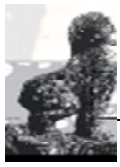


# **Wealth and Potentials as Motor for the Development of the World Heritage Site of Preah Vihear and Action Planning Based on the Fundamental Vision**



**UK Someth  
Tokyo City University  
Japan**

**Thesis submitted in fulfillment of the requirements of the D. Phil Degree in  
Regional Development Planning**



### **Disclaimer**

"I declare that this thesis is substantially my own work. Where reference is made to the works of others the extent to which that work has been used is indicated and duly acknowledged in the text and bibliography. The pictures, and graphic documents used in this dissertation are referred to, if it happens to involuntary not be mentioned, I express hereinto my profound apology".



## Acknowledgments

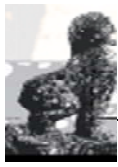
Many people have been of invaluable assistance prior, during and after I conducted this research. First I am very grateful to my advisor and friend MR **Noritada MORITA** for having shown genuine interest in this work and for encouraging me by providing extremely useful advices throughout the different stages of the thesis writing. I would like to express my gratitude to Doctor **Minoru KITAHARA** who had the kindness to introduce me to the TUC.

I also own gratitude to H.E **SOK AN** who provided essentials means and facilities my travel to present my thesis.

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I would also like to take this opportunity to thank the various providers of information and funding that have made this thesis possible. They include the many of my friends, to whom I apology not to be able to enumerate herewith, who have supported me all along my thesis writing.

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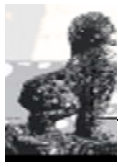


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## Acronyms and Abbreviations

- ADB Asian Development Bank
- AFD Agence Française de Développement
- AMP Angkor Management Plan (NZAID)
- APSARA: Authority for the Protection and Safeguard of Angkor &  
Region of Angkor
- BG : Green Belt Project
- BoD : Board of Development
- CSEC: Cambodian Socio-Economic Survey
- CDRI: Cambodian Development Research Institute
- CDM: Clean Development Mechanism
- C Int: Conservation International
- EIC: Cambodian Economic Watch (October 2008)
- EIA: Environmental Impact Assessment
- FFI : Faunes Flores International
- FDI : Foreign Direct Investment
- GB: Green Belt Project
- GDP: Gross Domestic Product
- GMS: Great Mekong Sub-Region
- HDI: Human Development Index
- ICJ: International Court of Justice
- IFAD: International Fund for Agricultural Development
- INRAP : Institut National de Recherches Archéologique Préventive,
- IWHM : An Introduction to World Heritage Monument
- IBRD: International Bank for Reconstruction and Development  
(World Bank
- JICA Japanese International Cooperation Agency LARP :
- Living Angkor Road Project
- NIS: National Institute of Statistic of Cambodia
- OPDPV: Orientation Plan for the Development of Preah Vihear
- PAC: Poverty Alleviation Cambodia-Health care
- PVNA: Preah Vihear National Authority



- PV : Preah Vihear World Heritage Site
- PVIWHM: Preah Vihear Introduction to the World Heritage Monument
- P.P.P: Public, Private, Project
- PVDA : Preah Vihear Development Authority
- RAFC: Royal Arms Forces of Cambodia
- RGC: Royal Government of Cambodia
- Royaume du Cambodge; (DRMODCPM) Dossier Relatif à la Mise en Œuvre de la Décision 31 com. 8.24 Rev du Comité du Patrimoine Mondiale (31 session 2007, Christchurch) Jan 2008.
- RUPP : Royal University of Phnom Penh,
- RED : Regional Economic Development
- SYBOC: Statistical Yearbook of Cambodia (Ministry of Planning 2008)
- TAOC: The Atlas of Cambodia (National Poverty) 2006
- UC: Unclassified
- UNESCO United Nations Educational, Scientific and Cultural Organization
- UOT : University of Tokyo
- WCS Wildlife Conservation Society: Focusing on Cambodia's High Value forest: Livelihoods and Management (Nov 2004)
- WWF : World Wild Fundy



## Methodology

The problem of development of Cambodia is a topic of interest by researchers and has been approached by many studies but yet it is still complicated to apprehend. This study involves a review of existing literature, field researches and interviews. Data were collected whenever it was possible, facts were analyzed, statistics were extrapolated for the purposes of providing the results coherent to understand the situation and to make this dissertation relatively easy to appraise. It was not the aim to provide a comprehensive discussion of all aspects of development in Preah Vihear Temple Region, but rather to provide key ideas so the vision of how a World Heritage site could be part of the nation wealth capable in helping economic and social development of Cambodia.

- **Review of literature**

Documentation work was based on existing writings, researches and selected statistics to limit incoherent figures. Tables, charts, graphs are extrapolated then drawn on the basis of results obtained from comparison of different sources. Some of the texts in italic letters were quoted and/or reproduced fully from original authors or titles of documents.

- **Field research**

It was conducted in some parts of area of study: villages, offices of administration, and discussions with population living in the areas. Surveys were conducted on the basis of sampling that best represented high probability of the real situation. Rationalization of onsite survey and data are based on facts.

- **Maps and photographs**

Maps were selected or redrawn to update and to make them relevant to the subjects. Some maps were superimposed to provide more information and to make them easy to understand. The photographs were taken in recent date and used to better illustrate the texts and to give to the readers to visualize the reality of the matter. Normally, maps and photographs were inserted in the pages in such



a way to facilitate reading the text and viewing charts, and graphics. Sometime explanation in boxes is for specific information.

- **Chronology**

The events were classified in chronological manner. Historical narration of facts was presented through different successive periods using Gregorian calendar. When the date was doubtful it mentioned by expression “around” or replaced by designation of word “century”.

- **Presentation**

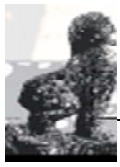
Presentation of the document is in a manner to facilitate the reading. Reader would be able to follow up the sequence of ideas in order to get rapid understanding of the objectives and aims to reach. This dissertation comprises five components as described in the Table of Contents on pages 4 and 5.

- **Page setting Presentation**

The cover of the document is presented by a combination of photographs of Preah Vihear Temple illustrated in the DOSSIER RELATIF A LA MISE EN OEUVRE DE LA DÉCISION 31 COM 8.24 Rev DU COMITÉ DU PATRIMOINE MONDIAL (31ème session – 2007 – Christchurch, Nouvelle Zélande) in an attempt to illustrate the “Exceptional Universal Value of the World Heritage Site”. Its cultural value through architectural design, the surrounding landscape as a natural support and the environment as a stage of the whole composition are of universal values.

The header and footer of each page begin and end with a lion in stone sculpture the symbol of guardian entrusted with mystic power to protect the Temple of Preah Vihear. These lions sculpture are standing at Goupura Five and along the causeway of the temple.

The dark brown color chosen is the color of Historical monument adopted by Cambodian and used by the World Heritage Site of Angkor Wat.

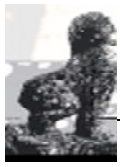


**Fig.1** Temple of Preah Vihear (source: El Templo de Preah Vihear UNESCO, 2008: Ref 5)

## ***Abstract***

*T*

*he present thesis is an attempt to sketch an overall vision of how the Temple of Preah Vihear and its immediate region could be developed through different stages along a reasonable time frame. Most important of all is how this development aimed to be sustainable could have a chance to be achieved. It has neither ambition to be a comprehensive development program nor an exhaustive list of actions to be undertaken. But it should be a concept upon which a World Heritage site could be preserved for the future generation of mankind and at the same time is a sustainable wealth that allows generating a balanced development so the benefits yielded would be shared equitably by the nation at*

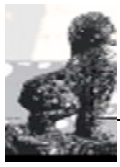


*different levels of social class. Within that perspective, the Exceptional Value of the World Heritage site of Preah Vihear is a priceless treasure entrusted the role of motor for economic and social growth.*

*The challenge of this concept is to see how we can formulate a synergy to conciliate conservation and development in such a way that environment could be protected, that the poverty could be alleviated and the fruit of development could be enjoyed without bringing prejudice to the ecosystem. The resources of Preah Vihear region are not negligible not to say they are sufficient to allow a proper development that could lead to sustainability. They are rich of diversity. The natural resources such as forest, needs to escape from complete deterioration in the range of the Dangrek Mountains whose micro climate still favors reasonable amount of rainfall to maintain the green environment and to allow possible agriculture in the region. The untapped resources, particular in underground have a chance to exist but this needs to be confirmed by further studies and researches. The man-made resource also exists. It is high-lighted by Khmer cultural such as the World Heritage Sacred Site of Temple Preah Vihear endowed by its exceptional universal value. The land is still available at its natural stage. Not yet spoiled or polluted by excessive exploitation either through industrialization or urbanization it constitutes an important asset for the region. All the mentioned resources combined together with existing of human power constitute regional wealth which is part of the Total Wealth of the Nation. But to reach such an objective that is sustainable development, it is imperative to first lay down the basic concept of the how the wealth of the region should be well deployed. In that respect, it seems that the fundamental policy is to establish a balance between the use of resources and the saving of these resources. These two parameters are essential in keeping the resources at a permanent saving stage ensuring its capacity to renew its potential of investment capital. In other words, the Wealth of Preah Vihear region shall be safe guarded as a sustainable investment capital. It should be used to optimize not only its output but even more important to reach the expected target with optimum efficiency. If resources are properly used, then there is neither depletion nor destruction of its potentials and values. In that case the wealth of Preah Vihear, adding up together of its different forms and variety of resources is insured and becomes finally invaluable equity for development.*

*To complete the sustainable development process, two more components should be added. A series of human factors such as a good management, a sound base of transparency and good governance are the most relevant parameters. The institutional aspect: rules and*



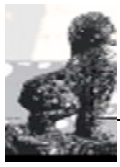


regulations will finally set the pace and enforce the policy and strategy implementation. Related to this vision, an action plan is suggested. It related to the strategy of how wealth should be deployed to ensure its saving capacity, how projects can be designed and be implemented in such a way that they would protect the cultural heritage and at the same time generate incomes while still preserving environment qualities of the World Heritage site. Thus the concept of “Green Development” is within reach.

Through this angle it seems that the most urgent projects should be primarily the protection of the temple. Therefore, maintenance and restoration works on the basis of recommendations set forth in the Management Plan of the World Heritage should be taken care of immediately. On the other side, and at the same time, a series of sectors of development are suggested in the dissertation in order to quickly generate revenues that would allow to be injected in investment of other supporting activities in order so to increase possible different forms of incomes. If this spin upward of growth is successful, then momentum of the development would be ensured and the path towards sustainability would appear clearly at the horizon. In the context of Preah Vihear, the cultural and environmental tourism industry is the most promising because of the value of its site and its potentials constitute the most important and reliable investment capital. Therefore it should be taken into consideration as a priority among other possible alternatives and be focused on as a spearhead of development.

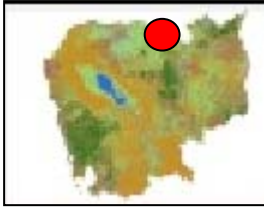
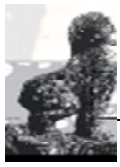
The last perspective of Preah Vihear development vision is the Great Mekong Sub-region (GMS) concept of Asian Development Bank (ADB) now being implemented. The GMS concept involves the poorest areas in the region comprising the North of Cambodia, along the Dangrek Mountain, the Southwest of Laos and the East of Thailand. It has an ambitious objective to narrow the gap of poverty of the population living in these areas by a development that will benefit to the region as a whole. Bringing infrastructures that would provide access to undeveloped regions, a network of transport of goods, a transmission of knowledge, and tourism development is the major aim of the GMS in the years to come. Therefore it is advisable that the Preah Vihear should foresee the possible opportunities generated by this great regional project. Upon this view the development strategy for Preah Vihear should take into consideration the GMS concept as its long term objective and should cooperate with the regions concerned in a full pledge partnership. (Appendix 9)





*If the GMS concept would become reality, the development progress of the designated region would be benefit for all in particular for the marginal population who would have a chance to improve their living conditions then a hope for a better life. The Preah Vihear region will share with those in the neighboring countries a regional development that might be sustainable and at the same time ensures stability, friendship and peace among people.*

***“Sustainable development, Good Governance, Stability of Social Environment”***



## **Introduction**

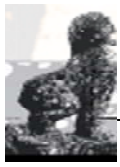
Isolated PV temple & Region

Cambodian has, through time and space, a long a vibrant, up and down history. Since the collapse of the Khmer Empire in the 15th century, the glory has shattered away and at the same time the disintegration of the country into regions governed by lords' wars. Along with the bankruptcy of the central power follows the catastrophic economic and social conditions of the population in particular the poor rural living primary with agriculture were left to themselves without neither help nor proper institution on which they could rely on.

Since a new era with independence from French Protectorate that honest, shall not be overlooked, saved the Cambodia from eminent disappearance, the global context has not much changed relatively in the the domain of political and social-economic development. Today despite many efforts the last decades attempts have been put forwards for implementation and enforcing the fundamental policy of improvement of social living conditions and economic growth but somehow these efforts have yet come to the expectation of the population.

Compared to the countries in South East Asia, Cambodia is still struggled for economic take-off even although its disposes of potentials of natural resources that are proportionally to the population of neighboring countries seems to have less problem of development. But with fluctuation of political regimes and governments policy decisions the natural resources have not been used under good managemanship and they continue to draining out rapidly without providing reasonable and equitable social- economic progress to the people .

The case of the World Heritage Sacred Site Preah Vihear, with its wealth tapped and untapped subject treated in this dissertation is one of the many examples proving that Cambodia have missed in many occasions the available opportunities to take advantages of potentials resources to enhance the road of sustainable development. Since the inscription of Preah Vihear in the World Heritage list, the Cambodian authority understood the importance



of this region. Many efforts have been devoted to bring out the province from isolation and to connect it to the development process. In that respect many access roads have been built and the population has been encouraged to migrate to the region. With the perspective of development of tourism like the World Heritage Site of Angkor, commercial activities have been developing along the ways going to the sacred temple. The junction town of Anlong Veng which was the strong hold of Khmer Rouge Military headquarter under the command of TA MOK, has changed from a small village to a size of a town with continuing population growth from year to year. Another village named Sra Em, lost in the remote area before 2007 is now due to the Sacred Site Preah Vihear is now becoming a “Gate to the Temple” receiving flows of tourists has swollen into the small town with no guide line and no vision of how the presence situation would be one day uncontrolled in term of land management and disorder in urban planning because of a sudden “Business rush”.

The thesis is an attempt to show the potentiality of this past remote region mostly unknown or at least unaware of Cambodians and practically unheard by people around the world until 2007 thank to the mass media which informed the world of political difference and arms conflict between Cambodia and Thailand because of Preah Vihear Temple. (See Appendix 2)

To grab a good understanding of the history of the Temple, the author has the obligation to present the context of the World Heritage Site within the frame line and the evolution of the history of the Province of Preah Vihear and at some circumstances to link it at the scale of the country because the practice of central power dominated the country and had all decision making about to do. The provinces representing the central power did the executing work and this system of government passed on to the districts which practically have no initiative to concert or to participation with the population for their wellbeing. In that manner the provincial authority was thinking to how to reinforce their authority only in the provincial capital and practically had no contact with the remote districts.

The short recall of economic history of Cambodia and philosophy of building social policy and structure will help to apprehend the complexity if not the mentality of the Cambodian people and in particular the ones in the upper rang of the governments who have chosen ideology and taken decision to adopt social structure. Successively, the French protectorate policy, the independence era with the concept of “Sangkum Reast Niyum” de Sihanouk, the Pol Pot utopic dream, the Kampuchea Democratique vision and now the



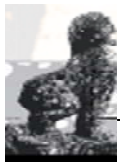
“liberal “market practice have yet to prove that the poor rural has gotten out of the poverty. The education is an “open “access but is still low, the coverage and quality of health care constitutes a luxury service for the rural population because of unequal distribution and of high cost that the incomes cannot afford. The poverty rate fell by 1-1.5 % per annum between 1993/4 (45-50%) and 2004 (35%) according to WB report in 2006. But the distribution of national wealth still far to eliminate the ID poor whose the average household income is up from 0.80 US dollar in 2003/4 and to 0.96 US Dollar in 2012. (Ref 1, p 19-20).

Even with the increase of income, when compared to the rising cost of living, in remote areas of Cambodia people are still struggling to insure their family of food safety net.

Despite all the unfortunate problems that endure the Cambodians for decades, there is still hope to salvage the down turn situation economically and socially because there are available natural and heritage potentials. For example the World Heritage Site of Angkor generate incomes which varies between 37 to 40 millions US dollars a year without counting the added values left to the different sectors of tourism even they cannot yet overreach completely to the marginal population. The province of Siem reap where is located Angkor is leading the country in term of tourism development and spearhead the economic growth.

The World Heritage Sacred Site of Preah Vihear could be another example after Angkor. It has a rich cultural Heritage in arts and architecture, a prestigious history, a magnificent and diversity of natural environment, and available tapped and untapped natural resources when added all together constitute a significant wealth that could be deployed to insure sustainable development of the region. This chance exists because the sign of progress has been observed since 2008, when the year of the inscription of the Sacred Site of Preah Vihear was declared in Quebec, Canada.  
(Appendix 4)

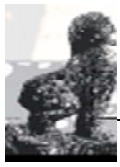
By monitoring the different sectors of possible development in Preah Vihear and region, it seems that the sector tourism is promising because the department of tourism of PVNA has recorded an increasing since 2008 and this trend is continuing steady. The growth of number of tourists foresees others related economic activities such as agriculture, hotels infrastructures, services like restaurants and amenities that will go along with. The urban sector will also grow with new immigrated population from poor areas of the country. With the momentum of tourism industry the town like Anlong Veng which is an important junction



between the road from Siem Reap to Thai province Sisaketh and to Preah Vihear temple will become a distributor center of activities in the region. Employment could be created and with a policy of equitability of distribution of output from tourism development the overreach to the poor rural population will be inevitable. Looking through that angle, the reduction of poverty would be a reality. The wealth of World Heritage Preah Vhear can fill the gap of lack of resources because it a diversity of potentials. The government and provincial authority should therefore set up a real taskforce whose responsibility is to find ways and means for the development of the region. Institution, laws and regulations should be drafted soon enough in order to counter offensive of the negative results of mismanagement of existing resources that should be generated and recycling by nature to provide sustainable use. It is also recommended that urgent solutions shall be found urgently so these resources now in a state of depletion could be stop and better managed. The destruction of forest in the region is going at an alarming rate; example the national park “Long” which covers the three provinces including that of Preah Vihear is subject to illegal logging even around Preah Vihear temple region. The poor farmers rely on forest products not only for fruits, vegetable, bush meet, or revenues but also use forest as a ground of traditional medicine when they are not able to afford the cost of healthcare services.

The land grab is the second catastrophe. Poor farmers are today complaining about loss of their land in particular rice field which is the source of their basic food with which the rural population insure the livelihoods. This situation becomes from serious to desperate for the poor rural households because they know one day they will be deprived of what they need for survival. It is undoubtedly that land issue and the destruction of forest constitute the major risk of jeopardizing the chance of sustainable development in the region despite all the wealth provided by the World Heritage Site Preah Vihear as cultural value, the natural resources and the possible variety of mineral which is still to discover in the region along unexplored the Dangrek Mountains.

Cambodia is a nation of sufficient and diversity of resources and Preah Vihear temple region with important potentials. But it is important to understand that human resources will be needed too in order to provide good management in the world of competition and in the context of economic landscape in the future. It is crucial that the policy of the governing administration be reviewed as soon as possible because the opportunity to narrow the gap of poverty and the chance to reach the sustainable development could not be achievable. The



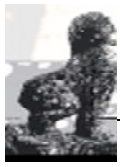
goal to reach economic take off that will lead Cambodia out of developing nation as incessantly mentioned in government statement and action planning might escape away from the wishing goal.

The country is at this moment situated at the cross road, a choice has to be made rapidly because the time left for that choice is limited. Or the country will engage in a road for a sustainable development to the whole nation and in particular for poor farmers living in the remote and disconnected will have hope for better life or on the contrary, the country will go away from on the direction of serious socio-economic downturn.

An urgent solution shall be sought out rapidly to prevent Cambodia to fall back to the situation of 19th century during which the nation had lost control of the unity and almost disappeared for good if there was no French intervention.

It would be sad that the Khmer people would set the time back to political and socio-economic imbroglio in such way that Joel Brinkley calls in his book “Cambodia’s Curse”.\*

\* Joel Brinkley author of “Cambodia’s Curse”;  
The Modern History of the Troubled Land, 2011



# *Chapter I*

## **Background**

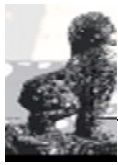


### **1-1 Preah Vihear as a Province**

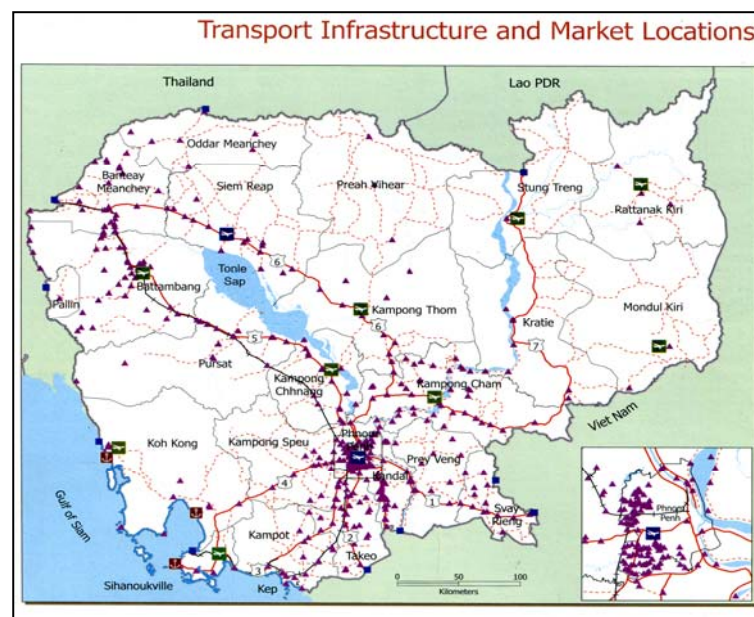
#### **1-1-1 Historic**

To apprehend the problem and to have clear look for a possible solution for the World Heritage Sacred Site of Preah Vihear, it is necessary to understand the province of Preah Vihear because the region where is located the temple is in a quite remote mountainous region with few years ago did not get from national and international neither attention nor interest. In the plan development Preah Vihear province which has been a “center of administrative and commercial” dominated and controlled all development even in a very district and village and of course the temple region.

Referring to the geography of Cambodia, Preah Vhear is one of the remote provinces of Cambodia. It is located in the North of Cambodia and at extreme distance of 550 km by road from Phnom Penh, the Capital city of the country and at 240 km from Angkor Wat the World Heritage Site located in the province of Siem Reap. Thailand and Laos are countries on the frontier line separated by the Dangrek Mountain. The most striking aspect of the area is that the region of the province of Preah Vhear was by far disconnected from regions in which economic activities of Cambodia were most concentrated and most dynamic. In term of density, Preah Vihear with 7 inhabitants per km<sup>2</sup> ranked 4<sup>th</sup> among the low population in



the country in 2004 (Ref 1; Table 4.4, p 53). Only a few provinces in Cambodia are considered as economic centers. They have been the heritage of the French protectorate period during which the main concern was to set a border lines between neighboring countries in particular with Thailand and at the same time creating commercial counters to optimize the shipment of local resources to outside of Cambodia. The frontiers between what was known as French Indochina e.g. Cambodia, Viet Nam and Laos were free of circulation between the three countries and the most important roads were constructed mainly for the purposes of channeling natural resources and goods to the two principle sea ports named at that time Haiphong and Saigon, both are located in Viet Nam. The harbor of Haiphong was more concentrated in commercial activities with countries in the South China Sea while Saigon was more related to inland movement of goods and persons within the three countries of French Indochina and a direct route to France for importation and exportation. Preah Vihear region, an isolated space yet to discover was a long way from the road to development (Map 1).



**Map 1** Market Places and main road infrastructure (Source: TAOC Maps 2006; Ref 2; p 31)

Though, there has been development in Cambodia since its independence, but statistics and observations shows through GDP per capita and through HDI (Human Development Index) Cambodia's score of 0.543 was one of the poor countries in South-East Asia.(Ref 1; p11). Most of the nation resources have been devoted to the development of the central plain of the country, mainly the region in and around the Phnom Penh country capital city.





The national budget allocation proves that there is inadequation of efforts mobilized towards different provinces even some of them might have if not equivalent but reasonable potentials. The poorest provinces still benefit starving resources from central government despite signs of possible economic and social growth in the future. While the distribution of nation wealth to each of the region of the country continues to be disproportional to the economic and social needs due to the problem of availability of nation incomes, the investment efforts have so far limited impact in the remote regions (Ref 3; p VII-X).

	2003	2004	2005	2006	2007
	Share in expenditure of total (%)				
III. Social Administrative	35.0	38.5	36.6	38.0	29.9
11. Information	0.7	0.7	0.7	0.7	0.5
12. Public Health	9.8	11.0	11.4	11.3	9.9
16. Education, Youth and Sport	17.1	18.7	17.8	18.8	14.2
18. Culture and Fine-Arts	0.8	0.7	0.7	0.7	0.5
19. Environment	0.4	0.4	0.4	0.4	0.3
21. Social Affairs, Labor & Vocational Training	1.9	1.9	4.8	4.6	3.7
23. Public Worship and Religion	0.2	0.2	0.2	0.2	0.2
24. Woman Affairs and Veteran	4.1	4.9	0.5	0.6	0.4
IV. Economy Administrative	9.7	8.7	9.1	10.1	7.7
05.3 Civil Aviation secretariat	0.4	0.3	0.4	0.3	0.3
13. Industry, Mines and Energy	0.4	0.4	0.4	1.3	1.1
15. Commerce	0.9	0.7	0.7	0.7	0.6
17. Agriculture, Forestry and Fishery	2.2	2.2	2.4	2.4	1.7
20. Rural Development	1.0	1.0	1.1	1.3	1.0
22. Posts and Telecommunications	2.0	1.4	1.6	1.3	0.9
25. Public Works and Transport	0.8	0.7	0.7	0.7	0.6
27. Tourism	0.9	0.7	0.7	0.7	0.6
28. Urbanization and Construction	0.4	0.4	0.4	0.5	0.4
29. Water Resources and Meteorology	0.8	0.8	0.7	0.8	0.6
V. Other expenditure	12.8	11.3	13.3	12.0	12.8

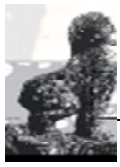
Source: Ministry of Economy and Finance.

**Table 1**

Source: SYBOC; (Ref 1; Table 19.8; p 319)

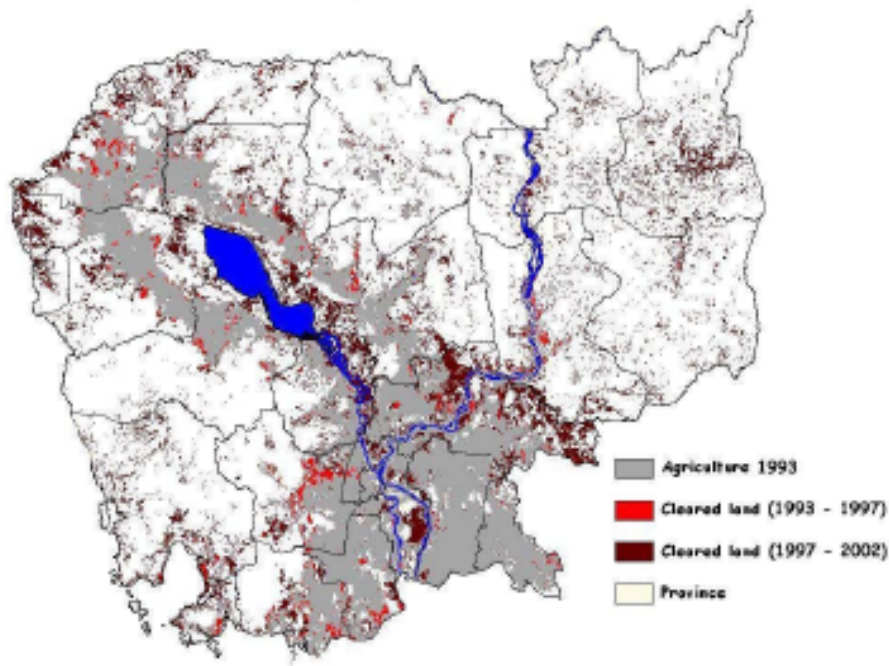
Only few provinces did receive some FDI and that not too long ago, this is the case of Siem Reap, Sihanouk Ville, Battambang, and Kompong Cham and in the last two years Ratanak Kiri and Mondulkiri in the field of agriculture.

Upon the planning strategy elaborated and put in place by successive governments, number of provinces are still in need for help in order to progress; for example Bantey



Meanchey, Odor Meanchey, and Preah Vihear (Map1) just to enumerate a few which are in the remote regions, located on the border with neighboring countries. So still today Cambodia is far from a well-balanced developing nation in term of economic and social policy making. As far as spatial development it is noted that the region situated on West bank of Mekong River has tendency to develop faster than the region of East of Mekong River.

The West region has more inhabitants and has more potentials in term of natural resources, in terms of infrastructures and in terms of economic centers (Map 2). The East bank of Mekong River is somehow neglected due not to the inexistent resources but mostly due to the lack of infrastructures to cross the Mekong which used to be a physical obstacle to the development effort. In the case of Cambodia, the lack of resources seems not to be the only crucial problem. The misunderstanding of the development issue in the long term and proper vision of a how the nation can mobilize its own resources natural as well as human in order to plan the future growth looks like the main handicap all along the last decades. The absence of a fundamental administrative and technical structure added by a sound approach mechanism to visualize the trends of development in the future is therefore the weakness of the successive government's policy (Map 2: based on Ref 4; p 41). Maps 2 shows the 2 major regions in Cambodia where disparity of development has been observed. The East region of Mekong River with a population of approximately 2.07 million inhabitants in 2008 and the west Mekong river with a population around 11.3 million inhabitants show already a disparity in population. This disparity also applies to the gap of incomes of the rural population except only a small percentage of urban population have a better incomes because they have access to trade sometime illegal between Vietnam and Laos. Nevertheless a segment of population has fortune because they own rubber plantation they took from French when the war in 1969 took place and the region were frequently an intensive battle fields between Lon Nol, Khmer Rouge et Vietcong not excluding American frequent excursions in the zone.



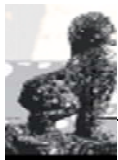
**Map 2** showing agriculture areas and cleared land 1992-1997 and 1997 -2

Source: base on Map 2; p 41 CDRI and WCS November 2004 (Ref 4)

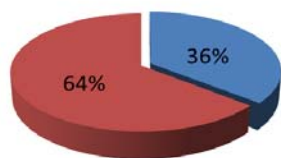
But there has been progress during the last few years with improvement of infrastructure and light industries but there still exist a wide gap between the two sides of Mekong River in term of employment, revenue per inhabitant and health care conditions. Many efforts have been devoted by government to improve rubber plantations that were left by the French company Michelin after the country was taken over from the Khmer Rouge regime.

In the North-East provinces a tentative of commercial forest has started by joint ventures with foreign private investors mainly Chinese companies after intensive illegal logging operation.

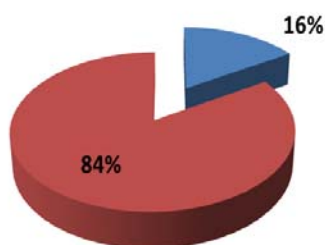
Since the French colony, four provinces were considered as centers through which commercial exchange were most active. Phnom Penh, the country capital administrative and economic, Siem Reap the province famous for its cultural heritage site Angkor Wat, Kompong Cham to control the Mekong River water way and Battambang province rich of agriculture, in particular rice production. Beside these four provinces the remote areas of the



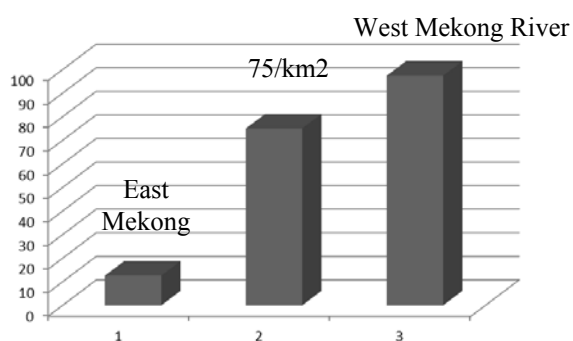
country were still a vast region in search for an appropriate development policy because of their isolation and the lack of regional economic policy by many successive governments.



**Chart 1** Population between East and West of Mekong River



**Chart 2** Population between East and West of Mekong River



**Chart 3** average densities of inhabitants per km<sup>2</sup> between East and West Mekong River

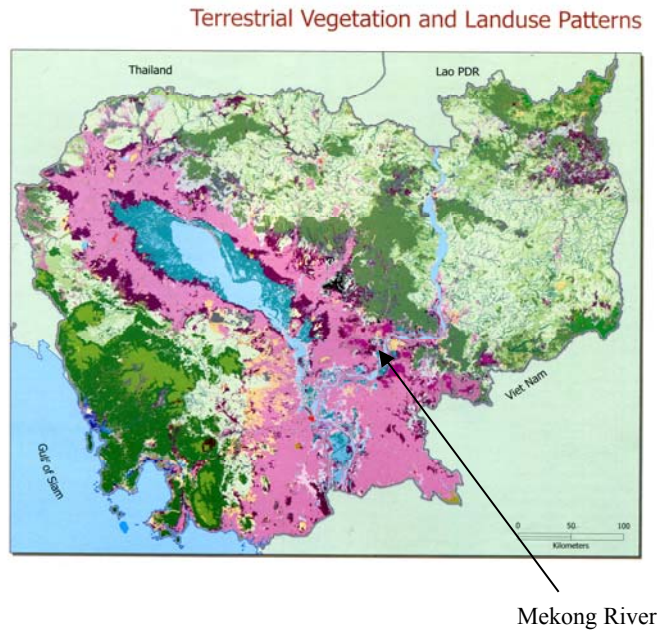
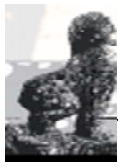
#### Charts No 1,2

**Chart No 1** shows the area of Regions East and West of Mekong River. 36% of the land size is for 16% of population while 64% are for 84% of population

**Chart No 2** shows that in 2008 about 16% of Cambodian population is living on the East side of the Mekong River, region of plateau and mountainous, while 84% living in the West of Mekong River on a rich land of plain and Great Lake Tonle Sap basin where conditions are favorable for agriculture and fisheries.

**Chart No 3** gives the average density of inhabitants per km<sup>2</sup> between the East and West Regions of Mekong River in comparison with the average density on the national level of 75 inhabitants/km<sup>2</sup>.

Source: Figures computed based on SYBOC, 2008(Ref 1; p 52-53)

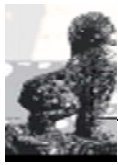


**Map 3** Concentrating of Population on West of Mekong River due to

- rich land for agriculture, potential of Tonle Sap Lake and better road infrastructure allowing rapid economic development.

(Source: TAOC; Maps, 2006; p 37(Ref 2))

By geographical isolation and by limited man power in term of basic human resource isolated regions could not have benefit from adequate social development such as elementary education for the children and basic health care. The lack of appropriate planning policy at least at the regional level, is already a serious error. In order to expect the best output in investing resources, but absence of planning itself would be an unforgivable mistake in the process of development. Adding to the absence of a real policy on a well-balanced planning, there has been limited attention given to spatial management. Agricultural land has been left without proper use, forest land with no program of feasible exploitation and /or preservation while land for urbanization has been used without a long term vision of how villages and towns would be developed in the future and what urban space should be set aside for infrastructures, utilities, services and green areas. It is not unusual to see the construction of houses and buildings prevent the possibility to enlarge existing streets, digging trench for drainage network or installing public lighting. Roads or streets have been constructed without



proper drainage and subject to constant flooding whenever rain season arrives. This situation still continues up to today.

Disregarding the period of Khmer Rouge devoting to more genocide than improving economic and social conditions of the population, successive governments in power since independence of the country did not put much effort to develop Preah Vihear region. In the contrary they created a situation of disequilibrium in the allocation of resources in comparison to the most vital requirement for the population in order to have a decent living. No investment fund was included in the national or regional budget to allow regional or local investment so economic and social progress could take place. Up to the present time, the existing situation shows that the small population living in the Preah Vihear region which is politically sensitive because of the antagonism between Cambodian and Thai has benefit some assistance from central administration. The mean household income in Preah Vihear province ranges from US\$ 169 to US\$ 1202 compared to US\$ 275-US\$ 1696 in Kampong Thom and to US\$ < 250->US\$ 750 in Mondul Kiri.

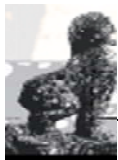
Source: (CDRI-WCS, Nov. 2004 (Ref 4 ; page 54)

Although this range shows the highest-income household earning 6-7 times the amount of the lowest-income households in other poor regions of the province and this could be well the case of Preah Vihear Temple rural region with less than US\$ 0.30 per household per day which reflects the poverty level of the population.

Source: TAOC, 2006; (Ref 2); pp. 12-13,

Based on Statistical Year book of Cambodia 2008, the population in Preah Vihear province is far behind other provinces in term of economic and social development. The human development index shows there is wide gap of disparity in Preah Vihear region if compared to the rest of the country. Under Khmer Rouge Regime, Preah Vihear was plunged into the military theatres that destroyed all the possibility of development action. People were suffering by forced intensive labor and had no hope to have access to normal livelihood except striving for survival. After Khmer Rouge, Preah Vihear is still a long way from being on the road map for the development. Table 1 shows that the population of Preah Vihear is facing threats to their livelihoods in the future and judging on these figures it is estimated that only little progress has been accomplished from the Khmer Rouge's period up to recently in particular from 2007, the moment of high tension between Cambodia and Thailand because





of the contestation of the Preah Vihear temple and its surrounding area of 4.7km<sup>2</sup> that blocks all access to the site of the temple. Appendix 2

**Table 3:** Future threats to Livelihood in Preah Vihear compare to those of in Kompong Thom

Future Threats to Livelihoods	Percentage of Households in Preah Vhear	Percentage of Households in Kompong Thom
Drought and floods	73	56
Rice/crop destroyed by wild pigs	22	3
Resin tree logging	36	48
Lack of cattle/buffaloes	37	14
Human disease	20	63
Security problem	16	3
Restriction to access to forest	17	4
Animal disease	9	4

Multiple responses allow, percentages may not sum to 100 percent

Source: CDRI-WCS, Nov. 2004; table 3:10 (Ref 4; p 67)

Compared to the study area of Kompong Thom province, Preah Vihear has a high percentage of threat in drought and flooding while Kompong Thom has high risk in human disease. Both have high threat in drought and flooding meaning there is a serious problem of water control and management. Preah Vihear region does have a high rate of rice/crop destroyed by wild pigs which in turn provide to the population bush meat primarily reserved for local consumption. In term of means that farmers normally use for agriculture work, Preah Vihear Region has great need of cattle and buffaloes. For them these animals are precious tool for agricultural production and for transport of goods from village to village or to the market centers. But the most important factor that worries the poor farmers is the land grapping which now still exist and by far the most critical problem because it diminishes the land for agriculture practice from which the poor population base their living on. Although different measures have been implementing by government to track down this illegal practice but so far there has been a very limited success. It seems that the problem is still going on if not getting worst in the countryside of Cambodia. Most of rural poor go to forest nearby or cultivate a small plot of land in the compound of their house to supply everyday needs and the surplus they bring to the local market to sell to get some income. This is happening everyday life for the rural poor not only in the remote area like Preah Vihear region, but it is also a typical scene in the village market or on the side road.



This kind of activity is carried on by mostly women who normally have the financial preoccupation and responsibility for the family.



**Fig.1 to 6:** Typical daily Living activities of the population; (pictures by Author)



**Fig.7** family shop in front of house by AMP (Ref 13)

#### **Figures 1-6**

show the activities of everyday life of the population living around the area of the temple site of Preah Vihear.

selling rare commodities on a local market is mean to have revenue even it is not on regular basis. These commodities are in general grown in the back yard garden or got from the forest nearby, while people Gathered around without employment.

**Fig.7** Work done by children proves that family relies on its children to help making a living and has no possibility to send them to school.



**Fig. 8**



**Fig. 9**



**Fig.10**

**Fig.7, 8, 9 and 10** show the activities of every day of the rural paysans who are working for family subsistence. Most of them do not have permanent activities which depend largely on the products they cultivate in plots in their house and/or collect from forest nearby. Source: Pictures from PVNA 2010

## **1-1-2 Geography and Demography**





The province of Preah Vhear is on the mountainous region. It is situated in the North of Cambodia along the Dangrek Mountain. On the North and North-East, it is bordered by Laos PDR and Thailand. Based on Statistical Yearbook of SYBOC in 2008 (Ref 1) edited by the Cambodian Ministry of Planning shows that province of Preah Vhear has a land area of 13 788km<sup>2</sup> and a population of 119 261 inhabitants with a density of 12 inhabitant/km<sup>2</sup>. There are 7 districts and 204 villages. With an average density of 8.64 inhabitants/km<sup>2</sup>, the PV Temple Region is one of the least inhabited compared to the other areas in the district and to the average of population density in the Plateau and Mountainous region.



### Cambodia

181,035 km<sup>2</sup>. (SYBOC 2008; p 8)

It is bordered to the North by Thailand and Laos, to East by Vietnam and to the South by the Gulf of Thailand.

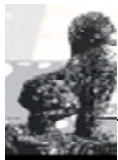
### Angkor and Preah Vihear Archaeological Sites:

Major attraction sites for visitors from around the globe. Angkor was the capital of Khmer empire from 9th –15th centuries is on the list of World Heritage in 1992. Preah Vihear declared an exceptional universal value by World Heritage Committee in 2008.

**Map 4:** Position Geographic of Preah Vihear Temple  
Source: The University of Texa 1997

The primary activity of the province relies on agriculture and forest exploitation mainly for household consumption and the limited production in agricultural products are insufficient for local market demand. With the provinces of Monduliri and Ratanakiri, Preah Vihear is one of the most undeveloped regions in the country and with the complete Khmer Rouge regime control; people were suffering enormously and were kept to minimum knowledge and food supply for just survival purposes.

By its size the province of Preah Vihear ranks third as largest province in Cambodia after Monduliri and Kompong Thom. And by its low density of population, it reveals that its location in the region of plateau and mountainous there is still land of dominant nature and

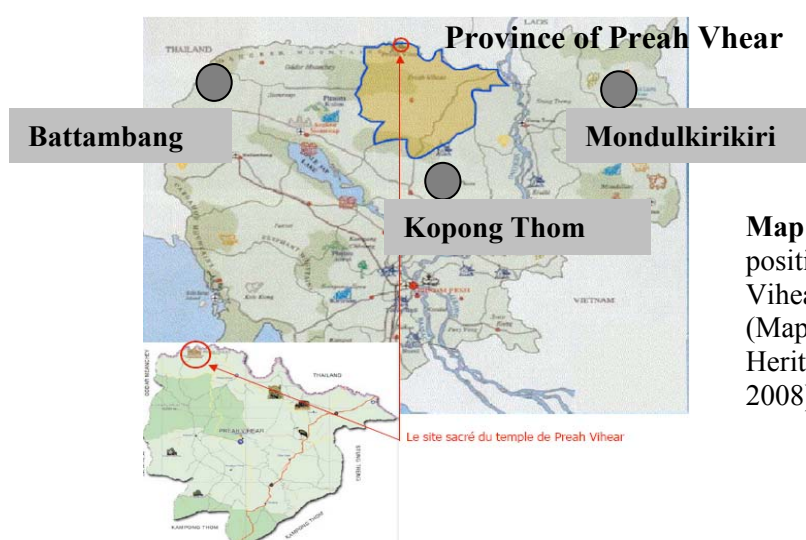


yet to be preserved with appropriate development policy in order to avoid gradual destruction of its environment and biodiversity equilibrium. Major ethnic minority groups indigenous to the province are Kuoy and Por. The population is mostly young with more than 50% younger than 40 years old. Although, women outnumber men in the overall population, there are slightly more men than women in the labor force. Male labor constitutes 36.7% of the total labor force, while female labor constitutes 34.1% and children in the age group of 14-17 year are 30 %.( Ref 1; table 4.5 p 54). As a rural province, child labor in Preah Vihear is used for animal care and crops production activities

**Table 4** Density of Population: inhabitants/km2 in 5 Regions of Cambodia

Plain region	Basin Tonle Sap Lake Region	Coastal region	Plateau and Mountainous Region 22	Average National Level
261	64	47	<b>Preah Vihear province 12</b>	75

SYBOC table 4.4; p 53; (Ref 1)



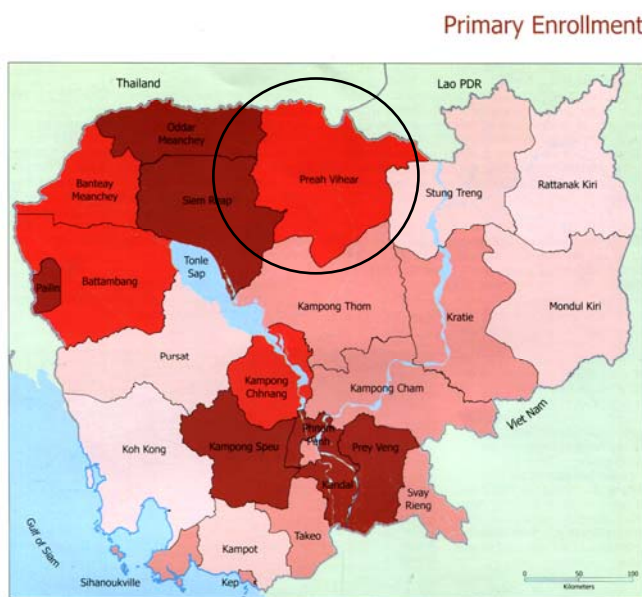
**Map 5** Geographical position of Preah Vihear  
(Map from P.V World Heritage document 2008),Ref 5

### 1-1-3 Education



According to the statistical Yearbook of Cambodia 2008, the province of Preah Vihear is one of the least developed in the field of education. It ranks 21<sup>st</sup> among the 27 provinces in the nation for the number of students finishing primary and secondary education. The map below shows at the national level the enrollment in the primary schools is a sign of an encouragement despite its rank compared to the other provinces of the country but the lack of class rooms usely overcrowded and number of teachers are the serious problems.

(Ref 1; Tables 7.4, 7.5, 7.6; pp. 220-222)



Primary enrollment in the province of Preah compared compared to its population is considered quite good. But the main problem resides in drop out of many students before finishing the primary level. This is due to the social and economic level of the households which need children to help in their living. Enrollment in the beginin, drop out students at primary school is considered a crucial problem.

**Map 6**, Source: (TAOC) 2006; (Ref 2; p 105)

Charts **No 4, 5** and **6** below prove that the number of class rooms is far behind to the national average for a good enrollment. This means class rooms are crowded and/or teachers are insufficient for reasonable ratio teacher/students. This is the reason of illiteracy is high in PreahVihear in particular in the rural area. The total illiteracy population is estimated at 27,803 by gender illiterate males is 11,966 and illiterate females is 15,817.with a population of 6% urban and 94% rural.

Source: (Ref 2; TOAC, p 23, p 109)

**Number of Primary & Secondary class rooms per inhabitant and number of Educational Staff compared to National Average**



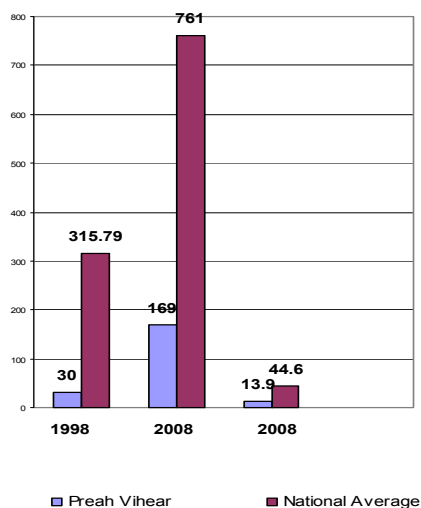
#### Charts No 4, 5 and 6

**Charts No 4 & 5** show evolution of Educational Facilities in Primary and Secondary classrooms within 10 years period in Preah Vihear, compared to the National Average. Figures on the right end side indicate that the progress per year in Preah Vihear province is behind National Average.



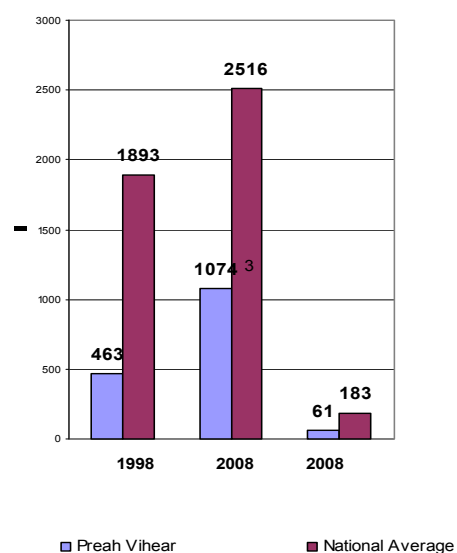
**Chart 4** Sources: Charts based on SYBOC; p 120-127 (Ref 1)

**Number of Class rooms and its Evolution in Secondary Education compared to National Average 1998-2008**



**Chart 5**

**Number of Class rooms and its Evolution in Primary Education compared to National Average 1998-2008**



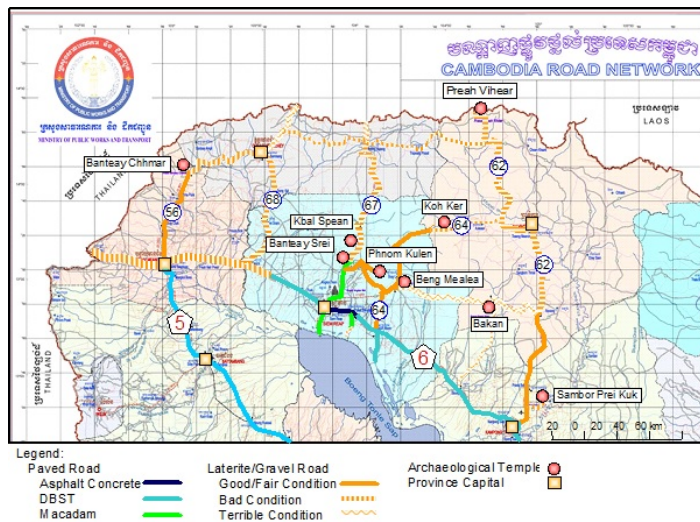
**Chart 6**

Sources: Charts based on SYBOC; (Ref 1; p 120-127)

## 1-1-4 Road Infrastructures



National road NR 6 is in good condition, but NR 64 was a bad condition road up to 2008. It is an important road network which extends on a stretch of about 130 km off the NR 6 from Kampong Thom provincial town. The NR 64 is currently under rehabilitation, and asphalt pavement is envisaged, which will soon give the province good and fast communication with Phnom Penh and surrounding areas.

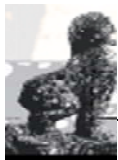


**Map 7** of MPWT, Dpt Highway. Go to Preah Vihear Temple. At the moment 2 main roads exist, first from Siem Reap town, second from Kompong Thom. To go to PV Temple or going through PV province capital or from Siem Reap to junction at Anlong Veng town first then to PV Temple. Many others are on planning state. Source: MPWT.

In the other hand, many rural roads connecting the provincial town to the districts have been rehabilitated and are now, by the standard of Cambodia's rural roads, are in a good condition but only during dry season. Most districts are accessible even those where the rural road network is not yet good, although these roads are being improved progressively.

With funding from the World Bank and government Currently, NR 64 linking Kampong Thom provincial town to Preah Vihear provincial town (134 km) is under reconstruction. In the current phase, the road was levelled, graded and compacted and topped with laterite. In 2006 the surface was supposed to be asphalted but this has not yet happened and the road has deteriorated badly in the meantime. It happens that the road construction does not meet adequate standards, in particular they lack of good drainage system, this is the reason of serious floods during heavy rain such as in 2011 and 2013. Therefore most of the roads are damaged and interrupt circulation from one area to another creating considerable difficulties for travelling and for transporting goods from one town to another. Now many other access roads are planning between districts but most of them are still dirt road or covered of laterite that pose serious problem during raining season. Most of these roads are constructed within the framework of government rural development planning by NGO such





as by NGO, ILLO or by KFW a grant from Germany in its program of Regional Economic Development.

**Table 5** Road Infrastructure

Access Road Number	Condition	District	District to Provincial Centre - km
213	Average	Chey Sen	65
211 & 214	Poor	Chheb	96
64 & 212	Good	Choam Ksant	115
64 & 210	Good	Kulen	47
64 & 213	Good	Rovieng	77
64 & 66	Average	Sangkum Thmey	66
64 & 210	Good	Tbeng Meanchey	5

Source: IFAD ;( Ref 13; p 15); Field visit and Preah Vihear Provincial Department of Agriculture (2005); p1, Survey of the Dept. of Road maintenance, Ministry of Public Works and Transports (2009)

### 1-1-5 Agriculture and Forestry

**Agriculture:** The main resource of Preah Vihear province is common to that of whole Cambodia which is agriculture. Rice is basic commodity for Cambodia population and the culture of paddy is the principal agriculture activity of the inhabitant whose almost 80% are farmers. Compared to the other province of Cambodia, the practice of agriculture in this remote region is considered as traditional; meaning using the methods and tools that have been used for many decades by old generation of farmers. As result, the productivity of this sector of activity is not efficient enough to cope with the need of the region. This is one of the reasons why famine has, from time to time, happened in the area if the weather conditions are worst (persistent dry season, flood). (Ref 1; pp. 216-221) prepared by the National Institute of Statistics of Cambodia have released figures on which some, by extrapolation could provide a fairly good understanding of the overall aspect of Agriculture in this Plateau and Mountainous Region of Cambodia where is located the province of Preah Vihear .



The cultivated area in 2007 is 33.100 ha but the irrigable area is 15718 ha, the rest depends on rainfalls (Table No 6; Ref 13; p 19). However, the area of agriculture land currently irrigated is only 2 215 ha which is about 14% of the potential area. The Provincial Department of Water Resources and Meteorology estimated that the potentially irrigable area is more than stated here. However, the inventory of irrigation schemes remains to be done.

Therefore the irrigation is still one of the problems that limit the possibilities of the farmer to improve their rice production. If the irrigable area could be restored agricultural productivity and the living conditions of farmers could be increased. Since agriculture in Preah Vihear depends largely on the rainfall, it is logic that in order to increase the agricultural product it is indispensable to give the irrigation project as main priority. Yet the authorities national and provincial should set aside in their rural development project a sufficient budget to face this shortage of water during dry season. A scheme of investment in that sector should be drawn up as soon as possible due to the fact that climate change could produce more negative impact on the livelihoods of the rural people. Many farmers express their concern about this problem and wish that national authority gives more attention to the problematic of the irrigation for agricultural production.

As a matter of facts there exists some reservoirs and water basins in which water can be stocked but up to now they collect only rain falls that come during the monsoon season. But there is no network of irrigation system that is able to bring water to neither rice field nor waterway to fill the basin from a permanent intake water source such as river or mountain. For this reason, rice in some areas can only grow twice a year while the possibility of technical know-how can help farmer to produce three times a year like the land situated closed to the rivers whose water overspreads over rice field during raining or flooding season.

Preah Vihear, as a rural province, has less population than the national average with low density. They depend primarily on agriculture for their livelihood. While agriculture is the dominant source of livelihood for the rural poor, investment in the sector has been very low. For example, between 1995 and 2002 spending by the government on the agricultural sector was only 1.5% of the nation's total spending or less than 1.0% of the GDP. Very few donors have invested in the sector. And, investment by NGOs has also been minimal. Source: Field visit and P V Provincial Dept. of Agriculture (2005); p 15,

**Table 6** Potential Irrigable lands in Preah Vihear Districts

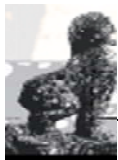
District	Area - ha	Status	Sources
Tbaeng Meanchey	500	Defective	Tbaeng mountain and rainwater.
Tbaeng Meanchey	275	Defective	Prey Preah Rokar, Dangrek range and rainwater.
Tbaeng Meanchey	628	Defective	Stung Sen River and rainwater.
Rovieng	1 500	Operational	La-ang mountain (natural spring).
Kulen	165	Operational	Bos mountain (natural spring).
Chey Sen	4 500	Defective	Stung Sen River.
Chheb	5 000	Defective	Tonle Ropeuo River and rainwater.
Choam Ksant	400	Defective	Dangrek range and rainwater.
Choam Ksant Defect	2 200	Defective	Dangrek range and Stung Sen River.
Sangkum	550	Operational	Thmey Lagoon (Boeng Pdak)
Currently Irrigated Area – ha	2 215		
Potential Irrigable Land in ha	<b>15 718</b>	An estimated of 33 100 ha in 2007 by National Statistic Department, Ministry of Planning including irrigation and rainfall.	

Source: IFAD Working Paper No 2, Nov 2005; (Ref 13; p 19)

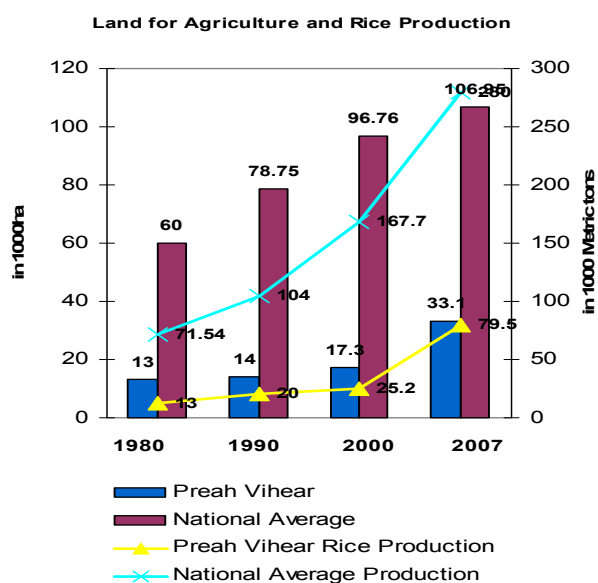
This situation applies particularly to Preah Vihear where road infrastructure and security remained poor until early 2003. For example, on the basis of the projects completed, on-going or planned for the period 1997-2009, but excluding the *Seila* programmed, Preah Vihear will only receive one project, WFP project, which has already been completed. With limited assistance poor farmers in Preach Vihear struggle along by themselves and so are more vulnerable to shocks, such as drought, livestock diseases etc. which have caused poverty to increase. The poor in the province include also new settlers who have come from provinces such as Prey Veng, Svay Rieng, Takeo, Kompong Cham, Kampong Thom, where pressure on land is high and opportunities for livelihoods are limited.

Due to its location, physically located in the north of Cambodia, Preah Vihear does practice agro-ecologically. This activity is grouped as part of the northern and north-eastern



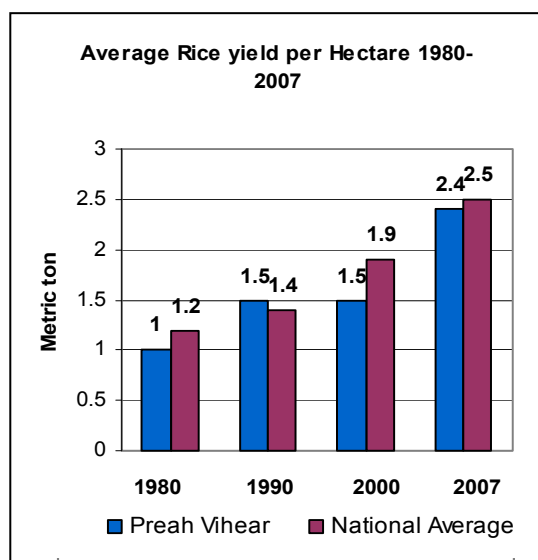


mountainous zone (MAFF, 1984). This particular agro-ecological zone has the following characteristics low population density; high proportion of ethnic minorities; high rainfall; high altitude; reliance of local communities on forest resources and *chamcar* cultivation. The annual average rainfall is 2 000-3 700 mm. However, the annual average rainfall seems to have declined recently and during the 1994-2002 periods was less than 2 000 mm p.a., although average compared to the lowland regions of the country.

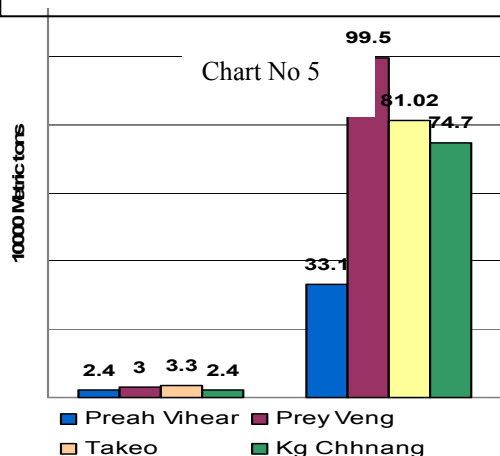


**Chart No 7:** Most of the land in Cambodia has been devoted to agriculture the basic everyday activity for 80% of the total population. Graph No 3 shows the evolution of land area used for agricultural purposes mainly for paddy production. Preah Vihear province counts for 13 000 ha equivalent to 1.29% of the total agricultural land in Cambodia in 2007. Its production in the same year is 1.18% compared to the total country production. Graph No 3 compares area of land and paddy production of Preah Vihear province compared to those of the National Average.

Source: Charts based on SYBOC 2008, p 216 (Ref 1)



**Chart 8:** indicates the average of paddy yielded per hectare of Preah Vihear province in comparison of that of the National Average. It is interesting to note that the production of paddy per hectare of land during the 27 years is only slightly below the National Average. It means that in 2007 the quantity of production is increased of 1.5 tone per hectare for Preah Vihear and 1.3 tons for the National Average. This assessment does not take into consideration the quality of soil, the technics applied to the grow of paddy and the investment cost of the production



**Chart 9:** provides the information related to the Rice production of Preah Vihear province in comparison the 3 most productive provinces in Cambodia. The figures on the left reveal the yield per hectare of rice cultivated land and prove that Preah Vihear is among the productive. The figures on the right hand side



Source: Chart 9 based on (SYBOC) 2008; (Ref 1; p 218).

### **Agriculture Products**

Major crops after rice are, in order of significance, are corn, peanut, mung bean, soybean and sesame. These are mainly cash crops produced for markets in Thailand and Vietnam, and the neighboring provinces of Siem Reap and Kampong Thom. Yield of these crops are generally high compared with the national average. But, a large area with a good potential for producing these crops remains uncultivated, while markets are available. Main constraints are the irrigation network, the lack of seeds of improved varieties and technologies as well as timely market information and market access arrangements. There are also limited agro-transformation products in good of hygiene acceptable standard; some of local and traditional way for food transformation is widely used in rural areas.



**Fig. 11 and 12:** Local Agricultural products found in the market by Apsara team (2008)





**Fig.13** of typical rice field around Preah Vihear region taken by author in 2008

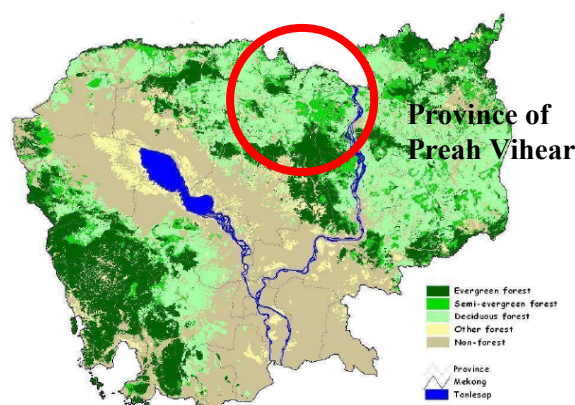
## Forestry

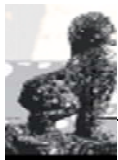
Evergreen and semi green forests represent about half of Cambodia's forest cover area, with approximately 90% located in 11 provinces in the North-Central, Northeastern, and Southwestern regions of the country. The province of Preah Vihear is located in one of these regions: the North-central. Normally these forests are in concessions, cancelled concessions or protected areas. Many villages mostly farmer population living within the 5km of the evergreen and semi green forests are likely to have forest-dependent livelihood. During the last few years at the accelerating pace, there has been an over exploitation of this natural resource by illegal logging. If this uncontrolled activity continues the livelihood of the population in particular the poor will be in serious danger.



**Fig.14** typical forest in Preah Vihear, province (Plateau and Mountainous region)

Source: Forestry Administration 2003, (MAFF)



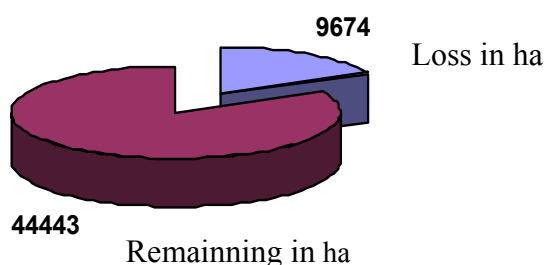


**Map 8** Preah Vhear is a semi-green area (Ref 4; p14) CRID/WCS

Map number 8 shows that Preah Vihear province is a semi-green area. The number of population living and mostly depending on forest for livelihood is within a radius of 5 kilometers. The danger is that without good management those areas could face near-term threats of deforestation due to commercial logging and road access, and /or due to their close proximity to the villages. It was estimated by CDRI-WCS in his special report “Focusing on Cambodia’s High Value Forests: Livelihood and Management” that net Ever Green and Semi-Evergreen Forest losses in Preah Vihear province from 1996/97 to 2002 is 9674 ha, the remaining forest is 44, 443 ha resulting in a forest change of minus 1.79%.

**Forest loss in Preah Vihear from 1996/97 to 2002**

**Chart 10**



The loss of forest in Preah Vihear province has started progressively strating from the loss in natioanl parc Lung in Kompong Thom province, while the loss around Preah Vihear temple areas started only since 2008 during Cambodian Thai arm conflict up to now with widle deforstation by soldiers.

Source : Site monitoring by PVAN an Author from 2009 20013.

**Chart 10** based on Source: CDRI/WCS (2004); (Ref 4; p 28)



**Table 7:** Forest Cover and Rate of Forest Loss in Cambodia from 1960 to 2002

Year	1960s a	1973/76b	1985/87 b	1992/93bc		1996/97c	2000d	2002e
Forest cover (000ha)	13.27 7	12.711	11.852	11.284	10.859	10.638	9.245	10.379*
Forest Cover as % of total Land Area	75.2%	71.9%	67.4%	63.6%	61.3%	60.2%	52.4%	56.5%*
Time Period of Analysis	1960 to 1985/87		1985/87 to 1996/97			1996/97 to 2000/2002		
Average Annual Rate of Deforestation	0.5%		1%			1.7%		

Sou  
rces

: CDRI/WCS

a-Commonly referred to estimate from the French colonial era, but the original source is unknown. Reported in Report No 2 of the Ministry of Water, Forest and Hunting (1965) in Ung (1991).

b-Mekong Secretariat (1994).Cambodia Land Cover Atlas 1985/87 and 1992/93, UNDP/FAO in Sources:

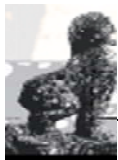
c-DFW (1998) in DFW (2003a).

d-FAO (2000).

e-DFW (2003b).

\* Not reliable

Yet, there has not been a proper and well thought program for reforestation in particularly for tree of good quality with high commercial value normally used for future making. In doing so and in improper manner, they deplete the natural resources in such a way that nature might not be able to regenerate itself in the future. In addition for the survival of the population rural poor continue clear forest for agricultural land. The lack of protection of sensitive biodiversity has been going on, even since the end of Khmer Rouge regime at even



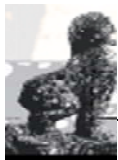
serious over exploitation of forestry potentials and a systematic destruction of natural resources. Community Forestry in Cambodia should a crucial role because of the invaluable potentials provided to the people for their livelihoods in particular the poor farmers but obstacles raised continually by pressure from private investors with negligible attitude from the relevant authorities due to the implementation of laws allowing private concession to investors. (See map on page)

### **Collection of Forest Products**

Most households are engaged in forest product collection for trade. It is estimated that about three-quarters of households in Preah Vihear involved in this activity. These households are collecting dozens of forest products and this activity generates about half of household's income. For each generation, resin is the most important product. But wildlife, fuel wood for cooking, and other non-timber forest products are also critical to livelihoods. Many factors push household to undertake this activity.

- Market demand- For many products, these factors play the greatest role in dictating how collection occurs. Demand from traders is intense in the area, added to an easy way to transport products to semi-urban provincial market. Many products that exist in abundance are simply collected by population who see in this activity substantial increase in the household's income.
- Household demand- In addition to wider market demand, there is often strong need within households for forest products like fuel wood for cooking, wildlife for consumption, bamboo, rattan and other NTFPs for household materials such as resin for making torches for lighting.
- Access and distance to resources- Fuel wood and many other NTFPs are generally available in areas nearby villages, whereas resin tapping and hunting require long-distance trip to the forest. But sometime these trips are made possible by logging roads that penetrate deeply in the forest areas except during wet season due to flooding by high level of stream in the rivers.





- Labor availability- Women and children tend to have responsibility for collecting forest products from areas nearby villages whereas men usually devote their time to resin tapping or wildlife hunting.

### 1-1-6 Socio-economic

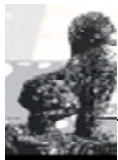
Preah Vihear province relies principally on agriculture and forestry to develop its economy and to push forward its social improvement. Agriculture as explained in the above paragraph shows potentials even compared to the others provinces in Cambodia. It requires an extensive development by an improving not only scientific methods and techniques on production of paddy rice so to optimize yield per hectare of land but also sustainable investment in adequate equipment and a good management. Most of farmers are still practicing traditional tools and ways of doing due to the lack of information, training but in particular appropriate assistance from public sector. The major part of population has main activity in the primary sector and depends on forestry for livelihood. Often, they get their basic needs such as fire wood and commodities; fruits vegetable and bush meat from nearby forest.



**Fig.15** Planting rice from nursery

In most part of Cambodia agriculture is still practicing in the traditional way with help between farmers for particular work. The need of labor force is not balanced between input and output in term of production. In some limited area there is introduction of mechanical tools for rich famers only.

The majority of the population of Preah Vihear is not different from lowland Cambodians in terms of their daily diet. They eat rice and fish as basic food consumption. But the local production of both is insufficient to meet the needs of the population. Rice and fish are both imported from outside the province. Some initiatives were piloted for aquaculture production. Many farmers were involved in these activities and some continue the practice and see a potential for its development. Some farmers encountered were considering



investment in fish rearing as they considered it to be a very profitable activity even when supplying the local and provincial markets.

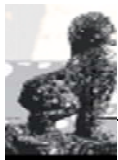
In sector of industry, the province of Preah Vihear disposes almost no activity. The only activities that could be considered related to that sector, in a large definition is limited to local production of consumption goods and basic food, household equipment such products derived from handicraft. In the province where scarcity of electrical energy exists and is mainly concentrated in the provincial capital, possibility to create opportunity and to undertake any initiative in that sector of development is problematic. The total availability of electricity in the province is estimated 1000 kW in 2006 (Ref 1; p 256) most of it is for the province-city, installed and managed by private investors. Since the downfall of keys industries in Cambodia such as garment, food transformation and construction started with the financial situation, labor wage then now to economic crisis. Preah Vihear is now becoming further away from having good probability to reach out for at least the starting point of real industrial development. Some small PME do exist mainly in the sector of building construction such as quarry, timber, clay bricks and clay tiles. (Ref 1; and Provincial Authority Office 2009)

**Table 8** Evolution of Industry sector in Cambodia

Industries	2004	2005	2006	2007	2008p	2009p
Garments	24.9%	9.2%	20.4%	10.0%	8.8%	6.8%
Food, Beverages & Tobacco	-5.3%	9.0%	3.3%	3.1%	5.5%	5.5%
Electricity, Gas and Water	11.3%	12.7%	31.5%	11.7%	12.2%	11.2%
Construction	13.2%	22.1%	20.0%	6.7%	-0.3%	-5.7%
Other Industries	9.3%	17.4%	14.1%	6.4%	8.3%	7.2%
Total Industry	17.0%	12.9%	18.4%	8.4%	6.4%	4.1%

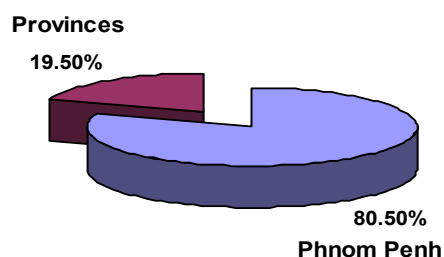
Sources: *Compiled from NIS for 2004-2007, EIC projection for 2008-2009 (Ref 3)*

Most of household products are derivatives from modern materials such plastic, heavy duty fabric or aluminum are imported from neighboring countries in particular from Vietnam and from Thailand. Light machineries like water pumps, electrical rice cookers or small electrical appliances are imported from either Singapore, Malaysia but mainly from Mainland China. These light industrial products are still absent from Cambodian local market.



Based on Table 5 indicating the trends of industrial development sector in Cambodia, the forecast for Preah Vihear in that segment of development is rather grim in the next few years unless the country economic recovers soon enough to stimulate investment.

**Distribution of Electrical Energy in 2007**



**Chart 11**

Sources: Chart Based on SYBOC 2008; p 253 (Ref 1)

**Preah Vihear compared to 3 Province/cities with least Electricity Energy in 2007**

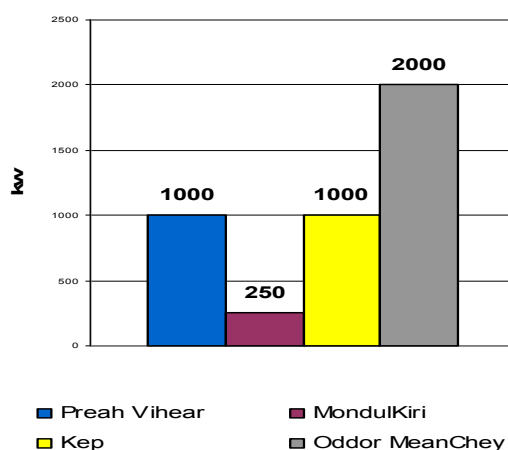
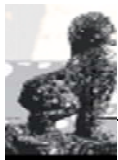


Chart based on SYBOC 2008; p 256 (Ref 1)

**Chart 12**

The lack of energy is somehow crucial to encourage any industrial activity even for manufacturing purposes to meet the local demand in term of basic household needs. Without Energy, services are also limited sometime non-existing such as fax, phones or office equipment that could facilitate communication and commercial requirements.

Preah Vihear is one of the remote provinces in Cambodia. It has many disadvantages in term of basic criteria needed for development. Its geographical position is major handicap.



The lack of infrastructure such as road network that could link it to regions and cities with high commercial activities or economic exchanges in the country has created a difficult situation to vehicular persons and goods from one area to another without important time consuming. The insufficient of electrical energy which is indispensable to launch industrial activities even for local market constitutes serious difficulty to enhance small and medium manufacturing enterprises that could create for local and regional market. Amenities and services have not reach a level to stimulate any related activities in the province. In term of labor force, there are limited skilled workers in the field of construction or basic machinery due to lack of both appropriate educational policy and training program. In view of these relevant factors which are fundamental requirements in order to set up feasible industrial implementation activities, Preah Vihear province is yet a long way from creating favorable conditions for economic take off.

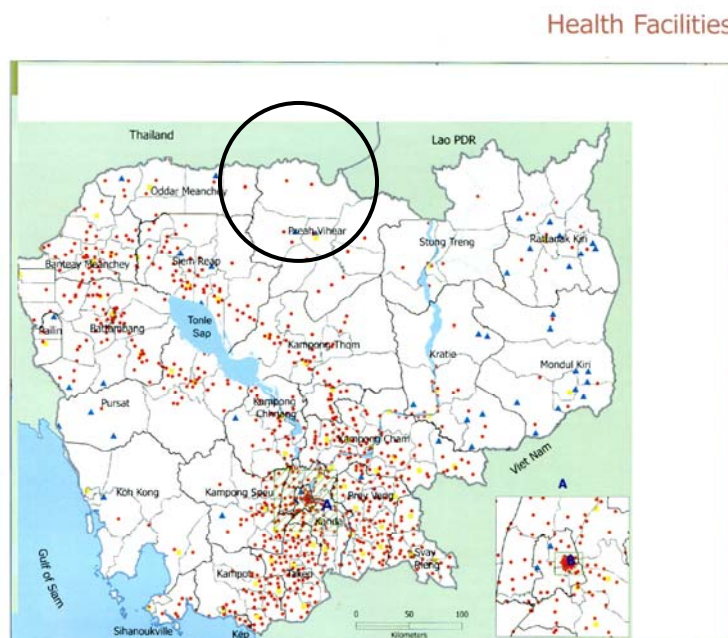
### **Poverty and Vulnerability**

Farmers, both poor and non-poor, in Preah Vihear are generally vulnerable to at least three main shocks. However, the most vulnerable groups to these shocks are the poor. The three main shocks are: drought, contagious diseases of humans and animal epidemics. The three shocks have forced many households into poverty trap. However, the drought is not as bad as in late 2004 and early 2005, which was the most serious drought that the province has ever experienced according to the memories of the local elderly people. Contagious diseases on humans and animal epidemics are the major shocks that happen every year.

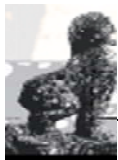
The disease problems of both humans and animals could be minimized and avoided, if relevant and appropriate services are provided on time. For example, animal epidemics could be dealt with effectively if adequate veterinary and vaccination services were available. But, they are always in short supply, not only for poor households, and are never adequate and only available for cattle and pigs. To salvage their animals during epidemics local people pay for treatment, which could not help much because the quality of the services provided remains poor. Human diseases are of many kinds starting from deadly malaria, typhoid fever to very common parasitic diseases and dang fever happening frequently to children. Since public health services are inadequate most of households do not have possibility to go to private medical treatment.



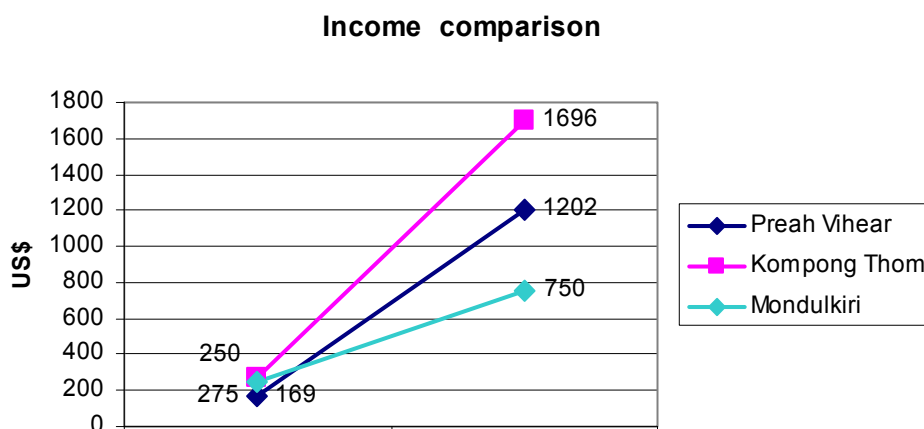
Animal epidemics are often reported in nearly all villages as one of the vulnerabilities from which the poor suffer. Some of the villages, for example, lost nearly all their chickens, which are the only animals few poor households could afford to keep. Source:(Ref 13; p 6).Approximately 25% of the total population do not have access to health care at all because the government resource does not have the possibility to respond to the rural people living in remote areas. (See Map 9)



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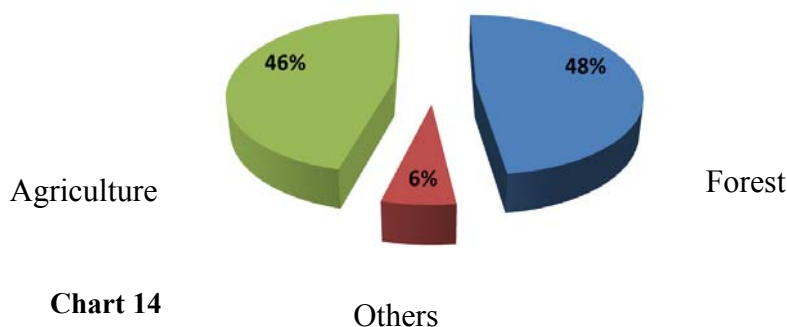


The population in Preah Vihear province like many those in other region in the remote areas far from few economic centers concentrated in urban areas have an average incomes per household varies from US\$169 to US\$ 1202 per year, meaning less than US\$ from bottom to US\$ to the top.(Chart 7). By definition of poverty level is of US\$ 0.80 in 2003/4 per household and US\$ 0.96 in 2012 (Ref 8). Chart No 7 shows that Preah Vihear has more population under poverty line in comparison among the three provinces.



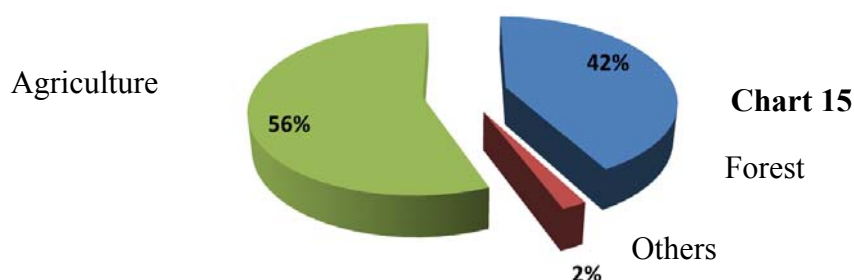
**Chart 13:** Annual Family income of Preah Vihear province compared to those of Kompong Thom and Monduliri province

Source of Rural Household's income in Preah Vihear Province



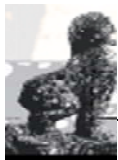
**Chart 14**

Source of Rural Household's income in Kompong Thom Province



**Chart 15**





Source of Rural Household's income  
in Ratanak Kiri Province

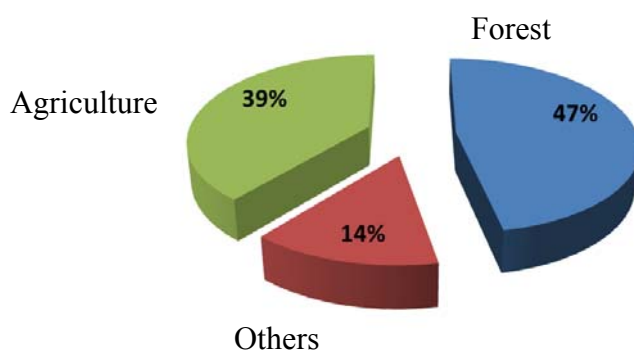


Chart 16

In comparison with provinces Kg Thom and Mondulkiri, charts 8,9,10 prove that Preah Vihear depends so much on agriculture and forest products for their livelihoods more than the two other provinces .

Charts based on Sources: CDRI-WCA 2004; (Ref 4; p 54).

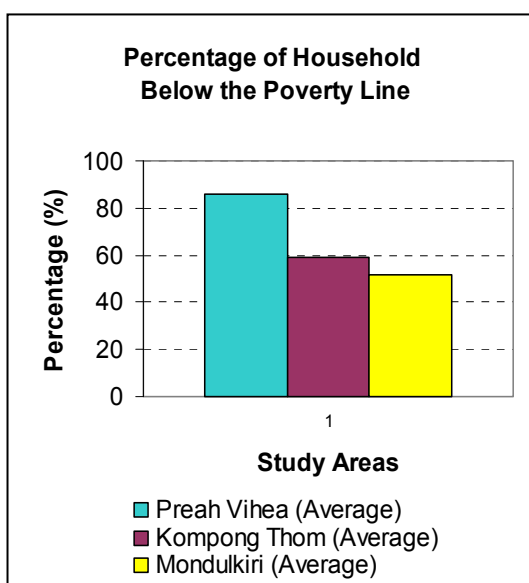


Chart 17

Charts 16 , 17 allow by comparison the of sources of income per family of Preah Vihear to those of Kompong Thom and those of Mondulkiri provinces,proves Preah Vihear has a high percentage of houholds below poverty Line .

Sources:CDRI-WCA , p 55; (Ref 4)



Fig.16 and 17: Typical rural poor houses in the Preah Vihear region by APSARA team in 2008.



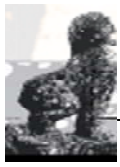
## **1-2 Preah Vihear Temple and its Region**

Referring to its geographical context, Preah Vhear Temple is located in the extreme remote area; North-East of the province of the same name, in the district of Choam Ksan in the commune of Kantuot. Because of its extreme location in comparison with other districts of the province its socio-economic is far below the average of those in the province. Not until 2002, the temple site and its surrounding areas were almost inaccessible. It is on the extreme North of Cambodia at the distance of 550 km by road from Phnom Penh, the Capital city of the country and at 240 km from Angkor Wat the World Heritage Site located in the province of Siem Reap. The Temple was built on the cliff of the Dangrek Mountain Range at more than 600 meters high. The Dangrek Mountain Range separates Cambodia from the two neighboring countries; Thailand and Laos. In the true economic definition, Preah Vihear Temple region was inexistence and the population was cut off from the rest of the country.

### **1-2-1 Definition of Preah Vihear Temple and its Region**

For the purposes of this dissertation and for the comprehension of the analysis which is limited to the scope of this thesis, Preah Vihear and its Region is defined as a spatial area comprising of the following zones and region :(Appendice 5)

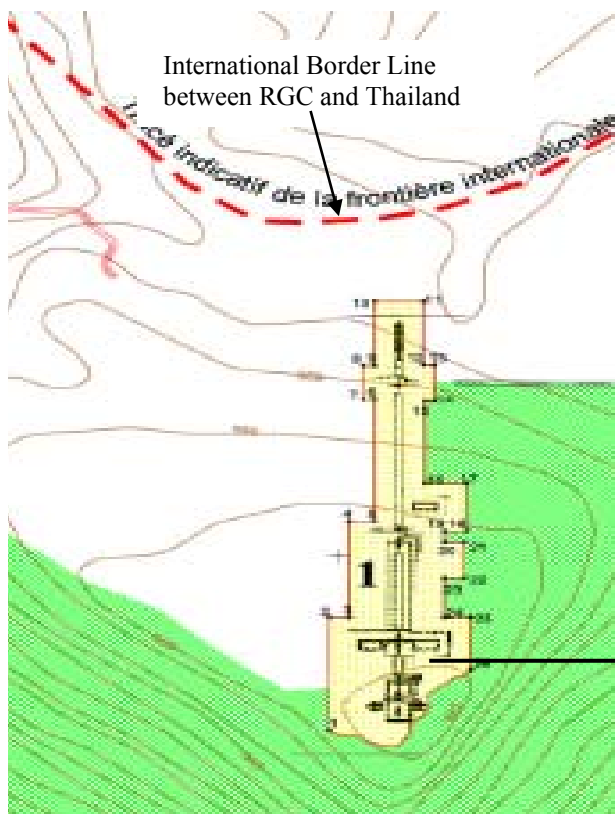
- ***World Heritage Zone***, a physical space comprising the Temple and its immediate surroundings in conformity to the decision of 31COM8B.24 at Christchurch, New Zealand on July 2007. But this zoning has been modified (temporarily) at the inscription of the Temple into World Heritage list in July 7, 2008 in Quebec, Canada. The World Heritage zone comprises 2 zones: the temple zone called Z1 and the buffer zone or protection zone called Z2.



a/ **Zone 1: Temple zone** with an area of 11 hectares (154.70 hectares originally proposed) is the core zone where is located the Temple. This zone is the most important of the site and must benefit with high level of protection. It comprises all the Temple Structures situated at 625 m altitude on the cliff of the mountain. The historical staircase constructed by cutting in the mountain rock is located on the East side of the temple with a steep slope including a space of 50 meters wide on both sides of the staircase. (See Map10 and, Fig.18, below).

