

WORKING PAPER

Policy, Legal and Institutional Studies

***Management of Fisheries, Coastal Resources
and Coastal Environment in Cambodia:
Institutional, Legal and Policy Perspectives***

THE CAMBODIA WORKING GROUP

SH
206
P272P64
#3
c.2

Research and Impact Assessment Program



International Center for Living Aquatic
Resources Management



#395

Working Paper No. 03

MANAGEMENT OF FISHERIES, COASTAL
RESOURCES AND THE COASTAL ENVIRONMENT
IN CAMBODIA: INSTITUTIONAL, LEGAL AND
POLICY PERSPECTIVES

S e p t e m b e r 1 9 9 9

Cambodia Working Group



SH
206
P 272
P 64
#3
c. 2

MANAGEMENT OF FISHERIES, COASTAL RESOURCES AND THE COASTAL ENVIRONMENT IN CAMBODIA: INSTITUTIONAL, LEGAL AND POLICY PERSPECTIVES

by The Cambodia Working Group

1999

Cambodia Working Group. 1999. Management of fisheries, coastal resources and the coastal environment in Cambodia: institutional, legal and policy perspectives. PRIAP-ICLARM Work. Pap. Ser. 3.

Coordinator: Albert M. Salamanca
Copyeditor: Jess Alfonso A. Macasaet
Layout Artist: Florisa Norina Luna-Carada
Cover Designer: Miguel C. Migallos

This document has not been subjected to peer review or editing by ICLARM Publications Unit. The views presented in this paper are those of the authors and do not necessarily represent those of the Policy Research and Impact Assessment Program, ICLARM or Sida.

0000018813

Acknowledgement

We owe our gratitude to the Ministers, Secretaries, Undersecretaries, General Directors and Directors of the Ministries of Tourism (MOT), Environment (MOE), Industry, Mines and Energy (MIME), Public Works and Transport (MPWT) and Agriculture, Forestry and Fisheries (MAFF), who gave us great support and enabled us to get all information and materials on institutional, legal and policy issues of coastal resource management.

Many thanks to the provincial authorities of Sihanoukville, Kep, Koh Kong and Kampot provinces and towns, who kindly gave us an understanding of the overall management and use of natural resources at the local level.

We would like to acknowledge the support and cooperation provided by nongovernment organizations (NGOs) and international organizations (IOs) who kindly collaborated with us, including the "Participatory Management of Mangrove Resources Project" (PMMR Project, MOE and the International Development Research Center); the "Environmental Management of the Coastal Zone Project" (MOE and Danida); as well as NGOs such as APHEDA in Kampot Province and the American Friends Service Committee (AFSC) in Sre Ambel, Koh Kong Province for helping us with the case studies. Special thanks to Mr. Kim Nong, Mr. Nin Vanntha and Ms. Chheang Sokha for their assistance in the study.

We also extend our gratitude to the Directors and staff of the Coastal Resources Institute (CORIN) in Thailand and Wetlands International-Asia Pacific in Malaysia for kindly hosting us during the study tour. We appreciate the sharing of information and useful insights from the many regional organizations who helped us gain other perspectives on the management of coastal resources.

Last but not the least, our team would like to express our deepest thanks to the International Center for Living Aquatic Resources Management (ICLARM) and the Swedish International Development Cooperation Agency (Sida) who provided funds and technical support to ensure the success of our work.

Editor's Preface

This working paper is an output of the project on Management of Fisheries, Coastal Resources and the Coastal Environment in Cambodia: Institutional, Legal and Policy Perspectives. It intends to provide a basis for a country profile. The findings in this working paper will be included in a regional study that includes Bangladesh, Indonesia, Philippines, Thailand and Vietnam. This working paper is conceived in order to disseminate the results of the country case studies to a wide audience.

The national case studies discuss the following themes:

- ❖ Status of coastal resources, values, threats and development options;
- ❖ Historical overview;
- ❖ Overview of the current legal, institutional and policy contexts and their effects on coastal resource management;
- ❖ Status of policy, legal and institutional conditions for the management at the local level; and
- ❖ Policy synthesis and recommendations.

The overall objective of this study is to look into the elements that are instrumental in formulating the rights and rules (laws, customs, traditions, etc.) which provide the legal, institutional and policy frameworks for the implementation of locally-based (resources) management systems in marine and coastal areas. Other names for these systems include "co-management", "community-based management" and "integrated coastal resources management". Special attention is given to fisheries and other types of aquatic resources as well as coastal environmental protection. Specifically, the case studies were undertaken in order to generate information on the legal, institutional and policy frameworks on environmental and resources management of each countries, to describe and analyse conflicting uses of natural resources in coastal areas, to review and identify the role of stakeholders and interest groups, and to assess the impacts of culture, religion and tradition on natural resource management and environmental protection.

In the case of Cambodia, the study was aimed at identifying the gaps, strengths and weaknesses of the legal and policy frameworks for managing fisheries, coastal resources and the coastal environment. Furthermore, the study provides a basis for increased awareness and identification of priority areas for action on the integration and co-ordination of laws and policies between different sectors and at different levels (local, provincial, national and regional).

The target groups for the study are policy and decision-makers at the national and local levels, NGOs and community organizations, donor agencies, as well as international and regional organizations. The study in Cambodia has been successfully implemented in co-operation with Wetlands International, the Ministry of Environment and other ministries. Funding was provided by Sida.

A multisectoral team was formed and Ms. Pum Vicheth of the Department of Natural Resource Assessment and Environmental Data Management of the Ministry of Environment assumed the role of national project manager. The research counterparts and advisers were chosen from the ministries and NGOs undertaking coastal resource management work in Cambodia. The advisers included Messrs. Srun Lim Song, Ministry of Agriculture, Forestry and Fisheries; Nguon Narin, Ministry of Industry, Mines and Energy; Sin Chhay, Ministry of Public Works and Transport; Ouk Siphon, Ministry of Tourism; Chan Dara, Ministry of Environment; Mao Kosal, IUCN/Wetlands International; Toby Carson, IDRC; and Bernard. O'Callaghan, Wetlands International.

The project collaborated with other projects and organizations working in Cambodia's coastal provinces such as the "Coastal Environmental Management" project (MoE and Danida) and the "Participatory Management of Mangrove Resources" project (MoE and IDRC). This project also worked with Mr. Vann Monyneath of the Coastal Coordinating Unit, who served as a project adviser, to help coordinate activities with other relevant coastal zone projects.

Five case studies were carried out in different locations along Cambodia's coastline to explore various coastal management issues and to ensure the participation of resources users and other stakeholders. The reports of the case studies were echoed to the fishing villages that participated in the case studies. This exercise aimed to validate the findings of the case studies and to gather the opinion or comments of the stakeholders. The full reports, available in Khmer and English versions of these case studies, are available as separate documents. The study team also participated in a regional workshop and study tour to Thailand and Malaysia.

The study, together with the integrated training, has contributed in increasing the awareness of policy and decision-makers in the country on coastal resources management and helped identify priority areas for action on the development and improvement of laws, policies and institutional frameworks, including coordination and cooperation between sectors and institutions. In collaboration with other coastal projects, a database of coastal human and institutional resources in Cambodia has been prepared.

A national workshop on the Management of Fisheries, Coastal Resources and the Coastal Environment in Cambodia was held on 23 June 1998. The objectives of the workshop were to present the results of the project study, to discuss and gather feedback on the contents of the project study and to assess the level of support of key policy-/decision-makers in order to continue the process that the project initiated.

This working paper, written by the Cambodia Working Group, raised several important issues on the legal, institutional and policy frameworks of fisheries and environmental management in the country. It shows that a top down approach is still the predominant mode of managing natural resources in the country. The paper also identified important constraints in policy, legal and institutional aspects of natural resource management. Available policies on natural resources management in Cambodia are too broad or too "demanding" in relation to available financial resources. There is also no specific coastal zone policy. The main constraints to the protection, conservation and management of coastal and environmental resources are the lack of implementation of policies and the unclear responsibilities among local authorities on how these policies are to be implemented.

With regards to legal constraints, it is noted in the paper, that, among others, most laws and sub-decrees that have been adopted do not have implementation guidelines such that different interpretations are made. Moreover, many laws that are presently being enforced are outdated and do not reflect the current situation such as the Fisheries Law of 1987. This law is inadequate as it has no provisions, among others, on size limits of harvestable marine fish and it does not prohibit mechanized push gear, which destroys the seabed.

Aside from the legal and policy constraints, this working paper also identified important institutional constraints, which prevented successful management of the country's fisheries and other natural resources, particularly in the area of human resources. The paper emphasized the need for improved knowledge and skills among government personnel involved in natural resources management. Without a credible and capable human resources, the implementation of any legal and policy framework will hardly succeed.

The views presented in this working paper belong to the authors and do not necessarily represent ICLARM, Sida or WRI.

Dr. Magnus Torell
Project Leader
Policy Research and Impact Assessment Program

Contents

Acknowledgments	i
Editor's Preface	iii
List of Figures	xi
List of Tables	xi
List of Abbreviations	xiii
1 BACKGROUND	1
1.1 Geographical Characteristics	1
1.2 Economic Patterns	2
1.3 Employment	4
1.4 Summary of Resource Status, Resource Benefits and Threats	4
1.4.1 Population	4
1.4.2 Fishery Resources	6
1.4.3 Aquaculture	9
1.4.4 Mangrove Forest	9
1.4.5 Coral Reefs	12
1.5 Development Potentials and Options	12
1.6 Historical Profile of the Cambodian Legal and Institutional System	13
2 INSTITUTIONAL ARRANGEMENTS	15
2.1 Line Ministries	15
2.2 Provincial Authorities	22
2.3 Committees, Coastal Units and NGOs	23
3 LEGAL FRAMEWORK	27
3.1 Legislative Hierarchy	27
3.2 National Legal Framework	29
3.2.1 Constitution of the Kingdom of Cambodia	29
3.2.2 Land Law and Land Management Law	29
3.2.3 Investment and Labor Laws	30
3.2.4 Fisheries and Forestry Laws	31
3.2.5 Industrial Laws	33
3.2.6 Transport Laws	34
3.2.7 Tourism Laws	38
3.2.8 Environmental Laws	39

3.3	International and Regional Arrangements	42
3.3.1	Law of the Sea Convention and the Exclusive Economic Zone	42
3.3.2	UNEP Coordinating Body of the Seas of East Asia	44
3.3.3	Association of Southeast Asian Nation (ASEAN)	45
3.3.4	CITES Convention	46
3.3.5	MARPOL Convention	46
3.3.6	Ramsar Convention	47
3.3.7	Biodiversity Convention	47
3.3.8	Climate Change Convention	48
4	LOCAL UTILIZATION AND MANAGEMENT	49
4.1	Access to Coastal Resources	49
4.2	Local Utilization	49
4.2.1	Mangrove and charcoal kiln	49
4.2.2	Fishing	50
4.2.3	Fish Processing	50
4.2.4	Medicinal Plants	51
4.2.5	Aquaculture	51
4.2.6	Coastal Tourism	51
4.2.7	Value of Marine and Coastal Resources	52
4.3	Local Management Experience	52
4.3.1	Initiative of Coastal Resource Management	52
4.3.2	Current Mangrove Management	52
4.3.3	Fishing and Detrimental Practices	53
4.3.4	Development of Salt Pans	53
4.4	Religion and Traditional Beliefs	54
4.4.1	Ethnicity and Religion	54
4.4.2	Traditional Belief	54
4.5	Initiatives to Combat the Degradation of Mangroves and Coastal Resources	55
5	NATIONAL POLICY AND PLANNING	57
5.1	National Policy	57
5.1.1	Fisheries Policy	58
5.1.2	Industrial Sector Policy	58
5.1.3	Tourism Policy	59
5.1.4	Policy of the Ministry of Public Works and Transport	59
5.1.5	Environmental Policy	60
5.2	National Planning	60
5.2.1	Fisheries Planning	61
5.2.2	Industrial Policy and Planning	61