The Sacred Site of Preah Vihear; source: PVNA 2008;

Source: (Ref 5); Appendix 2



**Fig.18**



**Map 10** Temple Zone (Z1): Picture 18 Temple on North-South Axis (Ref 5)

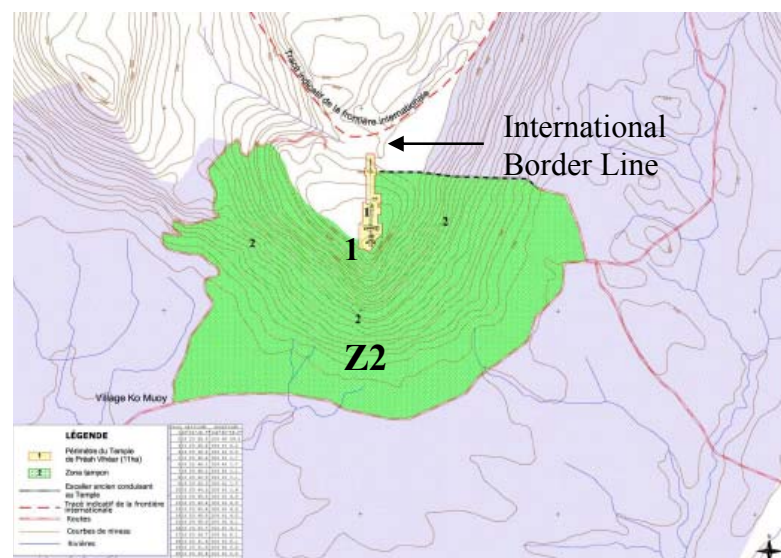
The Temple lies on its North-Axis. The North staircase faces the Thai border, the South the The East and the West are in Cambodian territory.



**Fig.19:** the Temple Site is at the + 625m high from sea level

Source: Ref 5

b/ **Zone 2: buffer zone** with 644.113 hectares (2642.50 ha proposed). It is the protection zone of originally archeological Park, of landscape and environment. It is adjacent to Zone 1, the border line between Thailand and Cambodia the points A, B, C, D on East side. The South side and the West side provide an angle of view of 60 degrees angle.

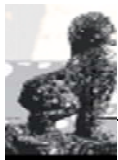


**World Heritage Site Buffer Zone (Z2)**

**Map 11** submitted to World Heritage Committee for inscription in June 2008 (Ref 5)



**Fig. 20** Buffer Zone (Z2); Source: PVNA 2008 (Ref 5)



c/ **Zone 3:** Nature and Landscape Protection,  
Temple Discovery zone.

This zone covers a large area of 50 000 ha for protection of nature and landscape. It is called Susana's Square, in honor of environmentalist specialist Richard Sussman who participated in the designing of Preah Vihear Management Plan and who had the vision of how to better protect the Temple and its Region in the sustainable manner.

Eco-Development activities would be allowed to take place if conformed to the objectives of the zone likes eco-tourism and related projects. All Tourism development could take place, but it shall be integrated in the global concept of the protection of the site and the environment natural. The development could be a cluster of satellites zones of limited size with the traditional livelihood of group ethnic and ancient population already living in the surrounding area of the Temple. All development projects to be implemented in Zone 3 should be subject to compliancy with its Development Master Plan and the land use plan that Preah Vihear National Authority should prepare at the earliest possible date. Rules and regulations shall be set for planning, in order to the World Heritage Site a lively space and safeguard and to protect the quality of nature. This zone is planned to be the future extension of buffer zone of the World Heritage Site area. It is expected to be integrated to the present Buffer Zone (Z2) at the later date.

d/ **Eco-Development Z4** The *Sussman's Square* is an extension of (Z3) which encompasses a larger area in the direction of the existing nucleus of villages located on the on the road network. These villages a type of traditional human settlement could be later on be integrated within the process of the Temple development zone by complying with the Management Plan.

The living conditions of population in the villages in the areas yet precarious, would change to participate actively in the tourism development of Preah Vihear whose potentials in that segment of



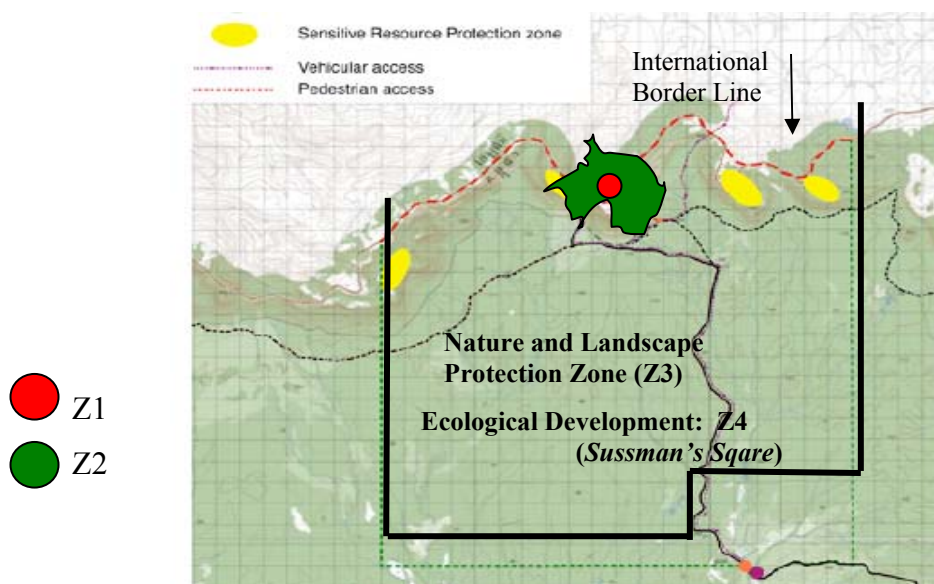


activities are important but are full of promising future in term of economic growth and social improvement.

#### e/ R 5 Economic zone at the level of District

Has an area of approximately 160 000 ha. It consists of additional physical space close to the World Heritage Zone and to the Zone of Ecological-Development. This area is adjacent to zone 4. This zone with a large space is recommended to be in the future capable in generating interaction and synergy with three other zones so all together would have a chance to create a pool of economic activities leading to the development in the district of Choam Khsan.

The role of administrative center inglobing the Temple area will have an important role to play as a facilitator of the development generated in the district. It will have the responsibility in implementing laws, regulations concerning land use planning, protection natural environment, deforestation, protection for farmers, implanting policy of development with the BoD or the PVDA which will coordinate the technical aspect and the management of natural resources.



**Map 12:** Extension of Z2 into Nature and Landscape Protection Zone in the future  
Source: PVNA, 2008 (Ref 5)

The region of Economic Influence (R5) should also act to support the World Heritage zone to spearhead the development so it could, in return,





benefit from the positive driven effects of areas with high potentials of growth. The region of economic influence could in the future expand to neighboring districts and be integrated at the national level in development strategy and policy scheme in the long term.

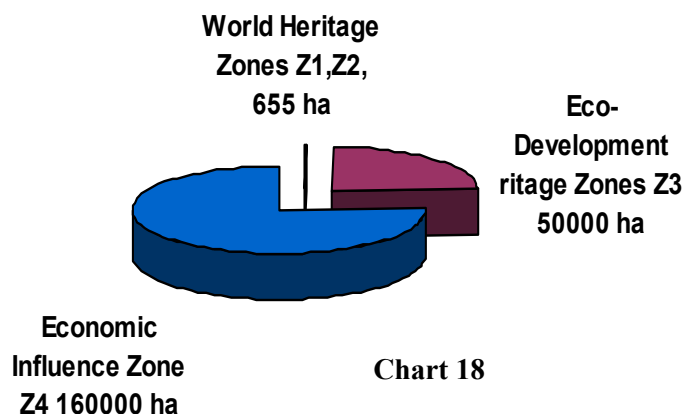
(See Map 13, p 56)

**Table 9** Area of different zones of Preah Vihear Temple Region

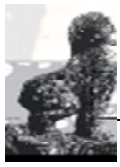
Temple Zone Z1	Buffer Zone Z2	Ecological Development Z3	Economic Influence Region(4)
<b>11 ha</b>	<b>644. ha</b>	<b>50 000 ha</b>	<b>160 000 ha</b>
154.70ha Originally proposed	2642.50ha Originally Proposed	Or 500 km <sup>2</sup>	Or 1600 km <sup>2</sup>

Source: PVNA 2008; (Ref 5)





## Size World Heritage Site compared to its Region

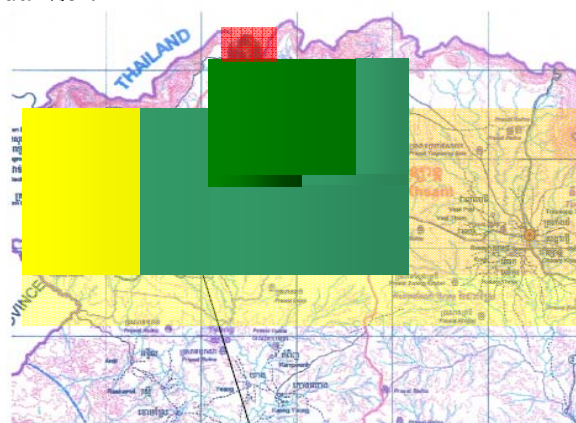


The total area of site comprising the Sacred Site of Preah Vihear Temple including its zones of natural protection, eco-development and its zone of economic influence is evaluated at 210 655 ha. It is under the responsibility of the National Task Force created in 2009 for the Development of the Preah Vihear Temple and its surrounding Region.



The reason behind why the Z2 and Eco-Development zone is such a large area because it would be easy to prevent land grabbing for illegal use and from loitering. (Ref: Scottish Center for Crime and Justice Research Cambodian; British Journal of Criminology, June 2014). The experience of World Heritage Site of Angkor is the example of such a situation. The protection Z2 of Angkor is threatening with the wide spread of urban development sprawl which is sometime illegal if referred to the rules and regulations of the World Heritage Committee. But pressure or high demand of land closed to prestigious monument for commercial, hotels and housing purposes became unbearable. Despite laws and control by APSARA National Authority, there are constant attempts from investors to pursach land reserved for the protection of the Angkor site. The situation of Angkor concerning the protection zone 2 is now critical due the fact that many constructions have overlapped or intruded in the protection zone. The main cause of this conflict between economic pressure and the conservation policy stems from negligence of the government to take adequate measures physically and politically since the creation of the limits of the World Heritage Angkor Site at the beginning and at the time of its implementation. Since 1992 the inscription of Angkor to the World Heritage list and the conference of Tokyo to set up an International Committee for the Coordination of Angkor (CIC) in order to help the RGC through APSARA created in 1995 to solve the problem of intruding into the Angkor Site but these phenomena still persist and become a serious issue that needs adequate solution otherwise Angkor Site will be in danger.

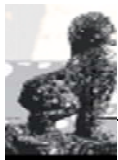
-  World Heritage Z1,Z2
-  Nature & Landscape Protection Z3
-  Eco-Development Z4
-  Economic influence Region (R5)



Map No 5 Temple Preah Vihear & Region



Map 13



Map No 13 Shows the approximate area defined as Sacred Site Preah Vihear and its Region. It involves the districts of Choam Khsant, Cheb and Tbeng Meanchey, comprising many villages rich in history, cultural as well as agricultural land and water network which are the main natural resources necessary for development. The region shall play the role of economic support for the development and in return shall benefit from wealth generated by the potentials of the World Heritage Site. In the future there is possibility to envisage the development starting from Preah vihear area to link with the existing infrastructure network that permit an overreach to other small districts that have development potentials such as the Choam Khsan on the West and to Along Veng on the East because Along Veng is a junction town between Seam Reap Province and Sisakhet the Thai province through which transit many goods and tourists from both sides.

### **1-2-2 Geography and Population:**

**A- Geography:** The importance of Temple of Preah Vihear could be assessed in the geopolitical context of the Dangrek Range where the sacred Temple is located. The range extends from the Mekong River westward for approximately 320 kms, merging with the highlands near San Kampheng in Northern Thailand. The Mountain Range slopes down to the North towards the Mun Valley. It stands erect like a high wall in the South. The temple of Preah Vihear is located on a promontory plateau of ones of the summits of the Dangrek Mountain. This plateau is on the eastern sector of the Dangrek Range. Some 200 meters large on its East-West axis and several kilometers long on its North – South axis, the plateau culminates as a steep cliff, inaccessible from the South. From the remaining three sides the North, East and West, the mountain is approachable, but with an important slopes. From the North, meaning from the Thai side the slope is exceedingly gentle. From the East and West it is extremely steep. Looking from the Temple towards South side on Cambodian territory, a plateau then a vast plain is stretching southward in the direction of the ancient Khmer empire capital city Angkor Thom. From a high altitude of Dangrek Mountain the topography of the site is highlighted by progressive gentle slope towards the basin of the Great Lake Tonle Sap.



**Map 14:** Compared distance from the capital Phnom Penh and from Angkor Wat to Preah Vihear World Heritage Site (Map by Samreth Socheat OCM/RGC)

**B- Population:** In immediate proximity of Preah Vihear site, e.g. area in and surrounding the Zones 1 and 2, according to a survey done in January 2006 by the Department of Population and Development of Apsara National Authority, the number of population living around the site of Preah Vihear temple was marginal with only 1754 inhabitants. There were also 947 people (515 males and 432 females) inhabiting in the village Mean Chhey nearby. In addition, before Thai artillery attack on April 3, 2009, there was a village of 319 families closed to the main staircase in direction to Thai border. For security reason its inhabitants have been evacuated. This population was living in the Temple zone Z 1. At the bottom of the mountain of Preah Vihear there is a village called Ko Muoy. It is small village with light construction and has been expanding lately. It has a population of 319 families. The total population approximately 800 families or 4000 persons should be removed from the Sacred Site Preah Vihear surround area to be reinstalled in new village to be located outside the boundary of the protected zone Z2 and Z3. The new village is in construction and is expected to be inhabited progressively around September 2009. The village lay out on the border of the Natural and Landscape Protection in Eco-Development zone (Z4); (See Appendix 10) is the first important project of human settlement in the region. According to the scale of the project, the village of 4500 ha for a population of 4000 people will be equivalent of a small town with adequate infrastructures, amenities and facilities in order to comply with the basic requirements needed by the inhabitants.



**Fig.21** Village market in Z 1, Situation before Preah Vihear being Sacred World Heritage Site.





**Fig.22** Village Ko Muoy in Z 2

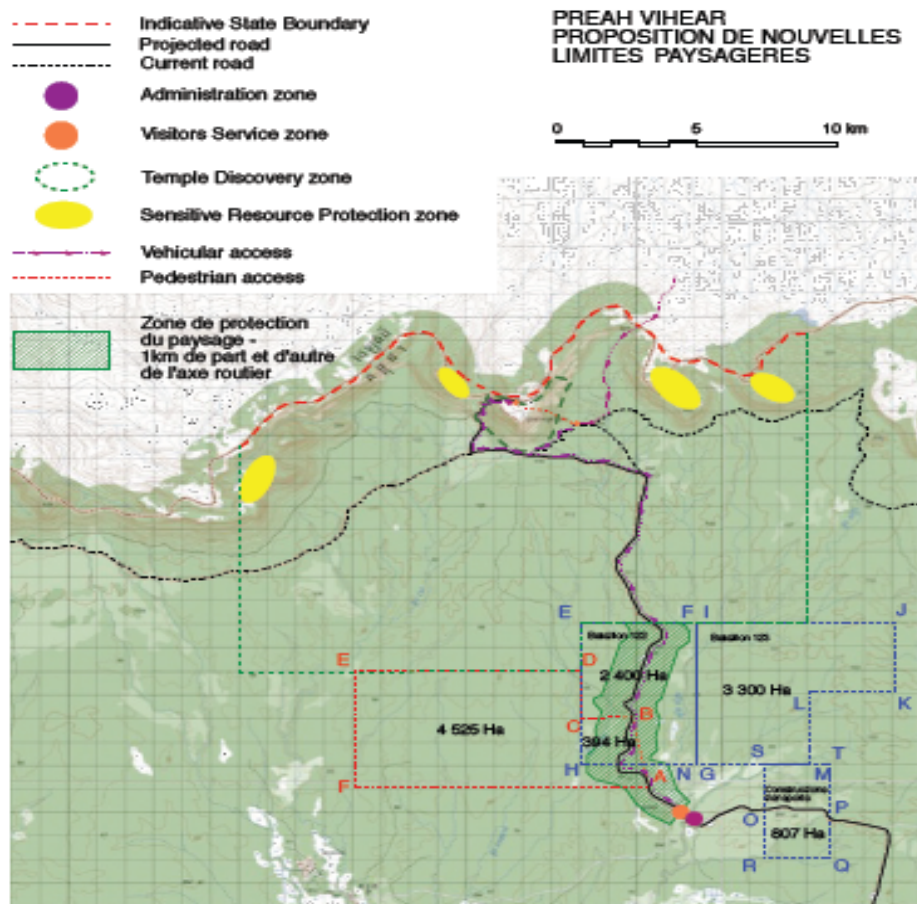


**Fig.23:** Village Ko Muoy seen from the Temple.

This village market, Ko Muoy has been evacuated from the temple zone and resettled in the new Z4



called Eco-Village “Samdach HUN SEN” in 2009. Source: PVNA (Ref 5): Appendix 10

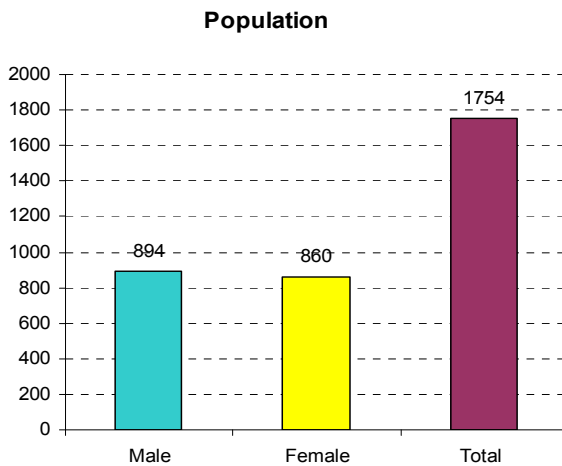


**Map 15**

The first development of the Preah Vihear in Z4 adjacent to the Nature and Landscape Protection zone Z3, called a Temple Discovery zone. Source: PVNA 2008; (Ref 5)



Population living in Temple zone 1 and Protection zone 2 of the Temple site in January 2006 before being relocated in 2009. Chart 19



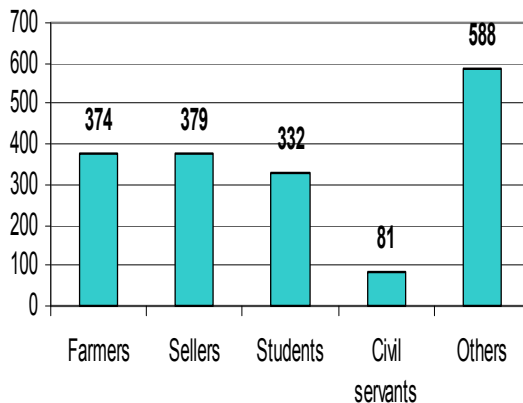
**Chart No 19**

**Chart 19** shows the occupation of the population living around the temple areas.

Farmers and retail sellers have almost the same number while 588 people are in category others meaning the employment are not stable. Out of the total number of population of 1754 there are 588 in the category of uncertain reflecting the possibility of people seeking work. The percentage of this category is high with 33.5%; about 1 out of 3 people has no specific job. The civil servants are mostly teachers, police force and administrators representing local government.

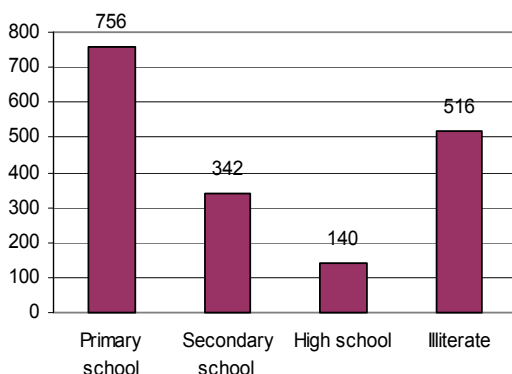
**Chart 20**

**Occupation**



**Chart No 20** represents the level of education of people. Out of the total population there are 516 illiterate a percentage of 29.4%. It shows that close to 1 person out of three cannot read or write. But a good sign of many children in primary school 43.1% proves that education is now considered by the parents as a hope for a better future for their offspring's. The 3 Graphs explains the signs of poverty of Preah Vihear temple region

**Education Level**

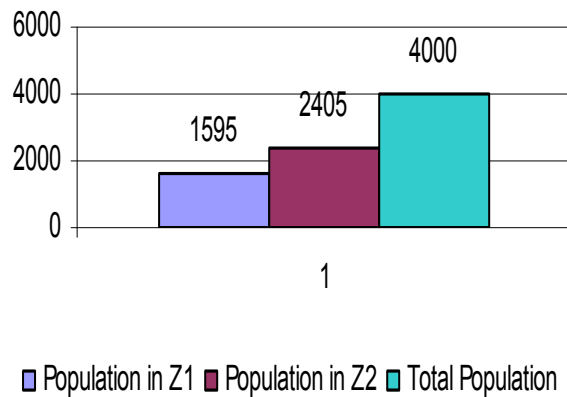


**Chart 21**





**Population living in World Heritage Site  
Preah Vihear in Z1 and Z2 in 2009**



**Chart 22**

Sources: Committee for the Resettlement  
of Population in 8 April 2009 before  
its relocation outside the Sacred  
World Heritage Site

**Chart 22** shows that the population in Preah Vihear Site Z1 and Z2 has increased rapidly, more than twice in 2009, only for a period of 3 years. This phenomenon is linked to 2 factors:

- the Temple became World Heritage then the change of statute has pushed the population to come to the area to sell their products to the tourists they expect to increase in number.
- uncontrolled speculation by shop owners who expected an added value of the place they occupied.
- these 2 factors have been stopped after the attack by Thai military troupe across the border on 3 April 2009.

For safety reason Cambodian Government has evacuated the population to a new village outside the Zones Z1 and Z2 of the World Heritage Site.

The population of the Preah Vihear Temple Region including the economic Influence zone has increased since 2010 with farmers in majority as illustrated by charts No 22 in 2009 and by Table 10 between 2012-2013.

**Table 10:** Population of Preah Vihear Temple and Region in Sra Em,  
Chaom Khsant district (2012-2013)

Village	Number of household	Profession			Total Population
		Farmer	Handicraft	Service	
Sra Em North	727	1514	28	306	2495
Thamachheat	2512	500	0	623	7172
Sen Chhey	875	616	0	848	1003
Bosbuey	137	137	0	124	589
Chhambaok	217	147	30	248	959
Senchey					
Bangkol 8	410	685	5	424	1600
Stung Kheav	230	632	9	48	777
<b>Total</b>	<b>5108</b>	<b>4231</b>	<b>72</b>	<b>2621</b>	<b>14595</b>

Source: Survey team of PVNA 2012-2013

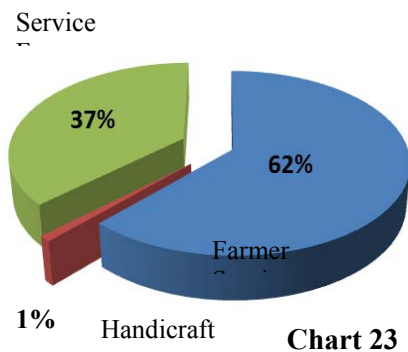


Chart 23

Percentage of farmer, handicraft and services among total population in Preah Vihear Region: Survey team PVNA 2012-2013

**Chart 23** shows the situation people living Preah Vihear Temple region in term of paddy rice production in comparison to the increased of the population. The chart 16 illustrates that the paddy rice production is slower than the rate of population growth indicating the poverty level in term of food safety net.

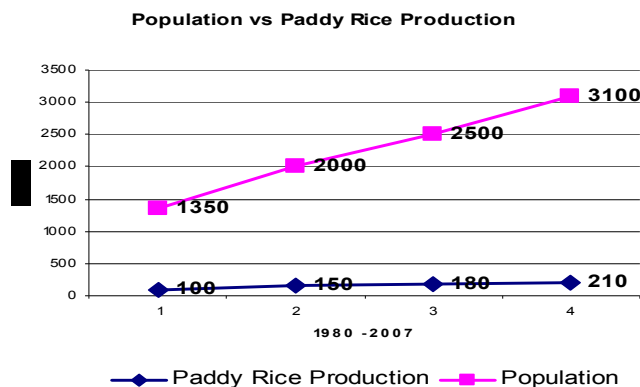


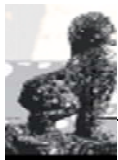
Chart 24

Source: Chart No 24 based SYBOC 2008, (Ref 1; p 218)

### C- Socio-Economic and Poverty:

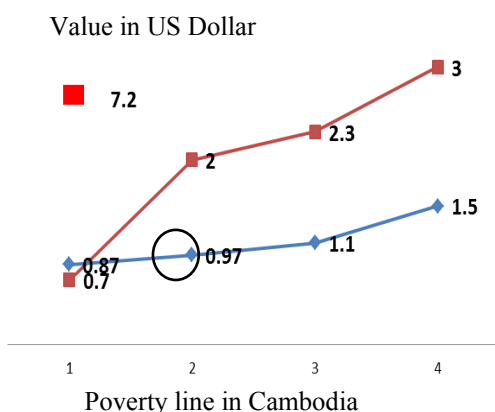
The conditions socio-economic of the surrounding zones of the Sacred Site of Preah Vihear present a variety of situations. The first group of population in the villages located sporadically in Z4 has less income and living conditions are lacking behind the population who are living in region of economic influence R4 who benefit from direct market access generated by tourists and travelers who stop by for relay trip to other parts of the region in Preah Vihear province such as villages grouping around Sra Em commune which is considered as the gate to the temple. In addition Sra Em commune has a population in majority in commerce business, merchants and traders but only few farmers.

Nevertheless from 2008, the situation has been improved since the Temple became World Heritage Sacred Site. The number of local and international tourists has enhanced the



improvement of local market in term of production of commodities and services in sector of tourism. Tourism infrastructure begins to develop. Restaurants, souvenirs shops exhibits local products that have been initiated trough government help and nonprofit organizations. But recently a new type of development mainly mineral exploitation, illegal logging have affected and used for rice field plantations and access used for collecting secondary products by minority ethnic population Kuoy tri said a Kuoy representative of the community (source: VOA report in collaboration with VOA Khmer service; Jan 28 2014). Farmers who depend substantially on the forest for their livelihoods and do not have sufficient land for their activity in agriculture are the issues that have to be solved urgently if the living conditions of the marginal famers have to improve (see chart 17).

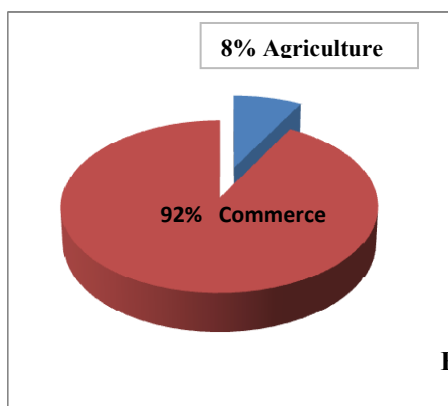
**Chart 25:** Household incomes in villages in Z3 and R4 of Sacred Preah Vihear World Heritage Site compared to poverty line in Cambodia



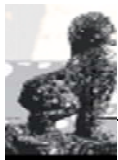
Sources: - PVNA survey team 2012-2013  
 - Poverty line (based on CSES 2009 data),  
 - PVAJ Student's survey 2012-2013

The household income varies on the location of village and the profession of the family.  
 -If the villages are far away from access roads and are farmer, the income ranges from US\$ 0, 7 to US\$ 1.5 per household per day with an average of US\$ 2.  
 - If the family not farmer located along the access road at the market center the average income is US\$ 7.2. The graph in blue represents the ID Poor in Cambodia in rural area with US\$ 0.7, urban area with US\$1.1 and Phnom Penh. with US\$1.5. Average for Cambodia is

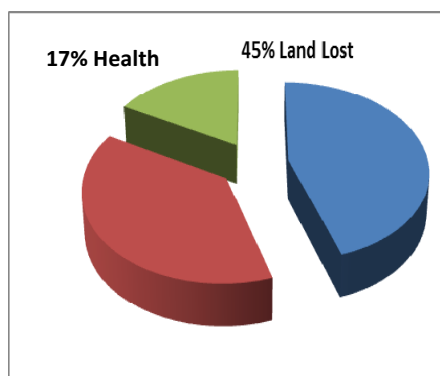
**Chart 26:** Source of revenue of population living around Sra Em town, close to market area.



**Fig. 24,25:** Typical in House in Sra Em Typical house rural poor



**Chart 27:** Main concerns of Population living in villages around Temple site in Z4



**Fig.26:** Typical plot of 100mx50m(0.5ha) that farmer has for farming

Charts based on survey data of PVNA (2012-2013) and PVJA (2013), Figures with courtesy of PVJA (2013)

Charts 18 and 19 show different level of life of people living in Preah Vihear region. The farmers in villages spread out in Z4 still need to improve their livelihoods with fear of losing their agriculture plot and illegal logging which destroys forest their source of living. They are the ones who need most help mostly land and forest.

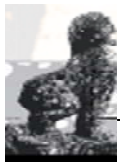
There still exists a range of socio-economic vulnerabilities that contribute to food insecurity. On such vulnerability is dependency on low, erratic, and secure sources of cash in incomes to by household needs including food. Another characteristic vulnerable is illiteracy, which is associated with higher levels of poverty and low incomes, and higher rates of child malnutrition.

### 1-2-3 Past Development

- **Historic**

Preah Vihear temple region had no or very limited development so when speaking about development it should refer to the whole development of the province of Preah Vihear in its global aspect.

Since 1962, when Preah Vihear temple and region have been declared located in the Cambodian territory and belonging to Khmer nation and under its sovereignty by the International Court of Justice, nothing much has been done for the development. The region was left in its natural and primarily state for almost forty five years, until recently up to the time the problem of border was created by Thailand a few weeks after Preah Vihear has been declared as World Heritage by UNESCO on 7 of July in 2008 in Quebec City in Canada. There are so many factors that explain the un-development of Preah Vihear.



- **The French Protectorate period**

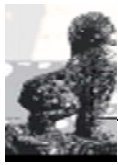
During the period between 1863 and 1953, Cambodia was under French protectorate. There were some sporadic and primarily researches conducted by French authority all along the region of Dangrek Mountain that constitutes the physical border between Cambodia and Thailand. Most of the researches were concentrated in archeology. Many French scholars have devoted time and efforts with compassion to discover the Khmer cultural in the past. This is the reason why many famous archeological sites and temples located along the Dangrek Range were found and shed light on the Khmer ancient civilization dated back from 6<sup>th</sup> to 12<sup>th</sup> century. Geography, climate, topography of the region were noted then released as drafts or sketches documents.

But parallel to the historical and archeological researches there were also a preliminary survey on natural resources of the region including that of the Preah Vihear temple site. Unfortunately the results of these researches were apparently kept out of reach of the Cambodian administration and apparently unpublished to the public. So minimum information and little knowledge was yielded about the geography, the geology and most important, the possible underground resources that might exist in the region. After 90 years of protectorate, France left in 1953 with little development of Cambodia.

*“French colonial authorities, while building roads, cities and schools, did little to modernize the Cambodian economy. Instead, they built large plantations for the production of rubber and other agricultural commodities, which they exported. For the vast majority of Cambodians, life did not improve significantly”\**

\* Cambodia after the Khmer Rouge by Evan Gottesman,  
Thailand and Cambodian edition published in 2004

After obtaining its independence, the new Cambodian administration continued the same attitude towards that remote region sometime left aside by other urgent preoccupation such as improvement and building of nation capital or important provinces in the country. But surprisingly enough it has been noted that all along from the time the country got its independence up to now, still there has never been neither an appropriate survey nor a comprehensive study of the natural resources in the region.



### **1-2-4 Development Trends**

- **Absence of a long term Vision**

There is a second factor relevant to the above matter. It is an absence of a long term vision of regional planning. Even though planning was still a new and not well known tool to use for development there were no effort to conduct an inventory of the nation wealth in term of natural resources; at least those on the ground that are usually easy to recognize and are relatively not complicated to be compiled for a working document. It is understood that the planning process was limited to a budged programming, and development mechanism was restricted to short term actions translated into immediate projects ready to be implemented. But even so there should have been more useful by disposing a list of available resources potential in the region. It is still difficult to know exactly how many hectares of arable land in Preah Vihear that could be devoted to agriculture, the type and quality of soil that is suitable for specific agricultural products, the soil eroded that needs to be generated for future purposes. There exists a map of soil productivity produced by the Forestry Administration in 2003 but it provides only approximated information about soil potentials in Preah Vihear and its region which is not sufficient for a comprehensive agriculture planning (See Map No 2; p 16). Up to the presence, there is yet to have systematic study of water resources in the region, there might be some vague information, provided most of the time, by farmers who have been living in the areas and who have been searching for water source for their everyday need for living. Only recently, there was a sporadic and quick survey or water resources in Preah Vihear and its immediate surrounding done by APSARA National Authority in 2008. The survey is more related to the drainage problem in the site of the temple. It concerns mainly the rain fall, its overflows the causeway and its destructive effects on the foundation of different parts of the temple and the erosion of the site around it. The data provided by the survey is important to study the adequate protection measures to preserve the temple from deterioration in the future. It is a part of the many components of the management plan submitted to UNESCO for the inscription Preah Vihear in the World Heritage list.

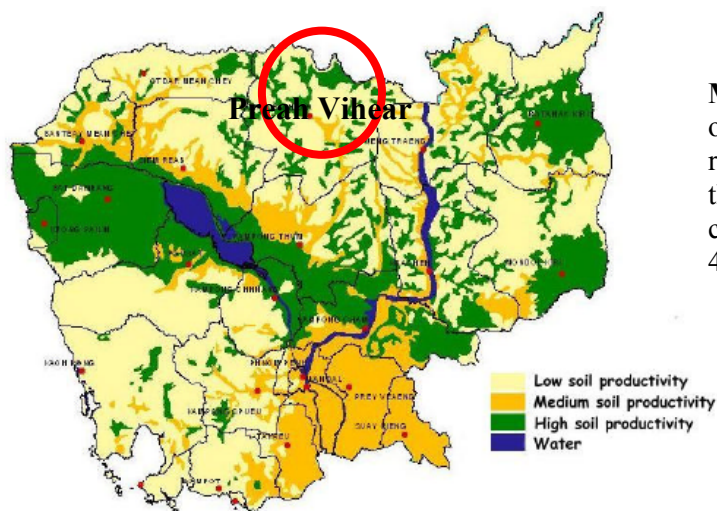
One year later, there was another attempt to survey water resource in the region of the temple. The survey should led to a detail study of the hydrology that would permit the appraisal of water resource potentials which could provide accurate data about the possibilities of Agriculture practice and human settlement in the areas. Until today the





total population has no safe drinking water. They rely on wells and ponds for their everyday use but these reservoirs are most of the time dried out during draught season that comes at least once a year. This is the case of the Ko Muy village at the bottom of the mountain from which the access road to the temple starts.

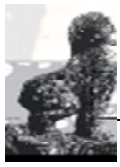
Before the Cambodian Thai border incidents, people living in the market-village located by the monumental staircase of the temple used the monumental staircase at the bottom of the temple giving access to Thailand to cross into Thai territory to have their supply of drinking water. This situation was still acute before the close of border gate by Cambodian government in 2008. Many other people living closed to the road going to Ko Muy village make their provision of water at a big pond in an area of wet land located on the same road 15 km on the way to Sraem village. Up to today the problem of water remain unsolved except for the raining season during which streams from high ground and mountains near by provide not only sufficient water but most of the time create flooding conditions that bloc the circulation and deteriorate the only road from Sraem to the temple site.



**Map 16** Productivity of soil in Preah Vihear region comparison of the other regions in the country; Source: (Ref 4; p 42) CDRI/WCS

- **Unawareness**

A misjudgment of benefices and outcomes that could generate from the development of Preah Vihear Temple and its region at the national level, is an integrated global perspective of sound planning strategy. It would be illogical to plan the development of the nation without considering the potentials of each one of the provinces in term of its social and economic advantages or disadvantages and furthermore without a good comprehension of the synergy between regions that could lead to the approaches of development scenarios, then finally to adequate and feasible solutions. Lack of human resources could be one of the



reasons of this unawareness, but lack of a long term comprehensive vision from the authority is the fundamental error that should be now corrected as soon as possible. The speed of development in the neighboring countries region is increasing in order to answer to the needs implied by the population growth and by the desire of each country to move forward in term of economic growth and social improvement. In the context of regionalization and at a larger scale of globalization, the momentum to compete between nations is becoming more acute day after day and the nation which is at the end of the trail failing to keep pace with others would find itself in a difficult situation. Development requires time, strategy and appropriate planning. These criteria's must be formulated quickly so actions could be undertaken without delay in order to fill the gap of economic and social progress with other countries in the region and to have a better chance to challenge the future. For this reason Cambodia has been for years subject to the reach over effects from Thailand in term of commodities as well as industrial and housewares goods creating thus an unbalanced trade in favor of Thailand. (Ref 3; p IX).

- **Absence of a strategy**

It links to what has been developed in the above paragraph: the absence of a sound and global strategy for Preah Vihear province from successive governments. It seems that for a long time ever since, there is no strategy in term of the protection of national boundaries, in particular those in the regions of high political sensitivity. The Preah Vihear province has been left without adequate infrastructures in particular road network that permits its linkage with other neighboring provinces and most important of all a constant physical contact with the main economic and political decision centers. Until recently there was no good access road from Siem Reap provincial capital, one of the most populated and one of the poles of the development of the country to Tbeng Mean Chey the capital provincial of Preah Vihear province which was isolated from others economic and cultural activities in the country. Going to Tbeng Mean Chey in that time required that the travellers, most of them are military personnel to take a trail that went through dense forest and streams with log bridges. The trip took days because trail should be cleared out of forest and bivouac had to be organized for the night (s). It was an adventure.

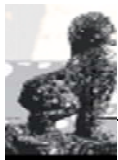
- **Road network Infrastructure**

Anlong Veng was a Khmer Rouge strong hold; a sort of military capital during the Cambodian civil war. The military headquarter of Ta Mok, the commanding in chief of the



Khmer Rouge army built in the middle of a lake was located in the outskirt of Anlong Veng. Urban area. Strategically the town controlled the remote Northern part of the country which has the Dangrek Mountains as border with Thailand and Laos. Due the lack of road infrastructure, the region is still undeveloped and had at that time one of the dense forest in the region until when uncontrolled logging started few years back.

Recently in 2012, there is a second road linking Kompong Thom provincial capital to Preah Vihear capital Tbeng Meanchey of 128 km funded by Chinese loan. Then from Siem Reap through Tbeng Meanchey to Preah Vihear Temple, it has a distance of 239 km. The third access road goes from Siem Reap city and passes through Koh Ker a site of famous Temple of 11<sup>th</sup> century listed as national Heritage. Only portion of the road is in good condition, the rest is subject to flooding during raining season. It stops by the capital province of Preah Vihear, and then continues to village Sra Em, before getting to Preah Vihear Temple. The road reconstruction 62 has finished with Chinese aid program (See Map 7; page 33). The construction of highway 67, a built, operate and transfer (B.O.T) a joint project between Thailand and Cambodian government has started in 2007 and has been completed in 2009. The highway constructed in DBST permits a rather convenient transport linking directly Siem Reap town to the Anlong Veng, a small town situated at 131 km, at a junction from which the highway 67 crosses the border into Thailand while passing through the province of Sisakhet. To go to Preah Vihear Temple from Anlong Veng there was a small dirt road, unpractical during raining season due to serious flooding which were threatening deteriorated and unsafe bridges. The road was first constructed in 2002 by the former governor of Phnom Penh in attempt to provide access to Preah Vihear and surrounding region, making them less isolated. Curiously, highway 67 which, for some reason does not go through or by passes Preah Vihear which is one of the famous and well know temple despite many physical and technical possibilities including many border passes between Cambodia and Thailand. There is a distance of 84 km from Anlong Veng to a small village called Sraem and the dirt road which was under improvement became a paved road at the end of 2009 with construction of 24 new bridges. From village Sraem to the Preah Vihear Temple a dirt road of 24 km is now reconstruction as a paved road providing good access to the temple. This section is part of the overall road of 157km going to Tbeng Mean Chey then to temple Koh Ker which was constructed with Chinese loan. The work has only started recently in 2008 after Cambodia has succeeded in inscribing the temple of Preah Vihear on the list of World Heritage and after



Thailand has shown signs of hostility along the frontier line between the two countries. Finally the road links provincial capital Kompong Thom to Preah Vihear. With three direct important access, Preah Vihear and region will be connected to an overall national infrastructure network and will stop being isolated. The construction of this road has recently started in early 2009, after Thai army incursions in Khmer territory where is located Preah Vihear Temple. (See Appendice 2)

**Table 11:** Three major Access Roads to World Heritage Site Preah Vihear

Source: MPWT; Dept. of Highway 2009

Main Road	From/to	From/to	At the bottom of temple	Distance
Siem Reap city <b>Road 67</b>	Anlong Veng 131 km	Sra Em 84 km	Preah Vihear temple 24 km	<b>239 km</b>
Siem Reap city <b>Road 64</b>	Srayang-Koh Ker 120km	Tbeng Meanchey 70 km	Preah Vihear Temple 126 km	<b>316 km</b> <b>416 km</b>
Kompong Thom city <b>Road 64</b>	Tbeng Meanchey 128 km	Chom ksant-Sra Em 132 km	Preach VI hear Temple 156 km	<b>416 km</b>



**Fig. 26 and 27:** Road 67 from Siem Reap to Anlong Veng in construction before 2009  
(by Author in 2010)

Source: MPWT, Dept. of Highway 2009



**Fig.28, 29** road from Anlong Veng to Sra Em in 2007 and in 2010 (by Author)



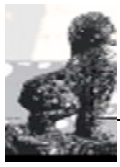
**Fig. 30, 31** road from Sra Em to Preah Vihear temple in 2007 and in 2010 (by Author)



**Fig.32,33** Dirt road from Sra Em to Thbeng Mean Chey, provincial capital in 2007 and now reconstructed in 2010 (by Author)

Road infrastructure has been improved considerably in 3 years' time and provides now good access to the Preah Vihear World Heritage Site. It is easier and convenient for tourists to travel from many parts of the country to the temple area and in particular provide the possibility for transport of persons and goods to Sra Em village from other centers of economic activities.





**Fig.34** Earth roads network around Preah Vihear temple site in village

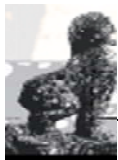
Ko Muy looking from the cliff of the temple, PVNA 2007, (Ref 5)



**Fig.35:** Dirt roads and village Ko Muy in Z2 at the bottom of the temple PVNA in 2007, (Ref 5)

Due to better road network an increased number of tourist's international and local has been noticed lately. The region of Preah Vihear Temple is now linked to the big agglomerations of the country and initiated therefore a good start for the development of tourism. Many tourists come from Siem Reap-Angkor Town because the one way trip to Preah Vihear takes approximately 4 hours, allowing them to come back to Siem Reap during the day. The one day trip from Siem Reap the main capital tourist in the country attracts many visitors because they cannot spend the night in Sra Em the village entrance to Preah Vihear temple due to lack of facilities or services provided not yet to the standard of hygiene and sanitary conditions are still unavailable. In the contrary, many local tourists are pouring in the region during religious holiday. Lately there is food improvement in some restaurants





in Sra Em village which is the junction town and supposed to be the gate to the Preah Vihear Temple.



**Fig.36, 37** Access road from bottom to the temple on the left road, on the right rehabilitation and tree plantation in progress in 2007 to 2009 (by Author)



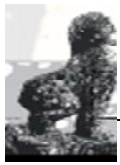
**Fig.38, 39:** (before 2017 and after 2008) winding access road midway to the temple on the top. On the left road in construction 2008, on the right road after rehabilitation, it is in reinforced concrete in 2009, (by Author).



**Fig.40, 41** winding access road midway to the temple on the left road before 2007, on the right, road after rehabilitation in 2010, it is in reinforced concrete. (by Author and PVNA in 2008)

- **Unplanned Human settlement**

The inhabitants living in Preah Vihear region are in the form of isolate pattern. Most are originated back to the historic time when the Dangrek Mountains Range had played an essential role in the development of the Khmer Empire. Through time these populations have been in the moving due to armed conflicts between neighboring nations and between different



warlords in search of power and territorial ambition. Major minority ethnic group indigenous used to settle down on this vast area such as the Kuoy, the Tor who along the centuries have been nomads and who only in the late decade have finally chosen to elect domicile in the high ground north, north-east of Cambodia for example in the provinces of Rattanakiri and Mondulkiri. They became sedentary in the remote mountains and have a life closed to nature from which their livelihoods depend upon. These populations did not have chance to settle down with a planned policy, in term of land distribution for ownership and in term of real right to use or to have access to the land they had occupied. The group of villages that now exists is a matter of necessity to regroupment for collective survival. For many centuries government action in this matter has been almost absence or at least insignificant.

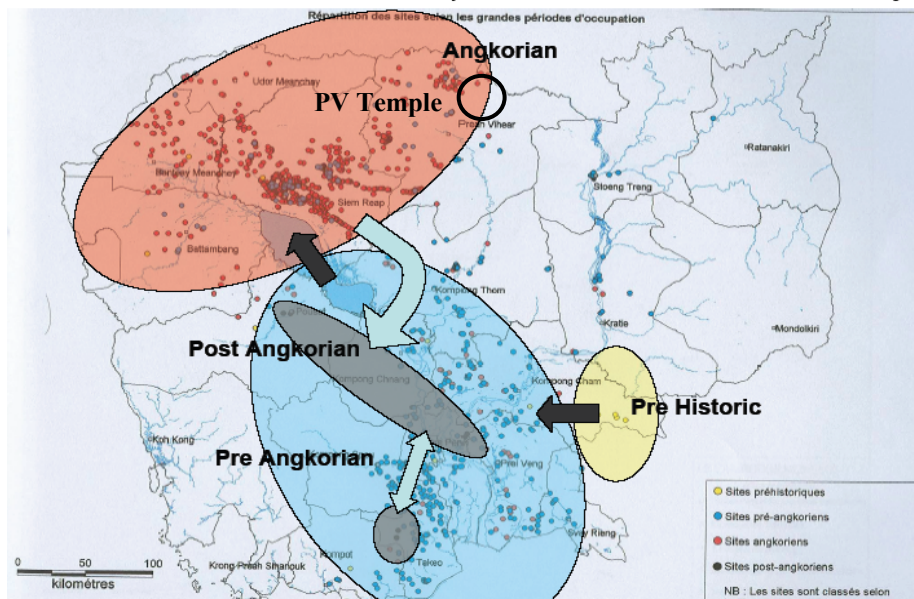
At the beginning of 5<sup>th</sup> century, according to the book of SAHAI (Ref 10; p 5-6) and recently confirmed by the researches on Living Angkor Road, Project (LARP; Ref 11), that towns, villages were planned and created. Not only agriculture but activities such as handicraft based on ceramic, pottery for household consumption, bronze, tin, precious stones (zircon mainly) as jewelry, iron smelting and iron sites were the spearhead of industrial development. Added to the commercial dynamism between both sides of Dangrek Mountains, the region proved itself to be at the highest degree of development in that period.

Unfortunately, the geographical context added to the political evolution and the continuous turmoil of armed conflicts in the area had changed the home for a permanent development and human settlement in the region. This result is due fundamentally to the absence of population settlement strategy.

Despite available resources and economic activities that had made the region prosperous if not the richest in the country at that period, the inhabitants in the area and particularly the minor ethnic group were forced to move to a safer place and better environment where they could benefit better living conditions. Since the end of golden period of the Khmer empire up to recently, population had been on the run, searching for new and safer settlements away from Dangrek Foothills region once the pride of Khmer civilization cradles. They have been in other term left aside, neglected for many centuries. There was no program of social integration of these groups ethnic such as education, health care or access to professional training. Most of them still at the time being live in closed communities which depend on forest for livelihoods.



### Settlement of the Khmer People from 4<sup>th</sup> to after 12<sup>th</sup> Century



**Map 17:** Dangrek Mountains population settlement including Preah Vihear



**Map 18** Preah Vihear Temple and Region along the Dangrek Mountains

where was located the Human Settlement in 5<sup>th</sup> century; Source: LARP (Ref 11)

Map by Lunet de Lajonquiere 1907 from Data Resources; Old Maps.

- **Unimproved Social and economic basic needs**

Since the collapse of the Khmer empire around the 15<sup>th</sup> century, there was constant movement of population leaving the Dangrek Mountains. The wars, then the insecurity followed by destruction and/or dismantling of economic structure, the region became after time deserted except a few areas where population had enough courage to stay on. This situation of instability reigned for many decades. The most striking aspect is that during the Khmer Rouge the population was severely under pressure politically, economically and





socially due to the hardship of the regime imposed on the life of the population. Until recently, the security seems to come back, except recent border problem with Thailand, that migration has stopped and lately there is a beginning of movement of new immigrants from other provinces coming into the region. But still compared to the rest of the country, the region is one of the least inhabited, as illustrated by low average density of the population. (See Table 13 on page 80).

Social and economic development in Preah Vihear Temple area was almost inexistent. School, medical center, basic facilities such as drinking water, electricity has been totally absence and did not figure out in the project priority list not until 2008. The population was disconnected from the social world and lived within the conditions at the threshold of poverty. Preah Vihear region despite its potentials was left outside the road map of a global country strategy planning. An assessment of present situation proves that Cambodia has paid dearly for its fundamental error and that in many aspects; political, economic and social. During the last few years and since the dispute with Thailand on Preah Vihear issue, new efforts from the government seems to compensate the many decades of negligence in the region. But according to the CRDI, growth of rural-based economy and the agricultural sector, which is the main income source for the poor, has been sluggish and unless its improves may lead to a slower rate of poverty reduction.



**Fig.42**, Child in dumping area force;  
**Fig.43** Health Care Center in a commune.  
Source:Poverty Alleviation Cambodia (PAC) 2013

Health situation in Preah Vihear including the temple region is a crucial problem. Especially, greater attention needs to be paid to overcoming logistical access issues: strengthening the relationship between the health centre and the community. The mean distance to health facility is between 5km to 15km making\* the farmer almost impossible for a serious case of sickness. Despite the fact that much progress has been done in the country, and that the 85% of population live in rural areas, most hospitals and health personal are concentrated in urban areas, resulting in an unequal distribution of health



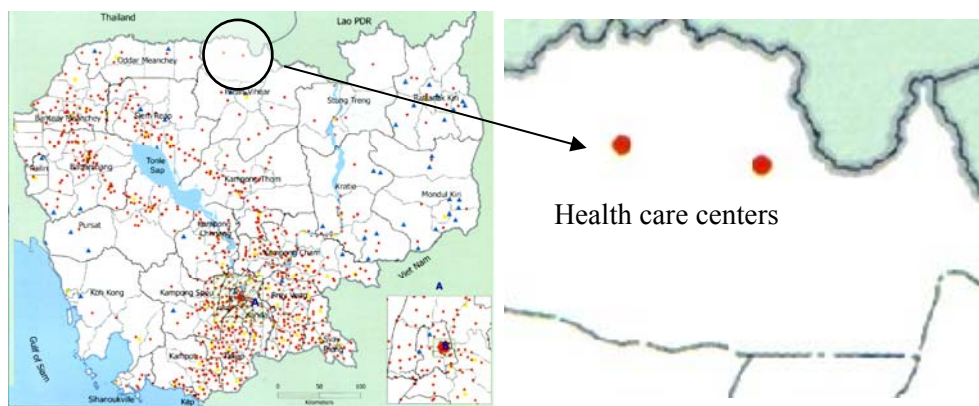
care .for Cambodians (Dewdney:2004). Approximately a quarter of the total population do not have access to health care. To the publically funded health services, especially to the rural poor, are inadequate and overall rates of utilization are low. For most, out of pocket spending on healthcare is the key issue related to indebtedness. \* Source: Danida Recherch Portal Kristine Larsen, university of Copenhagen, Master thesis 20 July 2012.

Table 12 below shows the situation of public health in Preah Vihear including the Temple region compared to the 3 poorest provinces.

**Table 12:** Health Facility in Preah Vhear compared to the 4 poorest provinces

Province	Health Center	Health Post	National Hospital	Referral Hospital
<b>Preah Vihear</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>1</b>
Rattanak Kiri	10	9	0	1
Mondul Kiri	6	10	0	2
Oddar Meanchey	11	2	0	1

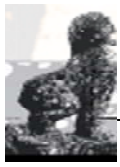
**Map 19:** Health Situations in Preah Vihear Temple Region in Cambodia



Source: TOAC Maps 20; p 113 (Ref 2)

### • Destruction of Environment

Ever since the independence and in particular during the recent years, there has never been any effort to consider the natural environment as an important aspect in the development process. The lack of understanding that nature can play a significant role in everyday life and in supporting the future of human needs is evidence. Neither study nor research in the matter has been undertaken seriously in Preah Vihear region. It is difficult if not impossible to define accurately the limit of dense forest, the medium size forest or the domain where bushes can



be precisely defined. Nowadays human settlement can still be seen everywhere intruding in the domain reserved for natural environment, making impossible to implement the protection measures. In many cases population that live in the forest draw the supplies from their immediate natural surrounding for their everyday living. Many villages are located less than 5 km from forest on which they depend for everyday foods (See Table 13; p 80). Trees have been cut to use for construction, or fuel wood for cooking, bushes have been savagely cleared for cultivation land and expected claiming ownership once the land is converted. It is clear that the forest decline in Cambodia has become a familiar story. Preah Vihear and its region despite its remote area have followed the same general pattern as other provinces with every green forest. High levels of commercial and illegal logging, creating conditions such as road access, pressure on rice field needed for road construction, degraded forest, contribute to the encroachment and to the conversion of forest. Indicators of such activities in Cambodia include the non-transparency allocation of forest concession and logging rights are inevitably a major cause in contributing to the forest decline. In addition to these factors, the problem of forest governance and revenue collection have been common practice in the country as much in South East Asia, making Cambodia's experience over the past decade either unique nor surprising.

To conclude forestry is becoming a very serious matter for Cambodia due to the fact that deforestation, despite all efforts and measures put in place by government and recommended by international stakeholders, has gone out of control in particular in the areas declared as national parks or nature protection zones. Up to now illegal logging continues in different parts of the country even in remote areas such as plateau and mountainous region. The systematic and continuous destruction of forestry which is one of the main asset of Cambodia could be disastrous in the long range because it will deteriorate the ecosystem as a whole with negative effects on climate change and at the same time and indirectly could lead to the extinction of biodiversity that constitutes one of the richest of natural resources and environment of Cambodia.

The destruction of forest dense and semi-dense is becoming alarming. Illegal logging is still going on and more actively in almost everywhere. In the last 2 years such the activity has been spreading out in the remote and least accessible areas such as Koh Kong in the Cardamom Mountain which is a National Park. Now open illegal logging is accelerating the last forest park Prey Long (Long Forest) which covers Kompong Thom, Preah Vihear





including the region of Preah Vihear Temple, and Kratie provinces which constitutes the big last forest resource of the country. This is the actual trend in forest and natural environment situation in Cambodia.

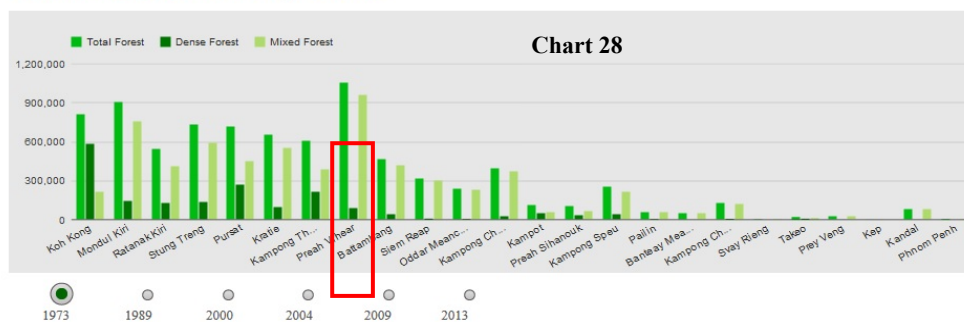


**Fig.44 et 45:** Illegal logging in Preah Vihear region

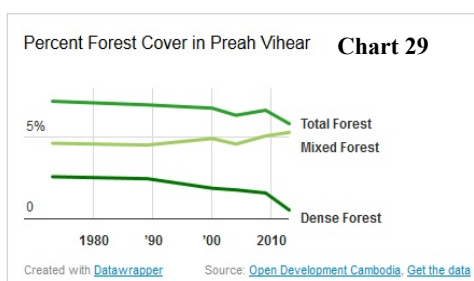
Sources: Stringer Global Post, [khmer.kampuchea.blogspot.com](http://khmer.kampuchea.blogspot.com), [Culturalsurvival.org](http://Culturalsurvival.org) (April 2014)

## Forest Cover Analysis, 1973 – 2013

### Forest Cover Distribution by Hectare



### Prah Vihear



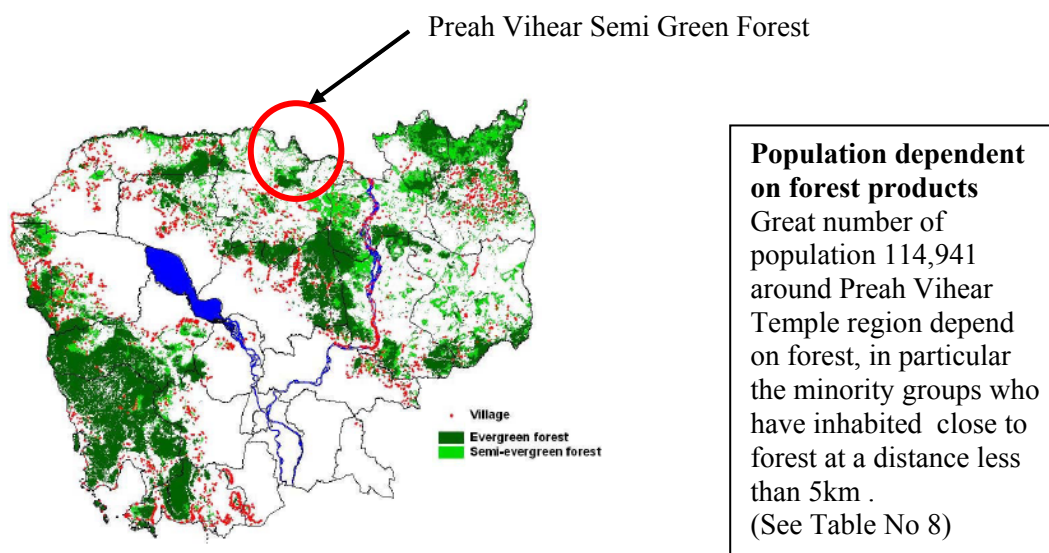
Source: Forest Cover Analysis, 1973 to 2013; Open Development Files, including lately the dense forest around Temple region, the Dangrek Range.

**Table 13:** Villages situated less from 5 km from Evergreen and Semi-Evergreen

Province	No. of villages < 5km from Evergreen or Semi-Evergreen	Total population of villages	Evergreen or Semi-Evergreen <5 km from a village (ha)	Population density: (person/ha)
Battambang	298	242,949	162,387	1.5
Ratanakiri	244	98,241	159,021	0.6
Siem Reap	234	215,304	60,232	3.6
Preah Vihear	206	114,941	116,882	1.0
Kompong Thom	193	109,257	93,565	1.2
Kratie	183	169,864	83,791	2.0
Oddar Meanchey	168	121,321	79,518	1.5
Pursat	133	105,553	77,661	1.4
Stung Treng	126	76,068	125,166	0.6
Koh Kong	120	122,115	108,067	1.1
Monduliri	95	34,472	69,014	0.5
<b>Total</b>	<b>2,000</b>	<b>1,410,085</b>	<b>1,135,302</b>	<b>1.2</b>

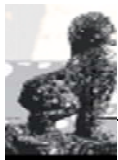
Livelihoods and Management 2004; p 15 (Ref 4)

Sources: CRDI-WCS: Focusing on Cambodia High Value Forests:

**Map 21** ; Sources: Ref 4; p 14 CDRI/WCS

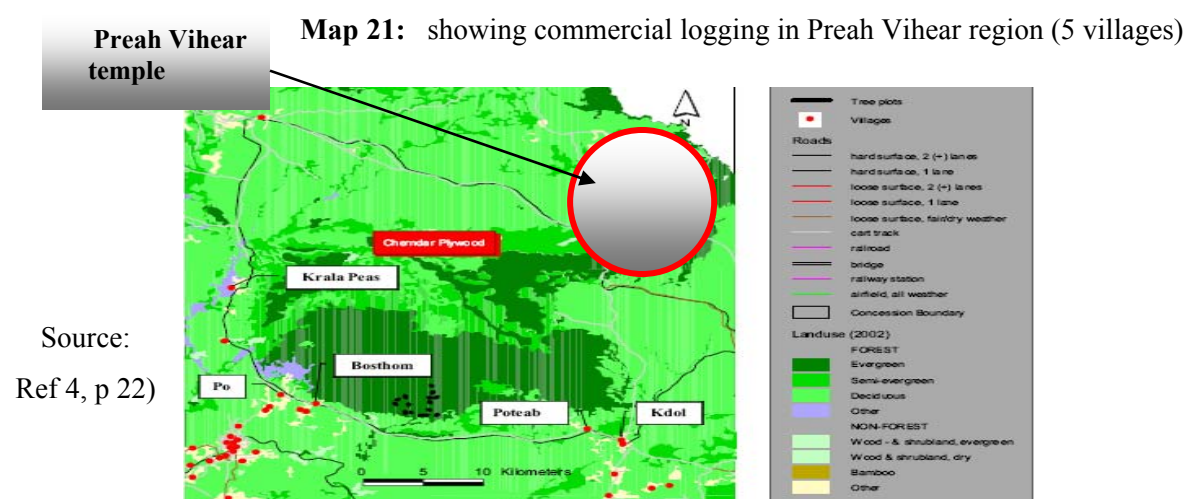
Rather than a single dominant, forest decline usually occurs due to a combination of factors through a chain of causation (Geist and Lambin 2002, Contreras-Hermosilla 200, Kaimowitz and Angelson 1998). For example; consider the difficulties of identifying the main cause of forest decline in as follows.

Due to the unplanned development in land use in particular for agriculture farmers practice burning forest or encroach on a forest area to clear and convert it for agriculture. Lack of regulations and laws enforcement for ownership and land tenure arrangements pushes farmers to extend their agricultural land in need for the agricultural production to feed their



increasing number of household. Often because weak controls for forest resource, farmers believe they will be able to claim ownership once the land is converted. Others are clearing land on behalf of wealthy land speculators. Access to this previously closed forest area was also open a way by a commercial timber company, which built roads throughout the area in at the same time clearing forest to support its operations. Over-harvesting by the company and illegal logging by the other actors degraded at a high speed the destruction of forest resource which for the poor farmers means a progressive destruction of their livelihoods.

In such example, many factors play a role including unemployment and land use options in rural areas, land tenure arrangements and enforcement, accessibility and infrastructures, market integration, unsustainable and illegal logging practice, institutional weaknesses, corruption, and the macro-policy context.



Despite knowing that forest is also a critically important watershed that regulates rainfall, water flow and prevent sedimentation in the water network and reservoir, illegal logging has been practicing without severe punishment ever since and has been accelerating even more at the present time. The results of this negligence start already having direct catastrophic impact in the region such as decreasing of rain fall, draught, and extinction of wild life and some of the flora species. The consequence to be expected in the long term will be far beyond estimation, because the overall eco-system would be jeopardized and natural equilibrium that co-exists between human and nature is being threatening as many poor Cambodian farmers depend on forest for their livelihoods. This type of living is part of the



Cambodian traditional way of life, in other words it is part of Khmer culture that would be lost.

Another problem that reveals its importance in the near future is that the mismanagement of forest would lead to the vulnerability of the population living in and around the forest areas. Farmers make their livelihoods by tapping resin, wildlife hunting in addition to other forest product collection such as fuel wood, timber, rattan, bamboo, thatch, grains, mushrooms, wild fruits, and medicinal plants. Most of these products are collected by women and children for household use rather than for trade. In total these products account for about 15 -20 percent of household income in Preah Vihear and region. According to village elders in Preah Vihear, wildlife hunting and trapping has been common for as long as they can remember.

During the Khmer Rouge period skilled hunters were assigned to hunt 2-3 times per month, to have bush meat distributed for consumption in the co-operative. During the 1980s and early 1990s, hunting and trapping for local consumption in village still continued only for the need of consumption. Arms Forces doing it in full liberty. Later in the 1990s with the arrival of wildlife traders and the increasing demands in market integration, hunters and trappers began to sell bush meat at the commercial scale. This trade, in combination of scarcity of wildlife has become a serious destruction of wildlife in the region.

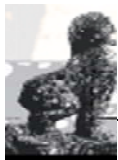


**Fig. 46, 47:** Fuel wood, one of the aspect contributing to destruction of vegetation in the. Source: FraserThomas: Angkor; 2007 AMP Community Aspect Report;



**Fig.48, 49** (bottom) bird-meat from forest, wood used for timber  
(Courtesy of AMP; Ref 12)





In view of this situation, an immediate assessment of the existing environment degradation should be carried out as soon as possible in order to appraise the ecosystem and the conditions of biodiversity in the Preah Vihear region, then to find proper solutions for the future, otherwise natural environment would leave area to a vast desolated region that would definitively compromise the sustainability of human settlement.

Preah Vihear could have been a motor that would enhance and help the region to start off with possible action plan which at least helped the population to have reasonable standard of living. Many projects could have started to give way to the development initiative at the local level with the population in place. But this negligence from many successive governments in power has put Preah Vihear totally in the forgotten shelf. It is unfortunate to observe since 1962 up to the present time limited or no research neither survey or study has been undertaken to have a good knowledge of the region. The people now still living in the area are still struggling for survival and have very limited hope for their future and for their children because of the unawareness of the potentials of Preah Vihear and its region from the part of the governing power.

### **1-2-5 Review of Development Planning Policy**

- **Impacts from Road Construction Policy**

Since early 2008, the government of Cambodia has turned its development strategy to the construction of road infrastructure. In addition to the road improvement program, new road projects have been on the drawing board. This new orientation came to the fact that the government starts to believe in the regional development policy. New strategy should therefore design in order to connect the remote areas left aside and forgotten from many years even from the French colonial period to the economic centers of the country.

The progress of the infrastructure program lunched by the MPWT mainly to the West of the country has improved during the last few years from 2008 to 2012. It changes in development landscape in the direction of the main provinces in the North such as Preah Vihear, Oddar Meanchey, and Banteay Meanchey. A significant development urban followed by increasing commercial activities have been registered in the small town of Anglong Veng, the former Khmer Rouge military headquarter during Pot Pot era. Before 2007, the time when the Cambodian government decided to move in force and rapidly to enhance road network



built up, Anglong Veng was a small town with very limited activities besides collecting the agricultural products from the nearby regions. Its growth started in 2007 when the road 67, a joint Khmer-Thai operation to promote economic exchange between Siem Reap to the Thai Sisa Khet province. Then the improvement of road from Anglong Veng to Preah Vihear passing through the local villages to entrance village of Sra Em has transformed the former Khmer rouge military headquarter to a junction town whose development has been accelerated during the last two years.



**Map 22:** Major Road network to Preah Vihear temple site (2009)

Source: Ministry of Public Works and Transport; Dept. of Highway 2009

National **Road No 64** Kompong Thom city to Bantey Meanchey provincial capital of Preah Vihear  
National **Road No 67** Siem Reap city to Anglong Veng, district of Oddar Meanchey  
**Road** Anglong Veng district to Sraem Village  
**Road** Sraem Village to World Heritage Sacred Site Preah Vihear

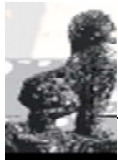


**Fig.50:** Road to provincial capital (by Author 2011)

### Impacts of road construction policy

The road construction policy plays an essential role in linking remote areas that were before 2007 spreading out along the dirty roads. New road provides good access to center towns in the region for goods transport and for commercial exchange.





At the same time population has increased rapidly with high price of land and construction on both sides of the road.

Pictures 50, 51 show the fever of migrants to settle down along the only axis of communication between Anglong Veng and Preah Vihear and Sra Em to provincial capital..

**Fig.51;** Road between Anglong Veng and Preah Vihear in 2009

(by Author)

Now Anglong Veng is playing an important role of a relay town with great potentials of economic development in the region. Since Temple Preah Vihear has become a main issue in Cambodian politics and has been projected in world actuality through mass media, Anglong Veng has also changed its scale in term of development growth. Local visitors as well as foreign tourists are coming steadily to Preah Vihear temple by crossing the junction town Anglong Veng which is the transit point for many travelers. Its reasonable distance from Siem Reap of approximately 130 kms makes it convenient for a stop by place where many visitors taking the road at 8 o'clock in the morning from Siem Reap, can have breakfast in Anglong Veng around 9:30 and with a rest of one hour can continue the trip to arrive at Preah Vihear Temple at noon time. The timing for visit from Siem Reap to Preah Vihear is so convenient to make the travel pleasant and relax by going through Anglong Veng. The increase number of people, traders, local tourists, foreign visitors pushes the demand of consumption of durable goods for the local population as well as commodities for the visitors creating therefore an increasing momentum of economic activities.

- **Impact on Urbanization**

The small town of Anglong Veng which had been struggling for possible development before 2007 is now becoming gradually a real center for commercial activities. Its location at the cross road of main communication road network is the important advantage which the town can take profit from. The transport of goods from Siem Reap and from Thailand provides the town the opportunity to play the role of distribution center for the region still unconnected to the major towns in the country. The urbanization becomes a main concern to the local government because it gave sign of disorder. Disorder is related mainly to:



- First: Real Estate: the small village at the time of Khmer Rouge was not planned to be one day an important human settlement. It was just a strong hold that the Pol Pot Regime considered as a transition headquarters due to the security vis a vis of the other regions in the country ravaged by internal war. Year 2007 is a new era for Along Veng who benefits its development by the impact of Preah Vihear becoming a World Heritage Site in 2008. The direct affects are undoubtedly the growth of the town during the last two years from 2008 to now 2010. The population of a small town before 2007 has increased to more than 40,000 inhabitants in 2014. (Source: Phnom Penh Post, 9/26/2014). There has been migration from other poor surrounding regions and population from other villages like Chaar, Kantout, Prasat Dorp and provinces such as Siem Reap, Kompong Thom, Banteay Meanchey, Odor Meanchey, even from far away distance of the country like Phnom Penh, Prey Veng, Kampot because the migrants feels the business opportunities is in the future of this new region.

The new population is continuing to come and has created spiral cost of land and created active real estate business. Land in the center town has commercial value and transaction has been particular dynamic. But this spiral cost of real estate could, if without proper control be a serious obstacle to the long term development.

- Second: Urban land use: As Anlong Veng is continuing to grow in term of population and in term of economic activities, many negative side way effects have also been observed. In respect to urban planning Anlong Veng has yet to dispose of a master plan or a development plan. Up to now there is neither urban plan nor regulations that give orientation of how the town should grow in the future in considering its continuing dynamic activities by population increased as well as its trade development. The results of absence of development guideline lead to the anarchy in town expansion. Land has been affected or distributed without proper study on how impact it will create to the urban growth in the future. The priority of land use is determined by its location either on the main road or main streets directly accessible by automobiles and by inter-region transport vehicles. This situation determines the high cost of the real estate in detriment of



the urban planning logic. In this context, the main street connecting the road 67 linking Siem Reap to the Khmer-Thai border causing Anlong Veng in its center to become a commercial road with on both sides are springing, hotels, restaurants and services. The zoning of the town is inexistent allowing therefore mixing of all commercial and residence activities with sometime light factories such as car repairing shops, garages or construction of warehouses. The area reserved for local administration compound is away from center town, not easy accessible by public due to the fact that land on which it was built has low high market value. This urban lay out with no appropriate consideration of adequate urban planning direction makes the town unattractive, not functional and later on difficult to provide a good management. In this regard Anglong Veng could be developed by following the same trends of “laissez- aller” concept with the stereo-type mechanism as many other towns in the country. In the long range, when Anlong Veng will be in full momentum of development it could change the landscape and the scale from a small and pleasant town and evolve toward an “Anisotropy” type city which means that the population and its activities develop both sides along one axis. The main axis to be used for rapid traffic will then become a secondary traffic or a simple urban street, loosing therefore its primary function of rapid inter-city highway, such as the road to the international airport from Phnom Penh city, road 4 to Kompong Som highway or 6A to going to East and north of the country, both sides of which are almost packed of activities and construction. Many towns in Cambodia have been settled in this pattern and became a serious obstacle for good urban development in the future. In many towns like Sra Em, Anlong Veng there is no zoning plan the least urban development document guideline.



**Fig. 52, 53:** Anlong Veng Center town before 2007 and after (by Author)

- Third: building construction: The spiral of commercial activities have a direct effect on the local construction industry. Many buildings have been erected mostly along the main roads in a hurry. Unfortunately there are neither rules nor regulations to make them safe and fitted to the urban environment. The lack of



green space for the population to use or for the children to play constitutes one of the fundamental errors in urban development for the city. Landscaping is limited and Architecture is of mediocre quality. Laws for town cleanness, hygiene and traffic safety is yet to be enforced.



**Fig. 54, 55** Anlong Veng Center Town in 2009 (by Author)

Pictures 54 to,57 show the development urbain of Anlong Veng from 2008. The disorder in the center of the town with shops on both sides of main street through which the road going to Preah Vihear with all types of traffic.



**Fig. 56, 57** show urban growth in Anlong Veng in 2009-2010 (by Author)

Important constructions are accelerating around the city on prime land to meet the requirements of commercial activities and the growth of population has increased the price of land with active Real Estate.

- The prototype of urban development: Many other small villages such as Kantuot, Trapain Prasat, Tomnong Chheay, Trapain Sangker, Choam Ksant situated along the road from Anglong Veng to Preah Vihear with limited importance in term of population and trade before 2007, have now swollen in size and in commercial activities. But all have grown with the same pattern as Anlong Veng. They expand along the road and sometime on the road sides making traffic difficult and dangerous. To attract clients by visual mean in order to expose at maximum their products, markets places were setting up close to the road sides, creating therefore congestion and risks of accident. This type of accident is happening every day in major roads linking the capital Phnom Penh to provinces. The number of road accidents makes Cambodia one of the dangerous driving in the world.



**Fig. No 58, 59** Settlement and commercial shops along the road sides (2009-2010)  
(by Author)

In the future these villages will develop into a small towns with no proper planning guide and would create many urban problems such land use, environment, drainage, sewerage, services and social equipment as seen in many existing towns in Cambodia. Experiences have proved that changing this type of unplanned human settlement is an extreme difficult task.

- Sra Em Village: “Gate to the World Heritage Site”: Before getting to Preah Vihear, there exists a small village called Sra Em. The village is a “Gate to the World Heritage Site” because all traffic has to go through it. Since 2007, Sra Em has grown rapidly and now becomes a small town. The case of Sra Em is not different from other villages which benefit from the positive impacts of World Heritage Site Preah Vihear. It grows so fast that no action plan can be designed for no preventive measures be taken to make the village a good urban development. The same patterns of land use and construction sporadic and no order have been observed in the junction roads coming from Anlong Veng and the second road N 62 arriving from the provincial capital Tbeng Meanchey passing through the district of Chhom Khsan. This process of development, if there is no immediate action to cope with, could, in the near future, create urban woes and prejudice to the World Heritage Site itself. The district authority should act immediately to solve this problem with the Ministry concerned because there is land problem in Sra Em due to the economic improvement during the last 7 years. Somehow no action has been taken either by local or by national authorities.





Sra Em village in 2007 and road to the Preah Vihear Temple in 2007 in back ground

**Fig.60** (by Author in 2007)



Picture 64 construction on the road to Preah Vihear Temple face to former round about in 2009

**Fig.61** (by Author in 2009)



**Fig. 62** road going to Tbeng Mean Chey in 2007, (by Author)



**Fig.63** road going to Tbeng Mean Chey in 2009 (by Author)

Sra Em the “Gate to the World Heritage Site”. Many constructions have been erected along the main roads and around at the intersection. The small village became a small town with guest houses, restaurants and souvenir shops to welcome tourists before taking the road to Preah Vihear temple. A local market was constructed to respond to the need of growing population and tourists





## *Chapter II*

### **Wealth of Preah Vihear**



### **Heritage Values of Preah Vihear, World Heritage Sacred Site**

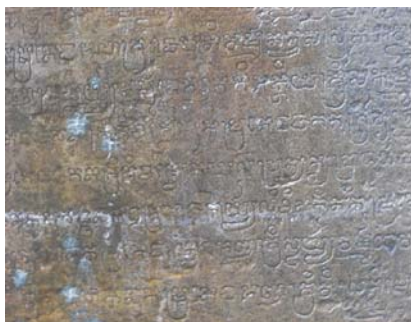
Despite all the errors and disadvantages created by unawareness, negligence and other relevant factors by one government after the other for a period 56 years since French power left Cambodia, Preah Vihear province an undeveloped region still disposes unexploited potentials, and its wealth remains hidden or unknown. The wealth is the basis for production, growth, and welfare which is the fundamental aim of economic and social development. Its mechanism is both a determinant and result of the development process. Natural resources are an integral part of wealth and constitute a large share of social and economic progress. They are special economic goods because they are produced but they can be transferred into commercial value for transaction and therefore yield economic profits if properly managed. In that context, the wealth of Preah Vihear and its region is yet to be fully proved and understood. It is apparently seen and appraised as a non-negligible potential that can help in enhancing the development mechanism and therefore in moving forward the momentum of growth. The natural resources above the ground and possibly the untapped resources lying underground seem to give to that province a chance to challenge the rest of the country.



The main composition of wealth of Preah Vihear and of its immediate region can be enumerated and be described as follows:

- |                             |                                |
|-----------------------------|--------------------------------|
| 1-Historic Heritage Value,  | 4- Natural resources Value     |
| 2-Religious Heritage Value, | 5- Mineral Resource Potentials |
| 3-Cultural Value            |                                |

## 2-1- Historic Heritage Value



An Inscription in PV temple (Ref 10, p 77)

Khmer Nation is rich in History. Along the birth of the first Khmer Settlement, history has become part of spirit of the Cambodian people. It has an intangible value that has been carried on through space and time by generations who have been always succeeded in keeping it alive.

Preah Vihear along with the Dangrek Mountain has a long and vibrant history. It provides through time and space a successive up and down situation of a legendary nation, then the once the powerful empire came back again to a simple country and then a developing nation. A rich and invaluable background from the beginning of its birth to the present time makes Cambodia one of the oldest nations in South East Asia according to a study done by many scholars like Dr Sachidanand Sahai, Indian historian, Etienne Aymonier, Henri Parmentier, George Coedès, French archeologists, historians, John Black, in their books and writings on Preah Vihear. (Ref 10; p 1-4)

- **The Dangrek Mountain**

By its topography and by its size and altitude, Dangrek stand up like a Mountain Wall or *Phnom Kampheng* in Cambodian language .Based on the above researches and documents, it seems that Dangrek is the starting point of a Khmer nation. Of course this assumption can be challenged by many others scholars and searchers, but it is seen as one of the many scenarios that could be considered as the beginning of Khmer history. If referred to the writing of Dr Sachidanand Sahai, an Indian, expert-historian specializing in ancient Khmer

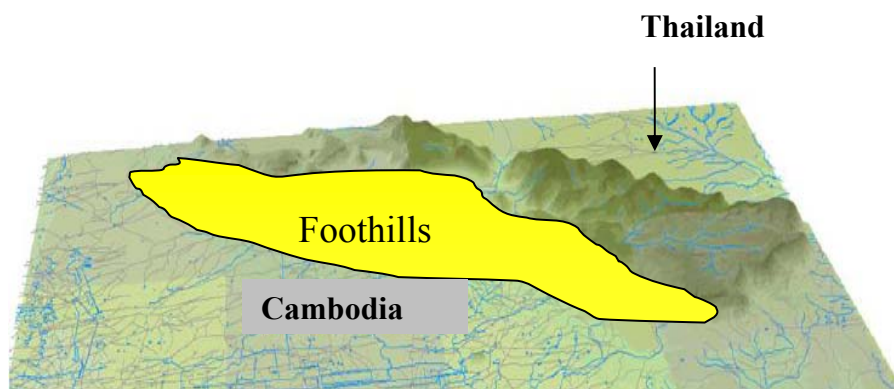


cryptology has spent most of his time studying Khmer history with Bernard Groslier and other eminent scholars. Dr Sahai upon his discovery through his inscription readings on many of the Khmer monuments and lately on Preah Vihear temple has written in his book “Preah Vihear, An Introduction to the World Heritage Monument” in 2009. He emphasizes the importance of the Dangrek Mountain Range as the region where Khmer civilization has come to light and the high degree of development of the population living along the foot of the mountain as he calls the Foot-Hills province. In that province, the religion was dominated by lord Shiva and the population considered the site of Preah Vihear Temple located on the highest point of all the mountains around by naming it the Small Himalaya. (Ref 10, p 7)

*Dangrek Range is a factor of the Empire of Angkor. From the sixth to twelfth centuries the policy planners of Angkor were deeply concerned with the problem of free flow of ideas and institutions, exchanging regional wealth across the “Mountain Wall” of Dangrek and linking of the plains of the Great Lake with the Mun Valley and beyond, using a dozen passes in the range could be the starting point of the Khmer civilization.*

*The Dangrek factor in the Angkor politics led to the development of the foothills on the either side through a network of hermitages and temples and management of the area under a separated provincial unit called the Foothill Province.*

Source: (Ref 10; p 5); Appendice 8



**Map 23** the Dangrek Range which was the Great Wall along which was once located a powerful and prosperous province during Angkor period called the Foot-Hills province.

Source: LARP (Ref 11)



According to this statement, Preah Vihear region could be correctly assessed in the geopolitical context of the Dangrek Range where this sacred complex is located. So the temple of Preah Vihear should not be considered as an isolate monument as normally thought off but a complex of an integrated social and political structure which dominated the region during that period. Upon that consideration the temple history is closely linked to the Dangrek Range itself, the Temple and its region is therefore inseparable. To have a profound understanding of the monument, one has to look back to the importance of the Dangrek Range as the part of the cradle of the Khmer civilization and the Preah Vihear Temple as a symbol of religious, political and social accomplishment of that period.

Phnom Dangek is the modern name for the Dangrek Range. It means in Cambodian “Mountain of the Balancing Beam”. A fragmentary pillar inscription of Prasat Khna (III) dated 1041 A.D refers to the Dangrek Mountain as *Phnom Kampheng* or the Mountain Wall. The Dangrek Range is a mountain chain separating Thailand from Cambodia. It starts from North to South but at the city of Korat in Northeast of Thailand, it turns East and separates the basin of the Great Lake Tonle Sap of Cambodia from the Mun Valley in North-East Thailand. The mountain stands as a retain wall between two terraces of different altitudes, the lower in the South-South-East and the higher in the North-North-East. The Northern side of Dangrek Mountain offered fertile land and the Southern side open into the plain of Angkor fed by numerous water networks originated in the mountain range. DR Sachidanand Sahai stated in his writing that the foothills (*Cheung Phnom* in Cambodian) have been inhabited since pre-Angkorian period (See maps No 24 and 25 on pages 95).Ref 10; p5-6 .

In the 1940s, researches conducted at the sites (*O Yak, O Pic Chan and O Nari*) in the region of *Mlu Prei* yielded semi-polished stone tools representing the Sumatra type Hoabienhien Paleolithic tools, testifying the development of this region as one of the earliest shelters of man. However more systematic researches need to be taken to establish the sequence of cultures in the region. Inscriptions from the Prasat Neak Buos suggest that the region was occupied in the pre-Angkor period. In the Angkor era, effective control over the Dangrek Range and its passes was considered crucial for the expansion of the Khmer domination over the mainland South East Asia. The early kings of Angkor were fully aware of this strategic importance. Such was its importance that by 9<sup>th</sup> century the major part of Foothill was brought under the administration of a separated administrative unit of the kingdom (see map No 15 page 70). It was then called the Division of the Foothills.(Ref 10; p



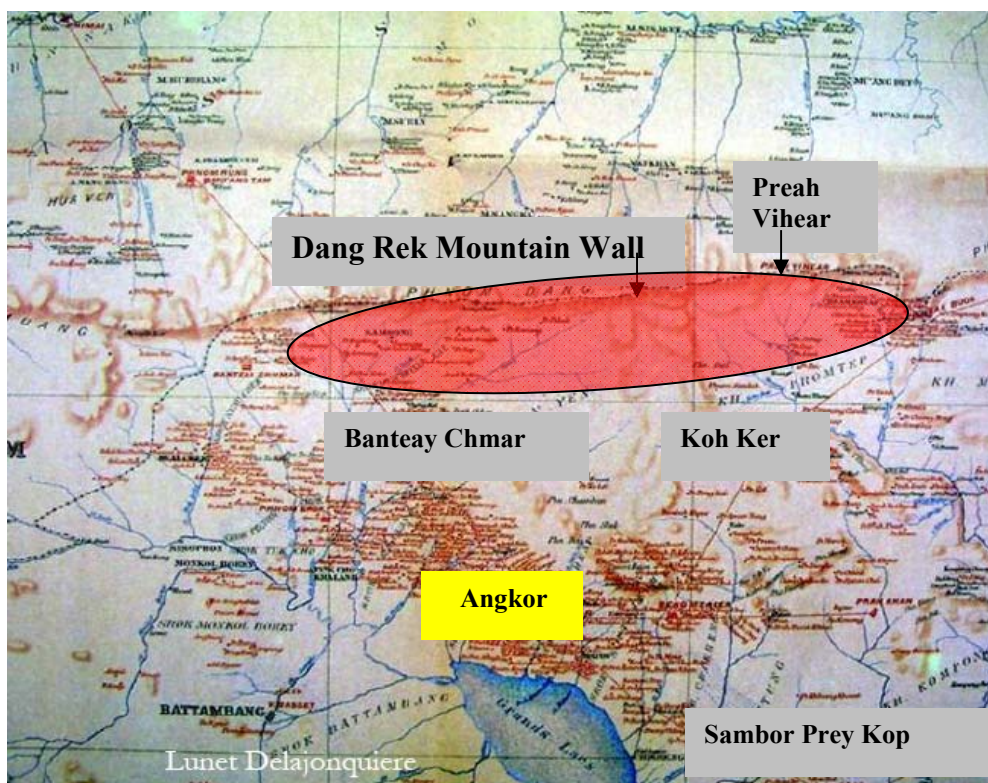


6; inscription K878). Until recent times, part of the population of the Foothill were Kuay an ethnic group who preserved their own language and specific usages in spite of many centuries of interaction with the Khmer civilization. This has been proved by the results of the researches jointly conducted by APSARA National Authority and Thai Institutions (LARP) in 2007. (Ref 11)

**Map 24** showing The Dangrek Range considered as the Mountain Wall



Source: Data Resources: Topographic Maps 1960; scale 1/250,000 (Ref 6)



**Map 25** The Foothills province with support Map of Lunet Delajonquiere in 1907: Foot-Hills Province in relationship with other important regions during Khmer empire.



Angkor the Empire capital



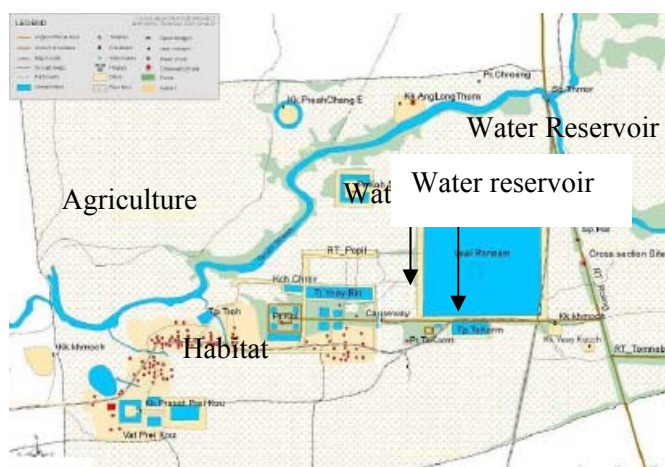
Foot-Hills Province



According to DR Sahai, along the Dangrek Mountain was established the *Cheung Phnom* or the Foothills province which was powerful and rich. The existing of many Khmer temples sites at the foothills suggest that the region was densely populated under the Angkor Empire. A human settlement from that period still shows its trace in the existing village called Kol (See maps 26; p 96). The inhabitants exploited iron deposits, quarries, forest reserves, hunted animals and enhanced agricultural based on irrigation from water reserves and enjoyed relatively high social and cultural values. A research done a joint team APSARA National Authority and Thai institutions (LARP) in 2007 proved that many industrial sites such as iron smelting and ceramic production centers existed in the Foot-Hills province. (Ref 11)

The province of Preah Vihear known as province of Melou Prei during French protectorate period was connected to other satellites towns built along the Dangrek Range which later became the clusters of population settlements such as Sisophon, Svay Chek, and Chong Kal. Due to this geographical position which privileged relationship and road network between other towns of the Foothills province Preah Vihear enjoyed the development of diverse economic activities as well as cultural and religious practice.