5.2.3	Tourism Zoning Strategy	62
5.2.4	National Environmental Action Plan	62
5.2.5	Nationa Wetlands Action Plan	63
5.2.6	Conservation Plan	63
6	POLICY, LEGAL AND INSTITUTIONAL CONSTRAINTS AND ISSUES	65
6.1	Policy Constraints in the Legal Framework	65
6.2	Constraints in the Institutional Framework	65
6.3.1	Human Resources	67
6.3.2	Law Enforcement	67
6.3.3	Management Systems	68
6.3.4	Financial Constraints	69
7	RECOMMENDATIONS	71
	REFERENCES	75
	APPENDICES	
Appendix 1:	List of Legal Instruments	77
Appendix 2:	List of Conventions and Regional Instruments	79
Appendix 3:	Workshop Report	80
Appendix 4:	List of Participants and Guests	88

List of Figures

Figure 1-1	Administrative Map of Cambodia	2
Figure 1-2	Population Density in the Coastal Zone of Cambodia	5
Figure 1-3	Protected Areas of the Kingdom of Cambodia	10
Figure 2-1	Organizational Structure of the Fisheries Department	16
Figure 2-2	Organizational Structure of the Ministry of Industry, Mines and Energy	17
Figure 2-3	Organizational Structure of the Ministry of Tourism	18
Figure 2-4	Organizational Structure of the Ministry of Public Works and Transport	19
Figure 2-5	Organizational Structure of the Ministry of Rural Development	20
Figure 2-6	Organizational Structure of the Ministry of Environment	21
Figure 2-7	Organizational Structure of the Ministry of Province and Municipality	23

List of Tables

Table 1	GDP Composition and Annual Growth Rate	3
Table 2	Employment Characteristics	4
Table 3	Coastal Population in the Kingdom of Cambodia	6
Table 4	Number of Fishing Effort of Koh Kong Province	7
Table 5	Catch-Effort (tons)	8
Table 6	Fish Production (tons)	8
Table 7	List of Factories in Coastal Provinces	11
Table 8	Protected Areas along Cambodia's Coastline	40
Table 9	Current Potential Overlaps and Conflicts within Sectors	69
Table 10	Current Potential Overlaps and Conflicts among Legal System	70

List of Abbreviations

ADB	Asian Development Bank
AFSC	American Friend Service Committee
APHEDA	Australian People for Health, Education and Development Abroad
ASEAN	Association of Southeast Asia Nations
CCU	Coastal Coordinating Unit
CDC	Council for the Development of Cambodia
COBSEA	Coordinating Body of the Seas and East Asia
COP	Conference of Parties
Danida	Danish International Development Assistance
DNCP	Department of Nature Conservation and Protection
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
IDRC	International Development Research Center
IMO	International Maritime Organization
IUCN	World Conservation Union
MAFF	Ministry of Agriculture, Forestry and Fisheries
MARPOL	International Convention on the Prevention of Marine Pollution from Ships
MIME	Ministry of Industry, Mines and Energy
MoE	Ministry of Environment
MoT	Ministry of Tourism
MPWT	Ministry of Public Works and Transport
NACA	Network of Aquaculture Centers in Asia and the Pacific
NEAP	National Environmental Action Plan
RAMSAR	Convention on Wetlands of International Importance especially as Waterfowl Habitat
Sida	Swedish International Development and Cooperation Agency
SEAPOL	South East Asian Programme in Ocean Law, Policy and Management
SNC	Supreme National Council
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework for the Convention on Climate Change
WI	Wetlands International

Chapter 1

Background

1.1 GEOGRAPHICAL CHARACTERISTICS

Cambodia is situated in Southeast Asia between 8° and 12° North latitude and 102° and 108° East longitude. The country occupies about 181 035 km². Cambodia shares its 2 428-km land border with Thailand on the northwest, Laos on the northeast and Vietnam on the east and south. On the southwest, the coastline extends for 435 km along the Gulf of Thailand (Figure 1-1).

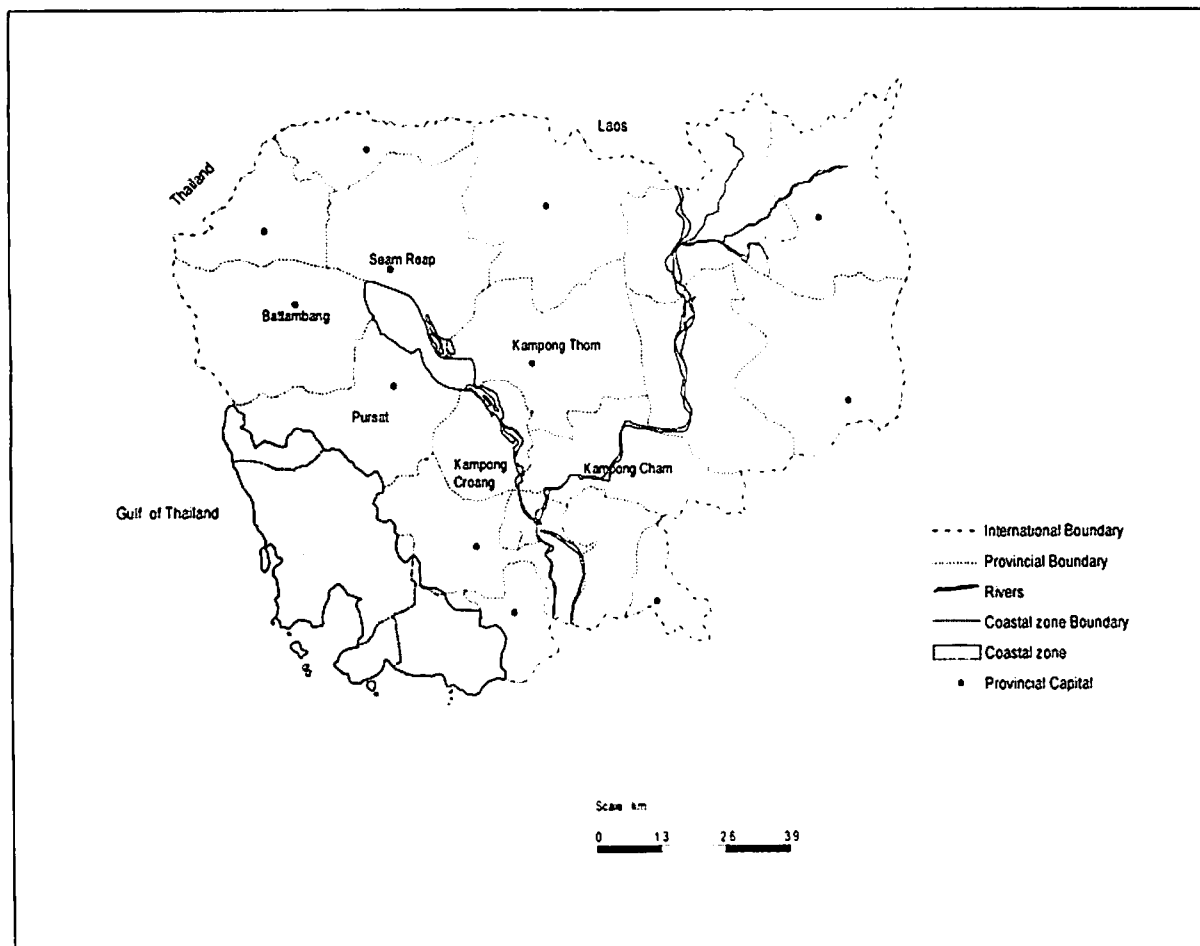
The coastal zone of Cambodia contains extensive forests and numerous bays and beaches. There are several offshore islands belonging to Cambodia. The coastal areas and islands provide natural resources for the national economy. The largest town on the coast is Sihanoukville which has deep seaport facilities and considered as one of the economic centers of Cambodia.

Cambodia's coastal climate is tropical monsoon which is typically hot and humid. The average annual temperature is around 27 °C with a maximum average of 35 °C in April and a minimum average of 19 °C in December. The average annual precipitation varies from 2 000 to 4 000 mm. The rainy season is from around June to October and the dry season from around November to May.

The coastline of Cambodia faces the Gulf of Thailand and consists of a rocky coast bordered by the rugged and largely uninhabited Cardamom-Elephant Mountains. Streams descend steep slopes and deposit their bedloads where their gradients flatten out near the coast. The coast up north is protected by hard rock, but in the south, the coastline is eroded by strong waves during the southwest monsoon. The streams of many valleys are salty. Storms drive surges of salty water into coastal paddies, thus increasing soil salinity in some areas. Mud irrigation is practiced where muddy floodwater can be directed into the rice fields.

The major coastline types consist of sandy shoreline, estuaries, lagoons and reefs. The coastline is characterized by waves, currents, river flows and tides depositing sediments such as sand, gold and clay. The nearshore area places deposits, concentrated to the climate change during the last Pleistocene. Cambodia's coastline is currently being subjected to various stresses including mangrove deforestation and sand mining.

Figure 1-1. Administrative Map of Cambodia.



The coastal areas lack freshwater resources, especially during the dry season. There is not enough accurate information regarding the ground water resource situation in these areas.

1.2 ECONOMIC PATTERNS

Civil turbulence greatly disrupted Cambodia's economy in the 1970s and slow growth persisted in the 1980s. Since 1989, however, the economy has seen rapid changes. Increased private sector participation is being encouraged, thus contributing to a marked growth in the gross domestic product (GDP). Average per capita income in 1996 was estimated at about US\$300 (Ministry of Finance, 1996). The annual growth rate of GDP was about 5-7% in mid-1990s. Cambodia made a remarkable progress in its economic growth from 1.2% of GDP in 1990 to 7.6% in 1995, largely due to the strong performance of the industry sector (growing at an average of 11% a year), trade and transport

(each growing at an average of 10% a year) and services sector (growing at an average of 8% a year). Economic growth continued to be robust in the early 1996 reaching 6.5%. The slight reduction in GDP growth for 1996 was largely due to severe flooding that occurred in September and October. The flooding caused internal displacement, damaged infrastructure and reduced crop output, which also affected other countries bordering Mekong. More than 70% of investments come from the private sector including about 37% as foreign direct investment.

The steady growth of Cambodia's service sector

The steady growth of Cambodia's service sector indicates the positive impact of the changes in the country's industrial base and increased public investment in key infrastructure. Output is increasingly driven by growth in the garment sector, small-scale enterprises and other forms of foreign investment rather than the production and export performance of traditional industries such as rubber and timber. Services including restaurants, shops, hotels and trade-related activities were the main contributors to economic growth, with the number of restaurants and hotels growing at an average of 25% a year.

"The steady growth of Cambodia's service sector indicates the positive impact of changes in the country's industrial base and increased public investment in key infrastructure."

The multiplier effect of increased public investment and the rehabilitation of transport and communications resulted in increased contributions to growth. However, continued productivity problems in the agricultural sector reduced that sector's contribution to the economy. Thus, while Cambodia is still highly dependent on the performance of agriculture, the new industries and services are making an increasing contribution to the country's economic development. Moreover,

Table 1. GDP Composition and Annual Growth Rate (Percentage Per Year).

	1991	1992	1993	1994	1995	1996	1997 (Est.)
GDP at current prices (Billion Riels)	1 336	2 509	5 414	6 131	7 200	8 200	9 132
As a % of GDP							
Agriculture	51.5	46.4	45.8	43.0	43.7	42.6	44.0
Industry	11.6	13.0	15.0	16.3	16.3	17.8	17.3
Services	36.9	40.6	39.2	40.2	40.0	39.6	38.7
Annual Growth Rate (1989 Prices)							
Agriculture	2.9	0.3	4.1	0.5	6.4	2.4	5.2
Industry	11.6	22.3	19.4	15.3	9.5	15.0	0.6
Services	12.2	9.6	7.3	11.9	8.2	7.3	0.4

Source: Ministry of Planning, 1997.

the positive effects of efficient public utilities and social infrastructure on service and industry emphasize the need to maintain public investment in core areas.

1.3 EMPLOYMENT

The current active labor force is estimated at 4.5 million, 75% of which are employed in agriculture (e.g., farming, forestry and fishing), while 20.5% are employed in the service sector (e.g., wholesale and retail trade, hotels and restaurants, transportation, public administration and personnel services) and 4.5% are employed in the industrial sector. Employment generation is a government priority because of the need to provide jobs to about 250 000 low-skilled persons of working age, consisting of the openly unemployed, disabled, refugees and the internally displaced. To add, 135 000 jobs have to be created each year to accommodate new entrants to the labor market, including those to be generated from the planned demobilization of the armed services and the reform of public administration. The main features of the labor market are summarized in Table 2.

Table 2. Employment Characteristics.

Employment Queue	New Jobs Needed
Unemployed	3% labor force growth = 135 000
Invalids	Rural areas = 100 000
Refugees	Urban areas = 35 000
Internally displaced	Retrenchment rate: 30 000 over three years
	Demobilization rate: 42 000 over three years
Constraints	Current Employment
Low skills	75% In agriculture
High dependency ratio	60% Self-employed in Phnom Penh
	40% Wage earners in Phnom Penh

Source: Ministry of Planning, National Statistics Institute, 1997.

1.4 SUMMARY OF RESOURCE STATUS, RESOURCE BENEFITS AND THREATS

1.4.1 Population

Cambodia's current population is estimated at 11 million, with an annual growth rate of approximately 2.8%. Khmer constitutes about 90% of the population while ethnic Chinese, Charm, Vietnamese and upland people make up the rest. About 80% of the population live in rural areas. It is estimated that some 250 000 Cambodians have settled overseas since 1970, wherein 175 000 are in the USA and 40 000 are in France, while the rest are in Canada, Australia and elsewhere.

About one-third of all household heads are women, who comprise 54% of the total adult population. The current average life expectancy is about 50 years, higher

than previous estimates but low by international standards. Infant and child mortality rates remain high at 110 per 1 000 births. In 1990, the adult literacy rate was 48% for men and 22% for women. There remains a severe shortage of skilled labor and professional people such as engineers, masteral and doctorate degree-holders.

The official language is Khmer, spoken by roughly 90% of the population. Until the 1970s, French remained the second language until the advent of English as a language widely taught in schools. The main religion is Buddhism.

The average population density of Cambodia is 61 persons/km². Coastal areas are two to three times less populated than the average, and in Koh Kong province there are only 9 persons/km². Figure 1-2 shows the population density in the coastal zone of Cambodia.

Figure 1-2. Population Density in the Coastal Zone of Cambodia.

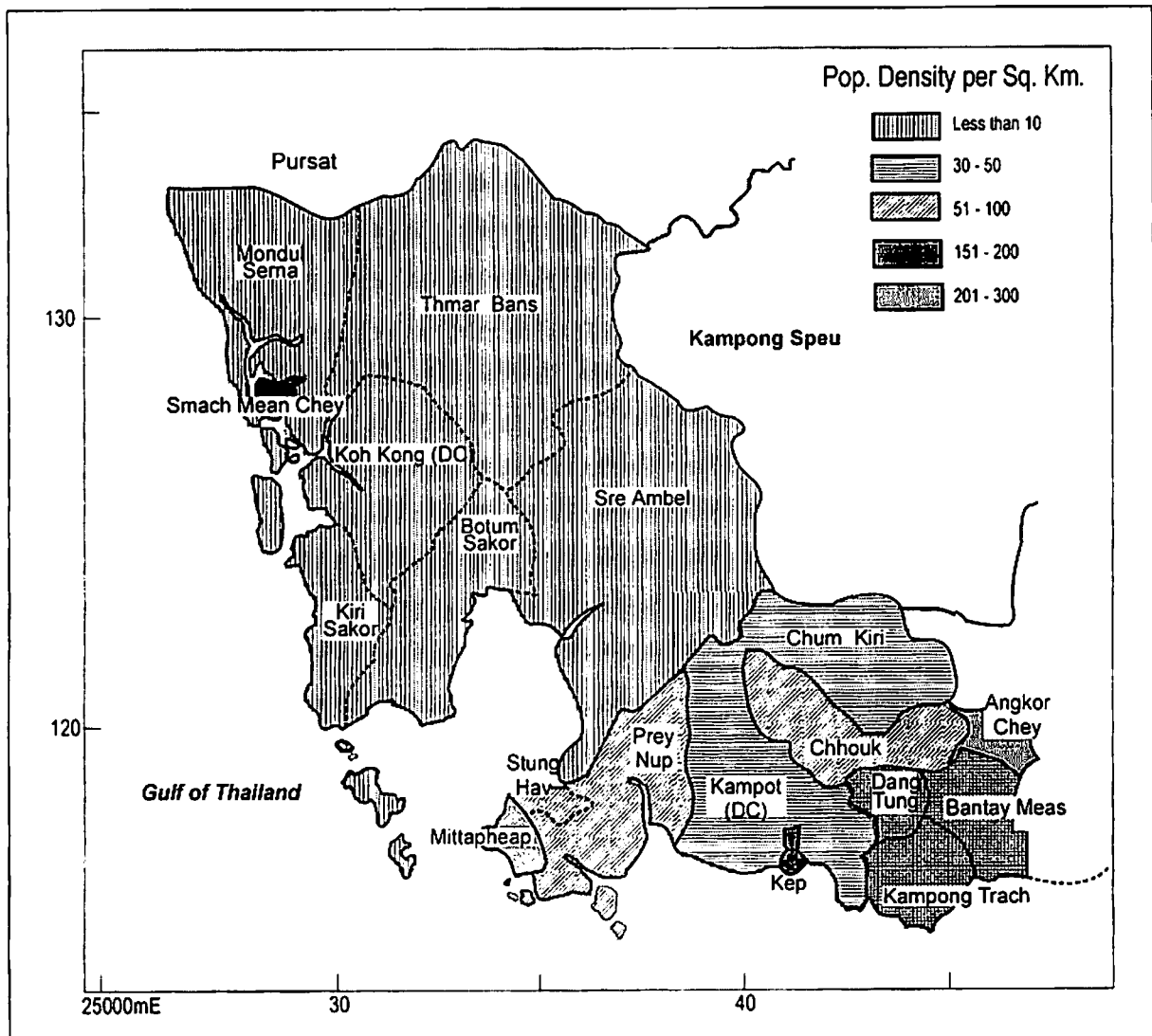


Table 3. Coastal Population in the Kingdom of Cambodia.

Coastal Region	Area (km ²)	Population	Density (/km ²)	Districts	Commune
Sihanoukville	868	132 000	152	3	21
Kampot	5 209	575 000	110	8	95
Kep	148	28 000	192	-	-
Koh Kong	11 160	105 000	9	7	30
Total	17 237	840 000	49	18	146

Source: Ministry of Planning, 1997.

1.4.2 Fishery Resources

Results of marine fisheries research in Cambodian territorial seas from 1983-1986 conducted by USSR scientists and nationals show that there were 435 fish species from 97 families in the offshore areas (from 20 m deep up to the outer border) with a total stock of 50 000 tons/year. The same source had identified seven shrimp species, one squid species and two cuttlefish species. The latter stock was estimated at about 1 300 tons/year.

Previous studies on the species composition of inshore catches found 109 fin-fish species. Twenty percent of these are excluded from the species identified by the research done in 1983-1986.

Resulting from the above research, two major groups, scad and mackerel, prevailed (more than 10%) among the total fish stock. In the 1980s, Dr. Veravat Hongskul studied the spawning movement and spawning season of migratory species of the Gulf of Thailand. He also studied the importance of these two groups of fish and indicated its migratory patterns and spawning areas in the Gulf of Thailand. Knowledge about these patterns are known to local fishermen in the region.

Mackerel and scad purse seine has been introduced in Cambodia around 1958. This was later followed by the introduction of trawls. Operation of purse seines at that period was mostly done inshore and vessels had an engine capacity of not higher than 50 Hp. The total number of fishing vessels (purse seiner, trawler, long line and nylon gill nets), recorded before 1975 was about a few hundred units. The rest of the fishing vessels were small rowing boats that used traditional fishing techniques such as fishing weir, stack trap, beach seiner and so on. Shrimp trawling was introduced after the 1970s.

Interestingly, monofilament gill nets and large shrimp trawlers were heavily introduced from Thailand during the Khmer Rouge period (1975-1978) and large shrimp trawlers and mackerel purse seiners were also reported to have been used at the same time. Fishing operation was allowed only in Sihanoukville Bay and selected fisher groups settled in two areas—in Thmar Sar/Chamlang Kor, Koh Kong province

and in Tomnup Rolork of Sihanoukville. Fish catches were allocated for local consumption and fish sauce factories in Chamlang Kor (which is inoperative now) and Tomnup Rolork (which is still operated by private individuals), while shrimp catches were exported to Thailand. This was done through Thai middlemen in exchange for fuel, fishing nets, medicine (which was the main barter item), rice (occasionally) and others.

Catching shrimp in Koh Kong province using modern gear (big trawler and monofilament gill net) developed rapidly since 1981 due to the boom in the shrimp market. This led subsequently to a dramatic decrease in almost all the purse seine fishing and the traditional fishing operations, such as those using fishing weir and stack trap. The target species for the Koh Kong fisheries are shrimp, crab, squid, tuna, Spanish mackerel and stony fish which are in demand in the Thai market. Surplus of scad, mackerel and other low-value fish are also exported to Thailand.

In the last decade, depletion of shrimp stock has led to a gradual change in the methods used for catching shrimp.

Shrimp trawlers have ceased their operation, while shrimp gill-netters have increased. Shrimp production from gill nets, which has recorded a yield of higher than 6 000 tons/year in the 1990s, will decrease if this situation continues. Tables 4 and 5 show the current fishing and catch efforts within the area of Koh Kong province. Table 6 shows an estimate of fish catch production. The estimated or recorded

Table 4. Number of Fishing Effort of Koh Kong Province.