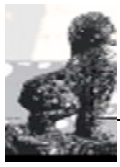
The provinces located in the other side of Dangrek Range which belong to Khmer Empire during that time pushed even more trade and moving more people deeper towards North and North-East onto the high land region up to the province of Pimai now in Thai territory.



Archaeological Mapping at  
*Arogyashala Community*, an  
ancient Agglomeration, Kol  
Village  
In Cambodian side

**Map 26** Land use *Arogyashala Community*, Kol Village; Source: Ref 11





The village Kol as shown in the map 25 is one of the old human settlements in the Foothills province along the Dangrek Mountain. It is part of *Arogyashala* community ancient agglomeration. This agglomeration continues to exist and inhabited by population who might have originated through time from ancient population living in the Foothills province. The urban lay out using octagonal grid reminds that of the Angkor period with predominant of hydraulic network system which ensures water resources for population consumption and for agriculture development. Now in that area, the number of inhabitants has increased steadily from 2002 to 2007 as shown on map 26, page 96.

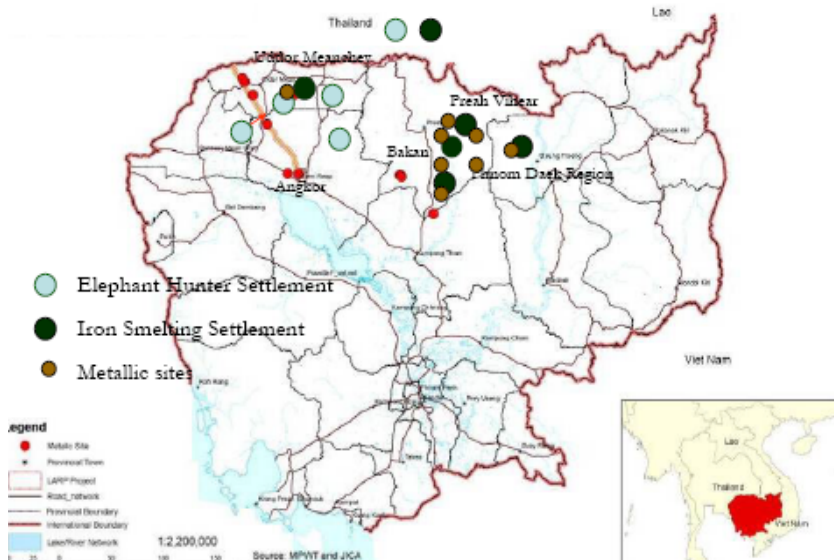
The prosperity and the cultural values have succeeded in making their way through many passes along the Mountain Wall, which were the strategy and the concern of the Khmer kings to expand their empire. The prosperity of the province of Foothills could be attributed to many factors such as political, economic, social and hydraulic engineering of how to control and manage the water resource.

Despite the difficulty of topography with the presence of Dangrek Range as a wall providing limited access to move forward, the geographical location of the region, rich in natural resources and in particular the water resource have allowed the Khmer to develop economic and cultural activities in the Foothills province. The water resource seemed to be the most important because it permits the development of agriculture which was the main produced wealth that could feed the population and support military actions beyond the Khmer territory. Water flowed from its intake source of the Dangrek Mountain where the high altitude allowed abundance of rain fall. It then built its network of streams and rivers across the region of Foothills province. This natural resource was benefic to the population and permitted to the development of agriculture that contributed to the political, economic, and cultural success of the Khmer Empire. Along with industrial development such as iron, bronze, ceramic the cultural and religious aspects reinforced the economy and the politics to be strong enough to ensure the sustainability of Khmer Empire power from 12<sup>th</sup> to 15<sup>th</sup> centuries.

Source: (Ref 11)



## Mapping Iron Smelting sites at *Ky* settlements



**Map 27** showing economic activities in and around the Foothills Region along the Dangrek Range

Source: MPWT and JICA (2005); LARP; Ref 11

The natural resources in minerals in the Preah Vihear Region that allowed the khmer Empire to conquered its neighboring countries.



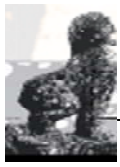
**Fig. 64,65**

Pottery in Foot-Hills province

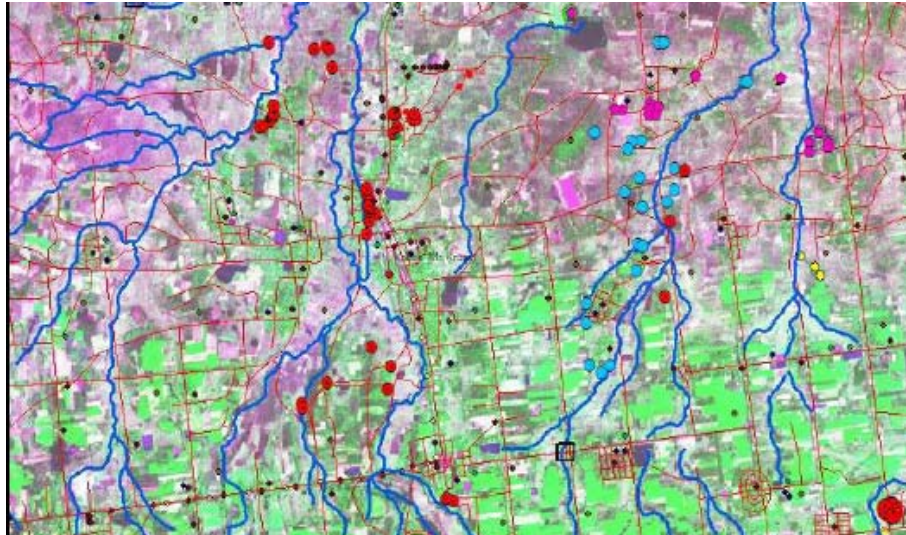
**Fig.66, 67**

- Khmer
  - Brown Glazed: Jar with ears, baluster jar, bottle and cover box.
  - Green Glazed: cover box, bowl, and roof-tile.
  - Unglazed: Basin, water jar and kiln wall

Source: LARP; (Ref 11)



At the same time, while the Foot-Hills province enjoyed its prosperity and political and economic power, the sacred temple of Preah Vihear was then the complex served as a rallying point for hermitage and a place of worship and dedicated to a myth Siva an important contribution to the religious cultural heritage to the Khmer people

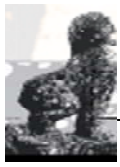


**Map 28** Water sources from Dangrek Range run through the Foot-Hills province allowing agricultural development. Sources: GIS from ASTA Data: LARP (Ref 11)



**Fig. 68, 69:** Examples of Mastering Water Resource of Dangrek Mountains  
Water was stocked in reservoirs natural in the Foot-Hills province  
during Khmer empire that allowed the  
development of the region.

Source: GIS from ASTA Data; LARP (Ref 11)



## 2-2- Spiritual and Religious Heritage Value



Picture by Eric Llopis (Ref 6)

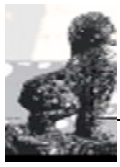
### **Religion as a cultural value:**

Religion has long been a stone mark for Khmer social and traditional way of life. It has become and continues to be part of Khmer culture because it reflects in tangible and in intangible way the spirit and behavior of the Cambodian people.

In that respect, most Khmer temples symbolize a mountain. Some temples may represent mythical mountains such as mount Kailāsá which dominates the Himalayan Range in the Indian subcontinent. Kailāsá was considered as the mountain of Siva a mythological god of Brahmanism. This is the concept used by Khmer builders during that period and well-illustrated by the sacred temple of Preah Vihear.

During the eleventh and twelfth centuries the Khmer capital Angkor was connected with Pimai, the Northern metropolis which emerged as an important Angkorian center on the right bank of the river Mun some sixteen km from the city of Korat. A road linking the two centers and crossed Dangrek pass at Prasat Ta Meuan. This means that all along the Dangrek Range between eleventh and twelfth centuries, numerous temples were constructed practically on the similar concept. The most significant examples, is that within a distance of three kilometers, four sanctuaries were constructed along the Dangrek Range. Each one represents one of the four cardinal directions. Prasat ( temple) Preah Vihear to the North, prasat Ta Meuan Thom on the South, prasat Ta Khwai on the East and prasat Bai-Baek on the West. A number of inscriptions from Ta Meuan Thom have been recently deciphered by Ecole Française d'Extrême Orient and the texts reveal that the site was dedicated to the Western Foot print of Siva. Prasat Ta Meuan Tauch (tauch means small in Cambodian), stands in front of the pass which goes up to the Dangrek Mountain. Astele in Sanskrit of Sūryavaraman II reign begins with an invocation to the Buddha. Kampheng Nai, situated about thirty kilometers West of Sisakhet now in Thailand, is another important monument





with a Khmer language inscription confirms the importance of the Dangrek Range in the Angkor Empire. (Ref 10, p 8); Appendix 8

Banteay Chhmar, another important temple complex emerged from the shadow of Dangrek Mountain and was a part of the Foot-Hills region. It was built by King Jayavaraman VII in the memory of his trusted soldiers who scarified their life in the battle fields. Prasat Neak Buos and its satellites is another famous site during the pre-Angkorian and the Angkorian history because it was believed to be the preferred place of Siva where the god left his footprints. The inscriptions recovered from the site suggest that the temple was dedicated to the foot-prints of Siva and received royal patronage from the Cambodian kings for the last four hundred years. A diagraphic inscription (K 346) of King Yasovarman suggests that the king chose the place sanctified by Siva footprints for the foundation of his hermitage. A 10<sup>th</sup> century Khmer inscription (K 580) mentions a hermitage at Vrah Kamraten An Sivapadā, while another inscription on tower K in 985 AD belonging to the reign of Jayavaraman V describes how the forest tracts were bought from the temple, the forest were cleared, new villages were established and its revenue was donated to the temple of Sivapadā which became one of the three religious sites visited by King Suryavaraman I in the course of his pilgrimage.

The complex served as place for pilgrimage and a rallying point for a number of hermitages and temples spreading along the foot hills. Siva was worshipped at Preah Vihear as the Lord of the Peak as his footprints were venerated to the East at Prasat Neak Buos and to the West at Prasat Ta Meuan. This hierarchy of worshipping and geographical distribution of temples proves that Preah Vihear was the center of cultural and ritual networking in and beyond the region. (Ref 10; p 7; p 10)

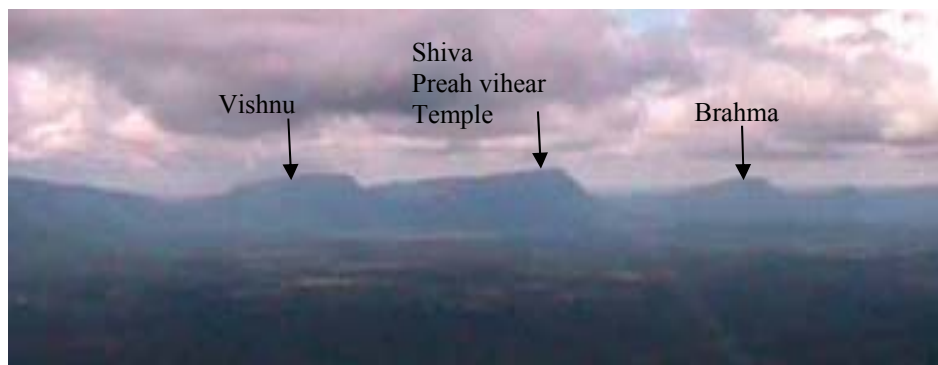
The 10<sup>th</sup> and 11<sup>th</sup> centuries from in the Foot-Hills province in the direction of the Great Lake plain downward to Kompong Thom region were marked by religious practices and at the peak of the cult of god Siva. In the beginning of the 11<sup>th</sup> century, according to the writing of DR Sahai, there were three major religious sites of Sivapāda Pūrva: Lingapura and Kanlong K.A Angve Danle. An inscription engraved on the eastern and western doorjambs of the chamber preceding the central tower of Prasat Neak Buos (K.342) dated 1008 AD offers these details. This is confirmed by many studies and by scholars that the Foot-Hills province



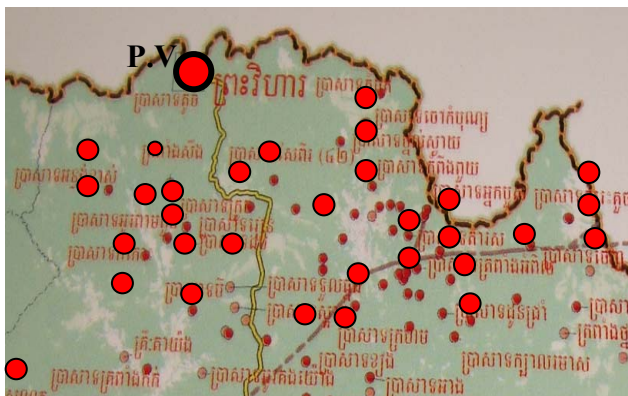
along the bottom of Dangrek Range was rich in religious cultural heritage during the Khmer Empire. This heritage should be considered as a part of the national wealth.

The most intriguing about the religious heritage is that in many cases, religions when sharing the same site and use the same place of worship are often source of conflict. In the case of Preah Vihear, it happened that all along the centuries up to today, religions have cohabited without incident. It means that this particular situation has gone through time and space with mutual respect, tolerance and peace.

During Angkorian period and along the Dangrek Mountains, the practice of Siva was dominant. The Preah Vihear temple was the symbol of the Himalaya in South East Asia. The natural and spectacular setting of the three summits above and overlooking the plain was, according to some experts, an invocation of the spirit of the founders of the Divine Trinity of Hinduism. The summits of the mountains shown in the picture No 37 are the symbol of VISNU, SHIVA and BRAHMA. The symbolic value of the site was revealed by the inscriptions. (Ref 10, p 7)



**Fig. 70** from Ref 5: View of summits a religious symbolic (Ref 10)



**Map 29:** temples satellites around Preah Vihear Temple which was the center of Divine Trinity of Hinduism Spiritual and Ritual practices like Ascetic, Pilgrimage, and Hermitage in 5<sup>th</sup> century in the province of Foot-Hills.  
Source: Archive des plans du Cambodge à EFEO à Siem Reap





## 2-3- Cultural Heritage Value



PV at sunset (Ref 5)

### **Exceptional Universal Value**

The sacred Site of Preah Vihear has been inscribed into the list of World Heritage List Monument because of its “Exceptional Universal Value” as declared by ICOMORE at the 32<sup>nd</sup> plenary session in the city of Quebec, Canada in 2000.

The exceptional value comes from ingenuity of human being whose creation is outstanding in the domain of arts, architectural and engineering. Preah Vihear temple was claimed as an example of master piece created by mankind and hailed as one of the wonders of the Angkor civilization. The sacred site has been viewed through the context of its cultural geography which has its own particularity that makes it different from other Khmer temples. The temple was built on a cliff of the Dangrek Range.

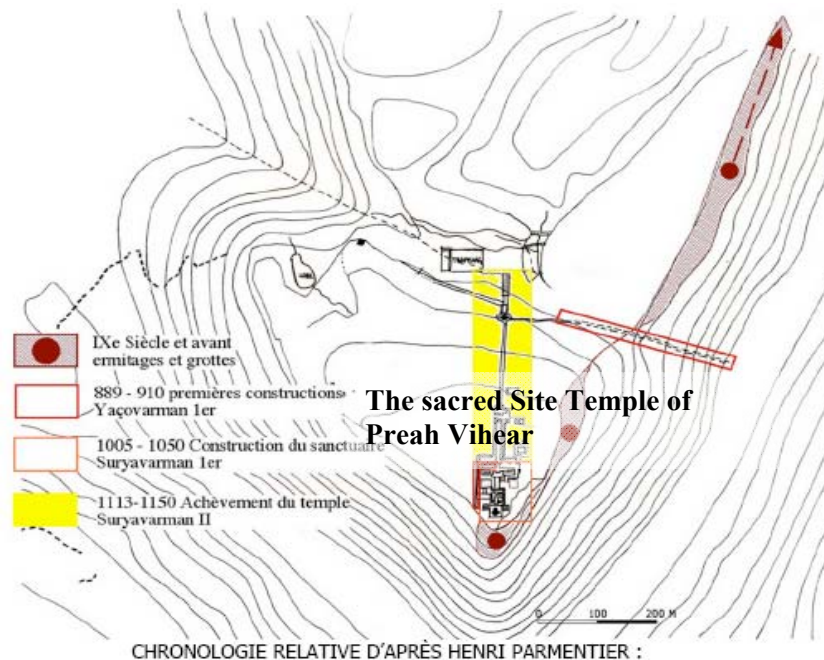


**Fig.71** Preah Vihear temple on its axis North-South (Ref 5)

The site of temple Preah Vihear on the top of the mountain is of exceptional value in term of setting, landscaping, architecture and engineering. From the cliff of the mountain the view overlooks the vast plain of Cambodian territory extending in the direction towards the basin of Tonle Sap.



**Map 30:** Location of the Sacred Temple of Preah Vihear  
(Map from P.V World Heritage file 2008; (Ref 5))



Construction of Hermitage Sanctuary under Suryvarman I (1005-1050)

#### Chronology by Henri PARMENTIER

(French archeologist who did the drawing of Preah Vihear Temple in 1939)

IX Century:

Foundation of the site by the son of king  
Jayavaraman II, Indrâyudha who brought  
A fragment of Linga from Vat Phu

889-910:

First construction under reign of  
Yaçovarman I

944-1001:

Contributions from kings  
Rajendravarman II and  
Jayavarman V

1005-1050:

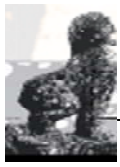
Sûryavarman I constructed  
the central sanctuary. The  
lateral complex finished in  
1025.

1050-1080:

Contributions from kings  
Udayadityavarman II,  
Harshavarman II.

1113- 1150:

Sûryarman II transferred to  
Divâkarapandita to finish  
the Construction.



Among many temples constructed in different periods in the region, Preah Vihear, is considered as the most important. It stands by its exceptional universal value, and emerges as an everlasting symbol of Khmer ancestors who have built and have left to their grandchildren of the future generation.

- Architectural and related artistic values

From the selection of the site to the construction of Preah Vihear temple, the Khmer constructors had the merit to be the ones who really understood the concept of the monument. They deployed their talent how to translate ideas, wishes and the functions of what needed into the physical expression. At the time Preah Vihear like many other mountain peaks in the mainland of South East Asia, is a place of pilgrimage and austere practices. In that consideration, it may be logic to assume that the hermits and the ascetics were the first informal architects of the site of Preah Vihear. According to the Professor SAHAI's book "An Introduction to the World Heritage Monument", the hermits and the ascetics installed the Lord of the Peak at the culminating point of the mountain on which was built Preah Vihear. Guided by their spiritual mind, they concentrated all their efforts on how to move from the bottom to the top so they could be closed to Siva in the heaven. From the point of view of a pilgrim, it is the ascent which matters. One has to ascent the peak, passing through various levels because it is strenuous. This is an act of austerity to gain the proximity of the lord. With this vision the hermits and ascetics did not need staircase. In that respect, the layout of the site and its development could be better understood in the descending order, following the gravitational flow of water. (Ref 10; p 24);Appendix 8

Based on this historical perspective, the architectural composition of Preah Vihear is conceived on the descendant movement. The pavilions are listed from the top down to below, so the topmost pavilion is counted as pavilion I and the lowest is called pavilion V. The gopuras or gates fellow also this numerical order. When escalating the peak from north to south, east to West, four plateaus mark the increasing altitude to become four successive terraced monuments with receding sand stone steps at the four sides. The whole architectural composition is a layout of an alternative sequence of stairway-entrance pavilion or opera leading up to the sanctuary at the top. Three elements are distinguished as the sacred



components of the construction of the temples, the courts and the stairways. This illustrates, after the inscription, the 12<sup>th</sup> century of the typical Khmer architecture.

Two main stairways are to access to the temple. The north, impressive in its design and monumental in proportions is called Monumental Stairway. According to the researchers of Preah Vihear National Authority, there are 164 steps. Series of five or six steps sculpted as monoliths by chiseling the rocks and adding stone slab as steps at places where it was not possible to transform the big rocks into steps.



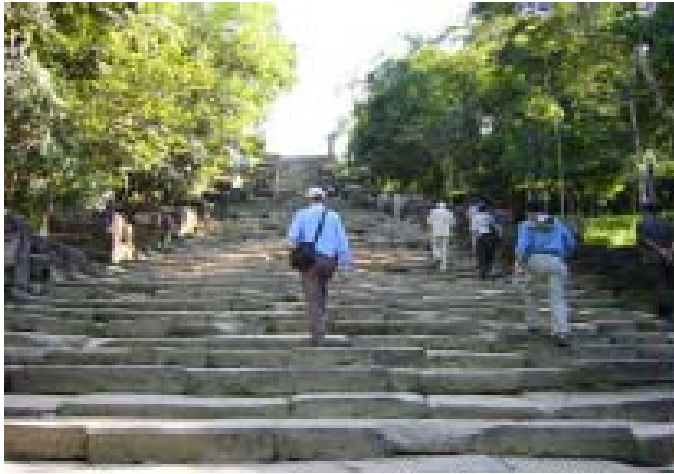
### Map 31

Map No 30 shows the basic layout of the Preah Vihear Temple. If the approach to the complex is made from following the map from North by the *Monumental Staircase* along its axis to the South, it will go through all Gopura (gates) starting from Gopura V to Gopura I which ends at the cliff of the top of the mountain.

The following pictures show the sequence of the architectural design of the complex. The Gopura are separated by avenues that are the sacred path on which moved the pilgrims, hermits and the religious people during their visit to the temple.

The architectural setting is in such a way that the feeling to climb upward to the highest point in order to be close to Siva is ensured by different elevations from sacred path to the Gopura successively until the peak of the mountain on which the complex is constructed. The cliff is arranged to give the impression to dominate the world as expressed by the panorama looking to the vast plain below.

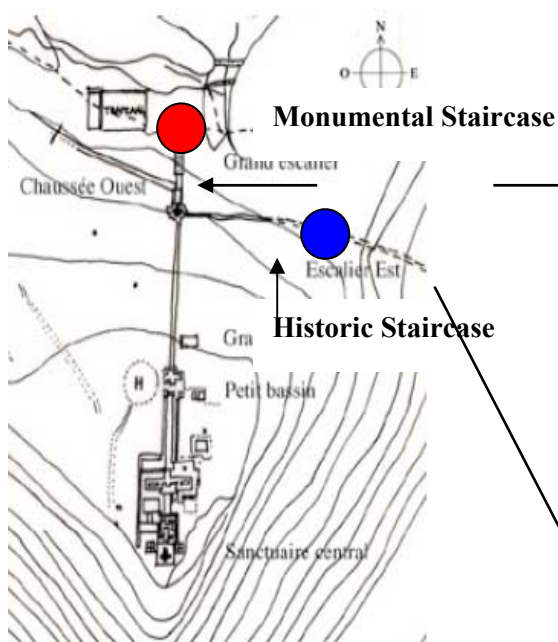
Source: Ref 5 PVNA



**Fig. 72 to 74**  
Shows the  
Monumental Staircase  
giving access to the  
north in direction of  
Cambodian-Thai border.  
This staircase has 164  
steps and has an  
elevation of 500 meters  
from the ground level.  
The staircase leads first  
to gopura (gate) V.  
entrance to temple.

**Fig.72** Monumental staircase looking up  
(Ref 5)

PVNA



**Fig.73:** Monumental Staircase looking down  
Ref 5 PVNA

Plan of Preah Vihear  
Ref 5 PVNA

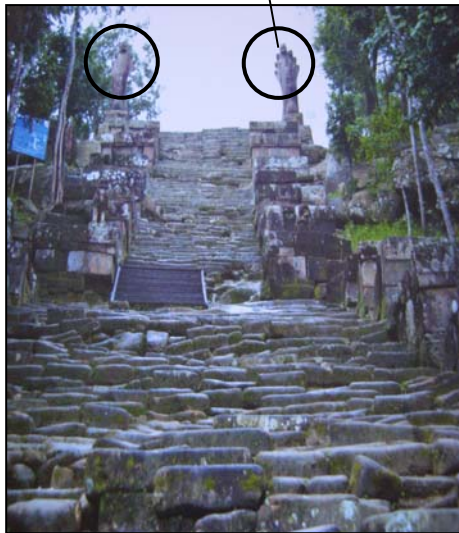


**Fig.74** Historical staircase (Ref 10; p 136) Sahai





**Fig.75**



**Fig. 76** Gopura V & 2 Naga heads



**Fig 77** Avenue leading to from Gopura IV



**Fig.78** Gopura V

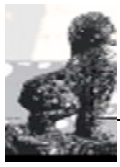
**Fig. 75 to 78**

Show the sequences of an approach from north side of the temple by using the Monumental Staircase. The different levels from the staircase along the sacred path are guarded by gigantic nagas to gopura V. Then the great avenue leads the way to gopura IV. Picture No 77 is the sacred path linking gopura V to gopura IV before finally acceding to the main monument which is the central cores of the Preah Vihear temple complex. This staircase was used by pilgrims, hermits and common rituals adepts.

Now for connecting from the bottom to the Temple platform a temporary wooden staircase was built by PVNA to facilitate access of visitors who normally take time to reach the top but with rest areas along the way.

Sources: Ref 10; pp. 129,150.  
Ref 5, 6





The eastern approach is made by another major staircase. This stairway led pilgrims, devotees, high officials and kings from the southern part of the Angkor Empire to the entrance pavilion of the first level (GopuraV). From that level visitors ascended to the three upper levels of the cliff to reach the abode of Lord Shiva. The stairway has 1230 steps from the bottom to the top. (Picture 74, page 107)

According to many scholars, this master piece of construction could rank as one of the wonder of the world because of the harmony that was achieved in a rare combination of architectural design and landscape setting. This staircase now in bad conditions and impracticable is known as the Historic Stairway of Preah Vihear Temple with approach from the East side of the Temple.



**Fig. 79** Gopura IV  
North face



**Fig. 80** Gopura IV  
South face

**Fig. 79 to 81**

Picture No 79 is Gopura IV seen from the North linked to sacred path (picture No 81). The same Gopura seen from the South picture 80 side with sacred path acceding to Gopura III.

Ref 10; p 137; Ref 5,6



**Fig.81** Sacred Path to Gopura IV South face



The setting of Preah Vihear on one of Dangrek mountains peak of 625m high, between cloud at the bottom and sky above provides a breathtaking sensation and an impressive beautiful landscape looking towards Cambodian forest and rice fields at a distance far beyond ten kilometers in the direction of World Heritage site of Angkor Thom City complex and its most significant Temple Angkor Wat. In considering all the factors it is right to believe that the temple of Preah Vihear is a rich Cultural heritage that can be considered as invaluable asset.

#### Sequence of architectural lay out of Preah Vihear Temple



**Fig. 82** Sacred path to  
Sacred path to Gopura III



**Fig. 83**  
Gopura III

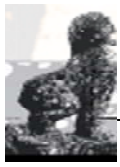


**Fig.84** Gopura from North Side

#### **Fig. 82 to 84**

Picture 82 shows the sacred path from Gopura IV to Gopura III. Then Gopura III to Gopura II an elevated platform of sacred path with balustrade on both sides leads to Gopura II.

Ref 10, pp,141,142,152



**Fig. 85**

Sacred path to Gopura I

Access from North side

Ref 10; pp. 158,191



**Fig.86**

The cliff-edge ends of temple site

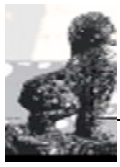
looking onto the green Cambodian plain

The architectural design of the Preah Vihear which is one of the master pieces of Khmer monuments conceived by Cambodians architects and engineers was completed by exceptional selection of surrounding landscape.

The first component of landscape is of natural environment provided by the local climate, vegetation and the topography of the region. The mountains, the big forest, the high sky with cloud under and the cool temperature at the temple site are well integrated with the panoramic view from the cliff onto the vast plain that extends towards the Tonle Sap (Great Lake) region.

The second element is the ingenuity of Khmer builders to use and compose the material existing on the site to create man made landscape. This explains by the fact that the materials used for the construction of the temple are mainly of stone that has been quarried on the site. The stone was cut and treated in such a way not to destroy the natural line of mountain but to modeling it so the plate-form for the construction of the temple was well in line with nature. Some of the huge pieces of stone that have been used for the construction were carefully cut, chiseled, modulated or carved like sculptures that express the idea of the Picasso's abstract cubism invention. (See Fig. 87 to 89; p 112)





In that context, the Preah Vihear temple and its site is a good example of an outstanding architectural achievement among many other Cambodian monuments during the Khmer empire. It is a symbol of a success in design concept that succeeded in harmonizing nature, man created environment and spiritual objective.



**Fig. 87**



**Fig. 88**



**Fig. 89**



**Fig. 90**

**Fig. 87**

Cliff-edge.

Quarry for the construction of the temple. The stone was cut in such a way that the left over is becoming a plate form with sculptural affect

**Fig. 88**

Cave

Stone was extracted to create a worship place before the construction of the temple. The floor was level to make place for praying.

**Fig.89**

Sculpture-like Boulders.

Close to Gopura V, in the garden a piece of stone was carved and modulated as a sculpture, a man made element to be integrated within the landscape setting.

**Fig.90**

Quarry site at the back of the temple. A piece of stone left over after chiseling and carving so to give a particular decor to the walkway near by. Sculpted stone could represent a mythic symbol of foot print path to approach Lord Siva.

Sources: Fig.75 to 90 from “*Preah Vihear an Introduction to World Heritage Monument*”

Ref 10 p 37, 38,41,42,52,58,91,99 (Appendice 8)

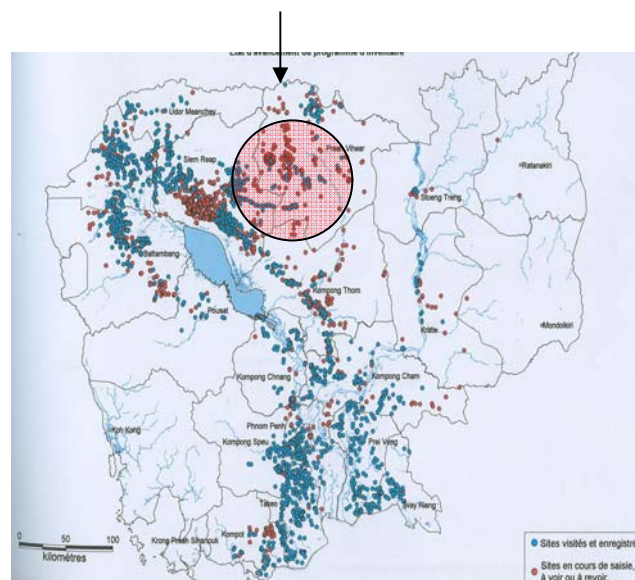


- Archeological patrimony value

Cambodia is rich in archeological sites. There are now more than 4,000 ancient temples scattered throughout the country sites discovered (Map 32 on page 113). The region of Preah Preah alone counts for itself more than 80 temples and archeological sites (See Map 29 on pages 102).

These temples and archeological sites constitute the second phase of the development of the Khmer history that leads to the apex of the Khmer Empire during angkorian period. This richness is one the basic components of cultural wealth that marks the civilization of the Khmer nation through many centuries from the Kouk Thlok era up to the fall of Angkor. In this respect the region of Preah Vihear is part of the global archeological patrimony in the country. It could be considered as invaluable cultural asset with possibility of transformation into development potentials resources. Preah Vihear region in term of archeological value could be linked to the network of the overall cultural property that would make Cambodia one of the richest cultural heritages in the world. How these cultural assets could be turned into values for development will be explained in the following, chapter III.

Major Archeological sites in Preah Vihear and Region



**Map 32**, Archeological sites in Cambodia  
Ministry of Culture 2007

- Registered sites
- Sites discovered



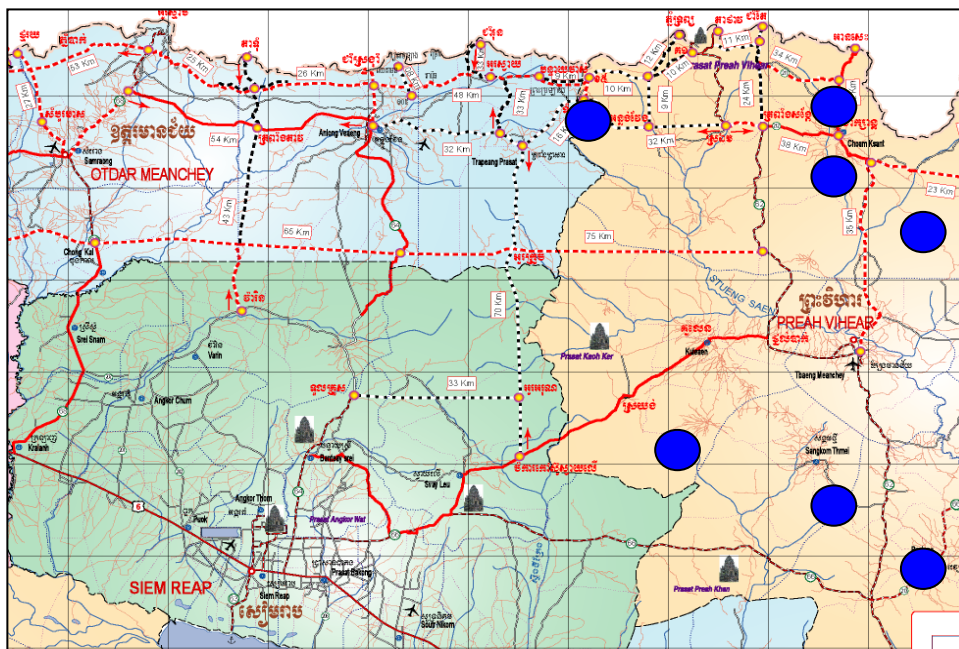


- Immaterial and intangible values

In addition to religious values, Preah Vihear as a region disposes of a rich diversity of cultural heritage. The tradition, the way of life and the social value with its qualities and defaults constitute a rich human ethnological variety. The most important of these values is the population who has been living the region for many centuries.

The general conference of UNESCO on 20 of October 2005 approved the Convention on the protection and the promotion of cultural expression diversity. In that matter the convention completed the process for the preservation of material and immaterial cultural heritage.

The Royal Government of Cambodia which ratified the said Convention on July 20, 2007 is exceptionally rich in Culture and linguistic. More than 20 ethnics have been surveyed and despite their minority at national level, they, in contrary represent particular majority in some of the provinces located on the border line of the country.



Map 33 (Ref MPWT)

● Village Kuoy in Preah Vihear

Source: Map based on MPWT and Ref 10,

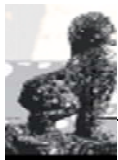


Many ethnic groups still practice the traditional way of life and use their own language. Classified as austro-asian, the Kuoy population is found in the Preah Vihear province. They selected their habitat in high ground and up to the mountains living close to nature from which they depend on for their everyday needs for livelihood. Despite well integrated within the Cambodian social milieu, they still keep their dialect but the writing system is limited. The text book in primary school “Khmer language” has been translated in Kuoy. The minority ethnics in Cambodia have become lately an essential element in the process of cultural development. They are intangible values which have invaluable contribution to the freedom of expression, the right to preserve human identity and individuality, the potential source of mankind creativity.

Since Cambodia has come a long way from an era of turmoil that the world has witnessed, it is crucial that the country should be interested in its cultural diversity, encourage the research and then implement a sound policy in order to optimize its value.

The interrelations between cultural diversity and a broad spectrum of human activities extend from cultural creation through the commercialization of cultural expression to the broader impacts of culture on business and the marketplace. The creative impulse is considered as the root of cultural diversity. It nourishes in fact innovative respond to a rapidly evolving environment. In this sense, artistic creation (painting, dances, folklore, theatre, traditional sport...) and all forms of innovation spanning the spectrum of human activity may be seen as primary imaginative sources of cultural diversity. Creativity is thus fundamental to cultural diversity, which is conducive to spectrum of artistic creation and to creative economy. Craft and tourism are considered the positive aspects of the participation of cultural diversity in direct economic development. The former by giving artistic shape to decorative or domestic objects, while the latter by providing access to the diversity of cultures in their natural settings illustrate the tension between authenticity and commercialization that is central to the preservation and promotion of cultural diversity. Crafts production is an important from the cultural expression and increasingly, of income and employment in many parts of the country.

Crafts have become part of highly organized system of guilds, traders and banking systems which is transforming the traditional the traditional craft economy in keeping with the requirements of a global market. Mass production of handicraft which comes through

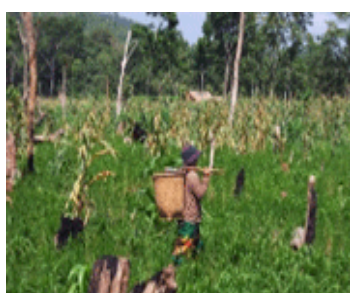


industrialization process has tendency to lose its genuine quality therefore diminish its creative value created by individual talent or freedom of expression. The flooding of traditional markets with industrial products has had a serious impact on craft economies. To avoid these phenomena, it would require policy to ensure fair returns on handcraft products of equal quality and at the same time preserving the traditional know-how.

The promotion of cultural diversity could be relied on government support in policy to communities with high vocation on handicraft creation. The commercial ventures could be designed to adapt to cultural contexts and local economy constraints.

Tourism plays an important role in combining profit-making initiatives with the promotion on intercultural dialogue. A renewal tourism trends is in search of authenticity which is motivated by the desire to discover other people in their natural social and cultural settings. This is called “cultural tourism”.

Considering that cultural diversity is a cradle of freedom of expression and a balance of presentation of the different communities living together in the same country, appropriate studies and researches should be undertaken in order preserve and promote it. Therefore this invaluable cultural treasure should be properly invested to help achieving the sustainable development.



**Fig. 91**

**Fig. 91**

The livelihood of the minority ethnic in Preah Vihear temple region. Traditional agriculture with seasonal fruit collection from near by forest are still widely practiced



**Fig.92**

**Fig. 92**

Traditional and folkloric dances as part of their cultural heritage value. The artistic performed during holiday and religious occasion are the expression of their way of life.



**Fig. 93**

**Fig. 93**

Craft is employed to create family needs and a mean to find additional revenue. The skill is transmitted from generation to generation through family.



**Fig.94**

**Fig. 94**

Kuay's house, expressing the traditional architecture using local materials mainly from forest near by.

The wealth of Preah Vihear, World Heritage site as explained and described in the above Chapter II is based on the basic survey. Existing documents revealed that this wealth is an evaluation done in most part by observation and collection of data located on the site. Neither research study in dept. has been carried on of what existing underground except some sites related to archeological excavation. In particularly, the untapped resources such as minerals and/or other historical valuable discovery have not yet been subject to methodological underground investigation. Even on the ground survey is still limited to the basic visual and scientific assessment for example the forestry, soil conditions and most important of all the potential of existing water resources.

To have a perspective of how wealth of Preah Vihear could be tapped and mobilized in order to inject into the development streamline, it would not be difficult to understand by taking examples of few sectors of economic activities that are worldwide known and practiced. In the case of Preah Vihear and its region, the cultural heritage seems to be the spearhead of all the capital assets to be deployed in the development activities. The most logical and the most profitable in term of produced resource is the tourism sector. Many



examples have demonstrated that world heritage sites in the world have been mobilized to create revenues and in most cases these revenues are substantial and contribute a part in the country GDP formation. The cases are observed in Egypt, Greece, France, Italy etc. The second most important sector could be the services which required supporting the first tourism development. The production of commodities by agricultural products specific to the region will add to the momentum of the development of tourism sector.

The recent statistics show that forestry resource does still exist and is still important compared to most of regions in Cambodia despite intensive illegal logging during the last few years. Wild life has survived many periods of arms conflicts and destruction from hunters who have done so much prejudice to the eco-system of the region. Therefore the environment that encompasses the region could still be saved and protected due to international organizations such as WCS.

In term of total capital wealth, Preah Vihear has already two of the main three capitals: the natural, and the cultural that are possible to combine with intangible capital to set up a good potential of wealth that could put Preah Vihear and its surrounding regions on the road leading to sustainable economic and social development in the years ahead. In global aspect, there is variety of wealth that is possible to inject in the development of the region to increase the chance of getting out of poverty of the poor rural population.



Fig. 95



Fig.96



Fig.97 the tools to produce shadow (From MOT 2007)

#### Intangible wealth

##### Fig. 95,96,97

illustrates the traditional dance of a Minority ethnic Kuay in the province of Preah Vihear, an heritage value heritage from a diversity culture.

##### Fig. 96

Shadow theater is a popular and traditional expression of cultural value. This Cambodian immaterial cultural value has been inscribed in World Heritage in 2005. The shadow theater is normally played with an accompaniment of musical recital which describes a story or a legend. Sometime tambour is used as major music instrument.

Fig. 97 tool used to produce shadow.

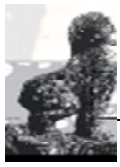




The intangible wealth can also include the human resources taking in its wide sense of definition. The belief of the people in its traditional and social everyday life, the diversity of cultures comprising minority ethnics and languages and their handicraft and know-how are all parts of intangible wealth. On the other hands, renowned for its graceful hand gestures and stunning costumes, the royal ballet of Cambodia know as classical dance has been associated with the Khmer court for one thousand years. Performances would traditionally accompany royal ceremonies and events. This immaterial wealth and the Khmer Shadow Theater have been listed in the World Heritage in 2003 and 2005. This category of wealth represents therefore indispensable agents capable in transforming the natural and the cultural capitals into investment assets. These assets in turn would yield a produced capital, the final components needed to complete the total wealth of the nation. In the case of Preah Vihear the wealth is at a modest scale compared to that of the whole nation of Cambodia, nevertheless it constitutes an important endowment of the World Heritage Site and its regions. Looking at this angle, it should be, therefore, considered as the invaluable existing potentials for the development. Researches have been done throughout time and have proved that these potentials did exist in this region of the Dangrek Foot-Hills province as described in this chapter II. Historical facts and inscription have explained that with these resources Cambodia succeeded in building its political and economic power during the Khmer empire period that pushed its civilization to the highest point in South East Asia.

Nowadays, despite many successive dark periods of its history, Cambodia still benefits of many resources, some are still untapped many have been mismanaged in different ways, but somehow the total potentials are not all depleted. With a sound policy guideline to orientate the development, and the good transparency in the allocation of existing and available resources combined with the will to succeed, the World Heritage Site of Preah Vihear could become an engine for the development. The development if it is well thought out and planned for, will undoubtedly lead to a snow ball effects in a long term. First at the Preah Vihear Site by the fact that the Temple benefits from the of World Heritage inscription as an Exceptional Universal Cultural Value that could enhance rapidly the development of tourism. A worldwide advertising is already done through many cultural media. In that perspective the tourism shall be devoted and based fundamentally on the culture because it is the main capital asset that the Cambodian people inherited from their ancestors.

Alongside with this important wealth, the geographical situation of the area; such as the Dangrek Range mountain and the surrounding natural elements still in cohabitation constitute



a second asset to be mobilized in order to link it to the total wealth of the Preah Vihear and its Region. It is striking to think that cultural, natural capital properly combined with intangible wealth could be a large share of the total wealth of Preah Vihear temple and it's Region.

## 2-4- Nature Value



(Picture seen PV temple from Ref 6, PVNA)

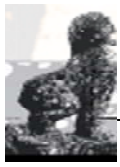
**Nature** has been always part of the Temple Site. Its value as a landscape architecture is profoundly integrated into the natural environment which reflects the tropical climate of the region and the human adaptation to its milieu. It is a precious wealth.

- The site

The Site of Preah Vihear at the top of the Dangrek Range beyond the cloud where the sky seems reachable. The surrounding vegetation which enriches the natural landscape and the green plain below gives the impression of infinite perspective. It is believed that within this vision, the Khmer architects have conceived the setting of the temple. Therefore nature has been always an indispensable element in the architectural composition of Khmer monument. Preah Vihear happens to be located in an area rich of nature.

The geographical setting is the first basic element of this region. The Dangrek Mountains Range with high up to 650 meters is a particular site which stands up like a great barrier surrounding by vast plain which is significant in term of landscaping. At the site of the temple, mountain peak, the cloud, the clear sky on a dry season and the stars at night give the feeling that the setting is well balanced between the basic elements of nature. The landscape composition gives the impression that man is beyond the earth, standing at summit of the world in order to reach out to the lord he worships. The fog that envelops the site creates even more a mystical atmosphere to the Temple complex. (Fig. 98; p 121)

The sun has also become a major composition of the whole complex of the temple and its site. It provides by shedding its rays from early morning on the mountain site through



different angles creating a wide range of perspectives of the temple complex with shade and shadows. The sunrise, the sunset and on a clear sky the full moon is the most spectacular scenes worth to contemplate on the site. (See Fig. 99 sunset on the temple)



**Fig.98:** the myth; Preah Vihear temple on a foggy day  
(Picture by Wild Cambodian Press; Dougla Beattie, Fine Arts Photography)



**Fig.99** sunset at the site of the Temple  
(Picture from Ref 5) PVNA

- The natural elements

The richest of the natural elements are found on the top of the Mountain Range. They have the characteristic of being an environment free from human transformation which grows naturally within the eco-system of the milieu. The trees, the shrub, the grass evolves with the cycles set by laws of nature; the seeds transported by wind, watered by rain and the flowers bloom by meadow. Successively from the top a variety of landscape enchants the site around the Temple. The Mountain Range that surrounds the milieu on both sides is majestic within its natural setting. For endless time history, stories and legends and mystery were born in this environment of combine natural elements. This is a part of natural treasure in the region of Preah Vihear and its World Heritage Site.



In the Dangrek Mountain Range, there exist many natural caves; most of them have historical values. The water falls and natural lakes are also part integral of the nature that has not been exploited to provide natural environment in order to attract visitors.



**Fig.100:** Natural wealth; Phnom (Mountain) Dangrek  
Scene from the Temple (pictures from P.V World Heritage file 2008); Ref 5



**Fig.101;** Natural wealth: Dangrek Mountains.  
View from Preah Vihear Temple to surrounding plains



**Fig.102:** Natural wetland with Nenuphar Lake on the way to the temple.  
(Pictures from PV World Heritage File 2008); Source: Ref 5



- Fauna and Flora

The recent statistics show that forestry resource does still exist and is still important compared to most of regions in Cambodia despite intensive illegal logging during the last few years and still continuing with an accelerated speed. Wild life has survived many periods of arms conflicts and destruction from hunters who have done so much prejudice to the eco-system of the region. Therefore the environment that encompasses the region could still be saved and protected. Recently a team of international researchers FFI had discovered in the Cardamoms Mountains close to the Dangrek Mountains Range a wolf snake, a rare species of reptile and amphibians. Other discoveries such as fishes, birds, frogs of unknown species add to the richness of biodiversity of living animals in the remote mountainous regions of Cambodia such as the Cardamoms Mountain located at the South of Cambodia close to the Dangrek Range.

According to the researchers many regions of Cardamoms and Dangrek Mountains are still unexplored and they believe they are rich of nature and still many species of fauna and flora have to be discovered. Cambodian traditional doctors are continuing to use these two areas as ground laboratory to collect medicinal plants.



Tailorbird



Leopard-cat Tenoji



Hairy-nose otter



Unpoisonous  
Wolf-snake

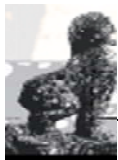
Sources: WCS, [wwcare 2.com/news/animal/cam.06.2014](http://wwcare2.com/news/animal/cam.06.2014)

Mail Online News Paper 17/06/2014, WWF, WCS, C Int, FFI

- Man and Nature

Man living with its natural environment in the region of Preah Vihear is continuing for centuries without drastic changes or brutal transformation of natural milieu. The process of symbiosis that happens between man and nature is still kept in well balance. The cycle of eco-system has not yet been disrupted but if there is no protection program designed to





preserve it, the disequilibrium of the whole mechanism of natural recycling of species, fauna and flora could be in danger in the near future.

The picture below illustrates the harmonious cohabitation between man, nature and domestic animals. All continue their life at a pace along with regeneration of the natural environment elements for the basic needs of their everyday life.



**Fig. 103:** a farm-boy with his buffalo in a green rice field, a typical landscape in Cambodian country side.

(Picture by Wild Cambodian Press; Dougla Beattie, Fine Arts Photography)

Alongside of existing natural landscape, the Khmer people have created an environment that is well integrated in the milieu of habitat. This is due to the requirements of the livelihoods that forced the people to modulate nature to accommodate their living conditions. The land for agriculture, the forest nearby from which many commodities can be extracted to support the needs for foods should be preserved.

Many other man- made landscapes can be considered as wealth derived from nature because it is the combination of natural elements with the everyday activities of the population. For example the rice field which shows a diversity of aspects at every season of the year from the early rain where the rice seed is sowed, the yellow-green field when the rice is fully blooming to the harvesting period after which the field has changed its color to become light brown marking the end of the rice production season for the year. This spectacular landscape that changes through seasons due to the man-made activities should be considered as the symbol of harmony of creation between nature and man activities. It should be included in the list of wealth derived from nature. The natural landscape and the man-



made landscape from natural elements as shown on pictures 104 to 105 are the typical scenes of Khmer country side. They could be streamlined as products into the development of tourism.



**Fig. 104**

Scene of rice planting during the raining season: nature, animal and man at work on the field.



**Fig. 105**

Landscape of rice field turns the scene into multiple natural colors with dominant of green and yellow.



**Fig.106**

Harvesting period; the rice plants are collected leaving the trucks on the field to be for the next raining season.



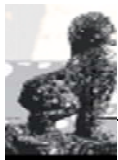
**Fig.107**

The end of the season of rice cultivation of the year, is a rest period for the farmers. The four pictures illustrate the richness of landscape in Cambodia.

Pictures from AMP (Ref 17)

The wealth of Preah Vihear, World Heritage site as explained and described in the above chapter II is based first on the basic survey on the site and interviews and discussions with population. And secondly it was done based on documentation.

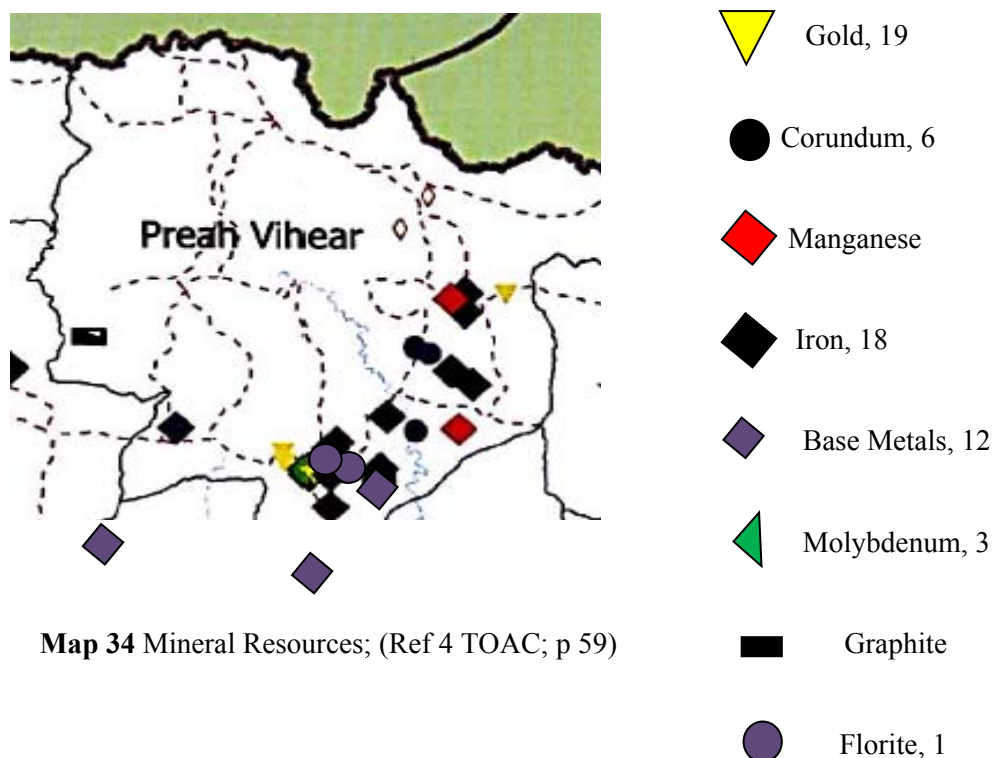
Existing documents revealed that this wealth is an evaluation done in most part by observation and collection of data located on the site by researchers or N.G.O.



Neither research nor study in detail has been carried (at disposal of the public) on of what existing underground except some sites related to archeological excavation.

## 2-5 Mineral Resources Potentials

There has not been a good survey of underground in Preach VI hear region beside some archeological excavation around the temple site. In particularly, the untapped resources such as minerals and/or other historical valuable discovery have not yet been subject to methodological underground investigation. Even on the ground survey is still limited to the basic visual and scientific assessment for example the forestry, soil conditions and most important of all the potential of existing water resources. But it has been according to the population living in the areas that there is possibility of presence of minerals lying below the soil surface because the population have found many samples while ploughing the rice field , digging wells or construction irrigation canal. LARP (Ref 11) and DR Sahai (Ref 10; p 6) have mentioned about prosperity of the Foot-Hills province, and the population Kuay who found iron and other metals capable to make weapon for Khmer army and jewelry at that period. Lately, some precious stones have been found in the area around Preah Vihear and in the area of Foot-Hills province. It seems that the region still disposes important quantity.

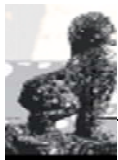




**Fig.108:** Sample of precious stones found in Preah Vihear

Source: Precious Stones and Mineral in Preah Vihear Region certified by Intertek (15-8-2014)

To have a perspective of how wealth of Preah Vihear could be tapped and mobilized in order to inject into the development streamline. It would not be difficult to understand if taking examples of few sectors of economic activities that are worldwide known and practiced. In the case of Preah Vihear and its region, the cultural heritage seems to be the spearhead of all the capital assets to be deployed in the development activities. The most logical and the most profitable in term of produced resource is the tourism sector. Many examples have demonstrated that world heritage sites in the world have been mobilized to create revenues and in most cases these revenues are substantial and contribute to part in the country GDP. The cases are observed in Egypt, Greece, France, Italy etc. The second most important sector could be the services which required supporting the first tourism



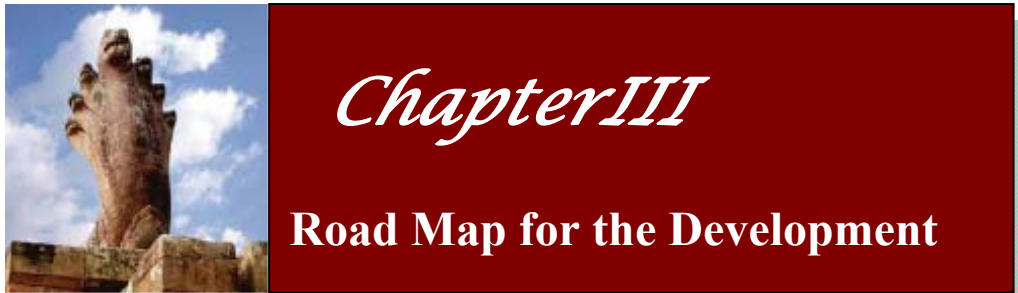
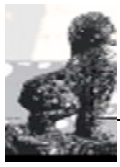
development. The production of commodities by agricultural products specific to the region will add to the momentum of the development of tourism sector.

The recent statistics show that forestry resource does still exist and is still important compared to most of regions in Cambodia despite intensive illegal logging during the last few years and still continuing with an accelerated speed. Wild life has survived many periods of arms conflicts and destruction from hunters who have done so much prejudice to the eco-system of the region. Therefore the environment that encompasses the region could still be saved and protected.

Recently a team of international researchers FFI had discovered in the Cardamoms Mountains close to the Dangrek Mountains Range a wolf snake, a rare species of reptile and amphibians. Other discoveries such as fishes, birds, frogs of unknown species add to the richness of biodiversity of living animals in the remote mountainous regions of Cambodia. According to the researchers many regions of Cardamoms and Dangrek Mountains are still unexplored and they believe there are still many species of fauna and flora to be discovered. (See Fig on page 124)

In term of total capital wealth, Preah Vihear has already two of the main important resources that are nature and culture. They are possible to combine with intangible capital to set up a good potential of wealth that could put Preah Vihear and its surrounding regions on the road leading to sustainable economic and social development in the years ahead. In global aspect, there is variety of wealth that is possible to inject in the development of the region to increase the chance of getting out of poverty of the poor rural population. It is true that these resources still exist and available, but authorities at the provincial and national should be careful by implementing a rigorous system of monitoring because of the insistent abuse in using these resources illegally or intensively without consideration of how to respect the cycle of nature to generate. In some area population to earn extra income have to kill wild animal for bush meat in order to satisfy demand on black market.





## *Chapter III*

### **Road Map for the Development**

#### **- Proposed Development Guideline-**



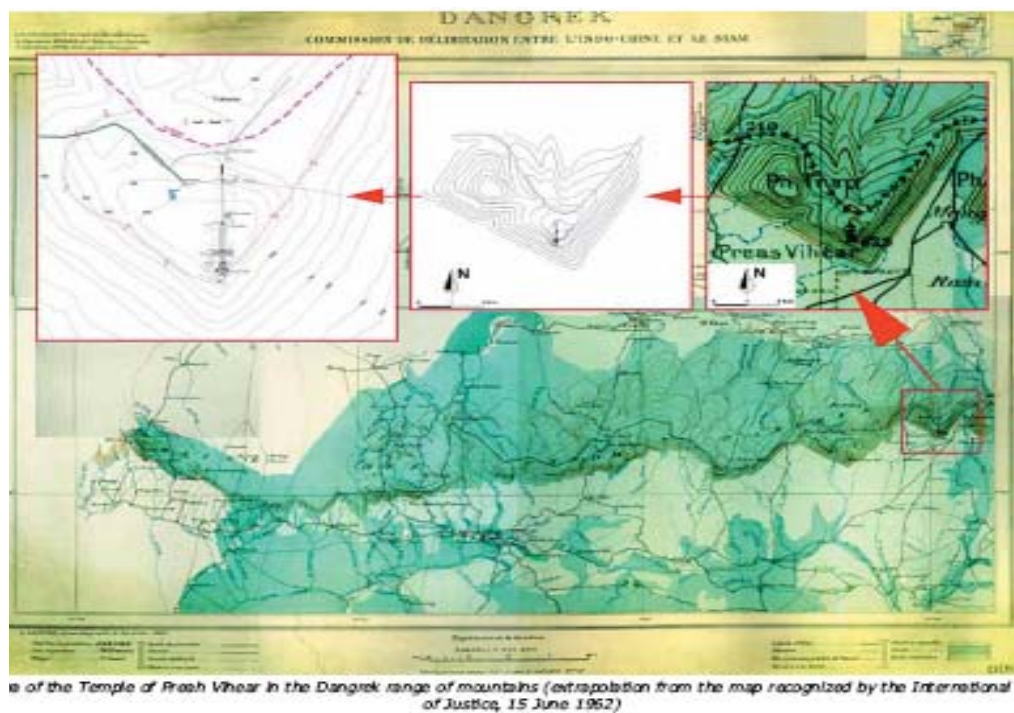
Fig. from (Ref 6) and FFI

### **3-1 Preah Vihear as a Motor for the Development**

Before its inscription in the World Heritage list as an “Exceptional Universal Value of Cultural Heritage”, Preah Vihear stood idle as an archeological and historical monument that happened to be constructed on the top of the Dangrek Mountain, a natural obstacle that stands between Cambodia and Thailand. The Temple despite its special architectural and site setting design was one of the many thousands historic monuments in Cambodia. In that context, it was neither well known nor considered popular compared with many other temples. Its remote location with difficult access from populated areas of the country makes the visit beyond the normal trip for population inhabited outside the region. The road in bad conditions and most of the time impractical during raining season kept visitors away from

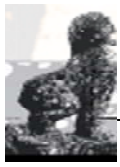


visiting the Temple. In addition to these factors the lack of scientific researches and publication on the region did not stir up curiosity from educated population. It was almost a forgotten monument on the top of the Dangrek Range Mountains. Then the event of June 15 1962 came along by the final judgment of the ICG court of The Hague (See map No 35). The judgment declared that Preah Vihear belongs to Cambodia. It *finds that the Temple of Preah Vihear is situated in territory under the sovereignty of Cambodia*. (See Appendix 2). This event has then changed the course of the destiny of Preah Vihear Temple. First it was political reason. Cambodia started to pay attention to the temple. Few access roads and trails were built to give way to military and police establishment in order to mainly control the border from illegal traders. Many years later, after the fall of the Khmer Rouge's regime and the declaration of National Unity of Cambodia the historical temple revealed its cultural value and its economic potentials. These potentials were at the beginning understood in Thailand which at the benefice of its boom tourism industry extended the diversity of tourist's attraction to the Preah Vihear temple.



**Map 35:** Map recognized by the ICG for the final judgment in June 15 1962

Thailand, aware of the potential in the development of tourism took the opportunity of the situation. With the advantage of topography of the terrain offering a gentle slope from its territory toward the temple site, the Thai built a road directly to the Cambodian border in



order to create an easy and direct access to the North Gouda through the monumental staircase. From that moment the tourism to Preah Vihear temple became an important aspect of the regional economy.

Before the border dispute between Thailand and Cambodia, tourist's number was already increasing steadily, much more from Thai side than the Cambodian side. The reason is that Thailand had good access from its territory and disposed of experienced Thai travel agencies who could well organize the tours. Cambodia only shared a small percentage of ticket fees sold to visitors. It was estimated that there only few hundreds visitors each year from Cambodian side most of them are searchers or archeologists with insignificant revenues generated that did not reach the provincial treasury. Looking at that angle the beginning of tourist development had already taken place even the site was not yet listed as World Heritage. Unfortunately this momentum of tourism development had slow down sin July 2007 when Cambodia submit the temple to the Committee of World Heritage for inscription because of political problem raised between the two countries. Then all visits came to a complete stop since the June 15, 2008, one week after inscription of the Temple of Preach VI hear in the list of World Heritage Site. The date marks the arm conflict in Preach VI hear Temple areas.

The military invasion of Thailand into Cambodia territory with the political dispute between the two countries gave the opportunity to Cambodia to understand the cultural value and the economic potentials in term of resources generator and in the first place the tourism development. Since then, many infrastructures and facilities to the visitors to the temple have been constructed and provided rapidly. Due to these efforts which were still limited but sufficient for the moment, many tourists in majority national have come to visit Preach VI hear despite tense atmosphere and military confrontations between Thai and Cambodian soldiers. Cambodian visitors having been motivated first by their pride of their identity and second by the cultural value of their heritage have been coming massively to visit and pay tribute to the temple. The entire site became in a very short time a permanent place of pilgrimage of Cambodian population in the country including Buddhists monks and nuns. Along with the development of local tourism in the Preah Vihear Temple, curiosity and the motivation to understand the historical site and the dispute between Thailand and Cambodia, foreign tourists started to visit the World Heritage Site and this trend is continuing day after day with more visits to the temple. It was the beginning of tourism activity. Along with the

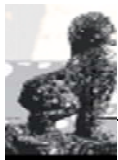


tourist movement, many experts from UNESCO and from academic milieu have taken great interest for their studies, researches or cultural appreciation. At the same time the RGC has mobilized its efforts to implement population in the region with important program of development. Human settlement, infrastructure projects and social support measures have been undertaken to encourage the population to settle down in the region and to facilitate their implementation.

Considering the beginning of development of tourism sector for the last few years, even at a very difficult political situation between the two neighboring countries, the tendency of growing in tourism activities are well taken place. For the time being, local visitors in particular the nationals have stimulated, in the country, massive flows of interest in the World Heritage Site. At the same time, helped by mass media of the border dispute around the Preah Vihear Site, foreign visitors of different categories of profession such as journalists, historians among others have added the visit of the temple as part of the itinerary in their holiday to Cambodia. The more the relation between Thailand and Cambodia is getting deteriorated; the number of oversea tourists is growing faster. It is believed that people wish to understand the reality of the political situation as well as the importance of Preah Vihear Temple.

The observation and monitoring of the described phenomena that have been carried on since a couple of years ago did confirm that the World Heritage Site of Preah Vihear has great potentials for the development. The first and immediate field of application is so far the tourism. From this sector, it would not be difficult to foresee other connected segments of development. Tourism if well planned would draw direct effects on the other components of related activities. These activities could be rated as immediate necessities such as hotels, guest houses, restaurants, souvenirs shops, transport system that directly support the momentum of the tourism development and the benefit would overreach the poor rural population.

On the other hands, once tourism is properly launched according to planned objectives and following a sound methodological approach with a transparent mechanism it would lead to reach final and wishful targets. Many secondary and/or indirect economic segments would be triggered such as amenities, services, and jobs creation to accompany the main structure of



tourism growth. So in visualizing the perspective of this spearhead of development initiated and led by tourism potentials, Preah Vihear is, in this context, plays the role of the motor of the future economic growth and social improvement in the future. The development could first take within the temple area site because of existing infrastructure and facilities created or in the process of being implemented. The temple and its site have now the possibility to receive tourists up to a certain number as it happens at the moment. With adequate improvement of the facilities and proper arrangement for the visit, the number of tourists should be increased rapidly. (See Tourism a spearhead of Development in The proposals next section). The second phase of development would be at the areas adjacent to the buffer or protection zone regulated by the World Heritage Committee (See map 12; p 55). The next step foreseen at mid or long term time frame would be at the regional level including the space enveloping the World Heritage site at a large scale. The detail of priority actions to be taken including the regional impact in terms of economic and social growth potential will be described in the next paragraph of this chapter under the title Regional Vision. A list of Priority of Projects is given at the end of this Chapter. (Appendix 6)

### **3-2 Resources-cyclical and Recycling Concept**

To develop the World Heritage Site of Preah Vihear it is necessary to visualize how the global picture of the region would look like in the future. Even the Temple can act as a motor for the development and has positive dragging effects on other components of economic activities. But expected results can also, in return, face negative consequences. A development can be classified in two main categories based on the use of resources. The first category concerns countries that do not dispose of their natural resources, but have succeeded in their development. On the other hand, the second category relates to the countries disposing of important natural resources but so far they are still struggling to break away from the state of developing nations. The two situations exist anywhere in the development world like most of countries in Africa and some countries in Asia. Up to today their economic conditions are not progressing due to continuous political struggles within the countries that are main obstacle for any formulation of a sound base of economic policy. As a matter of fact many of these countries have fallen in the state of internal arm conflict between political factions.





- **Examples of Countries which succeeded in Economic Development by relying mainly on Human Resources**

**Examples of Japan, Singapore, Switzerland and Netherlands**

The case can be illustrated by the following examples. The first example is a country with limited natural wealth. In this case the lack of natural resources that can be transformed into assets or a commercial negotiation values or currencies constitutes a serious handicap. The country in this category should highly rely on human potentials, meaning that the human resources deployed as investment capital shall be of outstanding quality in term of performance and productivity. Many countries have succeeded in adopting this model of development.

Japan with limited natural resources but by relying on its high degree of qualification of human power, has emerged finally to be one of powerful economic nations in the world. Its man power is updated along the line of technology progress. Its educational system is performant and following closely to the evolution of society with new ideas and new concept of life. Continous educational through not necessary academic but by pointual and periodic training is a power force of human resources. Many researches in diversity of fields have come trthough with commercial applications keeps its economic model competitive with the developed countries. Through this concept of recycling of human resources, constant and relatively sustainable economic growth provide its population a good living standard at a high degree of health care. Here some of the data proving the Japanes economic development.

Table 14 Example of Countries Relying Mainly on Human Resources –JAPAN–

<b>Japan</b> <b>377,835km2</b>	Natural Resources	GDP Annual per capita	Average % of unemployment
2011	Agriculture, M inerals negligeable, Fish	46,175 US\$	4.57
2012		46,531 US\$	4.34
2013		38,468 US \$	3.71

Source: CIA World Factbook 23 August 2014



The second example country which has almost no natural resources but adopts the same model is Singapore. A small country of 714.3 km<sup>2</sup> but enjoys a powerful GDP and benefits a good turn- out in economic growth. In that respect Singapore has a relatively high standard of living and a good social coverage if compared to the South East Asian nations. The median household income in 2011 is around US\$ 4,672 and the rate of unemployment is 2%. The basic and main resource that Singapore disposes is human power. This intangible capital is efficient and very productive. When injected in the process of development it generates high degree of performance. So the investment of human resources by Singaporeans should be considered as a fundamental asset capable of leading the smallest country in South East Asia toward a rapid economic and financial hub capable to challenge the famous financial plate-forms in the world.

Table 15 Example of Countries Relying Mainly on Human Resources –Singapore–

<b>Singapore</b> <b>714. 3km<sup>2</sup></b>	<b>Natural</b> <b>Resources</b>	<b>GDP Annual per</b> <b>Capita*</b>	<b>Average % of</b> <b>Unemployment</b>
<b>2011</b>	None	34 758 US \$	3.2
<b>2012</b>		36 102 US\$	3
<b>2013</b>		36 110 US\$	1.9

\*in US \$ at a constant price since 2000

Sources: [www.Tradingeconomics.com/World Bank Dec 16 2014](http://www.Tradingeconomics.com/World Bank Dec 16 2014)

U.N (2012), World Bank ( 2013)

Looking at this angle, Japan and Singapore are striking examples to demonstrate that countries with few or no natural wealth can rely on human power as main resource.

(Source: en.wikipedia the free encyclopedia; wpedia.org/wiki/Singapore)

There are countries around the world in similar situation like Japan and Singapore. They succeeded in mobilizing their intangible resources to build up their economy and their social welfare.



Two countries in Europe are in the same category. Switzerland and Netherland depend intensively on their human resources which are highly skilled and effective in the sectors of services and industry of high degree of technology and precision such as banking, jewelry and watch manufacturing. In the option that using intangible capital-human resource as investment asset, the country must also dispose in addition to labor force quality and performance, of social value measured in term of strong believe and commitment of population to achieve a common goal. This goal is set as the social well-being of the country.

Table 16 and 17 below provide some economic indicators that prove their economic performance by optimizing their human resources as principal potential for economic development. According to the World Economic Forum Global Competitiveness Record currently ranks Switzerland's economy as the most competitive in the world while ranked by European Union as Europe's most innovative country. The table below shows some data that illustrates its economic performance:

Table 16 Example of Countries Relying Mainly on Human Resources – Switzerland–

Switzerland 41,285 km2	Natural Resources limited	GDP Annual per Capita in US \$ current	% Rate of Unemployment
2011	Hydrology, Natural Landscape: Mountains, lakes and the four seasons climate	47,816.98	2.8
2012		78,924	3.10
2013		80,477	3.20

Sources: World Bank, United Nations, 2014





Another example is the Nederland a country with very limited land and part of it under sea level. Natural resources are very limited but its human resources are very performing and are the spearhead of its economic development in particular in the services sectors such as transportation, distribution, logistic and financial area including tourism.

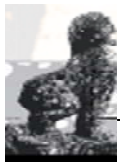
Table 17 Example of Countries Relying Mainly on Human Resources – Netherlands–

Netherlands 41,526 km2	Natural Resources limited	GDP Annual per Capita in US \$ current	% Rate of Unemployment
2011	limited agricultural and nearly no mineral resources, wind is a resource,	37,193	4.9
2012	Highly urbanized	38,678	5
2013		41,556	6.8

Sources: World Bank 2014, Country economy.com,  
Unemployment Netherlands March 2012.

Through the examples given, it is to believe that human resource is at least as important as natural resources if not even more. They are precious investment asset, the country must also dispose in addition to social value measured in term of strong believe and commitment of population to achieve a common goal. This goal is set as the social well-being of the country.

Yet, there are still many countries in the world that, despite, their enormous natural resources cannot take off economically. Most often they are in permanent political crisis, one of the principal factors that prevent them from generating sufficient human resources capable to efficiently undertake a good management of their wealth. In the mean-time their natural resources continue to deplete. Several examples can be found to illustrate this case.



- **Countries having abundant natural resources**

**Examples of Zaire and Nigeria**

Many countries in the world are on the contrary disposing from huge to reasonable natural wealth. But unfortunately they are still in the process of getting out of undeveloped state. Two situations can be discussed and observed because they have produced different results not to say they end up with opposite outcome from their development framework.

**Zaire**

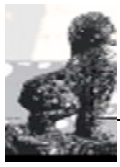
Most striking examples can be the case of Zaire in West Africa. Former Belgium colony called “Congo Belge” or Belgium Congo was known as wealthy in Africa. It was considered as the land of blessing with hug natural resources. Rainforests contain great biodiversity including many rare endemic species. It was considered as the richest country in the world regarding natural resources. Its untapped resource deposits of raw materials are estimated to be worth of US\$ trillion. Several minerals could be extracted in an open sky and easy access could be provided with little investment costs for exploitation work.

But with such a vast mineral wealth, the economy of the country has declined drastically since mid-1980. The country woes mean that despite its potential, its citizens are among the poorest people on earth. The Congolese being constantly assigned the lowest, or near lowest, nominal GDP per capita in the world, though lowest HDI of the 187 ranked countries in 2011. Poverty in rural areas is chronic with 50% of unemployment according to IFAD, but the poorest are living in the large sub-urban areas in extreme bad conditions. The World Bank has estimated at 71.3 % of population living below the poverty line in 2006. (Source: World Databank; Retrieved 2012-11-17).

From all the diversity of natural resources from arable land, forest with high quality of wood, flora and fauna, the water and mineral resources Zaire is even today ongoing conflicts exacerbate the exhaustion of the country’s great potentials. Mineral mines are considered as the main wealth of the nation.

Beside bauxite, aluminum, iron etc. the most famous and the most value added mineral is diamond. In addition to this natural treasure, there was a large variety of green vegetation ranging from fruit trees to good quality of wood that constitutes the dense tropical forest which covered a vast area of the country. A big river Congo running across the capital





city of Kinshasa in the direction of the sea is by far the most important source of water in Zaire without counting other rivers and water streams of less important that can be diverted to agricultural land. A water falls of hundred meters high could be the potential of hydro-power that the dam would be able to provide electrical energy. In term of natural environment Zaire has a diversity of remarkable touristic sites forest with numerous species of fauna and flora. From the independence of the country from Belgium how has Zaire insured the management of its resources to let 60% of its population living under poverty line?

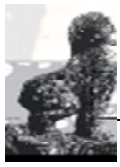
(Source: Wikipedia, the free encyclopedia)

It is also unfortunate to note with no exception, that Zaire as many other countries in Africa, after getting their independence, has been the theatre of political turmoil. But disregarding the sad internal problems that could be accounted for as part of inevitable factors of development, a final assessment can be made at this moment 50 years later.

According to different economic analysis and evaluation and report on site from mass media, it is to believe that Zaire is still a developing country and in the process of continuing it perhaps for a long time to come. In other words, Zaire has not yet been able despite all the potentials to take off economically. The country is still in search for a model of development that will insure an acceptable economic growth and a reasonable social wellbeing. Today the potentials of these resources are diminishing rapidly, there has been a depletion of total wealth at a large scale but most serious of all is those resources have been draining out constantly. In the situation as now seen, the wealth of Zaire is regressing in quantity and in added value. The natural resources have no possibility to regenerate as fast as the speed of it exploitation and this disequilibrium would create in the long run unsustainable resources needed to develop the country. In the conclusion a question one can ask is why a country like Zaire disposing of a huge amount of natural resources of great diversity and considered as one the rich in the world has not yet succeeded in moving off from the phase of developing to developed world and in what situation of the population when the nation wealth would be drying out?

## **Nigeria**

A second example can be the case of Nigeria. This nation in the West Africa is one of the richest countries in fossil resource. With its vast areas of underutilized arable land, rich



mineral resources including export of petroleum could not for many decades move the country out of developing the state.

In fact, despite the country disposes of huge deposits of diversity of resources like petroleum, natural gas, coal, bauxite gold the mining industry is still in its infancy.

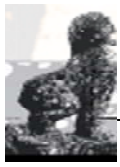
(Source: [www.nationsencyclopedia.com/Africa/Nigeria-Location-size](http://www.nationsencyclopedia.com/Africa/Nigeria-Location-size)).

Vast areas of arable land are still underutilized. Mismanagement of the resources mixed with repeated political turmoil and social unrest Nigeria is still in term of HDI far from good economic performance and the negative effects are taking amplitude to reach the scale which pushes population to become poorer and to create serious socio-political problematic. The unsafe situation in big cities such as Lagos and with 60% of unemployment Nigeria cannot be compared to Singapore a country with no natural resource.

(Source: Nations' encyclopedia, com/Africa/Nigeria, Location-Size)

The analysis of the situation of Nigeria is similar to the case of Zaire. In addition to the resource in oil, Nigeria has rich in forest timber. The country is in the tropical zone then it benefits from the seasonal rain that keeps part of the country green. So in term of natural environmental, Nigeria is a green land disposing of good agricultural land with potentials in producing necessary foods commodities to feed the population. With natural wealth in particular oil production Nigeria could have been a developed nation whose population could enjoy high standard of living and a social well-being. In 2000, Nigeria was a major oil exporter. In that situation, it could have had a large volume of stock of produced capital five times higher. But up to now oil still plays a major role in the Nigerian economy and the continuing on relying on one easy resource-dependent did have negative impacts on policies affecting other sectors of economy. In 2010, 61% of Nigerian lived under poverty line which is US\$ 1 per day. (Source: [wiki/Nigeria#Demographic](http://wiki/Nigeria#Demographic))

The development of Nigeria has been undertaken since decades but unfortunately, it has turned out to be on the contrary of what the population hoped and expected for. Up to the present time, the country has much to prove of its capability to deploy its resources face to the needs of economic growth in order to provide to its population the satisfactory conditions of living. The weight of its population with a high birth rate that makes up a total population of 151.3 million in 2007 is a burden parameter to take into account in the development equation. In conclusion, the example of Nigeria can raise the same question as in the case of Zaire.



How come a country like Nigeria, one of the richest in Africa has failed in its economic and social development program? What will it be when all the resources will be empty?

Upon the striking examples of Japan, Singapore compared to the examples of Zaire and Nigeria, the strategy of development shall be conceived not only in term of existing natural resources potentials but also in term of intangible capitals. The human power and its capacity to provide skilled labor force, good management, accountability added to the will to succeed are even more crucial than being only natural-wealth dependent. The model of development of each country depends first on two most important elements; the natural resources and the human resources because the two create a synergy which is a base of process called sustainable development.

The comparison between the countries cited above needs also additional explanation. It can be considered as one of the keys to understand the approaches of their respective development. These countries with different cultural background were in the past subjected to governance of foreign powers during the colonial period. They were forced to adopt sometime by force different type of institutions from their protectors and received cultural and social influences from them. So their ideas, their thinking, their philosophy, their way of life and in particular their system of governance is different from each other and their institutional background play an importance part in the way of running the governmental system and its management. The English culture and its influence had dominated one part of the world while French, Spanish, Portuguese, Dutch and German institutions in majority had encompassed the other part. The transmission of cultures, institutions and governances undoubtedly plays a fundamental and essential role all along the way of the development process of these countries.

Compared to the examples cited in the above paragraph, Cambodia is not a rich country like Nigeria or Zaire but it has considerable advantage the most important is the small number population compared to those countries. Therefore it does not have too much weight on the development effort. Its wealth enumerated in the Chapter II is considered capable enough to claim that cultural and natural resources are sufficient in term of quantity and quality to enable the development in the region in a way that reasonable sustainability could be possible. An appraisal of global potentials in the area of Preah Vihear Temple proves that the possibility of relying on the available resources does really exist.



Looking at the global aspect of national wealth, Cambodia is a fairly rich country compared to many others in the world. There are natural resources of a wide range of variety that can be transformed into investment capital. There is yet a shortage of human resources in the country, but if properly managed the population would have a reasonable standard of living and can enjoy the basic requirements of social well fare such as safety food net, access to medical care, and healthy life. If we make a comparison between the neighboring provinces by considering only two factors: land and forest resources which are the most reliable parameters for countries Preah Vihear does have an advantage in term of cultural resource that have potential to push forward the development of the region. Cambodia should not meet difficulty to generate output revenues and to develop. Since Cambodia is basically an agricultural country, it has much advantage than its counterparts in term of potentials of basic natural resource at disposal of its population. Compared to its neighbors Cambodia has good natural resources population ratio. This indicator with an empiric value gives an idea of the capacity of development. It does not include other factors of development such as tangible resources like human power, institutional values or management quality or performance that are in complement to the natural resources that Cambodia lacks and that are vital for the development process.

Table 18 is used only to illustrate the case of the four neighboring countries Cambodia, Thailand, Vietnam and Laos. The main advantage Cambodia has is its small population which is not a burden for economy of the country which has the capacity to support. The resources are sufficient to avoid a high rate of rural poor and are able to provide to the population reasonable living conditions. But the situation in Cambodia for decades is reversed compared to Thailand and Vietnam. (See Chapter II)

**Table 18** Land and Forest-Population ratio between four neighboring countries

Country	Population in millions (1)	Cultivated land as % Population ratio *	Natural Forest Cover as % of land area(3)	Estimate Natural Forest cover per population number*
<b>Cambodia</b>	<b>13.389</b>	<b>1931.36m2/ inhabitant</b>	<b>52.4%</b>	<b>3.91% per million inhabitants</b>
Vietnam	90.3	700m2/ inhabitant	24.9%	1.54% per million inhabitants
Laos	6.5	2000m2/ inhabitant	54.2%	8.33% per million inhabitants
Thailand	67.2	2300m2/ inhabitant	19.3%	0.29% per million inhabitants

Sources: Table based on:

FAO Forest Resource Assessment 2000; Ref (1); Ref (4.p 26),

Wikipedia, the free encyclopedia.com/Asia/Laos; Thailand

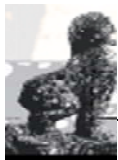
Vietnam; population

\* obtained by dividing number of population by estimate natural  
forest cover and cultivated land.

Basic natural resource/population ratio is defined as fundamental wealth of type of natural resource upon which the population rely on to insure its living. It measures the potential of development capacity of number of persons having at their disposal the quantity of specific resource. The above table gives the ratio in percentage of estimated natural forest cover in the country per one millions of persons and the cultivate land per inhabitant.

Table 18 above reveals that among the countries in the Indochina, Cambodia has after Laos, more advantages than the others in term of basic forest resources. It would not be too much a problem to solve the famine or to let the country fall too far below the poverty line and in the worst case the majority of the population is in the range of absolute poverty. In 2008, the number of population of 13.4 inhabitants is small compared to the neighboring countries except Laos. (Ref 1, p 9).It should be an important factor that could ease the





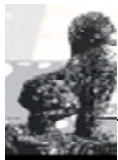
development due to the fact that the weight of the population is not as heavy as the country with great number of inhabitants. In this respect the food requirement which is necessary and fundamental to avoid social disturbances should not be a difficult problem to solve if a good management of natural resources can be applied. The same other basic and indispensable items such as amenities (water, fuel wood,) housing materials, can be provided within accessible reach by use of existing natural resources.

On the other hands, an economic growth effort for a small population is in common case easier than for the great number of inhabitants. In term of ratio of basic natural wealth to the number of population as estimated in the Table 18 Cambodia has and good advantage over its neighbors.

- **The case of Preah Vihear**

Preah Vihear region cannot entirely be isolated completely from the overall development policy of the nation. Therefore it should be intimately involved in the process of the development of the country. By analogy, Preah Vihear in comparison with other provinces in Cambodia is not a poor region in term of natural and cultural wealth. The Chapter II gives more details on the different aspects of resources either from nature and/or from culture. This global heritage which is the national treasure constitutes the overall natural wealth of Preah Vihear and its Region. Table 19 below attempts to illustrate the potentials of Preah Vihear expressed in large manner its wealth compared to the province of Kompomg Thom typically located in the middle of the country and Mondulkiri situated on North East, the extreme remote of Cambodia. Both of them supposed to be poor compared to the vast plain region of Tonle Sap.

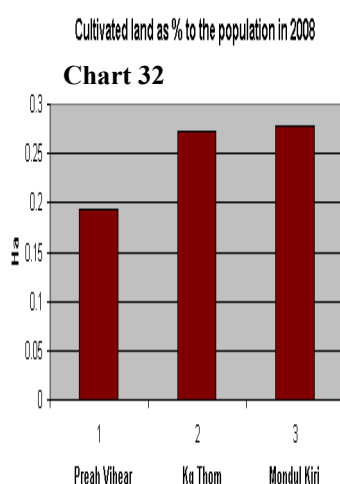
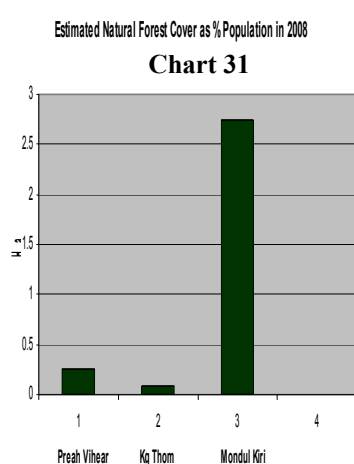
Table 12 on page 77 gives a comparison of the potential that exist between the three bordering provinces each one has specificity in term of resource. Kompong Thom located in the center plain of the country is used to be rich in fauna and agriculture (rice and fruit crops) and in fishery due to approximately to the great lake Tonle Sap, one of the biggest fresh water lake in the world and rich in biodiversity because of its ecosystem. Benefit from these potentials Kompong Thom is considered as a rich province in term of diversity of natural wealth with a big forest park called Prey Long (Long Forest).Mondulkiri is considered one of the poor provinces but the survey in the last few years has proved that on the contrary this mountainous and remote province is rich in forest, in arable land and in mineral resource



without counting the value of nature such as lakes, waterfalls and fauna and flora. To highlight the existence of mineral resource such as iron, base metal, aluminum, lignite, gold that many foreign companies mostly Chinese are now exploiting. In addition to these potential, the soil is favorable for rubber plantation whose resin is worth a good price on the regional market. The culture of rubber is becoming intensive by big investors.

**Table 19** gives the ratio  
of basic wealth (natural and cultural resources) to the population  
of Preah Vihear and Region

Province	Population in 1000	Cultivated land as % to the population	Estimated Natural Forest Cover per population	Culture or nature as Capital Asset
<b>Preah Vihear &amp; Region</b>	<b>171</b>	<b>0.193ha/pers</b>	<b>0.259ha/pers</b>	<b>Historical archeological monument, mineral, forest</b>
Kompong Thom	631	0.273ha/pers	.081ha/pers	Forest, Fishery, Historical archeological monuments
Mondulkiri	61	0.278ha/pers	2.75ha/pers	Mineral Forest, Nature



**Charts No 31-32** reveal that Preah Vihear has a ratio of land resources to population below that of Kg Thom and that of Mondul Kiri, but still has potential of available agricultural land in stock. On the other hands, Preah Vihear has Natural Forest Cover per population higher than that of Kg Thom and almost the same as that of Mondul Kiri. By adding cultural asset the estimated total wealth Preah Vihear has the same potentials of development than the two compared provinces.

Sources: (Ref 1; p 208) SYBOC 2008, CDRI/WCS, Nov 2004  
(Ref 4; pp. 52, 56); (Ref 2 pp. 43, 59)  
(2) Charts based on the above sources



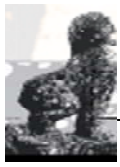
### **3-3 Sustainable Resources**

#### **a- Human Resources**

The case study of Japan, Singapore, Zaire, Nigeria and Cambodia provide sufficient evidence to raise the logic question of how these countries have come out with different degree of development. Some relying almost uniquely on human resources and intangible potentials of their social values have enjoyed a good performance in their economic growth and have improved the well-being of their population to a relatively high standing of living by increasing the income. Their development has moved their country away from the developing world. What is the key of their success? The human resources are the undeniable wealth on which their development strategy is based upon. This wealth is intangible but it has a dynamic structure which implies a constant evolution according to the situation and conditions of the economic environment. Following the trends of the needs of human society and the progress undisrupted of sciences and technology the intangible wealth of Japan and Singapore and many other countries which are in the same conditions and adopt the similar strategy needs to be flexible and capable of changing shapes and directions as required by specific circumstances.