Fishing Gear	Targeted Resource	Capacity	Number	Fishing Ground
Purse seiner trawler	Mackerel, scad Anchovy shrimp	-<50Hp		Inshore
		->50Hp	8	
		->50Hp	15	Inshore
		-<50Hp	33	Inshore
		->50Hp	257	Inshore/offshore
Drift gill netter	spanish mackerel	-<5,000m	28	Inshore/offshore
Set gill netter	Mullet Seabass Mackerel Crab Shrimp	-<5,000m	141	Inshore/offshore
			18	
			259	
			208	
			262	
Trap	Crab	-Rowing boat	87	Inshore
Stake trap	Squid Fish	-<50Hp	80	
		->50Hp	2	
Long liner	Shark/stingray Snapper/grouper	-<50Hp	42	Inshore/offshore/coral reef area
			10	
Engine boat push netter	Fish/shrimp	-<50Hp	34	Inshore
Portable push net		Rowing boat	20	Inshore
Beach seine	Fish/squid	Rowing boat	6	Inshore

Source: Koh Kong Provincial Fishery Office, 1997.

catches by shrimp gill net and crab gill net would probably be at least doubled if the amount that have not been registered for tax purposes is considered.

The marine fishery production in Cambodia is officially estimated to around 30 000 tons annually, which is about 30% of the total estimated fish production, although marine production tends to decrease. The total estimated production (including freshwater fish production) is around 110 000 tons annually. According to the National Environment Action Plan (NEAP, 1998), the actual catch may be higher because the figures as shown in Table 6 do not include the harvests of foreign fishing fleets that land their catch out of Cambodia, illegal commercial boats and subsistence or family fishing. It should also be noted that some fishers do not register their catches to avoid tax.

Table 5. Catch-Effort (tons).

Type of Gear	Yields
Mackerel purse seine	1 420
Anchovy purse seine	958
Shrimp trawl	1 340 + 5 897 trashfish
Shrimp gill net	1 797
Fish gill net	1 890
Crab gill net	390
Crab trap	210
Squid trap	498
Fish stake trap	210
Hook and line	295
Push net	680
Shellfish collector	123
Beach seine net	48

Source: Koh Kong Provincial Fishery Office, 1997.

Table 6. Fish Production (tons).

Year	Total Fish Production	Marine Production	Freshwater Production
1990	111 400	39 900	65 100
1991	117 800	36 400	74 700
1992	111 150	33 700	68 900
1993	108 900	33 100	67 900
1994	103 200	30 000	65 000
1995	112 510	30 500	72 500
1996	104 310	31 200	63 510
1997	103 850	28 000	75 850

Source: Fisheries Department, 1997.

Furthermore, household surveys and other estimates indicate that the production of aquatic resources such as fish, shrimp, squid and crabs is substantially higher than the present statistics, which primarily reflects production from commercial fishing.

1.4.3 Aquaculture

Cultivating shrimp is an important aquaculture activity in Koh Kong province. Other cultured species such as oyster and green mussel are not as significant in terms of both production and economy. The main shrimp species is *P. monodon*. Pond yields are reported to be up to 7-8 tons/ha for the newly started farms, and profits from these farms are attracting further investment. However, the shrimp industry in Koh Kong is causing serious problems such as shrimp disease and self-pollution of culture areas. Furthermore, the shrimp culture generates effluents that are discharged into the adjacent areas and the sea. This creates damage on other ecosystems and subsequently disrupts economic activities.

Surveys on shrimp farming management conducted by Network of Aquaculture Centers in Asia and the Pacific (NACA) in the early 1995 concluded that the intensive shrimp farms had an average annual production of 7 545 kg/ha, valued at Riels 42 million. Although the intensive shrimp farms generated a high profit value, shrimp farmers also faced significant environmental problems, particularly those farms located in acid sulphate soils and/or acidic sandy soils. An estimated Riels 14.5 million/year is lost due to the occurrence of diseases. Total environment-related losses are estimated at Riels 28.6 million yearly. The high financial losses require urgent measures to improve the environmental sustainability of shrimp farming in Cambodia. One concrete step that local governments and concerned ministries have taken involves the issuance of a moratorium on the licensing of additional shrimp farms.

1.4.4 Mangrove Forest

Landsat data of Mekong in 1992 shows that the total mangrove area of Cambodia is 83 700 ha. Seventy-five percent (63 200 ha) of these mangroves can be found in Koh Kong, while 16% (13 200 ha) is in Sihanoukville. The remaining 9% (7 300 ha) is located in Kampot.

Important mangrove forest areas are located in the large estuaries of Peam Krasob/Koh Sralao in Koh Kong Province. These areas are reputed to be some of the best pristine mangrove forests left in the region. There are also many other estuaries with mangrove flora such as Koh Por, Koh Yor, Dong Tong, Anduong Tuk and Sre Ambel, but they cover small areas.

Figure 1-3. Protected Areas of the Kingdom of Cambodia.

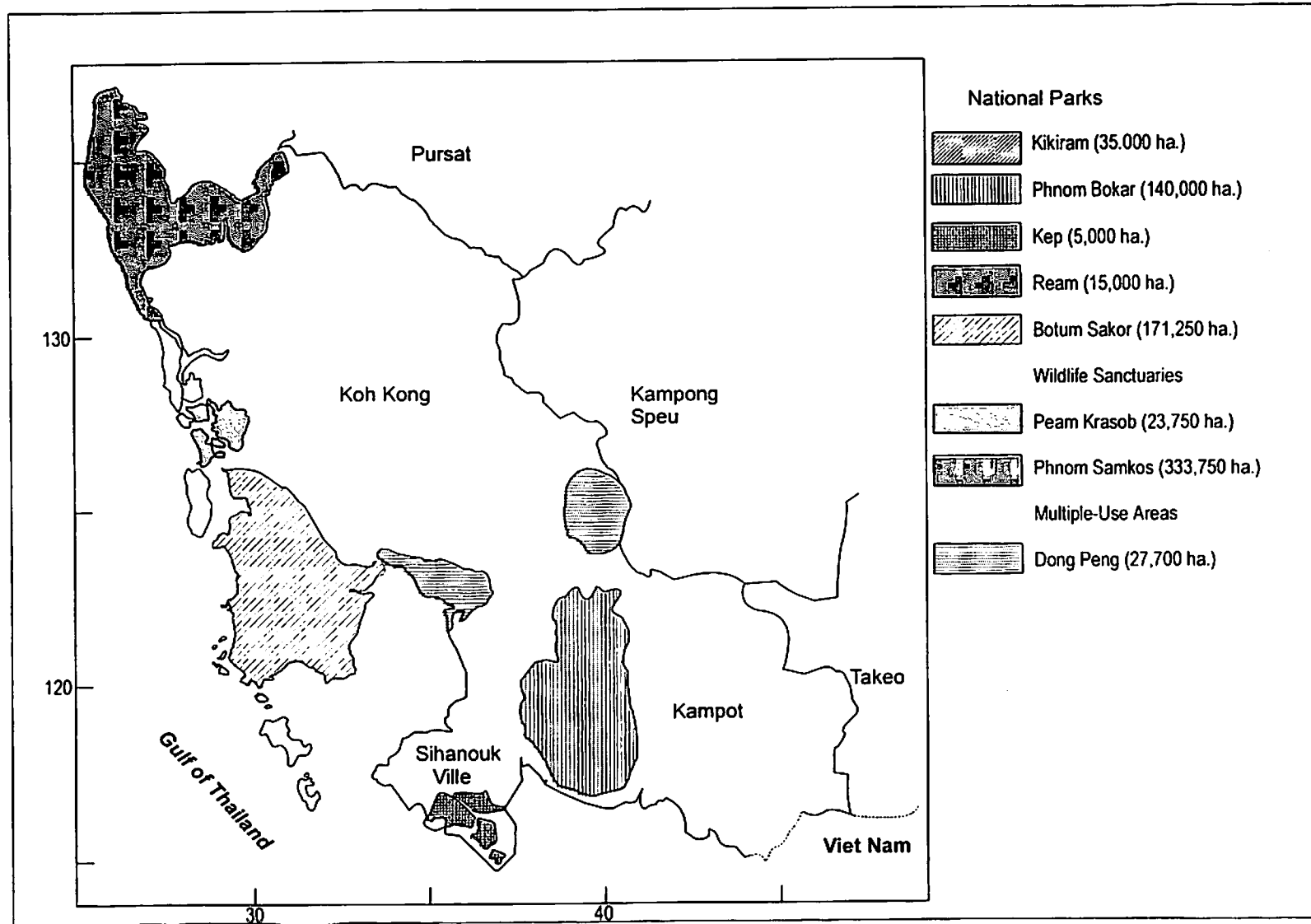


Table 7. List of Factories in Coastal Provinces.

Number	Name	Product	Location	Situation	Number of Employees
1	Manufacture of food, breweries and tobacco				
1)	Sun Wah Fisheries Co. LTD	Frozen Shrimps	Sihanoukville	Working	780
2)	Angkor Beer Factory (Cambrew)	Beer and soft drink, Angkor and Pepsi Cola	Sihanoukville	Working	100
2	Textile, wearing apparel and leather industries				
1)	Rao Yuan Garment Corp.	Garments	Sihanoukville	Working	360
3	Manufacture of chemicals, petroleum, coal, rubber and plastic products				
1)	Phosphate Fertilizer Factory	Phosphate fertilizer	Touk Meas, Kampot	No Working	160
4	Manufacture of non-metallic mineral products, except products of petroleum and coal				
1)	Naga Cement Factory	Cement	Chakrey Ting, Kampot	Working	319
2)	Thai Bun Rong	Cement	Phnom Laang, Kampot	Under Construction	
3)	Golden Dauphin	Cement	Touk Meas, Kampot	Under Construction	304

Source: Planning Department, MIME, 1997.

The mangrove flora in Peam Krasob/Koh Sralao is reported to have 74 related species from 35 families and 53 genera (Chun Sareth, 1993). A recent study in 1995 conducted by IDRC (International Development Research Center) and the Ministry of Environment (MoE) identified 17 families and 34 species in the field.

Exploitation of this resource for domestic fuel has remained a traditional activity. During 1920-1930, however, when charcoal was produced for export, the former French protectorate employed a resource management program that had designated zones for exploiting, regenerating and protecting mangroves. The red mangrove *Rhizophora spp.*, known locally as *kong kang nhe/chmuol*, is the most favorable for firewood and charcoal production.

Fishery laws promulgated in 1987 considered illegal the exploitation of mangrove for any purpose except when a special license for such is issued by the Department of Fisheries. Despite enforcement by both central and provincial fishery surveillance units, the clandestine harvesting of mangroves continued and even intensified, thus resulting in the serious degradation of this pristine resource. Another cause of mangrove degradation is the establishment of intensive shrimp culture in mangrove areas.

1.4.5 Coral Reefs

Coral reefs are abundant around Koh Karang in Kampot province. In fact, almost all islands have abundant coral reefs. The Cambodian coral is similar to those found along the coast in the nearby Thai provinces of Chantaburi and Trat.

1.5 DEVELOPMENT POTENTIAL AND OPTIONS

Cambodia is a developing country whose economy has been destroyed by two decades of civil war. Through steady rehabilitation and reconstruction efforts, Cambodia is transforming its economy to a free market system since democratic elections were held in May 1993.

Since its earliest days, Cambodia has always relied on rudimentary agriculture. Its importance in the country's economy is exemplified by the high regard that the Khmer culture possess the virtues of the farmer—full of initiative, hard work and self-sufficiency. However, agricultural production figures point out that this reverence for the farmer and his trade seems to be misplaced.

Khmer agriculture reveals a mixture of heroic facts tempered permanently with lingering myths. Farmers have never been self-sufficient since they have always been dependent to a large extent on factors outside of their control such as the weather, agricultural facilities, fertilizers and the price they receive for their products. Agricultural infrastructure is not efficiently developed. The yield of paddy cultivation is as low as 1 ton per hectare. Rubber production remains lower than 1 ton/ha. In summary, share of agriculture in the country's gross domestic product (GDP) is sensitive to climatic variation.

Before the Khmer Rouge in the 1960s, the industry in Cambodia was divided into two sectors—the private sector, which was flourishing, and the public sector which was experiencing problems due to dependency on foreign aid and credit. In the construction material sector, the most important factory was the Chakrey Ting cement factory. The first stage was erected from 1960 to 1964 and produced 53 500 metric tons in 1965, 60 000 metric tons in 1966 and 155 000 metric tons in 1969 of cement with good quality. A urea factory was planned to be erected near the petroleum refinery in Sihanoukville, but it was halted by the event of March 1970. A small fertilizer phosphate-milling factory was erected on one of the two small phosphate deposits at Touk Meas, Kampot Province. This factory was not working well due to the lack of management capability.

Another interesting sector in the coastal zone of Cambodia which has great potential was that of agricultural raw materials and agro-industries. The predominant feature in the 1960's was the small- and medium-scale rice mills. They produced rice of good quality and they were also able to utilize the by-products. From those mills, rice was exported. Many cottage industries produced food paste, fish sauce as well as traditional salted meat, vegetable and fish.

In 1968, the Khmer Distillery erected a modern brewery at Sihanoukville with a capacity of 1 000 000 hl of beer of excellent quality and a great part of it was exported to Vietnam.

During 1970-1978, the economic structure in Cambodia was turned upside down due to the instability caused by the Khmer Rouge regime. As a result, the transportation system, industrial output, commerce, trade and other services were totally destroyed and the national economy went down to zero.

In 1979, all the "left overs" from the Khmer Rouge, i.e., finished products, half finished products, machinery and equipment and almost all imported commodities left from the pre-war period were taken away by the neighboring country. Hence, the rehabilitation of the country was made barehanded. In that period, even though Cambodia was facing many difficulties, the result of the effort was substantial—the essential point was the re-birth of the nation.

Starting in late 1993, a remarkable change took place as many foreign firms became interested in the country. A number of businesses submitted their proposals to the Ministry of Industry, Mines and Energy (MIME) for consideration. Among those, a great number of textile and garment firms have been registered and issued with such licenses. The government has established a 900-ha Industrial Zone and a 260-ha Export Processing Zone in Sihanoukville (MIME, 1994). Several factories have been built in the coastal provinces such as phosphate fertilizer and cement factories in Kampot province, a brewery and an oil refinery in Sihanoukville (Table 7).

In 1994, foreign trading companies registered with the Ministry of Commerce accounted for not less than 1 200 establishments. With that, a great number of Foreign Direct Investment (FDI) in the industrial sector was registered with the Ministry of Industry, Mines and Energy.

At present, Cambodia has a large pool of cheap labor. There is a great potential for increases in agricultural primary production as well as in the development of mineral deposits scattered all over Cambodia.

1.6 HISTORICAL PROFILE OF THE CAMBODIAN LEGAL AND INSTITUTIONAL SYSTEM

In its recent history, the Cambodian legal system has undergone a series of radical changes as indicated below:

Pre-Colonial Time

Traditional Cambodian law was non-adversarial. Traditionally, accepted figures in society mediated in disputes and facilitated their resolution rather than imposing a settlement.

Management of Fisheries, Coastal Resources and the Coastal Environment in Cambodia: Institutional, Legal and Policy Perspectives

1870-1954

The French system was progressively introduced during the period of protectorate and colonial status.

1954 - 1975

The dual system of traditional and French law was retained after independence.

1975 - 1979

The Khmer Rouge regime abolished all laws and legal institutions and did not replace them with any new formal system.

1979 - 1991

The government of the State of Cambodia did not reinstitute the pre-1975 codes but developed a system of revolutionary people's courts with a strong emphasis on devolution to the provincial level.

1992 - 1993

The United Nations Transitional Authority of Cambodia (UNTAC) exercised power to implement the Paris Agreement for the establishment of a democratically elected government. UNTAC set up a limited legal framework, notably to reorganize the court system and a law of criminal procedure.

1993 - Present

The constitution established the principle of the separation of powers—executive, legislative and judicial branches of government. The monarch's power and authority were subsequently reduced.

Chapter 2

Institutional Arrangements

There are several main government institutions whose activities are related to the use and management of the natural resources and the environment in the coastal zone. In addition, there are some committees and nongovernment organizations (NGOs) who are also key players in managing this area.

2.1 LINE MINISTRIES

The Ministry of Agriculture, Forestry and Fisheries

The Ministry of Agriculture, Forestry and Fisheries (MAFF) has major responsibilities in managing and controlling natural resource use in the coastal zone. It has traditional management responsibility for environmental protection in general. The Ministry has an organized and developed administrative system at the national, provincial, district and even at the commune levels.

The Department of Fisheries (Figure 2-1) is mandated to manage activities related to water, fisheries, flooded forests, mangroves, swamps and industrial fisheries.

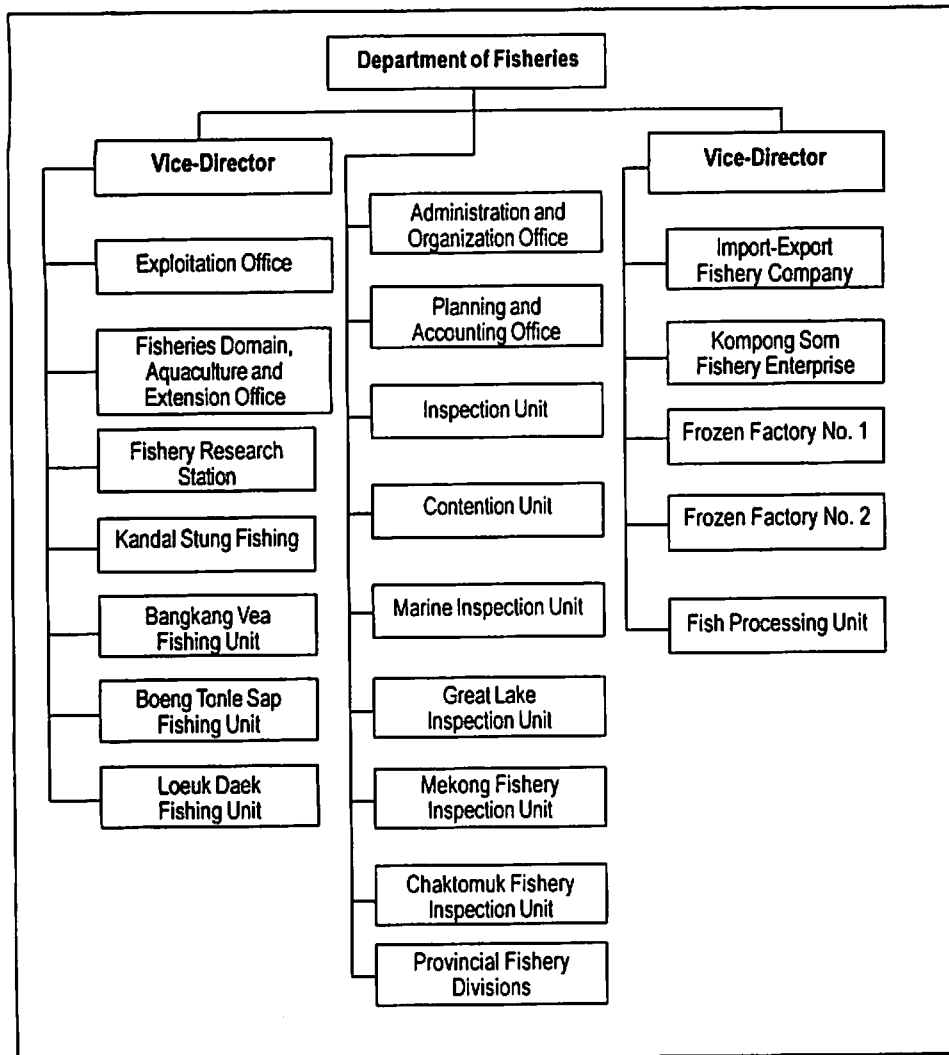
The Department of Forestry is responsible for the management and utilization of Cambodia's inland forest resources and the protection of wildlife.

The Ministry of Industry, Mines and Energy

The Royal Government of Cambodia established the Ministry of Industry, Mines and Energy (MIME) in accordance with the Constitution. The MIME acts as one of the principal catalysts to create the necessary atmosphere conducive to the industrial and economic development of the Kingdom, while safeguarding the welfare of the people and the environment. This Ministry has organized and developed administrative systems at the national, provincial and district levels. The MIME has three departments—Technical, Mines and Energy Departments (Figure 2-2).

Moreover, it has the obligation to manage and develop all projects within its mandate in an environmentally sustainable manner. The major responsibilities of the MIME related to coastal development and coastal zone management are as follows:

Figure 2-1. Organizational Structure of the Fisheries Department.

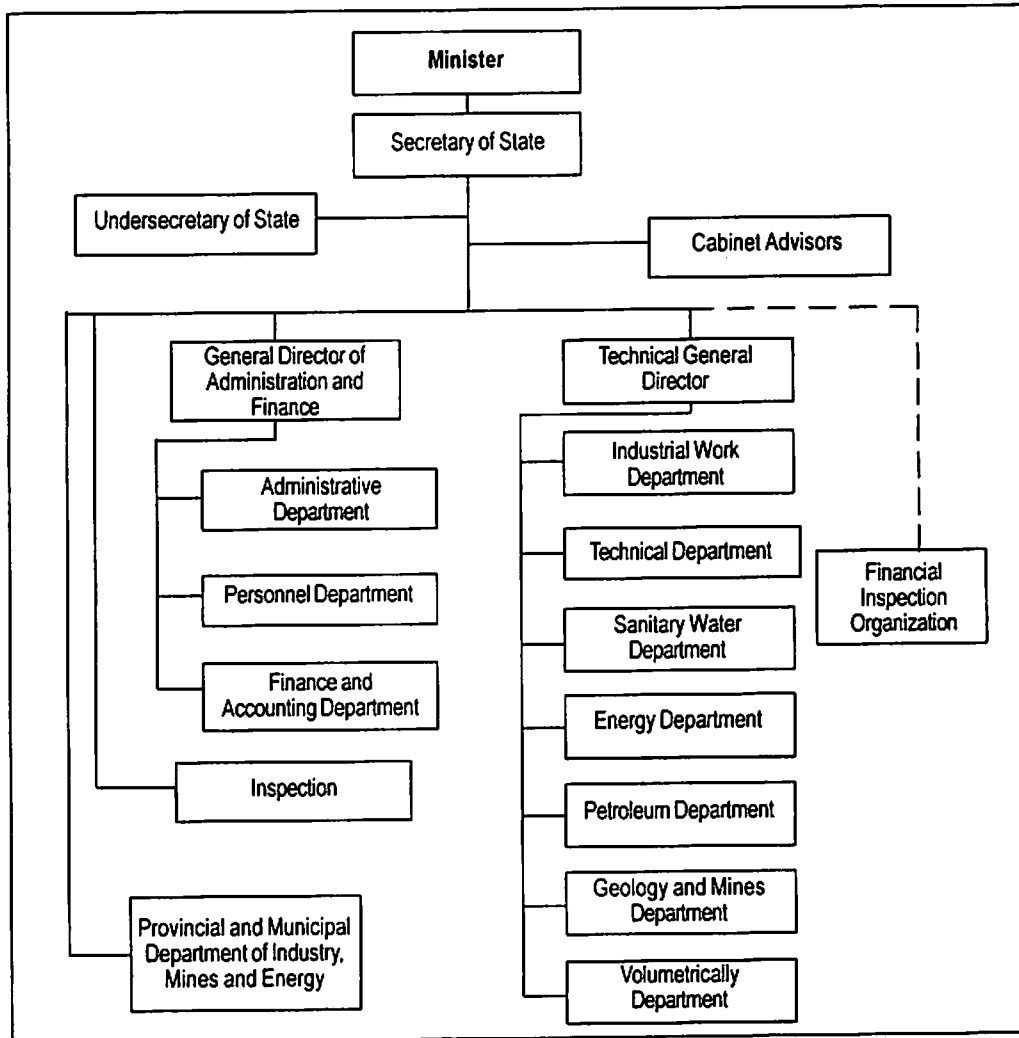


- ❖ To promote the economy and generate employment opportunities through the development of industrial activities, especially in Sihanoukville region, in line with government policy;
- ❖ To promote mining activities, hydropower development and oil and gas exploration in the coastal and marine zone of Cambodia; and
- ❖ To develop legislation, policy and plans that shall encourage the growth of these industries.