The philosophy of dynamic human power stems from Darwin's theory of evolution of species that resides in the capacity of living nature to adapt to changing environmental conditions. Since the world has always been in that everlasting process, it is therefore indispensable to be able to undergo the necessary readjustments that allow life to survive as long as possible. Looking through that angle, some countries with scarce natural resources (Japan) or extreme limited in natural resources (Singapore) have to find an alternative solution. This alternative solution is how to rely on their human resources. Disposing man power is also an advantage but unfortunately it could be also a serious obstacle to the development like example in many countries particularly in Africa.

Many countries dispose of human resources, but many others have only primary human labor. The different between the two cases is that one has a human power which is trained adequately in order to fulfill responsibility as required by the market demand. This human power in order to follow the trend of market needs to be trained and retrained periodically or as often as needed to acquire new qualification with the objective to respond to the changing

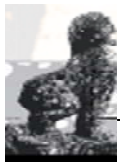


society at both levels national as well as worldwide. To cope with reality, we notice that many countries like Japan and Singapore, have adopted a policy of intensive and continuous education. Training and retraining of human labor force constitute a permanent process to create human power to acquire specific field of work with in addition a high degree of competence. The output of this process is to avoid interruption or depletion of good quality of human work force and dispose it in sufficient number to respond to the market demand.

Two main results are considered beneficial from this policy. The first result is to allow the country to dispose human power already in action to keep up with new technology. In that manner the human work force is prepared to challenge to the new requirements of new profession. By the same time, provide human power a flexible capacity to adapt to new changing technical knowhow to answer to the more and more obligation as claimed by the competitively in term of production and performance. The intensive and updated education has the role of providing a continuous flow of human resource in order to replace the work force already in action unable to undergoing new adaptation by being aged or worn out by work load and will be called to leave for retirement. In proceeding in this manner, sustainability in ensuring a permanent flow of qualified human resource is achieved and constitutes a primary wealth for the development process.

The mechanism as described above has the purpose to allow the country to depend on its human resource in order to enhance and then to maintain the rhythm of the development. To ensure the momentum of the development through the use and the deployment of human power requires a dynamic process of recycling this intangible wealth namely Human Resource. The countries like Japan and Singapore specifically due to the scarcity of natural resources have succeeded well all along their development process to maintain the rhythm and the sustainability by adopting what can be named *the resources recycling concept*.

In conclusion, the recycling of resources which are based on intangible wealth such as human power is becoming a dominant concern in the development process of many countries mainly the developed and the developing world. Nowadays, the trend is to how to mobilize human work force into a reservoir of human resource capable to handle new requirements of development criteria. Due to changing world, human resource should be ensured to evolve in term of technical know-how and social behavioral qualities such courage, endurance and

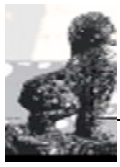


resistant to work load and psychological pressure in order to meet the ferocious competition in standard setting and production performance as to comply to market demand. When the chain of recycling process is completed it results that the human resource is regenerated continuously with new ideas or methods that would help to improve quality of work and its efficiency in a constant manner.

Along the line of this process, it requires a set of institutions capable of good management of human wealth. Institutional value and good governance policy are also the vital components of intangible wealth associated to human resource. They have the role to play in the mechanism of carrying on the transformation of primary labor force into of human resources potential in term of knowledge and in term of accountability. Finally human resources should lead and open the way to innovation and initiative enabling to generate other form of wealth. In that manner the recycling of human resource is vital to enhance and to help sustain the development.

In the opposite case, many countries in the world dispose important resources. Most these countries are still in the developing world and have strived for many decades to exit the gravity of underdevelopment. The case study of Zaire and Nigeria is only limited to African continent, but many others nations in other continents are in the similar situation. In this situation the primary labor force has not transformed into good productive human resources that can be used to create asset for valuable investment capital. The absence of a sound policy in the development of human resources is one of the principal causes of the stagnation or even regressive state of their economic and social progress. First a great percentage of population is still illiterate due to the lack of good education policy which should provide access to people disregard their economic strata. Secondly, there is no strategy in the transformation of their human labor force into reliable human resources. There is then a disruption of maintaining the human resources up to new technical know-how and the professional skill as required by the employment market. The lack of continuous training and retraining of human resources and in particular in the field of technology and management present a major gap between the evolving labor market and the specific skill of leadership claimed by more and more complicated economic and financial situation. The unprepared policy of education formal and informal or on the site training in order to keep in line with labor market demand is a setback in term of human resources supply either at local as well as at international level. The high quality of education plays an important role of ensuring





supplying and re-supplying the labor force mechanism because new graduates will replace the worn out work force that will be called, in the later date, to go to retirement. If the linkage between the regeneration of labor force and its transformation into a competitive human resources is not ensured then it would be difficult to convert this intangible wealth into investment capital necessary to produce other form of wealth. In that case, many countries in the third world do need foreign skill labor to help running their development program. Up to nowadays, many foreign experts in different professions still circulate the world to help countries in development because the countries hosts do not have the possibility to provide sufficient human resources to cope with the situation. Looking through this angle, like many nations in the developing world, Cambodia is not an exception in term of how to design a sound policy in the deployment of its human power. Even its population is small compared to neighboring countries; Cambodia has not yet to dispose a well design strategy in term of sustainability of this intangible wealth. It is true that great effort has been focused on education at the base, but it needs to look into closely the relationship between the quantities produced and the quality expected. A serious management of this wealth is required if Cambodia wishes to generate its human resources in such a way that they will be able to fill the gap of experts and foreign skill workers. In the labor market demand it is not only the mass of labor force that counts but the skill and the capacity to adapt to the economic environment became inevitably a criteria in the production and the performance based on lost and profit concept.

Along the policy of creating sustainable human resources it would require that country should have the economic activities so to keep the drain out of its human resource to others places looking for high salary. This phenomenon is happening in developing countries that cannot keep the human resource due to poor economic conditions. The Philippines, and recently Cambodia are losing skill labor force to migrate to Thailand to Arabian countries. This is big loss in human investment.

When there is failure in transforming the primary human work force into productive human resources, there will be limited chance to push forward the development program. The technical skill, the institutional framework and the managerial capacity constitutes important components in linking the chain of development; without them the growth process can hardly move forward and cannot be optimized to produce maximum yield. In that situation, the



country has not succeeded in putting in place the mechanism enabling the recycling of resources. The human resource cannot acquire new technics or skill that require responding favorably to the demand and therefore is lacking behind the others countries with permanent recycling labor force. In this case there will be no new jobs created and will not be able to compete with the neighboring countries.

The case of Preah Vihear is not different from that of the Country at national level. The lack of human resources is one of major factors causing slow down the speed for the development. Many skill workers have left the region for Thailand in particular in the field of construction in such a way that is difficult to find good workers in the area. In order to be able to develop, Preah Vihear region should dispose capable man power which is qualified to perform assignment and to assume responsibility. They should be trained in vocational schools to perform specific works in the field of construction, amenities like electrician, plumber, and mechanic to fulfill the basic need. Good services, accounting personal, qualified manager for small and medium enterprises are indispensable.

This proposal does not mean to design human resource policy neither at regional nor at the national level. It is only a suggestion to the case of Preah Vihear because there is a need in every aspect of development. Human resources development is linked to the global economic policy framework which is the responsibility of government's political orientation and decision which is beyond the content of this dissertation.

Therefore the proposals are addressed specifically to Preah Vihear region. They aim to recommend the following fundamental ideas which should be the key factors for this rural area with potentials to change the living conditions of the rural poor. With the Site of Preah Vihear Temple, the population of the region might have a chance to reduce the level of poverty. A development spearheaded by tourism sector can be foreseen in a short or medium terms depend on how the authorities visualize the future of the region and how fast the good development policy frame work can be implemented.

- **Develop Human Resource and capacity building**  
A fundamental factor

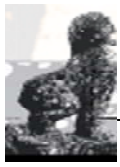


- 1- *Human resources are vital for the development of Preah Vihear and Region, as well as at national level. **Human resource should be the first criteria for development,***
- 2- *Man power shall be trained and be qualified to be skilled worker to handle work with effectiveness,*
- 3- *White collar worker shall be performing his task with transparency and have a sense of responsibility,*
- 4- *Manager shall be well trained and capable of high degree of managing skill,*
- 5- *High ranking official such as head of project, team leader, conceptual designer and supervisor shall have leadership and be of senior professional with experiences in his specific field, including a strong sense of accountability,*
- 6- *Man power in all categories shall undergo retraining, attend seminar or professional meeting in order and to absorb new technical- know how, and to increase productivity,*
- 7- *Officers with high responsibility shall comply with the rule of good governance, have the opportunity to attend congress, conference related to his duty and to specific field of work in order to share experiences with colleges of the same discipline,*
- 8- *Man power shall be formally trained through satisfactory educational system such vocational school, periodically trained to respond to the new market demand due to the constant changing trends in world economy,*
- 9- *Human Resources shall be reliable, renewable, and efficiency in order to compete on market demand,*
- 10- *Sustainability of human resources and its competitiveness shall be ensured because no matter how much natural resources exist sustainable development might not be achievable.*

#### **b- Natural Resources-cyclical and recycling**

Exhaustible resources: to yield sustainable produced wealth

When a country has a chance to receive a gift from nature it is normally rich in natural resources. The countries like Zaire and Nigeria are considered to have the blessing from nature. Zaire had disposed an important natural treasure that had made it one of the richest country in Africa due to the colossal and diversified underground mines in particular diamond and aluminum among others. Then is the case of Nigeria, a country rich in fossil energy, the



richest in Africa in that particular resource. The volume of its exportation has made it one of the important oil producers in the world. Both countries Zaire and Nigeria have in addition to their primary and principal resources a good percentage of forest coverage on the total land area.

The climate is prosperous for the development of green vegetation and the ecosystem provides variety of fauna and flora species. Compared too many other countries, Zaire and Nigeria have great potentials for the development. Their natural wealth has been used intensively for many decades and yet there is no sustainable development on sight. In Zaire, diamond mine has been exploited at a very fast rate. Most of precious stones like diamond are extracted since the Belgium colonial period and extraction work continued massively when the country got its independence. As a matter of fact, Zaire has been trying since breaking away from Belgium a transformation of its natural wealth into other forms of wealth such as buildings, machines and infrastructures. The cost of the process is so high because it requires intensive pumping of the resources. Now with the estimation, those mineral wealth are depleting progressively, and in some cases exhausted like the diamond mines. There are no everlasting diamond mines, but there are sustainable diamond- mining industries. In this statement an assumption can be made that the failure of resources transformation can lead inevitably to empty out the natural wealth of the country. Mineral resources once discovered will be exploited, once after being exploited they will be first depleted, then exhausted and finally drained out completely. Mineral resources are unable to be regenerated in their primary form because they are over exploited breaking therefore the cycle of their reproduction. They are exhaustible after a period of exploitation; the mine ran out of its substance, has no more added value, and then it is called to be close out. Consuming rent from exhaustible resources is equivalent to consuming literally capital. Many countries in the developing world have not looked deeply into this reality, hoping there is possibility of renewable resources, either by self-regenerating process or by finding new ones. Many countries in Africa happen to be in that situation. South Africa for example has succeeded in achieving the recycling of its diamond mine by using well managed exploitation policy in such a way that their natural resources can last longer and have time to follow the natural cyclical process. In such a manner natural resources can be sustainable and be turned into a prolonged period of reserve in investment capital.



- **Regenerating Green Resources to ensure their sustainability**

Now, let's us turn our attention to the green resources. Green resources are also natural resources that some countries have a chance to dispose as gift given from nature. These resources can be inexhaustible if properly managed. The forest is recyclable. It grows, it can be cut; the trees can be used to serve many purposes, when they die they can reborn by natural phenomena or they can be replanted to ensure their sustainability. Fauna and flora are also part of these resources that follow the same mechanism of recycling process.

Many countries in the world have succeeded in maintaining relatively good balance between preserving and using their green resources in such a way that this precious natural wealth can be set to recycle in a sustainable mean. Just to give few examples of success in implementing this policy. We can see New Zealand, the United States, Finland, and Japan and lately Malaysia a country close to Cambodia has been very much involving in designing a strategy that will ensure a sustainable use of green resources in the long term. Being countries highly developed, they understood that green natural resources should be preserved and be carefully managed because they provide permanent wealth to create a relatively continuous overflow of assets that will be transformed into investment capital for the development. The forest can be exploited without destruction or degradation by complying to the pace of its growth and its reproduction in other words to its natural cycle. Practice of commercial forest is worldwide well known nowadays. Developed countries in the North hemisphere such as Canada, United States, Norway, Finland and South hemisphere, Australia, New Zealand have been using forest as sustainable wealth to help developing their economy without neither depletion nor exhausting. They have also proved that forest should be preserved as environmental heritage. It must be protected to keep the equilibrium of ecosystem which is vital for human as well as for every living being. The benefits drawn from forest are numerous aspects starting from food to economic potentials; they should be considered into a global management policy and conservation strategy as sustainable green resource.

Unfortunately, this practice has not been observed in many countries around the world in particular those that are still in the development stage. Cambodia with no exception is one of them. Instead of recycling the natural resources so they could be sustainable they exhaust





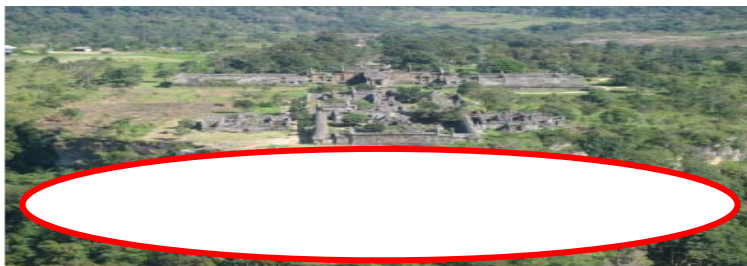
them at a rapid pace. In a short time this natural wealth is drained out completely. Experiences have shown that reforestation is possible, but it would be difficult due to the degradation of environment like soil conditions, change of micro-climate that creates insufficient of rainfall, new adaptation of seeds and species into the new milieu but also and more importance is the lack of willingness of authority to do it. Normally replanting is possible but it has been observed that there a big deficit between reforestation and destruction by over cutting. Examples of this unbalance of green resource are given in the Chapter II. Reforestation of a large area will take time for the trees to get to the age when they should be cut and it will need steady maintenance. It is much better to have a sound policy of a good management and a proper skill for the preservation of natural resources that can be cyclical and recycling in following the natural process in order to achieve the sustainability of this exceptional value of wealth.

In the case of Preah Vihear region, as any part of Cambodia, the green resources were so important in the last many decades that they became a part of everyday environment. Population and authority looked at these resources as permanent gift given by nature. They took it for granted. This is one of the aspects of vision that both inhabitant and the authority do not take responsibility. The lack of long term vision and the consequences that have happened to green resources have been explained in the chapter 2 of this document. Due to mainly absence of visionary policy about how to generate forest wealth and to keep it sustainable by using recycling process as natural mechanism, Preah Vihear Region which used to be ever green area has now lost important part of its natural potentials. The ever green forest has become today a semi green or deciduous forest. On the other hands, the change of the state of nature has also implicated in the modification of other components of natural resources such as water because of limited rainfall and agriculture capability because of soil degradation. At the same time the change of landscape added by uncontrolled human activities in the region produce also the negative impacts to the natural environmental in particular at the foot hills of the Preah Vihear Temple site.

In addition to the above mentioned factors responsible for preventing nature to growth and to reborn as required by its natural cycle, came another factor which causes of even more harm to the green resources. This factor is the human impacts. It comprises the intensive human settlement in the region, his everyday life activities, his livelihoods and his negligence



in a compromise of behavior toward this natural wealth. Massive habitat in nearby forest brings about destruction of forest products in particular valuable trees that cutting requires an appropriate management in order to prevent total drain out of green resource in the long term. Forest has no possibility and no time to regenerate therefore degrades slowly then dies out completely. At the same time, farmers need land to build the houses and to practice agriculture. In that manner forest has to be cleared out, soil has to be modified from its original and natural conditions. Landscape also has changed from luxuriant vegetation to dry bush with progressive extinction of fauna and flora. Finally the green resources begin to shrink their potentials and disappear completely.



**Fig. 109**

Ever green forest  
surrounding the site  
that must be protected  
at all cost.



**Fig. 110** dense forests on the mountain slope must be protected



**Fig.111** Ever green to semi-ever green and deciduous forest  
should be replanted (Source: Ref 5)

**Fig. 110**

Shows that the ever green forest still exists around the site at high altitude. It used to be this landscape many decades ago when nature had no obstacle to follow its recycle mechanism and there was then none or limited intrusion from human habitat. Now this type of landscape exist only on the slope of the mountain.

**Fig. 110**

Shows that the state of forest nowadays became a semi-ever greento deciduous. The landscape has changed drastically and there is risk of having negative impacts on the environment in the future if no appropriate policy has been thought out.

**Fig. 111**

Evergreen forest used to occupy this area until human settlement. Land for habitat and for agriculture replaces the trees and natural environment.

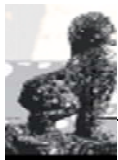
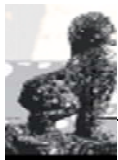


Fig. 112 human impacts on forest and natural environment should be regulated or banned (Ref 5)

- **Proposed policy framework**

Preah Vihear and region requires primarily the following basic and fundamental policy without which sustainability of development would be problematic and could not have chance to be achieved. As illustrated in section **Natural Resources cyclical and recycling**, the development of Preah Vihear should be sought out, first, in disposing a good policy frame work in term of how to ensure sustainability of existing natural resources. Preah Vihear and region have relatively important potentials that could be used to enhance proper development and to support its mechanism. Even the region of Preah Vihear is not known up to the moment that there exist of minerals or other untapped resources but it is evident that many other forms of wealth are present and with exceptional values. Chapter II of this document has enumerated most of the existing resources that summarized globally the Wealth of Preah Vihear and its Region that has been identified with specific category and value. Each form of wealth is capable to be transformed into asset for investment capital indispensable to undertake a sound development program. The question to be asked is how this wealth could be regenerated, renewable and be potentially available in order to support the sustainable development. To meet such a requirement, it is necessary that the relevant authorities e.g. Preah Vihear National Authority, local government, central government, and the population involved comes up with a policy frame work of how to design a good management strategy and to implement a feasible action plan. The existing situation and the pre-conditions for enhancing a development require that wealth of Preah Vihear and Region be the central point of the concept of respecting the cycling and recycling natural resources. These resources shall



be subject to preservation for sustainable development. They should, in any possible way, be protected to allow regeneration; then take advantage of their natural products to transform into commercial values and then leave them back into their natural mechanism of reproduction. Proceeding along this line the resources are ensured to be renewable for sustainable use. They can provide continuously what we need without risk of depletion or destruction; therefore a relative equilibrium is at last established within the eco-system. It is obvious by analysis of past and present situation of Preah Vihear and its region that the primary concern is to integrate them in the policy framework for resources protection with good control based on transparency of laws enforcement. It has been observed that lack of such measure has provoked serious implications on meteorology of the region such as drop in rainfall, depletion of water resource, land erosion and loss of soil nutritious for agriculture. This change of micro-climate proves the evidence that the eco-system is being in the state of serious degradation. This problem is crucial and needs to be tackled immediately in order to find urgently appropriate solutions. The following suggestions is not an exhaustive study but a guiding principle that permits relevant authorities responsible for the development of Preah Vihear to have ideas and awareness for the elaboration of a sound policy aiming to regenerate and to preserve the eco-system in the region.

The following recommendations provide the key issues of each of the major components of the ecosystem to be protected according to order of priority that requires positive urgent actions.

- 1- **The forest in and around the site of the World Heritage** temple of Preah Vihear declared protection zones (Z1, Z2). The immediate surroundings of the temple (Z1) the vegetation is limited to scattered trees and shrub and grassland. Dense big trees are still on the cliff of the mountain. In (Z2), many species of trees of good quality (Beng, Thnong, Kranyung) and variety of flora are in the state of danger of extinction. The ecosystem is being unbalanced and might be in the short term in the state of serious deterioration. This area shall be treated urgently to prevent further degradation due to uncertainty of climatic conditions. The world heritage site is the historical and cultural wealth of Exceptional Universal Value and acts as motor of the development of Preah Vihear Region. The forest in this area needs to be preserved, regenerated and reforest in following its natural pattern and cycle.



*Upon this consideration all action plan to be undertaken in Z1 and Z2, shall be conformed to the prescription stipulated in the Management Plan of Preah Vihear World Heritage approved by UNESCO on January 2010. All action in the contradiction of the Recommendations of the Management Plan shall be forbidden.*

- 2- **Zone (Z3)** is covered by deciduous forest with existing important trees (Trach, Tbeng, Khong, Rang) of highly added commercial value, and by seasonal grass (Trengh, Sbov). This area should be subject to detail study including the micro-climatic conditions in order to seek solutions of how Z3 could be reversed to become a permanent evergreen or semi-evergreen forest. Since this zone is adjacent to the Z1 and Z2 of high degree of protection is called to be developed in such a way not to create prejudice to the World Heritage Site, it is crucial to dispose a special policy in the matter of land use which should uplift the value of the world Heritage Site.

*The reverse situation seems to be the best solution because it could revitalize the eco-system that is in danger. Reforestation in Z3 is urgent matter in order to prevent further degradation of eco-system. The Zone 3 was used for human settlement so detail study of soil conditions that will help revitalization of green area is necessary. If this option is not possible, then Z3 could be revived into alternative solution such as area for park, garden, nursery; in such way that Z3 can be save from further degradation. At the same time Z3 is called landscape zone but the development in order to support economically the surrounding region might be allowed to be integrated within a global program of environmental conservation. Therefore land use policy allowing related to the preservation of site and its green space should be designed for. Integration of actions plan within a policy frame work of a global eco-system*





*shall be formulated urgently so to ensure harmony of the region. A strategy leading to the implementation of the policy shall be the ultimate criteria prior to any program submitted for the development. (Appendix 6)*

3- **Area beyond Zone (Z3)** is Preah Vihear Temple Region. It is characterized by a variety of forest types; semi-green, mixed ever-green, deciduous are dominant and partially by mangrove, and flooded forest. The region is threatened by deforestation, human settlement and livelihoods of inhabitants. In this zone agriculture is practiced and some livestock is raised by the population.

It is important that this region reflects the typical landscape of a tropical country in South East Asia under a warm and humid Climate dominated by monsoon. In that context, the region can be rich in biodiversity, and becomes a precious habitat for fauna and flora. In this view, it suggests that destruction of forest including illegal logging, landfills to natural water basin or pond, inappropriate excavation of soil, and unauthorized land claim by deforestation should be stopped rapidly.

*Changing the nature of this environment will lead undoubtedly to the change of cycle of local climate in the region. The Asian tropical climate with monsoon rain can be jeopardized, the warm temperature during dry season could affect agricultural practice and disturb the cycle of fauna and flora.*

*With this vision it suggests that the region shall be part of an overall policy for the protection and conservation of eco-system of the milieu followed up by immediate implementation of action program with a comprehensive land use plan at least a the regional level. It recommends that the paddy grow can be restarted because nature allow a compatibility between semi green forest and agriculture. This practice is common for small farmer everywhere in*



*Cambodia. The cohabitation between agriculture and semi- green forest provides also a beautiful landscape from the composition of natural diversity.*



It is imperative to continue this type of integration between semi-dense forest with agriculture as practiced by poor farmer. This small area of land with semi-dense forest should be protected from land grabbing

**Fig. 113** cohabitation between agriculture and semi-ever green forest

#### 4- **Fauna:** recreate, protect and regenerate

It is essential to recreate fauna which once used to exist in this region. Not many researches have been done in this field but survey with the population living in and around the region and periodic reports testify that there was presence of wild animals in the region. Elephants, tigers, leopards, wild buffalos, jungle cats, sun bears, gibbons, wild boars are often seen in the region along the Dangrek Mountains comprising the three provinces Preah Vihear, Banteay Meanchey and Oddare Meanchey.(\*)

*Fauna that still exists in the region shall be preserved from extinction and the rare species in endangered shall be protected and regenerated. Integrate the region in the Kulen Promtep Wildlife Sanctuary situated south of road connecting Anglong Veng to Sra Em which is one the largest protected area in Cambodia. Wild life hunting shall be regulated or banned for particular rare species until reproduction is ensured. A program of strict control of illegal hunters with forest rangers should be implemented and the involvement of population in the communities for the preservation should be included in the action.*

\* Source: International Union for Conservation of Nature endangered species list (Forestry Administration 2009)



#### 5- Flora: natural recycling within eco-system

No detail research neither document has yet to be done or existed in flora. Field survey by international NGO has proved the existence of some rare flora in the region in particular along the Dangrek Mountain. Observations and testimony from population living in in the region suggest that the area is rich in flora. Diversity of species have been found in evergreen and deciduous forests characteristic of zones (Z2, Z3) and beyond. The following are the most common on bush land while lotus , nenuphar, water cress are popular in ponds, lakes or marsh land which also constitute an invaluable habitat for the biodiversity.

*Within the frame work of eco-system protection, it necessary to preserve flora and let it reborn and renew itself through the natural cycle processing mechanism. It is also important that flora offers a natural esthetic in term of life element and colors, but it is the basic food supply for certain categories fauna (bees, insects, aunts). So measures of conservation and regeneration shall be formulated and implemented in order to prevent land filling these water areas.*

### 3-4 Management of Ecosystem

A good management of the eco-system is a key factor in achieving a balance between world of nature and human world. Since the eco-system is the base of natural wealth that supports life of living being, it is crucial that it should be the priority of consideration. In the days ahead, the authority of Preah Vihear, relevant government institutions and civil society including the population will have to face a serious challenge of how to manage the eco-system policy framework. The policy should be though along with strategy of how the whole country understands the importance of this issue and how to mobilize the public to support the actions to be taken. This is an important task to cover the scale of work to do starting from World Heritage Site to protection zones extended to the region. Government should tackle this problem soon enough before the situation becomes irreversible.



A set of general but nevertheless essential recommendations that concern vegetation such as forest, ever-green, semi-green and deciduous in different zones including the area beyond is summarized hereafter. The objectives of the recommendations should be considered within a time frame that has to be defined urgently, medium and long terms. It is recognized that environment policy and action is a long process because of the time required by nature to complete its cycle. Forest will take time to adapt to the new milieu, to reborn and to regenerate. The department of environment in Preah Vihear should take initiative with population and private sectors such as saw mill, real estate, or cooperate with related N.G.O.

*In that perspective the first step of management work shall be the compliance with the recommendations prescribed in the Management Plan of Preah Vihear Temple of UNESCO in January 2010. It concerns the World Heritage Site and its surrounding areas that are indispensable to protect and to preserve. The recommendations of the Management Plan is well thought, amply sufficient and pertinent enough to respond to the requirements for the protection of eco-system.*

*This assignment is relevant to and is a direct responsibility of Preah Vihear National Authority. For zone Z3 and beyond which encompass extended areas is crucial to have a management that will link it to Z1 and Z2 in such a way that it would be coherent a consistent in vision and provides harmonious and complementary development for the whole region. By doing so, the core zone where is located the World Heritage Site will be connected to the surrounding wildlife sanctuary Kulen Promtep and protected areas as declared by the United Nations Environmental Programme World Conservation Monitoring Centre (UNEP-WCMC).*

*It is recommended, once the policy frame work has been defined and designed, that an inventory list of the major elements of ecosystem be established so to have an overall look of the situation, before drafting the strategy and implementation of action plan. The inventory list shall be followed by mapping the vegetation, the forest location in each zone to be declared as ecosystem zone. Such document will facilitate management of each zone and will provide a good picture of how impacts could be expected in the whole region and what kind of solution to look for. In a global perspective and within reach, it is advised that the spatial area encompassed by the World*



*Heritage Site and its influenced are shall be conceived as a global eco-region. While human factor is normally brings about disturbances and degradation for the eco-system such deforestation, land clearance, or wildlife hunting, it is imperative that these activities should regulated or banned because reproduction of nature cannot support. It is possible that negative impact induced by accelerating the pace of human responsible activities such as illegal logging, destruction of wild life, filling marchland or draining out the water source will affect seriously the eco-system to maintain its natural course.*

*It is recommended that an equitable balance between natural environment and human livelihoods be established in order to reach an harmony between evolving human being and ever-changing nature.*

### **3-5 Management of Water Resource:**

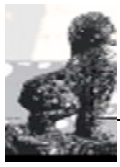
Water resource is considered vital for the development of PreaVihear and its Region. It would be unrealistic and even unforeseeable to think of development without insuring the availability of water resource in the region. Water resource to be considered herein is limited only to water supply covering mainly for drinking and basic uses for everyday life needs, for agriculture, and for bio-diversity to be cyclical and sustainable.

Water source of region of Preah Vihear relies on rainfall. The natural conditions of the environment regulated by micro-climate in the Dangrek Mountains are basic and essential to the quantity of rain fall. According to the researches and studies by PVNA (Ref 5; p 151) the climate conditions in the region of Dangrek are still favorable to the development of agriculture with intensive rainfall during season. This is the reason why Foot-Hills province was one of the prosperous provinces in the kingdom of Cambodia. The human settlement as shown in urban lay out and the reservoirs fed by ingenious network of canals and water ways prove the abundance of water resource at that time.

(See map 26; p 96)

During the 11 century during which Preah Vihear complex Temple was constructed, two ancient man-made reservoirs (Baray) were discovered on the foot of the mountain. The





Barays were built in order to catch and store the rainwater running down from the top of the surrounding mountains. The archeological work undertaken recently by PVNA has proved that during the period Preah Vihear had sufficient water to meet the needs of the population living in the area.

#### Baray Prasat (temple) Monivong

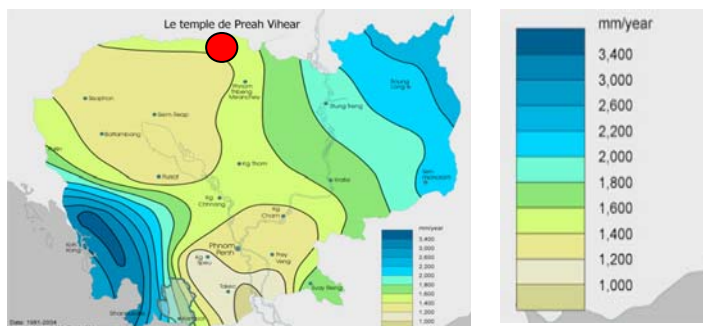


**Fig.114**  
Recent archeological work of PVNA shows the existence of a man-made water reservoir (Baray) that existed during the time of the construction of Preah Vihear temple. This proves the existence of water source in the region

**Fig. 114:** Man made Barays (water reservoir) Ref 5 PVNA

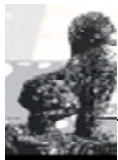
- **Current situation**

At the present time, climatic conditions have changed; less rainfall with prolonged dry season and water source has diminished accordingly. The drop of rainfall in the region is the cause of many factors; a long process of climate change in general, but undoubtedly for this case it is the continuous and persisting of deforestation in the area.



**Map 36**  
Source: Mowram;  
Dept of  
Meteorology; data  
1981-2004

The field observations of the study of the “*Orientation Plan for the Development of Preah Vihear*” (Ref page 67-70) done in 2009 revealed that there are several natural and artificial ponds in the area but they are not all year round filled of water because of serious



draught during hot season. According to the same study, only a few water reservoirs i.e. natural ponds and man- made basins were seen to use for storing rain water during wet season (See pictures 116-117; p 162) ;( PVNA Ref 5)



**Fig.115** natural water basin close to the Pagoda

One of them with a good storage capacity is located close to the Keo Sekha Kiri Svarak pagoda. During the hard dry season, these water reservoirs are dry out and people living nearby have difficulty for their everyday needs. There is no treated water, so drinking is becoming a hazardous health problem. In most areas well water does not have the qualities that comply with the WHO standard guidelines. Thus water should be boiled before drinking.

In zone 2 of the Temple on the main road to Sra Em village there is an important pond built during Khmer Rouge period on natural depression surrounded of wet land.



**Fig.116** Water level during normal wet season in the reservoir at the Temple (Ref 5)

**Fig.116**

These man-made water reservoirs are located in the core zone where is situated the temple. They were constructed during to provide water for pilgrimage and religious people and visiting and living in the temple. They have been repaired and used to store water from rain fall for the use of PVAN and soldiers guarding the temple.



**Fig.117** Water level during dry season in PV temple site (Ref 5)  
PVNA



This constitutes at the presence the main water reservoir for the population in the area. It is called Svay Chroum reservoir, the of a village close by. Water is abundance during rainy season and can sustain during practically the whole year round due to the existing streams coming from the Dangrek Mountains. Small waterfalls and streams still exist along the access road from the bottom of the mountain to the Temple. They are current used by soldiers stationed nearby for the everyday needs (drinking, cooking and washing).

For the population living in the new settlement eco-Village located about 20km from the Site of Preah Vihear, there is no water supply. To meet the requirement of everyday needs they have to use underground water. There is not yet a system of water sourcing nor distribution network. The government is planning to construct some reservoirs in the future to channel water from nearby Stung Sambou river, but the work will take some time due to the size of the and the cost of the project. The project might have the possibility to insure that the voulme of water will be able to face the long draught season.

The “*Orientation for the Development of Preah Vihear*” has made an estimation of water demand and supply in the region of Preah Vhear. According to the document the minimum requirement of water for the population and for the tourism whose number is forecasted to 400, 000 the annual demand for water supply is to be 0.30 mcm to10. (Ref OPDPV; p 70) This amount of water should be available to push forward the momentum of development; and the solution should be sought out accordingly.

In order to respond to the above requirements, the University of Tokyo and the Royal University of Phnom Penh teams who lead the study of the orientation plan suggests to undertaken in depth the study of water resource potential in the Preah Vihear region. It is hoped that this good initiative will provide invaluable results in order to determine the real potentials of development of Preah Vihear and its immediate surrounding areas.

In conclusion, like most areas in the Preah Vihear region, capturing water resource encounters two major problems. The first is the availability of rainwater which is becoming in the last decade unpredictably low and with a prolonged of the dry season (See map 36; p 161). The second problem is that the water ways such as streams, canals, cricks), natural water reservoirs and man-made like ponds, basins, wet land have been left out without properly maintenance. So for many years, every time heavy rains come, the debris of trees, pieces of stone and vegetable soil washed out by flows of water coming to fill the water networks and



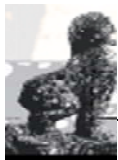
reservoirs in such a way that their capacity to store became meaningless and finally dry out. This is the problematic of the management of water resource in Preah Vihear region.

- **Resourcing and collecting the Water**

The main sources of water in Preah Vihear and region come from the Dangrek Mountains. The rain fall from the top of the mountains runs down with steep slope to the hill sites through successive platforms where water can be collected with the construction of small dams that help to contain the water. So according to preliminary survey by the RCAF water does exist on the tops of the mountains. The department of topography of RCAF has given evidence of the existence of water in the mountains and has proved that this water has had been used by Khmer Rouge soldiers to serve their multiple purposes such every day needs for drinking, for cooking for cleaning and for agriculture.(See map 37;p 165). This water from the top of the mountains runs off quickly through the land below and washes away the vegetal soil below due to the absence of proper irrigation system. Instead of directing water to reservoirs by man-made canals or by existing natural water ways such as creeks water is running down stream in direction to Banthey Meanchhey and to Anlong Veng regions. It is necessary that this first survey should be checked and eventually studied in details to make a good inventory of water resource in the region and its directions of flow. By the same time the study should provide solution of how sources of water can be protected, used and managed so it can be sustainable to support the development of the region. In Anlong Veng, a small village now becoming an important junction town between Siem Reap and Preah Vihear, has a natural lake. The lake was restored, improved and maintained to store maximum of water taking its source from Dangrek Mountains by the Khmer Rouge as reservoirs to supply water to the population living in Anlong Veng and to feed the rice field. The size of the lake with its wet land is around two thousands ha. Today the lake reservoir is becoming shallow and seriously filled in by sedimentation brought for by heavy rain. Due to the lack of maintenance, its storing capacity has diminished considerably and reduces the production of agriculture compared to that of the Khmer Rouge. This situation can produce negative impact on paddy production of the region.

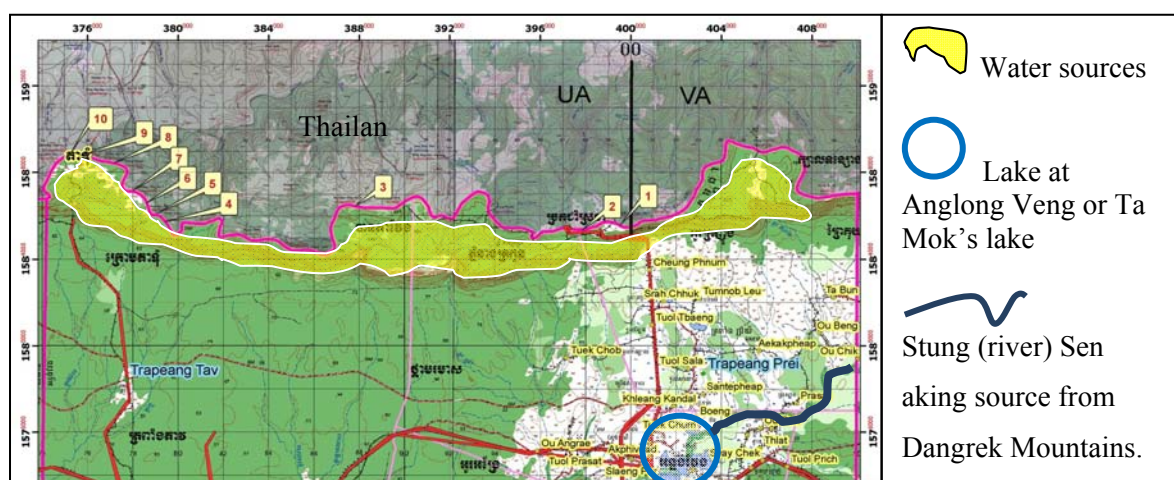
The region from Preah Vihear down to Anlong Veng which is in the water shed of the Dangrek mountains is favorable for agriculture. The land is rich with marschland and flooded land, the Khmer Rouge was capable to use Anlong Veng as paddy storage to feed its army. Now the situation has changed because agricultural land have been sold and made place to





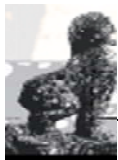
urbanized areas since the Temple of Preah Vihear became a popular destination for tourists. Because of this situation the management of water becomes crucial for two reasons. The first is how to meet the demand of water of a growing town with steady migrant population and increasing number of tourists. The second is how to provide sufficient water in order to increase the level of agricultural production in the rural area surrounding the town of Anlong Veng. The alternative is to review the strategy and the management policy of water resource taking into consideration the scale of region. Thus it requires first to protect and improve the sources of water by avoiding all factors that can affect the rhythm and the volume of rain fall. Second protect the water networks by regular maintenance such as cleaning out the detritus, branches of trees and accumulated sediment from soil erosion during heavy storm. The management frame work should take care of water resource from its sources, water network from upstream down to the storage reservoirs. In addition, it needs to assess the feasibility and to represerve the potentials of natural and man-made water reservoirs that exist and that were built by the Khmer Rouge during their occupation. It has been observed recently that the big lake acting as water reservoir in the middle of which located the headquarter of Ta Mok, has been filled in as reclaimed land for the purpose of construction. Recently starting from 2010 some housing projects and resorts are beginning to invade the lake and this situation is unbearable because if it continues in that trend there will be problematic in water supply for the population as well as for agriculture.

There has been a study on management of water resource in Cambodia done by MAFF and MOWRAM in June 2009, but so far the plan has not yet been implemented because perhaps there is no financial support.



**Map 37** showing the possibility of water sources on the top the Dangrek Mountains; Source RCAF





- **Water resource at regional level**

Water resource should be studied at the region level because the whole Dangrek Mountains is acting as a water source and rain fall along the mountain range can be different from one area to another. The micro climate concerning Preah Vihear Temple could be specific to the whole pattern of rain fall compared to the whole region. Topographically, the plain at the foot of Dangrek Mountains Range is slopping down toward the central plain creating therefore a sequence of water sheds from which the water runoff to the water basin of the Great Lake Tonle Sap. During rainy season most of flat land along the roads is flooded. The twenty four bridges that exist between Sra Em and Anlong Veng can be over flown by rainwater during continuous heavy rain. There is no master plan to control and to use the overflow water during heavy rain in Preah Vhear. The drainage in the town is inadequate and constructed with lack of technical study so the center of the town is often flooded in particular at the market place, creating insalubrity with an unhealthy environment.



**Fig.118**



**Fig.119**



**Fig.120;** From top to bottom

Fig. 118,119,120 (by Author) in 2012

**Fig. 118,119,120**

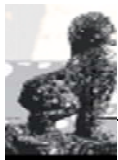
Ta Mok's Lake as shown in Fig. 81 is a natural basin created by a ground depression. It stores water running through a network of streams on water sheds from Dangrek Mountains Range seen in the back ground. (Fig. 81). the main reservoir. Fig.82, this natural reservoir is being filled.



Site observation in 2008 at Anlong Veng in direction of Khmer-Thai border noted that great quantity of water ran off from the natural lake over the bridge to a crick below. This situation happens during the raining season normally starting from May to end in September from the Dangrek Mountain. Through water network in upstream, important quantity of water runs toward Ta Mok's lake in Anlong Veng. When the lake is filled, water over flows in all directions because there is no mean to stock the surplus. Water runs over the bridge and falls off into small creeks which, with no maintenance, cannot channel the water to the direction of irrigation network that feeds the rice fields. It is estimated that the water drop from the bridge is around seven meters high. The different level of water from the Bridge to the creek combined with important volume of water runoff and its speed of flow, there could be a possibility to create a potential energy which with generator would turn into electricity to feed at least part of the town. This idea should be developed with appropriate study to determine the feasibility of the project because this form of energy is not polluting and it is in line with the idea of clean environment. In case the results of feasibility study reveals positive, and since the project is a small size it does not require important investment; it will not be too difficult to look for a local investor. Therefore, the electrical energy supply by runoff water from Ta Mok's lake could be used to power plant for water treatment that will contribute to better hygiene and to cut down significantly the number of many water-borne diseases in the region.

Looking at this potential the water resource having been wasted, the authority at the local level with the participation of the population and local private sector can collaborate a project aiming at first the protection of the lake, second find a way to dredge it in order to increase stocking capacity, and prevent fill in at all cost to meet the demand of growing population and expand the agricultural production.

The availability of water resource in Preah Vihear Area is a vital for its development. If a study in depth reveals that there will be a limited potential in this natural resource new strategy for the development should be sought out immediately. Either plan at regional scale of water resource to find solutions or change the plan into a small scale projects sufficient to cope with the local problem for the time being. Nevertheless not sufficient water will also have implication on the zone 2 of World Heritage Site Preah Vihear because it will jeopardize the program of reforestation which for a time being relying uniquely on the rainfall.



Since the development of Preah Vihear and its region depends primarily on the availability of water resource, it is then indispensable that the relevant authority pays particular attention to the issue. The study of the water sources as recommended many times in this documents and in many others including recent Japanese Mission for the study of “*Orientation Plan for the Development of Preah Vihear*” in 2010, emphasizes strongly on the necessity of water resource as basic and fundamental criteria for the future of the region (Ref OPDPV;p 67-70). It has been also stressed that the first step for the management of water resources should start from the protection of environment in particular the preservation of forest. At any cost forest that has been destroyed by illegal logging, by using as wood fire for the population as neglected forest fire should be banned and/or prevented. Public authorities shall take strong measures to stop these natural and man-made catastrophes that have destroyed so far the cyclical natural wealth of the region. It would be also, in a long term perspective that the management shall include the great region bordering the Dangrek Mountains Range due to the potentials of water sources. These sources should be protected, maintained and eventually improved the quantity as well as their quality from any form of pollution. The water network such streams, creeks, rivers, or lakes should be surveyed, inventoried and studied their potentials.

**Fig.121** Natural lake with marshland



**Fig.122** Water reservoir used by local population



The information provided will allow drafting a master plan of water resource of the region. Once a vision on the water potentials have been established, the relevant authorities could easily proceed to planning a diversity of projects which will lead to the development of Preah Vihear as a first step, to its immediate surrounding and then successively on to other activities that are considered as priorities. Main economic field of development that is on line with the government “Rectangle Strategy” is agriculture as a backbone to all others sectors such as energy, and potentials of market driven industries like tourism, related services and handicraft. Water management at region level is becoming necessary to visualize the regional development at different horizons. A strategy and policy on water resources conservation and



how to use by saving measures should be looked into and planned the mechanism for implementation.

A possible and feasible solution for water management which leads to optimizing the use of water is the different level of run-off by gravity. This solution is not new. It has been used since ancient time by many groups of populations who have been facing the problem of having water shortage for agriculture development. In Indonesia, in China, in Peru South America where the topography of the terrain is dominated by very sloppy site the techniques of capping water for agricultural purposes are genial. The water from its source on the top Dangrek Range Mountains can be stored at the first reservoir located at the highest altitude. Level by level water flows down and then continues step by step to the next lower level creating therefore a series of terraces where reservoirs can be built from which water can be used for different purposes. Using this technique of gravity flow is the most natural way that contributes to the protection of the environment. This doing permits also to save water by regulating the flow for necessary quantity to be used without wasting. This technics have been used in many countries in the world. The overflow of water will be collected at the lowest level and can be channeled to rice field with good irrigation network.

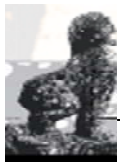


**Fig.123** example of good water management

**Fig.123**

Taking advantage of the topography of the sloping site water stemming from its source on top of the mountain can be channel down through the techniques of terrace rice field. The reservoirs can be built with natural depression one after the other so water flowing by gravity can be directed to final destination and its used is optimized.

Waste water problem in Cambodia even in the capital city of Phnom Penh, is still a continuous major problem. There have been many attempts to solve it but somehow the problem is continuing up to the present time. In many other big cities in the countries waste water is a main concern due to the increase number of population in the urban areas. Drainage system is limited and inefficient, but serious matter is the sewage water and rain water using the same drain. There is no real treatment plant even in the big city like Phnom Penh or Sihanoukville. The waste water and the rain water have the same exit to stream, river or close to the beach. No site has been set aside for the treatment plant. It seems that in urban lay out



this kind of problem has been forgotten or pushed to the later date. Even Siem Reap a world-wide known tourism destination due to the World Heritage Site of Angkor does not yet dispose a waste water treatment plant. There is a beginning of drainage system and a master plan of sewerage but it will probably take some time before the project of sewage treatment plant can be constructed.

The consequence of untreated used water that normally rejected directly to the drain most of the time in the open drain trench is a vector of dangerous pollution that can cause substantial health damages to the population. Many surveys have been done for Siem Reap town. They show that its underground water is polluted and the degree of pollution is now alarming according to the study on Integrated Master Plan for Sustainable Development of Siem Reap/Angkor Thom in the Kingdom Of Cambodia on 7of July 2006.

Waste water is also linked to the solid waste problem. The same as drainage and sewerage situation solid waste is becoming a vector of pollution on the surface as well as for the water. In many ponds and water ways, trashes or debris of solid materials are thrown into using them as dumping places. The water that either penetrates into the ground or flows downstream is polluted by toxic substances that exist from the solid wastes like used tires, plastic bags, cans containing paint etc...This problem is common in most towns in and urban areas in Cambodia. Based on these examples it is becomes an urgent matter that the public authority of Preah Vihear take immediately action in the region in particular in Sra Em which is supposed to be the “Gate to the World Heritage Site”. To solve this problem action plan should have many levels. The population should be informed and explained by the authority of the negative impacts of unclean streets, houses or Public Parc. Furthermore through schools by educating children so they would be sensitized about the clean environment and the basic hygiene measures that provide good health conditions for the people.

So the water management policy should therefore include all of its aspects that would in the long range leads to the water resource protection and conservation. This scheme is part of the global environment policy to be put in place by relevant authorities.

The development program of Preah Vihear and its region should in that respect include and foresee all the side-ways effects factors that could lead to negative results in its environmental milieu. Any related project should be examined carefully and before decision



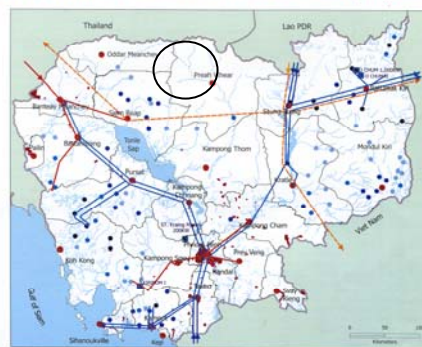


making should undergo an environmental impact assessment (EIA) because any wrong doing will push to the degradation of environment in particular water resource which is becoming day after day limited.

### 3-6 EnergyResources forClean Environment

Like countries in development Cambodia is at the beginning stage of a vast program of its energy planning. In the capital city of Phnom Penh as well as in the major cities in the country, existing electrical energy is very limited. In this situation the conditions that prevail in the far out countryside are quite below the requirements for everyday life and far more limited for economic activities. The current energy situation in Cambodia is summarized in Chapter I page 45.

Projected National Transmission Grid and Potential Hydropower

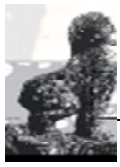


**Map 38;** Source: EDC; 2009

#### **Energy Resource**

For the time being electrical energy is concentrated in Phnom Penh and the provincial capitals as shown in map 37. A project to extend the grid to districts is in the way but it would take time since no fund has been set for. Only private sectors invest with high cost of KWH.

The electrical energy in Preah Vihear and region is not different from all remote towns or area in the country. There is either electrical plant in the area and nor project of its kind in the near future. According to the national program for electrical energy, the transmission grids for Preah Vihear and its immediate region will not come before 2020. In that perspective Preah Vihear will have to rely on independent solution for energy in order to undertake a real development in a wider meaning of the word. But this current situation could be an opportunity to search for a different strategy in energy development. Since the fore coming decades will be based on the new outlook of the possibility to use renewal energy that will help slow down global warming, Preah Vihear might be a spearhead in taking opportunity by enhancing new and adaptive technologies. The choice of this option will provide a step ahead toward achieving a clean development mechanism (CDM) policy. In term of global environment, the CDM will open the door to encourage for search of new



renewable energy rather than be dependent of fossil energy whose increasing cost could slow down economic activities in particular in the remote area as Preah Vihear which is isolated from the main national transmission grids. The sources of alternative energy that could be feasible are mainly solar and bio-mass. Many experiences have proved their efficiency in particular for isolated areas in developing countries. In Cambodia many NGO have help to develop bio-mass energy in the country side to provide farmer possibility to use the animal excrement and to convert it into bio-mass. This type of energy does not attract attention of the government national as well as local, but experiences have proved that it can solve the problem at the rural level where the classic type of power plant cannot reach. Looking through this solution, the authority should encourage rural areas to adopt this type of cheap and clean energy. Another possibility is to study the win energy that monsoon rain season bring along. Some regions of Cambodia are suitable for the wind energy such as the areas around the Tonle Sap Lake where wind velocity is high. But further study is needed to find out the feasibility of this alternative solution. It would be interesting also to look into another possibility by using coarse rice left after milling. This natural element can be burnt and produce heat energy as fuel to produce electricity. Since the coarse rice is wildly plentiful in Cambodia, it is worth to look into of this possible solution. Example exists in Indonesia. Therefore it requires a detail study on the subject. There is another strategy to provide to small and remote areas electricity which is to plan the grid system of the size of village using natural fuel. A PPP project can be set up with private and public partner since the investment is within reach of the local economy. The solution planned for global national grid project with hydro power to provide electricity to the remote rural areas by the government will obviously take time and in between the poor population are still suffering of not having basic need of electricity such as having light in the house, using small fan, water pump or even small refrigerator to preserve foods. The above suggestions combined with good management of this category of energy should be possible for immediate alternative while waiting for the global strategy of country electrification. Preah Vihear and its immediate region could be the first example to enhance a net zero- emission development with the forms of clean and cheap energy. Preah Vihear can enhance the eco-environment of human settlement. However series of energy solutions have been well highlighted and proposed for Preah Vihear in the OPDPV. (Ref 21; p74-79).



### 3-7 Tourism as a Spearhead for the Development

Based on the survey and analysis of the geographical context and the existing potentials of Preah Vihear and its region, tourism shall be the reliable and fundamental capitals for the future development of the area. The potentials cited in Chapter II constitute the most evident assets that can be used to push other activities, at different timeline, in order to integrate into the whole processes of development mechanism. Efforts have been deployed in this sector of development since the political difference started with Thailand about the Temple and the border line between the two countries. (Appendix 2)

An increased number of tourists have been observed both on local level as well as on international level.

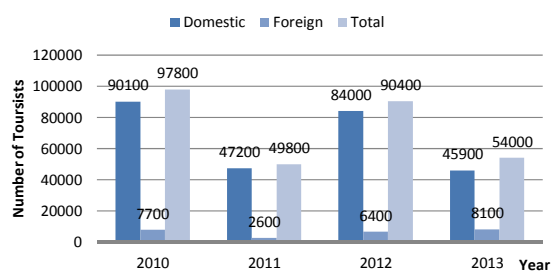


Chart 33 Tourist number visiting Preah Vihear temple at the same period of the year (Feb. to Nov.)<sup>14)</sup>

**Table 16** Fluctuation of tourists between 2010 to 2013<sup>14)</sup>

Tourist	2011	2012	2013
Domestic	-47.6%	78.0%	-45.4%
Foreign	-66.2%	146.2%	26.6%
Total	-49.1%	81.5%	-40.3%

**Table 15** gives the percentage of up and down of the number of tourists visiting Preah Vihear temple compared to the previous year at the same period. The drop of tourism number in 2011 and 2013 is due to bad weather (2011 and 2013 flood), and fear of arm clash with Thailand after ruling of International Court of Justice on the contentious land around Preah Vihear temple. While the increase of tourist number in 2012 is due to good access roads from Siem Reap and from other provinces close to Preah Vihear site.

Drawing up a tourism road map based on authenticity, singularity and local specificity of the country or region seems to be an effective solution.

Looking through that angle, the cultural and natural tourism should be the main aspiration because it would have different aspect. It reflects the identity of the country and by the same time avoids aggressive competition from the countries in the region that have, for many years, given priority to the tourism of leisure.

Tourism also provides access to the diversity of cultures in their natural setting, which illustrates the tension between authenticity and commercialization that is central to the preservation and promotion of cultural diversity.

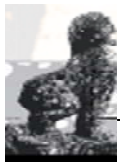


Now, tourism plays an important role in combining profit-making initiatives with the promotion on intercultural dialogue. Now renewal tourism concept has been observed; its trend is in search of authenticity, which is motivated by the desire to discover other people in their natural, social and cultural cradle.

**Strategy:** *In strategy formulation, it would be better to conceive tourism development based on the root of national culture and identity. This principle should be the ultimate goal in strategy for tourism industry. In such a manner original idea would be initiated to foster a new type of tourism that will be different from what it exists in most of the present market. The idea is to make a singular and genuine product among others. Repeating what already exists in many tourism items would lead to a rude competition with many countries which have long experiences in this classical type of development. Preah Vihear shall challenge by enhancing new ideas and new vision. The wealth of the World Sacred Site Preah Vihear is capable to create the type of tourism based on cultural richness of the Khmer heritage and its diversity of natural potentials that have been discussed in Chapter II.*

On this basis, the development of tourism in Preah Vihear should emphasis on the followings axis.

**a- Highlight national identity and better use of cultural wealth as tourism products,** Preah Vihear and its region as explained previously are by all means, rich in Cultural resources and have been declared as World Heritage in July 2008. The political and military events that happened between Cambodia and Thailand have propelled the Temple to the international scene in terms of cultural values that attract rapidly world-wide attention. Thanks to the media. The curiosity to visit the temple site, the desire to understand the ancient Khmer social matrix during the glorious period and the wish to witness of this treasury of humanity provide already the inevitable potentials in making the sacred site the core of tourism development. It would not be difficult, if well managed, to transform Preah Vihear into a world-wide tourism destination. Mobilizing the potentials to achieve this aim seems to be relatively accessible. The intangible values of the temple created by mystic religious legends during its active existent will certainly add to the architectural and environmental design concept of the author who had genius vision to harmonize man made element with the surrounding



natural landscape. Based on these assets, tourism development could take place without obstacle and it could, in a relatively short time, expect to yield adequate profits. In that perspective, and because of the “Exceptional Universal Value” of the Temple, it is right to believe that tourism sector is promising. It could generate quick return in term of revenue. Its investments could rely on local capitals and combined with offshore financial supports tourism would be the spearhead of all other sectors of development.



**Fig. 124** Site of Preah Vihear: tourism potentials view of Temple along its axis to the Cambodian plain (Pictures from P.V World heritage file 2008)



**Fig.125** Cultural wealth: Cultural heritage linking to religious Culture (PVNA 2008; Ref 5)

***b- Protect and preserve natural as tourism environment***

Protection of natural environment should be considered as a top priority because it is the main natural asset that would help the whole process of diversifying the development to be based upon in order to reach the sustainability in the long range. The eco-tourism relies on nature, its characteristics, and its typical and specific biodiversity and of course the local landscape that stems from the micro climate. The environment of the region highlighted by the landscape of the Dangrek Mountains nearby is a special feature to be taken care off. There is still dense tropical forest in





the region. Part of it is integrated with some of the existing historical villages mostly minority ethnic groups that could be developed as zones of harmony between human settlement and to eco-tourism.



Tourism potentials: Natural Nenuphar Lake on the way to the Temple  
(Fig.126 from P.V World Heritage File 2008) Ref 5



**Fig.127** Traditional village in the region with earth road flooded in raining season

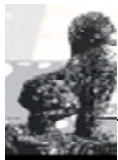


**Fig.128** Local landscape in the region reflecting semi-green vegetation with grass in dry season

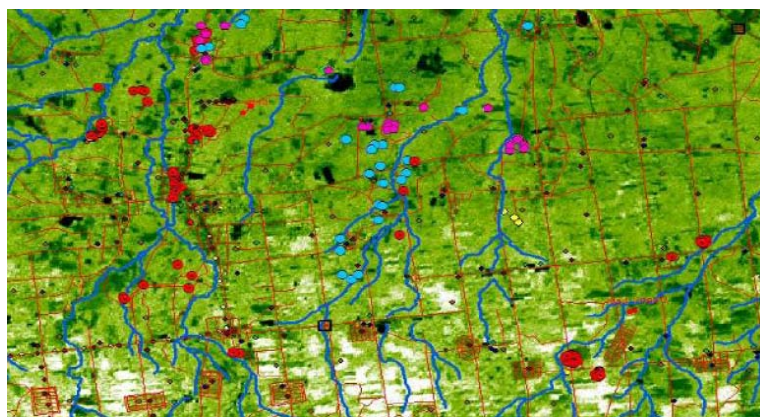
Source: Pictures from P.V World Heritage File 2008 (Ref 5)

***c- Safeguard and maintain natural resources to support tourism activities***

There are natural resources in Preah Vihear region some have been tapped but most of the time have not been properly managed. The most evident example is forestry, then integrated with it is wild life and their species which constitute the whole eco-system and the rich variety of bio-diversity milieu. Untapped resources might exist but need more studies and researches to prove its existence. According



to the Living Angkor Road Project (LARP) by APSARA team in 2008, there were many villages of population Kuoy inhabiting in the region of Preah Vihear called Foot- Hills province were already working on metal that was used to produce arms for military purposes.



**Map 39:** Ancient industry sites within the Region of Preah Vihear

● Iron smelting, ● Ceramic kiln, ● other metals



**Fig.129** showing continuing activities in iron works the region from ancient time  
Source: LARP (Ref 11)

Water which is the most important natural that has been described with strong emphasis on the preservation in large extend in the present Chapter mainly in the Water Management from page 160 to page 171. So the other natural resources in particular underground not yet untapped resources there is evidence of their existence is the subjects of these recommendations.

Minerals that have been found unexploited and/or those to be found in the Future shall be considered as part of national wealth transformable into assets allowing a wide range of industrial activities whose products can attract tourists.



*d- A balance between nature, social value and tourism development,*

One of the most challenging policy of the development of Preah Vihear and Region in the years to come is how to visualize the perspective in term of economic growth vis-a-vis of tourism development. Should the tourism be considered priority to the social and cultural values? Many examples have shown that tourism could change the behavior of social and traditional value including heritage cultural. Rural population can be attracted by tourist's activities and might abandon their primarily role of farmers who rely on natural resources for livelihoods? The tourism "Boom" effects could be dangerous to the strength of Cambodian economy which is agriculture. It is believed that a balance between the two targets should be thought out due to the fact that they are intimately linked together. The final produced wealth which is in fact a result of global economic success should be an integrated of all activities. Agriculture supports tourism as well as tourism produces income to be distributed to poor farmers without drastic change in social and traditional way of life.

The balanced development would permit to strengthen the structure of the social welfare and to arrive at the conviction that the cohesion and harmony between tourism development and nature is a wise option. The principle of balance development is applicable in the first place for the tourism sector because this segment of activities is called to spearheading the other economic activities. It would unfortunate to sacrifice environmental project at the profit of real estate or the construction of tourism infrastructure such as hotel, restaurants, entertainment center by arguing that the projects will create employments. Of course any sensible project would provide jobs to the population but put this profit compared to the destruction of environment it will yield residual value and progressively would degrade the quality of tourism product, and as a final consequence reduce the number of visitors. Nowadays tourists seek what is different from what they see in their everyday life. A new environment privileging nature, cultural aspect and social authenticity seems to be the promising target for intellectual visitors. They are people who travel to learn about culture from other countries. They have have a good judgment of what they would like visit and appreciate of what they see. This is one of the reasons why tourism products have to be studied and selected to better respond to the expectation of visitors.



**Fig.130, 131:** Two hotels with different concept (Pictures by Author 2013)

Fig. 130,131 are typical examples of unbalanced development between nature preservation and tourism infrastructure. Many of these examples are commonly seen in any town of tourism in Cambodia. The absence of real consideration of the importance of nature preservation should be object for main concerne of all actors involving in tourism development project. Harmony between nature and man- made creation can be achieved by sensible explanation to the public through tourism program about the importance of preservation of natural landscape. Professionnel involving in the process such as architect, inginer should be aware of the quality of their creative product.

***e- Research for the originality of tourism products.***

It is believed that originality of tourism products should be one of the main aspect of research. The long history of Preah Vihear and Region has been narrated in the above Chapters and has shown that it constitutes the important and rich sources on which specificity of tourism attractions could be built upon. In that context reconstruction of time and space of Preah Vihear and region could be one of many examples. The *Foot-Hills* province at the Dangrek Mountains might be considered as a tourism inspiration because it would provide the opportunity to show and to explain to the visitors the cradle The people way of life, the traditions, the impact of religion into social matrix could be restored partially in such a way to interest the curiosity of tourists. Chapter II summarizes the wealth for tourism development. Tourism products can take root in the following domains.

- **Sport and leisure:** there are in fact many traditional hobbies and sport activities that can be restored and improved to be integrated in the tourism list of attraction. One example is the Khmer Boxing. This sport is popular and has been practicing





without interruption for centuries. It is now in the process of becoming a favorite feature for younger as well as for old people. There are organized competitions in major cities in the country. It should be encouraged and supported to make it more attractive to international visitors. In that context international competition should be one of the solutions to promote its popularity at the larger scale. On the other hands, kite flying is also a traditional hobby and wonderful relaxing sport. It has been practiced throughout the kingdom during harvest period after the rainy season when the monsoon winds direction comes from the north. The most characteristic of Cambodian kite is that a sound system is integrated within the



**Fig.132** Khmer boxing



**Fig.133** Flying kite

Source: Cambodia Khmer News; daily motion.com

kite structure so it will create rhythmic tones that can be heard at night within hundred meters. This is called the 'Kleng Ek'. More important flying kite is Fig. not only a sport or festival but it is also a ceremony to express gratitude to Preah Peay

(wind spirit) for bringing dry weather to ripen the crop.

According to Sim Sarak Director General of Administration of the Ministry of Culture, through a stone inscription dated AD 972; "harvest kites" were sacred objects during the Angkor period.

- **Costume and Dress:** The ancient traditional Khmer costume and dress is beautiful in style and often prestigious. It does not only reflect the richness of designs that have flourished over centuries, but also dazzles on lookers with the high quality of Khmer silk that has been a trademark of Cambodian style for generations. Up to now clothing which is an important part of of Khmer culture and tradition has become part of handicraft and silk is a fabric of appreciation in tissue for the design commonly for cloths and dress locally. According to MR Mao Kheng, chief of the department of Spectacle Arts, the



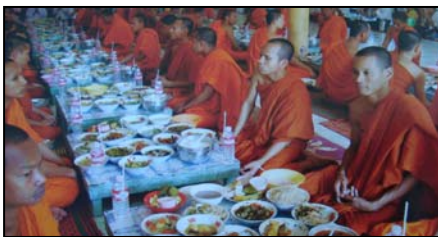
Khmer costume and dress  
(**Fig.134** from MOT 2009)





development of costume from the Angkorian era up to Lungvek era and later on to the Chaktomouk era has evolved in countless styles and designs. The Khmer during this period were talented in fashion and jewelry design. This cultural aspect linked to the many generations of traditions can be revised, restored and exhibited as one of the cultural domain in Khmer civilization. Many special events in this domain can be organized at nationally or internationally level such as fashion shown, exhibition or competitions.

- **Spiritual and Religious festivities:** Since Cambodians are strong Buddhism believers and practitioners; the country is dominated by religious festivals which are celebrating all year round. Music and chanting spill from every pagoda in Cambodia and faithful Buddhists with their saffron color dress illuminates the country with spirit of pray and blessing. This event happens yearly in the months in September or October. It is called Bon Pchum Ben (Festival of death) and is most observed by Cambodians. The “end of Buddha lent” or (Chenh Preah Vossa) is celebrated as well as the end of rainy season on the full



Moon of the 11<sup>th</sup> month of lunar calendar. This is an expression of gratitude of Cambodians to rain and water which are elements for life in Khmer belief.

**Fig.136** Pchum Ben (By Author 2012)

The third and popular religious event is “Loy Pra-tib” which is a parade of miniature floating lanterns along river at night. This event is seen during the Water Festival celebrated once a year in big city in the country in particular in Phnom Penh and in Siem Reap town.



**Fig.137** Floating lantern  
(Picture by Author in 2012)

It is an act of apology to Buddha and ask for pardon for having committed sin and prayer for good health, fortune or love. Nowadays this event is becoming popular with participation from foreign tourists.



- **Music and Dances** area artistic value: Cambodia is rich in music and dances. From generation to generation this carried on without interruption. Even during the Khmer Rouge period music and dances were alive except they were transformed into political purposes. It is believed that the rhythm of music and dance are part of the Khmer spirit and livelihoods. There are a diversity of music and dance. Every aspect of live this art comes to follow the movements and the path of the people along the time span from the day they are born to the die.

There are different types of music and dances. The music of happiness used normally for the wedding, for the end of good harvest season, for the birth of particular person, while music for religious celebration is played in pagodas, and music of sorrow such as “Kleng Khek” (music of death) is always used on funeral occasion. The music and dances are the expression of soul and behavior of people can be an important source of inspiration for tourism products.



**Fig.138:**Teller of the tales is a very popular artistic manifestation in Cambodia. It has been carry on from many old generations up to now due to its popularity in country side as well in cities. It is called Champey Dang Veng .The artist tells the tales by singing and by playing a guitar.

Picture from MOT 2011

- **National Festivities** can be programmed for tourism products such as the Khmer New Year, The “Kathen” (Celebrate to clean the sin and for future life).

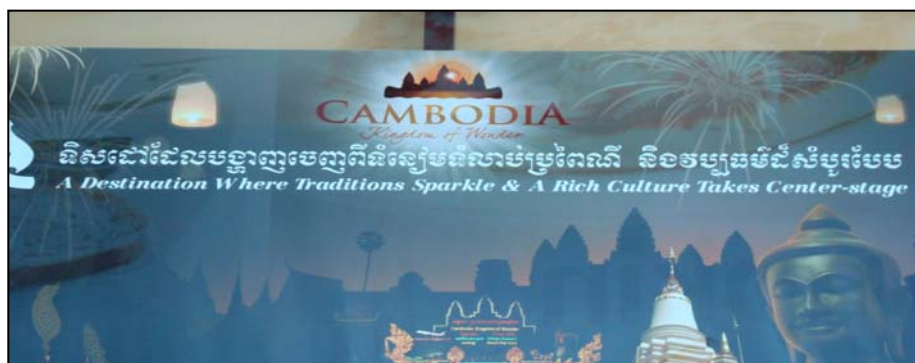


**Fig.139** Cambodian New Year in a village    **Fig.140**“Kathen” Celebrated once a year  
([Khmerization.blogspot.com](http://Khmerization.blogspot.com) & [commons.wikimedia.org](http://commons.wikimedia.org))



***f- Advertisement with good travel network***

The Ministry of Tourism has adopted a well thought slogan calling Cambodia “Kingdom of Wonders”. This initiative is commended because it shows the originality and identity for visitors in Cambodia and makes it a particular tourism destination. Additional appellation of “Cambodia where traditions sparkle and Culture takes the Center-stage” is a good example of advertising that attracts visitors because it is provocative and stimulates the curiosity of tourists. The marketing aspect launched by the ministry of Tourism is already the first step in the right direction toward the concept of national identity and specificity of tourism regional in Cambodia. The Ministry of Tourism has the duty to inform local public and international visitor about the richness of nature and cultural heritage products that can offer to tourists. As the case of Preah Vihear, up to now the advertising is limited to the temple only despite many others interesting items such forest, water falls, mountains, and biodiversity that exist in the region along the Dangrek Range.



**Fig. 141** Advertising at Phnom Penh International Airport

***g- Implementation of regulatory mechanism to control tourism development***

The current situation of tourism facilities in Preah Vihear region is mainly limited to the small village Sra Em. This village of a few hundred people living before 2007 is now becoming an important gate to the Preah Vihear Temple because it is located in the junction of two main roads from which people and goods come from other regions of the country. The road from Anlong Veng, ancient Khmer Rouge town is increasing its traffic since 2007, the date of preparing inscription of Preah Vihear into World Heritage list. The construction of second road connecting Sra Em to Preah Vihear provincial capital has almost completed and its transport potential is promising



in the near future. Tourists from Siem Reap to visit Preah Vihear site, despite political and military situation between Cambodia and Thailand, continue to express their interest in the region.

The small village Sra Em has grown rapidly. Before 2007, it was barely known by people outside of region. There was no guest house. There existed only one house along the road to fulfill multiple functions of café shop, restaurant, souvenirs and commodities selling depot. But since Preah Vihear took the front stage on international scene, according to the Ministry of Tourism's Annual Report in 2008, there are in the province of Preah Vihear 10 guesthouses of 127 rooms, 13 restaurants and 2 karaoks parlors/discotheques principally located in the Sra Em village. A former small village became the tourist's center in a short time.

This growth is continuing with consistent speed and it is expected that Sra Em village will soon become a small town. However this development seems going in many directions without proper planning with clear and well thought objectives, creating therefore a great risk of perverse effects in a short time. The quick assessment of Sara Elm's growth leads to a serious concern for the future development and its impacts on the "Gate to the World Heritage Site".

At the same time a few kilometers from Sara Me, there exists a main entrance to the World Heritage Site with projects going on such as museum called "Eco-Global Museum" and an Eco-Village. This development should be integrated with Sra Em. See Appendix 10



**Sraem the gate to the World Heritage Site: tourism impact**  
**Fig.142,143** Sra Em the small village before 2007 has now grown into a small town like any other agglomeration in Cambodia. This growth is due to the inscription of Preah Vhear temple in the World Heritage list and the growing number of tourists. The movement of people coming from other regions of Cambodia has been steady because they consider Sraem is tourism Eldorado. Consequently many tourism facilities have been created in the hurry and without consideration of urban impact on the environment.could deteriorate





Statute removed



At the speed of the growth the current situation with no adequate control At this stage authority should implement a regulatory mechanism allowing a better control and management of the urban and tourism development for the future.

**Fig. 142 to 144** Sra Em in 2010. From top to bottom: Evolution of village Sra Em before 2007, in 2009 statute was removed, in the background restaurants and shops were erected

It would be difficult not to conceive a development plan for Sra Em because the pace of construction and land occupation in the area is accelerating from year to year. The first negative impacts have been already proved with the beginning of traffic problem, proliferation of waste solid and liquid that could, in the short time, create a situation of disorder. In the same time as land demand in the village is increasing, a problem of land speculation would be inevitable and to meet the rise of market there would be forest clearing or land filling in ponds or lake for water stockage. In that perspective the natural environment as well as the urban environment would be degraded because of negative consequences. The eco-tourism and environmental protection and improvement are main priorities for the tourism development in Preah Vihear region would have then a least chance to achieve.

Regarding the facilities for tourists Sra Em is still at the primary state. Even though efforts from public sector and from local investors are impressive during the last five years, but tourists facilities have yet to meet the international standard. First the cleanness and the hygiene of the town need to be taken care of rapidly. Quality of guesthouses, restaurants, shops, market place, tourist guide, services need to be improved in order to respond to the expectation of the international visitors. For the moment tourists facilities in Sra Em are not only insufficient but also inefficient and of poor in quality.

If Sra Em is to be “Gate of the World Heritage” urgent actions should be implemented urgently.

**Fig. 145** solid wastes on road side (By Author 2012)







The public authority i.e. the Ministry of Tourism and related government agencies such as Urban Planning, health Department should look into this matter soon enough so appropriate measures can be taken. But so far nothing has yet been done.

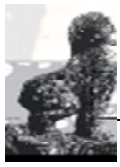
The private sector with the role of investor should respect the laws enforcement which is necessary for cohesive and integrated action aiming for a good development with respect to the principle of eco-environment. To meet this objective a policy of partnership between public authorities, the population concerned and the private sector should be designed for and properly implemented.

Many projects can be operated with three partners the public sector, private sector and the population such as the P.P.P which has now gained momentum in many developed countries as well as developing countries. Such a formula has been used in the RED program for the Green Belt project now in operation in the Siem Reap province.

(See appendix 19).

### **3-8 Scope of Tourism Strategies Planning**

The proposed planning attempts to give tourism sector a new vision. Since tourism is the spearhead of development, it is expected that it would have great potential to generate revenue. When reaching its momentum, this resource could be re-injected into other development projects of high priority definition that should be implemented according to a sequential time frame and be coherent with global objective of a sustainable growth for the Preah Vhear and Regions. In the proposed concept tourism development should take its root from two basic criteria; the cultural values and the natural environment because it would be singular, original and will not lose its potentials in the long term as normal tourism activities. It is singular because it is based on the specificity of Khmer cultural identity, the tradition and the way of life that have been existing for many centuries. It is original because of the “Exceptional Universal Values” of the site and the nature of surrounding environment of the region highlighted by the landscape of the Dangrek Mountain nearby. The fact that Preah Vihear is inscribed in the World Heritage list is not only an honor to Khmer culture but also an exceptional advantage. By good advertisement through mass media and relying aggressive and competent travel agencies it will become an attractive new tourism destination in the region.



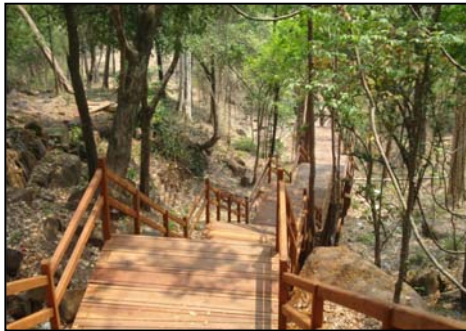
- **Visit to World Heritage Sacred Site of Preah Vihear**

Since the temple is located in a very special site declared as World Heritage it should therefore be subject to the rules and regulations of World Heritage Committee. The archeological work, the safeguard of monument from deterioration and the maintenance of the site are at least the prerequisite of the regulations. Any tourism activities shall be in line with the set of rules in practice for World Heritage monuments. In addition safety for tourism within the visit site should be insured. Itineraries of visit, walkways, staircases, promontories, cliffs on which tourists stand on to enjoy panoramic views should be secured from possible accident. To optimize the touristic visit, relevant infrastructures to and back from the temple should be provided with logic facilities for visitors. NAPV has started to implement some of the main facilities such as the historical staircase, an important work to restore the most significant approach from the East in order to reach the Temple. Along the new and temporarily built wooden stair way to facilitate access from the ground level to the temple, there exists a variety of landscapes that can be seen from different level of mountain terraces where platforms can be constructed for rest areas and for lookout posts so tourists can appreciate the typical landscape of the region. It is also possible to think what kind of accommodation should be provided to senior people due to their difficulty physic to climb up the stair. For this particular reason mechanical devices should be sought off providing that their construction will not degrade the site and destroy the landscape which is one of the main features of the visit. The mechanical device could be inclined elevator to fit the slope of the site. It could stop at different level of platform for rest areas and for taking a good view of natural landscape of the Dangrek Range. Appendix 8

The visits can be approached from different way. The practical and common ways is one from Cambodian territory with a winding sloppy road, the second from Thai side with good access with gentle slope through staircase. The most original and grandiose way to visit the temple is the ancient historic staircase used by the king for procession of religious hermitage. The staircase in stone has been degraded badly due to time, soil erosion and lack of maintenance. But to make the



visit by this East side, ANPV has built a temporary wooden stair which permit visitor to appreciate the magnificent landscape composed of forest and mountains.



**Fig.146** wooden stair way

**The historic stair way**

This is the Eastern access to the temple. It is also the royal access used during the period when Preah Vihear was a high lieu of pilgrimage and a religious worship during 10<sup>th</sup> to 12 centuries.



**Fig.147** spectacle from the Temple

(Pictures PVNA; 2012) Ref 6

On the site of the temple where number of tourists can be increasing a scheme for directing the visit should be designed for. This is a management work tool to control the tourist's flow and give a good quality of visit. In addition, facilities for the comfort of tourists should be provided for; at the same time, order, cleanness of the site showing good maintenance and improvement of natural landscape such as tree plantation and garden should be a permanent preoccupation of the NAPV which has a long way to go. Hygiene conditions shall be of great importance they should meet international standards because they have to give satisfaction and confidence to the foreign visitors. In the future, the project of illumination of the temple at night can be undertaken to give an apotheosis to the imperial and mythic setting to the master piece of Khmer cultural monument.

- **Zones 2 to be developed as National Park and Forest**

The Zones 1 and 2 classified as the protection areas located around the World Heritage Site should be under the rules and regulations of the World Heritage Committee. It has been declared these zones are to preserve natural environment



that should be improved in order to avoid further degradation. In some areas vegetation is still dense, it should be part of restoring program of the original forest of the milieu so ecological mechanism can protected, and biodiversity can be have its sustainability cycle. In fact this is a commitment of NAPV stipulated in the Management Plan submitted to UNESCO in 2009. (See Appendix 5)

The Zones 1 and 2 are vulnerable to degradation if lack of appropriate measures to put in place rapidly.

Despite zone 2 is part of the protection zone, it can be integrated within the concept of Natural Park. In addition to reforestation of the area with local species of vegetation, the repopulation of fauna and flora that existed and then have been extinct in the region can be done. It would also be interesting for the protection of environment and maintain of biodiversity. The proposed Natural Park can be designed to receive visitors many of whom are lovers of fanatic of eco-tourism and wild life. In that context, the special research should tell how to create a symbiosis between nature, wildlife and biodiversity.

- **Zone 3 an eco-development** area which is the landscape zone should be integrated with Z1 and Z2. Eco-tourism should be designed to reach a balance between nature and human activities and make the National Park not only a reserve of nature but at the same time a living environment that have the potentials to generate financial resources.

In the park development program, historic trails that used to be the main access routes to the temple can be restored and improved, trails for exploration promenade and/or exploration of the milieu should be sought off, including the possibility to include the types of transportation that will allow good visit itineraries but will neither harm nor degrade the Park environmental quality. The transportation means can of ecological character such as traditional like oxen cars, horse riding bicycle, battery motor-cycle, electric-train for what the track and the destinations should be carefully studied and designed in function of the interesting spots of the park worth for the visit.



Since the trip in the rain might be long, it would be wise to have the itineraries planned for different time length that would be suitable for majority of the tourists. The stopover stations along the train journey should be well connected to the point of interest in the park and should permit the tourists to choose the proposals options that fit to their schedule.

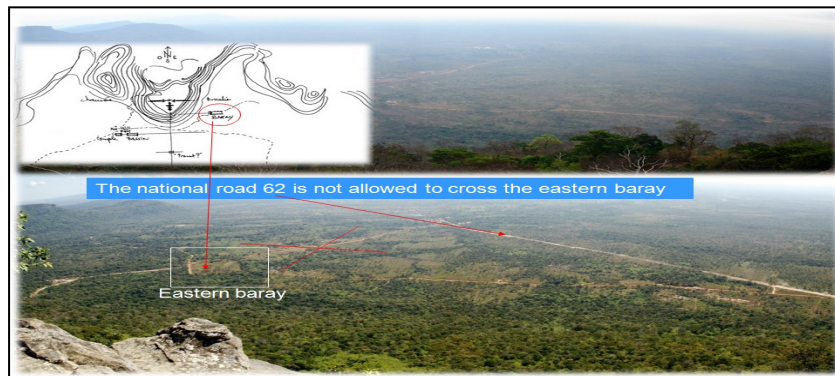


**Fig. 148 to 151** are examples of eco-transportation with net zero co<sub>2</sub>,  
an approach to CDM

In the park, botanical, spicy or medicinal gardens can be created to attract tourists who have special interest in these particular fields and to act as living laboratory for searchers and students.

The above suggested ideas have also the advantage to be fully in line with the policy of Net Zero Emission of Carbon Dioxide which is the basic criteria to achieve the eco- environment of the milieu. It will be the first step to achieve CDM (clean development mechanism) process, which in the long range will certainly produce positive results on the environment protection or improvement. In the other hand tourism activities will be well integrated within nature, to create harmony between development and environmental protection.





**Fig.152** the area that can be developed as a living eco-park

Picture from Ref PVNA; Ref 6

The area as shown in the above picture has potentials to be developed as a living eco-park by encouraging a program of reforestation and with afterward a sound park management system. This action relevant to the protection of environment close to World Heritage Site is recommended in the Preah Vihear Management Plan. (See appendix 5)

- **Beyond Preah Vihear Site: Mid and long terms planning**

Looking at a larger perspective, and beyond the aim of its own development, Preah Vihear should be integrated within an overall global vision of a national network of tourism policy. The mid-term planning should cover a time line within five years, while the long term planning covers from five to ten years.



**Map 40** The Triangle Patrimonial (Ref 5)



The Triangle Patrimonial consists of eight big and famous archeological sites and monuments considered famous because of their related history during the Khmer Empire.

At the national level, tourism development can be started from Preah Vihear to other many cultural sites and temples in the country. Network with interesting destinations can be designed for to meet specific requirement of visitors; cultural, historical, nature or combination of the three. For example close to Preah Vihear site a link between major temples can be a realistic project due to their approcimity in the region. Many itineraries can be schedules to be included in the program of visit for tourists as follows:

a/ at regional level i.e. around Preah Vihear region. Many small temples of historic value and archeological sites exist within the vicinity: such as (1) Prasat Toch, (2) Prasat Kambot, (3) Prasat Chau Kambon, (4) Prasat 42, (5) Prasat Thnal Svay and many more as show in the map below. Visit itineraries can be set up providing available good access. The visit can last one day.



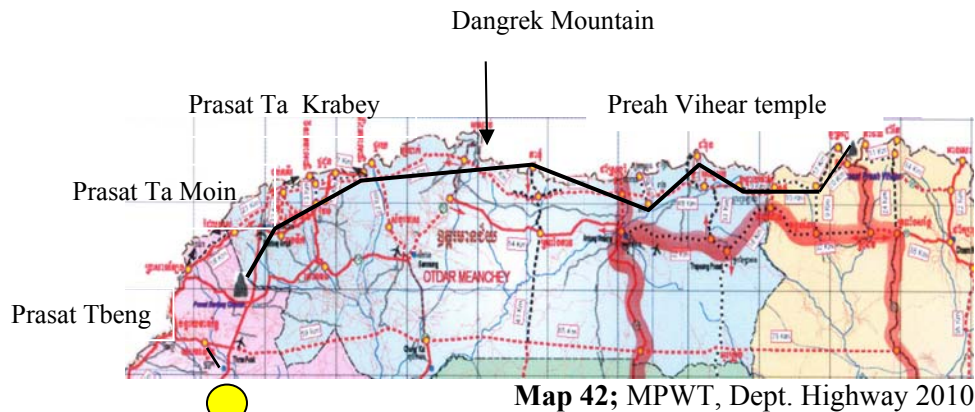
**Map 41** Temples and archeological sites in the vicinity of Preah Vihear.

Source: (EFEO, Siem Reap)

b/ at Danger regional level: Preah Vihear is closed to other provinces which have also heritage site for example in Seem Reap and Odor Meanchhey adjacent provinces. Toward Odor Meanchhey province along the Dangrek Montains, they are famous monuments such as Prasad Ta Moin, prasat Ta Krabey, and at the border of Bantey Meanchey province, the famous



archeological site and temple Banteay Chmar which part of the Foothill province. These temples could be linked together and constitute an itinerary for a visit by improving existing access road. (See map 39)



Prasat Banteay Chmar

Map 42: Possible tourism network at inter-regional level

Itinerary linking Preah Vihear temple to other temples in direction of Banteay Chmar. (Ref 16 MOC; Chuch Pheoun)

#### c/ Linkage with World Heritage Site Angkor

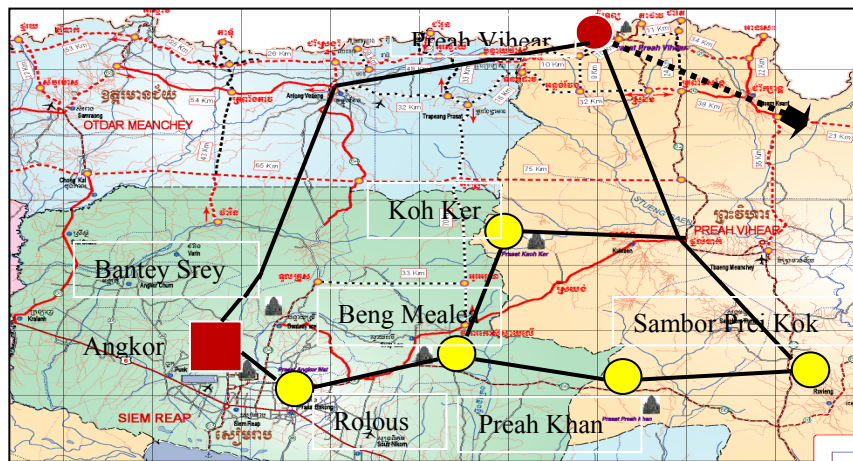
The tourism network with World Heritage Site Angkor has been done with the help of many good roads; some more in construction will provide additional access allowing visitors to spend less time travelling to Preah Vihear. The existing itineraries can be improved and diversified to provide tourists a variety of options as suggested on the map 43 below.

Starting point can be Siem Reap, a bench mark to final destination Preah Vihear. The visitor has a choice of selecting the itinerary which is suitable for the time-length he disposes. Since there are many places of interest to visit it would be necessary to develop relay centers on the itineraries to facilitate visitors in term of rest areas, foods and hotel accommodation at local as well as at international standards. In the near future a road in construction will connect Preah Vihear region to the North East provinces of Cambodia providing therefore a communication link to the remote regions yet isolated from the main economic centers of the country. One finished the highway will allow Cambodia to have good access to neighboring provinces in the North as



well as in the in the East and West up to now encountering difficulty of having good and reliable road network. The impacts of overreaching these regions of the country would provide uncalculated sideways effects on the economic and social improvement of the undeveloped areas inhabited by the poor population.

Map 43 conceived based on Ref 6; 10



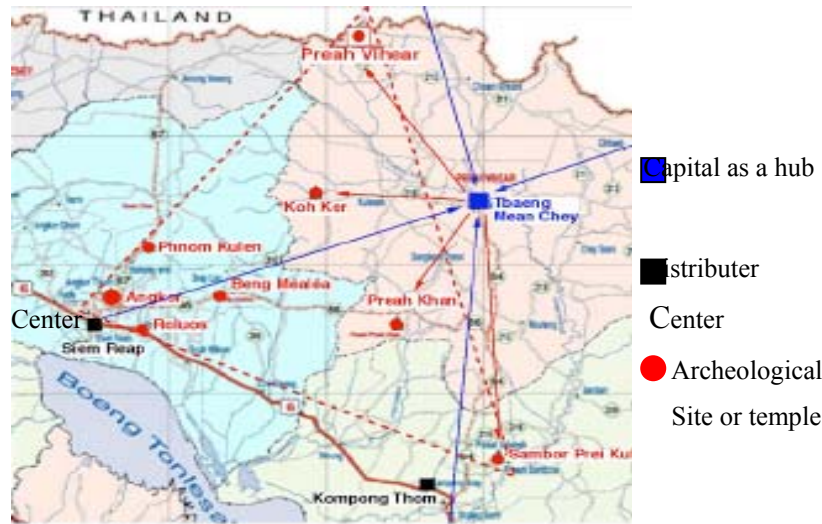
■ ● World Heritage Sites ● temple - - - - -> Future touristic road

#### d/ Provincial Capital as a hub network:

Another possibility exists. It is the formula to combine a set of provincial capitals which can be used as stop over or starting from which tourism itineraries can be designed for. It would be a combination of many archeological sites and temples of great interest spreading around the neighboring provinces. The network would be integrated with an ensemble of linkage acting as spider net. (See Map 44 below).

In this proposal Thbeng Meanchey the provincial capital of Preah Viheay is called to play in important role by acting as a support center distribution of tourism network in complement to Siem Reap the house of the World Heritage Site Angkor already know as the international center for tourism in Cambodia. Thbeng Meanchey is well located because it on the way to the northern and eastern provinces. It can be the second Northern hub for tourists from which it can enhance the development in direction of North East.





Proposed provincial Capital as a hub for Tourists' itinerary

**Map 44** from P.V World Heritage file 2008(Ref 5)

e/ with Anlong Veng the Junction Town:

Due to the fact that one of the main road going to Preah Vihear passes by Anlong Veng which has a steady growth since 2007, the possibility of creating a synergy for a joint development between Anlong Veng and Sra Em the two growing towns should be considered complementary and real.

(See page 89)

This town of ancient Khmer Rouge can turn out to be a tourism center to attract tourist's curiosity because of the following reasons:

- **Historical memory:** the civil war between Cambodians for a decade 1970 to 1980 which left Khmer people living in misery or dying in atrocity is a page of a dark period in Cambodian history. The presence of the Khmer Rouge military headquarter in Anlong Veng is a witness of the regime. Many visitors have visited the site and the compound of Ta Mok which becomes a national museum. But the degradation of the museum because of no maintenance and little consideration of this historical page somehow importance in term of memory of the innocent victims. This relic of Khmer Rouge General should be restored and taken care off as a real museum in order to prove to the next generation of Cambodians about the dark side of Khmer history to see and understand the policy of the Khmer communism during that





cruel period for Khmer people. Many tourists interested in the history of Khmer Rouge regime have already visited the place.

- **The Pol Pot's tomb:** is also a point of curiosity. It is located 15km from Anlong Veng on the road to the Thai border. People will see how a cruel leader of the Khmer Rouge who invented the “killing field” finally died by having his body burned with car tire and his tomb is a ground area of 2 meters by 3 meters with a sign written roughly in black paint on a simple piece of wood reading “Tomb of Pol Pot”.
- **Restoration of the museum** combines with the waterscape of Anlong Veng city. The lake in the middle of which Ta Mok had elected his command headquarter can be improved and turn to the big lake that will be the recreation area of the town. The water collected from upstream will provide not only potable water for the population but a water garden to increase the tourism activities in Anlong Veng and the small local villages in the surrounding area. In addition it will provide visitors on the way to Preah Vhear a moment of stop over to relax and to learn more about the “Khmer Rouge Armed Force Headquarter”, generating tourist incomes for the town.



**Fig.153-156** from left to right: Ta Mok's rest headquarter (Pictures by Author in 2012)

:Ta Mok's prisonniers celle,

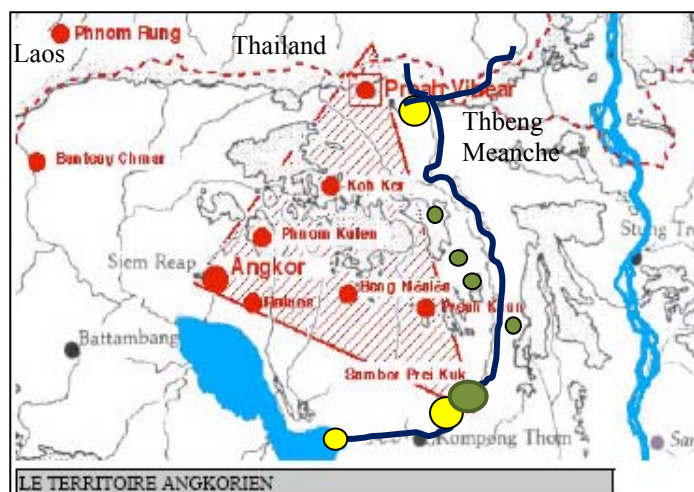
: Ta Mok's command car

f/ A Cultural cruise: Many streams originate from the top of Dangrek Mountains Range. It requires a study in depth to identify the water network in particular the one with potentials of being a water way that can be used to organize journey of discovery. It seems that river (stung) Sen taking its source from Laos, crossing Thbeng Meanchey in the direction of Kompong Thom province before finishing its course in the Tonle Sap Lake. In 2010 population in Preah Vihear province has organized the annual water festival in that river.







It proves that river (stung) Sen can be improved and organized in order to optimize its potential. Since the river runs through many interesting rural villages with each one of them having diversity of livelihoods and traditional way of life, a project can be thought out and can be source of original tourism product. Connecting the small typical Cambodian villages with their characteristics in term of micro-culture with a water way can be the designed and programed for Journey of discovery, taking visitors from the departing point such as Thbeng Meanchey and final destination at Kompong Thom or on the lake Tonle Sap. Since they are famous archeological sites closed by the river like Koh Ker, Preah Khan Sambor Prey Kuk, a combination of visits to the temples with the journey can be an additional itinerary for visit. Since there is a new category of tourism in particular the young people who like adventures in nature and to discover the traditional way of life of isolated population in rural area, the villages can organize a small guesthouse or home stay with appropriate services to attract this type of nature and social tourists. There are an increase number of young people who like to experience the rural life.

(See map 45 below)



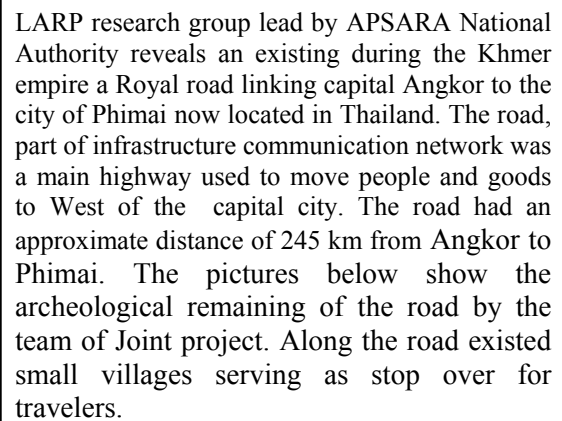
Map 45

A cultural cruise on Stung Sen provides an opportunity for discovery of diversity of authenticity of Khmer rural settlement and their way of life.

-  River (stung) Sen has the potential for organizing
  -  Point of interest (traditional rural village, small monument)
  -  parteur point or destination,
  -  Temple
- Source: Ref 6



## Map 46



**Fig.157** Archeological remaining from the ancient road and bridges

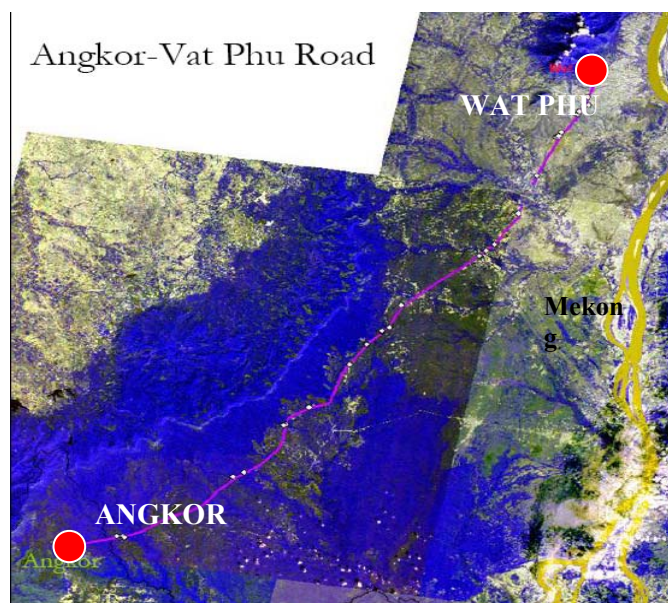
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highway oriented North-West named the “*Royal Road*” linking Angkor City to Phimai in Thailand. It is believed that through this road, travelers doing trade between villages and regions as well as army troupes and goods were moved in both directions. The road a direct distance approximately 245 km between Angkor and Phimai and all along its axis there were many rest stations and villages to make travel easy and comfortable.

e/ Preah Vhear-Angkor-Vat Phu itinerary

The second important road went East and connected Angkor City to the World Heritage site Wat Phu in Laos. This road has another important historical background due to religious aspect. It is believed that a linga was brought from a Vat Phu to Preah Vihear Temple. This road went along North-South axis to the Mekong River and all along its trail, villages were constructed, and pending confirmation from further studies, it seems that the same as the Royal road Angkor- Phimai, facilities were provided to travelers. Due to its historical values and to the tourism potentials for the region, the road should be restored in the future. It could recreate not only to provide a diversity of tourism product in term of historical interest in the region but as well as to scholars for their researches.



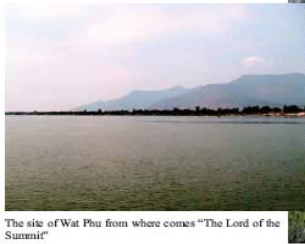
**Map 47**  
Angkor-Vat Phu Road is running along the Mekong River. It was conceived the same way as road to Phimai, with rest areas equipped of jar of potable water for travelers.

**Map 47** Proposed Preah Vihear-Angkor-Wat Phu itinerary  
(Ref 11 from LARP)





Site of Vat Phu by the Mekong River from where comes “The Lord of the Summit” to Preah Vihear Temple Site (Ref 6 )



Site of Preah Vihear  
**Fig.158**



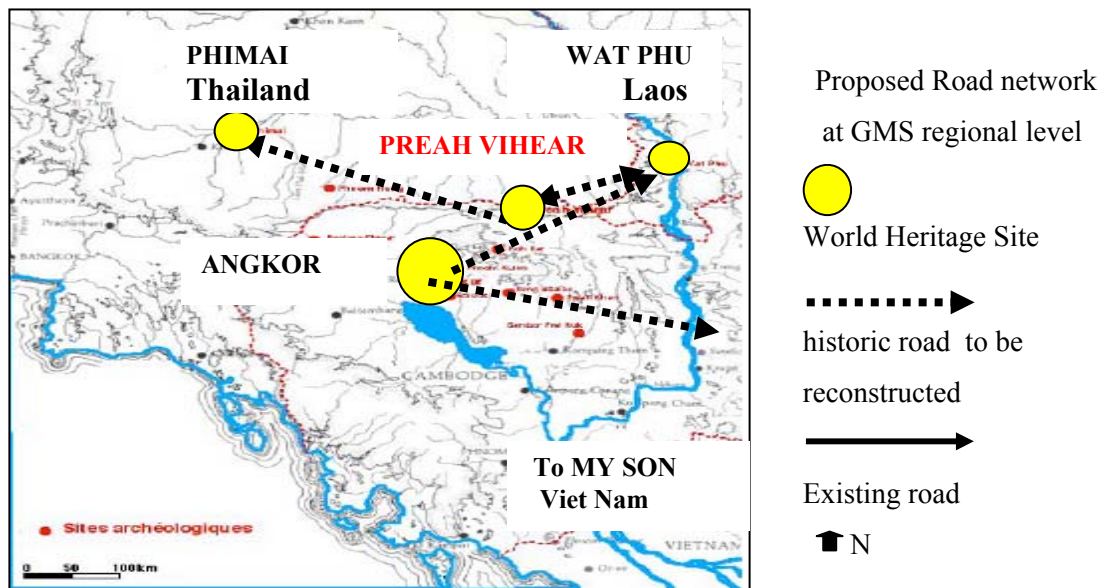
#### f/ Beyond the national border

On a long term vision it could be a tourism that is capable to provide visitors urgent help. An air strip should be planned for not only for special tourists but also to be used for emergency measures for urgent medical evacuation. In the future, since most of travelers nowadays are facing not having enough time for their holidays, it would be important to plan the travel by air. This type of transport will allow tourists with limited time to enjoy their trip to special archeological sites or temple of great interest. The air travel requires airports or air strips planning. This mode of rapid transportation will link not only tourism centers in national territory but also to other famous historical site and World Heritage monuments located in the nearby countries such as Vat Pho in Laos and Phimai in Thailand situated at a reasonable distances by air from Preah Vihear using as a tourism hub. In the same manner, roads network could be easily extended so the travel by automobiles would be at the range and possible for medium and low incomes inter-region and neighboring countries tourists. This project could be implemented in the future in Thailand, Laos and Viet Nam would be, therefore one of the major axis of tourism development on the GMS's concept. It will then constitute one of the many projects with regional partnership focusing on the integration of the adjacent nations and would permit the riparian countries of the Mekong





River to facilitate their global economic development at the regional scale which is also the objective of ASIAN.



Map 48 from P.V World Heritage 2008

#### Proposed Tourism Development Program for Preah Vihear and Region

Short time (5 years)	Medium Term ( 8years)	Long term (10 years and above)
1-Temple Visit by facilitating access from bottom to the top, and services,	1-Develoment of Z2 and Z3 with tourists, product: transport systems, eco-tourism: elephants tour, bicycling, walking, oxen car,	1- Expand tourism activities to district with original tourism products: (Map 41,p 191),
2- Religious and Pilgrimage tour to visit Temple,	2- Development of Sra Em with urban development plan,	2- Link Preah Vihear Temple to Anlong Veng Town, (Map 43,p193)
3-Annual spiritual worship at the cave,	3- Park and botanical in Z3to make Z3 a living park,	3- Visit of temples along Dangrek Mountains with Preah Vihear (Map 42,p192)
4-Reconstruction of the King's ceremony to visit the Temple from Historic staircase,	4- Promote tourism link between Temple Site and district	4-Visit the Triangle Patrimonial (Map 40,p 190)
5-Annual Festival of Shiva's Dance on the historic Temple dancing place	5- Organize tours for Home stay with villages,	5- Visit Itinerary from Angkor Wat- Koh Ker-Preah Khan Phnom Kulen,(Map 44,p 194)



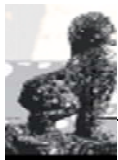
6-Annual Festival of Music for Peace by International & National Orchestra,	6- Installing mechanical means to facilitate senior citizen taking Historical Staircase to Temple,	6-Visit the Living Angkor Road Angkor Wat- Preah Vihear- Phimai in Thailand, (Map 46, p197)
7- Annual Sound and Light with International or Regional competition of dance at music,	7- Make Eco-Village a tourism attraction	6- Travel Tour from Preah Vihear Temple to Wat Phu using ancient royal road, (Map 47, p 197
8- Organize Phum Ben (festival of death) with the nearby pagoda,	8-Reconstruct Ta Mok's museum at Anglong Veng,	8-Tour in the Foot-Hills province to learn civilization,
9-Improving the Global Museum as main entrance to Temple	9- Urban development of Anlong Veng as stop over with tourists' facilities	9-Travel tour from Preah Vihear-Phi Mai,Wat Phu Angkor Wat- My Son in Vietnam, (Map 48, p 200)
10- Improvement of Sra Em Village with better accommodations and services,	10-Vist to the Foot-Hills province to learn early Khmer Civilization including famous Temple Banteay Chmar,	10-Cultural cruise on Stung Sen to appreciate eco-environment and traditions of rural people and minority population. (Map 45, p 196)

### 3-9 Improvement of Road Infrastructures:

- Access roads to the Temple

Development of tourism requires at the beginning sufficient and adequate means to provide access to the people who wish to visit the site. The physical networks that link tourists from where they are to the place of destination are to be created. Many possibilities of types of infrastructures could be envisaged in such a way that they would facilitate the movement of tourists as well as required logistics services needed to support this kind of sector of development. The basic and the most popular infrastructure that could be thought off is the tourists' road network because it will pass through villages and will open the way for medium income people in general.

In the other hand it is easy conceive and to implement. The output of project will yield a good ratio of cost- benefit because it is the mass transport. In the case of Preah Vihear, due



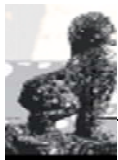
to the topography of the site characterized by a steep slope from Cambodian side and with a high of a 625 meters does present some difficulties for the construction. But these conditions of terrain should not be an obstacle and with new modern engineering know-how this technical problem can be resolved.

The road network should be designed and used to optimize its cost by integrating its layout with its natural surrounding so to create a typical landscape and specific environment that would attract the attention of the tourists during their trip. Many countries in the world have already done this successfully; such as roads through national parks, through gardens or along the natural coast lines with well protected marine biodiversity reserves.

### **3-10 Improvement of the quality of Amenities and Services:**

The roads are vital for the development of Preah Vihear because they will move people, they transport goods and they are essential link for communication from one area to another in diffusing culture as well as in promoting commercial exchanges. But optimizing these infrastructures so they could give way to a sustainable tools, indispensable services and amenities should be planned for and be implemented all along the process of the development. A city, a village or in another term, a human settlement, services are basic necessities to everyday life in addition to amenities. Potable water is essential for physiological and chemical required to maintain human body, hygiene and health requires good sanitary conditions. Foods and water as vital input to our body requires inevitably solutions to take care of residuals that are biological wastes. Electrical energy is undoubtedly a second most important utility to be provided. The world has changed by technology that conditions modern living which requires abundance of electrical power. If Preah Vihear has the ambition to be developed as a world tourism center, it will then need to foresee and to program how this energy could be supplied and how to be implemented. Since all development activities are related through a sequential process, meaning that the first one will enhances the second and the second will link to the third and so on.

Besides the basic utilities and services as mentioned, it is necessary to raise the primary question of how to keep our immediate environment clean and free of wastes. Unfortunately the problem is observed in most part of the country, in particularly in crowded towns. Either along the streets, canals and public spaces as restaurants, parks or gardens, solid



and liquid wastes are often seen as part of cityscape. It is suggested that all services and amenities should be envisaged with the main idea how to keep the new villages not only clean but unpolluted. In this perspective the use of free pollution agents such as sun energy, biogas and non-chemical products into everyday life should be sought out. The net zero pollution environment should be the objective for the new generation of human settlement.

### **3-11 Improvement of Agriculture**

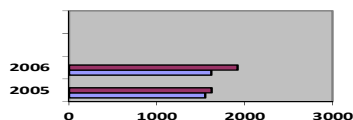
Agriculture is the main backbone for Cambodian primary indispensable good for living. Agriculture generates economic goods. It is a land resource. First it helps the poor people living in the rural areas to insure the foods safety net. It will provide them a chance to avoid starvation that is the worst condition for human being. Second the surplus of production from population consumption will help to generate economic output that could be profitable to the country as well as the rural population itself. It is a land resource particularly important for the developing countries like Cambodia because it is a direct source for making a living of the country population. Rice the basic nutritive good is a vital subsistence for many ID poor household which comprises around 25% of total inhabitants (Ref 1; p199). From many generations, a great percentage of people in Cambodia live with their land. The climate with alternative dry and raining seasons all year round is the reason that why Cambodia is primarily an agricultural country. This situation still prevails at the present time with around 80% of Cambodians are farmers. The practice of agriculture, at least, around the areas of the site of Preah Vihear is still very limited and at the scale of family size. (See average size of farm in Chapter II, page 65). This is due mostly to the geographical location which is a remote area whose most of population is mainly rural and poor. The movement of goods and people are difficult and the increasing flow of tourists into the region despite the existing of Preah Vihear Temple is still negligible. For the last few years, the improvement of roads conditions linking the region to main secondary economic activities in the vicinity has initiated a rapid growth in some of the small towns such as Anlong Veng and Tbeng Meanchhey. It is a good sign that agriculture could have an important role in the future. Cambodia export rice to abroad but the exportation is not yet optimized for the potential it disposes. A good percentage of farmers are first handicapped by not having modern tools, second by not having training to use these tools because of lack of financial support and



Figure 1.1. Average rainfall at selected stations, 2006

Station	Average Rainfall (mm)
Bardhaman	1,400
Barrabong	1,300
Barrabong Chin	1,700
Nongrong	1,400
Kampong Saba	1,000
Kampong Thom	2,100
Kompong	1,100
Katde	1,000
Kailash	5,800
Purnea	1,100
Phnom Penh	1,400
Phnom Vithay	1,600
Phnom Veng	3,200
Purna	1,100
Samnang Khut	3,100
Samnang	2,100
Samnang Khut	4,300
Samnang Khut	1,900
Samnang Khut	2,600
Samnang Khut	1,100

### Average rainfall compared to other Provinces

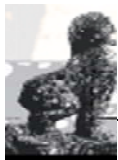


The map illustrates the Kosi River basin, highlighting the **Water runoff zone** (yellow) and the **Agricultural Zone** (white). The basin is situated in the region of Nepal, India, and Thailand. Arrows indicate the flow of water from the runoff zone into the agricultural zone. The map also shows various districts and geographical features, including the Kosi River and the surrounding terrain.

Direction of flow is toward the great plain area and toward the Great Lake which collects most of the water from North West of Cambodia. Due to this reason the central plain of Cambodia is very fertile and in which concentrates most of agriculture activity.

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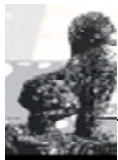


projects. For example, limited capacity of staff and farmers could be dealt with through provision of capacity building programs; animal diseases and declining soil fertility could be addressed through improved services, agricultural knowledge/technologies and protection of environment such as forest. Also landlessness problem can be tackled through government's social land concessions policy that protects the rural land-owners in order to reduce poverty reduction and economic development in the remote areas of the country. In addition the authority shall stop anarchic land clearing by the population and illegal land grabbing by investors or by some audacious high ranking government officials. (See Table 21 below)

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Access to markets in Siem Reap, Kampong Thom, Thailand (at two border crossing points, one formal and another informal with potential to become formal) and Vietnam through Kampong Cham, especially for cash crops such as soybean, sesame, groundnut, and cattle.</li> <li>• Fertile land.</li> <li>• Good and moderate road conditions easily accessible by vehicles.</li> <li>• Irrigation schemes that could be rehabilitated.</li> <li>• Potential collaboration with CARDI, which is currently establishing a presence in the province for research and demonstrations for rice and other crops e.g. soybean, mung bean, banana etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of veterinary, rural finance and agricultural extension services.</li> <li>• Limited capacity of PDA.</li> <li>• Limited social services (health care and education).</li> <li>• Low level of knowledge among the population, including the indigenous ethnic minority groups.</li> <li>• Limited water sources.</li> <li>• Few donor or NGO partners for development projects.</li> </ul> <p>Source: Ref 13; p 25</p>



**Fig.159-161:** Land resources: potentials of produced capitals. From left to right: Typical rural landscape in the region Rice field, rice planting (bottom); (Pictures by Author 2012)



Considering the trends of development as well as foods supply in the 21th century, foods are becoming one of the strategic resources of the future. With oil and water, foods will lead the main component for development and for survival of the human in next generation. The foods crisis that we have recently experienced in the world has proved that they cannot be left aside nor minimized for planning the future. Preah Vihear should be foreseen as a foods production center and a reserve to supply the needs of tourism development as well as to ensure the basic requirements of the local population. Without adequate foods supply it would be difficult to envisage any kind of development in the Preah Vhear Region.

For the types of commodities produced, their method of production and their quality need to be revised and improved. New technics and tools should be used to replace the old traditional practice inefficient and yields poor productivity. Adapt to the new methods in agriculture which permit to increase production. Detail studies of feasibility should be undertaken. Agriculture is the most important food supply not in Preah Vihear Region alone but in all remote rural areas in the country for the rural poor. Therefore, it is vital to insure the ownership of a minimum size of agricultural land for the poor so they can have food safety net and some cash revenue for their living. Then making provision for sufficient arable land that will be required to undertake such crucial program of agricultural development should be urgently planned for with transparency.



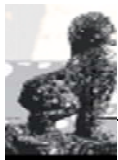
**Fig.162** Traditional Harvesting



**Fig.163** Harvesting by Machine

Sources: kairosphotos.photoshelter.com; chamkarrkhmer.com

Thus agriculture should be given priority among others sectors for the development of Preah Vihear Region because it will provide food safety net for the ID rural poor who are still in good percentage of inhabitants and is the first factor in reducing the poverty gab. In that perspective, it is important that the relevant authorities look into the issue so that a sound and equitable solution could be found to solve this crucial problem. It could be irreversible in the



long term. Since land is invaluable asset for future growth of the region of Preah Vihear, it is necessary and urgent to establish as soon as possible a land use plan to preserve the arable land from using for uncontrolled urbanization due to the tourism development or for the implementation of polluting industrial zone. Many experiences have shown that lacking of precaution and adequate measures to control land use would lead to difficult situation in the future in term of balanced development in the region.

For the time being Preah Vihear and its surrounding areas have limited agricultural production in quantity and in quality due to the lack of intensive policy on involving farmers into rural development program. Only rice production is the main activity. Some of commodities such as vegetables, fruits are produced normally for everyday life consumption for the farmers themselves and very limited amount is sold on the village market because their land is small and cannot increase the production. So based on the potentials of land availability, climate conditions and man power, agriculture could be organized, managed into a productive economic agent in the region ensuring therefore at least that the rural poor can avoid famine. For the moment some NGO are active in helping the rural poor such as the Japanese NGO “The Friends of Preah Vihear” which has been working consistently on the project for poverty reduction mainly in the “Eco-Village”.

Considering the potentiality and the multiple programs needed to plan for, it is necessary to find a sustainable balance between the use and the production of resources. Land resources, because of their rents generate produced capital resources could be used as collateral and or equity in investment. As needs increase in the future, land could become scarce; land set aside for agriculture, for a good urban development and for the needed infrastructures as required by transport and communication between cities should be well thought off and well managed to avoid land crisis such inflation in land price and pressure to extend into the agricultural zone imposed by industrial activities.



Main agricultural products in the region mostly from nearby farms and forest

(Fig.164, 165 by Author in 2010)



In that case of absence of land use policy for agricultural land is subject to speculation. Land is bought and then freezes intentionally waiting for better high value to sale and therefore left it unproductive. In conclusion any appropriate land use policy should include all vicious aspects that could lead inevitably to serious obstacles for economic and social progress. Within the agricultural development project, it would be wise to include the problem of human settlement at the scale of rural village. If the possibility occurs it would be beneficial to the population as well as to the government to take the opportunity to create the village that could have the potentials to use and to optimize its natural resources in such a way they would be renewable. The process is to create sustainability of natural resources. In that optic the concept of an ecological village that has the capacity of self-help and economic autonomy should be conceived and put into implementation. The concept of eco-village has the advantages of first the protection of environment, second to mobilize and also to protect natural resources to regenerate along its natural process of cycling and recycling so that they could be used and reused continuously in a sustainable way without neither disruption nor destruction of this invaluable natural capital in the long term.

- **Recommendations**

The following recommendations are for the development of agriculture in Preah Vihear and region.

- *Government should provide and give property right to rural poor sufficient arable land (2ha) to insure their needs for livelihoods,*
- *Good water management: collecting, implementing a rational irrigation system, saving and optimizing the use of water, avoiding pollution,*
- *Select the proper region with good soil conditions for high yield output of agricultural products and protect it from urbanization and commercial pressure,*
- *Insure the right of ownership of rural poor,*
- *Improve techniques of production in quantity and quality, encourage the use of natural fertilizer; avoid using harmful chemical fertilizer,*
- *Improve tools of production to better productivity by facilitating work of farmers,*
- *Improve the agriculture in semi-green forest, there is compatibility between the trees and paddy, it would be a nice landscape with high trees above the green rice*



*paddy. This type of culture is practice in Preah Vihear region (Chamcar rice field in Khmer).*

- *Provide incentive to farmer to stimulate productivity,*
- *Training farmers to take initiative and basic management to negotiate with buyer for better added value of their products,*
- *Create communities or cooperative to help each other to increase the capacity to defend their interest and coordinate their work,*
- *Authorities should provide assistance in administrative procedures, facilitate their project with rules and regulations that encourage their work with transparency,*
- *Authorities should help farmer in looking for market and assist in establishing related legal paper work,*
- *Emphasize on organic agriculture due to:*
  - *the trend of market, in the future at local as well as international demand to allow farmers to improve revenue in hard currency,*
  - *strong demand exists in local market because of current situation of poor quality of commodities,*
  - *more people in Cambodia are now aware of health problem due to the use of chemicals in food production,*
- *Initiate researches on bio-agriculture due to the growth interest of the products and a high demand from developed countries in Asia. This type of agriculture will have a good future because of the change of behavior of foods consumption by high incomes people,*
- *Improve the quality of foods preservation and transformation at local level to comply with basic hygiene requirements and to limit importation. The surplus of fruits and vegetables should be encouraged and provide help in preservation or transformation by appropriate techniques so it can be preserved or sell it as derivative. Some rural people have habit to do this only for household consumption. Some NGO have assisted many farmers in other areas to initiate the products from fruits and vegetables surplus.*



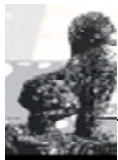


### **3-12 Handicrafts**

Handcraft is a part of Khmer tangible culture. The every life and the tradition have transmitted from old generation to the new one and fortunately the know-how of people has been carried on through centuries. The cloths, the tools they have been using, the jewelry all are interwoven in the matrix of social behavior and their philosophy of life. This aspect of culture should be preserved like monuments because of its cultural linkage. It should also be optimized in term of way of finding incomes that could provide better living conditions to the population. But for the moment in the concerned region, despite some initiative in this domain by the population themselves, there is little stimulation and/or incentive to encourage the activity such as training in technical knowhow as well as in promoting through proper advertising or market promotion. Many arts creativity could be closely associated to handicraft. The design and improvement of the techniques of production should be included in the whole process of manufacturing that would enable the effectiveness of the sale. Marketing network should be established with aggressiveness in order to compete on the market. Initiative to new creation of ideas and concept should be part of the curriculum of the only Fine Arts School in Phnom Penh who teaching is basically classical traditional transfer of knowledge. In provinces or rural areas arts are learned through family from grandparents to grand children to keep the skill in order to make a living. (See pp. 196-197)

This type of family education with highly skilled borne-talent people, most of them unknown, should be organized and encouraged in order to make it sustainable. In Preah Vihear region, it is believe that talented people exist because they inheritate this culture from their ancestors practicing in Foothill province along the Dangrek Mountains Range.

Raw materials could be extracted from natural environment such as wood, stone, marble that most Cambodian artists know how to work with to produce sculptures, or furniture and many house hold tools. The products from silk or bamboo have played an important role in handicraft in Cambodia. This activity should be strengthening and encouraged because it is directly related to the activities of the majority of the population. Handcraft should therefore be considered as an economic component that would yield high added values for the population. The example of the “Green Belt Project” in Siem Reap can be duplicated. It helped the rural poor to develop handicraft products from the local resources



in the villages such as straw, bamboo, rotten, etc., .With other products of handicraft like stone work, bronze wood sculpture, a logo named Angkor Vat Handcraft Association (AHA) has been created to avoid copies from outside and to testify that the products are originally made by Khmer artists in Siem Reap Angkor.



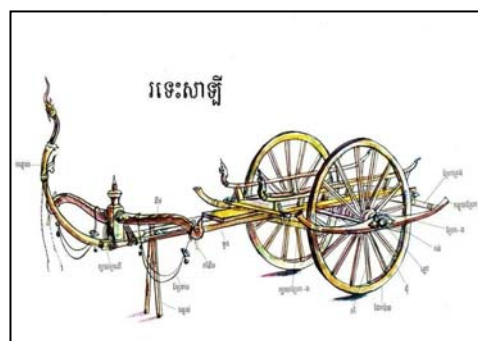
Products from handicraft artistic products

(Fig. 166-168 from AMP file 2007 and AHA of Green Belt Project)

At regional level meaning in the Preah Vihear Region could also be encouraged and developed by relying on the traditions of minority ethnic group who have been longtime inhabitants in the areas. The traditional fabrics and cloths which last many centuries ago and continue to be part of the textile arts and design can be upgraded and improved without losing their original aspect and essence of the everyday life of the population. Many other handicraft products ranging from household appliances to furniture design might be also of interest to show the visitors the woodcraft and the quality of craftsmanship of the Khmer artisans who have been carried on the professionalism from their old generation.

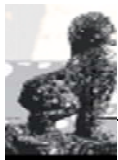


**Fig.169** handicraft work in family;



**Fig.170** Sport Oxen car (MOT 2010)

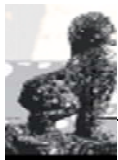
Khmer handicraft has been considered one of the finest arts with good workmanship of quality in the choice of material and in design. After the Khmer Rouge regime, to restore Khmer Arts from its root European Community leading by French organization has set up a training center in Siem Reap town called Artisan d'Angkor which is teaching young boys and



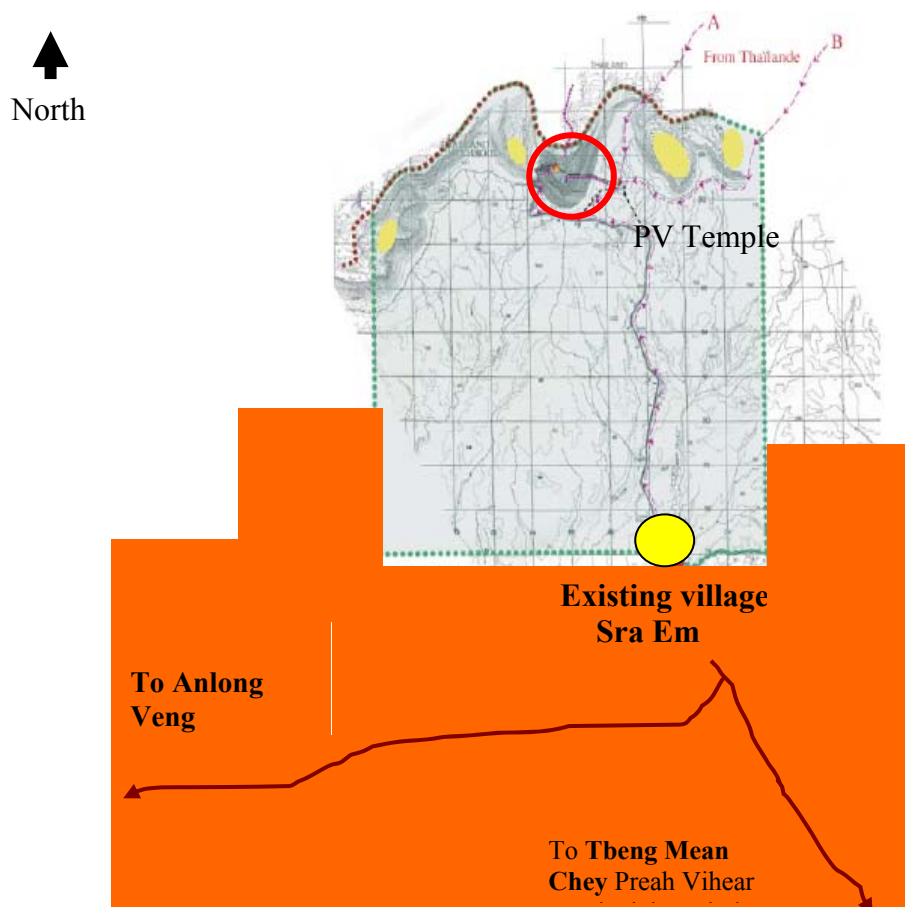
girls to take the profession of skilled artisans and due to this effort Siem Reap has revived the Khmer Arts lost during the Pol Pot's civil war.

### **3-13 Regional Development Vision**

The vision should focus on the sustainability of the economic and social development in the region of Preah Vhear Temple. Seen through this angle, it means that parallel to the immediate, medium and long term actions, a series of actions should be planned and implemented progressively within a continuous time frame, according to the suggestions described and explained previously in the Development Strategy section of this document. This action has the purposes of driving economic and social development process that would help to lay a sound base for sustainability. In that perspective the approaches to undertake the projects should be coherent within the global vision of sustainable development and the objectives as expressed in the present design concept. It is necessary to recall that the use of natural resources should be in such a way to ensure their sustainability avoiding over exploitation and allowing the time to regenerate for future needs. This process should be based as a whole on the Management Plan of Preah Vihear which stresses that every economic development and growth should take advantage of the Sacred World Heritage Site which plays the role of the source of development. Thus the idea is to streamline projects leading to the establishment of sustainability of existing potential resources for the many generations to come. If the sustainability is well installed in the chain of development mechanism then the wealth of Preah Vihear and region would be secured for investment, regenerated and well prepared to, eventually, face possible economic turbulence. In the meantime the benefit of output resources in terms of produced goods or financial aspect could be distributed equitably to the population in particular the rural poor who have participated in the process of economic development of the region. The visional concept is similar to the "Green Belt Project" whose main objective is the poverty alleviation in the rural areas. The most important philosophy of the "Green Belt Project" is to teach the rural poor to rely on themselves, to take initiative in what they believe. Farmers should work in close cooperation for any problem related to the interest of their village or commune. Communication and transfer of know-how shall be shared together. They should create a cooperative of modern agricultural tools such as ploughing, harvesting machines that each farmer cannot afford to buy, in order to increase



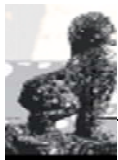
their production. To help the farmer cooperative, the Government should step in to facilitate by providing no or symbolic interest rate and shortening the administrative procedures.



**Map 50** Proposed area of concerted development at the scale of region (R5)

The first phase to be considered at the regional level is within the boundaries of immediate neighboring provinces because the mechanism of development will undoubtedly create a synergy and interaction between them. The adjacent provinces to that of Preah Vihear should be considered as an economic space within which exchange and complementary of needs will happen during the process of economic activities. Commodities, agricultural products, energy and many other items will be moved back and forth within this space and will have side way effects in many ways on the population through commercial relationship. By this approach it is hoped that the development will not contain in Preah Vihear only but spill over the other provinces creating therefore a momentum of growth.

Along with the development process of the proposed region, comes the physical development plan i.e. the urban and spatial plan for the population to inhabit. The existing towns and the small villages settling along the main axis roads leading to and from Preah



Vihear World Heritage Site should be reconsidered in term of redistribution and relocation if necessary, because the spread out of population all along the major roads can be prejudice to development plan at a regional scale. Experiences have demonstrated that in developing countries and no exception for Cambodia, population in villages including farmers like to occupy the land along the roads for the main reasons:

- Have a very easy access to communication and transport axis in order to sell their merchandise. The products to sell are exposed on the road sides to attract travelers who frequently stop the cars or the buses to shop.  
(See Fig 58, 59; p 89)
- Avoid flooding by heavy rain their houses are built on the elevated ground adjacent to the road platform so the water can overflow over the road pavement,
- Profit of services and facilities that are normally integrated to the major roads such as drainage, electricity, and sometime public water,

Very often, this small agglomeration becomes bigger when local commercial activities are getting better creating therefore a small business nuclei which attracts more and more people to come inhabiting in the area. The unplanned situation is getting out the control and creating in consequence multiple problems difficult to be solved in the future. This is one of the typical phenomena that have been happening along the major roads in the Cambodia.

The village of Sra Em, the Gate to the Word Heritage as explained in section on page ....is an example of such a case. The second example is a junction town named Trapaing Prasat which was a small farmer village located on the road between Sra Em and Anlong Veng has grown significantly during the last three years for the same reason. Small constructions have sprawled along the roads and around the round-about designed to ease the traffic flow. This new town needs an urban development plan. The most spectacular growth in population because of increasing economic activities is Anlong Veng has already raised on pages 86-89 (Fig 54-57). This junction town with potentials of development due to the highway 67 leading Siem Reap town to Khmer-Thai border before entering to Sisakhet province in Thailand should be subject to an urban development plan as soon as possible. The trends of growth as observed at the moment will lead to serious urban problems in the near future. In general all the new agglomerations either located on or closed to the road network





should be planned properly. Even Thbeng Meanchey, the capital provincial of Preah Vihear grows steadily without a plan. This type anisotropic development (development on both sides along the same axis) should be prevented because it will have negative results on highway because of risk of accidents by people crossing the road often and force the traffic to slow down changing therefore the function of a rapid transport system. Many examples of this type of spiel over development happened along the National roads leading Phnom Penh the provincial capitals such as road N 4 from Phnom Penh to Sihanouville, road N 6 going to Siem Reap and road N1 to Vietnam border.

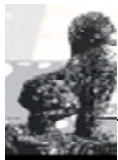


Picture168 shows a market constructed on a land filled on stream over which a bridge was built. In this extreme and curious situation, the flow of water is obstructed and floods the street nearby.

**Fig.171:** for construction situation in 2011, Anlong Veng town  
(Picture by Author in 2012)

To have a chance to reach sustainability in development, the government agencies in particular the provincial administration responsible for land planning and construction should be attentive to this issue and take measures to insure the degradation caused by proliferation of uncontrolled human settlement along the roads. Many examples have been cited on page 89 of this document.

The proposed concerted development deals with cross cutting issues such as urban planning, land use planning for specific purposes like agriculture, small and medium enterprise, preservation of biodiversity reserve i.e. wetland, mangrove, etc. in order to achieve equilibrium between natural environment and manmade activities. Since the density of population in the province is still low compared to the big cities like Phnom Penh, Kompong Cham, Sihanoukville or Siem Reap it would be wise that the relevant authorities implement of “land bank” policy. Land bank idea is that the province or district makes reserve of land in order to use when needed. This idea if properly managed will provide the government the possibility to face the lack of land for future need. The Land bank should be assigned to ease



the above problem and constitute a reserve for government purposes. Now in big cities in Cambodia government does not have enough land reserve to cope with the public demands such as green space, state hospital, schools. Most of available land in cities is sold for private ownership, government buildings are swapped with private investors for a site sometime located outside the agglomeration creating difficult access to public services.

Within the context of global regional planning at larger scale i.e. beyond the national border, with neighboring nations the scope of vision should be in coherence with the philosophy of GMS in order to take advantage of the regional cooperation in term of common economic prosperity. Projects at the regional dimensions should be considered within the GMS concept. To be listed as priority, projects should have benefit at regional level between neighboring countries. Electrical energy, communication and road network seem to be the most important because they will connect different remote regions yet isolated from economic and information centers. When linked together their potentials resources could be used to enhance economic growth and social improvement in particular for the poor. Tourism, education, movement of goods are judged crucial and considered a key vector of development.

Along that perspective, in the long run and at the proper political climate, it would be opportune to envisage a set of infrastructure such as a restoration of the Angkor Royal Road linking Siem Reap Angkor in Cambodia to Phimai, the ancient Khmer temple in Thailand. The second project that could think off will be the road from Angkor to Vat Phu in the South of Laos. These two roads network will revive the history of neighboring nations in time and space and inspire the tourism development for the concerned regions.  
(See map 48; p 200).

- **Infrastructures at Regional level**

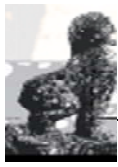
The design of regional road network should have long term vision in the concept of regional planning encompassing the neighboring countries such as Laos, Thailand and also Viet Nam. The impacts from the regional projects in road infrastructure will provide positive effects in economic growth that could be shared by the riparian nations. In the medium term, Cambodia should visualize the possibilities to restore the historic roadway of the Khmer empire.



The restoration of these infrastructures will require a studious time frame and important budget, but it could be scheduled sequentially according to the opportunity and cost profit of each one of the projects. The benefit of the operation will undoubtedly spearhead the development of tourism at national as well as international level due to exceptional cultural values generated by one of the prestigious history of humanity in this region of the world.

The road linking the capital of Khmer Empire Angkor to Phimai in Thailand called Royal Angkor Road has been discovered by joint Khmer-Thai research team. (Ref 11). The second road from Angkor to Wat Phu in Laos has been of an intensive study and research from research team of APSARA National Authority. The third road that existed at the same period of the Khmer Empire linked the capital Angkor to the town My Son in Viet Nam. It will be soon subject to research by APSARA's research team. These roads are supposed to be the main network serving as infrastructure for economic development as well as military logistic roads during the Khmer empire. The three roads could be restored, improved and used as a communication networks between the riparian Mekong countries to improve regional development and to promote inter-countries tourism (See map 48; p 200). In the future the riparian countries of Mekong River will be liaised with series of communication and transport networks that will help to bring the concerned nations together with a wide and opened objective of economic and social development at a large scale.

Since ASEAN foresees in the future free circulation of population and goods within the country members. The project of linking these countries with road networks will become necessary in order to respond to the objective set by the ASEAN. Adding the GMS concept plus ASEAN Nations' objectives the countries in the South East Asia will enjoy a wide spirit of cooperation and understanding making them an important space for economic development of the region. In that context Preah Vihear Region will be connected to Thailand because of its proximity. The many passes along the Dangrek Mountains could be improved to link Preah Vihear Region to the Thai provinces on the border on the other side of the Dangrek Mountains creating then a free flow of goods and persons. Thus the World Sacred Site of Preah Vihear will be integrated within the context of GMS vision and will certainly not a remote and isolated area anymore. At the same time it would benefit from economic growth of the GMS Region Development Plan. In that perspective the reduction of poverty of the rural poor is becoming a reality.



### **3-14 Sustainable Community Development Policy**

The success of the overall development of Preah Vihear and region depends a great deal on the policy formulation and its implementation strategy. Vision of the future, decision making, and actions planning are to be sought off within the institution framework. The institutional framework should include the community development policy which is the basic and dynamic component of the development mechanism for the rural poor.

The population should be involved in development process. The issues and opportunities that have been identified through site observation and investigation indicate that the development activities with the participation of the rural poor may best use to cause substantial reduction in the incidence and depth of poverty and bring about community development. The diversity of livelihood skills, initiative, and the probability of an overgrowing market for foods and services to tourists should be included in the community development policy formulation. On the other hand, key issues to be addressed include severe and increasing pressure on natural resources when over development happens to take place. Authorities shall have the responsibility to assist communities in developing their capabilities to improve their livelihoods by different sectors of economic activities such as tourism, agriculture, small and medium enterprises or services. Current constraints on community development are basically the level of education of the rural poor with still low literacy rate and limited skill.

In consideration of these constrains priority areas for community development a decentralization policy should be applied in the government structure. The following priority areas emerge from the consultations:

- Adult education to enhance the ability to acquire skills and knowledge, related to livelihood as well as to addressing health issues.
- Technical advice and assistance to assist with the uptake of a wider range of livelihoods that enables villagers to take advantage of the economic development. To respond to it, it is necessary that the government at local as well national level make a



commitment in financial resource and in human resource. It will not be easy for the case of Preah Vihear Region because of other priorities of government but it is possible to put in place reasonable budget with the participation of all private sectors and even with grants from friendly countries. The PPP ideas should be tested.

Here is an example of community development through Regional Economic Development in the province of Siem Reap with successful results.

*The “Green Belt” project in the Province of Siem Reap in Cambodia is an excellent example of Regional Economic Development (RED) operation. Conceived by APSARA National Authority and funded by Federal Republic of Germany German is recognized both by Cambodian Government and Germany as a successful project using similar strategy as suggested in this document. Such pilot project has been assessed as a model of rural development that helps narrow the gap of poverty because the incomes coming from projects have been made transparent and distributed equitably among the involved population. The project has three components:(Ref 19 );Appendix 11*

*a/ **Component 1 "Regional Management – Regional Partnership for economic development"** will promote co-operation between public, private and civil society stakeholders to activate growth potentials in rural districts of the province and to establish links to its booming center. The program will build capacities and mobilize resources to tackle spatial constraints and to identify and develop new business and employment opportunities.*

*b/ **Component 2 "Beneficial market participation of the poor"** aims at identifying and promoting market opportunities for small producers and the poor and at developing local production of vegetables, fruits and handicraft. In order to increase the availability, quality and competitiveness of Cambodian products in the Siem Reap market.*

*c/ **Component 3 "Decentralized development management, local self-governance and service delivery"** supports the implementation of decentralization and deconcentration reforms, including the forthcoming Organic Law, in areas important for rural development and poverty reduction. In order to improve the local governance environment of Siem Reap*

*This model is now expanding to Banteay Meanchey and Odor Meanchey, the two among the poorest provinces in the country with financial aid from both Germany and*





Switzerland. The project will use the example of Siem Reap “Green Belt” as center for training and for logistic because of the availability of human resource trained during the last project. The training of Cambodian trainers has produced positive results. The trainers have had experiences in conducting the three components of the project in close relationship with the farmers and have gained their confidence. (See Appendix 11)



Fig given here show the tragedy and activities of Green Belt Project in Siem Reap of RED Program assisted by

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

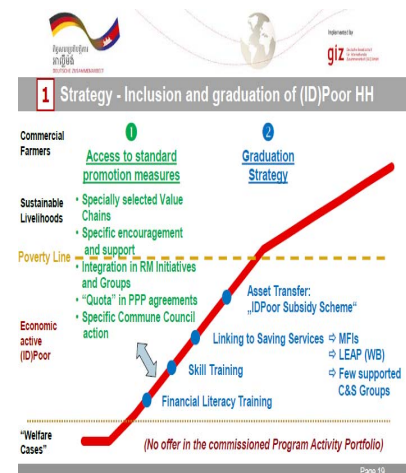
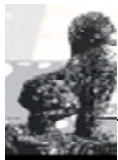


Fig from Summary of Review Strategy GIZ 12/29/2013;pp.11,12,19 (Ref 19)

### 3-15 Institutions and Politics

Preah Vihear National Authority (PVNA) has the jurisdiction on Zone1, Zone 2 and Zone 3, the three zones of the World Heritage Site of Preah Vihear (See Appendix 1). Due to immense responsibility, PVNA should be reorganized in such way to respond to the diversity of tasks that need good management and optimum efficiency. The first responsibility is the conservation work which concerns the monument and its site. In this field not much has been done since 2008. For the moment, PVNA work is very limited first, because of the staff is young with limited experiences even with the reinforcement of APSARA National Authority personnel. Second it seems that the organizational structure does not respond to the requirements of its responsibility. The lack of well trained staff and capacity building



becomes a major concern. To meet the requirements and to fulfill its mission, NAPV needs to increase its staff, improve its performance and build up consistently its capacity in technical know-how as well as in social comprehension. Though multiple activities in the zones of its responsibility, the staff of NAPV should work hand in hand with the population in the region such as protection of the World Heritage Site, preservation of natural resources or improvement of the human environment. In order to achieve successful operation, it requires, therefore, a good cooperation with the local communities which should be involved in PVNA's policy vision and strategy. In that matter NAPV should follow the Management Plan (Ref 5).

Since the development of Preah Vihear and region is a long and difficult process, a good coordination between actors involving in the mechanism from planning to implementation phase including law enforcement should be put in place and be fully operational with efficiency and endeavor. There is now a Board of Development (BoD), comprising representatives of ministries and institutions to advise and assess NAPV in accomplishment of its task but it produces very little result. No solid coordination in pushing neither conservation nor protection of environment has been substantial enough. Degradation of natural resources in the region such as illegal logging, land grabbing, cutting forest for land use and lack of water for agricultural purposes are still problems to be solved. To be more effective in the future the BoD should be revised and restructured to respond to the real situation because its duty in every aspect from conservation to economic development of the Region is enormous. Many people's representatives of each government service who at the same time occupy other functions in administration cannot have sufficient time to devote their effort to those responsibilities.

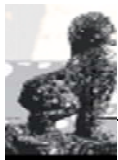
To visualize the perspective of a coherent and global vision to draft policy and strategy including a proper management requires a full-time staff. Therefore BoD should be given one and specific job which aims to the development of Preah Vihear Region. To fulfill this duty BoD should be transformed to an Authority with autonomy of action. It could be called for example "Authority for the Development of Preah Vihear Region" (ADPVR). It should be strengthened with well-trained and experienced staff that has the technical capacity to respond quickly to any required situation so the decision-making can proceed accordingly. The role of coordination is crucial for such a big plan of development because it permits a cross-cutting mechanism allowing permanent consultation of stakeholders for a rapid and cohesive action to be taken. The coordination body should be dynamic to define approaches



to any unforeseen problem and be entrusted with power to make decision, allowing adequate solution to be carried on. At the same time it has been observed that there is a lack of understanding and awareness from most of the public and private sector about the objective and the process of the development of Preah Vihear and its region. This gap of comprehension of the vision of the future of the region should be object of explanation and information by ADPVR to the population when implementing the concept of Community Development. The issue should be approached with skill in such a way that a good participation both from population and from private investors be ensured for a cohesive and harmonious collaboration that would lead to reach the ultimate goal. In this context ADPVR could create within its structure a unit specializing in the task of public relation and information. In such a manner, ADPVR will find its relationship with actors involving in the development process as partners and not often as protestors. In order to proceed in this direction with success, it would require that ADPVR adopt a policy of transparency, good governance and accountability. The human factor is crucial and should be linked to the global political decision of the government. The accountability, the distribution of national resources yield from economic growth shall be shared equitably according to the input capacity of each citizen and the power of decision shall be transferred to the local administration which in turn consults the communities prior to decision making. The implementation of de-concentration and decentralization is on progress but it is going too slow to really apply the model of “bottom-up”. This is political philosophy to adopt in order to give the same chance to all layers of population disregarding their opinion. That is the HARD CHOICE.

Within the NAPV organization itself, the relationship between departments and decision makers emphasizes more on vertical inter-active method that could overlook certain cross section relationship and technical inter-connection in decision making. This vertical approach is normally slow because the decision maker at the top of pyramid of organizational structure might not be available or reachable easily, therefore delay or postpone occurs frequently for the reason that problem might not be perceived and appraised correctly because it stems from the lower level. Each team leader should be given a responsibility according to the scale of work to be performed and not being a simple reporter. (See Appendix 1)

In order to optimize the efficiency in technical decision, it might be interesting that PVNA reviews its structural organization in such a way to prioritize more synergy at horizontal level between different technical departments and gives more time to the Director



General and to the President to concentrate on policy and strategy design within a frame line and then to appraise the proposed project for final decision.

As stated, Preah Vihear Region does have enough living resources to allow a well-balanced development that could lead to poverty alleviation. They are special economic goods to preserve and to use with good management to prevent them from being exhaustible.

From economic perspective, and in the case of Preah Vihear, efficiencies in resources exploitation should be the basic policy. Incentives resources management generally encourage excess exploitation which could depress genuine saving relative to the level of efficient exploitation and in the long term could drain out the resources. This practice has been observed in most of the developing countries, including Cambodia in the case of forestry and land exploitation. The case of Preah Vihear requires urgent change in natural resources management, and this change will lead to reform the policies and the institutions. The new policies and institutions, from a development perspective should comprehend that natural resources are significant shares of the total wealth to be used with precaution. A sound management of total wealth will support and sustain the welfare of the poor population in Preah Vihear region, so they could have a chance to move up to the development ladder.

PVNA has its own structural organization (See Appendix 1). It has been operational even before the Temple was declared World Heritage at Quebec City, in Canada on 7 of July 2008. Its management structure preceded by a complete legislative and regulation issued by the Royal Government of Cambodia has enable it to perform its function and responsibility within the frameworks of existing laws in order to insure the protection and the safeguarding of the sacred Site and Temples of Preah Vihear. Along with the legal aspect a set of recommendations concerning different components relevant to the conservation, the protection and the management of the Site and the Temples has been be completed by March 2009.

The Management Plan (See Appendix 5) defines the first important works related to the protection of the site, the temples and its immediate surrounding called buffer zones or protection zones as required by the World Heritage Committee. Proposed programs for actions to be taken up with various priorities focus basically on the site within the protection



boundaries as defined in the Management Plan. It focuses on the archeological and historical conservation goal. The proposed design concept in this paper on the Development of Preah Vihear concerns another aspect of objective. It shall cover the area beyond that of the protection zones so to envisage a long term vision on the overall development approaches of Preah Vihear Temple and Preah Vihear Region. The second objective shall seek a coherence of development actions based on the Management Plan. The idea of combining the two aspects of development arises from two essential goals:

- The first is to take advantage in great cultural values, transform it into financial capital that, in the process of development, would finally yield important revenues such as tourism sector.
- The second is to optimize in a sustainable way the exploitation of natural resources, part of total wealth described in Chapter II in order to synchronize efforts to generate momentum for a global development of Preah Vihear at the scale of its region.

The process of regional development requires a consistence interaction approaches in setting up an appropriate mechanism that fellows the development path as well as the appraisal of the use of available resources by keeping in mind not to destroy them or drain out and by having conscience that they should be capable to regenerate and sustain. A vision in the long term is that not only Preah Vhear but its region would bind together to share the benefit from integrated development. In the long run both Preah Vihear Temple and its Region would act as an entity of a regional development built through the same strategy, with a common policy and within the same frameworks. It is evident that such a development will encompass the population living in the region in particular the rural poor.

There is a good reason to get the rural population involving in the process. The labor force: skilled workers, carpenters, and many other professionals from different disciplines will be needed to participate in the chain of development. They constitute a tangible human capital to be injected in the process of generating economic growth. In return the profits yield from growth should be distributed equitably to all actors in economic development to government sector as well as to the private sector. Looking through this perspective the aim to reduce poverty gap and to provide future prospects for well-being of the marginal population living in the Preah Vihear region seems going in the right direction. Providing the





rural poor a better chance to share their part from the social and economic progress by involving them in the process of drafting and implementing the Road Map of Development to sustain growth so the goal of the government stipulated in its policy to reduce poverty gap between populations. To reach that ultimate objective many components of the development requirements should be met as described in the recommendations of this Chapter. This colossal task needs an intensive capacity building of human resource as well as natural resources and a good management. The government should also find appropriate solution immediately because many skilled labor are continuing leaving their villages for a better wage jobs in Thailand. This migration of man power can be a handicap for the development of the Preah Vhear Region.

### **3-16 Development Policy**

The proposed policy is mainly based on the following concept of global development. The concept itself relies on how to reach and maintain the equilibrium between the three pillars of total wealth of Preah Vihear as follows:

- **The cultural Heritage.**

It has been handed over from generation to generation and carried out to keep the social and identity values of a nation. It comprises the way of life, the behavior and the traditional living attitude of the majority of population. Even though these values have evolved through time, they still follow their rhythm and patterns that are binding together so the essence and the structure remain identified as human society. The cultural heritages left by ancestors are numerous. The temples, the religion, the human behavior, the tradition and the philosophy of life are parts of social values and genetic identity upon which the people root their way of life. Cambodia is rich in cultural assets. It is rich in arts tangible and intangible, material and immaterial. The art of engineering testified by the construction of hydraulic networks during the empire period, the city planning of Angkor Thom, the management of forest and water resources is few examples of the tangible and material accomplishments in the past. Painting, literature, philosophy built on Buddhism and many other religions combined and variety of national dances invented through social values prove the other aspect of intangible and immaterial of cultural richness. The diversity of cultures enriches the world we live in, stimulates mutual respect and understanding between people



and encourage exchanges of ideas or interests that would lead to friendship and peace. If we are to continue to exist within the framework of national pride, and in the concert of nations it would be cultural asset which is one of our main resources.

Since the development of Preah Vhear relies on this potential it is therefore crucial to make it sustainable.

- **The natural resources and the environment:**

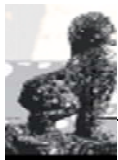
The natural resources and the environment should act as a second pillar for the development because they are the basic of human activities. They support and maintain human life within the cycle of the world ecosystem. Within the environment as a global generator and regulator of natural resources that human being taps what he needs to survive, to develop and finally to prosper.

The Natural environment consists of fauna and flora and the biodiversity that enriches our world and gives essence to our life. If we take a look to our everyday way of living, we find that our food we eat, our house we live in, our furniture our cloths they are all made from different elements of our natural environment. Without it, human life would face a serious problem. More important is that the environment nests the cradle of natural resources. And those natural resources are special economic goods because they are not produced but gifts given by nature.

As consequent, natural resources will yield economic profits, rents, if properly managed. So in order to pursue development and to ensure the sustainability of this wealth, it is therefore important that natural environment should, adequately, be saved from destruction and be well protected.

- **The human resources.**

It is important that all the resources of Preah Vihear and region should undoubtedly managed in such a way that they will not tarries in the future. Human resources should also be considered as the dynamic components in the chain of development process. Skilled workers; people from different categories of profession are needed in modern society to initiate, and to carry on the process of development. They are the ones who assure the role of management of the available resources, harvest them on the ground, tap them from under the



ground and finally have the ability to turn them into appropriate negotiable exchange values. The development process of Preah Vihear needs urgently a deployment of available human resources capable to insure good management of the potentials of its existing wealth.

From natural and cultural resources yield produced wealth. From human resources comes the development. The three pillars as above mentioned are essential in the chain of economic and social growth. It seems that Preah Vihear has at least two of them ready to be used at this stage. The third pillar which is human resources, still lacking and not yet reaches optimum performance could be deployed appropriately at different levels needed of the development, while waiting for more trained specialists through immediate intensive capacity building program. In case of urgent needs for additional or specialists to fill the key positions in order to help solving certain obstacles that risks to bloc or delay the development process, we could then rely on foreign technical assistance, bilateral or international cooperation. Filling this gap by using high qualified man power, on temporarily basis is a common procedure in the approach toward a sound development mechanism in developing nations.

The whole process of this type of development should rely on the strategy how to reach a sustainable balance between sequencing and prioritizing policies. The two policies strategy and management will definitely determine the allocation of resources available which in the case of Preah Vihear is a primary concern due to the limited existing potentials that are ready to invest. Any possible error in defining priority of action will lead to hazardous results and inefficient performance in optimization the use of resources that would finally be drained out. Therefore, the demonstration effect projects should be avoided and focusing more on the projects with a sound feasibility and sustainable return profit and not for quick and run off return profit.

It would be wise that the proposed strategy takes into consideration of a long term vision in the region because of the possible new trends perspective of regional economic cooperation between neighboring countries that becomes, one day, a reality for example the Great Mekong Sub-region project (GMS). Appendix 10

In the case of absence of good institutional frameworks, of will to implement it, of law enforcement, the chance to achieve social and economic success would be uncertain. In that respect the rules of transparency and good governance are no doubt the essential human



factor to be integrated fully in the policy implementation required for the process of sustainable development.

### **3-17 Priority Projects**

Since resources are not all available at the same time and do not produce the same effectiveness, it is wise and important to envisage their use according to a sequences of strategic planning framework. It would be most logic to think what kind of resources should be mobilized first into the development process that in turn is considered priority in comparison to the overall development plan that needs time to implement. So the action plan shall be designed in such a way that it would provide successive phases of output that would lead immediately to quick expected results. The results would themselves be re-injected as input so to enhance the next steps that would insure the momentum of the development process. In that manner the revolving mechanism would help to optimize the use of available resources in one hand, to attain objective quickly in the other. Considering the phases and priorities resulted from the present dissertation, the following action plan is proposed.

- 1- Immediate action: From World Sacred Preah Vihear Temple takes root the development. Without this cultural heritage it would be quite difficult to any concrete action and to get the region out of poverty.

The recommendations concern only the priority projects that deem necessary to sow the development of Preah Vihear Temple. It should be taken immediately as recommended by the Management Plan (Appendices 5 &7).

- a- Archeological work to be undertaken:

It consists of a projects aiming to preserve the monuments now in danger of collapsing or from sustained deterioration such as drainage, reinforcement of monuments structure and repairing of damaged cause way. The maintenance works should also be included in this phase because the monument is the source to generate revenues then the chance to improve living conditions of the population in the region then a chance to reduce the poverty gap. (Appendix 6)

Archeological work is a long and studious task. As recommended by the Management Plan it will take time and financial as well human resources to

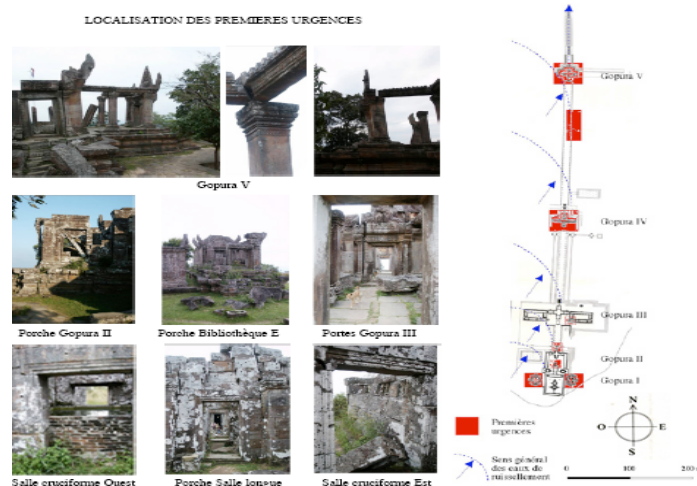


accomplish the restoration work. But urgent matter needs PVNA to prioritize the projects in such way that the Temple will not be degraded slowly.



Drainage problem: in and around the Temple during raining season

(Fig.172 from P.V World Heritage file 2007, Ref 5)



**Fig.173** Immediate and urgent actions (pictures 170 from P.V World Heritage file 2008) Ref 5 (Appendices 5, 6, 7)

The project should also include the following works:

- Improve the Historical Stair Case and Royal access Road
- Provide easy access for senior citizens and handicap persons, (installation of funicular or elevator from the historic staircase if possible),
- Create panoramic platforms at different levels as rest area,
- Create parvis (welcome center for visitors parking, facilities for tourists), by avoiding at maximum the pollution of CO2



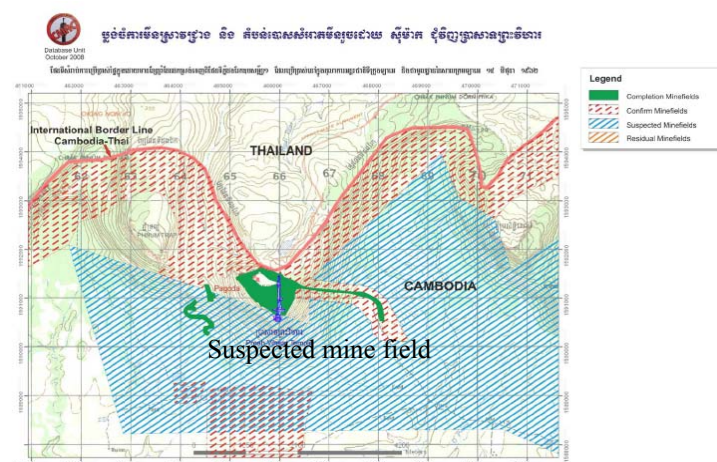


- b- Safety for restoration work and visitors: Important part of Preah Vihear site is still under the danger of land mines as show in the map below, despite great efforts from national and international de-mining actions. These actions are not only continuing but accelerating at regular pace according to available means that dispose the de-mining teams. These actions should be reinforced by international assistance so to clear the most part of the temple site in particular the immediate surroundings in order to allow urgent works to be done, such as access road to the temple, parking areas, reforestation on the immediate vicinity and landscaping in and around the archeological complex. Here, below are the major archeological works concerning the preservation of some important structures of the temple. The volume of this work is colossal. It would call for participation from most international institutions comprising funds as well as technical know-how. UNESCO is undoubtedly the first partner which has a significant role to play in the immediate actions.

At the same time de-mining action should also focus on the protection zones in order to provide safety access to undertake appropriate physical survey and to make inventory of the natural potentials in the areas to provide safety to the visitors. Many areas around the Temple site are not sure of safety because of mines since the region was a long time intensive wars zone. The demining work continues but it is slow because of difficulty to identify the areas where the mines were planted. Unless the region is safe, development at a large scale cannot be undertaken. (Appendix 6)

**Map 51** Safety of the region surrounding the temple.

Source: CIMAC, 2009





- c- Appraisal of the environment and the natural resources in the protection zones are indispensable for good appreciation of how the global development plan could be visualized and how the program for strategic action at different phases could be drafted.
- d- Protection and preserve the natural environment meaning stop deforestation, illegal logging, protect the water sources and networks,
- e- Stop land grabbing and give land ownership to the rural poor to prevent destruction of agricultural land.
- f- Start land use planning or at least zoning plan in order to prevent disorder in urban development in the future,
- g- Create appropriate Development Authority for PV and region to ensure and to draft policy, strategy and coordinate feasible projects,
- h- Train human resource with incentive policy in order to promote transparency and good governance which are the human factor indispensable for sustainable development,
- i- Apply Community Development strategy to involve the population in rural villages in planning and decision making to stimulate their participation,
- j- Authorities at all levels should assist, facilitate and encourage the rural population in agriculture and related culture,
- k- Enhance education of children in school to understand the future of their region and to teach them the negative effects of pollution by protection of the nature and environment in which they live in. Children for next generation should be to be aware of the scarcity of natural resources in the country and how management is needed to keep them sustainable to support the development that each one will share equitably during the lives.
- l- Attract reliable FDI that could help develop the Preah Vihear Region because the financial resource of the government is quite limited and the needs are so vast and so diversified. The infrastructures such as roads, power plants, water supply, sewage treatment or energy would require great amount of funding. But to call on offshore investment, there some conditions that insure the investors. First, it is indispensable that the stability politic exists and can last even there is a change of government. Second a guarantee of practice of good governance should be place



at every level of administration. Third, is the transparency in business practice including the respect of agreement by both investors and the government?

The recommendations herein are not exhaustive. They should be considered as urgent set of projects with the reach of government national as well as local. The PVNA, or BoD or the new suggested institution such as the proposed PVDA has the responsibility to respond to the collective responsibility. At the same time the PV Management Plan should be a guide line for the protection and conservation of World Sacred Site and its surrounding so the positive impacts from economic growth can overreach the region and the spilled over of improved living conditions of the rural poor could spread beyond the regional border.

While tourism is considered as a spearhead of development, attention should be given to this segment of activity. Many examples have shown that tourism without appropriate philosophy and fundamental direction could go perverse and produce counter-effects on the culture, the way of living and the thinking of population. Nowadays maximum benefit and optimization of financial gain are the common aspect at the detriment of the preservation of culture and natural environment. The results of this modern thinking of excessive “money mind” have proved that many countries in the world are regressing in their policy of development and the rural population in majority is getting poorer and losing hope for a reasonable future for themselves as well as for their children. This situation Cambodian government should be aware off and should therefore find a sound base of political decision and strategy to optimize the national resources in order to share equitably the output with all layers of population.

### **3-18 Examples of the consequences of Natural Resources Destruction**

The path of the development of Cambodia can be compared to the fluctuation of the Cambodian political situations from the French Protectorate Period up to the present time. The colonial economy consisted mainly in exploiting the resources and transferred them outside the country but did little to transform Cambodia’s village-based economy.

(Ref: Colonial Economy; edit; French Protectorate, 1863-1954, ch.5) Wikipedia, the free encyclopedia; 2009). When Cambodia got its sovereignty The Sihanouk “Socialism Buddhism” practice did not succeed to be on the right direction of economic and social improvement framework with the “Sangkum Reast Niyum” (People Social Preference) doctrine whose development was predominance on agriculture and the lack or neglect real industrial development have characterized Cambodia’s economy. Then came the period of Pol Pot Khmer Rouge regime which is a hash communist planning economy based on total



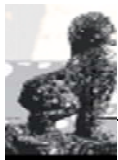
collectivization of agriculture and for a complete nationalization of all sectors of economy. (Ref: Khieu Samphan Khmer Rouge leader doctoral thesis at the University of Paris in 1959).

The outcome of this strategy turned out to be the “killing Field affects” and set the clock of Cambodian people back to the dark medieval period. Now at the present situation with a free market economy policy practice for a span of 35 years, the results have not changed much in term of development and the people in majority continue to stay poor if not poorer when compared to the economic situation of neighboring countries. Cambodia has its advantages and disadvantages, but the political framework of government ideology can make a choice on economic approach by considering the economic environment in the region.

(Ref 20; p 75-82)

But in term of country's natural resources that were implicated in all the above enumerated development policies, they never were so drained out and mismanaged as they are today. Minerals, gem stones, forest now land added to the poor quality of human resource are becoming a serious problematic for sustainable development in Cambodia.

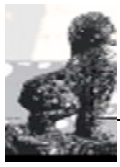
The conceptual ideas illustrated in this paper attempts to indicate a vision through which one of the paths towards sustainable development of World Heritage Sacred Temple Preah Vhear is a cultural resource. Its region could rely on as a possible investment capital solution for Cambodia. The present document explains the approaches upon which a solid base of mechanism could be built to enhance the momentum of sustainability of economic and social growth. Protecting our resources from becoming exhausted, investing them in right direction with a sound management so they can generate a sustainable positive net capital is a priority to all development action. Because natural resources could turn into financial capital, their rent will yield produced capital and the human resources generates intangible capital. They are the three basic components of nation wealth that should be combined together properly in order to formulate a vector of growth that could lead to sustainable development. The three basic components are indispensable for such an objective, it is therefore imperative that they should be protected or recycled and maintained in the state of sustainability. Many examples have proved that development, if not well thought, have produced negative output and consequently reverses the outcome of the desired goal. This result can be also due to excessive use and mismanagement of resources which ends up with depletion and degradation of environmental, a factor compromising the ability of future generations to meet their own needs. Environment should be understood in its global aspect;



natural as well as man-made are part of the produced capital. It is considered as one of the component of the total wealth of nation because its actions and effects have multiple implications in our everyday life through the process of our overall development. For example, urban environment is a man-made environment. It could provoke, in most cases, negative effects due to the fact that it creates different types of pollution including disturbances to living habit and deterioration of health conditions to urban population. Many developing countries are now experiencing this type of phenomena and if no solution is not sought out rapidly they will encounter even more difficult problems in the future because the degradation of environment will accumulate at a faster rate and to repair the damages high price is needed to pay for. In that respect, the development of Preah Vihear Region should take into account the human made environment, in particular the urban development to be foreseen for in the future. Only a good appraisal of the future could avoid perverse development whose side away effects range from economic to social degradation.

In coherence with this concept, it is imperative that the **Wealth of nation** as defined in the present paper shall be preserved and managed with efficient, with transparency and with good governance. It needs to high light this fundamental measure and to stress its importance for the simple reason that it would be difficult to undertake investment without proper resources and it would be even more difficult to achieve the sustainability of development if the total Wealth of Nation is wasted, mismanaged and later drain out completely or do not exist anymore. The action plan for the development of Preah Vihear and Region is formulated in the principle that **good management of Total Nation Wealth** shall be the key, the base of economic growth and the vital factor to reduce poverty gap. One final element which is essential to sustainable development is the **human factor** considered as intangible resource. It shall be a leading component among others responsible for all decision making in the long process of development mechanism. It is the human factor which set up the strategy for the development and formulates the policy for the implementation. Any anomaly such as wrong doing in the use of nation wealth, or any incapacity in management leadership would certainly lead to negative effects of expected objective as well as a prejudice to good governance practice. Jeopardize the institutional system is a worse action that endangers the integrity of the values of the society. In that perspective, the Preah Vihear development should be truly thought of in the context of global interest for the population as well as for the Region and for the country on the national scale due the fact that its impacts would determine the outcome of the future of the development.





If the development is to be sustainable it should obey to a certain basic rules and laws regulated by nature. The laws set up by nature are to be considered fundamental because they articulate the matrices of every aspect of elements created by natural process and mechanism. They should be the binding of what created by nature and what created by human being. The two should be complementary and can never be separated as individual and unrelated action. All our development is based on resources that we dispose and most of these resources come from nature which we rely on and with which we construct our everyday life. So in that respect we are called to live in concert with nature. All man-made products are produced by using at least at primarily state by natural resources. Every object that surrounding our everyday life such as table, bed, shop sticks just to cite a few are made from wood or from metal. Wood is provided by tree cutting from forest or metal that comes from a chain of a technical processing starting from extraction of mineral to the final phase of production of the desired material. The computer that became an indispensable working tool in the this new era is made of diverse components each one being a specific type of mineral with particular scientific propriety is all extracted from nature or synthesized with other minerals. Within this consideration, it could be testify that all man-made items from house hold appliances, houses, cars and electronic equipment, just to enumerate some, that support our everyday activities are produced by using natural elements provided by nature. In term of food supply, to sustain our living, we also use natural resources such as agricultural products which come from natural elements; land to cultivate, water to stimulate seeds to the production of crops that we need. In the same manner, fish and meat from natural living beings that provide protein for the maintenance of our life are all from natural resources. Therefore there is no way nature can be by passed for the development and for the sustainability of our everyday living.

There are still three fundamental natural resources on which development can rely upon even the list of resources relating to enhance and to carry on the momentum of economic actions can be extended. But three of them are fundamental for the development and for the achievement of the sustainability of economic and social progress because without them the mechanism and the process of development could not be put together to enhance any positive results and could, on the contrary produce perverse effects.

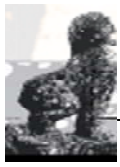
**Forest** is a part of our natural environment and is the basic natural resources that fosters lives and permits a cyclical process to regenerate multitude forms of living beings. It



products and services should be protected (Ref 9; p 253-258). The equilibrium between natural environment and human activities is essential to achieve sustainable development. There should be at least a minimum consideration of how these resources that are sensitive can be intelligently and properly managed.

The idea that natural resources are plentiful and do not drained out is a wrong judgment because nature complies with basic rules of recycling process that governs the mechanism of the reproduction of living organism or minerals which also have their living cycle. The process called eco-system is understood that natural elements are capable to reproduce themselves within different time lines. A tree grows from seed, undergoes a development stage, becoming mature ready to be used, lives to the day of its limited age and then decays and dies out. At the same time its pollens transported by wind are spread out toward other areas and then the tree starts its natural reproduction and multiplication that gives way to the formation of forest. At the age of maturity, a tree can provide its usefulness. It can be logged to be used for multiple purposes such as lumber for construction material, fire wood for basic energy that human beings from ancient time up to now many people in developing countries depend upon to cook their foods. If a tree is healthy and its wood is of good quality, it will be used to manufacture furniture of high standard and other items of high added values that are part of our everyday living environment. Furthermore, all living beings use forest resources to sustain life or at least for survival. For a long time population mostly indigenous groups living in the remote areas, e.g. the Kayos in the Dangrek Mountains in Cambodia, the Mongs in Highland of Laos or the Jorai of Leu in northern Cambodia, a region that is home to number of ethnic minorities with a profound spiritual and economic attachment to the landscape (Bourdier 2006), continue to rely on forest to maintain their livelihoods. From forest, they extract their foods, their needs of protein from wild life and even the medicine from plants to cure diseases. Forest constitutes a source of life for these people during centuries.

There are many examples along history that many nations have collapsed due to the destruction of natural environment. Therefore, it is essential that forest resources should be used with good management because it is vital for not only preserving balance of our eco-system but is crucial for survival of all living beings. Mismanagement of forest such as illegal logging, inappropriate trees clearance for agricultural land could lead to the degradation of the environment like, erosion, land slide or flooding that triggers destruction of homes and

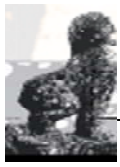


infrastructures and causes loss of human lives. In this regard, when forest resources is properly used according to the sequences of the natural process of reproduction in order to insure the renewable cycle, the drain out of the potentials of these natural resources would be avoided and increase in return the chance for achieving sustainability for the development in the long term. Along the history, there were many examples of doming civilization by destruction of forest. The example is the Mayan Empire in southern Mexico, North Central America. The city states of the ancient Mayan empire flourished for about six centuries. Then, around A.D. 900 Mayan civilization disintegrated.

Two new studies examine the reasons for the collapse of the Mayan culture finding the Mayans themselves contributed to the downfall of the empire. Scientists have found that drought played a key role, but the Mayans appear to have exacerbated the problem by cutting down the jungle canopy to make way for cities and crops, according to researchers who used climate-model simulations to see how much deforestation aggravated the drought. "We're not saying deforestation explains the entire drought, but it does explain a substantial portion of the overall drying that is thought to have occurred," said the study's lead author Benjamin Cook, a climate modeler at Columbia University's Lamont-Doherty Earth Observatory and the NASA Goddard Institute for Space Studies, in a statement. (Dry and Dying: Images of Drought). Using climate-model simulations, he and his colleagues examined how much the switch from forest to crops, such as corn, would alter climate. Their results, detailed online in the journal *Geophysical Research Letters*, suggested that when deforestation was at its maximum, it could account for up to 60 percent of the drying. (The switch from trees to corn reduces the amount of water transferred from the soil to the atmosphere, which reduces rainfall.)

Another scientist team led by B.L. Turner, a social scientist at Arizona State University, concludes that by clearing the forest, the Mayans may have aggravated a natural drought, which spiked about the time the empire came to an end and population declined dramatically.

But this is just one contributing factor to their demise, as Turner and colleagues wrote, pointing out that the reconfiguration of the landscape may also have led to soil degradation. Other archaeological evidence points to a landscape under stress, for instance, the wood of the sapodilla tree, favored as construction beams, was no longer used at the Tikal and

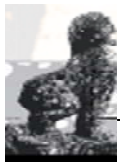


Calakmul sites beginning in A.D. 741. Larger mammals, such as white-tailed deer, appear to have declined at the end of empire.

Social and economic dynamics also contributed. Trade routes shifted from land transit across the Yucatán Peninsula to sea-born ships. This change may have weakened the city states, which were contending with environmental changes. Faced with mounting challenges, the ruling elites, a very small portion of the population, were no longer capable of delivering what was expected of them, and conflict increased.(Source: on Twitter @Wynne Parry or LiveScience@livescience. Facebook&Google+)

**Water** is undoubtedly a very important element from nature. It helps maintaining the equilibrium of biological and chemical process to support our physical and mental living conditions. So if water is indispensable in the first place for our consumption in term of drinking water it is also indispensable for multiple aspects of our activities. The growth of rice, vegetable, fruits, forest, flora and many other living organisms are depending on water either surface water like rain or underground water due to infiltration of surface water through soil and sub-soil. Rain is still essential for agriculture despite much progress that water could be stored in reservoir and channeled to rice field with modern techniques of irrigation system. Paddy Crops e.g. rice, corn, potato the basic nutrition elements in major developing countries are dying during drought season because there is no or insufficient rain water. In that case farmer has to rely on underground wells providing there is water that can be accessible from the surface. In that respect water plays an important role in our everyday life and for tourism development (Ref 18; pp. 67-70). Therefore it needs to be protected and managed properly so it can be used to provide us its services that are required to support and maintain our economic and social development. Protecting water resource with comprehensive management policy is one of the main criteria that lead to sustainability of the use of this crucial resource. Thus adequate measures should be taken in order to insure our need of this resource in the future. The basic measures to be taken for the preservation of this natural resource are known for many centuries, but due to the fact that idea of water is unlimited and we take it for granted, we are now are experiencing the increasing problem of its shortage.

Many nations with high civilization have collapsed during the past. According to an article published by Bob Yirka in January 3, 2012 in (PhysOrg.com), a group of scientists led by Mary Bet Day, an earth scientist with the University of Cambridge has found a possible new explanation for sudden demise of Khmer Empire known as the Angkor Civilization. The



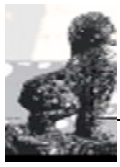
group digging the West Baray, a huge water reservoir located on the west side of Angkor complex, found that like many other lost cultures, what was once a flourishing metropolis, in a period of time, gave way to collapse. Now, work by the group of scientists indicates it may have been due to drought.

The Khmer Empire existed from the period between 9<sup>th</sup> and 15<sup>th</sup> centuries and was spread around the city of Angkor. During that time, great effort was devoted into capturing massive amounts of water that came from the skies during the monsoon seasons in summer. The water was used to support drinking and crop growing during the rest of the year. The system with hydraulic engineering know-how and a good management worked well for a long time, and then suddenly stopped. The reasons put forth for this sudden change have varied, from diseases or warfare to public strife, to changing environmental conditions. Now, it appears due to this research of Mary Beth Day, that at least, one of the major factors is in fact environment.

Public strife is commonly happened to changing environmental conditions. Now, it appears due to this latest research, that at least one of the major factors was indeed environmental. In studying the sediment deposits on the bottom of Baray over time, they found that less water became available for storage. They also proved that rainfall was more erratic. Instead of steady rains during the monsoon seasons, huge storm would erupt flooding farmland and dumping massive amounts of soil into the Baray, which were then followed by periods of no rain at all. There was much less water available for drinking and for agriculture during the drier seasons. There it was possible of destruction of crops that the farmers were able to grow, due to due to flooding.

This new research doesn't prove for a fact that it was drought that led to the demise of the Khmer Empire, of course, as there were other factors involved such as wars with neighbors, the conversion of many of the inhabitants to Buddhism, loss of social dynamism and other factors yet to be proved. At least, these researches and scientific findings revealed that we should pay special attention to the environment especially when change being recorded. Consequently we should create a scientific group to note and study in details and deeply to understand and follow up any indication of new change in the nature. The nature reacts as an indicator to gauge what is going next in greater extend and disaster if related





attention will not be big enough to alleviate or sustain the larger impacts to avoid any possible larger disaster.

First, surface water such as river, creek, canal in other words water stream should be protected. They should be free from pollution of all kinds and maintained properly so to keep them clean and flow according to their natural pattern. Many countries in the developing world still use streams as liquid and solid wastes dumpers. It is not unusual to see beer cans, bottles, rubbish and plastic sacs floating in the rivers, ponds or lakes. In these water sources are discharged liquid wastes such as sewage outlet and chemical from factories that are toxic and dangerous to health. When rain comes the discharge will be carried downstream to pollute water on the surface as well as underground due to the permeability of the soil. Secondly most of streams are deviated from their direction of flow creating therefore a change of natural current that can bring about floods and soil erosion. The list of ways of destroying water resources is numerous but here is just to cite the common practices of pollution that still happen in many countries around the world including the remote areas in Cambodia.

**Land** should be considered as a natural resource with the same importance as water and forest. Reforestation is essential for the reconstitution of the health of soil. (Ref 9; p 272-273) These three natural elements are inter-woven and can be hardly separated. Land is the basic natural resource that supports life. For centuries human being have been fighting to it; conquering neighboring countries or exploring the world to find new territories with the same purpose that is to have more space for surviving. It is evident that forests exists and insure its reproduction cycle on land. Farmers depend on land to practice agriculture, and city needs land to be built upon. So in this respect land is the most fundamental asset for every life even nowadays some people are living in houses constructing on water as an alternative for settlement. This natural resource is becoming scared and its value is increasing no matter if it is agricultural or urban land because of the increase number of population. As long the world population increases land will be inevitably not only a limited resource but an invaluable asset. Foods production including livestock husbandry, will be increased in order to comply with the population growth, arable land should be looked for and the technology for optimum agricultural productivity should be thought off because the best food-producing land is already used. Another concern related to land scarcity is that the number of cities is increasing their size is getting larger due to the urban growth. The land needed for their



expansion, for the infrastructures to link cities to gether and to have access to rural areas will take over agricultural land, reducing progressively the potentially area of cultivation.

Thus protecting and preserving the land is an obligation to assure that this resource could last longer and be able to recycle in order to support development. Avoiding pollution to happen on soil and sub soil is a necessity to keep its nutritive potentials that are required to develop agriculture. Using excessive and inappropriate chemical products such as non-organic fertilizer or DDT could contaminate the soil and this contamination could then be transferred to produced crops or vegetable, creating a health hazard. This practice is widely used in Cambodia and in particular in the provinces due to the lack of information or misinformation passing on to the farmers. The public health service should radiate the use of harmful chemical agents in agriculture.

The aim of this dissertation is to focus on the wealth of Preah Vihear, and how it can be optimized for the development while keeping it sustainable. It has, within this goal, the ambition to offer a vision of the future of Preah Vihear and its Region. It highlights the challenges that the government of Cambodia will face in achieving a balanced, equitable and sustainable development. It addresses the potentials of Preah Vihear not only as a World Heritage Site but its natural resources tapped and untapped that constitutes the Wealth of one of the remote province of Cambodia. Economic growth should lead to social improvement meaning reduce the poverty gap often stipulated in government policy and stipulated in its Rectangle Strategy.

Long term thinking is essential in dealing with sustainability issues such as economic change, ecological threats and social progress. A consensus should be thought out about how to move toward a new development path, the one that integrates economic growth with environmental responsibility and social equitability.

The wealth of Preah Vihear shall be in no way wasted. It should be optimized in deploying to generate economic and social benefits for the nation and all along be well managed in such a way that it continues to be sustainable. Once the balance between development and the preservation of eco-system is disrupted natural resources could drain out and the road to sustainability is put into question. Environment that shapes our every existence and upon which living beings are depend should be preserved and improved.

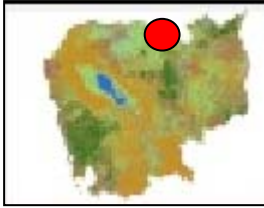


Biological diversity of Preah Vihear and its region is rich because it has been preserved and not yet undergoes intensive human exploitation. As economic activities pressures on nature increase, the ability of ecosystem to respond to disturbance will increasingly determine the sustainability of such key economic activities as agriculture, forestry, and nature tourism. To face this problem in the future, it is wise to seek means to protect and to preserve this gift of nature from progressive erosion that leads indefinitely to exhaust the wealth of Preah Vihear. The sustainability of this wealth will insure the sustainability of development as suggested in this dissertation.