The Ministry of Tourism

The Ministry of Tourism was established by Royal Decree (1996) as the administrative organization (Figure 2-3) placed under the authority of the Royal

Figure 2-2. Organizational Structure of the Ministry of Industry, Mines and Energy.

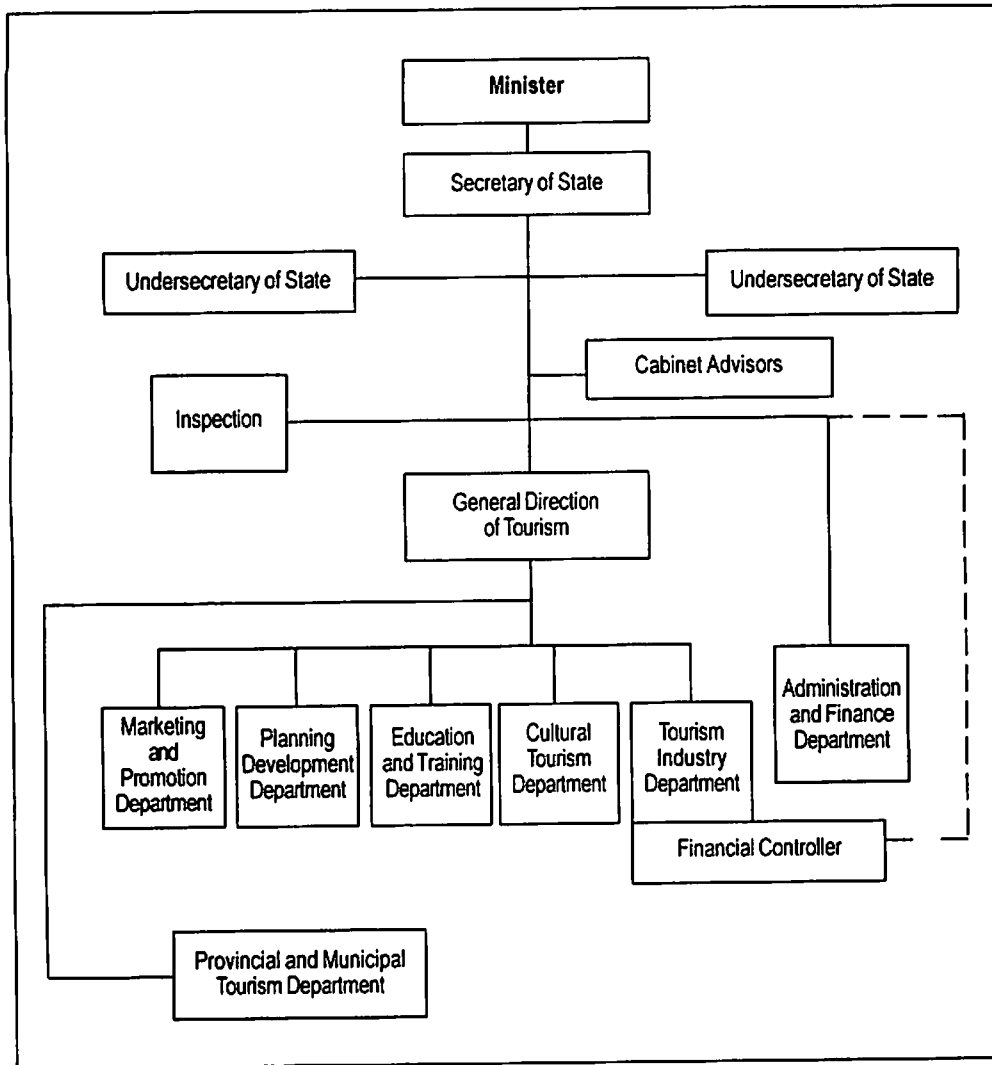


Government of Cambodia assigned to direct and encourage the tourism industry of the Kingdom of Cambodia.

Its main responsibilities related to the coastal zone of Cambodia are as follows:

- ❖ To work with other ministries to preserve the coastal zone in all aspects;
- ❖ To develop accessible infrastructure to the coastal zone;
- ❖ To promote various coastal zone attractions of the Kingdom;
- ❖ To develop a master plan to manage the coastal zone for tourism; and
- ❖ To develop tourism legislation, policy and plans related to the coastal zone tourism sector.

Figure 2-3. Organizational Structure of the Ministry of Tourism.



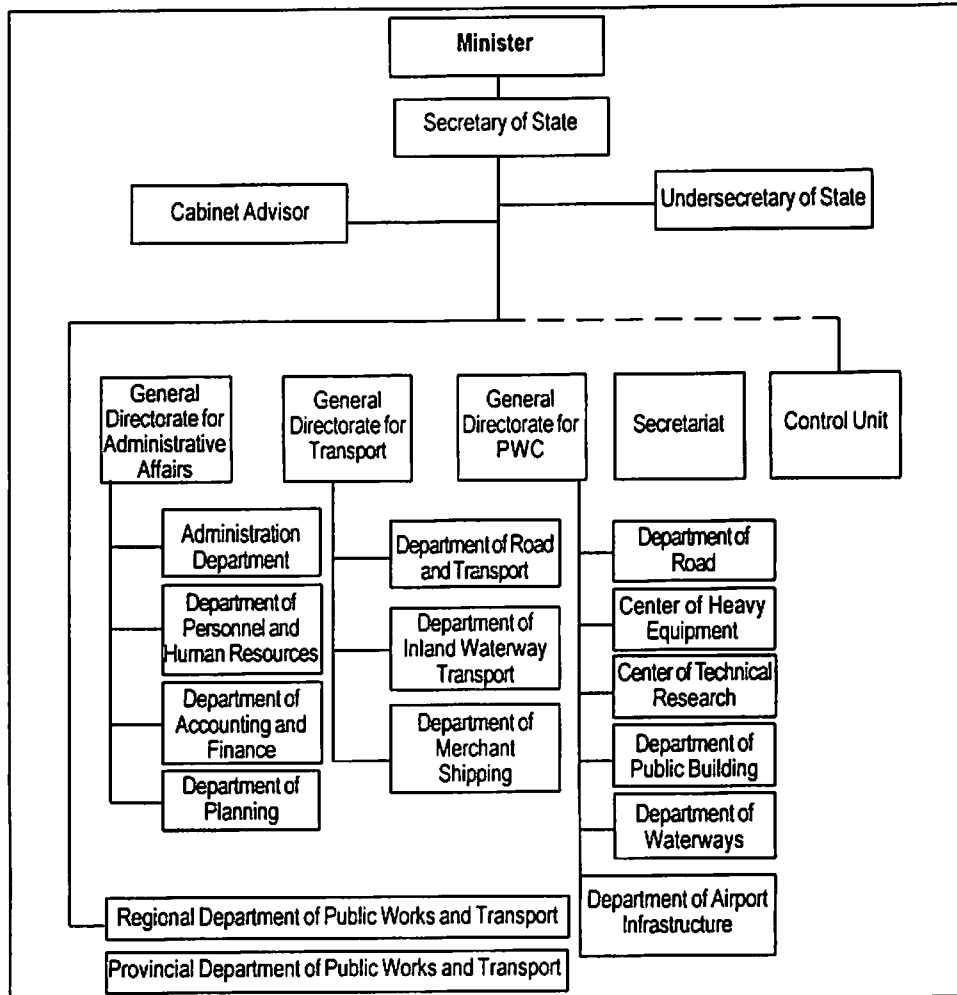
The Ministry of Public Works and Transport

The Ministry of Public Works and Transport (MPWT) is responsible for the development and implementation of policies and legislation for the transportation sector throughout the country. The MPWT (Figure 2-4) is also responsible for all transport infrastructures in the country including roads, railways, airports, ports and waterways as well as public buildings.

The Ministry of Rural Development

This newly created ministry is considering models to assist in the development of the rural poor as well as appropriate administrative structures for the implementation of rural development (Figure 2-5). This Ministry should be consulted in the development of community based-projects.

Figure 2-4. Organizational Structure of the Ministry of Public Works and Transport.



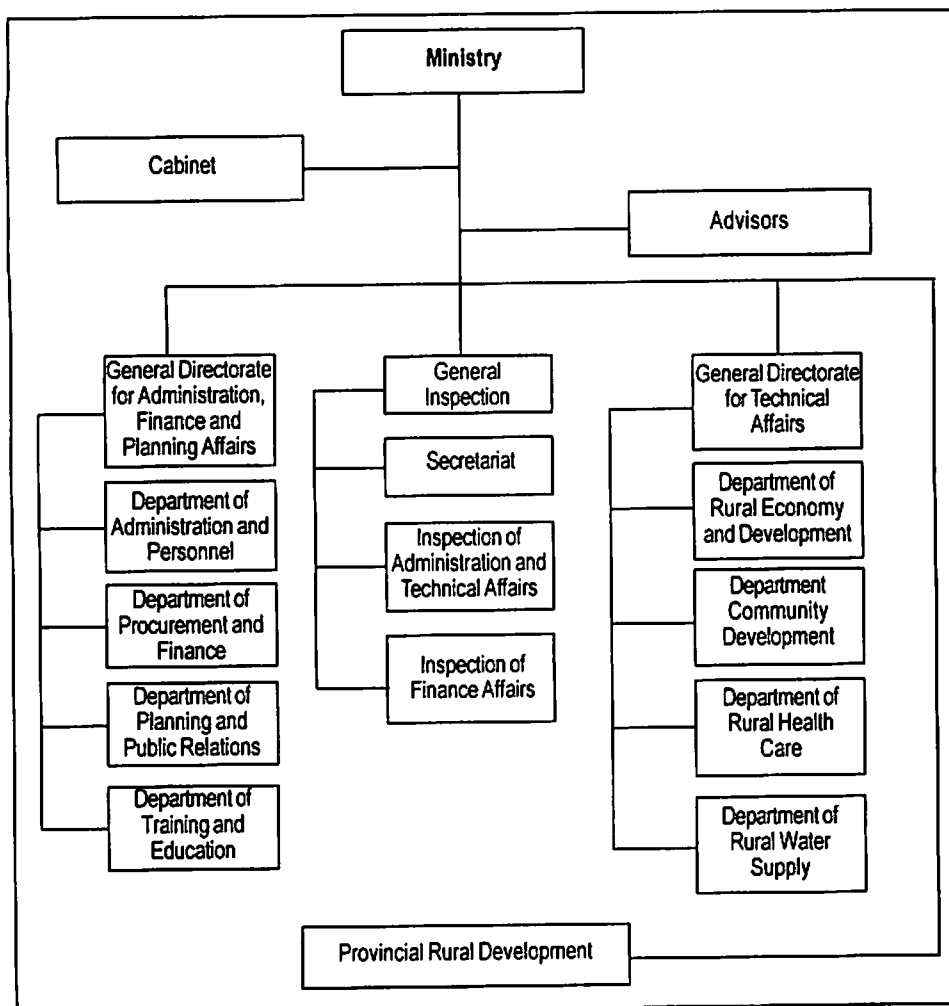
The Ministry of Environment

The Ministry of Environment was established in 1993, soon after the UN-sponsored election. It deals with problems related to the management, conservation and protection of the environment throughout the country. Thus, the planning and management of the protected area system in the coastal zone fall under its responsibilities. The management structure of the Ministry is divided into central and local administrations (Figure 2-6).