**Human resource** is the root of all development because it would be difficult to conceive a development without people with high degree of competence and possibility to adjust the policy to face the unpredictable turbulence in economic and social environment. Integrated natural resources with respect to its development cycle, combined with human resource including good management, Preah Vihear and its region could become a special region that would develop in harmony between nature and human settlement with the goal of economic and social progress. Live the nature fellows its cycle, use it with precaution, well protect it and make it sustainable is an equation of economic growth and social improvement. In that perspective the road map for sustainable development is then unveil to open the way for a better future. (See p 133 -139)

**Good governance** should be the last key factor for a sustainable development. It will provide confidence in business practice both from local investors as well as offshore investors who have the capacity to supply financial resource to help important projects for which Cambodia, for the time being cannot support the cost. With this policy Cambodia might speed up the development of Preah Vihear Region and the effort of reduction of poverty could be strengthening in a short time. This human behavior factor is essential for sustainable development.

After viewing the global situation of World Heritage Sacred Preah Vihear and appraisal of the wealth that exists today in the Region, there is to believe that integrating Society, Ecology and Development is still possible and narrowing the gap of poverty is reachable.



## Conclusions

The development of Cambodia has been lining to the Cambodian political situations from the French Protectorate Period up to the present time. The colonial economy had not lay down a good base for the Cambodia to take over economic structure and capable to enhance its own development after independence. In terms of human resource, there was an emptiness of educational system that could have helped Cambodia to build up man power to manage the natural and cultural resources of the country. The rural poor continue to exist nowadays despite some government efforts to narrow the gap of poverty.

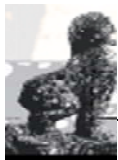
The conceptual ideas illustrated in this thesis attempts to indicate a vision through which one of the paths towards sustainable development of World Heritage Sacred Temple Preah Vihear is possible. Its region could rely on cultural heritage as a main investment capital to start off economic development for Cambodia. The present document explains the approaches upon which a solid base of mechanism could be built to enhance the momentum of sustainability of economic and social growth. Protection of resources from becoming exhausted, investing them in right direction with a sound management is the first step to do immediately.

The final conclusion for the Development of the World Heritage Sacred Site of Preah Vihear as well for the whole country as visualized in this dissertation can be better summarized the following tables:



Conclusion	Key Ideas and Vision Frame
1.	<p><b>Human resources</b>, including skilled labor force, performing technicians and good managers, should be considered as basic and fundamental for sustainable development because they have the capacity and ability to appraise the situation and find appropriate solutions to overcome obstacles. They include:</p> <ul style="list-style-type: none"><li>• Their skill and knowledge should be recycled in order to follow up the progress in their domain of their profession to respond to the competitive environment of work force market demand,</li><li>• In addition, they should have the human factors such as integrity, transparency, responsibility and the quality of leadership.</li></ul>
2.	<p><b>Cultural resources</b> should be preserved to strengthening as national identity that has been since an invaluable heritage tangible and immaterial.</p> <ul style="list-style-type: none"><li>• They should be used as sustainable wealth capable to yield produced resources in Development of the Region of Preah Vihear.</li></ul>
3.	<p><b>Natural resources</b> should be protected at all cost to prevent wasting and drain out. They should be well managed in the way to use them with respect to their natural reproduction cyclical mechanism. Therefore a balance between over exploitation and conservation should be planned for.</p> <ul style="list-style-type: none"><li>• Land, water, forest, and minerals and other components of bio-diversity sphere should be preserved and well managed so they can be sustainable and prevent from depletion.</li></ul>





4. ***Protection of Natural and man-made environment*** should be included in development planning policy. Avoiding destruction such as illegal logging, forest clearing, pollution of water and reduction of agricultural land by unjustified projects should be banned and stipulated in laws enforcement, rules and regulations which permit to respond to the needs of the rural poor which are 80% of population in the region.

- Urbanization should be subject to planning in order to provide a good human settlement with proper services and adequate health conditions, wasting land and creating disorder that leads to social chaos.

5. ***Institution and Policy*** should be reviewed, adjusted or reformed and implemented in order to respond favorably to the above conclusions 1-2-3 and 4. A short term strategy should plan for in order to gain and to foster the mechanism of development.

- The education system should be revised because it is outdated compared to the new trends in learning technics and philosophy in international practice.
- Implementation of the policy of decentralization and de-concentration allow the people in particular the rural poor to participate and share decision making with government authorities in order to fully participate in the development process. The output of economic growth should be equitably distributed among the population.

6. ***Strategic planning***, to enhance the first step of development of Preah Vihear region, should use the World Heritage of Sacred Site Preah Vihear to start with. A program of development is given on paragraph 3-17.

7. ***Tourism*** should be used as spearhead for development. Taking advantage of the World Heritage Sacred Site of Preah Vihear which is by mass media attracts already an increased number of tourists. Take the opportunity of now good relationship with neighbor country Thailand and the creation of International Coordination Committee for Preah



Vihear to start off a cooperation and partnership with Thailand for the development of both sides of Preah Vihear region.

There is to believe that sustainable development in Preah Vihear region can be reachable. Integrating nature, man and economic development and social progress is possible within a reasonable time line. The approaches of planning based on the fundamental vision as described in the present dissertation would be on line with the concept of the Great Mekong Sub-Region Development philosophy that would lead to the improvement of living conditions for the poor then narrowing the gap of poverty in the poorest areas of the three countries Cambodia, Thailand and Laos.



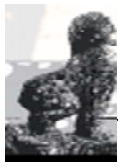
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## APPENDICES

### Appendix 1

#### INSTITUTIONAL AND LEGAL DOCUMENTS FOR THE CREATION OF PVNA

##### *6.1 Legislative Protection*

i. The national cultural policy of Cambodia is formulated by the Supreme Council on National Culture (SCNC), which is an inter-ministerial body, composed of the seven ministries most concerned by development of the region (Culture & Fine Arts, Public Works & Transport, Economy & Finance, Foreign Affairs & International Cooperation, Tourism, Environment, and Planning).

ii. The site of Preah Vihear now inscribed as a World Heritage site (UNESCO) is nationally protected by the Royal Decree on Establishment of Preah Vihear Temple Site (NS/RKM/0303/115) dated 11<sup>th</sup> March 2003.

It is also supported by a number of other Decrees:

1. Sub Decree on the Establishment of Protected Forest for the Conservation of Plants and Animal Genetics, "Preah Vihear"- 30<sup>th</sup> July 2002.
2. Royal Decree on the Delimitation of the Site of Preah Vihear Temple - 13<sup>th</sup> April 2006.
3. Royal Decree on the Creation of ANPV- 1<sup>st</sup> June 2006
4. Sub Decree on the Layout and Management of the Site of Preah Vihear Temple – 31<sup>st</sup> July 2006.
5. Sub Decree on the Establishment of the Administrative Board of the ANPV - 26<sup>th</sup> July 2007
6. Sub Decree on the Nomination of the High Counselors to the Administrative Board of NVPV - 31<sup>st</sup> December 2007

iii. According to the Royal Decree on the Establishment of Preah Vihear Temple Site, the policies of the SCNC shall be implemented in order to ensure the management, maintenance and protection by allocating the responsibilities among competent institutions; whereas the Ministry of Culture and Fine Arts (MCF A) is responsible for policy implementation according to Article 5 of the Law on the Protection of Cultural Heritage, promulgated by Royal Kram (decision) NS/RK/0196/26 dated 25 January 1996:

iv. As the nominated area especially the buffer zone also falls under the Royal Decree for Protected Forest for the Conservation of Plant and Animal Genetics and under the environmental protection and natural resource management, the Ministry of Agriculture, Forests, Wildlife, and Fisheries and the Ministry of Environment will be major partners in management. The Ministry of Land Management, Urbanization & Construction, the Ministry of Tourism and other national and provincial authorities will also be involved in relevant aspects of the management system particularly within the buffer zone such as land-use, lifestyles, housing & construction, farming, & etc.

v. The Sub Decree concerning the application of the Royal Decree on Establishment of Preah Vihear Temple Site Authority which came into force in June 2006 establishes the National Protection Authority for Preah Vihear (ANPV) on lines of APSARA in Angkor (another WH site in





Cambodia), which will have the overall responsibility for the management of the site.

vi. A Preah Vihear-Conservation Board of Directors (Preah Vihear Consultative Board) comprising of representatives of all concerned Ministries as well as the Preah Vihear provincial authority to coordinate the activities with various local & national authorities and international organizations as well as to provide decision-making for the site, has been established by Sub Decree on the Establishment of the Administrative Board of the ANPV - 26<sup>th</sup> July 2007

The Board shall report its findings directly to the MCFA and the SCNC after due deliberation and resulting recommendations. The ANPV office will also act in the dual role as the Secretariat for the Board.

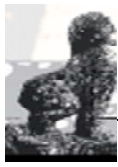
vii. Apart from the site specific Decree, all archaeological / cultural remains in Cambodia are protected under the Law for Protection of Cultural Heritage dated Jan 1996 and Natural Heritage by the Royal Decree on Environmental protection and Natural Resource Management dated Dec 1996. These statutes contain provisions for prosecutions and penalties for transgressions that adversely impact archaeological sites and ruins, historic buildings, artifacts, etc. and for unauthorized development projects in protected areas.

viii. The boundaries of such protected sites are defined by Royal Decree at the proposal of the Supreme Council on National Culture (SCNC). The SCNC is responsible for policy formulation in domain of national cultural properties, while Ministry of Culture and Fine arts is responsible for policy implementation. The boundaries of the site of Preah Vihear are defined by the Royal Decree on Delimitation of the Site.

ix. The management system for the Preah Vihear site is described in the Sub Decree concerning the Layout and Management of Site which came into force in July 2006, it states how the site shall be managed, maintained and protected with respect to significance of archaeology, history, environment, national wealth, respect of ownership rights of the people living in the whole area, livelihoods and the promotional value of the site. The detailed description of the property management plan is also stated in this Sub Decree. The objectives of this management plan serve as a guideline for the protected zones with regard to such items as conservation, tourist development, territorial management, cultural protection measures, promotion and development.

The perimeter of the Temple is the most significant consisting of monuments and archaeological sites and as such deserves the highest levels of protection. The Buffer Zone refers to protected cultural and natural landscapes and subject to regulations controlling harmful or disruptive activities that may concern its appearance, land use, varied habitats, historic and aesthetic values. Any development in these zones is prohibited, with the exception of development essential for the protection and enhancement of the site.

It mandates the ANPV to formulate a comprehensive management for the WHS after finalization of a complete survey, review and meetings with both national and international specialists from related area.



## ***6.2 PVNA Structural Organization***

- **The management structure of the ANPV composes of six technical departments :**
  - 1-Department of administration, finance, planning, legislation and public relations
  - 2-Department of monuments and archaeology
  - 3-Department of tourism development
  - 4-Department of human settlement
  - 5-Department of cooperation and order
  - 6-Department of environment, forestry and water
- To effectively fulfill the above mandates, the ANPV recruited an interdisciplinary team consisting of archaeologists, architects, engineers, hydrologists, environmentalists and demining services, including a permanent core technical team on site.



Appendix 2  
(Extract from)  
**The 1954 Hague Convention**  
**International Court of Justice**  
**Judgment of 15 June 1962**

***THE TEMPLE OF PREAH VIHEA IS SITUATED IN TERRITORY  
UNDER THE SOVEREIGNTY OF CAMBODIA***  
(Judgment of the International Court of Justice- 15 June 1962)

Through its petition submitted to the International Court of Justice (the Court) on 6 October 1959, the Cambodian Government requested that the Court rule on a dispute over territorial sovereignty. In its judgment of 26 May 1961 the Court “upheld its jurisdiction to adjudicate upon the dispute” which it described in the following terms:

“In the present case, Cambodia alleges a violation on the part of Thailand of Cambodia’s territorial sovereignty over the region of the Temple of Preah Vihear and its precincts. Thailand replies by affirming that the area in question lies in the Thai side of the common frontier between the two countries, and is under sovereignty of Thailand. This is the dispute about territorial sovereignty”.

“The court can only give the decision as to the sovereignty over the Temple area after having examined what the frontier lines”

MAPS were submitted to the Court and various considerations were brought to bear on this subject. The Court found herein the reasons for the Decision that it would render to resolve the dispute.

The Court first noted that: -The “Dangrek” mountain range wherein the Temple of Preah Vihear stands on a promontory, is in a general way the **border** between The two countries in the region-Cambodia to the south and Thailand to the north;

-The **border** in this area of the “Dangreks” was subject to the relevant provision of the **13 February 1904 Convention** between France (as the protectorate power CAMBODIA within French Indochina) and SIAM (as Thailand was then known);

-**The exact delineation of this border** was to be determined by a Franco-Siamese mixed Commission.

The Court then pointed out that:

- A new **Border Treaty** has been signed on **23 March 1907** between Siam and France;
- A second **Mixed Border Delimitation Commission** had then been established;



-A **Map** (referred to by the Court as Annex I Map) shows the delineation of the border as the result of delimitation work and locates **THE ENTIRE PROMONTORY OF PREAH VIHEAR, INCLUDING THE TEMPLE ZONE, WITHIN CAMBODIAN TERRITORY.**

“Thailand denies this so far as she is concerned, representing herself as having adopted a merely passive attitude in what ensued. She maintains also that a course of conduct, involving at most to a failure to object, cannot suffice to render her as consenting party to a departure at Preah Vihear from the watershed line specified by article I of the Treaty of 1904, so great as to affect the sovereignty of the Temple area.” “The Court sees the matter as differently” because:

- “The maps were given wide publicity in all technically interested quarters by Being also communicated to the leading geographical societies in important countries; to the Siamese legations accredited to the British, German, Russian and United States Governments; and to all members of the Mixed Commission, French and Siamese;”
- “The Court cannot accept these contentions either on facts or the law”, which Thailand “suggested” during the oral proceedings that no one in Siam at the time knew anything about the Temple or would be troubling about it.”
- “It is an established rule of law that the plea of error cannot be allowed as an element of vitiating consent if the party advancing it contributed by its own conduct of error.

The Court raised the question:

“THE REAL QUESTION, THEREFORE, WHICH IS ESSENTIAL ONE IN THIS CASE, IS WHETHER THE PARTIES DID ADOPT THE ANNEX I MAP, AND THE LINE INDICATED ON IT, AS REPRESENTING THE OUTCOME OF THE WORK OF DELIMITATION OF THE FRONTIER IN THE REGION OF PREAH VIHEAR, THEREBY CONFERRING ON IT BINDING CHARACTER” (P.22, PAR.3 Reports of Judgments, Advisory Opinions and Orders, International Court of Justice-Case Concerning the Temple of Preah Vihear-Judgment of June 1962);

The Court answered:

1. “THE COURT HOWEVER CONSIDERS THAT THAILAND IN 1908-1909 DID ACCEPT THE ANNEX I MAP AS REPRESENTING THE OUTCOME OF THE WORK OF DELIMITATION AND HENCE RECOGNIZED THE LINE ON THAT MAP AS BEING THE FRONTIER LINE, THE EFFECT OF WHICH IS TO SITUATE PREAH VIHEAR IN CAMBODIA TERRITORY” (p.32, par.5 of the same Report of Judgment, Advisory and Order mentioned above).
2. “BOTH PARTIES, BY THEIR CONDUCT, RECOGNIZED THE LINE AND THEREBY IN EFFECT AGREED TO REGARD IT AS BEING THE FRONTIER LINE” (p.32, par.1 of the same Report of Judgment, Advisory and Order mentioned above).
3. “THE COURT CONSIDERS THAT THE ACCEPTANCE OF ANNEX I MAP BY THE PARTIES CAUSED THE MAP TO ENTER THE TREATY SETTLEMENT AND TO BECOME AN INTEGRAL PART OF IT” (p.33, par.4 of the same Report of Judgment, Advisory and Order mentioned above).
4. “THE COURT, THEREFORE, FEELS BOUND, AS A MATTER OF TREATY INTERPRETATION, TO PRONOUNCE IN FAVOR OF THE LINE AS MAPPED IN THE DISPUTE AREA” (p.35, par.3 of the same Report of Judgment, Advisory and Order mentioned above).



“FOR THESE REASONS,

THE COURT,

by nine votes to three,

“FINDS THAT THE TEMPLE OF PREAH VIHEAR IS SITUATED IN TERRITORY UNDER THE SOVEREIGNTY OF CAMBODIA”

finds in consequence,

by nine votes to three,

“THAT THAILAND IS UNDER AN OBLIGATION TO WITHDRAW ANY MILITARY OR POLICE FORCES, OR OTHER GUARDS OR KEEPERS, STATIONNED BY AT THE TEMPLE, OR IN ITS VICINITY ON CAMBODIAN TERRITORY;

by seven votes to five,

THAT THAILAND IS UNDER AN OBLIGATION TO RESTORE TO CAMBODIA ANY OBJECTS OF THE KIND SPECIFIED IN CAMBODIA

FIFT SUBMISSION WHICH MAY, SINCE THE DATE OF OCCUPATION OF THE TEMPLE BY THAILAND IN 1954, HAVE BEEN REMOVED FROM THE TEMPLE OR THE TEMPLE AREA BY THAI AUTHORITIES.”

Remarks:

The above text basically summarized the judgment that the International Court of Justice published in its “Report of Judgment, Advisory Opinions and Orders,” under the heading CASE CONCERNING THE TEMPLE OF PREAH VIHEAR (CAMBODIA vs THAILAND)-Merits-Judgment of 15 June 1962-ICJ.Case report,p.6-37.

The United Nations Charter signed in San Francisco on 26 June 1945, under the provisions respecting the STATUTE OF THE INTERNATIONAL COURT OF JUSTICE, stipulates the following:

Article 60:

**The judgment is final and without appeal.**

Article 61, paragraph 5:

**No application for revision may be made after the LAPSE OF TEN YEARS from the date of the judgment.**





REQUEST FOR INTERPRETATION OF THE JUDGMENT OF 15 JUNE 1962  
IN THE CASE CONCERNING THE *TEMPLE OF PREAH VIHEAR*  
(*CAMBODIA v. THAILAND*)

(*CAMBODIA v. THAILAND*)

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DEMANDE EN INTERPRÉTATION DE L'ARRÊT DU 15 JUIN 1962  
EN L'AFFAIRE DU *TEMPLE DE PRÉAH VIHÉAR*  
(*CAMBODGE c. THAÏLANDE*)

(*CAMBODGE c. THAÏLANDE*)

11 NOVEMBRE 2013

ARRÊT



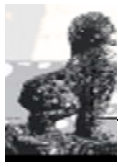
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(Extract from)

**The 1954 Hague Convention  
International Court of Justice  
Judgment of 15 June 1962**



INTERNATIONAL COURT OF JUSTICE

YEAR 2013

2013  
11 November  
General List  
No. 151

11 November 2013

REQUEST FOR INTERPRETATION OF THE JUDGMENT OF 15 JUNE 1962  
IN THE CASE CONCERNING THE *TEMPLE OF PREAH VIHEAR*  
(*CAMBODIA v. THAILAND*)  
(*CAMBODIA v. THAILAND*)

*Historical background.*

\*

*Jurisdiction and admissibility.*

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\*



- 2 -

*Interpretation of the 1962 Judgment.*

*Role of the Court under Article 60 of the Statute — Relationship between operative clause and reasoning in original judgment — Role of pleadings, evidence and submissions of Parties in original case — Principle of non ultra petita — Nature and purpose of headnote — Conduct of the parties occurring after original judgment given.*

*Principal features of the 1962 Judgment.*

*Role of Annex I map in reasoning of the Court — Submissions of the Parties — Subject-matter of the dispute before the Court — Court concerned with question of sovereignty over the Temple area and not frontier delimitation.*

*Operative part of the 1962 Judgment.*

*First operative paragraph of the 1962 Judgment clear in meaning — Temple situated in territory under sovereignty of Cambodia — Scope of this operative paragraph to be assessed in light of the Court's examination of the second and third operative paragraphs.*

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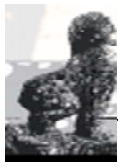
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*Temple of Preah Vihear a UNESCO world heritage site — Cambodia and Thailand must co-operate to protect the site — Each State under obligation not to take any deliberate measures which might damage Temple — Access to Temple from the Cambodian plain to be ensured.*

## JUDGMENT

*Present: President TOMKA; Vice-President SEPÚLVEDA-AMOR; Judges OWADA, ABRAHAM, KEITH, BENNOUNA, SKOTNIKOV, CAÑADO TRINDADE, YUSUF, GREENWOOD, XUE, DONOGHUE, GAJA, SEBUTINDE, BHANDARI; Judges ad hoc GUILLAUME, COT; Registrar COUVREUR.*



- 3 -

In the case concerning the Request for interpretation of the Judgment of 15 June 1962,

*between*

the Kingdom of Cambodia,

represented by

H.E. Mr. Hor Namhong, Deputy Prime Minister and Minister for Foreign Affairs and International Co-operation,

as Agent;

H.E. Mr. Var Kimhong, Minister of State,

as Deputy Agent;

H.E. Mr. Long Visalo, Secretary of State at the Ministry of Foreign Affairs and International Co-operation,

Mr. Raoul Marc Jennar, Expert,

H.E. Mr. Hem Saem, Ambassador Extraordinary and Plenipotentiary of the Kingdom of Cambodia to the Kingdom of the Netherlands,

H.E. Mr. Sarun Rithea, Adviser to the Minister for Foreign Affairs and International Co-operation,

Mr. Hoy Pichravuth, Assistant to the Deputy Prime Minister,

as Advisers;

Mr. Jean-Marc Sorel, Professor of International Law at the University of Paris I (Panthéon-Sorbonne),

Sir Franklin Berman, K.C.M.G., Q.C., member of the English Bar, member of the Permanent Court of Arbitration, Visiting Professor of International Law at Oxford University and the University of Cape Town,

Mr. Rodman R. Bundy, *avocat à la cour d'appel de Paris*, member of the New York Bar, Eversheds LLP (Paris),

as Counsel and Advocates;

Mr. Guillaume Le Floch, Professor at the University of Rennes 1,

Ms Amal Alamuddin, member of the English and the New York Bars,

Ms Naomi Briercliffe, solicitor (England and Wales), Eversheds LLP (Paris),

as Counsel;





*and*

the Kingdom of Thailand,

represented by

H.E. Mr. Virachai Plasai, Ambassador Extraordinary and Plenipotentiary of the Kingdom of Thailand to the Kingdom of the Netherlands,

as Agent;

Mr. Voradet Viravakin, Director-General, Department of Treaties and Legal Affairs, Ministry of Foreign Affairs,

as Deputy Agent;

H.E. Mr. Surapong Tovichakchaikul, Deputy Prime Minister and Minister for Foreign Affairs,

H.E. Mr. Phongthep Thepkanjana, Deputy Prime Minister and Minister of Education,

H.E. A.C.M. Sukumpol Suwanatat, Minister of Defence,

Mr. Thana Duangratana, Vice-Minister attached to the Office of the Prime Minister,

Mr. Sihasak Phuangketkeow, Permanent Secretary, Ministry of Foreign Affairs,

Mr. Nuttavudh Photisaro, Deputy Permanent Secretary, Ministry of Foreign Affairs,

General Nipat Thonglek, Deputy Permanent Secretary, Ministry of Defence,

Lieutenant General Nopphadon Chotsiri, Director-General, Royal Thai Survey Department, Royal Thai Armed Forces Headquarters,

Mr. Chukiert Ratanachaichan, Deputy-Secretary-General, Office of the Council of State, Office of the Prime Minister,

Mr. Jumpon Phansumrit, Expert Public Prosecutor, Office of Policy and Strategy, Office of the Attorney General,

Mr. Darm Boontham, Director, Boundary Division, Department of Treaties and Legal Affairs, Ministry of Foreign Affairs;

Mr. James Crawford, S.C., F.B.A., Whewell Professor of International Law, University of Cambridge, member of the Institut de droit international, Barrister,

Mr. Donald McRae, Hyman Soloway Professor, University of Ottawa, Member of the International Law Commission, associate member of the Institut de droit international, member of the Ontario Bar,



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Mr. Alain Pellet, Professor at the University Paris Ouest, Nanterre-La Défense, President of the Société française pour le droit international, associate member of the Institut de droit international,

Mr. Thomas Grant, member of the New York Bar, Senior Research Associate, Lauterpacht Centre for International Law, University of Cambridge,

Ms Alina Miron, Researcher, Centre de droit international de Nanterre (CEDIN), University Paris Ouest, Nanterre-La Défense,

as Counsel;

Mr. Alastair Macdonald, M.B.E., Honorary Fellow, International Boundaries Research Unit, Department of Geography, Durham University,

Mr. Martin Pratt, Director of Research, International Boundaries Research Unit, Department of Geography, Durham University,

as Expert Advisers;

Mr. Ludovic Legrand, Researcher, Centre de droit international de Nanterre (CEDIN), University Paris Ouest, Nanterre-La Défense,

as Assistant Counsel,

THE COURT,

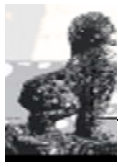
composed as above,

after deliberation,

*delivers the following Judgment:*

1. On 28 April 2011, the Kingdom of Cambodia (hereinafter “Cambodia”) filed in the Registry of the Court an Application instituting proceedings in which, referring to Article 60 of the Statute of the Court and Article 98 of the Rules of Court, Cambodia requests the Court to interpret the Judgment which it delivered on 15 June 1962 in the case concerning the *Temple of Preah Vihear (Cambodia v. Thailand)* (hereinafter the “1962 Judgment”). Cambodia on the same day, referring to Article 41 of the Statute and Article 73 of the Rules of Court, also filed a request for the indication of provisional measures in order to “cause [the] incursions [by Thailand] onto its territory to cease”.

2. In accordance with Article 40, paragraph 2, of the Statute, the Registrar communicated the Application forthwith to the Government of the Kingdom of Thailand (hereinafter “Thailand”); and, pursuant to paragraph 3 of that Article, all other States entitled to appear before the Court were notified of the Application. Pursuant to Article 73, paragraph 2, of the Rules of Court, the Registrar transmitted a certified copy of the request for the indication of provisional measures to Thailand.



3. Since the Court included upon the Bench no judge of the nationality of either of the Parties, each Party exercised its right, conferred by Article 31, paragraph 3, of the Statute, to choose a judge *ad hoc* to sit in the case; Cambodia chose Mr. Gilbert Guillaume, and Thailand Mr. Jean-Pierre Cot.

4. By an Order of 18 July 2011, the Court, after rejecting Thailand's request for the case to be removed from the General List of the Court, indicated the following provisional measures:

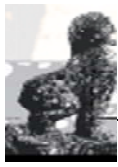
- “(1) Both Parties shall immediately withdraw their military personnel currently present in the provisional demilitarized zone, as defined in paragraph 62 of the present Order, and refrain from any military presence within that zone and from any armed activity directed at that zone;
- (2) Thailand shall not obstruct Cambodia's free access to the Temple of Preah Vihear or Cambodia's provision of fresh supplies to its non-military personnel in the Temple;
- (3) Both Parties shall continue the co-operation which they have entered into within ASEAN and, in particular, allow the observers appointed by that organization to have access to the provisional demilitarized zone;
- (4) Both Parties shall refrain from any action which might aggravate or extend the dispute before the Court or make it more difficult to resolve.” (*Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand), Provisional Measures, I.C.J. Reports 2011 (II)*, pp. 555-556, para. 69, points B.1 to 4 of the operative part.)

It further decided that “each Party shall inform the Court as to its compliance with the above provisional measures” and that, “until the Court has rendered its judgment on the request for interpretation, it shall remain seised of the matters which form the subject of this Order” (*ibid.*, points C and D of the operative part).

5. Thailand filed written observations on Cambodia's Request for interpretation within the time-limit fixed by the Court for that purpose, in accordance with Article 98, paragraph 3, of the Rules of Court.

6. The Court decided to afford the Parties the opportunity of furnishing further written explanations, pursuant to Article 98, paragraph 4, of the Rules of Court. Each of the Parties filed such further explanations within the time-limits prescribed by the Court.

7. The Court also decided, in response to a request from Thailand to which Cambodia did not object, to give the Parties an opportunity to provide further oral explanations under Article 98, paragraph 4, of the Rules of Court.



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8. In accordance with Article 53, paragraph 2, of the Rules of Court, the Court decided, after ascertaining the views of the Parties, that copies of the pleadings and documents annexed would be made accessible to the public on the opening of the oral proceedings.

9. Public hearings were held from 15 to 19 April 2013, at which the Court heard the oral arguments and replies of:

*For Cambodia:* H.E. Mr. Hor Namhong,  
Mr. Jean-Marc Sorel,  
Sir Franklin Berman,  
Mr. Rodman Bundy.

*For Thailand:* H.E. Mr. Virachai Plasai,  
Mr. Donald McRae,  
Ms Alina Miron,  
Mr. Alain Pellet,  
Mr. James Crawford.

10. At the hearings, a Member of the Court put a question to the Parties, to which replies were given orally and in writing, in accordance with Article 61, paragraph 4, of the Rules of Court. Pursuant to Article 72 of the Rules of Court, each Party presented written observations on the written replies received from the other.

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11. In the Application, Cambodia presented the following claims:

“Given that ‘the Temple of Preah Vihear is situated in territory under the sovereignty of Cambodia’ (first paragraph of the operative clause [of the 1962 Judgment]), which is the legal consequence of the fact that the Temple is situated on the Cambodian side of the frontier, as that frontier was recognized by the Court in its Judgment, and on the basis of the facts and arguments set forth above, Cambodia respectfully asks the Court to adjudge and declare that:

The obligation incumbent upon Thailand to ‘withdraw any military or police forces, or other guards or keepers, stationed by her at the Temple, or in its vicinity on Cambodian territory’ (second paragraph of the operative clause [of the 1962 Judgment]) is a particular consequence of the general and continuing obligation to respect the integrity of the territory of Cambodia, that territory having been delimited in the region of the Temple and its vicinity by the line on the Annex I map, on which the Judgment of the Court is based.”





12. In the written proceedings, the Parties made the following submissions:

*On behalf of the Government of Cambodia,*

in the further explanations presented on 8 March 2012:

“On the basis of the facts and arguments set out in its Application for interpretation and in this Response, Cambodia respectfully asks the Court to adjudge and declare:

- (i) that the submissions made to the Court by each of the two Parties show, both in the light of the facts and in themselves, that the Parties are in disagreement regarding the meaning and scope of the 1962 Judgment;
- (ii) that the disputes between the Parties concern both the first and second paragraphs of the *dispositif* of the 1962 Judgment, as well as the link between those two paragraphs;
- (iii) that the dispute relating to the first paragraph concerns the meaning and scope of the Court’s use of the term ‘territory’ (‘is situated in territory under the sovereignty of Cambodia’), particularly in connection with the Court’s decisions regarding the legal status of the Annex I map as representing the frontier between the two States;
- (iv) that the dispute relating to the second paragraph concerns the meaning and scope of the Court’s use of the terms ‘vicinity’ and ‘territory’ (‘at the Temple, or in its vicinity on Cambodian territory’);
- (v) that the dispute relating to the link between the two paragraphs relates to the question of whether the second paragraph must be read in the light of the first paragraph, or whether the particular terms employed by the Court in the second paragraph must be read as seeking to limit the general scope of the first paragraph;
- (vi) that each of those disputes concerns matters decided by the Court with binding force in the Judgment;
- (vii) that on account of the terms used and given the context (specifically, the Court’s decision concerning the legal status of the Annex I map as representing the frontier between the two States), the first paragraph of the *dispositif* must be understood as determining, with binding force, that all of the disputed area that lies on the Cambodian side of the line on the Annex I map — including, therefore, the Temple of Preah Vihear itself — is to be regarded as falling under Cambodian sovereignty;
- (viii) that on account of the terms used and given the context (particularly the expression ‘in consequence’ linking it to the first paragraph), the second paragraph of the *dispositif* must be understood as representing a





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particular consequence stemming from the decision taken in the first paragraph, implying that the scope of the second paragraph, both in space and in time, must be understood in the light of the first paragraph;

- (ix) that on account of the terms used and given the context (particularly the link with the first paragraph, of which it is a ‘consequence’), the second paragraph of the *dispositif* must be understood as imposing on Thailand both an explicit obligation to withdraw immediately to its own territory all military or police forces stationed at the Temple or at nearby sites at that time and an implicit obligation not to send those forces — or similar forces — back to the Temple or to nearby sites in the Temple area, which must, on account of the terms used in the first paragraph of the *dispositif*, be regarded as Cambodia’s sovereign territory.

On that basis, Cambodia respectfully asks the Court, under Article 60 of its Statute, to respond to the question concerning the interpretation of its Judgment of 15 June 1962 set out in paragraph 45 of the Application for interpretation filed on 28 April 2011, namely:

‘Given that “the Temple of Preah Vihear is situated in territory under the sovereignty of Cambodia” (first paragraph of the operative clause), which is the legal consequence of the fact that the Temple is situated on the Cambodian side of the frontier, as that frontier was recognized by the Court in its Judgment, and on the basis of the facts and arguments set forth above, Cambodia respectfully asks the Court to adjudge and declare that:

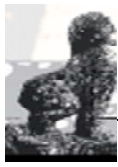
The obligation incumbent upon Thailand to “withdraw any military or police forces, or other guards or keepers, stationed by her at the Temple, or in its vicinity on Cambodian territory” (second paragraph of the operative clause) is a particular consequence of the general and continuing obligation to respect the integrity of the territory of Cambodia, that territory having been delimited in the region of the Temple and its vicinity by the line on the Annex I map, on which the Judgment of the Court is based.’”

*On behalf of the Government of Thailand,*

in the written observations presented on 21 November 2011:

“The Kingdom of Thailand requests the Court to adjudge and declare:

- that the Request of the Kingdom of Cambodia asking the Court to interpret the Judgment of 15 June 1962 in the case concerning the *Temple of Preah Vihear (Cambodia v. Thailand)* under Article 60 of the Statute of the Court does not satisfy the conditions laid down in that Article and that, consequently, the Court has no jurisdiction to respond to the Request and/or that the Request is inadmissible;



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- in the alternative, that there are no grounds to grant Cambodia's Request to construe the Judgment and that there is no reason to interpret the Judgment of 1962;
- in the further alternative, that the 1962 Judgment does not determine that the line on the Annex I map is the boundary line between the Kingdom of Thailand and the Kingdom of Cambodia."

in the further explanations presented on 21 June 2012:

"In view of the reasons given above and its Written Observations of 21 November 2011, the Kingdom of Thailand requests the Court to adjudge and declare:

- that the Request of the Kingdom of Cambodia asking the Court to interpret the Judgment of 15 June 1962 in the case concerning the *Temple of Preah Vihear (Cambodia v. Thailand)* under Article 60 of the Statute of the Court does not satisfy the conditions laid down in that Article and that, consequently, the Court has no jurisdiction to respond to that Request and/or that the Request is inadmissible;
- in the alternative, that there are no grounds to grant Cambodia's Request to construe the Judgment and that there is no reason to interpret the Judgment of 1962; and
- to formally declare that the 1962 Judgment does not determine that the line on the Annex I map is the boundary line between the Kingdom of Thailand and the Kingdom of Cambodia."

13. At the oral proceedings, the following final submissions were presented by the Parties:

*On behalf of the Government of Cambodia,*

at the hearing of 18 April 2013:

- Rejecting the submissions of the Kingdom of Thailand, and on the basis of the foregoing, Cambodia respectfully asks the Court, under Article 60 of its Statute, to respond to Cambodia's request for interpretation of its Judgment of 15 June 1962.
- In Cambodia's view: 'the Temple of Preah Vihear is situated in territory under the sovereignty of Cambodia' (first paragraph of the operative clause), which is the legal consequence of the fact that the Temple is situated on the Cambodian side of the frontier, as that frontier was recognized by the Court in its Judgment. Therefore, the obligation incumbent upon Thailand to 'withdraw any military or police forces, or other guards or keepers, stationed by her at the Temple, or in its vicinity on Cambodian territory' (second paragraph of the operative clause) is a particular consequence of the general and continuing obligation to respect the integrity of the territory of Cambodia, that territory having been delimited in the region of the Temple and its vicinity by the line on the Annex I map, on which the Judgment of the Court is based."





*On behalf of the Government of Thailand,*

at the hearing of 19 April 2013:

“In accordance with Article 60 of the Rules of Court and having regard to the Request for Interpretation of the Kingdom of Cambodia and its written and oral pleadings, and in view of the written and oral pleadings of the Kingdom of Thailand, the Kingdom of Thailand requests the Court to adjudge and declare:

- that the Request of the Kingdom of Cambodia asking the Court to interpret the Judgment of 15 June 1962 in the case concerning the *Temple of Preah Vihear (Cambodia v. Thailand)* under Article 60 of the Statute of the Court does not satisfy the conditions laid down in that Article and that, consequently, the Court has no jurisdiction to respond to that Request and/or that the Request is inadmissible;
- in the alternative, that there are no grounds to grant Cambodia’s Request to construe the Judgment and that there is no reason to interpret the Judgment of 1962; and
- to formally declare that the 1962 Judgment does not determine with binding force the boundary line between the Kingdom of Thailand and the Kingdom of Cambodia, nor does it fix the limit of the vicinity of the Temple.”

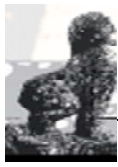
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## I. HISTORICAL BACKGROUND

14. The Temple of Preah Vihear is situated on a promontory of the same name in the eastern part of the Dangrek range of mountains, “which, in a general way, constitutes the boundary between the two countries in this region— Cambodia to the south and Thailand to the north” (*Temple of Preah Vihear (Cambodia v. Thailand), Merits, Judgment, I.C.J. Reports 1962*, p. 15).

15. On 13 February 1904, France (of which Cambodia was then a protectorate) and Siam (as Thailand was then called) concluded a treaty (hereinafter the “1904 Treaty”) which specified that the frontier in the Dangrek sector was to follow the watershed line “between the basins of the Nam Sen and the Mekong, on the one hand, and the Nam Moun, on the other hand”. The 1904 Treaty provided for the establishment of Mixed Commissions composed of officers appointed by the two Parties and responsible for delimiting the frontier between the two territories. The first Mixed Commission was thus established in 1904. The final stage of the operation of delimitation was to be the preparation and publication of maps, a task assigned to a team of four French officers,



three of whom had been members of the Mixed Commission. In 1907, that team prepared a series of 11 maps covering a large part of the frontiers between Siam and French Indo-China (of which Cambodia formed part). In particular, it drew up a map entitled “Dangrek — Commission of Delimitation between Indo-China and Siam”, on which the frontier passed to the north of Preah Vihear, thus leaving the Temple in Cambodia. That map was duly communicated to the Siamese Government in 1908, but was never approved by the Mixed Commission which had ceased to function some months before the production of the map (see *Temple of Preah Vihear (Cambodia v. Thailand)*, *Merits, Judgment*, *I.C.J. Reports 1962*, p. 21).

16. Following Cambodia’s independence on 9 November 1953, Thailand occupied the Temple of Preah Vihear in 1954. Negotiations between the parties regarding the Temple were unsuccessful and, on 6 October 1959, Cambodia seised the Court by unilateral application. Thailand filed preliminary objections to the jurisdiction of the Court.

17. In its Judgment of 26 May 1961 on Thailand’s preliminary objections, the Court found that it had jurisdiction to entertain the dispute concerning the *Temple of Preah Vihear (Cambodia v. Thailand)* and set out the subject-matter of that dispute in the following terms:

“In the present case, Cambodia alleges a violation on the part of Thailand of Cambodia’s territorial sovereignty over the region of the Temple of Preah Vihear and its precincts. Thailand replies by affirming that the area in question lies on the Thai side of the common frontier between the two countries, and is under the sovereignty of Thailand. This is a dispute about territorial sovereignty.” (*I.C.J. Reports 1961*, p. 22.)

18. During the merits phase, Cambodia relied upon the map referred to in paragraph 15 above, which was annexed to its pleadings and was referred to as the “Annex I map”. Cambodia argued that this map had been accepted by Thailand and had entered into the treaty settlement, thereby becoming binding on the two States. According to Cambodia, the line shown on the map (hereinafter “the Annex I map line”) had thus become the frontier between the two States. Thailand denied that it had accepted the Annex I map, or that the map had otherwise become binding upon it, and maintained that the boundary between the two States followed the watershed line, as provided in the text of the 1904 Treaty, with the result, according to Thailand, that the Temple lay in Thai territory (cf. *Temple of Preah Vihear (Cambodia v. Thailand)*, *Merits, Judgment*, *I.C.J. Reports 1962*, p. 21).

19. In the 1959 Application and its Memorial, Cambodia asked the Court to rule: (1) that Thailand was under an obligation to withdraw the detachments of its armed forces stationed in the ruins of the Temple of Preah Vihear and (2) that the territorial sovereignty over the Temple of Preah Vihear belonged to Cambodia (*ibid.*, p. 9). In its final submissions presented at the conclusion of the oral proceedings in 1962, however, Cambodia went further, asking the Court to rule: (1) that the Annex I map had been drawn up and published in the name and on behalf of the Mixed Commission set up by the 1904 Treaty, that it set forth the decisions taken by the said





Commission and that, by reason of that fact and also of the subsequent agreements and conduct of the Parties, it presented a treaty character; (2) that the frontier line between Cambodia and Thailand, in the disputed region in the neighbourhood of the Temple, was the Annex I map line; (3) that the Temple of Preah Vihear was situated in territory under Cambodian sovereignty; (4) that Thailand was under an obligation to withdraw the detachments of armed forces it had stationed since 1954 in Cambodian territory in the ruins of the Temple; and (5) that Thailand must return property removed from the Temple since 1954 (*Temple of Preah Vihear (Cambodia v. Thailand), Merits, Judgment, I.C.J. Reports 1962*, p. 11).

20. In its Judgment on the merits, delivered on 15 June 1962, the Court stated that “the subject of the dispute submitted to the Court [was] confined to a difference of view about sovereignty over the region of the Temple of Preah Vihear” (*Temple of Preah Vihear (Cambodia v. Thailand), Merits, Judgment, I.C.J. Reports 1962*, p. 14). For that reason, the Court concluded that Cambodia’s first and second final submissions could be entertained “only to the extent that they give expression to grounds, and not as claims to be dealt with in the operative provisions of the Judgment” (*ibid.*, p. 36). In its reasoning, the Court stated that, in 1908-1909, Thailand had accepted the Annex I map “as representing the outcome of the work of delimitation, and hence recognized the line on that map as being the frontier line, the effect of which is to situate Preah Vihear in Cambodian territory” (*ibid.*, p. 32).

21. The operative part of the Judgment reads as follows:

“The Court,

[1] by nine votes to three, finds that the Temple of Preah Vihear is situated in territory under the sovereignty of Cambodia;

finds in consequence

[2] by nine votes to three, that Thailand is under an obligation to withdraw any military or police forces, or other guards or keepers, stationed by her at the Temple, or in its vicinity on Cambodian territory;

[3] by seven votes to five, that Thailand is under an obligation to restore to Cambodia any objects of the kind specified in Cambodia’s fifth Submission which may, since the date of the occupation of the Temple by Thailand in 1954, have been removed from the Temple or the Temple area by the Thai authorities.” (*Ibid.*, pp. 36-37.)

22. Following the delivery of the 1962 Judgment, Thailand withdrew from the Temple buildings. It erected a barbed wire fence which divided the Temple ruins from the rest of the promontory of Preah Vihear. This fence followed the course of a line (hereinafter sometimes referred to as the “Thai Council of Ministers’ line”) depicted on the map attached to a resolution, adopted by the Council of Ministers of Thailand on 10 July 1962 but not made public until the present proceedings. By that resolution, the Thai Council of Ministers fixed what it considered to be the limits of the area from which Thailand was required to withdraw.





23. On 5 January 1963, the Head of State of Cambodia, Prince Sihanouk, and a large party of Cambodian officials and monks, as well as diplomatic representatives of other States, visited the Temple. During the course of this visit, they remained within the area enclosed by the barbed wire fence. The events of this period are considered in paragraphs 38 to 42 below.

24. On 21 June 1997, the Parties established the “Thai-Cambodian Joint Commission on Demarcation for Land Boundary”, entrusting it with the task “of placing markers in order to indicate the land boundary between the two countries”. On 14 June 2000, they concluded a “Memorandum of Understanding on the Survey and Demarcation of the Land Boundary” (hereinafter the “Memorandum of Understanding”), which provided for the demarcation of the frontier line between the two States and included, in particular, the terms of reference for the work of the Thai-Cambodian Joint Commission on Demarcation for Land Boundary.

25. In 2007, Cambodia requested that the UNESCO World Heritage Committee inscribe the site of the Temple of Preah Vihear on the World Heritage List established under the provisions of the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage (hereinafter the “World Heritage Convention”). To that end, it communicated to the Committee, in accordance with the Guidelines for the Implementation of the World Heritage Convention adopted by the Committee, a map depicting the site of the property. Cambodia included on the map what it considered to be the course of the frontier separating it from Thailand, the actual site of the monument and a buffer zone (described in the Committee’s Guidelines as “an area surrounding the nominated property which has complementary legal and/or customary restrictions placed on its use and development to give an added layer of protection to the property”). According to that map, the entire promontory of Preah Vihear, as well as the hill of Phnom Trap<sup>1</sup> immediately to the west of the promontory, were within Cambodian territory.

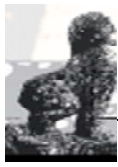
26. On 17 May 2007, Thailand contested that map by means of an aide-memoire, which it sent to Cambodia and to the World Heritage Committee, to which it attached its own map showing the international boundary between the two States as following the line drawn on the map attached to the 1962 Resolution of the Thai Council of Ministers (see paragraph 22 above).

27. On 7 July 2008, the World Heritage Committee decided to inscribe the site of the Temple of Preah Vihear on the World Heritage List, albeit with what the Committee described as “a revised graphic plan of the property”, which excluded the area disputed between Cambodia and Thailand.

28. Following the Temple’s inscription on that List, a number of armed incidents took place in the border area close to the Temple. On 14 February 2011, the United Nations Security Council called for a permanent ceasefire to be established and expressed its support for the efforts of the

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<sup>1</sup>In the original proceedings, and in the 1962 Judgment, the spelling used was “Pnom”. However, the spelling “Phnom” is the one generally used today. It has therefore been employed in the present Judgment.



Association of South-East Asian Nations (“ASEAN”) to find a solution to the conflict. The Chair of ASEAN, Indonesia, was subsequently invited by Cambodia and by Thailand to send observers to the affected border areas so as to avoid further armed clashes. This invitation was welcomed by the Foreign Ministers of ASEAN and their representatives but was not acted upon.

29. It is recalled that, on 28 April 2011, Cambodia filed a Request for interpretation of the 1962 Judgment, together with a request for the indication of provisional measures (see paragraph 1 above). In its Order of 18 July 2011 on provisional measures, the Court found that there existed, *prima facie*, a dispute within the meaning of Article 60 of the Statute and indicated provisional measures which, in particular, required both Parties to withdraw their military personnel from a “provisional demilitarized zone” around the Temple, as defined by the Court (*Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand), Provisional Measures, Order of 18 July 2011, I.C.J. Reports 2011 (II)*, p. 537) (see paragraph 4 above).

## II. JURISDICTION AND ADMISSIBILITY

30. The Court will first determine whether it has jurisdiction over the Request for interpretation submitted by Cambodia and, if so, whether this Request is admissible.

### 1. Jurisdiction of the Court under Article 60 of the Statute

31. Cambodia submitted its Request for interpretation pursuant to Article 60 of the Statute of the Court (see paragraph 29 above). That Article provides that

“The judgment is final and without appeal. In the event of dispute as to the meaning or scope of the judgment, the Court shall construe it upon the request of any party.”

This provision is supplemented by Article 98, paragraph 1, of the Rules of Court, which stipulates that “[i]n the event of dispute as to the meaning or scope of a judgment any party may make a request for its interpretation . . .”. Further, Article 98, paragraph 2, of the Rules of Court, requires a party to indicate in its request for interpretation “the precise point or points in dispute as to the meaning or scope of the judgment”.

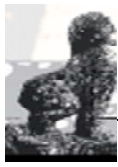
32. The Court begins by recalling that “[its] jurisdiction on the basis of Article 60 of the Statute is not preconditioned by the existence of any other basis of jurisdiction as between the parties to the original case” and that “by virtue of Article 60 of the Statute, [the Court] may entertain a request for interpretation provided that there is a ‘dispute as to the meaning or scope’ of any judgment rendered by it” (*Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand), Provisional Measures, Order of 18 July 2011, I.C.J. Reports 2011 (II)*, p. 542, para. 21; *Request for Interpretation of the Judgment of 31 March 2004 in the Case concerning Avena and Other Mexican Nationals (Mexico v. United States of America) (Mexico v. United States of America), Provisional Measures, Order of 16 July 2008, I.C.J. Reports 2008*, p. 323, paras. 44 and 46; *Judgment, I.C.J. Reports 2009*, p. 9, paras. 15-16).





33. The Court also recalls that, while the English text of Article 60 uses the term “dispute”, which also appears in the English text of Article 36, paragraph 2, of the Statute, the French text of Article 60 uses the term “contestatation”, which has a broader meaning than “différend”, the term used in the French text of Article 36, paragraph 2. The Court further recalls that “a dispute within the meaning of Article 60 of the Statute must be understood as a difference of opinion or views between the parties as to the meaning or scope of a judgment rendered by the Court” (*Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand), Provisional Measures, Order of 18 July 2011, I.C.J. Reports 2011 (II)*, p. 542, para. 22). As the Court has previously confirmed, the existence of a dispute under Article 60 of the Statute “does not require the same criteria to be fulfilled as those determining the existence of a dispute under Article 36, paragraph 2, of the Statute” (*ibid.*; see also *Interpretation of Judgments Nos. 7 and 8 (Factory at Chorzów), Judgment No. 11, 1927, P.C.I.J., Series A, No. 13*, pp. 10-12; *Request for Interpretation of the Judgment of 31 March 2004 in the Case concerning Avena and Other Mexican Nationals (Mexico v. United States of America) (Mexico v. United States of America), Provisional Measures, Order of 16 July 2008, I.C.J. Reports 2008*, p. 325, para. 53). Furthermore, it is not required that a dispute as to the meaning and scope of a judgment “should have manifested itself in a formal way; . . . it should be sufficient if the two Governments have in fact shown themselves as holding opposite views in regard to the meaning or scope of a judgment of the Court” (*Interpretation of Judgments Nos. 7 and 8 (Factory at Chorzów), Judgment No. 11, 1927, P.C.I.J., Series A, No. 13*, p. 11; see also *Application for Revision and Interpretation of the Judgment of 24 February 1982 in the case concerning the Continental Shelf (Tunisia/Libyan Arab Jamahiriya) (Tunisia v. Libyan Arab Jamahiriya), Judgment, I.C.J. Reports 1985*, pp. 217-218, para. 46; *Request for Interpretation of the Judgment of 31 March 2004 in the Case concerning Avena and Other Mexican Nationals (Mexico v. United States of America) (Mexico v. United States of America), Provisional Measures, Order of 16 July 2008, I.C.J. Reports 2008*, pp. 325-326, para. 54).

34. In accordance with the jurisprudence of the Court, “a dispute within the meaning of Article 60 of the Statute must relate to the operative clause of the judgment in question and cannot concern the reasons for the judgment except in so far as these are inseparable from the operative clause” (*Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand), Provisional Measures, Order of 18 July 2011, I.C.J. Reports 2011 (II)*, p. 542, para. 23; see also *Request for Interpretation of the Judgment of 11 June 1998 in the Case concerning the Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria), Preliminary Objections (Nigeria v. Cameroon), Judgment, I.C.J. Reports 1999 (I)*, p. 35, para. 10; *Request for Interpretation of the Judgment of 31 March 2004 in the Case concerning Avena and Other Mexican Nationals (Mexico v. United States of America) (Mexico v. United States of America), Provisional Measures, Order of 16 July 2008, I.C.J. Reports 2008*, p. 323, para. 47) or, in the words of the Permanent Court, constitute “a condition essential to the Court’s decision” (*Interpretation of Judgments Nos. 7 and 8 (Factory at Chorzów), Judgment No. 11, 1927, P.C.I.J., Series A, No. 13*, p. 20). That said, “a difference of opinion as to whether a particular point has or has not been decided with binding force also constitutes a case which comes within the terms of Article 60 of the Statute” (*Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand), Provisional Measures, Order of 18 July 2011, I.C.J. Reports 2011 (II)*, p. 544, para. 31; see also *Interpretation of Judgments Nos. 7 and 8 (Factory at Chorzów), Judgment No. 11, 1927, P.C.I.J., Series A, No. 13*, pp. 11-12).



35. In its Order on provisional measures in the present case, the Court observed that “a difference of opinion or views appears to exist between [the Parties] as to the meaning or scope of the 1962 Judgment” and that “this difference appears to relate” to three specific aspects of that Judgment:

“in the first place, to the meaning and scope of the phrase ‘vicinity on Cambodian territory’ used in the second paragraph of the operative clause of the Judgment . . . next, to the nature of the obligation imposed on Thailand, in the second paragraph of the operative clause of the Judgment, to ‘withdraw any military or police forces, or other guards or keepers’, and, in particular, to the question of whether this obligation is of a continuing or an instantaneous character; and . . . finally, to the question of whether the Judgment did or did not recognize with binding force the line shown on the Annex I map as representing the frontier between the two Parties . . .” (*Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v. Thailand) (Cambodia v. Thailand), Provisional Measures, Order of 18 July 2011, I.C.J. Reports 2011 (II)*, p. 544, para. 31).

36. The Court stated, however, that the decision rendered on the request for the indication of provisional measures “in no way prejudge[d] any question that the Court may have to deal with relating to the Request for interpretation” (*ibid.*, p. 554, para. 68). Accordingly, the Court must at this stage determine whether a dispute indeed exists between the Parties as to the meaning or scope of the operative clause of the 1962 Judgment, and, if so, identify the precise point or points that require interpretation. The Court will address these two questions in turn.

#### A. The existence of a dispute

37. Cambodia maintains that the Parties are in dispute as to the meaning and scope of the 1962 Judgment, specifically in the following respects: (a) whether the Court in the 1962 Judgment did or did not recognize with binding force the Annex I map line as constituting the frontier between the two Parties in the area of the Temple; (b) whether or not the meaning and scope of the phrase “situated in territory under the sovereignty of Cambodia” and the phrase “its vicinity on Cambodian territory” included, respectively, in the first and second paragraphs of the operative clause of the 1962 Judgment, must be understood by reference to the line depicted on the Annex I map which the Court “recognized” as constituting the frontier between the Parties in the area of the Temple; and (c) whether or not Thailand’s obligation to withdraw from the area of “the Temple [and] its vicinity on Cambodian territory”, deriving from the second paragraph of the operative clause, is of a continuing character.

38. Cambodia asserts that this dispute emerged immediately after the 1962 Judgment. In particular, Cambodia maintains that, immediately after the 1962 Judgment and throughout the 1960s, it continually protested against Thailand’s unilateral determination, in July 1962, of the “vicinity of the Temple” (as manifested by the barbed wire fence and notices erected by Thailand), and against Thailand’s view that the geographical scope of its obligation to withdraw under the 1962 Judgment was limited to the ruins of the Temple and the ground on which the Temple stood. Cambodia emphasizes that in those protests it expressed its view that this unilateral determination by Thailand was incompatible with the 1962 Judgment.





39. Cambodia acknowledges that it made no protests either during the period of armed conflicts in Cambodia or during the succeeding years when, according to Cambodia, Thailand refrained from imposing its unilateral determination of the vicinity of the Temple. Nonetheless, Cambodia contends that the dispute between the Parties concerning this issue re-emerged in 2007-2008, following Cambodia's request for the inscription of the site of the Temple on the UNESCO World Heritage List, and continued until the time of its Request for interpretation. Cambodia argues that this dispute is evidenced by a series of incidents which occurred in the vicinity of the Temple after 2008 and into early 2011, as well as by certain events and statements of the Parties following Cambodia's request for the inscription of the site of the Temple on the UNESCO World Heritage List in 2007. In particular, Cambodia refers to the statements made by each Party in their respective correspondence with the United Nations in the context of Cambodia's complaint concerning the alleged incursions of Thai forces into Cambodian territory in the area of the Temple.

40. For its part, Thailand denies the existence of a dispute within the meaning of Article 60 of the Statute, since the language of the 1962 Judgment is clear and in need of no interpretation. Thailand asserts that Cambodia accepted (or, at least, did not contest) that Thailand had implemented the 1962 Judgment by withdrawing to the Thai Council of Ministers' line. According to Thailand, the events and statements relied upon by Cambodia in respect of the period following Cambodia's request for the inscription of the site of the Temple on the UNESCO World Heritage List reflect only an ongoing delimitation dispute between the Parties. Noting that this delimitation dispute was not part of the dispute before the Court in 1962 and that the Court had expressly declined to pronounce upon it in the operative part of the 1962 Judgment, Thailand argues that this issue cannot be brought before the Court today in the context of proceedings under Article 60 of the Statute.

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41. The Court observes that the events and statements dating from the period immediately following the 1962 Judgment clearly demonstrate that Thailand was of the view that the Court had left the term "vicinity of the Temple" in the second operative paragraph undefined and that Thailand could thus determine unilaterally the limits of that "vicinity". In particular, this position is reflected in the 1962 Resolution of the Thai Council of Ministers which determined the

"location of the limit of the vicinity of the [Temple], from which Thailand has the obligation to withdraw police forces, guards or keepers, on the principle that Cambodia will only obtain the ruins of the [Temple] and the ground on which the Temple stood".





In implementation of this decision, Thailand erected a barbed wire fence on the ground along the line determined by the Resolution, and posted signs stating that “the vicinity of the Temple of [Preah Vihear] does not extend beyond this limit”.

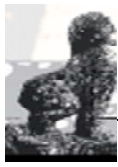
42. Contrary to Thailand’s assertions, the record before the Court shows that Cambodia did not accept Thailand’s withdrawal as fully implementing the 1962 Judgment. Rather, Cambodia protested the Thai presence on territory which, according to Cambodia, the 1962 Judgment had recognized as Cambodian. Cambodia also complained that the barbed wire fence erected by Thailand “encroach[ed] fairly significantly” upon that territory in contravention of the Court’s Judgment. In particular, the Ministry of Foreign Affairs of Cambodia in an aide-memoire issued in November 1962 stated, *inter alia*, that “this limit [of the temple zone]”, marked with barbed wire, “was in complete disagreement with the Court’s decision which confirmed the frontier as it appeared on the 1907 [Annex I] map”.

43. This divergence of views reappeared in the Parties’ correspondence following Cambodia’s request for the inscription of the site of the Temple on the UNESCO World Heritage List in 2007-2008. For instance, on 17 May 2007, the Thai Ministry of Foreign Affairs sent an aide-memoire to the Cambodian Minister for Foreign Affairs and the World Heritage Committee, objecting to “Cambodia’s nomination file . . . in particular, the delineation of the indicative boundary line, the monumental zone, and the development zone” depicted on the map attached to the file which, in Thailand’s view, implied “the exercise of Cambodian sovereignty in the area where [the two] countries assert different claims on boundary line”. Thailand further contended that this depiction “cannot in any way prejudice the existing international boundary between Thailand and Cambodia” as it appeared in Thailand’s own map series L7017.

44. On 18 and 19 July 2008, Cambodia sent letters to the President of the Security Council and the President of the General Assembly of the United Nations, stating *inter alia* that “[o]n 15 July 2008, about 50 Thai soldiers crossed into . . . Cambodia’s territory about 300 meters from the Temple of Preah Vihear”. Cambodia asserted that “[t]aking into account [the 1962 Judgment of the Court], the only map which legally delimits the border in the area of the Temple of Preah Vihear is the ‘Annex I map’ based on which the Court made its judgment”.

In response, Thailand, in a letter sent on 21 July 2008 to the President of the Security Council, stated *inter alia* that “the area adjacent to the Temple of Preah Vihear . . . is part of Thailand’s territory” and that “Thailand’s position in this regard is fully consistent with the [1962 Judgment], which Thailand has fully and duly implemented”. Thailand further stated that

“Cambodia’s territorial claim in this area is based on Cambodia’s unilateral understanding of the said ICJ Judgment that a boundary line was determined by the Court in this Judgment. Thailand *contests* this unilateral understanding since the ICJ ruled in this case that it did not have jurisdiction over the question of land boundary



and did not in any case determine the location of the boundary between Thailand and Cambodia . . . Taking into account Article 59 of the Statute of the ICJ and the fact that the issue before the ICJ in this case was limited solely to the question of sovereignty over the region of the Temple of Preah Vihear, the boundary line claimed by Cambodia has no legal status from the Judgment.” (Emphasis added.)

45. In the opinion of the Court, these events and statements clearly demonstrate that at the time Cambodia filed its Request for interpretation the Parties had a dispute as to the meaning and scope of the 1962 Judgment. The Court now turns to the precise subject-matter of this dispute in order to ascertain whether it falls within the scope of the Court’s jurisdiction under Article 60 of the Statute.

#### B. Subject-matter of the dispute before the Court

46. In its final submissions Cambodia expressed the view that

“‘[t]he Temple of Preah Vihear is situated in territory under the sovereignty of Cambodia’ (first paragraph of the operative clause), which is the legal consequence of the fact that the Temple is situated on the Cambodian side of the frontier, as that frontier was recognized by the Court in its Judgment. Therefore, the obligation incumbent upon Thailand to ‘withdraw any military or police forces, or other guards or keepers, stationed by her at the Temple, or in its vicinity on Cambodian territory’ (second paragraph of the operative clause) is a particular consequence of the general and continuing obligation to respect the integrity of the territory of Cambodia, that territory having been delimited in the area of the Temple and its vicinity by the line of the Annex I map, on which the Judgment of the Court is based.”

47. In its final submissions, Thailand requested the Court to adjudge and declare that

- “— the Request of the Kingdom of Cambodia asking the Court to interpret the Judgment of 15 June 1962 in the case concerning the *Temple of Preah Vihear (Cambodia v. Thailand)* under Article 60 of the Statute of the Court does not satisfy the conditions laid down in that Article and that, consequently, the Court has no jurisdiction to respond to that Request and/or that the Request is inadmissible;
- in the alternative, that there are no grounds to grant Cambodia’s Request to construe the Judgment and that there is no reason to interpret the Judgment of 1962; and
- to formally declare that the 1962 Judgment does not determine with binding force the boundary line between the Kingdom of Thailand and the Kingdom of Cambodia, nor does it fix the limit of the vicinity of the Temple”.



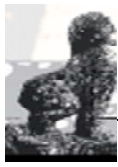


48. The Court observes that both Parties accept that there is a disagreement between them as to whether or not the Court, in the 1962 Judgment, decided with binding force that the Annex I map line represents the frontier between them in the area of the Temple. The Parties' divergence of views on this issue is further reflected in their positions expressed in the events and statements analysed above (see paragraphs 41-44) and clarified in the course of the present proceedings. Contrary to Thailand's assertions concerning the Court's lack of jurisdiction in this regard, the Court reiterates that "a difference of opinion as to whether a particular point has or has not been decided with binding force also constitutes a case which comes within the terms of Article 60 of the Statute" (see paragraph 34 above).

49. Further, the Court considers that the Parties' positions, expressed during the period following the 1962 Judgment as well as that following Cambodia's request to have the site of the Temple inscribed on the World Heritage List (see paragraphs 41-44 above) and in the course of the present proceedings, also reveal their divergent views as to the meaning and scope of the phrase "vicinity on Cambodian territory" in the second operative paragraph of the 1962 Judgment and the relationship between that paragraph and the Court's finding, in the first operative paragraph, that the Temple is situated in "territory under the sovereignty of Cambodia". Cambodia maintains that the Annex I map line necessarily determines the meaning and scope of the operative clause since the Court's recognition of that line as representing the frontier between the Parties in the Temple area constituted the "essential" reason underlying its conclusions therein. By contrast, Thailand asserts that the Court's reasoning concerning the Annex I map line cannot be seen as "essential" and that it is therefore neither necessary nor possible to resort to that reasoning in order to elucidate the meaning and scope of the operative clause of the 1962 Judgment. Rather, Thailand asserts that the terms "territory" and "vicinity" were not explicitly defined by the Court and should be interpreted as strictly confined to the grounds on which the Temple stands and its immediate surroundings — the "Temple area", as defined by the 1962 Resolution of the Thai Council of Ministers.

50. Finally, the Court turns to the contention that the Parties disagree about the nature of Thailand's obligation to withdraw from "the Temple [and] its vicinity on Cambodian territory", deriving from the second paragraph of the operative clause of the 1962 Judgment. The correspondence of the Parties surrounding the inscription of the site of the Temple on the World Heritage List, and the armed clashes that took place in the border area close to the Temple (see paragraph 28 above), reveal that the Parties disagreed, prior to the filing of Cambodia's Request for interpretation, about where Thai personnel could lawfully be located in the light of the 1962 Judgment. That difference of views has been confirmed by the written and oral arguments of the Parties in the present proceedings.

51. According to Cambodia, Thailand's obligation to withdraw relates to an area which the Judgment had placed under Cambodia's sovereignty and must consequently be understood as having a continuing character, in line with the general principle of respect for territorial sovereignty and integrity of States. Thus, in its final submissions, Cambodia claims that Thailand's obligation to withdraw "is a particular consequence of the general and continuing obligation to respect the



integrity of the territory of Cambodia” (see paragraph 13 above). Thailand accepts that it has a “general and continuing obligation” under international law to respect the sovereignty and territorial integrity of Cambodia. However, it rejects Cambodia’s assertion that “the obligation to withdraw as specified in the [1962] Judgment has the same character”. Rather, Thailand maintains that this latter obligation applied to its relations with Cambodia only “in respect of one place at one time” and that it fully discharged that obligation once it withdrew from the vicinity of the Temple in accordance with the 1962 Resolution of the Thai Council of Ministers.

52. In the light of the above considerations, the Court concludes that the dispute between the Parties as to the meaning and scope of the 1962 Judgment relates to three specific aspects thereof. First, there is a dispute over whether the 1962 Judgment did or did not decide with binding force that the line depicted on the Annex I map constitutes the frontier between the Parties in the area of the Temple. Secondly, there is a closely related dispute concerning the meaning and scope of the phrase “vicinity on Cambodian territory”, referred to in the second operative paragraph of the 1962 Judgment, a paragraph which the Court stated was a consequence of the finding, in the first operative paragraph, that the Temple is situated in “territory under the sovereignty of Cambodia”. Lastly, there is a dispute regarding the nature of Thailand’s obligation to withdraw imposed by the second paragraph of the operative part.

## 2. Admissibility of Cambodia’s Request for interpretation

53. Thailand maintains that Cambodia’s Request for interpretation is inadmissible since its real purpose is not to obtain the Court’s interpretation of the 1962 Judgment but, rather, to obtain the Court’s ruling on the Parties’ delimitation dispute in the area of the Temple by having the Court recognize with binding force that the Annex I map line constitutes their common frontier in that area. Thailand recalls that the Court explicitly refused to pronounce on the Parties’ common frontier in the Temple area in 1962 and asserts that it is therefore barred from determining this question now, through the interpretation of the 1962 Judgment.

54. Cambodia insists that it is not requesting the Court to delimit any boundary between the Parties on the basis of the Annex I map. Rather, it is “merely asking the Court to explain the findings that it reached in its 1962 Judgment . . . in particular as regards the relationship between those findings and the meaning and scope of the *dispositif* of the Judgment”.

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55. The Court recalls that the process of interpretation is premised upon the “primacy of the principle of *res judicata*” which “must be maintained” (*Request for Interpretation of the Judgment of 11 June 1998 in the Case concerning the Land and Maritime Boundary between Cameroon and Nigeria* (Cameroon v. Nigeria), Preliminary Objections (*Nigeria v. Cameroon*), Judgment, I.C.J. Reports 1999 (I), pp. 36-37, para. 12). Accordingly, as the Court has previously held:

“[t]he real purpose of the request must be to obtain an interpretation of the judgment. This signifies that its object must be solely to obtain clarification of the meaning and the scope of what the Court has decided with binding force, and not to obtain an answer to questions not so decided. Any other construction of Article 60 of the Statute would nullify the provision of the article that the judgment is final and without appeal.” (*Request for Interpretation of the Judgment of 20 November 1950 in the Asylum Case (Colombia v. Peru)*, Judgment, I.C.J. Reports 1950, p. 402; *Request for Interpretation of the Judgment of 11 June 1998 in the Case concerning the Land and Maritime Boundary between Cameroon and Nigeria* (Cameroon v. Nigeria), Preliminary Objections (*Nigeria v. Cameroon*), Judgment, I.C.J. Reports 1999 (I), pp. 36-37, para. 12.)

56. Having regard to the Parties’ divergent views over the meaning and scope of the 1962 Judgment, identified above (see paragraph 52), the Court considers that there is a need for the interpretation of the second operative paragraph of the 1962 Judgment and of the legal effect of what the Court said regarding the Annex I map line. Within these limits, Cambodia’s Request is admissible. Nevertheless, in line with the Court’s previous observation on this matter, in as far as Cambodia’s Request for interpretation “may go further, and seek ‘to obtain an answer to questions not [decided with binding force]’, or to achieve a revision of the Judgment, no effect can be given to it” (*Application for Revision and Interpretation of the Judgment of 24 February 1982 in the Case concerning the Continental Shelf (Tunisia/Libyan Arab Jamahiriya)* (*Tunisia v. Libyan Arab Jamahiriya*), Judgment, I.C.J. Reports 1985, p. 223, para. 56).

### 3. Conclusion

57. In the light of the foregoing, the Court concludes that a dispute exists between the Parties as to the meaning and scope of the 1962 Judgment pursuant to Article 60 of the Statute. Accordingly, the Court has jurisdiction to entertain Cambodia’s Request for interpretation of the 1962 Judgment, and the Request is admissible.

## III. THE INTERPRETATION OF THE 1962 JUDGMENT

58. The Court now turns to the interpretation of the 1962 Judgment.

### 1. Positions of the Parties

59. Cambodia maintains that the first and second operative paragraphs of the Judgment are “symbiotically linked”: in the first paragraph, the Court held that the Temple was “situated in territory under the sovereignty of Cambodia”, while in the second paragraph it found, in





consequence, that Thailand was required to withdraw the personnel which it had stationed “at the Temple, or in its vicinity on Cambodian territory”. According to Cambodia, the requirement to withdraw, in the second operative paragraph, can only be understood as a requirement that Thailand should withdraw the personnel from the Temple, and the Cambodian territory in its vicinity, to Thai territory and that the Cambodian territory referred to in the second operative paragraph coincides with the territory identified as being under Cambodian sovereignty in the first operative paragraph. In Cambodia’s view, the obligation to withdraw has a continuing character, in the sense that the requirement that Thailand withdraw its forces implied an obligation not to return them at any future time to the Cambodian territory identified in the Judgment.

60. For Cambodia, these findings in the operative part are the consequence of the Court’s determination, in the reasoning of the 1962 Judgment, that the Annex I map line constituted the frontier between the Parties in the region of the Temple (see paragraph 20 above). Cambodia maintains that this part of the reasoning stated a condition essential for the findings contained in the operative part of the 1962 Judgment and thus has binding force. Accordingly, the area of territory to which the Court referred, in the first operative paragraph, and from which, in the second operative paragraph, it required Thailand to withdraw, extended beyond the confines of the Temple itself and included all of the land in the disputed area up to the Annex I map line. Cambodia considers that this area encompasses the whole promontory of Preah Vihear and the hill of Phnom Trap as far north as the Annex I map line. Cambodia rejects the Thai Council of Ministers’ line (see paragraph 22 above) as a unilateral action which ran counter to the reasoning of the 1962 Judgment. According to Cambodia, the practice of the Parties since 1962 has no relevance for the interpretation of the 1962 Judgment, although it denies that its conduct amounted to acceptance of Thailand’s interpretation of the 1962 Judgment. Cambodia maintains that the Memorandum of Understanding deals only with the demarcation of the frontier, thereby implying that delimitation of the frontier has already occurred.

61. Thailand maintains that the dispute which was before the Court in 1962 concerned territorial sovereignty, not delimitation of a frontier, and that the 1962 Judgment decided only that the Temple fell under the sovereignty of Cambodia. The Annex I map was significant only as evidence of whether the Temple lay in Cambodian territory and did not serve the purpose of defining the boundary, a task which had to be carried out by agreement between the Parties. In Thailand’s view, it would have been contrary to the principle *non ultra petita* for the Court to have ruled upon the boundary line, since Cambodia had not included any request for a ruling on the map in its original submissions and the Court had declined to entertain the new submissions which Cambodia had advanced at the end of the oral proceedings.

62. Thailand also argues that more than one version of the Annex I map is in existence and that the different versions contain important discrepancies. In addition, Thailand claims that there are important deficiencies in the Annex I map, including topographical and positioning errors, that it is imprecise and that it departs in significant respects from the watershed line stipulated in the 1904 Treaty. According to Thailand, it would be impossible to transpose the Annex I map line onto a modern map without more information.





63. In any case, Thailand contends, the Annex I map was only one of the reasons on which the Judgment was based, since the Court also relied upon entirely distinct grounds, in particular, the visit to the Temple in 1930 by Prince Damrong of Thailand, which the Court described as “significant” and considered to be recognition by Thailand of the sovereignty of Cambodia (then a protectorate of France) over the Temple (*I.C.J. Reports 1962*, pp. 30-31). Thailand concludes that the 1962 Judgment decided only that Cambodia had sovereignty over the small parcel of land on which the ruins of the Temple are located, the area which was later depicted on the map attached to the 1962 Resolution of the Thai Council of Ministers. According to Thailand, the Judgment did not deal with sovereignty over the remainder of the Preah Vihear promontory or the hill of Phnom Trap.

64. Thailand denies that the obligation to withdraw in the second operative paragraph of the 1962 Judgment has a continuing character, in the sense suggested by Cambodia. Thailand argues that it discharged its obligation when it withdrew its personnel behind the Council of Ministers’ line and that Cambodia accepted that line when Prince Sihanouk visited the Temple in 1963 (see paragraph 23 above). Thereafter, the obligation not to enter Cambodian territory was derived not from the 1962 Judgment but from the duty, arising under general international law, of one State to respect the territorial integrity of another.

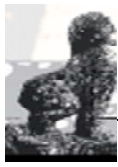
65. Thailand concludes that the delimitation of the frontier in the relevant area remains to be accomplished and that the Memorandum of Understanding provides the mechanism for the Parties to undertake that task.

## 2. The role of the Court under Article 60 of the Statute

66. The Court begins by recalling that its role under Article 60 of the Statute is to clarify the meaning and scope of what the Court decided in the judgment which it is requested to interpret (*Request for Interpretation of the Judgment of 20 November 1950 in the Asylum Case (Colombia v. Peru)*, *I.C.J. Reports 1950*, p. 402). Accordingly, the Court must keep strictly within the limits of the original judgment and cannot question matters that were settled therein with binding force, nor can it provide answers to questions the Court did not decide in the original judgment.

67. While the existence of a dispute between the parties regarding the original judgment is a prerequisite for interpretation under Article 60 of the Statute, the way in which that dispute is formulated by one or both of the parties is not binding on the Court. As the Permanent Court of International Justice explained:

“the Court does not consider itself as bound simply to reply ‘yes’ or ‘no’ to the propositions formulated in the submissions of [the Applicant]. It adopts this attitude because, for the purpose of the interpretation of a judgment, it cannot be bound by formulae chosen by the Parties concerned, but must be able to take an unhampered decision.” (*Interpretation of Judgments Nos. 7 and 8 (Factory at Chorzów)*, *Judgment No. 11, 1927, P.C.I.J., Series A, No. 13*, pp. 15-16.)



68. In determining the meaning and scope of the operative clause of the original Judgment, the Court, in accordance with its practice, will have regard to the reasoning of that Judgment to the extent that it sheds light on the proper interpretation of the operative clause.

69. The pleadings and the record of the oral proceedings in 1962 are also relevant to the interpretation of the Judgment, as they show what evidence was, or was not, before the Court and how the issues before it were formulated by each Party.

70. Thailand argues that the principle of *non ultra petita* precluded the Court from going beyond the submissions of the Parties and that the 1962 Judgment must be interpreted accordingly.

71. The principle of *non ultra petita* is well established in the jurisprudence of the Court (*Request for Interpretation of the Judgment of 20 November 1950 in the Asylum Case (Colombia/Peru)*, Judgment, I.C.J. Reports 1950, p. 402; *Arrest Warrant of 11 April 2000 (Democratic Republic of the Congo v. Belgium)*, Judgment, I.C.J. Reports 2002, pp. 18-19, para. 43) and is one reason why the claims contained in the final submissions of the Parties in the original case are of relevance in interpreting the 1962 Judgment. Nevertheless, that principle cannot justify an interpretation which runs counter to the terms of the 1962 Judgment. The Court in 1962 necessarily made an assessment of the scope of the *petitum* before it; Article 60 of the Statute does not give the Court the power today to substitute a different assessment for that made at the time of the Judgment.

72. Cambodia suggests that the headnote to the 1962 Judgment demonstrated that the Judgment determined the course of the frontier in the relevant area.

73. Under Article 95, paragraph 1, of the Rules of Court (Article 74, paragraph 1, of the Rules of Court of 1946 applicable in 1962), the headnote is not one of the elements of the Judgment and it does not form part thereof. Moreover, the purpose of the headnote is only to give the reader a general indication of the points examined in a judgment; it does not constitute an authoritative summary of what the Court has actually decided. The Court does not consider that the headnote to the 1962 Judgment assists in resolving the questions of interpretation raised in the present proceedings.

74. Thailand makes extensive reference to the conduct of the Parties between 15 June 1962, when the Judgment was delivered, and 2007-2008, when the present dispute may be said to have crystallized. The principal purpose for which Thailand refers to that conduct is in connection with its argument that there is no dispute, within the meaning of Article 60, between the Parties, an issue to which that conduct is of course relevant (see paragraphs 38-45 above). However, Thailand suggests that this conduct is also relevant to the interpretation of the Judgment.

75. A judgment of the Court cannot be equated to a treaty, an instrument which derives its binding force and content from the consent of the contracting States and the interpretation of which may be affected by the subsequent conduct of those States, as provided by the principle stated in





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Article 31, paragraph 3 (b), of the 1969 Vienna Convention on the Law of Treaties. A judgment of the Court derives its binding force from the Statute of the Court and the interpretation of a judgment is a matter of ascertaining what the Court decided, not what the parties subsequently believed it had decided. The meaning and scope of a judgment of the Court cannot, therefore, be affected by conduct of the parties occurring after that judgment has been given.

More generally, as the Permanent Court of International Justice made clear,

“the Court, when giving an interpretation, refrains from any examination of facts other than those which it has considered in the judgment under interpretation, and consequently all facts subsequent to that judgment” (*Interpretation of Judgments Nos. 7 and 8 (Factory at Chorzów), Judgment No. 11, 1927, P.C.I.J., Series A, No. 13, p. 21*).

### 3. The principal features of the 1962 Judgment

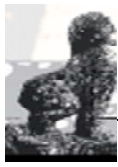
76. Three features of the 1962 Judgment stand out when that Judgment is read in the light of the considerations set out above. First, the Court considered that it was dealing with a dispute regarding territorial sovereignty over the area in which the Temple was located and that it was not engaged in delimiting the frontier. Thus, the Court, referring back to its 1961 Judgment on Preliminary Objections (*Temple of Preah Vihear (Cambodia v. Thailand), I.C.J. Reports 1961, p. 22, quoted in paragraph 17 above*), defined the matter before it in the following terms:

“Accordingly, the subject of the dispute submitted to the Court is confined to a difference of view about sovereignty over the region of the Temple of Preah Vihear. To decide this question of territorial sovereignty, the Court must have regard to the frontier line between the two States in this sector. Maps have been submitted to it and various considerations have been advanced in this connection. The Court will have regard to each of these only to such extent as it may find in them reasons for the decision it has to give in order to settle the sole dispute submitted to it, the subject of which has just been stated.” (*I.C.J. Reports 1962, p. 14.*)

This characterization of the dispute as one regarding sovereignty over a defined area of territory, rather than boundary delimitation, is also evident in the Court’s decision that:

“Cambodia’s first and second Submissions, calling for pronouncements on the legal status of the Annex I map and on the frontier line in the disputed region, can be entertained only to the extent that they give expression to grounds, and not as claims to be dealt with in the operative provisions of the Judgment” (*ibid.*, p. 36).

No mention was made of either the Annex I map or the location of the frontier in the operative part. No map was attached to the Judgment, nor did the Court make any comment on the difficulties of transposition of the Annex I map line, a matter which had been discussed by the Parties during the 1962 proceedings and which would have been of obvious importance in a judgment on delimitation of the frontier.



77. Secondly, however, the Annex I map played a central role in the reasoning of the Court. After reviewing the history of the map and its relationship with the 1904 Treaty, the Court stated:

“The real question, therefore, which is the essential one in this case, is whether the Parties did adopt the Annex I map, and the line indicated on it, as representing the outcome of the work of delimitation of the frontier in the region of Preah Vihear, thereby conferring on it a binding character.” (*I.C.J. Reports 1962*, p. 22.)

It then considered the conduct of the Parties with regard to the map and other practice, including the visit of Prince Damrong to the Temple in 1930, when he was received by the French authorities. Although the Court considered that the circumstances of Prince Damrong’s visit were such as to amount to “a tacit recognition by Siam of the sovereignty of Cambodia (under French Protectorate) over Preah Vihear” (*ibid.*, p. 31), that incident, together with Thailand’s other conduct subsequent to 1908-1909, was treated primarily as confirmation of the earlier acceptance by Thailand of the Annex I map line. The Court stated:

“Even if there were any doubt as to Siam’s acceptance of the map in 1908, and hence of the frontier indicated thereon, the Court would consider, in the light of subsequent events, that Thailand is now precluded by her conduct from asserting that she did not accept it . . .

The Court however considers that Thailand in 1908-1909 did accept the Annex I map as representing the outcome of the work of delimitation, and hence recognized the line on that map as being the frontier line, the effect of which is to situate Preah Vihear in Cambodian territory. The Court considers further that, looked at as a whole, Thailand’s subsequent conduct confirms and bears out her original acceptance, and that Thailand’s acts on the ground do not suffice to negative this. Both Parties, by their conduct, recognized the line and thereby in effect agreed to regard it as being the frontier line.” (*Ibid.*, pp. 32-33.)

The Court went on to state that “the acceptance of the Annex I map by the Parties caused the map to enter the treaty settlement and to become an integral part of it” (*ibid.*, p. 33) and concluded that it “therefore, feels bound, as a matter of treaty interpretation, to pronounce in favour of the line as mapped in the disputed area” (*ibid.*, p. 35).

78. Thirdly, in defining the dispute before it (in the passage quoted in paragraph 76 above), the Court made clear that it was concerned only with sovereignty in the “region of the Temple of Preah Vihear”.

That this region comprised only a small area is apparent from the 1962 proceedings. Thus, counsel for Cambodia stated:





“As I shall have occasion to remind the Court more than once, the area in dispute in these proceedings is very small indeed. A variation of half a mile, or even less, would place the Temple wholly on one side or the other of the frontier.” (*I.C.J. Pleadings, Temple of Preah Vihear*, Vol. II, p. 145.)

Later in the hearings, counsel for Cambodia observed that “the Court and counsel will have spent pretty much the entire month of March discussing an area of land hardly a kilometre in breadth” (*ibid.*, Vol. II, p. 464) and subsequently referred to “a frontier area of less than two or three square kilometres” (*ibid.*, Vol. II, p. 473). These statements were not contradicted during the 1962 proceedings.

The Judgment shows that the Court considered that the disputed area was a small one. Immediately after the passage in which it defined the dispute as one regarding sovereignty over the region of the Temple, the Court described that region in the following terms:

“The Temple of Preah Vihear . . . stands on a promontory of the same name, belonging to the eastern sector of the Dangrek range of mountains which, in a general way, constitutes the boundary between the two countries in this region — Cambodia to the south and Thailand to the north. Considerable portions of this range consist of a high cliff-like escarpment rising abruptly above the Cambodian plain. This is the situation at Preah Vihear itself, where the main Temple buildings stand in the apex of a triangular piece of high ground jutting out into the plain.” (*I.C.J. Reports 1962*, p. 15.)

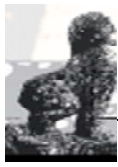
While the Annex I map deals with a part of the frontier region more than 100 km in extent, the Court made clear that it had to pronounce upon it only “in the disputed area” (*ibid.*, p. 35).

#### 4. The operative part of the 1962 Judgment

79. In the light of these elements in the reasoning of the 1962 Judgment, the Court will now turn to the operative part of that Judgment, the text of which is reproduced in paragraph 21 above. The findings set out in the second and third paragraphs are expressly stated to be consequences following from the decision in the first operative paragraph. It follows that the three operative paragraphs have to be considered as a whole; the task of ascertaining their meaning and scope cannot be reduced to an exercise of construing individual words or phrases in isolation.

##### A. The first operative paragraph

80. The Court considers that the meaning of the first operative paragraph is clear. In that paragraph, the Court ruled on Cambodia’s principal claim by finding that the Temple was situated in territory under the sovereignty of Cambodia. It will, however, be necessary to return to the scope of this paragraph once the Court has examined the second and third operative paragraphs.



## B. The second operative paragraph

81. The principal dispute between the Parties concerns the second operative paragraph. In that paragraph, the Court required, as a consequence of the decision in the first operative paragraph, the withdrawal of Thai military or police forces, or other guards or keepers “stationed by her at the Temple, or in its vicinity on Cambodian territory”. The second operative paragraph did not indicate expressly the Cambodian territory from which Thailand was required to withdraw its personnel, nor did it state to where those personnel had to be withdrawn. The only context in which the paragraph refers to an area of territory — “the Temple, or its vicinity on Cambodian territory” — was in indicating which of its personnel Thailand was under an obligation to withdraw, namely those whom it had stationed in that area.

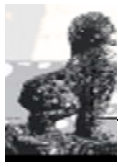
82. During the hearings in the present proceedings, a Member of the Court put the following question to the Parties:

“What is the precise territorial extent that each of the Parties considers as the ‘vicinity’ of the Temple of Preah Vihear ‘on Cambodian territory’ referred to in the second paragraph of the *dispositif* of the Court’s Judgment of 1962?”

and requested that each Party provide a set of geographical co-ordinates or refer to one of the maps produced in the 1962 proceedings.

83. In its response, Cambodia maintained that “the Court’s use of the term ‘vicinity’ can best be appreciated in the light of the overlap between the Annex I map line and the watershed line proposed by the Thai experts in the original proceedings”. As indicated on the map annexed to Cambodia’s response, the area between these two lines includes the entirety of the promontory of Preah Vihear and the hill of Phnom Trap. The Annex I map line is shown as the northern limit of this area. The western and eastern limits of the area identified by Cambodia consist of the points where the Annex I map line and the watershed line advocated by Thailand intersect. Cambodia accepts Thailand’s estimate that this area measures approximately 4.6 square kilometres.

84. Thailand responded to the question by stating that “[i]n 1962, the ‘vicinity’ of the Temple was identified by the Council of Ministers for the purposes of the withdrawal of the Thai troops who were stationed there”. The 1962 Resolution of the Thai Council of Ministers was based upon a report, which outlined two possible methods for determining the extent of the “vicinity [of the Temple] on Cambodian territory”. The Resolution chose the second of these methods, which involved confining the Temple within an area bounded, to the south and east, by the escarpment and, to the west, north and north-east, by a line close to the Temple. That line (referred to in paragraph 22, above, as the “Thai Council of Ministers’ line”) consisted of three segments. The first segment began at the south-western part of the escarpment and ran north in a straight line, parallel to, and a few metres to the west of, the Temple buildings, until it reached a point a few metres north of the most northern part of the Temple buildings. The second segment ran east from



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this point in a straight line until it reached a point just north of the eastern extreme of this part of the Temple. The third segment ran south-east from that point, broadly following the course of a feature known as the Broken Stairway (which was described in the report as falling within the vicinity of the Temple) until it reached the eastern escarpment. The report estimated the area enclosed within these limits as approximately 0.25 square kilometres. Following the adoption of the Resolution, Thailand erected a barbed wire fence along the Council of Ministers' line and put up signs stating that "the vicinity of the Temple of Phra Viharn does not extend beyond this limit".