According to Article 3 of the Sub-decree on the Organization and Functioning of the Ministry of Environment (MoE), it has the following main responsibilities:

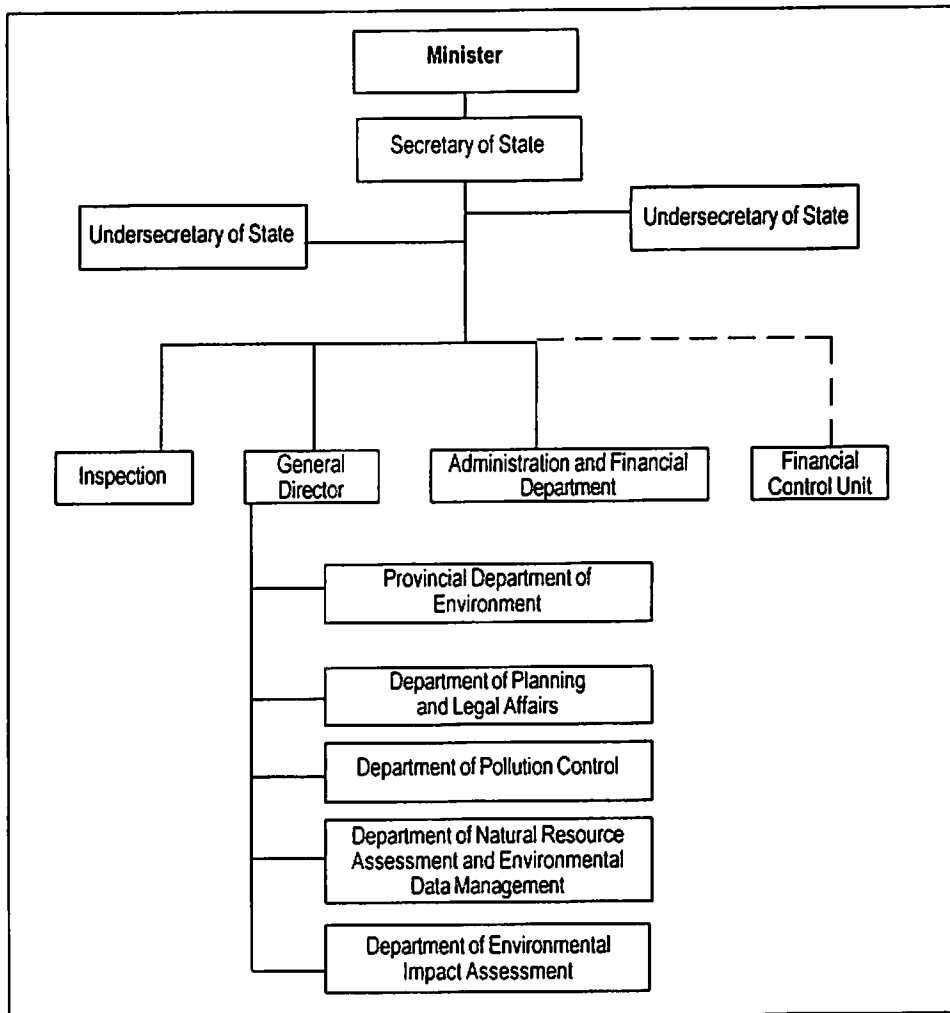
- ❖ To develop an environmental policy in the spirit of sustainable development and to implement the National and Regional Environmental Action Plans in cooperation with other ministries;

Figure 2-5. Organizational Structure of the Ministry of Rural Development.



- ❖ To prepare and implement environmental legal instruments to ensure sustainable development;
- ❖ To institute the Environmental Impact Assessment (EIA) of all proposed and on-going projects and activities, both public and private;
- ❖ To advise relevant ministries on the conservation, development and management of natural resources as prescribed in Article 59 of the Constitution;
- ❖ To administer the National Protected Areas System following the Royal Decree on the "Creation and Designation of Protected Areas" and to propose new areas to be included in the system;
- ❖ To prepare inventories which describe the source, nature and amount of pollutants and to take measures to prevent, reduce and control environmental pollution;

Figure 2-6. Organizational Structure of the Ministry of Environment.



- ❖ To prepare inspection procedures as mentioned in Article 9 of the Law on Environmental Protection and Natural Resources Management;
- ❖ To prepare and conduct environmental education programs at all levels, including local communities, in cooperation with relevant ministries and national and international organizations;
- ❖ To compile, analyze and manage environmental data;
- ❖ To initiate and prepare proposals to the government that fulfill international agreements, conventions and memoranda of understanding related to environmental protection and to implement such international agreements;
- ❖ To promote incentives for investment projects which facilitate environmental protection and nature conservation; and

- ❖ To cooperate with national organizations, NGOs, foreign governments and local communities in order to ensure environmental protection in the Kingdom of Cambodia.

2.2 PROVINCIAL AUTHORITIES

The provincial authorities are under the direct control of the Ministry of Interior. The provincial authorities are the main government authorities that oversee local government administration, promote economic development and sustainable environment and strengthen law enforcement through coordination. The provincial authorities are divided into districts, which are then divided into communes and villages (Figure 2-7).

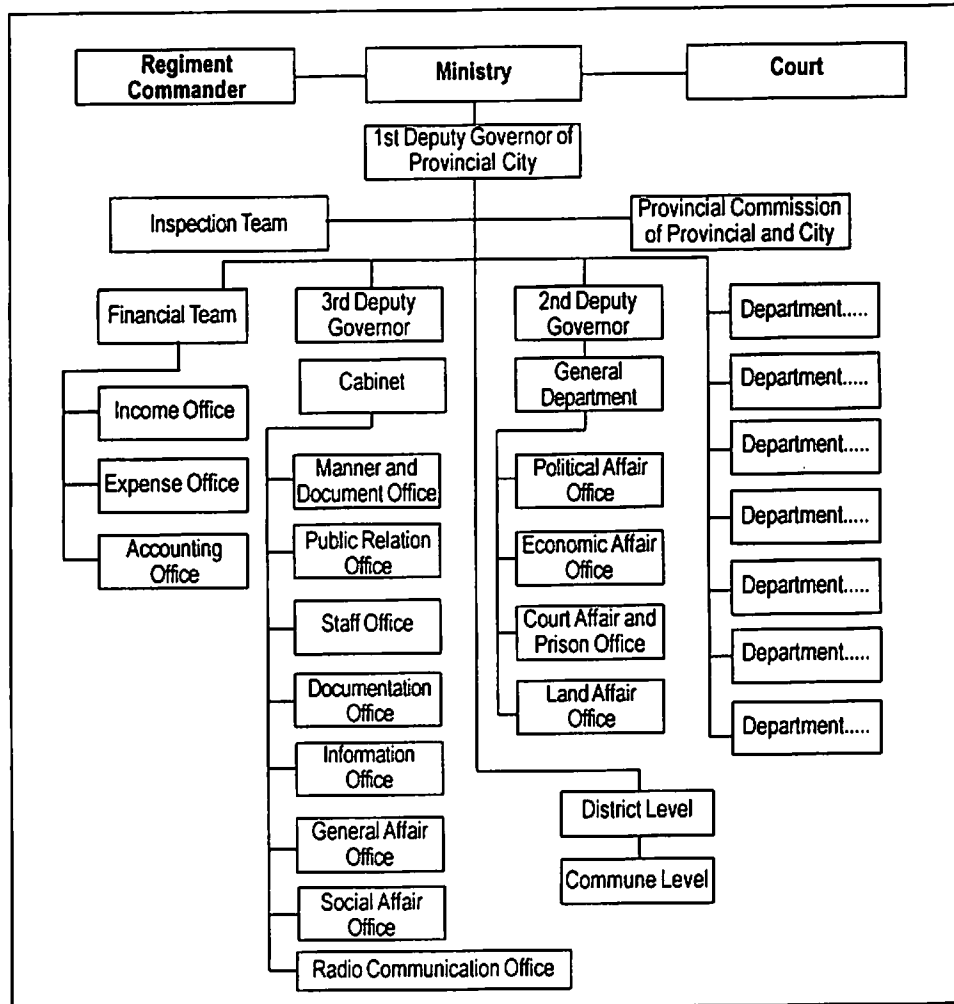
Apart from the roles and duties stated above, provincial governors have other administrative powers such as the following:

- ❖ To ensure public order, security and safety in the province;
- ❖ To propose national and provincial budgets;
- ❖ To control all kinds of tax collection in the province;
- ❖ To manage and use provincial assets and fixed assets as defined by law;
- ❖ To issue certificates and land titles;
- ❖ To propose socioeconomic programs, which conform with national government policies and programs;
- ❖ To issue licenses for trade, resource extraction and handicrafts in accordance with the law; and
- ❖ To take measures to protect and preserve the culture, national heritage and environment.

All provincial and municipal taxes collected are remitted to the national treasury under the Ministry of Economics and Finance, which then disburses to relevant ministries and provinces in accordance with the National Assembly's decision.

However, the provincial and municipal authorities have the obligation to regulate tax collection, plan and estimate the amount of tax to be collected, promote economic development and upgrade services and exploitation for the purpose of improved tax collection (Law on Financing and Property Regime in Provinces and Municipalities, 1998).

Figure 2-7. Organizational Structure of the Ministry of Province and Municipality.



2.3 COMMITTEES AND COASTAL COORDINATING UNITS

The National Committee for Land Management, Urbanization and Construction

The Committee was created on 18 December 1997 by the Sub-decree on the Creation and Organization of the National Committee for Land Management, Urbanization and Construction. Thereafter, the Sub-committees for each of the coastal provinces were also established.

The major responsibilities of the Sub-committee are:

- ❖ To prepare land use plans, including urbanization;

- ❖ To protect the national patrimony, environment and natural resources and ensure economic development;
- ❖ To control construction and installation works through the regulation of building licenses; and
- ❖ To issue stop work orders, seize construction materials and even prosecute legal violations.