85. Since the second operative paragraph of the 1962 Judgment required Thailand to withdraw "any [of its] military or police forces, or other guards or keepers, stationed by her at the Temple, or in its vicinity on Cambodian territory", the Court considers that it must begin by examining the evidence that was before the Court in 1962 regarding the locations at which such Thai personnel were stationed.

86. The only such evidence was given by Professor Ackermann, who was called by Thailand as an expert and witness and who had visited the Temple for several days in July 1961 in the course of preparing a report to be submitted in the proceedings. Under cross-examination by counsel for Cambodia, Professor Ackermann testified that, during that visit, the only people he had seen at the Preah Vihear promontory were a detachment of Thai frontier police and one Temple guard. He stated that the police had been stationed in blockhouses at a camp located to the north-east of the Temple, while the guard had lived in a separate house a short distance to the west of the police camp (*I.C.J. Pleadings, Temple of Preah Vihear*, Vol. II, pp. 401-402)<sup>2</sup>.

87. The location of the police station was subsequently confirmed by counsel for Thailand, according to whom the police camp was located south of the Annex I map line but north of a line which Cambodia maintained was the watershed line (*ibid.*, Vol. II, p. 559). During the 1962 proceedings, Cambodia had advanced an alternative argument that if, contrary to its primary position, the boundary was required to follow the watershed rather than the Annex I map line, then it was this Cambodian line which represented the watershed and not the watershed line advocated by Thailand (to which reference has already been made). In the event, the Court found that it was unnecessary to consider the location of the watershed in the area of the Temple (*Judgment, I.C.J. Reports 1962*, p. 35). Nevertheless, the reference to that line in the speech by counsel for Thailand is significant, because, as Thailand has stated in the current proceedings, the Thai Council of Ministers' line follows a course very close to that of the watershed line advanced by Cambodia in 1962. It is apparent, therefore, that the Thai police detachment was stationed at a location north of the line subsequently drawn by the 1962 Resolution of the Thai Council of Ministers and thus outside what Thailand considers to be the "vicinity [of the Temple] on Cambodian territory".

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<sup>2</sup>Professor Ackermann indicated these locations on a map shown to the Court. A copy of the map, entitled "Annex 85 (d)", is enclosed at the end of Volume II of the 1962 Pleadings.





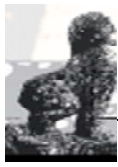
88. When the Court required Thailand to withdraw military or police forces, guards or keepers which it had stationed in the Temple, or in the vicinity of the Temple on Cambodian territory, it must have intended that obligation to apply to the police detachment referred to by Professor Ackermann, since, except for the solitary Temple guard (who seems to have been living near the police camp), there was no evidence of the presence of any other Thai personnel anywhere near the Temple. Accordingly, the term “vicinity on Cambodian territory” has to be construed as extending at least to the area where the police detachment was stationed at the time of the original proceedings. Since that area lies north of the Thai Council of Ministers’ line, that line cannot represent the correct interpretation of the territorial scope of the second operative paragraph as Thailand contends.

89. That conclusion is confirmed by a number of other factors. As the Court emphasized in its description of the area around the Temple (*Judgment, I.C.J. Reports 1962*, p. 15), the Temple is located on an easily identifiable geographical feature. This feature is a promontory. In the east, south and south-west, the promontory descends by a steep escarpment to the Cambodian plain. In the west and north-west, the ground drops into what Professor Ackermann described in his evidence as a “valley . . . between the Phnom Trap mountain and the Phra Vihear mountain” (*I.C.J. Pleadings, Temple of Preah Vihear*, Vol. II, p. 385). It is through this valley that access to the Temple from the Cambodian plain can most easily be obtained. The hill of Phnom Trap rises from the western side of this valley. A natural understanding of the concept of the “vicinity” of the Temple would extend to the entirety of the Preah Vihear promontory.

90. Furthermore, the Court’s reasoning regarding the significance of the Annex I map (considered in paragraph 77 above) shows that the Court considered that Cambodia’s territory extended in the north as far as, but no farther than, the Annex I map line. Although Professor Ackermann did not give any estimate of the distances between the various places on the promontory to which he referred in his evidence, it is clear that, for example, the police post which he identified was only a very short distance to the south of the nearest point on the Annex I map line.

91. The Court was therefore dealing with a small area with clearly defined geographical limits to the east, south, west and north-west, and bounded in the north by what the Court had stated in its reasoning was the limit of Cambodian territory. In these circumstances, the Court considers that the territorial scope of the second operative paragraph must be construed as extending to the whole of the promontory, rather than being confined to the part of it chosen by the Thai Council of Ministers in 1962.

92. Turning to the position of Cambodia, the Court is also unable to accept its interpretation of “vicinity”. In its answer to the question put by a Member of the Court (see paragraph 83 above), Cambodia maintained that the vicinity includes not only the promontory of Preah Vihear but also the hill of Phnom Trap. There are several reasons why the Court considers that this is not the correct interpretation of the second operative paragraph.



93. First, Phnom Trap and the promontory of Preah Vihear are distinct geographical features which are clearly shown as separate on the maps used in the 1962 proceedings and, in particular, on the Annex I map, which was the only map to which the Court made more than passing reference in the Judgment.

94. Secondly, there are certain indications in the record of the 1962 proceedings that Cambodia did not treat Phnom Trap as falling within the “region of the Temple” or “Temple area” (the terms used by the Court in defining the scope of the dispute before it). Thus, a former Cambodian provincial governor, Mr. Suon Bonn, who was called as a witness by Cambodia, testified that Preah Vihear had formed part of his province (*I.C.J. Pleadings, Temple of Preah Vihear*, Vol. II, p. 333), but that he thought that Phnom Trap belonged to a neighbouring province (*ibid.*, p. 434). Moreover, as explained in paragraph 78 above, in referring to the area with which the Court was concerned, counsel for Cambodia spoke of its dimensions in terms which would be too small to encompass, at the same time, Phnom Trap as well as the promontory of Preah Vihear (*ibid.*, pp. 464 and 473). He also stated that Phnom Trap was not part of the “crucial area” with which the Court was concerned (*ibid.*, p. 465).

95. Thirdly, there was no evidence before the Court of any Thai military or police presence on Phnom Trap in 1962 and no suggestion that Phnom Trap was relevant to Cambodia’s claim that Thailand should be required to withdraw its forces.

96. Lastly, Cambodia’s interpretation depends upon identifying the location of the points at which the Annex I map line intersects with the watershed line advocated by Thailand. Yet, in the 1962 Judgment, the Court made clear that it was not concerned with the location of the watershed and did not decide where the watershed lay (*I.C.J. Reports 1962*, p. 35). It is, therefore, implausible to suggest that the Court had the watershed line in mind when it used the term “vicinity”.

97. While no one of these considerations is conclusive in itself, taken together they lead the Court to conclude that, in 1962, the Court did not have this wider area in mind and, accordingly, that it did not intend the term “vicinity [of the Temple] on Cambodian territory” to be understood as applicable to territory outside the promontory of Preah Vihear. That is not to say that the 1962 Judgment treated Phnom Trap as part of Thailand; the Court did not address the issue of sovereignty over Phnom Trap, or any other area beyond the limits of the promontory of Preah Vihear.

98. From the reasoning in the 1962 Judgment, seen in the light of the pleadings in the original proceedings, it appears that the limits of the promontory of Preah Vihear, to the south of the Annex I map line, consist of natural features. To the east, south and south-west, the





promontory drops in a steep escarpment to the Cambodian plain. The Parties were in agreement in 1962 that this escarpment, and the land at its foot, were under Cambodian sovereignty in any event. To the west and north-west, the land drops in a slope, less steep than the escarpment but nonetheless pronounced, into the valley which separates Preah Vihear from the neighbouring hill of Phnom Trap, a valley which itself drops away in the south to the Cambodian plain (see paragraph 89 above). For the reasons already given (see paragraphs 92-97 above), the Court considers that Phnom Trap lay outside the disputed area and the 1962 Judgment did not address the question whether it was located in Thai or Cambodian territory. Accordingly, the Court considers that the promontory of Preah Vihear ends at the foot of the hill of Phnom Trap, that is to say: where the ground begins to rise from the valley.

In the north, the limit of the promontory is the Annex I map line, from a point to the north-east of the Temple where that line abuts the escarpment to a point in the north-west where the ground begins to rise from the valley, at the foot of the hill of Phnom Trap.

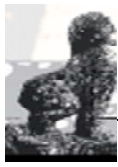
The Court considers that the second operative paragraph of the 1962 Judgment required Thailand to withdraw from the whole territory of the promontory, thus defined, to Thai territory any Thai personnel stationed on that promontory.

99. The Court notes Thailand's argument about the difficulty of transposing the Annex I map and thus of ascertaining the precise location on the ground of the Annex I map line in the area described in the preceding paragraph. The 1962 Judgment did not, however, address that question and the Court cannot now, in the exercise of its jurisdiction under Article 60 to interpret the 1962 Judgment, deal with a matter which was not addressed by that Judgment. Nevertheless, the parties to a case before the Court have an obligation to implement the judgment of the Court in good faith. It is of the essence of that obligation that it does not permit either party to impose a unilateral solution.

#### **C. The relationship between the second operative paragraph and the rest of the operative part**

100. The Court has already stated (see paragraph 79 above) that the three paragraphs of the operative part of the 1962 Judgment have to be considered as a whole. Having determined the meaning and scope of the second paragraph, the Court now turns to the relationship between that paragraph and the other two paragraphs of the operative part. While there is no dispute between the Parties regarding the third operative paragraph, it is nonetheless relevant to the extent that it sheds light on the meaning and scope of the rest of the operative part.

101. The scope of the operative part of a judgment of the Court is necessarily bound up with the scope of the dispute before the Court. The 1962 Judgment defined the dispute which was then before the Court as one concerning "sovereignty over the *region* of the Temple of Preah Vihear" (*I.C.J. Reports 1962*, p. 14; *emphasis added*). It was entirely consistent with this view of the dispute that the Court, having decided in the first operative paragraph of the Judgment that the Temple was located in territory under the sovereignty of Cambodia, determined, as a consequence of that finding, that Thailand was under an obligation to withdraw its forces and other personnel stationed "at the Temple, or in its *vicinity* on Cambodian territory" and to restore objects removed from "the Temple or the *Temple area*" (*emphasis added*). The second and third operative



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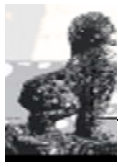
paragraphs each, therefore, imposed obligations with respect to an area of territory which extended beyond the Temple itself. The second operative paragraph expressly described this area as Cambodian territory. The third operative paragraph did not do so but the Court considers that such a description was implicit; an obligation to restore artefacts taken from the “area of the Temple” would be a logical consequence of a finding of sovereignty only to the extent that the area in question was covered by that finding.

102. The area with which the Court was concerned in the original proceedings, as has already been explained (see paragraph 78 above), is small and bounded, except to the north, by readily identifiable geographical features. In these circumstances, the Court considers that the terms “vicinity [of the Temple] on Cambodian territory”, in the second paragraph, and “area of the Temple”, in the third paragraph, refer to the same small parcel of territory. The obligations which the Court imposed in respect of that parcel of territory were stated to be a consequence of the finding in the first paragraph. In view of the characteristics of the dispute which confronted the Court in 1962 — in particular, the nature of the submissions of each Party — the obligations imposed by the second and third paragraphs would be a logical consequence of the finding of sovereignty in the first operative paragraph only if the territory referred to in the first paragraph corresponded to the territory referred to in the second and third paragraphs.

103. Accordingly, the Court concludes that the territorial scope of the three operative paragraphs is the same: the finding in the first paragraph that “the Temple of Preah Vihear is situated in territory under the sovereignty of Cambodia” must be taken as referring, like the second and third paragraphs, to the promontory of Preah Vihear, within the limits described in paragraph 98 of the present Judgment.

104. In these circumstances, the Court does not consider it necessary further to address the question whether the 1962 Judgment determined with binding force the boundary line between Cambodia and Thailand. In a dispute concerned only with sovereignty over the promontory of Preah Vihear, the Court concluded that that promontory, extending in the north to the Annex I map line but not beyond it, was under Cambodian sovereignty. That was the issue which was in dispute in 1962 and which the Court considers to be at the heart of the present dispute over interpretation of the 1962 Judgment.

105. Nor is it necessary for the Court to address the question whether the obligation imposed on Thailand by the second operative paragraph was a continuing obligation, in the sense maintained by Cambodia. In the present proceedings, Thailand has accepted that it has a general and continuing legal obligation to respect the integrity of Cambodian territory, which applies to any disputed territory found by the Court to be under Cambodian sovereignty. Once a dispute regarding territorial sovereignty has been resolved and uncertainty removed, each party must fulfil in good faith the obligation which all States have to respect the territorial integrity of all other States. Likewise, the Parties have a duty to settle any dispute between them by peaceful means.



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106. These obligations, which derive from the principles of the Charter of the United Nations, are of particular importance in the present context. As is clear from the record of both the present proceedings and those of 1959-1962, the Temple of Preah Vihear is a site of religious and cultural significance for the peoples of the region and is now listed by UNESCO as a world heritage site (see paragraphs 25-27 above). In this respect, the Court recalls that under Article 6 of the World Heritage Convention, to which both States are parties, Cambodia and Thailand must co-operate between themselves and with the international community in the protection of the site as a world heritage. In addition, each State is under an obligation not to “take any deliberate measures which might damage directly or indirectly” such heritage. In the context of these obligations, the Court wishes to emphasize the importance of ensuring access to the Temple from the Cambodian plain.

## 5. Conclusions

107. The Court therefore concludes that the first operative paragraph of the 1962 Judgment determined that Cambodia had sovereignty over the whole territory of the promontory of Preah Vihear, as defined in paragraph 98 of the present Judgment, and that, in consequence, the second operative paragraph required Thailand to withdraw from that territory the Thai military or police forces, or other guards or keepers, that were stationed there.

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108. For these reasons,

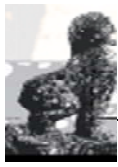
THE COURT,

(1) Unanimously,

*Finds* that it has jurisdiction under Article 60 of the Statute to entertain the Request for interpretation of the 1962 Judgment presented by Cambodia, and that this Request is admissible;

(2) Unanimously,

*Declares*, by way of interpretation, that the Judgment of 15 June 1962 decided that Cambodia had sovereignty over the whole territory of the promontory of Preah Vihear, as defined in paragraph 98 of the present Judgment, and that, in consequence, Thailand was under an obligation to withdraw from that territory the Thai military or police forces, or other guards or keepers, that were stationed there.



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Done in English and in French, the English text being authoritative, at the Peace Palace, The Hague, this eleventh day of November, two thousand and thirteen, in three copies, one of which will be placed in the archives of the Court and the others transmitted to the Government of the Kingdom of Cambodia and the Government of the Kingdom of Thailand, respectively.

*(Signed)* Peter TOMKA,  
President.

*(Signed)* Philippe COUVREUR,  
Registrar.

Judges OWADA, BENNOUNA and GAJA append a joint declaration to the Judgment of the Court; Judge CANÇADO TRINDADE appends a separate opinion to the Judgment of the Court; Judges *ad hoc* GUILLAUME and COT append declarations to the Judgment of the Court.

*(Initialed)* P. T.

*(Initialed)* Ph. C.

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Appendix 3

**Decision 31 COM 8B.24 Rev**  
WHC-07/31.COM/24

WORLD HERITAGE COMMITTEE  
Thirty-First Session  
Christchurch, New Zealand  
23 June-2 July 2007

Decision: 31 COM 8B. 24

The World Heritage Committee recognizes that the Sacred Site of the Temple of Preah Vihear is of the great international significance and has Outstanding universal Value on the basis of criteria (i),(ii) and (iv), agrees in principal that it should be inscribed on the World Heritage List and notes that the process for inscription is in progress.

Text

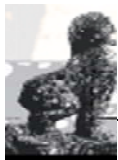
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1.The World Heritage Committee, Having examined documents WHC-07/31.COM/8B and WHC-07/31.COM/NF.8B.1,

2.Having taken note of the following statement by the Chair of the World Heritage Committee which has been agreed to by the delegation of Cambodia and the Delegation of Thailand:

“ The State Party of Cambodia and the State Party of Thailand are in full agreement that the Sacred Site of the Temple of Preah Vihear has Outstanding Universal Value and must be inscribed in the World Heritage List as soon as possible. Accordingly, Cambodia and Thailand agree that Cambodia will propose the site for formal inscription on the World Heritage List at the 32<sup>nd</sup> Session of the World Heritage Committee in 2008 with the active support of Thailand.





They also agree that the site is in need of urgent attention and requires international financial and technical assistance and close cooperation between them.

They further agree that it is essential to strengthen conservation and management at the site including by the development of an appropriate management plan, as required under paragraph 108 of the Operational Guidelines, that will ensure the future protection of this property.

They understand, following consultation with the World Heritage Center, That financial and technical assistance for the development of a management plan will be available through the World Heritage Centre's International Assistance programme.”

3.Recognizes that the Sacred Site of the Temple of Preah Vihear is of great International significance and has Outstanding Universal Value on the basis of criteria (i), (ii) and (iv), agrees in principal that it should be inscribed on the World Heritage List and notes that the process for inscription is in progress;

4.Requests the State Party of Cambodia to strengthen conservation and management plan, which progress will enable its formal its inscription by the Committee at its 32nd Session in 2008;

5.Further requests the State Party of Cambodia to submit a progress report to the World Heritage Centre , by 1 February 2008.

Decision report (Christchurch, 2007)

HWC-07/31.COM/24,p.53,54

Chairperson statement at the 31<sup>st</sup>  
Session of the World Heritage Committee,  
Christchurch, New Zealand

This decision means that the committee has agreed that this Sacred Site deserves to be included in the World Heritage List and that its formal listing will take place at the next session in 2008, and I request that my remarks are included in the final report of this meeting along with the decision.

**Mr . Tumu Te Heuheu**



Appendix 4

**Decision 32 COM 8B.102**

WHC-07/32.COM 8B.102

WORLD HERITAGE COMMITTEE

Thirty-Second Session

Quebec, Canada

7 July 2008

Decision: 32 COM 8B. 102

Inscribes the Temple of Preah Vhear, Cambodia, on the World Heritage List under criterion (i);

Criterion (i) : Preah Vihear is an outstanding master piece of Khmer architecture .It is very 'pure' both in plan and in detail of its decoration.

Text

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The World Heritage Committee,

1. Having examined Document WHC-08/32.COM/INF.8B1. Add2,
2. Recalling Decision 31 COM 8B.24, which recognized' that the Sacred Site of the Temple of Preah Vihear is of great international significance and has Outstanding Universal Value on the basic of criteria (i), (iii) and (iv), and agreed in principle that should be inscribed on the World Heritage List'
3. Having noted progress made by the State Party of Cambodia towards the development of Management Plan for the property, as requested by the Committee by its Decision 31 COM 8B.24 in Christchurch, New Zealand,



4. Expressing gratitude to the governments of Belgium, the United States of America, France, and India for providing support for the work of experts to assist in this effort, and to governments of China and Japan, as well as ICCROM, for providing valuable expert input to this process.

5. Recognizing that the Joint Communiqué signed on 18 June 2008 by the representatives of the Governments of Cambodia and Thailand, as well as by UNESCO, including its draft which was erroneously referred to as having been signed on 22 May 2008 in the document WHC-08/32.COM/INF.8B1. Add.2, must be disregarded, following the decision of the Government of Thailand to suspend the effect of the Joint Communiqué, pursuant to the Thai Administrative Court's interim injunction on this issue,

6. Noting that the State Party of Cambodia submitted to the World Heritage Centre the revised graphic plan of property (RGPP) included in WHC-08/32 COM/INF 8B1. Add 2 (hereinafter called "RGPP") indicating a revised perimeter of the area proposed for inscription on the World Heritage List,

7. Decides, on an exceptional basic, to accept, in view of the multilateral process leading to the elaboration of the supplementary report submitted in May 2008 by the State Party of Cambodia at the request of the UNESCO World Heritage Centre, the information submitted by the State Party beyond the deadline established in the paragraph 148 of the Operational Guidelines;

8. Recognizes that Thailand has repeatedly expressed a desire to participate in a joint nomination of the Temple of Preah Vihear and its surrounding areas;



9. Notes that the property proposed for inscription is reduced and comprise only the Temple of Preah Vihear and not the wider promontory with its cliffs and caves;

10. Considers further that archaeological research is underway which could result in new significant discoveries that might enable consideration of a possible new Trans boundary nomination, that would require the consent of both Cambodia and Thailand.

11. Encourages Cambodia to collaborate with Thailand for safeguarding the value of the property, in view of the fact that peoples of the surrounding region have long treasured the Temple of Preah Vihear, and agrees that it would be desirable in the future to reflect its full values and landscape setting through a possible additional inscription to the World Heritage List that could capture criteria (iii) and (iv), which had been recognized by the Committee in its Decision 31 COM 8B.24.

12. Inscribes the Temple of Preah Vihear, Cambodia, on the World Heritage List under criterion (i);

13. Adopts the following Statement of Outstanding Universal Value:  
The Temple of Preah Vihear, a unique architectural complex of a series of sanctuaries linked by a system of pavements and staircases on an 800 meter long axis, is an outstanding masterpiece of Khmer architecture, in terms of plan, decoration and relationship to the spectacular landscape environment.

14. Requests the State Party of Cambodia, in collaboration with UNESCO, to convene an international coordinating committee for safeguarding and development of the property no later than February 2009, inviting the participation of the Government of Thailand and not more than seven other appropriate international partners, to examine



general policy matters relating to the safeguarding of the Outstanding Universal Value of the property of the property in conformity with international conservation standards;

15. Requests the State Party of Cambodia to submit to the World Heritage Centre, by 1 February 2000, the following documents:

- a) A provisional map providing additional details of inscribed property and a map delineating the buffer zone identified in the RGPP;
- b). Updated Nomination dossier to reflect the changes made to the perimeter of the property;
- c). Confirmation that the management zone for the property will include the inscribed property and buffer zone identified in the RGPP;
- d). Progress report on the preparation of the Management Plan;

16. Further requests the state Party of Cambodia to submit to the World Heritage Centre by February 2010, for submission to the World Heritage Committee at its 34<sup>th</sup> session in 2010 a full Management Plan for the inscribed property, including a finalized map.





## Appendix 5

### Extract from the **Management Plan of the Temple of Preah Vihear**

## **Cambodia**



*Prepared by:*

Divay Gupta  
Conservation Architect & Heritage Management Specialist, India

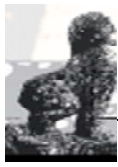
*Commissioned By:*

**National Authority for the Protection and the Development of the Cultural and Natural Site of the Temple of Preah Vihear (ANPV)**

*Supported by:*

Royal Government of Cambodia  
Cambodian National Commission for UNESCO  
UNESCO Office in Cambodia at Phnom Penh





### ***1.3 The Management Plan Strategy***

The proposed management plan aims to provide a framework to conserve the cultural heritage assets of the proposed World Heritage Site. This will include protection & conservation of the architectural, archaeological, landscape, natural & sacred assets, and their geological settings, improving an understanding of the site, its interpretation and ensuring and supporting local community in its cultural, social and economic vitality.

This plan attempts to outline all the key issues and challenges confronting the site. These issues will identify the vulnerability and threats, gaps in present management and opportunities to benefit the site.

The plan also sets out objectives which arise in response to the identified issues and are designed to achieve comprehensive management of the site. The implementation of these objectives would be achieved through a series of actions and programmes in a phased manner as per an agreed priority.

However it should be kept in mind that the proposed management plan is not prescriptive or binding, but rather aims to set a framework for coordinated management and development of partnerships. In this way the plan intends to build upon the nomination dossier and enhance the existing statutory tools like the Royal Decrees and will serve to inform and guide the future conservation and management requirements of the site.

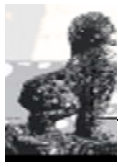
### ***1.4 The Management Approach***

Though the site has been inscribed under criteria (i), there are many other interlinked values of the site which need protection and conservation; thus the main approach for this document has been to look at the heritage of the site in a more inclusive and holistic way based on the present established international heritage concepts like that of Value Based Conservation. With this in mind, the document proposes to promote comprehensive conservation and management of the archaeological, architectural, natural and cultural heritage of the site.

As the site can be perceived, experienced and interpreted from many different perspectives - ecological, historical, political, cultural etc. there are also multiple ways to “read” the site, illustrating the challenges of managing such complex sites.

The main approach for the preparation of this document has been of ‘**Integrated Heritage Landscape Management Approach**’. This approach is based upon a comprehensive assessment of all the above factors and cultural resources like archaeological, historical, environmental and living traditions. It focuses on the connections and interrelationships between historic sites within their wider context, both physical and symbolic, for example visual experiences, environmental systems and associated cultural linkages and values. Thus this approach relates the site with its immediate landscape, buffer and broader geographic surroundings. This helps define the **significance of the site** which needs special conservation and management.

With this approach one can see that Preah Vihear’s primary strength is not only as a historic or archaeological site or a tourist attraction but equally as a sacred site, Cultural Sanctuary or a Cultural Landscape.



*I. All policies, proposals, decisions, interventions and actions should contribute to the protection, conservation and sustenance of the site including its cultural and natural assets, its character, quality, fabric, and authenticity.*

*II. All policies, proposals, decisions, interventions and actions related to the conservation of site should be based on International accepted Conservation norms and practices especially the ICOMOS charters and declarations and principles of sustainability.*

The plan developed through this approach will help define what heritage resources are in their inclusive sense and will indicate measures to conserve sustain and enhance them with minimum intervention.

### ***1.5 Project Limitations***

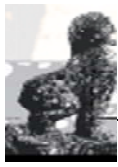
This document is the management plan based on a strategy plan done earlier. It established the various criteria, objectives and guidelines based on which this management plan has been created. This document was based primarily on the various missions, including the one for evaluating it as WHS in Oct 06' undertaken for ICOMOS and the other in Nov 07', Jan 08', April 09' and Nov 09' for ANPV. The management plan borrows heavily from various other reports undertaken by many international experts on various aspects of the site complied as the "Progress Report" by the UNESCO Phnom Penh Office in January 2008 and report submitted to the WHC by the Cambodian National Commission for UNESCO in January 09'.

This document focuses primarily on the management aspects and consideration impacting the management and conservation of the site. It does not thus deal in details on the history of the site or architectural description as the same are outside the scope of this document. These aspects are only introduced in Chapter 2 to provide with an over view of the site.

All maps and drawings were provided by the National Commission for UNESCO, Royal Government of Cambodia and ANPV. International borders shown between Thailand and Cambodia in the documents are indicative only and will be determined by the Joint Border Commission (JBC).

### ***1.6 Structure of the Management Plan***

The document is divided into seven chapters. The first chapter deals with the management approach, chapter two introduces the site and establishes its significance, and chapter three establishes the criteria and objectives for the management plan. In chapter four various issues and challenges confronting the site are identified based on which broad recommendations are proposed. Assessment and strategy for the conservation of the monument is dealt with in chapter five. Proposed implementation strategy along with a proposed administrative and institutional framework is given in chapter six. Chapter seven is the program for action, where the recommendations are summarised and their priority is indicated. The document is supported with the World Heritage Committee (WHC) decisions, organizational chart of ANPV, credits and bibliography as annexure.



## CHAPTER 3 - Management Strategy

The tool of Management Plan provides an opportunity to achieve Holistic and Integrated Conservation and Management of the site.

### 3.1 Vision

*The Cultural & natural assets of Preah Vihear and their associated values and significance will be conserved and safeguarded for this and the future generations through promoting sustainable management.*

*The site will celebrate its unique value and significance and be accessible to all through enhanced understanding and experiential quality.*

*It will continue to thrive as a living religious site and will use its universal values to support peace and further the socio-economic and cultural vitality of its local community.*

*The site hopes to create an example for heritage management and conservation founded on partnerships of local, national and international communities, institutes and organizations.*

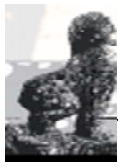
### 3.2 Defining Aims & Objectives

Based on the criteria developed above the main aim of the management plan should be:

- Promote effective and 'sustainable' management of the site by developing partnerships with the local community and other stakeholders.
- Ensure that the significance and values of the site are conserved for the future generations.
- Sustain and conserve the values of the site identified through consultation with multiple stakeholders and experts
- Ensure that the significance and values of the site are understood and communicated to the visitors and is shared by the local community.
- Improve access and interpretation of the site and encourage all to respect, enjoy and understand the site.
- Encourage partnerships and linkages of local, national, regional and international communities, institutes and organizations to establish the site as center of excellence in conservation and management.

### 3.3 GUIDING PRINCIPLES

The above aims should be supported by the following GUIDING PRINCIPLES:



### **3.4 Establishing Criteria and Objectives for Preparation of the Management Plan**

*The key considerations and objectives of the plan could be defined as follows:*

#### **3.4.1 Consensus on Values Recognized:**

One of the primary purposes of the Management Plan is to ensure that the values identified at the site are conserved and managed through adoption of appropriate measures. Though the site has been inscribed under criteria (i) (the site was originally nominated with criteria iii and iv, there are many other interlinked significances and values of the site. The determination of these values needs to be undertaken through research and discussions with the multiple stakeholders involved in the site based on which the zones of the site could be enlarged in the future to reflect the full values of the site.

Various values and significance of the site can include:

- **Cultural/Sacred Values** – to be defined by the contemporary users (monks, pilgrims, indigenous tribes, traditional users of forest produce, agricultural)
- **Historical Value** – defined through archival as well as field research
- **Architectural Value** – defined through architectural research on Khmer architecture and the significance of this site within the larger context of Khmer Architecture
- **Archaeological Value** – to be defined through preliminary non-invasive archaeological investigations to understand the significance of the site thus shedding light on an important period of Cambodian history
- **Natural/Ecological Value** – to be defined through studies on traditional flora and fauna of the buffer zone and geological studies.

#### **3.4.2 Understanding the Contemporary Function and Use of the site based on the assessment of values:**

The current assessment of the site should include an understanding of how the site is currently used and the function it performs for the multiple stakeholders including the immediate community, tourists, pilgrims as well as the State and the larger region. This understanding can serve as a base through which changes can be assessed and monitored. **For example:** As a sacred site which is used by pilgrims the site performs a specific function. This function needs to be understood and appropriately planned for in the Management Plan. Equally, the site also serves as an important research tool for furthering an understanding of ancient Khmer history, art and architecture and therefore to preserve this role of the site, appropriate measures would need to be developed and adopted to safeguard archaeological remains.

#### **3.4.3 Managing change: administrative, funding, risk management, monitoring, boundary, statutory protection and planning, traditional systems of management, religious management, monitoring change, development.**

- The management and administrative arrangement for the site should be appropriate for effective ongoing implementation of the Management Plan. The management structure itself would need to be tiered involving representations from all stakeholders and clearly delineating responsibilities for the management, conservation and development of the site. It should also encourage active participation and involvement of the local community and enable greater coordination between various partners and stakeholders who are also responsible for securing the required funding levels from various local, national and international sources.

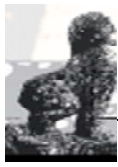




- Make a thorough assessment of the potential risks to the site and place comprehensive and effective risk preparedness and mitigation measures.
- Make full use of the modern technology to develop interactive data base like GIS for effective management and monitoring of the site.
- Develop proposals for establishing appropriate activities within the various zones and review various boundaries of core and buffer, when appropriate, as per new findings and understanding of the site.
- Statutory and non- statutory designations should be kept relevant and effective to afford the best possible protection to the site.
- Respecting that the site is sacred and linked to people's religious belief. Balance between this aspect and various conservation, tourism and management interventions should be maintained.
- Establish base line data on the present condition and the status of the site and its various components and develop systems to continually monitor the same.
- Establish detailed assessment of the character and values of the site to define limits of acceptable change within the core and buffer zones. Put mechanisms in place to provide framework based on which interventions and development proposals can be assessed.

#### **3.4.4 Conservation: conservation plan, skills, funding, historic environment, buildings, landscape, archaeology, cultural and natural resources, capacity building.**

- Create a broad conservation plan for the immediate core zone with specific plans for significant historic structures and features within the core and buffer area. The plan should include documentation, prioritization of conservation works, establishing conservation needs, and identifying appropriate conservation interventions and techniques to secure the authenticity and values of the site.
- Appropriate skills, techniques and expertise will be required for the scientific conservation of the various structures, assets and properties within the site, the same will need to be acquired and accessed through partnerships, technical assistance and capacity building of the local communities and conservation staff.
- Adequate funding will need to be made available and will need to be used appropriately as per set priorities for the conservation of the site and its assets.
- All conservation works including that for enhancement, maintenance, repairs or restoration, to be carried out within the site should be of the highest standards, appropriate to the international importance of the site, using materials, design and workmanship appropriate to the authenticity, value, significance and character of the site.



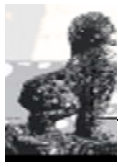
- Carry out preventive conservation training programs with the ANPV staff and other custodians of the site to ensure that there is periodic maintenance and timely interventions in addressing conservation issues.
- Ensure that the landscape and natural as well as '*living heritage*' OR INTANGIBLE HERITAGE elements of the site are acknowledged and understood as integral part of the site's value and are managed and conserved accordingly.

#### **3.4.5 Interpretation, education and research: information management, site interpretation and information, site as educational tool, awareness building, and research**

- Ensure that all information on the site is collected, stored and analyzed in a way that it assists the management of the site, as well as help in better understanding of the significance which is disseminated amongst its various managers and users.
- Establish accurate understanding of the current interpretation available for the site, including traditional and informal systems and ensure that there is interpretation accessible for all thus presenting a comprehensive view of the values and significance of the site.
- Interpretations should not be limited to a single view point, rather it should be inclusive highlighting the multiple views and facets of the sites.
- Ensure that the site is used as a comprehensive educational and training tool with access to all.
- Continually improve understanding of the site through appropriate and coordinated research and scientific studies.
- Increase understanding and awareness of the site in order to inform management decisions and improve comprehensiveness and accessibility of this understanding and information through appropriate dissemination measures.
- Consider creation of awareness/education/tourist materials for various interest groups (tourist brochures, cultural/natural trails, pilgrim maps, school educational aids etc.) based on the site understanding and research.

#### **3.4.6 Community participation and involvement: local community, common community spaces and areas, local knowledge systems**

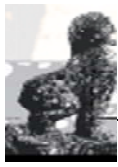
- Recognizing that the true custodians of the site are the local communities protecting and safeguarding it for many centuries without any formal protection, their full participation its values, vulnerabilities, limitations and opportunities offered especially since it is a World Heritage site.
- Identify and implement positive measures for the enhancement and appropriate development of the site to improve the quality of life of its local communities through improving physical conditions, infrastructure, and presentation of the site to generate cultural and economic opportunities for them.



**3.4.7 Visitor and pilgrim management: visitor facility, dispersal, marketing, local community, eco – rural tourism, home stays. Visitor access – vehicular, pedestrians, parking, entrance points, access for all.**

- Identify and implement opportunities to encourage visitors to explore the site both intellectually and physically, ensuring that the necessary infrastructure is in place to manage the effect of increase in visitors' numbers especially in the areas currently under or not visited.
- Ensure that the environment and availability of information at the entry / access points to the site are of highest quality and are appropriate to welcoming the visitor and pilgrims alike to the site.
- Identify opportunities for encouraging eco- tourism and rural tourism in consultation and involvement of the local communities to increase visitors' awareness and contribution towards the site.
- Ensure that the visitor facilities and information available are appropriate, reflecting international standards.
- Ensure that wherever possible visitor services and facilities also benefit the local communities and are managed in a sustainable way in keeping with the sensitivities of local community.
- Encourage local communities in benefiting from the economic activities generated by the increased visitors through appropriate measures like creating home stays, promoting local crafts and capacity building and training local communities to participate in conserving and managing the site.
- Seek to provide access to all to the site and suitable for all mobility needs, ensuring that the solutions are appropriate and do not distract from the values of the site.
- Restrict vehicular access to the site and encourage pedestrian access and movement with the aim to safeguard the physical and visual condition of the site.

It is recognized that there are substantial overlaps in the above objectives, reflecting the complexity of managing this WH site.



## CHAPTER 4 - Identifying Issues and Recommendations

For the site as complex and significant as the Preah Vihear there are many needs and interests to be reconciled and issues to be addressed. This chapter tries to consider the ways in which the site could be vulnerable to irreversible changes and has identified certain issues for the conservation and management of the site.

These issues reflect the concerns for the site addressed in the nomination dossier. Resolving several of these issues will mean working with multiple stakeholders to build consensus on the approach to be followed. However it should be noted that most of these issues are not mutually exclusive and there are many overlapping aspects in most of them. This further demonstrates the complexity in the management of a site like Preah Vihear and the importance of a management plan and framework for an effective conservation and management for its long term survival.

The main issues and concerns for the site could be categorized as:

- Conserving the special character and values of the site.
- Emergency Stabilization and Conservation of Archeological Remains and historic structures.
- Access and visitor management.
- Management of Natural environment.
- Planning & Policy Framework.
- Research and Further studies.
- Local Community Participation.
- Site Management framework and administrative structure.
- Risk management.

Each of the above issues needs to be addressed in light of the overall criteria and objectives established in this document.

### *4.1 Conserving the Special Character and Values of the Site*

i. The special character of the site is susceptible to erosion and changes both through the forces of nature and the impact of the activities of people. The area's character is strongly rooted in its cultural past and sacredness. The distinctive characteristic of the site consists of two distinct areas, one of the temples on its rocky spur and the other of its historical, cultural landscape including the range of natural and rural landscape. Maintaining a balance between these very distinct and related elements is important.

ii. Another important aspect of the site is that the site is 'living' and can not be seen as purely an archeological site. The evolution of this site due to continued royal patronage may have ended in the 13<sup>th</sup> century, but the site still retains its character as a sacred sanctuary and is revered as a holy place and is still in active use and worship. Though the nature of this temple has changed from an originally Shaivite to a current Buddhist site, its sacred character has endured and as such must be preserved.

iii. Many traditions and rituals continue to be practiced at the site, some of which may be earlier to introduction of the temples at the site. Some these activities are facilitated by monks who are residents of the monastery within the site. The sacred aspect of the site needs to be understood and incorporated within the management of the site.



iv. Though the site has been inscribed under criteria (i), the site was originally nominated with criteria iii and iv, there are many other interlinked significances and values of the site, based on which the core and buffer zones of the site could be enlarged in the future to reflect the full values of the site.

#### **4.1.1 The property of the Site**

The inscribed World Heritage site is shown in the enclosed RGPP as on page 52. The different zones as shown in the RGPP are temporary zones, to reflect the present circumstances of the site. In the future, there is a possibility to expand these zones to include other criteria to capture the full values and significance of the site.

##### ***i. Perimeter of the Temple***

The perimeter consists mainly of the temple remains (11 hectares) as inscribed in the World Heritage List. No new construction is to be permitted within the core zone. The theme of this zone will be restoration, conservation and stabilization of the monument.

##### ***ii. Buffer Zone***

The present buffer covers an area of 644.113 hectares. However the buffer does not include the areas to the north and west of the temple. This should be considered as provisional since the final demarcation of the buffer will be fixed according to the result of the JBC between Cambodia and Thailand.

It is proposed by this Management plan to enlarge the buffer to include the east and west baray, situated to the South of the temple at the foot hill, Prasat Toch and its pond and the high potential archeological areas near K1 village within the buffer of the site. It is also important that the buffer be extended towards the South side also for consistency, historical and environmental considerations.

Only minimal construction for the purpose of visitor facilities, amenities, administration and protection of the site should be allowed within this zone. This construction should also only be allowed if there are no adverse cultural, environmental or visual impacts to the site. No large scale construction or development for any purpose should be allowed within this zone.

##### ***iii. Landscape Protection Zone***

A third level of protection is also proposed; the boundaries of this landscape protection area are suggested to ensure that all natural, cultural and historical resources and values of the Preah Vihear site are taken into account. The main access, the "gateway to the site", can be located close to the village of Saem, 17 km to the south, bordering the landscape protection zone. This can be the starting point of the visitors' circuit and site discovery leading to secondary visitors centre starting from the eastern staircase. A global museum, interpretation center and botanical garden are being constructed at main entrance point. A global museum, interpretation center and botanical garden are being constructed at main entrance point.

Only some construction for the purpose of protection of the site should be allowed within this zone. No large scale construction or development for any purpose should be allowed within this zone.

#### **Recommendations**

- *Review of the zones to reflect full values of the site.*
- *Establish landscape protection zone and create royal decree in its support.*
- *Develop and build consensus on land use and zoning parameters in various zones.*





- *Encourage community based cultural resource mapping of the site to understand contemporary values and elements of the landscape recognized by the community.*
- *Establish national and international linkages with other associate sites like Vat Phou and include it in site interpretation.*
- *Establish monitoring mechanism.*

## ***4.2 Emergency Stabilization and Conservation of Archeological Remains and Historic Structures***

a. The last major conservation work on site was carried out in 1929; thereafter some conservation and repairs were carried out in 1963 once the Temple and its vicinity were handed over by Thailand to Cambodian Authorities. However urgent conservation and emergency measures are required at the site to stabilize many of its historic structures. Some of these measures are being implemented by the ANPV, as per the recommendations made by the international experts team 02<sup>nd</sup> April 2009.

b. Due to years of civil wars as well as of neglect most of these stone structures are showing signs of deterioration and many of them are out of plumb. Some of these are in complete collapsed condition, like the main Central Sanctuary- (Gopura I) of Temple. Since most of the original building stone is lying at site and it may not be difficult to re-assemble them by anastylosis following principles of international conservation charters like Venice, Nara and Burra Charters. However a policy and priority needs to be worked out which should be part of the overall conservation plan for the site. This has been dealt with as part of the conservation study presently being developed for the site. Emergency stabilization of monuments has been now undertaken.

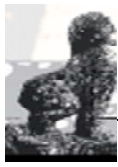
c. Problems with water drainage are causing major structural problems at different parts of the monument. The situation is aggravated due to depressions in the ground and presence of old bunkers in the basements which allows water ingress into the foundation causing instability and ultimate collapses. It is thus important that this problem is addressed immediately.

d. There are also specific problems related to the day to day maintenance of the monument like the cleaning of the areas around the temple and causeways. While the cleaning is good especially for better drainage, erasing or total removal, however can cause erosion. Removal of total ground cover and use of heavy equipment should be avoided as it contributes to erosion.

e. The conservation plan should be supported by full measured drawings and condition assessment and decay mechanisms for all the historic structures of the site.

f. The eastern staircase which is planned to be a primary access needs major conservation efforts after its documentation. Though the area has been cleared of mines and vegetation growth, conservation efforts are still to be undertaken. The proposed provisional staircase being built in wood along the eastern staircase should use 'good' stretches of the existing stone staircase where ever possible to minimize time, efforts and resources.

g. Another aspect of concern is the ground instability; there are evidences of damage of certain archeological heritage of the site due to this, especially when some of the construction is done to include the natural rock as its base or plinth. However to ascertain anything conclusively proper scientific studies will need to be carried out.



access is a long flight of stairs cut into the mountain and is a treacherous climb of about 1.4 kms to the top most of which is very steep. Sections of this staircase are badly damaged , a provisional staircase along the ancient staircase is under construction. A visitor center is also under construction at the base of this staircase.

d. It is proposed that the vehicular access to the site is restricted at the visitor center for the eastern staircase and till the pagoda for the road coming from K1 village. A car park is also proposed near present K1 Village.

e. There are basic toilet facilities and temporary stalls catering to **basic amenities** like cold drinks and snacks to visitors. However this is only an informal arrangement. It is proposed that new toilets be constructed at certain locations on the site. They should be constructed so that they merge with the surroundings and are not visually obtrusive.

f. There are no places to stay at the site. The nearest village Saem offers some basic accommodation which should be supplemented perhaps by a Community Home Stays program. This aspect needs attention and proper tourist infrastructure and facilities need to be provided in a planned and sensitive manner within the proposed eco-compatible village.

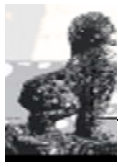
g. Tourism is seen as a major contributor to the national economy of Cambodia and there is a national campaign to increase visitor numbers. This, coupled with the inscription on the World Heritage List of the site, is predicted to increase visitor numbers to Preah Vihear. This document recognizes the importance of a sustainable approach to tourism at the site. Moreover the site offers many possibilities of **heritage and rural eco-tourism**.

h. **Public / private enterprise or Co-operative models** are recommended for an effective partnership to promote and market this concept at site. Adequate hospitality, hygiene and visitor interaction training would need to be imparted to local families engaged in this. In addition developing eco- resorts for high-end tourists can also be considered using appropriate environmental friendly design guidelines. These are planned to be located within the eco-compatible village.

i. Also community members will need to be trained for tourism. This may include **home stays**, local community **knowledge center (museum)**, **herb/botanical garden**, **craft center** etc. the community members could also be trained in tourism hospitality. The objective of this partnership will be to develop tourism in a sustainable way benefiting the local communities directly.

j. An additional dimension of the site is its **religious aspect**, which attributes it a '**living character**'. Because of this many visitors to the site are pilgrims, who may have a distinctive need and requirement than a tourist. Varied typologies of the visitors need to be recognized and catered to within the visitor Management Plan. Pilgrim facilities like meditation or religious center can also be considered to be appropriately located within the site.

k. There are no proper **site interpretation or presentation facilities** at the site. These are urgently required to disseminate the significance of the site as well as increase awareness towards the importance of the site within the visitors. There is a proposed museum at the first entry to the site near Saem village, there is a proposal to house interpretation gallery there along with multimedia presentations on Preah Vihear. A visitor center is also under construction at eastern staircase which is proposed to be the primary pedestrian access to the site. From here information on cultural and natural values of the site can easily be disseminated.



l. There is some **signage** at site but they are generic awareness messages related to nature and cultural heritage conservation. A proper site sensitive and specific signage need to be designed and implemented for both information and directional signs within the implementation of the tourism valorization program.

m. A new means of interpretation additional to physical visit and to publication and audio visual presentation is the opportunity opened up by the spread of internet. There are already numbers of websites featuring the site of Preah Vihear, this resource can be supported with sufficient details and research to make the internet more informative and disseminate the significance and values of the site.

n. The site offers many distinctive and varied experiences, like at the core is the temple and, within the buffer zone an active Buddhist monastery an ecological area rich in bio diversity and within the landscape zone are indigenous Kui villages with a vibrant rural landscape. All these can help disperse the visitors within larger area of the site thereby reducing impact on core of the site as well as bring in economic gains to local communities in a sustainable way. Specific tourism proposal for the same needs has to be developed and detailed out.

o. An important aspect of the site is the survival of a long sequence of archeological and architectural remains and their supporting features in dynamic landscape. Many of these have potential to be developed as **'stepping – off' points** for visitors to follow many interesting **footpaths and historic tracks**. Access to the site therefore will include not only the intense focused experience of the ancient temples but also wider enjoyment of the landscape and settlements within it. Exciting opportunities exist to improve the coordination among these various aspects of the site and their wider interpretation and dissemination.

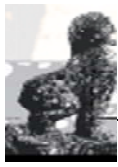
Much of these can be achieved through use of *sympathetic and high quality signage* as well as developing designated **Heritage Walks and Trails** within the site.

p. To improve the accessibility of Preah Vihear new roads are proposed or are being built. This could result in impact on the environment as well on visual continuity of the plains from the top of the cliff. To mitigate this impact it is proposed that the new roads should be constructed only when absolutely necessary and should not be more than **7 mts** in width and should be tree lined on both sides.

q. The physical impact of visitors on historic sites have been subject of many studies, however for the site of Preah Vihear adequate safeguards to mitigate its effects, need to be built in the monitoring indicators, the conservation plan as well as visitor Management Plan. Some of these aspects are already addressed by **restricting vehicular entry and visitors' dispersal** within the site. An important aspect in this regard is **on-site and pre-visit information** in promotional literature, internet and key interceptions points within the site, helping visitors' orientation and respect for the site.

r. Preah Vihear was the center of cultural and ritual activity of the region with many associated sites linked with the temple like Prasat Neak Buos in Choam Ksan District, Angkor in Siem Reap(Cambodia), Vat Phou in Laos etc. The cultural geography of the site goes beyond today's international borders. Re- linking these sites as a cultural axis for tourism circuit will allow exchange of ideas, mutual collaboration and flow of visitors.

s. An air strip is also proposed 25 kms away from Preah Vihear for better accessibility to the region and the site.



## Recommendations

- *Achievement of De-mining of the site*
- *Regional road linkages to Koh Ker, and other associated sites of Shivapada and temples in Choam Ksan should be considered.*
- *International links to associated WH sites like Vat Phou in Laos and Mi- Son in Vietnam can be created as a cultural axis.*
- *The eastern staircase will become the primary pedestrian access to the site.*
- *A provisional staircase in wood to be constructed at places where the original ancient Eastern staircase can not be used by the visitor.*
- *Multiple entrances. Ticketing counters*
- *Visitor center proposed at eastern staircase*
- *Eco Global Museum and a botanical garden etc. proposed at main entrance point*
- *Setting up of an interpretation gallery at the Eco-Gobal Museum*
- *Visitor Management Plan to look at both tourists visiting the site as well as pilgrims.*
- *Develop an Eco-Rural tourism plan and look at possibilities for developing home-stays in the surrounding villages, eco resorts etc.*
- *Develop Heritage trails and walks in the core and buffer zones and train local youth as guides to run these*
- *Signage and interpretation*
- 
- *Restricting new road to parking near monastery.*
- *Develop programs specifically for the youth such as guides training for cultural / nature trails*
- *Examine possibilities for community based eco - tourism opportunities, home-stays in vernacular dwellings, cultural festivals, etc*

## 4.4 Management of natural environment

a. The natural setting is an integral part of the site and is a more dominating factor than the historic constructions at site. The natural setting also provides the site with visual continuity and view sheds. There are also evidences of water networks and rain water harvesting from historic times.

b. Some of the old photographs suggest the site to be having more trees especially along the main temple access. However no tree planting policy was available for review but it is suggested that only authentic species of trees are planted within the core and buffer area. Also for the new trees to be planted local belief system with relationship to the sacredness of certain plants and trees needs to be taken into account. Moreover the original landscape design through research could be re-created around the main temple complex at least in selected areas.

c. Adequate training would need to be imparted to the staff of ANPV and local communities in environmental management to engage them in this aspect. In addition, measures for Rain water harvesting, Restoration of water bodies, Social forestry, etc, will further help create better environment and generate economic benefits to local communities.

d. Even with limited visitor numbers presently there is substantial solid waste being generated at the site, which due to lack of any proper waste management is being dumped in accessible areas of the site. This potentially is not only a health hazard but is also creating environmental pollution. There are many new and conventional means of proper and eco-friendly means of solid waste disposal, like eco sanitary fills, wet lands, waste segregation etc. There is a need for exploring appropriate measures to be adopted for waste management.





e. Moreover further research is also needed in the environmental aspect of the site. Since the setting of the site is integral to it, it is important to establish its **cultural geography** as well as develop **educational and eco-tourism strategies** for the area.

f. Water retention has become a serious issue because of the permanent presence of people on the site. However problem could be solved by proper water collection in the present reservoirs on the site and the **revival of old baray** in core and buffer zones, also new reservoirs could be created in the landscape protection zone after studying the topography. This will not only solve the problem of water scarcity in the summers but will also improve the environmental quality of the site. However ancient water network first needs to be surveyed and studied along with the hydrology of the site before their repairs.

### **Recommendations**

- *Create landscape protection zone.*
- *Study and research on ecological and environmental aspect of the site*
- *Publication on environmental educational aspect of the site*
- *Reforestation using authentic plantation.*
- *Landscape studies and its revival.*
- *Prepare landscape plan for the historic core.*
- *Water revival on ancient water system and bodies.*

## ***4.5 Planning, New Development and Policy Framework***

a. Due to limitations of a comprehensive archaeological data and planning control some areas of the site are being used for **inappropriate activities** like military housing and encampment, public utilities etc. All these activities though may be essential for the protection and the development of infrastructure at site; however their placement and location should be determined through proper planning and after the archaeological investigations and evaluation of visual impact of the intervention.

b. The overall design of the temple complex and its associated cultural landscape has changed little since the 13th century when it was at its zenith, and more recent buildings such as the Buddhist monastery and some village houses are in traditional vernacular styles and give the site a '**living continuity**'.

c. Within the core area there are also number of small houses and barracks mainly belonging to the locally stationed army and police. The army encampments from the core zone are proposed to be controlled or shifted from within the core area and rehabilitated elsewhere in the site.

d. Some of the buildings may have potential for "**reuse**" especially for visitor and administrative facilities, for example the **disused barracks** near the small tank can be developed as ANPV's site office with research and guest house facilities.

e. A **statutory planning system** is the primary means to ensure that the new development within or near the site are consistent with the site's historical significance. It is thus proposed to have a **planning policy**; also a **detailed zoning and land use** along with **activity plan** is needed to be established for the site.

f. The planning system has the potential to make a significant and positive contribution to the protection and enhance the character and appearance of the site. By using the planning policy of **Development Controls and Building Bylaws** imaginatively and creatively the ANPV can





ensure that the new development within the site enhances the character of the site and provides continuity to the local traditional and indigenous architecture. For example, key development sites like interpretation center, visitor center etc. can be identified and developed as model projects to achieve this objective.

g. It is also recognized that the development controls imposed on the site may not be well understood by the local communities, it is thus important to make them participate in a planning consultative process from the very beginning; also the ANPV who will be responsible for the site will need to provide them and other agencies with guidance and technical assistance to help them comply with the development controls.

#### **h. Re-organization and Rehabilitation**

The existence of a new K1 village and market at the base of monumental staircase are worrying since both of them are disturbing the archeology of the area. The market area also needs to be rehabilitated there by liberating the archaeological esplanade. Some of the local dwellers could be relocated in the proposed new eco-compatible village.

near Saem which is proposed to be the main access to the site, however some souvenir shops can be designed but out of the sight of the monument where buildings and facilities would be subject to a strict design controls and integration to the site. According to a 2006 census the Kor1 "K1" villages is comprised of: 144 houses; 270 families / 760 inhabitants. Some of the houses are makeshift, and made of poor quality materials; moreover they are spread sporadically in the landscape without any planning or design. This part of the site is rich in archeological deposits, part of the village has even encroached the ancient baray. The K1 village inhabitants are being transferred to the eco-compatible village. There are also three more ancient small villages (Svay Chrom, O Angkrong, Bantey Youn) within the landscape protection area. These villages are of ethnic Kui tribe and contribute to the intangible heritage value of the site and thus should be retained.

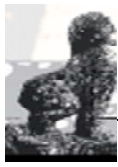
#### **i. ECO-COMPATIBLE VILLAGE**

A new settlement outside the landscape protection zone is proposed near Saem village called eco-compatible village or the Eco- Village of Samdech Techo Hun Sen. The houses and families from the Market and K1 villages are proposed to be transferred to this village. Within this settlement there will be space for 2000 families, beside the community facilities and social infrastructure. All the tourism infrastructure developments like hotels, guest houses, shopping etc. are also proposed within the Eco- Village.

j. A long term development plan is also under preparation especially in the light of the proposed eco-compatible village. Many issues like electricity waste management etc. need to be addressed in the plan. It is proposed that the long term development plan be based on sustainable development principles with use of environmental friendly technologies like solar and wind power etc. The natural water sheds and existing water bodies like the lotus pond at Svay Chrom should be protected.

### **Recommendations**

- *Prepare zoning plan with Land use and activity use plan*
- *Establish planning policy and developmental controls for the site.*
- *Rehabilitation of market and K1 village to eco-compatible village.*
- *Designate areas for army use.*
- *Restrict development on archeological sensitive areas and high visual areas.*
- *Setting up of a community center in eco-compatible village.*
- *Promote traditional lifestyle gallery in proposed new museum.*



l. There is some **signage** at site but they are generic awareness messages related to nature and cultural heritage conservation. A proper site sensitive and specific signage need to be designed and implemented for both information and directional signs within the implementation of the tourism valorization program.

m. A new means of interpretation additional to physical visit and to publication and audio visual presentation is the opportunity opened up by the spread of internet. There are already numbers of websites featuring the site of Preah Vihear, this resource can be supported with sufficient details and research to make the internet more informative and disseminate the significance and values of the site.

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q. The physical impact of visitors on historic sites have been subject of many studies, however for the site of Preah Vihear adequate safeguards to mitigate its effects, need to be built in the monitoring indicators, the conservation plan as well as visitor Management Plan. Some of these aspects are already addressed by **restricting vehicular entry and visitors' dispersal** within the site. An important aspect in this regard is **on-site and pre-visit information** in promotional literature, internet and key interceptions points within the site, helping visitors' orientation and respect for the site.

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s. An air strip is also proposed 25 kms away from Preah Vihear for better accessibility to the region and the site.



## CHAPTER 7 - PROPOSED PROGRAMS FOR ACTION

Based on the identified issues and to achieve the objectives set in this document following actions are proposed to be taken up on various priorities. For detailed conservation interventions refer chapter five.

S. No	Proposals	Project Objectives	Priority	Status
<b>1</b>	<b>Conserving The Special Character And Values Of The Site</b>			
1a	Establish MCC to set monitoring framework for the site	For monitoring the effectiveness of the MP & assess change in the site.	High	NC for UNESCO
1b	Create Landscape Protection Zone and establish Royal decree for the same	For effective conservation & management of the site especially its natural assets.	High	Ongoing ANPV
1c	Review the zones to reflect the full values of the site	To conserve special character of the site.	Medium	Dept of M& Dept of Env ANPV
1d	Identify funding sources	To implement priority projects.	High	Dept of Admn & Finc , ANPV
1e	Set up consultative process	To involve multi stakeholders in management process	High	Dept of Order ANPV
1f	Rehabilitation of market and reorganization of K1 village.	For effective conservation & management of the site	High	Dept of HS ANPV
<b>2</b>	<b>Emergency Stabilization And Conservation Of Archeological And Historic Structures Of The Site</b>			
2a	Further Develop the conservation plan As given in chapter 5.	To identify conservation needs and appropriate intervention on historic structures.	High	Ongoing Dept M&A
2b	Prepare measured drawings of the historic buildings and structures	For better understanding of the site & its architectural vocabulary, to feed into conservation plan.	High	ANPV Dept M&A
2c	Undertake selective emergency stabilization at 13 identified spots	To protect historic structure from further damage	High	Ongoing Dept M&A
2d	Restoration of <i>Gopura V</i> and central sanctuary of the main Temple	As pilot conservation project	High	Dept M&A ANPV
2e	Prepare Water Drainage plan	To protect historic structure from water ingress and damages to foundation due to flooding	High	Dept M&A & Dept of Env
2f	Conservation and restoration of eastern staircase	For conservation and better access to the site	High	Dept M&A
2g	Undertake Archeological diagnosis at 9 selected spots especially at <i>Gopura III</i> western side	For conservation chronology and eventual reuse of ancient pond	High	Dept M&A
2h	Restoration of <i>Prasat Toch</i> in K1 Village	To protect historic structure from further damage	Medium	Dept M&A
2i	Restoration of Eastern, Western & Northern and <i>Prasat Toch Barays</i>	For protection of site environment and context	Medium	Dept of M&A+ Env
2j	Establish Archeological Potential zones	For protection of heritage and its context	High	Dept M&A
<b>3</b>	<b>Access, Presentation And Visitor Management At The Site</b>			
3a	Complete De-mining of the site	For better and safe access to the site	High	Ongoing CMAC
3b	Building of road from foot hill	For better and safe visitors' access to the site	Medium	Ongoing Ministry of Transport
3c	Develop tourism plan and its marketing strategy	For quality and holistic visitor experience	Medium	Dept of Tourism
3d	Prepare visitor management plan	To increase number of visitors to the site	Medium	Dept of Tourism
3e	Produce heritage trails and eco walks within the site	For dispersal of visitors in wider site setting	Medium	Dept of M&A + Tourism
3f	Develop tourism 'products'	For promotion of local crafts	Low	Dept of Tourism
3g	Restrict vehicular traffic to main parking	To conserve site's special character	High	Ongoing ANPV
3h	Develop pedestrian and multi - access to site especially the Eastern staircase access	For dispersal of visitors in wider site setting	High	Ongoing ANPV
3i	Complete regional linkages to site by road and air networks.	To make the site more accessible to wider volume of visitors	Medium	Airport Proposed RGC
3j	Design of Appropriate signage for the site	For better site interpretation & presentation	Low	Ongoing Dept M&A
3k	Create Cultural Axis linking associate sites especially the four WHS of the region in Cambodia, Laos and Vietnam	To allow visitor flow and mutual cooperation	Medium	RGC
3l	Develop Website with info on site	For better site interpretation & information dissemination	Medium	Ongoing ANPV
3m	Set up interpretation center / Visitor center especially at main access points of Saem and Eastern staircase.	To promote better understanding of the site's significance & values.	High	Ongoing Dept of Tourism ANPV
<b>4</b>	<b>Management Of Natural Environment</b>			
4a	Develop plan for environmental improvements, reforestation	For environmental protection of site	High	Dept of Env ANPV
4b	Develop plans for tree cutting and plantation based on conservation requirement and indigenous species	For stability of monument and drainage of water	High	Dept of Env forest & water ANPV
4c	Revive ancient water system at the site including Barays at foothill through rain water harvesting	For environmental enhancement of the site and improve water availability at site	Medium	Dept of Env ANPV
4d	Carry out environmental and cultural audit of all major proposed interventions	To safeguard site from ecological impacts of developmental interventions	Medium	Dept of Env ANPV
4e	Waste management plan	For better Waste disposal & safeguarding site against pollution of site.	High	Dept of Env ANPV



<b>5</b>	<b>Planning, New Development And Policy Framework</b>			
5a	Prepare land and activity use / zoning plan and Identify areas for development.	For controlling non - conforming activities within the site and establishing conservation / protection and development zones	High	Ongoing Dept of HS
<b>6</b>	<b>Research And Further Studies</b>			
6a	Identify research gap and take up appropriate scientific studies	To increase understanding of the site to help management decisions	High	ANPV
6b	Archeological explorations	To understand full extend and significance of the site.	Medium	Ongoing Dept M&A
6c	Promote international study group and research	To increase understanding of the site and share best practices	Medium	Ongoing , ANPV
6d	Creating a data bank of information on the site	To guide the heritage management process	High	ANPV
<b>7</b>	<b>Local Community Participation</b>			
7a	Identify community skills and their livelihood development	To involve local communities in conservation and management of the site	Medium	Dept of HS
7b	Develop heritage educational and arts programs especially for local schools & community groups	To use the site as an educational tool	Low	Dept HS
7c	Promote community use of the site and its facilities	To involve local communities in conservation and management of the site	Medium	Dept Tourism & HS
7d	Improve community infrastructure. With setting up of an ECO-VILLAGE	To improve living standards of local communities	High	Dept of HS
7e	Set up community Resource center / Museum and botanical gardens	To create reservoir of traditional knowledge systems.	Medium	Ongoing Dept of HS & Tourism
<b>8</b>	<b>Site Management Framework And Administrative Structure</b>			
8.a	Review staff requirement and Identify Training needs	To implement the proposed actions	High	ANPV/ ICCROM
8b	Set up administrative and management framework	For coordinated conservation and management of the site	High	Completed ANPV
8c	Site office in disused barracks	For effective conservation of site	High	Completed
8d	Expand mandate of ANPV to include associated sites in the region like Prasat Neak Buos	To establish regional linkages of the site	Low	RGC
<b>9</b>	<b>Risk Management</b>			
9a.	Prepare risk mapping and preparedness plan	For identifications of risks and their mitigation	High	Dept M&A, Env





## Appendix 6

### RECOMMENDATIONS MADE BY UNESCO ON APRIL2, 2009

1-Proposing to revise the protected green, forest, environmental and cultural area to be compatible with the existing Royal Decree on the general management plan. The area is composed of man made structures and natural elements where biodiversity ought to be respected and the balance in the ecosystem should be reestablished.[ activated ] *The newly revised protected zone has been fully endorsed by UNESCO and actual demarcation of the Zoning will be carried out once the amendments of Royal Decree No. 04.06/183 and the Sub-decree No.118 are being finalized. (soft copies of the two legal documents are attached.)*

2-The village of Sraem will be the entrance to the proposed protected area [ activated ] *This point of recommendation is fully in line with the future management objective foreseen by NAPV.*

3-The width of the new road to the East side of the temple of P.V. should be 7 meters and both sides of the be reforested. The visit to the temple area via the historic staircase may commence at the newly constructed visitor center. The actual location of the visitor center needs to be reviewed to integrate into the natural environment [ done ] *The construction of the road which leads to the Eastern staircase is now completed with the length of 7 meters. The reforestation on both sides of the road will be carried out as soon as the fund is available. However, NAPV remains committed to have both sides of this road reforested.*

4-The visits from the East side could be continued further by crossing the restored stream and not from the bottom of the historic staircase. [ done ] *The provisional wooden staircase has been constructed at about 60%.*

5-The conservation, restoration and eventual restitution of the historic staircase, including the provisional[ staircase should be started as soon as possible [ already started ] *NAPV has undertaken a number of conservation activities, but most of them would fall under the long-term project.*

6. Recruiting an inter-disciplinary team consisting of archeologists, architects, engineers, hydrologists, environmentalists and demining services, including a permanent core technical team onsite. *Done.*

7. All available information should be collected to create an appropriate database for scientific interpretation of the site and to guide the heritage management process. *This data collection is still under study, but some proposed view-points have been chosen*

8. Problems with water drainage on all Gopuras of the temple are causing major structural problems at different parts of the monument. It is thus important that this problem is addressed immediately. It is proposed that visitors are kept at a safe distance while a possible partial dismantling of Gopura V could be investigated. *Certain proposals over these issued had been prepared by the Department of Monuments and Archaeology (DMA).*





9. An archeological diagnosis should be continued at the Western side of Gopura III in view of conservation, chronology and eventual reuse of the ancient pond. A monitoring system should be installed to observe the evolution of the monument. DMA has paid special attention on this matter.

10. Urgent attention should be paid to the pollution and waste management at the site and its larger surroundings. The comprehensive approach to combat this problem has yet been drawn, but some measures had been taken by the Department of Environment, Forestry and Water (DEFW).

11. The Forestry department should pay special attention to the cutting and planting of the trees and decide on the species to be used with relation to the stability of the monument, the drainage of water on the site, the observation points for visitors, and take into account local belief systems with relation to the sacredness of certain plants and trees. A number of projects have been submitted by DEFW (pending the approval of the proposed budget).

12. The structural problems on-site are caused by the existing drainage system. There is the specific problem of the cleaning of the area around the temple and the cleaning of the causeway. While the cleaning is good for drainage, erasing or total removal however can cause erosion. Removal of the ground cover and the use of heavy equipment should be avoided as it contributes to erosion. A number of projects have been submitted by DMA (pending the approval of the proposed budget).

13. Water retention has become a serious issue because of the permanent presence of people on site. However the problem could be solved after measuring the quantities of water that can be contained in existing reservoirs and studying the topography. With the support of the Ministry of Water Resource, the ancient reservoir at the back of the pagoda has been improved and its capacity has been enlarged. Two more of water collected sites are: 1) Sambok khnum; and 2) at the eastern side of the burned market.

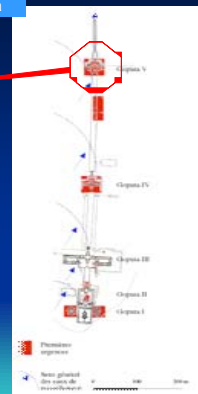


## Appendix 7

### PRESERVATION AND MAINTENANCE PLAN OF DIFFERENT LOCATIONS TO BE IMPLEMENTED IN PRIORITY

ARCHÉOLOGIE ET CONSERVATION		CARTE D'ÉTAT SANITAIRE DE LA ZONE SUD	
URGENCE	FICHES		
<b>PREMIÈRES URGENCES</b>			
PREMIÈRE ENCEINTE			
Gopura I : Angle Sud-Est	I-04		
SALLE CRUCIFORME EST	II-02 / II-03		
Angle Sud-Est - Porche Sud			
SALLE CRUCIFORME OUEST	III-02 / III-03		
Porche Ouest - Angle Sud-Ouest			
SALLE LONGUE A PILIERS	IV-02		
Porche Nord	VII-02		
GOPURA II			
Porche Nord	VIII-04 / VIII-06		
GOPURA III	VIII-09		
Salles longues Est et Ouest			
Gradins terrasse Est			
<b>DEUXIÈMES URGENCES</b>			
SALLE CRUCIFORME EST	II-01		
Partie Est			
DEUXIÈME ENCEINTE	IV-02 / VI-04		
Salle longue à piliers - Enceinte Est			
GOPURA III	VIII-05 / VIII-06		
Salles longues Est et Ouest	VIII-08		
Terrasse Est			
<b>SURVEILLANCE</b>			
PREMIÈRE ENCEINTE	I-01		
Sanctuaire central - Partie Nord	II-01 / III-01		
SALLES CRUCIFORMES EST ET OUEST	IV-02 / V-01 / VI-02		
Socle rocheux	VIII-01 / VIII-07		
DEUXIÈME ENCEINTE			
Salle longue - Bibliothèque - Enceinte			
GOPURA III			
Gopura - Prassat - Salle longue Est			

#### Urgent Preventive Intervention of the 5th Gopura



- Preventive measures against defacement and all risk in establishing wooden staircase to protect architectural elements and facilitate visitors at the fourth gopura





Appendix 8

Extract from

**Preah Vihear**

**An introduction to the World Heritage Monument (September 2009)**

Sachchidanand Sahai

Expert-Historian

Apsara National Authority

(Published by UNESCO office in Phnom Penh)

Chapter One

**THE MOUNTAIN WALL**

**The Dangrek Factor**

The importance of Preah Vihear can be correctly assessed only in the geopolitical context of the Dangrek Range, where this sacred complex is located. This range extends from the Mekong River westward for approximately 200 miles (320km), merging with the highlands near San Kampheng in northeast Thailand. It is a low mountain range (average elevation 500m). The highest elevation is 753 meters (2470 feet) above sea level. The mountain slope down in the north towards the Mun Valley. In the south, they stand erect like a high wall. From the sixth to twelfth century, the policy planners of Angkor were deeply concerned with the problem of maintaining a free flow of ideas and institutions, and an exchange of regional wealth, across the “Mountain Wall” of the Dangrek. They sought to link the plains of the Great Lake with the Mun Valley and beyond, using a dozen of passes in the range. The sacred complex of Preah Vihear is an architectural expression of that concern. The Dangrek factor in Angkor led to the development of the foothills on the either side through a network of hermitages and temples, and management of the area as a separated unit called the Foothills Province.

**Preah Vihear in the Dangrek**

The temple of Preah Vihear is located on a cliff plateau in the eastern sector of the Dangrek range, in the province of the same name in northern Cambodia. According to one source, the



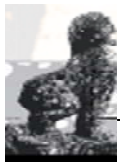
mountain is 547 meters high and 657 meters above sea level at this point (Roveda, 2000). The altitude of Preah Vihear is noted differently by different authors: 735 meters – Barthelemy; 760 meters-Lunet de Lajonquiere; 700 meters- Pavis. Some 200 meters long on its east-west axis and several kilometers long on its north-south axis, this plateau culminates in a steep cliff, inaccessible from the south. From the remaining three sides north, east and west-the mountain is approachable, following its slopes. From the north the slope is exceedingly gentle. From the east and west it is extremely steep.

### **The Earliest Reference of the Mountain Wall**

Phnom Dangrek the modern name for the chain, means “Mountain of the Balancing Beam”. A fragmentary pillar inscription of Prasat Khna dated 1041 A.D. refers to the Dangrek Mountain as *Phnom Kampheng* or the Mountain Wall. The Thai sector of this chain is known as Kampheng Veang (Long Wall) and in Lao sector as Phnom Den Meuang. (Briggs, 1999, 166, 195, 197, 222; IC 1, 195, K660).

### **Choeung Phnom: The Foothills Province**

The foothills of Dangrek has been inhabited since pre-historic times. In the 1940s, research conducted at three sites (O Yak, Opic Chan and O Nari) in the region of Plu Prei yielded semi-polished stone tools representing the Sumatra type Hoabinhian Paleolithic tools, testifying to the development of this region as one of the earliest shelters of man (Levy, 1943). However systematic excavation at several sites is needed to establish the sequence of cultures in the region. Inscription from Prasat Neak Buos suggest that the region was occupied in pre-Angkor period. In the Angkor era, effective control over the Dangrek Range and its passes was considered crucial in the expansion of Khmer domination over the mainland of South East Asia. The early kings of Cambodia were fully aware of its strategic importance. Such vast its importance by ninth century the major part of the foothill was brought was brought under the administration of separate administrative unit (*praman*) of the kingdom. It was called the Division (*praman*) of the Foothills (Choeung Phnom). In 893 A.D.; during the rule of Yashovarman, workers from the village of Virendrapattana in the Division of Choeung Phnom were attached to the royal



temple of Preah Ko (K 713 B/22, IC 1, 23). Establishmen of the hermitage at Neak Buos in the foothills of Dangrek by the same king was as much a strategic measure as an act of piety.

In 1003 A.D.; the stele of Tuol Prasat (K 158) mentions a dignitary Vap Jinendracharya of Choeung Phnom (IC 2, 111, 1/24). A certain dignitary who belonged to the village of Samabhumi in Choeung Phnom came to swear to oath of the loyalty to the king at the royal palace in Angkor during the reign of Suryavarman I. An inscription of Prasat Khleang dated 937 Shaka era (K 466) mentions some dignataries associated with Choeung Phnom as taking an oath of loyalty (IC 3, 212, K 292 C/37).

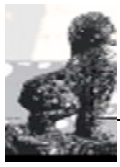
An inscription (K 878) on the doorjamb of the temple of Prasat Kuk Pradak, dated 898 A.D.; in the reign of Yashovarman, locates Bhadrappattana in the Division of Choeung Phnom. The people of this village offered one thousand pieces of fruit to the temple on the occasion of the festival of Magha (IC 5, 88).

The stele of Sdok Kak Thom ( K 235) mentions Cheoung Phnom as a district (*visaya*). One of the member of priestly family of the Devaraja cult entered holy order on a hill named Thko in thje district of Cheoung Phnom. The priest laid out a village, set up an image, and named the hill Bhdragiri. From stanza 36 of the Sanskrit text of the same inscription, it is clear that Choeung Phnom corresponds to the Sanskrit nname Adripala.( Sak-Humprey, 2005, K 235, D/3, D/20, ST 36). Aymonier (1901-265,n2), and George Groslier (BEFEO 34, 366) identify Mount Thko ( Bhdragiri) with Phnom Deng or Tangko in the north-west part of Dangrek.

The Rolom Tim inscription of the tenth century mentions an official called the Chief of Paddy of Choeung Phnom (K 233, Journal Asiatique 1954,50).The people of the territory of Choeung Phnom adjacent to Shikharesvara (Preah Vivear) were asked to swear an oath of loyalty to the god. It is obvious that in the time of Suryavarman I the administrative unit of Choeung Phnom extended to the foot of Preah Vihear as indicated by the use of the term “samypa” (adjacent) in the text ( anak phong ay praman choeung phnom ta samipa phong pre syang ta sapatta. IC VI, 257 L/21-23).

In the 1940's, the density of population in the foothills of the Dangrek was two persons per square kilometer.Was it more numerous in Angkorean times? The number Khmer temple





sites in the foothills suggests that the region was densely populated under the Angkor Empire. However that may be, a system of man-power mobilization, in the intensive exploitation of iron deposits, quarries, forest reserves of animals to be hunted, and enhance agriculture based on irrigation from water reserves (beng, srah, baray etc.) offered a favorable environment to sustain a denser population.

Till recent times, the majority of the inhabitants to the north of Kompong Thom were Kuy (Koui). These Kuy have preserved their own language and specific usages, in spite of many centuries of interaction with Khmer civilization.

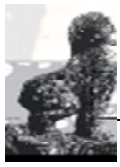
Ethically, Angkor was not a homogenous empire. Various non-Indianized ethnic groups lived on the periphery of the empire. Gradually, they came in contact with the more or less Indianized Khmers. It is quite possible that, at the expense of ancestors of the Kuy, the Khmer established themselves in the region north of Tonle Sap and west of the Mekong.

## **Myths**

According to folktales both in the north and south, in the remote past a vast ocean submerged all the areas up to the Dangrek chain. The boats which carried the first ancestors of the Khmer stuck to the Dangrek, floating over the vast ocean. Then they made their home there. (Aymonier, 1901, 202).

Cham folktales also claimed that in the year of Buddha's death (543 B.C) the king of Champa was shipwrecked on the Dangrek Mountains. As a result, the king had to settle at Kouk Telok (Moura, 1883, 6; Aymonier, 1901, 202).

The Dangrek represent Himalayas for the Khmer and Cham myth-maker of main land Southeast Asia. These folktales echo the Indic myth of flood. To escape the flood, Manu the progenitor of mankind, escaped in a boat and took shelter at the floor of Himalayas. "What is more certain in many centuries at the time when historic Cambodia blossomed," says Aymonier, "the influence of her literature which, was directly imported from India, indicated that Kambujas considered this chain to be the Himalayas in miniature, which had many retreats and where several temples were built". (Aymonier, 1999, 241).



## The Concept of Kailasha

Though most of the Khmer temples symbolize a mountain, they are not all exclusively representation of Meru. Some temples may represent some other mythical mountains such as Kailasha which dominate the Himalayas in the Indian subcontinent. Kailasha, however, is not usually considered to be the center of the universe (Filliozat, 1954, 531. Hedwige Miltzer O' Naghten, 200).

There is enough art historical evidence to demonstrate that the Khmer were quite familiar with Kailasha, the Himalayan abode of Shiva.

At Banteay Srei, one of the pediments of the south library portray an event in the life of Shiva which took place on Mount Kailasha in the Himalayan Range: Ravana shaking Mount Kailasha. "The sacred mountain is figured as a stepped pyramid quite similar to the tiered foundation of certain *prasat*. A representation of Mount Kailasha, conceived in the same formula, can be seen on a bas-relief of the Banteay Srei. The four tiers, that last serving as Shiva's throne, are decorated with the moldings and provided with vigorously contour cornices. Trees with stylized fronds evoke the "ravishingly beautiful forest" that, according to legend, surrounds the eternal dwelling-place of the god"

(Louis Finot, *et al*, 2000, 66). An Angkorean inscription refers to the legend of Ravana shaking Kailasha in unequivocal terms (IC 1, Phnom Bayan, st I, 258).

J. Boisselier (1966, 182) underlines the correspondence between the inhabitants of different levels on Kailasha and guardians of flights of stairways of temples.

The Khmers were familiar with the daughter of the Himalaya, married to Shiva and known by several Sanskrit names that mean "the daughter of the mountain"

(IC 1, st2, 152; IC 1, st 26, 243). As professor Hang Soth, Director General, Preah Vihear National Authority informs me, even in present-day Cambodia, the memory of Kailasha, the mountain dwelling is preserved in the dance form called *rabam Kailas*.

The ancient Khmers developed another Kailasha at the cliff of Preah Vihear, considering the Dangrek Range as the Himalayas of Angkor. By the eleventh century, the Dangrek Range, its peaks and cliffs, its foothills and plain attained the virtual status of the Himalayas of Angkor as they were developed into sites of Shaivite ascetic practices, supported by well developed farmlands and water management projects.



### **The Configuration of the Dangrek Mountain**

After taking its initial North-South direction, the Dangrek mountain suddenly bends to east, making a right angle at the city of Korat in northeast Thailand. From there it runs almost straight from west to east, separating the basin of the Great lake of Cambodia from the Mun Valley in north-east Thailand. It is nearly parallel with the equator from the meridian of Pacshim and Korat. The chain forms a sort of supporting wall between two terraces of different altitude. The plateau of the Mun constitutes the lower terrace and it formed from the enormous layers of sandstone.

The Mun originates at the angle formed by the Dangrek below the city of Korat, joints various streams flowing from the chain and runs initially from the southwest to the noreast. As the river leaves the prvince of Korat, it takes eastward, numerous torrents which flow from the Dangrek, joint the river almost perpendicularly from the right. The area south of the Mun, watered by numerous torrents from the Dangrek slopes, is populated by Khmers, with Kuys and Lao towards the east.

The northern side of the Dangrek chain offers fertile land watered by the Mun River and its tributaries whjich originate from this chain. The southern side unfolds into the plain of Angkor, water by numerous channels flowing form the mountain range.

The northern provinces of Thailand to the north of Dangrek (Korat, surin, Sang Keah, Sisaket, Kou Kha, Oubon *etc.*) where as important as the plain of the Great Lake in the formation of the state in the pre-Agkor and the Angkor eras. Exploration, manipulation and the management of the Dangrek chain in the intrest of the state wre three fold goals of the Khmer monarchy.

A few miles beyond the pass of Dan Ta Puoi, the chain forms a rather regular arch which makes its advance several miles towards the south. There it stretches into an accentuated spur, imposing to see, and then suddently takes up its last direction to the north-northeast towards the confluence of the Mun and the Mekong. The Lao then give it the name of the Phu Daen Meuang (Aymonier, 1999, 3, map 1).



Nature has designed about a dozen stairways by means of which pedestrians go from one terrace of the Dangrek to the other. A number of passes, which bullock carts crossed with great difficulty at the beginning of the twentieth century, are more or less open to modern transport.

### **Phimai**

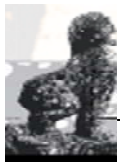
During the eleventh and twelfth centuries, Phimai emerged as an Angkorean center on the right bank of the Mun, some eleven miles from the modern city of Korat. This northern metropolis was connected with Angkor by a well designed road. That road passed through Phnom Rung, and Muang Tam, and crossed the Dangrek Pass at Prasat Ta Meuan.

Along the Dangrek Range, within a distance of three kilometers, four sanctuaries are planted: Prasat Ta Meuan Thom, Prasat Prasat Ta Meuan Toch, Prasat Ta Meuan and Prasat Chan. In the era of Jayavarman VII Prasat Ta Meuan held the sacred fire. Prasat Ta Meuan Toch was the hospital chapel as it indicated in an inscription discovered on the site. Prasat Ta Meuan Thom was dedicated to the footprints of Shiva. It is not known to which god Prasat Ta Chan was dedicated. Prasat Krabei (Prasat Ta Khwai) is eleven kilometers east of Ta Meuan Thom.

It is interesting to note that four temples are built into the Dangrek range, each representing one of the four cardinal directions:

- Prasat Preah Vihear - North
- Prasat Ta Khwai- East
- Prasat Ta Meuan Thom- South
- Prasat Ta Bai Baek- West

Prasat Ta Meuan Thom is aligned with Preah Vihear located 164 kms to the east. Prasat Ta Meuan Thom and Prasat Ta Meuan Toch, built less than two miles distance to the west of the pass of Chup Smach, are an important passage from the Mun valley to the Great lake crossing the formidable Dangrek chain. They also stand testimony to the Angkorean efforts to overcome the barrier of the Dangrek.



Ta Meuan Thom, the eastern most temple, located only sixteen hundred meters below the rocky crest, is announced from the foot of the Dangrek by a stairway which climbs the mountain. At the beginning of the twentieth century, this stairway served as “ a path for bandits rather than for the rare travelers who dared to penetrate these deserted areas.”

A number of inscription from Ta Meuan Thom have been recently deciphered by scholars of Ecole Francaise d' Extreme-Orient. These texts reveal that the site is dedicated to the Western Footprints of Shiva.

Ta Meuan Toch stands before a path which ascends to the Dangrek heights. A stele in Sanskrit of Suryavarman II's begins with an invocation to the Buddha (*namo buddhaya*). Kampeng Nai, located some thirty kilometers to the west of Sisaket, is another important monument with a Khmer language inscription that conveys the importance of the Dangrek range in the Angkor Empire. According to the inscription, in April 1043 A.D., a number of dignitaries joined together to buy a piece of land for Vriddheshvara, the Elder Lord, supposed to be one of the names of Shiva. The land was bought in the country named the Lake of Tamarind Trees (Stuk Ampil) which appears to be the name of the area where the temple of Vriddheshvara was located. The main promoter of this project was high official named Shivadasa, the president of the tribunal and the inspector of quality and defects. He bears the grand title of *vrah kamrateng an*.

His other associates in this project were also high dignitaries bearing the same title. One of them is quite relevant to the context of the Dangrek chain and the temple of Preah Vhear, a prized monument on this chain. He was V.K.A (Vrah Kamrateng An) Shikhaheshvara who read the Sacred Books of the Law. As Vriddheshvara and Shikhaheshvara are mentioned in one of the inscriptions of Preah Vihear, it is certain that dignitaries styled as V.K.A. of Shikhaheshvara was someone related to the temple of Preah Vihear. His main job was to cite the texts of the Law in judicial proceedings.

## Sisophon

The Pass of Tangkor (in Siamese Chhang Takor) in the Dangrek chain leads one from Korat to Sisophon. A small mountain chain, separate from the Dangrek Mountains, forms, with the





latter, a huge amphitheatre, which is itself divided into two parts by intermediate chain. These mountains are called Circular mountains (Khao Vong, Khao Lon, Khao Khna). In this region of Circular Mountains is the tower of Sangke Kong. The inscription on this monument, dated 938 Shaka (1016 A.D.), belongs to the reign of Suryavarman I. Another important Khmer inscription, narrating the life of the people at the foot of the Dangrek is at the site of Rolom Tim.

The three bricks towers of Prasat Teap Siem are some 40 kilometers south of Dangrek. The inscription refers to King Suryavarman I and Samaraviravarman, one of the dignitaries of his reign. Samaraviravarman is mentioned in the inscription of Phnom Sangke Kong as well. The temple of Sdok Kak Thom, marking the domain of the powerful priests of Devaraja, is some fifty kilometers to the south of Dangrek mountains (Aymonier, 1999, map2).

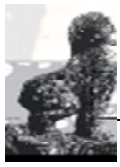
### **Banteay Chhmar**

Another important temple complex which arose from the shadow of the Dangrek Mountains is Banteay Chhmar, built by Jayavarman VII in the memory of his fallen trusted men (sanjaka). Moving north towards the Dangrek, one encounters a series of small temple complexes – Prasat Sing, Prasat Chanlattai, and finally a large water body called Roboek Rit, “the levee of the bowl”, measuring two hundred and fifty meters on the sides.

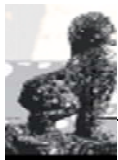
### **Preah Vihear (Melou Prei)**

A few miles east of Phnom Preah Vihear, a pass called Phlau Dan Ta Puoi allows one to descend the Dangrek wall and links the plateau of the Mun with the basin of the Great Lake of Cambodia. It connects the province of Koukhan with that of Preah Vihear (known in the colonial period as the province of Melou Prei).

The province of Prea Vhear stretches into the plain at the foot of Dangrek Mountains, on the dividing line of the waters which flow directly to the Mekong, on the other hand, and those of Sting Sen, which empties into the Great Lake. The expression of Veal Chaik Toeuk, in fact, means the plain of the water division. (Aymonier, 1999, 4, map 1). West of this plateau water flows into Sting Chok and its main tributary of the left Sting Chenh. Prasat Neak Buos, built at the foot of imposing spur of the Dangrek



Mountains, and the satellites of this temple are almost all grouped in a small part of the basin of these two torrents. In fact, the sandstone plateau on which runs the road from Kompong Thom to Preah Vihear is the line of division of water towards the Great Lake on one side and the Mekong on the other.( Levy,1943).



Appendix 9

**GREAT MEKONG SUB-REGION  
CONCEPT**

**14<sup>th</sup> GMS Ministerial Conference**

*GMS Ministerial Meeting*

**Thursday, 21 June 2007**

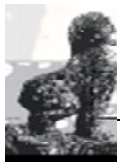
*Introduction of Pioneers*

**By Mr. C. Lawrence Greenwood, Jr., Vice President, ADB**

Excellencies, Ladies and Gentlemen:

As I mentioned earlier, our Meeting today is a celebration of the 15<sup>th</sup> anniversary of the GMS Program. For this reason, we have invited a small group of people who have helped carry the GMS Program during its crucial formative years. It is my distinct honor to introduce these distinguished individuals --- our GMS Pioneers.

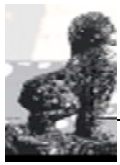
First, I would like to introduce His Excellency, Chea Chanto, who is now Governor of the National Bank of Cambodia. He was one of the architects of the early efforts to open up and modernize the Cambodian economy. As Minister of Planning of the Royal Government of Cambodia, he was part of the team that



oversaw Cambodia's transition from a centrally planned to a market economy and was at the forefront of designing and implementing the Government's reform program. He was also GMS Minister, and spearheaded Cambodia's involvement in the GMS Program in its early years. He participated in six GMS Ministerial Meetings, the 2<sup>nd</sup> to the 7<sup>th</sup>, and was a leading figure in the efforts to formulate and complete the sector studies and master plans for the priority sectors of GMS cooperation. Now, as Governor of the Cambodian Central Bank, an institution he helped to reestablish in 1979, he leads the efforts to set up a modern and efficient financial sector in Cambodia.

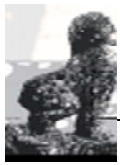
Next, we have Mr. Li Buqun, currently the Deputy Director-General of the China Anti-Money Laundering Monitoring and Analysis Center of the People's Bank of China. He was a senior official of the People's Bank of China when the PBC was still the main institution that led and coordinated PRC's participation in the GMS Program. Together with then GMS senior representative from PRC, Mr. Li Ruogu, he actively participated in the 2<sup>nd</sup> through the 4<sup>th</sup> GMS Ministerial Conferences, and worked to ensure central Government support to the GMS Program. During his stint as Alternate Executive Director for PRC in the ADB Board in 1999-2001, he continued to champion regional cooperation in the GMS.

The next Pioneer, His Excellency, Dr. Supachai Panitchpakdi, is no stranger to the international development community. He is currently the Secretary General of the United Nations Conference on Trade and Development and, before that, was Director-General of the World Trade Organization from 2002 to 2005. Dr. Supachai also chaired the Eminent Persons' Group recently commissioned by our president, Mr. Haruhiko Kuroda, to provide recommendations on the future of the Asia-Pacific region and ADB's



role as a development bank. A professional of great talent and competence, Dr. Supachai is both an international figure and a political and economic leader in his native country, Thailand. He began his professional career at the Bank of Thailand and was a principal figure in putting order in the financial system of his country in the 1980s. From there, he moved on to run for and win a seat in Parliament and was subsequently appointed Deputy Minister of Finance. He was responsible for, among other reforms, the introduction of the value-added tax system in Thailand and measures to instill fiscal discipline that enabled his country to achieve high rates of economic growth. In 1992, Dr. Supachai became Deputy Prime Minister, overseeing the country's economic and trade policy. He was also Thailand's first GMS Minister and was one of the prime movers of the GMS Program, being instrumental in accelerating the pace of the Program during its early years. Dr. Supachai provided strong support to the establishment of the GMS institutional mechanisms, especially the central secretariat in ADB that serves as the "clearinghouse" of GMS information. His presence here with us today, despite his many duties at UNCTAD, shows that regional cooperation in general, and the GMS in particular, still have a special place in his heart. Of course, a reunion of Pioneers would not be complete without a representative from the private sector, given the crucial of the private sector in the development and continued success of the GMS. For many of us, Dr. Jingjai Hanchanlash is the face of the private sector in the GMS. He is currently the Chair of the GMS Business Forum, which is composed of the various Chambers of Commerce and Industry in the GMS countries that have come together to promote and rally support for the GMS Program and help create the vital links between the Program and the private sector. But even before he assumed the chairmanship of the Forum, Dr. Jingjai was already a leading light in encouraging and enhancing private sector engagement in the GMS Program. A highly





respected and active business and civic leader, Dr. Jingjai lent his tremendous stock of goodwill to the service of GMS cooperation. In recent years, largely through his untiring efforts, the GMS Business Forum has generated private sector interest in key areas of the GMS regional economy, such as small and medium enterprise finance, opportunities in the mining industry and in the agro-processing industry, and the overall development of the GMS East-West Economic Corridor.

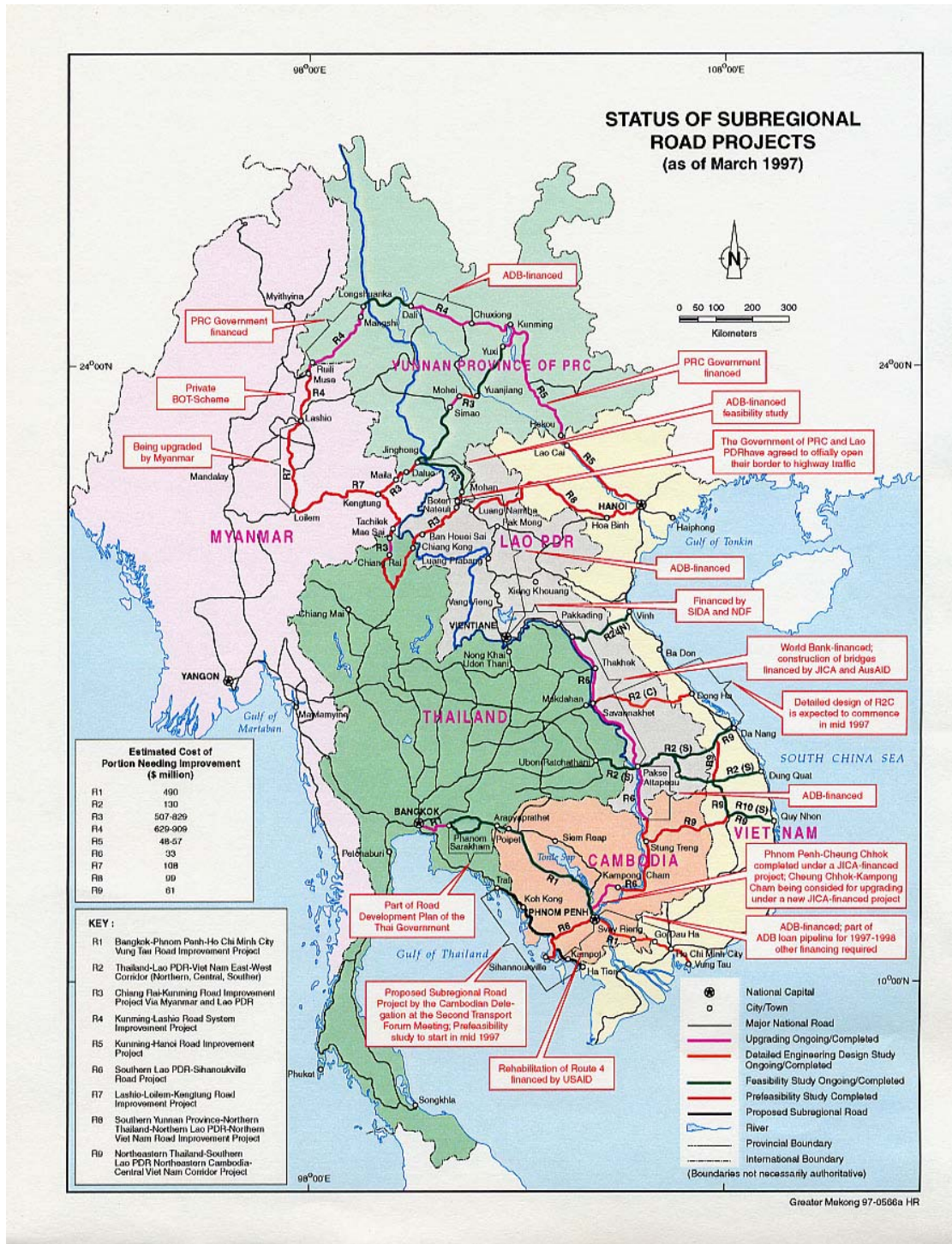
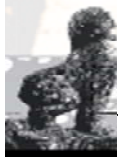
The last Pioneer I am going to introduce is considered within ADB as the “Father of the GMS”. Mr. Noritada Morita, former Director General of the then Programs Department (West) of ADB, is the individual whose visionary thinking in the late 1980s and early 1990s resulted in ADB's involvement in the establishment of the GMS Program. He was the original champion of regional cooperation and integration in ADB through his innovative work in the GMS. He was the first to see the possibility of the GMS countries' working together toward shared goals. He is highly respected by the Mekong countries, and for that matter by all the other countries that he has been involved in, as well as within ADB. Through his persistent efforts, he was able to marshal support from the other areas of ADB for the GMS Program. Mr. Morita has been so well identified with and worked so hard for the GMS that many in ADB and in the Mekong region fondly quipped that GMS really stood for “**G**reat **M**orita **S**cheme”.

Your Excellencies, Ladies and Gentlemen, let's all give our GMS Pioneers a big round of applause.

*[Invite Dr. Supachai to respond on behalf of the Pioneers.]*

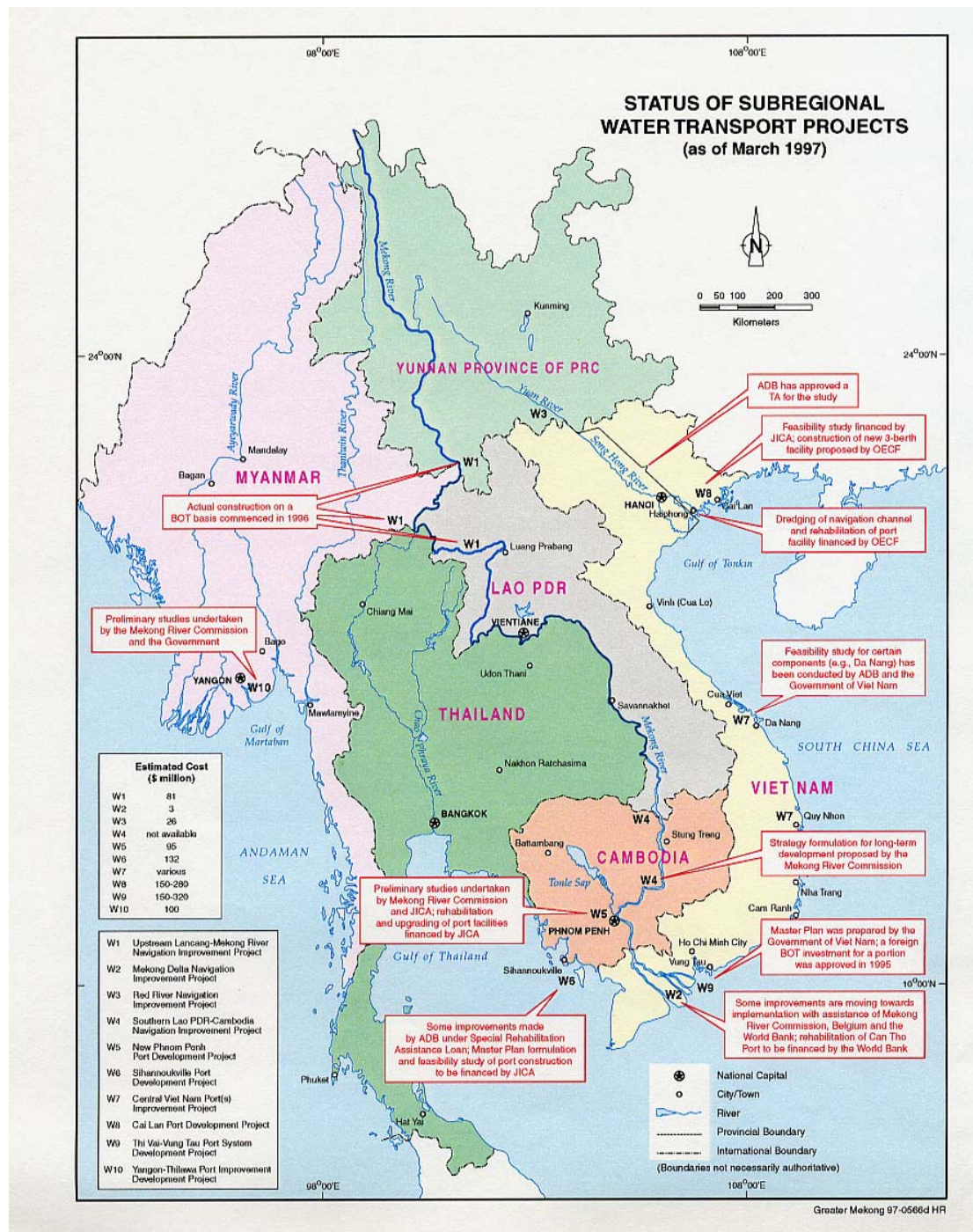


Map of complete Economic Corridor



Status of SubRegional Road Projects





Status of Subregional Water Transport Projects



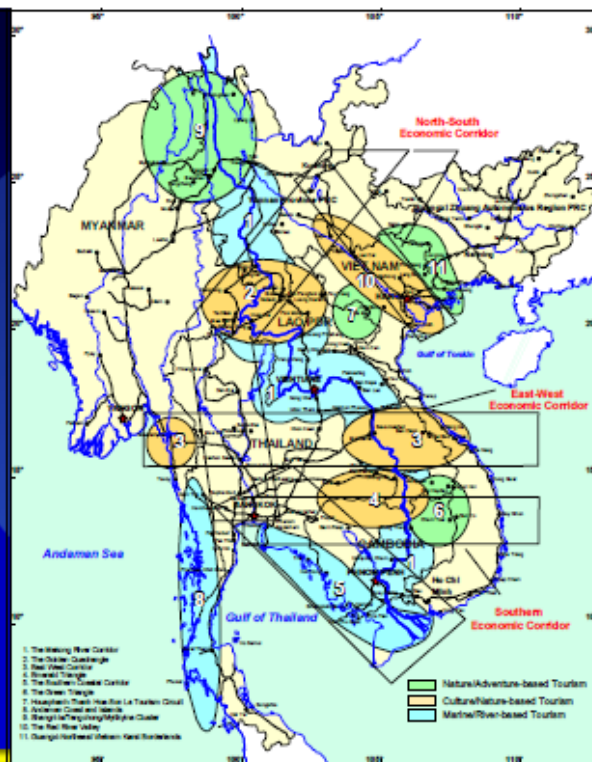
## Promoting the GMS as a Single Tourist Destination

2005: GMS Tourism Sector Strategy (2006-2015) –

7 strategic programs and 29 priority projects, including development of 16 thematic strategic projects and 13 priority tourism zones



Source: GMS Tourism Sector Strategy (2006-2015)



GMS Core Ecosystem Program and Biodiversity Conservation Corridors Initiative - ADB TA 6280  
Greater Mekong Subregion  
Biodiversity Conservation Landscapes and Pilot Sites



## Biodiversity Conservation Corridors

### Component 2

**Aim:** Establish pro-poor sustainable management and use regimes to enhance livelihoods and protect ecosystem services

#### Key Activities:

- Community-based sustainable biodiversity/ecosystem use regimes being established at five biodiversity corridor pilot sites
- Local capacity building involving over 200 pilot site communities
- Local communities and over 20 state and non-state stakeholders as implementing partners







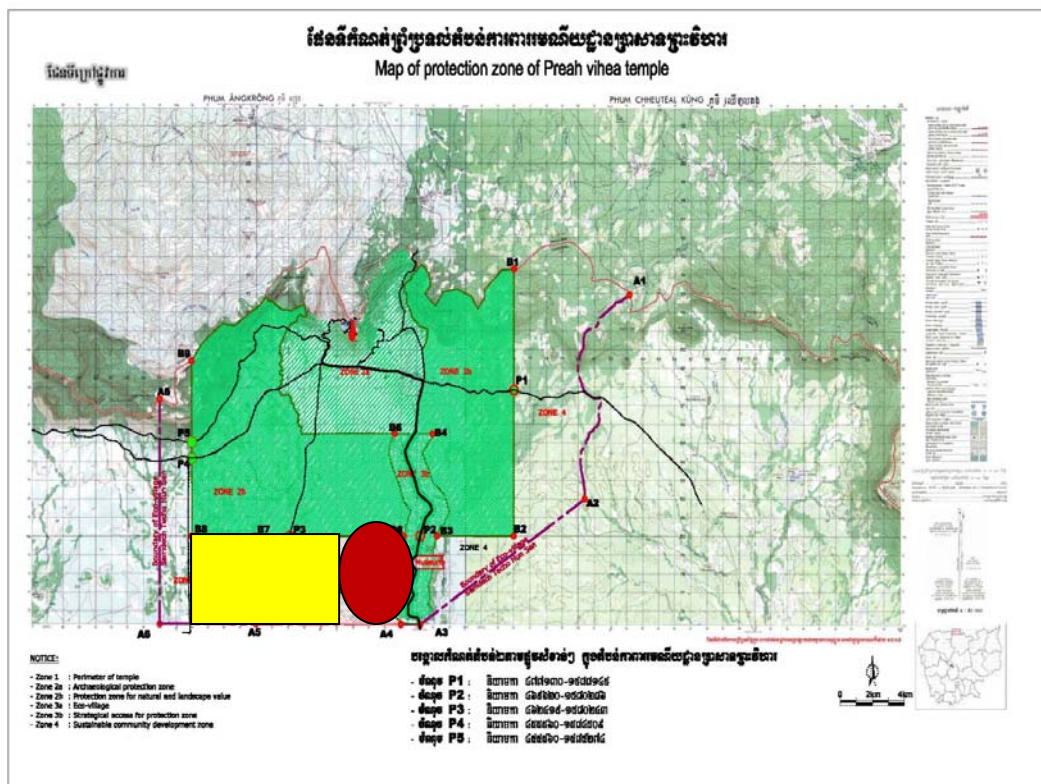
## Appendix 10

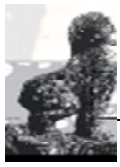
PROJECTS IN PROGRESS  
AT THE ENTRANCE  
OF TEMPLE OF PREAH VIHEAR

Two important projects are undertaking at the entrance of the Preah Vihear Temple adjacent to the protection zone. (Map of PVNA 2010)

*Project number 1*  is called the ECO- GLOBAL MUSEUM. It has the main goal of informing tourists on different aspects of the history of the region such as its origine, its minority ethnic, its archeological richness .its tradition and its faune and flora.

*Project number 2*  is an ECO-VILLAGE, a new population habitat regrouping marginal people whose improving living conditions is the main objective.





Eco-Global Museum



Statue of Khmer warrior hero in Eco-Global  
(Courtesy of PVNA, 2010)



Master Plan of Eco-Village, implementation in progress since 2009

The Eco-Village whose inhabitants are marginal and the government are helping to improve their living conditions. The people living in that village were moved out from the North Staircase of the Temple according to Thai side (Courtesy of PVNA and BoD, 2012).

The village is developing slowly due to the lack of water during dry season but Japanese Friends of Preah Vihear has been very active in helping the inhabitants.



Appendix 11

“Green Belt Project” Regional Economic Development

in Siem Reap Province, Cambodia

A joint Project Cambodia and Republic Federal of Germany

(Extract)



Internal Paper 45 - Update 6

**Facts and Figures:**

**Outreach, Impact and**

**Status of Indicator Achievement**

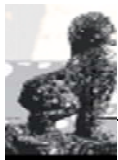
**of RED activities**



## **Regional Economic Development Program (RED) Green Belt Siem Reap**



Regional Economic Development  
Program (RED) P.O. Box 93221  
17000 Siem Reap Angkor  
Cambodia



## **OUTREACH of RED Activities**

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## **Status of Indicator Achievement**

<b>Impact Matrix, Status 30.6.2013</b>	<b>13</b>
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**Data and information for the period  
July 2012 to June 2013**



Table 1: Overall RED Outreach - Coverage of Districts, Communes, Villages and Households

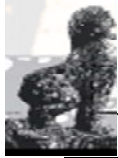
District	Angkor	Chum	Angkor	Thma	Banteay	Chi	Kraenn	Kralanh	Prasat	Rakong	Puok	Siem	Rean	Soutr	Nikom	Srey	Snom	Svay	Leu	Varin	TOTAL
Number of Communes	7	4	6	12	10	8	14	13	10	6	5	5									100
Number of Villages	84	26	37	155	99	57	132	108	113	46	35	38									930
Number of Households	12.251	5.075	8.496	27.683	13.500	12.778	24.551	39.779	21.426	6.936	6.685	8.015									187.175
RED components working per district	3	3	3	3	3	3	3	2	3	2	3	3									
OUTREACH COMMUNES																					
Communes reached by C1	7	4	6	11	10	8	13	0	10	6	5	5									85
Communes reached by C2 – Fruits, Vegetables	2	1	5	6	9	6	7	9	6	0	3	5									59
Communes reached by C2 - Handicrafts	1	2	1	0	0	1	9	9	4	0	0	1									28
Communes reached by C3	7	4	6	12	10	8	13	3	10	6	5	5									89
TOTAL Number of Communes reached by RED	7	4	6	12	10	8	13	11	10	6	5	5									97
% Coverage of Communes	100%	100%	100%	100%	100%	100%	93%	85%	100%	100%	100%	100%									97%

## OUTREACH VILLAGES

Reached by C1	84	24	36	113	99	56	130	0	113	45	32	38	770
Reached by C2 Vegetables, Fruits	8	1	18	22	31	18	31	30	40	0	16	14	229
Reached by C2 Handicraft	2	10	1	0	0	2	30	31	7	0	0	2	85
Reached by C3	31	0	24	63	50	56	101	11	50	0	5	19	410
TOTAL Number of Vil- lages reached by RED	84	24	36	123	99	57	130	48	113	45	32	38	830
% Coverage of Villages	100%	92%	97%	79%	100%	100%	98%	44%	100%	98%	91%	100%	95%

## OUTREACH HOUSEHOLDS

C1 - Multi-stakeholder events	295	160	263	509	303	376	247	0	314	327	233	351	3.378
C1 - SRI Direct	256	0	0	63	513	0	833	0	1.053	0	0	61	2.779
C1 - SRI Indirect	531	0	0	131	1.064	0	1.718	0	2.185	0	0	36	5.665
C1 - Chicken	204	0	0	46	462	0	679	0	1.129	0	0	73	2.593
C1 - Pig	21	25	38	23	0	0	18	0	23	19	34	16	217
C2 - Vegetables Direct	0	0	174	848	723	570	659	531	1.955	0	237	283	5.980
C2 - Vegetables Indirect	0	0	63	77	109	59	108	91	140	0	35	38	720
C2 – Fruits Direct	74	8	3	0	11	1	23	14	1	0	165	132	432
C2 – Fruits indirect	40	0	0	0	0	0	81	36	0	0	0	89	246



District	Angkor Chum Angkor Thom	Banteay Srei Chi Kraonn	Kralanh	Prasat Rakonn	Puok	Siem Rean	Soutr Nikom	Srey Snom	Svay Leu	Varin	TOTAL		
C2 - Handicrafts Direct	0	270	36	0	0	30	562	378	78	0	0	21	1.375
C2 - Handicrafts indirect	40	60	0	0	0	0	267	462	0	0	0	0	829
C1/3 - Fin. Literacy	446	0	615	2.442	1.643	1.626	1.259	303	1.734	0	0	71	10.139
TOTAL Number of Households directly reached by RED	1.907	523	1.192	4.139	4.828	2.662	6.454	1.815	8.612	346	704	1.171	34.353
% Coverage of rural households	16%	10%	14%	15%	36%	21%	26%	5%	40%	5%	11%	15%	18%

Table 2: Outreach of RED Activities - Additional Activities of Components

District	Angkor	Angkor	Thom	Banteay	Srei	Chi	Krati	Kralanh	Prasat	Bakong	Puok	Siem	Boeun	Soutr	Nikom	Srey	Snom	Svay	Leu	Varin	TOTAL
<b>Additional Facts and Figures</b>																					
<b>Component 1</b>																					
Farmer groups/ associations	16	0	21	0	12	0	13	0	48	0	0	13	123								
Saving groups	0	0	0	0	0	0	16	0	0	0	0	1	17								
Fair weighing scales	4	0	0	0	0	0	12	0	2	0	0	0	18								
Rice millers/traders	5	0	0	6	3	3	5	2	5	3	0	0	32								
Reg. Management (RM) concept	1	0	1	0	1	0	1	0	1	0	1	0	6								
RM Thematic Groups/Networks	5	0	6	0	5	0	8	0	6	0	0	6	36								
RM Project Action Groups	21	0	25	0	12	0	35	0	45	0	0	22	160								
<b>Component 2 - Fruits, Vegetables</b>																					
Private sector companies providing embedded services in PPP modality in 2013	0	0	2	3	3	4	3	3	4	0	1	0	4								
Total Demo Farms 2008-2013 (RED, EW, BAYON) (non-double	0	0	10	15	15	18	23	16	53	0	9	2	161								
Demo farms used for technical service provision by PPP part-	0	0	3	4	7	3	5	6	15	0	3	0	46								
Collectors qualified to provide technical embedded services	0	0	1	1	2	19	1	1	7	0	2	0	34								
Total Suppliers of quality inputs (non-double counted)	4	0	4	12	13	10	13	8	13	0	0	1	78								
• Agricultural input suppliers stock better quality of seeds	0	0	1	1	0	1	2	3	2	0	0		10								
• Agricultural input suppliers stock better quality of insecticide from Agrotech and	0	0	0	7	5	5	2	4	9	0	0		32								
• Agricultural input suppliers stock better quality of fertil-	4	0	3	7	8	5	13	4	5	0	0	1	50								
• Agricultural input suppliers stock the drip system from	0	0	0	0	0	1	1	0	1	0	0	0	3								





District	Angkor	Angkor	Thom	Banteay	Srei	Chi	Krasang	Kralanh	Prasat	Bakong	Puok	Siem	Reap	Soutr	Nikea	Srey	Cham	Svay	Leu	Varin	TOTAL
<b>Component 2 – Handicraft</b>																					
Local trainers qualified to train in Lpeak dyeing techniques	0	4	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	7
Local trainers qualified to train in advanced Lpeak weaving	0	7	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	13
Local trainers qualified to train in painting techniques	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	7
Local entrepreneurs participating in value chain upgrad-	2	3	0	0	0	0	0	0	0	5	10	0	0	0	0	0	0	0	2	2	22
Members of the Siem Reap natural fiber entrepreneur	0	3	0	0	0	0	0	0	0	5	9	0	0	0	0	0	0	0	2	2	19
Entrepreneurs purchasing raw material from sustainably managed CEs	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
Members of the Angkor Handicraft Association																					37
Handicraft enterprises using the Seal of Authenticity																					37
Producer Groups (associated with local entrepreneurs)	0	1	0	0	0	0	0	1	1	4	2	2	0	0	0	0	0	0	0	0	10
Lpeak NRM locations	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2

**Table 2: Outreach of RED Activities - Additional Technical Activities (cont.)**

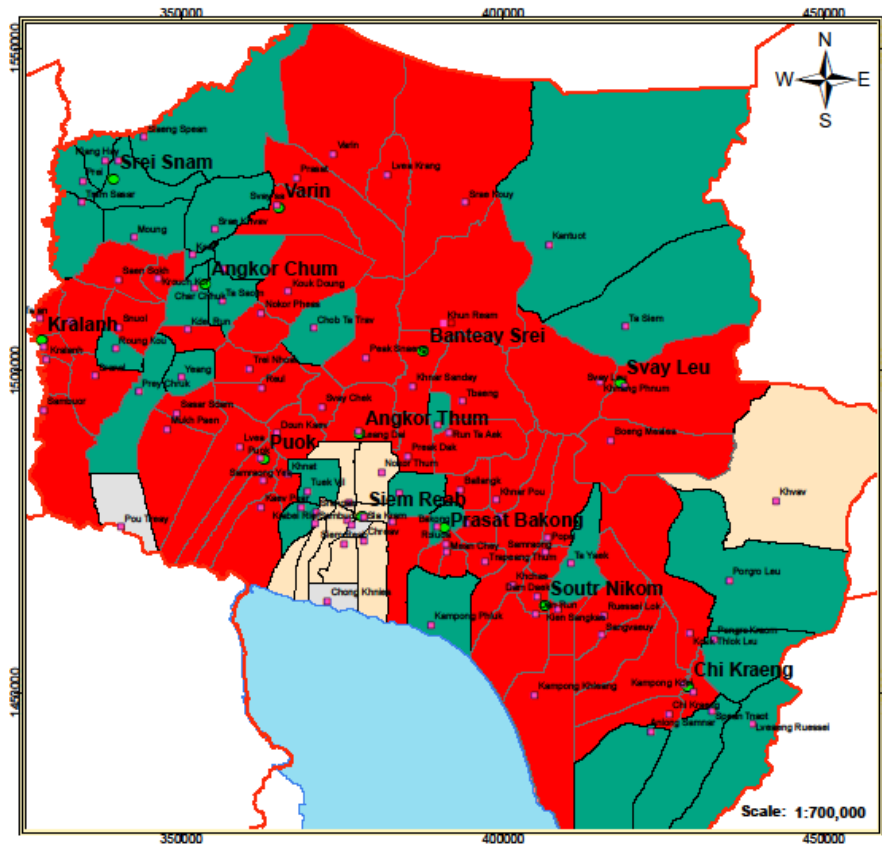
	District	Angkor Chum	Angkor Thom	Banteay Srei Chi Kraeng	Kralanh	Prasat Bakong	Puok	Siem Reap	Soutr Nikom	Srey Snom	Svay Leu	Varin	TOTAL	%	% in rural Districts
<b>Component 3</b>															
<b>DC/DA capacity building</b>	# of DCs	1	1	1	1	1	1	0	1	1	1	1	11	92%	100%
<b>DC/DA taking actions to create enabling environment for local ED (ED formats)</b>	# of act. taken	1	1	2	2	2	1	1	0	1	2	1	15		
<b>CC capacity building</b>	# of CCs	7	4	6	12	10	8	13	2	10	6	5	88	88%	98.8%
<b>CBO Engagement: NGOs cooperating with C3</b>	# of NGOs	4	3	3	2	2	1	3	1	4	0	3	7		
<b>CBO Engagement: Number of CBOs received coaching</b>	# of CBO coached	29	26	4	58	3	21	30	7	42	0	14	260	45%	52%
<b>CCs taking actions to sustainably manage or preserve natural resources</b>	<b>CCs taking actions to facilitate and/or enable economic activity by citizens</b>														
<b>CCs taking actions to establish improved framework conditions for economic development (Dekka)</b>	<b>CCs negotiating with other sub-national government institutions to address barriers</b>														
<b>CCs taking actions to improve the provision of their services to citizens</b>															
<b>CCs taking actions to improve economic infrastructure</b>															
<b>CCs taking actions to strengthen or assist local stakeholder groups</b>															

**Table 2: Outreach of RED Activities - Additional Technical Activities (cont.)**

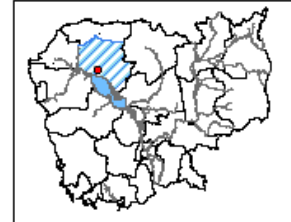
# of CCs							# of CCs	7	3	6	12	10	8	13	0	10	6	5	5	85	85%	97.7%
# of act.							# of act.	42	7	21	51	55	47	72	0	62	41	13	21	432		
taken							taken															
# of CCs							# of CCs	6	4	5	7	8	6	11	0	7	6	4	2	66	66%	75.8%
# of act.							# of act.	8	6	11	13	13	10	21	0	11	10	8	5	116		
# of act.							taken	43	0	32	14	16	17	261								
taken							# of CCs	1	4	5	1	7	6	2	0	0	6	0	0	32	32%	36.8%
# of CCs							# of act.	7	12	0	8	4	4	79	79%	90.8%						
# of act.							taken	37	0	15	20	6	10	177								
taken							# of CCs	7	4	3	7	4	8	13	4	6	4	6	4	70	70%	80%
ers to economic develop-							# of act.	11	4	3	7	4	9	18	4	11	4	6	4	85		
ment							taken															
CC mobilizing external re-																						
sources to promote econom-							# of CCs	6	0	6	5	6	3	7	0	4	2	3	2	44	44%	50.5%
ic activities and to facilitate																						
access to resources for eco-							# of act.	7	0	6	5	6	3	7	0	4	2	3	3	46		
nomic development							taken															
CC action directly relevant							# CCs															
for IDPoor households							IDPoor	2	0	0	0	0	0	1	0	0	0	1	2	6	6%	6.8%
(IDPoor Subsidy Scheme,							subsidy															
Financial Literacy)							# CCs															
							Financial	4	0	5	7	7	8	13	2	8	0	0	4	58	58%	67%
							Literacy															



MAP 1: Communes covered by different RED Components



RED Overall Oureach  
Communes-Color Codes



Legend

- Convnuce center
- District center
- Nearby provincial bol.lld.lry
- Convnuce boundary
- District boundary
- ToleSap
- Outreach Communes
- c=J Convnuces with activities

of one 000\X)nent

Communes wiith activities

of two COITiponents

Convnuces with activities  
of three components

Status: June 2013

Regiona

Economic

Development (RED) -

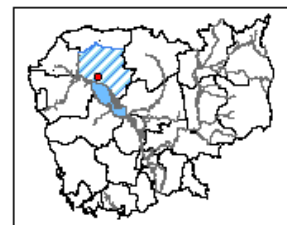
Green Belt Siem Rea



MAP 2: Communes covered by RED Component 1 • Regional Management



## RED Component 1 Outreach Communes



### Legend

- Commune center
- District center
- Nearby ptOYincial bol.Ild.Iry
- D Convunne boundary
- D District bourldaty
- To...sap

### Outreach Communes

- D Communes: with
- co01)00ent 1 activities

Status: June 2013

08/2013

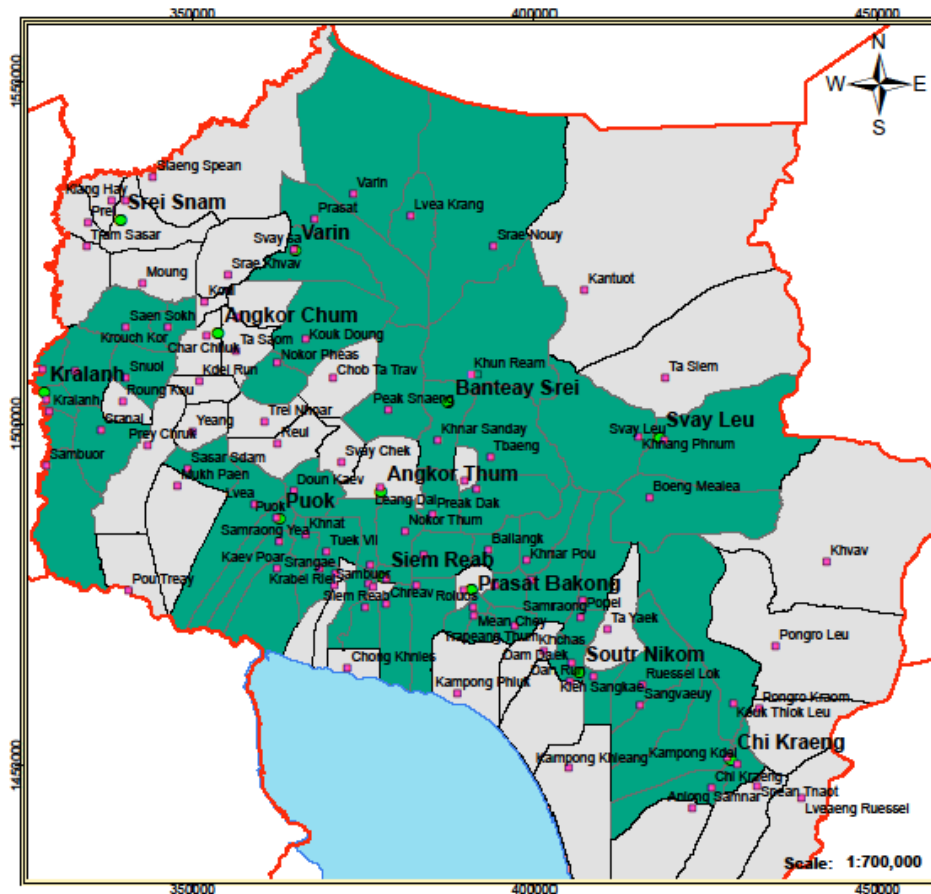
08/2013

Regional Economic  
Development (RED) –  
Green Belt Siem Reap

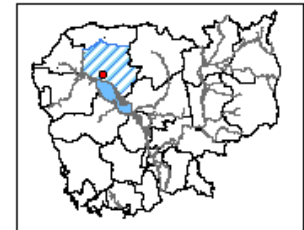




MAP 3: Communes covered by RED Component 2 •Vegetable Value Chain upgrading



RED Component 2A  
Outreach Communes



#### Legend

- Commune center
- District center
- Nearby provincial boundary
- Commune boundary
- District boundary
- To...

#### Outreach Communes

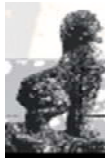
Communes with  
Component 2A activities

Status: June 2013

g, z, r, s

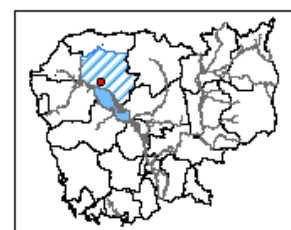
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Regional Economic  
Development (RED) -  
Green Belt Siem Reap



MAP 4: Communes covered by RED Component 2 • Handicrafts and Bamboo development

RED Component 2H  
Outreach Communes

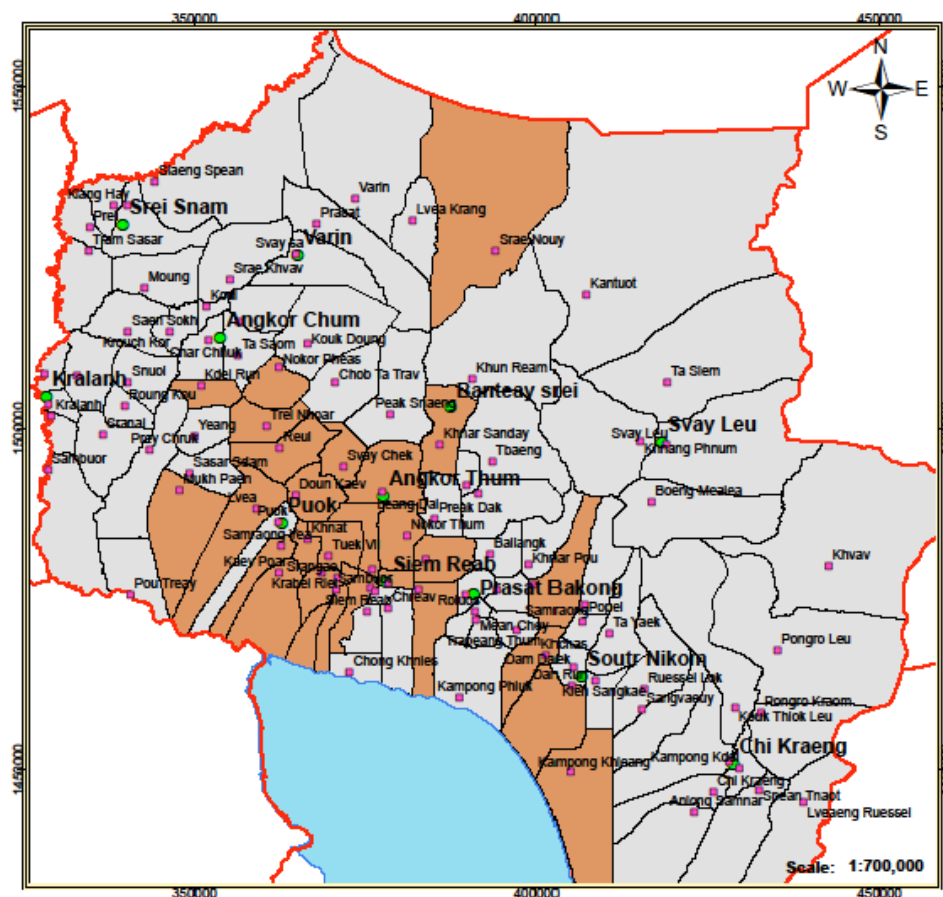


Legend

- Commune center
- District center
- Nearby provincial boundary
- Commune boundary
- District boundary
- To...sap
- Outreach Communes
- Communes with col(11)0flent 2H activities

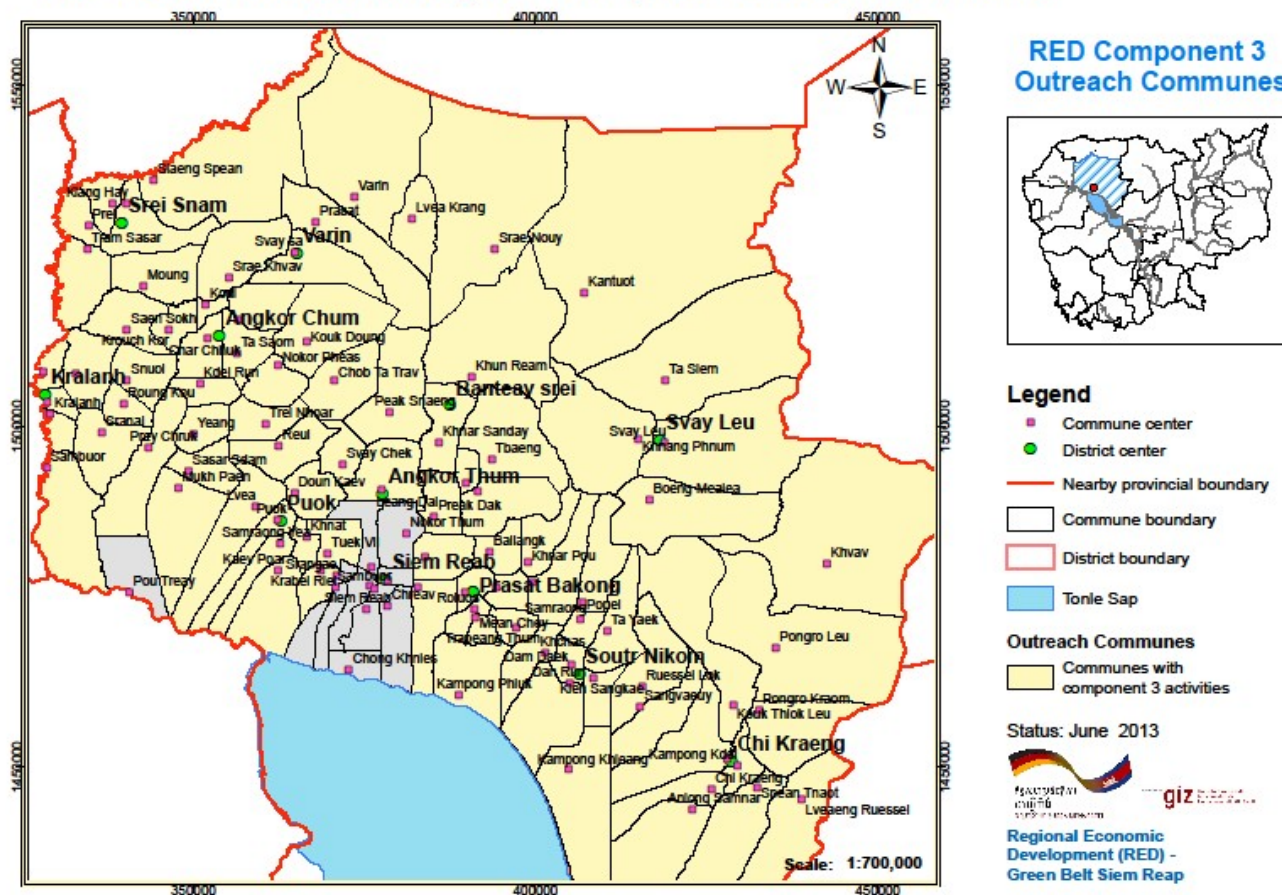
Status: June 2013

g, Z, ...  
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Regional Economic  
DeY•toprent{RED) -  
Green Belt Siem Reap

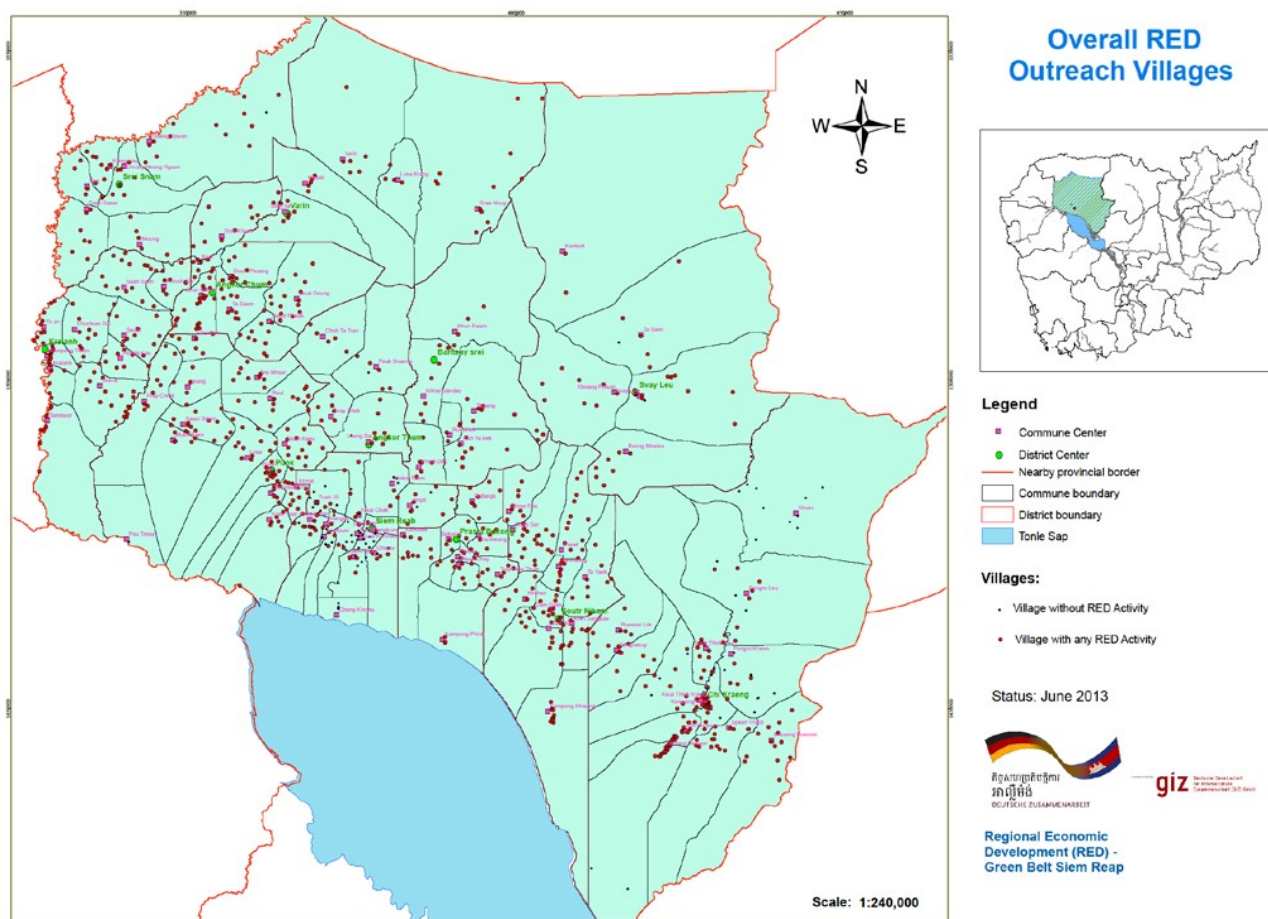




MAP 5: Communes covered by RED Component 3 - Local Governance



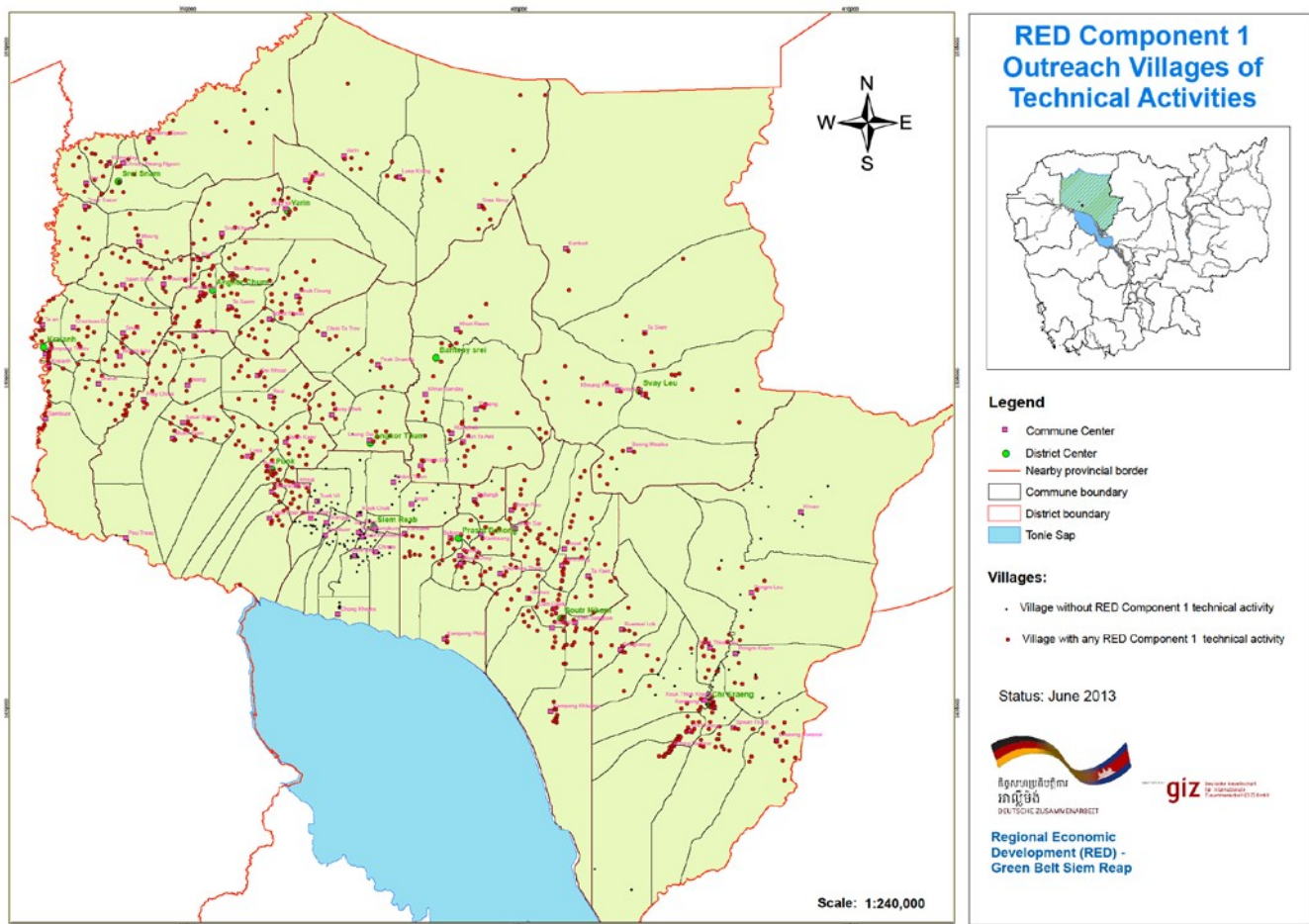
MAP 6: Villages covered by any RED activity





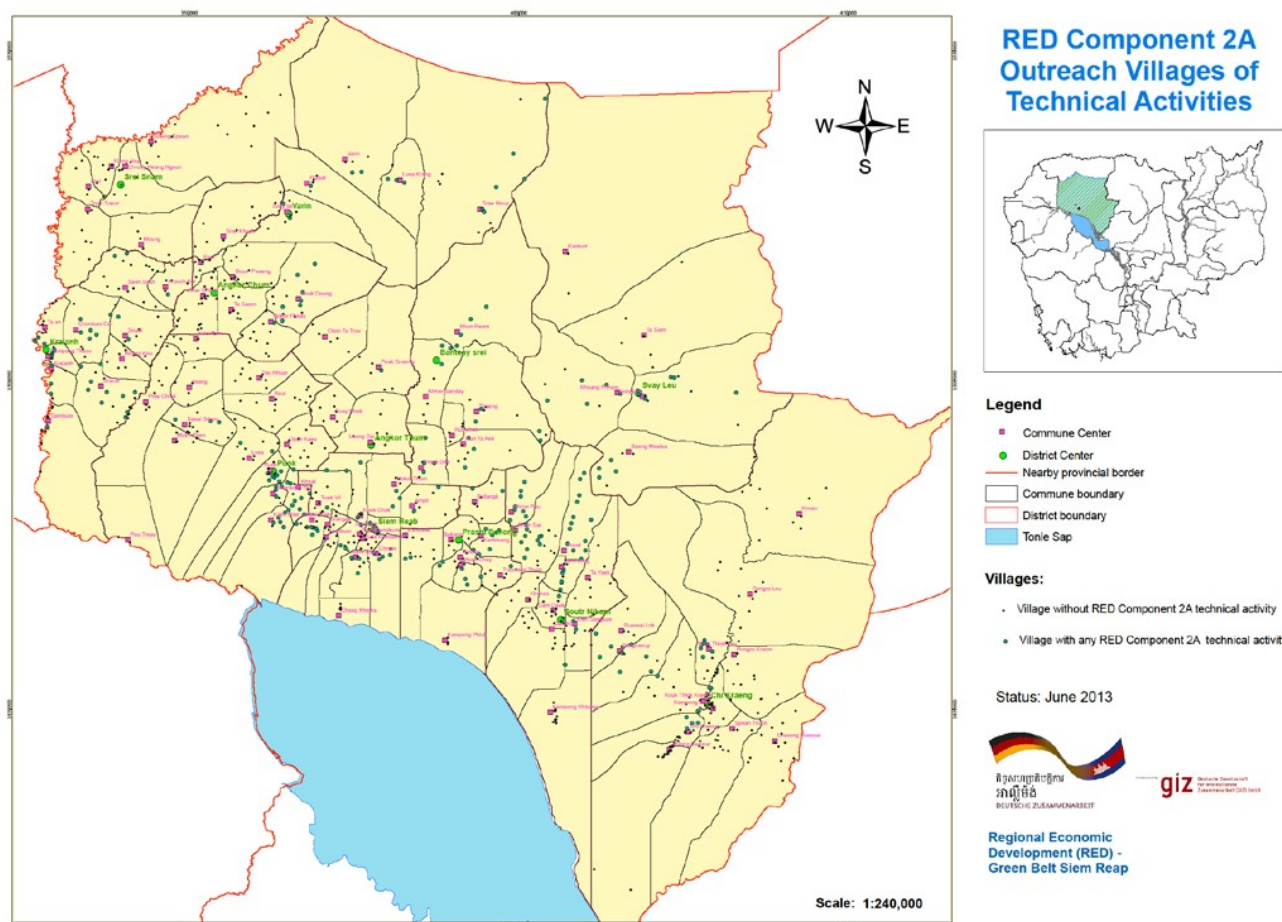


## MAP 7: Villages covered by RED Component 1 - Regional Management





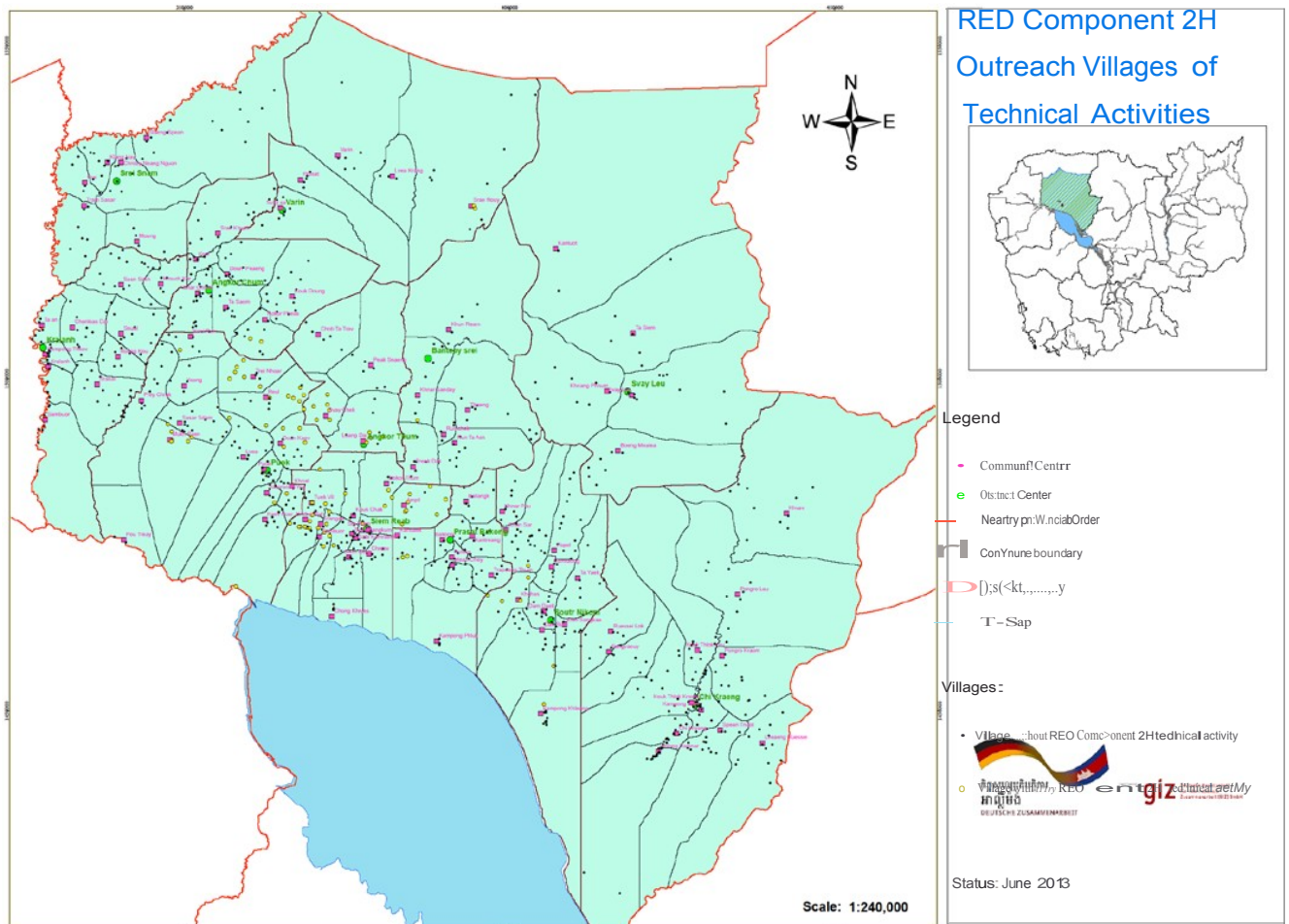
MAP 8: Villages covered by RED Component 2 – Vegetable Value Chain Upgrading







MAP 9: Villages covered by RED Component 2–Handicraft and Bamboo development



Regional Economic:  
Development (REO) -  
Green Belt Slem Reap



## IMPACT OF RED Activities

Table 3: Number of farm households that adopted innovations

District	Angkor	Chum Angkor	Thom Banteay	Srai Chi	Kraonn	Kralanh	Prasat	Puok	Siem	Rean Sout	Nikom	Srey	Snom Svay	Varin	TOTAL
<b>Households adopting innovations</b>															
Households - SRI	744	0	183	0	1.490	0	0	2.420	0	3.059	0	0	0	51	<b>7.947</b>
Households - Chicken	147	0	33	0	333	0	0	489	0	813	0	0	0	53	<b>1.868</b>
Households - Pig	11	13	19	12	0	0	0	9	0	12	10	17	17	8	<b>111</b>
Households - Vegetables	0	0	125	624	570	445	0	540	430	1.428	0	172	172	187	<b>4.521</b>
Households - Fruits	74	8	3	0	11	1	0	23	14	1	0	165	165	132	<b>432</b>
Households - Handicrafts	0	151	16	0	0	30	0	607	662	64	0	0	0	0	<b>1.530</b>
<b>TOTAL Number of Households adopting inno-</b>	<b>976</b>	<b>172</b>	<b>379</b>	<b>636</b>	<b>2.404</b>	<b>476</b>	<b>0</b>	<b>4.088</b>	<b>1.106</b>	<b>5.377</b>	<b>10</b>	<b>354</b>	<b>431</b>	<b>16.409</b>	

Table 4: Average income increase of rural households adopting innovations and participation of IDPoor households

Type of innovation	Average annual income increase per household	Total number of households realizing income	Total annual income increase of applying households	Part of IDPoor households
Households - SRI	182	7.947	1.446.354	12%
Households - Chicken	278	1.868	519.304	12%
Households - Vegetables	159	4.521	718.839	11%
Households - Fruits	157	216	33.912	21%
Households - Handicrafts	160	1.239	198.240	37 %
<b>Overall average income increase</b>	<b>184.7</b>	<b>15.791</b>	<b>2.916.649</b>	<b>14%</b>

**Status:** 07-2013

Summary	Success Indicators	Source of Verification	Important Assumptions / Risks
<b>Objective RED II (Outcome)</b>  <i>The participation of the rural poor in the value-added created on Siem Reap's markets improved.</i>	<p><b>Indicator 1:</b> Increase of the market share of vegetables and fruits produced by Cambodian smallholders supported by the program on the markets of the province of Siem Reap.</p> <p><b>Base value (5/2008):</b> 7% (fruits: %, vegetables: 9%)  <b>Target value (8/2016):</b> 25% (vegetables)  <b>Actual value (6/2013): Ca. 17% for vegetables (Average value of different recent external sources)</b></p> <p><b>Indicator 2:</b> Increase of the annual turnover (after inflation) of handmade handicrafts produces in Siem Reap.</p> <p><b>Base value (9/2009):</b> 7,6 Mio. USD annual turn over  <b>Target value (8/2016):</b> 10,1 Mio. USD annual turn over  <b>Actual value (6/2013): Ca. 9,8 Mio. USD (Average value of different recent sources)</b></p> <p><b>Indicator 3:</b> Test and evaluation of measures to enhance the participation of women in decision making processes and to enhance their access to economic promotion services in at least 3 districts.</p> <p><b>Base value (8/2010):</b> 0  <b>Target value (8/2016):</b> 1 measures  <b>Actual value (6/2013): More than 1 measures in all districts and relevant for all components</b></p> <p><b>Indicator 4:</b> Reduction of the part of (male and female headed) households that live below the poverty line (IDPoor households)</p>	Own Survey	
		Own Survey	
		Gender Focal Point Report	



- 14 -



## Impact Matrix

### Regional Economic Development (RED) Program – Green Belt Siem Reap

Summary	Success Indicators	Source of Verification	Important Assumptions / Risks
<b>Output B:</b>  Turn-over and market share of agricultural and non-agricultural products from rural smallholders or small business respectively production in the province of Siem Reap increased	<b>Indicator 1:</b> 8.000 producers (at least 50% female) involved in promotion activities increased their household revenue through additional incomes from improved agricultural and handicraft production by at least 20%.  <b>Base value (7/2008):</b> 650 USD [after Inflation in 12/2012: 829,- USD] <b>Target value (8/2014):</b> Plus 20% (after Inflation) for at least 8.000 smallholders participating in the program  <b>Actual value (6/2013): Plus 22% (184 USD after Inflation) for 15.791 smallholders participating in the program, Part of females: 55 %</b>  <b>Indicator 2:</b> At least 4 companies operating on national or international levels cooperate with at least 1.000 local SMSE in the marketing of rural products.  <b>Base value (7/2010):</b> 1 company: <b>Target value (8/2014):</b> At least 4 companies operating on national or international levels cooperate with at least 1.000 local SMSE.  <b>Actual value (6/2013): 3 trading companies cooperate with a total of about 1.200 local SMSE.</b>  <b>Indicator 3:</b> Supported MSME confirm that non-governmental service providers offer new services and instruments to promote enterprise development (e.g. BDS, services provided by associations, PPP facility, etc.).	M&E Reports Own Survey Own Survey	



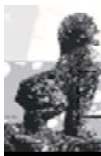


## Regional Economic Development (RED) Program – Green Belt Siem Reap

Summary	Success Indicators	Source of Verification	Important Assumptions / Risks
<b>Output C:</b>  The processes of elected local councils and their administrations to plan fund and implement local economic development and poverty reduction measures involve the local population and are transparent, efficient and replicable.	<b>Indicator 1:</b>  At least 75 % of the members of local government bodies (commune and district levels) assess the cooperation with the provincial and district administrations as effective, transparent and efficient.  <b>Base value (3/2008):</b> 0%  <b>Target value (6/2013):</b> 75%  <b>Actual value (6/2013):</b> <i>Commune level: 84% of all commune council members</i> <i>District level: 91% of all district council members</i> <i>Provincial level: The respective activities could not be implemented</i>	Own Survey	
	<b>Indicator 2:</b>  At least 75% of supported local government bodies on district (11) and commune (87) levels implemented at least 5 measures (outside road construction) to promote inclusive economic development.  <b>Base value (3/2010):</b> 25 Commune Councils in Puok, Angkor Chum, Varin: 2 measures each; the other 62 commune Councils: 0, District councils: 0  <b>Target value (6/2013):</b> 65 Commune Councils and 8 District councils: 5 measures each  <b>Actual value (6/2013):</b> <i>Commune Councils 86 with at least 5 measures each (actual average per council: 15 measures)</i> <i>District councils: 11 with at least 1 measure each und 8 with at least 3 measures each</i>	M&E Reports	
	<b>Indicator 3:</b>		



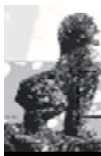
Summary	Success	Source of Verification	Important Assumptions / Risks
<b>Important Activities</b>  <b>Activity A:</b> Adjust, and apply a concept for Regional Management and  <b>Activity B:</b> Introduce and apply new services and tools for the develop-  <b>Activity C:</b> Qualify the support structures of Commune and District Councils and introduce new tools and procedures for local self-government bodies to promote the local economy and to reduce poverty and support councils in their application.			Line departments and districts are sufficiently equipped with technical and management staff



**Minutes on the Programme Progress  
Review Regional  
Economic Development Programme (RED)  
“Green Belt Project in Siem Reap”  
Cambodia**

## **Background**

1. A Programme Progress Review (PPR) was conducted from 13<sup>th</sup> – 26<sup>th</sup> January 2014 of the “Regional Economic Development Programme (RED) – Green Belt Siem Reap”, Cambodia. The PPR was conducted by H.E. Uk Someth – Representative of Council of Ministers, Piset Lim – Representative of Provincial Administration Siem Reap, Nikolaus Schall – Free-lance consultant on behalf of GIZ and PPR team leader, Angelika Fleddermann – Representative GIZ – HQ, Michael Engquist – Free-lance consultant on behalf of SDC, Christian Koch – Free-lance consultant on behalf of GIZ.
2. Programme progress reviews serve the purpose of systematically reviewing the programmes, assessing the lessons-learned and jointly developing proposals for the continuation of the Programmes into a further phase. The areas to be assessed by the PPR team as well as the areas of responsibility of the team members was agreed upon to in the respective terms of reference.
3. The methodological approach undertaken by the PPR team involved a triangulation of information comprising of information generated by assessing and studying existing Programme documents and reports, results of a wide-range of interviews and discussions conducted with key stakeholders during the mission in Siem Reap, Phnom Penh as well as two potential new provinces of Banteay Meanchey and Oddar Meanchey as well as the results of the internal workshops that were conducted in Siem Reap.
  4. For Phase II of the programme the outcome was defined as: **“The participation of the rural poor in the value-added created on Siem Reap’s markets improved”**. The indicators were:
    - Increase of the market share of vegetables and fruits produced by Cambodian smallholders supported by the program on the markets of the province of Siem Reap from 7% to 25%.



- Increase of the annual turnover (after inflation) of handmade handicrafts produces in Siem Reap from 7.6 MIO USD to 10.1 MIO USD.
- Testing and evaluation of measures to enhance the participation of women in decision-making processes and to enhance their access to economic promotion services in at least 3 districts.
- Reduction of the part of (male and female headed) households that live below the poverty line - IDPoor households - in all 11 rural districts: Reduction by in average -13%; In District-cluster 1: -20 %; in District-cluster 2: -13%; in District-cluster 3: -7%.

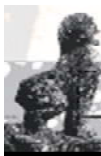
5. The RED-Green Belt programme was composed of three components (e.g. result areas):

- **Component 1** Regional Management - Multi-stakeholder processes and regional economic development initiatives.
- **Component 2** Increased competitiveness of local products - Value Chain Upgrading and Business Development Services.
- **Component 3** Initiatives of local government to promote economic development and poverty reduction.

## **Observations and Challenges**

### **6. Overall observations:**

- Good piloting approach and effective testing of different approaches, methods, tools and hypotheses.
- Quick impacts achieved for target groups (increases in both productivity and incomes).
- Effectively resisted working with subsidies.
- Concept of “cooperation” between different stakeholders effectively introduced (building up trust among public, private and civil society stakeholders).
- Some best practices have already been transferred to national level.
- Innovative and creative ideas and approaches.
- Right mix of CD measures for target groups, study trips very effective and capability of adjusting German model into local practice.
- Excellent monitoring system and documentation.
- Excellent reputation of the project positive results of “quick-win” strategy.



- Highly motivated/professional project staff/team and Cambodian implementing partners.

#### **7. Overall Challenges:**

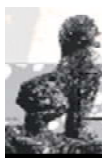
- Potential conflict of interest between different Sub-national Authorities (SNA).
- Diminishing returns (in terms of RED input for productivity improvements against additional income increases of target groups).
- Working in hierarchically structured society.
- Replication and scaling-up mechanisms will be challenging.
- Long-term sustainability of processes initiated (RM organizations, continued public sector engagement for PPP, etc.).
- Communication is not always bringing messages across on what project does (contributions towards climate change, resilience, gender, etc.).
- Subsidies, allowances and duplicating efforts by other organizations.

### **Key findings and achievements**

#### **8. Overall findings and achievements**

- The project has extended the programme activities to all 11 districts in Siem Reap province, and works in 97 communes and 830 villages (making up 95% and 97% respectively of the total communes and villages in the province). The project has been able to directly interact with 22,500 households in the province.
- The project has facilitated partnerships and cooperation arrangements between some 120 small, medium and bigger companies including input suppliers, rice millers, collectors, traders, processors, investors and has helped to promote the engagement with national and international companies in 5 Public-Private-Partnerships (PPP).
- The overall average income increase includes income increases of households from agricultural and non-agricultural activities as well as new incomes from additional RED induced job creations. In total some 15,461 households have achieved income increases. The total annual household income increase amounts to 3,054,017 USD in Siem Reap province. 14% of all households realizing income increase are households living below the poverty line (IDPoor) who directly benefited from the economic activities.
- Most of the Indicators – on Output (8/2014) and Outcome (12/2017) levels are fully fulfilled earlier than planned and in some cases have actually exceeded the target values.
- In view of the impressive results that have been achieved by the RED-Green Belt programme to date, the PPR concurs with the monitoring data and after careful spot checks and assessments in the field has assessed and rated the programme according to the **OECD-DAC criteria** as follows:  
*Relevance = 1, Effectiveness = 1, Efficiency = 2, Impact = 1, Sustainability = 2.*





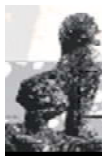
**The overall rating for the programme being 1** (details on how the team reached this assessment will be provided in the detailed report).

#### **9. Findings component 1**

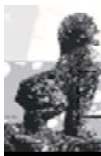
- Regional Management approach is being applied in all 11 rural districts, including formation of 6 RDCs, 3 RM organizations, 160 action groups. These include 123 newly created groups/ associations, 17 saving groups that have a total capital of 401,000 USD) and 36 (informal) networks (one group alone had 250.000 USD saving).
- 10 multi-stakeholder initiatives and in addition numerous initiatives only involving one type of stakeholders stakeholders have been completed e.g. between producer groups and a company, meaning private-private, etc.
- A regional management manual and a technical manual (e.g. set of tools) have been developed.
- Better bargaining power (through groups, use of marketing /bargaining).
- Increased number of women empowered in decision-making (through gender mainstreaming within trainings, field activities and manual / technical document).
- Removed entry barriers for ID-Poor households in rice (access to land organized through commune council) and chicken production (ID-Poor subsidy scheme).
- Availability of quality inputs/know-how – adoption rates of 83% in rice and 72% in chicken production.
- Transparent and fair business relationships (use of fair scale, business agreement with clear terms and price bonus for quality).
- Strong ownership on groups/associations/RM organizations.
- Enhanced engagement between citizens and district authorities.
- 123 groups and associations, 36 emerging networks; replicable modules for strengthening group capacities.
- Scaling-up to national level of the RM Manual, Technical Manual for district council action on economic development to NCDD.

#### **10. Findings component 2**

- Vegetable value chain: the component has achieved considerable results with regard to outreach, adoption, inclusion of IDPoor, gender equality.
- Cooperation of private companies with PDA a successful concept (business model) to reach out to many farmers: 71 % (4.000 farmers) adopted new technologies and increased their profits out of commercial vegetable production considerably.
- Partnerships with 4 private companies providing embedded services for farmers, technology and quality inputs, and demonstration farms successfully implemented.



- Comprehensive capacity building for resource persons (farmers, collectors, dealers) and multi-stakeholder dialogue (e.g. trader forum).
- PPP arrangements have enhanced the intervention of DOA (158 technical events for vegetable producers facilitated in 2013).
- Strong vertical linkages between input suppliers, collectors and farmers with better access to quality inputs and advice on technologies, use of inputs, provision of pre-financing by collectors, market access and information.
- Through cooperation of NGOs, private sector and PDA improved access of IDPoor and vulnerable
- Developed approaches and services have partially been adopted by the partners: PDA uses training material for own extension activities, companies applying the approach in other Cambodian provinces (e.g. Kampong Cham, Kandal), NGOs develop own partnership agreements with private sector.
- Lpeak Value Chain upgrading: High number of involved poor weavers, importance of activity for women (homework, children care-taking, dry season activity, etc.), comprehensive support strategy by RED in terms of: raw material supply (NRM, enrichment planting by partners etc.); upgrading of production process (product design, weaving techniques, quality management etc.; marketing and access to markets (business coaching, facilitating linkages etc.). Through the various interventions, outreach to 2.474 households. Innovations introduced adopted by 1.405 households, average income increase 160 USD/year; ID Poor percentage 37%.
- Support to the Angkor Handicraft Association (AHA): RED facilitated process of setting-up Angkor Handicraft Association (AHA) in 2011 in close cooperation with PDoC. AHA represents 70% of all handicraft enterprises and producers in SR. AHA offers five important services previously not existing in SR: 1.Wholesale centre (300 visitors, 30 purchasing contracts of 50.000 USD volume); 2.Souvenir market; 3.Seal of Authenticity (> 50.000 Seals sold, tourists increasingly recognize, concept replicated in Laos and Vietnam); 4.Design competition (winning designs presented in wholesale centre); 5.Export services (in cooperation with SRCC, TPD, Joy, etc.).
- Bamboo Industry Development: Research, study visits in neighbouring countries, trainings on bamboo cultivation, suitable varieties, etc. (12 farmers established bamboo nurseries for high quality bamboo species). Provincial Administration and Varin district administration clarified process to ensure special land use rights (bamboo on public land). Two Cambodian enterprises decided to enter bamboo stick production (plan: 1000 kg daily production capacity total, 2000 tons annual raw material demand, 150,000 US\$ investment/factory).



### 11. Findings component 3

- NGO capacity to engage CBOs in LED has been strengthened.
- 160 CBOs interacted with CCs to raise issues and needs.
- Commune support structure strengthened through improved job coaching.
- Better functioning CCs through increased understanding of their roles and responsibilities, more effective monthly meetings and better outreach to citizens.
- Measures taken to support LED initiatives (on average 15 per council).
- Provincial Association of CCs represented councils in negotiating with higher levels and relevant authorities in response to local needs.
- Capacity to manage Female Commune Councillor Forums has been strengthened.
- DA/DC acquired better understanding about their roles and functions and took actions for LED.
- All 11 DCs endorsed and supported the implementation of RM.
- Interaction with ARDP to assure orientation of component according to D&D reform and promotion of “case based learning” approach.
- Study trips and experience exchange organised for numerous groups.
- Manual to develop Commune Council DECCA submitted to NCDD.
- Component indicators have been achieved: Members of SNAs are highly satisfied with the cooperation with and support from higher levels; CCs and DCs took actions to promote economic development and targets on citizens’ satisfaction with commune actions and assistance to poor households reached.

### 12. Findings cross-cutting issues

- **Food Security:** increased production improves availability and accessibility to food; higher income allows buying more and diversified food; NGOs provide for IDPoor awareness on the use (more balanced diet).
- **Gender:** considered in project design (indicators on outcome and output level), implementation (in all components) and monitoring efforts (e.g. disaggregated data, impact for men and women); high rate of achievement, (e.g. VC Lpeak only women, incl. IDPoor, vegetable VC 60% women participation in project activities).
- **Climate change adaptation and mitigation:** awareness creation on changing climatic patterns, climate resistant crops and varieties, climate change proofing of all value chains and technical solutions (e.g. raised plant beds, adapted planting techniques in rice); joint activities with private sector (EastWest). Mitigation: pilot for “Carbon Certificates for Afforestation through Bamboo Cultivation” with INBAR.



- **Focus on IDPoor and vulnerable households:** inclusion of poor in economic activities realized, e.g.  
HHs adopting improved rice, chicken, vegetables production techniques are 12% and in handicraft

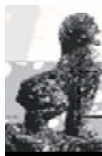
### **13. Resources allocated by Cambodian and German partners for RED – Green Belt II**

- The German Technical Cooperation allocated 5.3 Mio EUR to fund the technical assistance support for Phase II of the RED-Green Belt programme. These funds will be sufficient for the remaining part of the project phase that is due to end in August 2014.
- Before the start of the program as well as in the Cambodian-German Government negotiations  
2009, 2011 and 2013, the Royal Cambodian government committed a financial contribution to the  
RED program finally amounting to a  
total of 1,572,385 EUR.
- During Phase I of the program 113.600 EUR were allocated and spent. During the ongoing Phase II further 100,000 EUR are presently used for farmer training and the construction of small irrigation schemes to be accomplished in the first quarter of 2014. Upon accomplishment further 100,000 EUR will be allocated and used for different target group training and small infrastructure projects. It can thus be expected that until the end of Phase II a total of at least 313,600 EUR (or 20%) of the Cambodian financial contribution will have been allocated.

### **14. Key Recommendations**

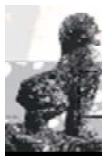
The mission's key overall recommendations include:

- RED III programme should be undertaken in order to consolidate successes and enhance sustainability in SR, scale-up / expand approaches in two new provinces.
- The expansion of the programme should be to Banthey Meanchey and Oddar Meanchey provinces.  
Not only is there a very high partner interest at provincial, district and commune level, where cooperation with the RED programme were welcomed but there were also high levels of interest in any planned LED cooperation. There is a good coordination among NGOs and government agencies in the provinces, there are very good opportunities for “quick wins” in the rice sector. Both rice and cassava production could also be targeted for value chain upgrading. Some promising agro-processing and small companies exist in the Special Economic Zones and these could also be of interest to cooperate with.
- The programme work in Siem Reap would be to complete activities that have been initiated, consolidate and strengthen overall sustainability of the measures supported by the programme during RED II.



- Programme should enter into co-funding arrangements with the Swiss Development Cooperation
- Strengthen the linkages between programmes at provincial level and national level through an additional field of work.
- Improve the overall communication of programme strategy/approach.
- Introduce two-tier steering structure: national level steering committee and 3 provincial steering committees.
- Maintain strong orientation towards poverty reduction through LED.
- Spatial development planning is not recommended due to intensity and length of measures to achieve legally binding results.
- Systematize “do-no-harm” / conflict sensitive programme management and mainstream approach of “rights-based approach” in the programme measures.
- Continue developing and promoting approaches for strengthening resilience of vulnerable beneficiaries to shocks etc.
- Measures that address climate change issues should be prominently placed in the programme design, resourced accordingly, and explicitly depicted in the documents and reported upon accordingly. Successful climate adaptation and mitigation measures should be transferred where appropriate to regional and national institutions.
- Further preparation for the RED III programme should commence as soon as possible and should include consultation with all relevant stakeholders, more in-depth data collection and analysis that also includes aspects of conflict sensitivity as well mitigation measures.
- Streamline the design of the RED III programme to take into consideration newly formulated Cambodian strategies for green-growth.
- Consolidate cooperation on the basis of past experience and the on-going discussions and conclude agreements on the modalities of the cooperation: ARDP-SPACE programme, Land Rights Programme and ASEAN Bio-control as possibly other emerging national or regional programmes including those of the SDC.
- Collaboration with KfW RIP IV Programme: The PPR recommends that the planned cooperation with the KfW Rural Infrastructure Programme should continue. The proposed data collection planned by the KfW for the new provinces should preferably be undertaken for the socio-economic data collection in Banthey Meanchey and Oddar Meanchey first so that the results of the data can be included in the further planning of RED III. For the implementation phase the PPR team concurs with the proposal that KfW would implement measures in other provinces first (e.g. Battambang) and would then expand the activities to either / or Banthey Meanchey and Oddar Meanchey at a later stage. This would allow for RED III programme to work with the stakeholders to determine where economic development





opportunities could profit from the rural infrastructure development measures of the KfW RIP IV programme.

### 15. Proposals for RED III programme

Proposed tentative outcome (or programme objective) for RED III is:

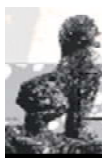
**“Smallholders, small businesses and jobseekers make sustainable use of economic opportunities –enabled by local government action, public and private sector and civil society cooperation and new or better performing services”.**

The following are the proposed key indicators that would measure successful implementation of the RED III programme:

- Number of beneficiary households (disaggregated by poverty status and gender of HH head)  
adopting profitable and sustainable new practices or – for Siem Reap – sustain their use.
- Number of associations implementing at least two activities that improve business performance of its members.
- Percentage of local citizens (disaggregated) satisfied with quality of commune and district council action to promote economic development and poverty reduction
- At least xx Knowledge Partnerships with national level stakeholders result in the use of project experiences on the national (sources of verification: e.g. taking up new or updating existing technical documents, statements, reference to RED practices, etc.).
- All promoted innovations and program measures are screened against a do no harm checklist and for fulfilment of criteria for sustainable food and agriculture systems as outlined in the FAO Guidelines for Sustainability Assessment of Food and Agriculture systems (SAFA) that includes the four dimensions of Governance, Environmental Integrity Economic Resilience and Social Well-Being. SAFA is undertaken before implementation, for the applied support strategies and after adoption and indicated at least xx% of fulfilment in each of the 4 dimensions and validated by an annual expert review. Particular importance is given to the criteria referring to participation, equity (Non-discrimination, Gender equality; Support to vulnerable people), environmental integrity and inclusion.

The programme will be composed of four main outputs:

- A. Local Governance Support:** Subnational Authorities (SNA) improve framework conditions and take action for Local Economic Development (LED) and poverty reduction (Indicators could include: number of supported SNA (DC and CC) and number of measures implemented to address framework conditions constraining economic development, number of supported SNA (DC and CC) and number of measures implemented (outside “usual”



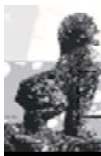
infrastructure improvements) to promote economic development; number of supported SNA (DC and CC) and number of measures implemented for uplifting or stabilizing poor HH (IDPoor and vulnerable HH) above the poverty line).

- B. Stakeholder Cooperation for LED:** Public, private and civil society stakeholders are capable of jointly developing and implementing LED activities (Indicators could include: Number of Districts in which different stakeholders developed a joint vision (Regional Development Concept, RDC) to promote economic development; number of Action Groups and/or Thematic Networks (with a minimum level of graduation/formalization) promoting LED activities in support of RDC implementation; number of measures (e.g. joint marketing of products, joint investments) undertaken by Action Groups and/or Thematic Networks to increase the business performance of their members; number of Districts and number of measures implemented to remove entry barriers for poor HH (IDPoor and vulnerable HH) to access promoted economic activities).
- C. Sustainable services and business linkages:** Services available to smallholders and small businesses improved and the range of job opportunities increased (Indicators could include: number of market oriented services (e.g. embedded services, services through PPP partners, services by associations, etc.) that are newly available (BM, OM) or that are sustainably financed (SR); number and scope of mobilized investments that are either game changing/innovative or positively impacting on the income of at least XXX smallholders, small businesses or jobseekers; number of measures in support of climate change adaptation and /or mitigation introduced and available for up-scaling/dissemination/replication (on the national level)).
- D. Knowledge-partnerships with the national level:** RED lessons learned and best-practices are used by stakeholders on national level (Indicators could include: number of assignments by national level institutions/agencies/stakeholders to develop and pilot solutions and models for use on the national level in the fields of decentralization reform and rural economic development).

The indicators will be qualitatively and quantitatively differentiated by provinces as well as being gender differentiated.

## 16. Resource requirements

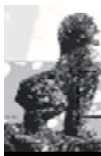
- The PPR mission views that the earmarked German Government Funds for RED III of 4.7 mio EUR will be sufficient in order to scale-up the project in one additional province.



- The PPR mission recommends that a co-financing arrangement with the Swiss Development Cooperation should be undertaken. The additional funds available to the RED III programme would not only allow for the extension to an additional new province (resulting in RED III being implemented in three provinces) but would also allow for a greater intensity of activities and measures to be undertaken by the programme.
- In line with the conclusions of the Cambodian-German Government negotiations, the mission recommends that the remaining Cambodian funds shall be released for use in the Follow-up Programme. However, in view of the fact that the funds had been allocated for use in the province of Siem Reap and its provincial administration being charged with the administration of these funds, the mission recommends that the funds shall be used for complementary measures to support RED implementation in the province of Siem Reap only.

#### **17. Proposed Steering Structure:**

- The PPR recommends a two-tier project steering structure with separate steering committees in each province and a national steering committee for the overall steering of the project as of now operating in three different provinces. At the provincial level the proposal would be that the provincial governor chairs the provincial steering committee. Members of the provincial steering committee will include the key stakeholder such as the respective line departments (MAFF, MOC, etc), the district governors and the GIZ-RED project. In the case of Siem Reap the representative from the Council of Ministers will continue to also co-chair the provincial steering committee. The provincial steering committee will be responsible for providing guidance on the implementation of the project in each province, supporting the project in whatever manner requested by the project management. The provincial steering committee may invite other members to join the steering committee as and when a need arises during the project implementation period.
- The management of the Technical Assistance support to the project will remain with the GIZ project and component managers.
- The national level steering committee structure should also be composed in a way that enables a flexible membership in-line with the changing and growing demands of the regional economic development approach. The coordination of the National Steering Committee and the work of the programme on the national level should be the responsibility of the Council for the Development of Cambodia (CDC). In view of the coordination capabilities inherent in the Council for the Development of Cambodia the CDC's role would be to bring the different stakeholders at the national level together for the steering committee meetings and ensure that the steering committee provides the project with the necessary policy guidance required to implement such a complex multi-sectoral regional economic development approach. As the project mainly works on the sub-



-national level and will involve working in 3 provinces, the Ministry of Interior should have a prominent role in the national steering committee. The membership of the national steering committee would, similar to the provincial steering committees, involve all relevant ministries and departments (MoI, NCDD, DOLA, MAFF, MoC, etc), as well as the 3 provincial governors and the donor representatives from the Swiss Development Cooperation (SDC) and the German Ministry for Economic Cooperation and Development (BMZ). The implementing organisation (GIZ) would be represented by the GIZ country director. The RED programme manager would be an ex-officio member of the national steering committee.

#### **18. Risks:**

The following risks need to be monitored and risk mitigation approaches developed and implemented where appropriate:

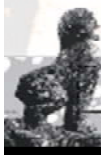
- Insufficient political commitment towards "substantial" D&D reforms (e.g. functional and financial decentralisation).
- Continued political uncertainty following 2013 elections.
- Effects of possible (rampant) corruption and insufficient transparent processes, abuse of power, etc.
- Effects of strong out migration of rural communities (e.g. to Thailand) .
- Effects of ASEAN regional integration 2015.
- Effects of possible continued political turmoil in Thailand.
- Difficulties for SNA and RED to recruit and keep adequately qualified and motivated staff in remoter areas.
- Continuation of large subsidy schemes and market distortion by other donor programmes and projects.
- Potential effects on poor households due to strong market and price fluctuations, unpredictable weather conditions, etc.
- Potential land and resource conflicts in target areas.

#### **19. Confirmation of results and recommendation**

The PPR findings and recommendations were presented and discussed at a large stakeholder workshop involving 75 participants on 27th January 2014 in Siem Riep. Points raised at the workshop will be considered by the PPR team in their PPR report.

#### **20. Declaration:**

- These Minutes do not represent a formal programme agreement, but rather reflect the assessment of the Programme



progress review team and the results of the various discussions that formed part of the review process. They are not binding on either party to the extent that formal approval is subject to agreement by the Council of Ministers, Ministry of Interior and in Cambodia and by BMZ in Germany.

- The parties signing hereunder declare herewith that they agree with the summarized findings and recommendations. This summary report shall serve the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH as basis for preparing a proposal for the RED III Programme with the broad objective being defined as *"Smallholders, small businesses and jobseekers make sustainable use of economic opportunities"* for submission to the German Federal Ministry for Economic Cooperation and Development (BMZ).

Date: 28th January 2014

H.E Uk Someth, Council of Ministers and  
National Programme Coordinator

  
.....  
Dr. Nikolaus Schall, PPR Team leader