The National Coastal Steering Committee

The Committee was created in 1997 and holds regular meetings among ministries, coastal provincial governors, as well as representatives from coastal projects, NGOs and international organizations (IOs). The Committee has a Coastal Coordinating Unit that serves as its secretariat and is based at the Ministry of Environment. The committee membership includes:

- ❖ The Minister of Environment (Chairman);
- ❖ Undersecretaries of State from:
 - (i) Ministry of Agriculture, Fisheries and Forestry (Vice Chairman)
 - (ii) Ministry of Tourism
 - (iii) Ministry of Industry, Mines and Energy
 - (iv) Ministry of Public Works and Transport
 - (v) Ministry of Rural Development
- ❖ Governors of the coastal provinces;
- ❖ Representative of the Cambodian Development Council;
- ❖ Representative of Danish Ministry of Foreign Affairs (Danida);
- ❖ Observers from coastal projects; and
- ❖ Representatives from NGOs and international organizations (IOs).

This committee is responsible for the overall direction of coastal projects and activities. All committee members should ensure the cooperation of their line ministries and provincial authorities. The committee also seeks to align the activities of coastal projects with the national development priorities. The committee also provides technical advises in preparing proposals for coastal projects. For instance, the proposal for the Phase II of the Danida project on "Environmental Management in the Coastal Zone of Cambodia" has been reviewed by the committee. Though the committee has a secretariat within the Ministry of Environment, there is still a need for office facilities and equipment for its operation.

The meetings of the National Coastal Steering Committee focus on exchanging ideas, consensus building as well as generating suggestions for implementing sustainable coastal projects. The following are examples of issues emphasized in previous meetings:

- ❖ The sustainable development of coastal and marine resources;
- ❖ Proposals to prohibit and prevent all development projects that cause negative environmental impacts on the coastal zone;
- ❖ Proposals to the Ministry of Environment to issue and implement the Law on Environmental Protection and Natural Resources Management. This will facilitate the participation of provinces and concerned institutions in contributing to environmental protection; and
- ❖ Requests for the establishment of coastal zone coordinating committees at the provincial level, in order to improve project implementation.

Coastal Coordinating Unit

The Coastal Coordinating Unit (CCU) was created in 1996 as part of MoE to help coordinate the activities relating to coastal and marine environmental management of the Kingdom. The Unit plays a very important role by providing secretariat assistance to the National Coastal Steering Committee during meetings and workshops. The Unit's functions are to:

- ❖ Coordinate and cooperate with international organizations, government institutions, NGOs and private sector (industries) in coastal and marine project development;
- ❖ Promote sustainable implementation of coastal and marine projects and ensure that there are no overlaps with existing projects;
- ❖ Report directly to the Minister, Director General, and indirectly, to the Departments under the Ministry of Environment on coastal activities;
- ❖ Provide information and advice on the positive and negative environmental impacts of projects on the coastal zone.

The Unit also coordinates with other members of the international marine community such as Coordinating Body of the Seas of East Asia (COBSEA), South East Asian Program on Ocean Law, Policy and Management (SEAPOL), International Maritime Organization (IMO), IDRC and others.

The Coastal Coordinating Unit is now trying to build its capacity and improve its facilities and equipment for better implementation.

Other Committees and NGOs

There are other proposed committees that deal with coastal zone management. These include the National Committee for Wetland Management, the National Committee for Climate Change and the National Committee for Protected Areas and National Parks. The proposed National Committee for Wetland Management, moreover, will be joining with the National Coastal Steering Committee.

There are also some NGOs which assisted in the management of the coastal zone of Cambodia. These include the Australian People for Health, Education and Development Abroad (APHEDA), Wetlands International (WI), the World Conservation Union (IUCN), the American Friends Service Committee (AFSC) and others.

Chapter 3

Legal Framework

3.1 LEGISLATIVE HIERARCHY

3.1.1 *The Constitution*

The Constitution is the Supreme Law of the Kingdom of Cambodia. All other laws must strictly conform with the Constitution. An initiative to review or to amend the Constitution is the prerogative of the King, the Prime Minister and the Chairman of the National Assembly at the suggestion of one-fourth of all the assembly members. Revisions or amendments can be enacted by a constitutional law passed by the assembly with a two-thirds majority vote for revision or amendment.

3.1.2 *Law (Chbab)*

The National Assembly determines law by their vote. The law is called an organic law if it refers to the creation or the organization of a state institution and its structures. For example, Article 127 of the Constitution provides that provinces, municipalities, districts and communes shall be governed in accordance with organic law.

3.1.3 *Kram*

This is the Royal Promulgation by the King.

3.1.4 *Royal Decree (Reach Kret)*

Royal Decrees are used by the King in the exercise of his constitutional powers, i.e., power of appointments upon proposals by the Council of Ministers, or by the Supreme Council of the Magistracy.

3.1.5 *Decree (Kret)*

Decrees are signed by the King upon proposal of the Prime Minister.

LEGISLATIVE HIERARCHY

- Constitution
- Law
- Kram
- Royal Decree
- Decree
- Sub-decree
- Declaration
- Decision
- Circular
- Arete
- Customary Law
- Treaties and Conventions

3.1.6 Sub-decree (*Anu-Kret*)

Sub-decrees are signed by the Prime Ministers and countersigned by the ministers in charge of their execution after adoption by the Council of Ministers. Sub-decrees can also be issued by the Prime Minister, based on his executive regulatory power.

3.1.7 Declaration (*Ministerial Prakas*)

Declarations are used by ministries in the framework of their own regulatory powers.

3.1.8 Decision (*Sechkdei Samrech*)

Decision is an individual decision of the Prime Ministers, a minister or a governor within the framework of their own regulatory powers.

3.1.9 Circular (*Sarachor*)

Circulars are used in general by the Prime Ministers, or by ministers as officials of the ministry either to explain or clarify the legality of regulatory measures or to provide instructions.

3.1.10 Arete (*Provincial Deka*)

Provincial Aretes are used by provincial governors within the geographical limit of their provinces.

3.1.11 Customary Law

Customary Law or Khmer customs may sometimes be a basis for judicial decisions. Cambodia is an ancient country in which Buddhist and Khmer beliefs, traditions and customs influence law. Some constitutional references to Khmer tradition illustrate how Khmer custom regulates behavior and serves as a source of law. For example, the Khmer tradition of conciliation (or reconciliation) beginning at the village level remains a part of the judicial process. Many legal conflicts are taken first to a village chief or monk or justice representative for reconciliation before being heard by a court. The courts of all levels adjudicate their trials based on laws currently in force and on laws and provisions as adopted by the Supreme National Council (SNC). In civil cases, when the law is explicitly silent or when there is a gap, where the law does not stipulate any legal provisions, the cases are then tried based on customs, traditions, conscience and equity.

3.1.12 *Treaties and Conventions*

International law, if considered part of Cambodian law, may also be enforced by judges in Cambodian courts. International law is a combination of the laws of individual nations, customs developed in the course of international business transactions, treaties (agreements between two or more independent nations) and declarations and resolutions of international organizations. Cambodia may become a party to the international treaties and conventions whenever they are approved by the National Assembly. According to Article 26 of the Constitution, the King is empowered to ratify an international treaty after approval by the National Assembly.

3.2 NATIONAL LEGAL FRAMEWORK

3.2.1 *Constitution of the Kingdom of Cambodia*

The Constitution of the Kingdom of Cambodia was adopted on 22 September 1993 by the National Assembly. It is the "Supreme Law of the Land" and all other legislative texts have to strictly conform with this. Article 59 of the constitution stipulates that the Government of Cambodia must protect the environment and balance natural resources.

The Kingdom of Cambodia is a constitutional monarchy. This Constitution consists of three separate powers—legislative, executive and judicial. Legislative power is vested in the 120 members of the National Assembly who are elected for a term of five years by universal adult suffrage. Executive power is held by the Royal Government of Cambodia. The head of the Judiciary branch is the Supreme Council of the Magistracy.

3.2.2 *Land Law and Land Management Law*

Land Law

The Constitution provides that only Cambodian citizens or entities have the right to own land. The State of Cambodia's National Assembly passed the Land Law or Land Tenure on 10 August 1992 and is now being enforced. This law prescribes the management of land, the property rights of land use with land titles and state and private property. Private property rights in fisheries and forest reserves, however, are totally prohibited.

Law on Land Management, Urbanization and Construction

This Law was passed by the National Assembly and came into effect on 24 May 1994. It aims to promote the improvement of urban and rural areas in order to ensure sustainable development throughout the Kingdom.

3.2.3 Law on Investment and Labor Law

Law on Investment

The Law on Investment governs all investment projects initiated by investors who are Cambodian citizens and/or foreigners within the Kingdom of Cambodia. The National Assembly of the Kingdom of Cambodia adopted this law in August 1994 during the session of the first legislature. It consists of nine chapters and 16 articles and is presented as follows:

- ❖ General Provisions;
- ❖ The Council for the Development of Cambodia;
- ❖ Investment Procedures;
- ❖ Investment Guarantees;
- ❖ Investment Incentives;
- ❖ Land Ownership and Use;
- ❖ Employment Practices;
- ❖ Disputes and Dissolution; and
- ❖ Final Provisions.

Labor Law

This law governs all agreements between employees and employers who are Cambodian citizens and/or foreigners within the territory of the Kingdom of Cambodia. This Law was adopted by the National Assembly on January 1997 during the extraordinary session of the seventh legislature and is divided into 19 chapters as follows:

- ❖ General Provisions;
- ❖ Enterprises and Institutions;
- ❖ Labor Skills Training;
- ❖ The Labor Contract;

- ❖ Common Memorandum of Labor;
- ❖ General Conditions of Labor;
- ❖ Particular Conditions of Professional Labor in Agriculture;
- ❖ Sanitation and Safety of Employees;
- ❖ Labor Hazards;
- ❖ Employment and Employees Selections;
- ❖ Freedom of Labour and Employee Representatives
- ❖ Resolving Labour Conflicts;
- ❖ Strikes and Lockouts;
- ❖ Administration of Labor;
- ❖ The Council Board of Labor;
- ❖ Penalties;
- ❖ Labor Justice;
- ❖ Inter Provisions; and
- ❖ Final Provisions;

3.2.4 Fisheries and Forestry Laws

Fisheries Law

The Law on Fisheries Management and Administration ("Fisheries Law"—State Council No. 33), passed in 1987, defines fisheries and categorizes fishing areas. It states that all entities or persons who fish in either freshwater or seawater must contribute to the state, except fishing for family subsistence. Permits for fisheries exploitation and aquaculture in fishing areas must be determined by regulations.

The Fisheries Law aims at conserving and regulating the exploitation of Cambodia's freshwater and marine fisheries resources. If effectively implemented, this law could make a significant contribution to the management of freshwater and marine areas. The fisheries law includes provisions addressing access control, gear restrictions, closed seasons and the designation of fish sanctuaries.

The Fisheries Law supports the management of fisheries, coastal resources and the coastal environment in Cambodia as well as resources and environment related to all types of inland waters. The basis for this is that all types of water bodies and flooded areas are considered as fishing areas (fisheries domain).

The important items of the Fisheries Law which relate to the management and administration of coastal fisheries of Cambodia are cited as follows:

- ❖ Fishery resources are comprise of living animal and plants found in the fisheries domain (Chapter 1, Article 1). The fisheries domain consists of:
 - a) Inland fisheries domain which includes rivers, tributaries of rivers, lakes, streams, small rivers, channels, natural ponds and holes in the ground. The last three trace their water source from rivers, tributaries of rivers, lakes, streams and small rivers.
 - b) Marine fisheries domain extends from the coastline to the outer borderline of the EEZ of Cambodia. Fisheries domain is the property of the state.
- ❖ Fishing exploitation, aquaculture and processing in Cambodia's marine fisheries domain is allowed upon government permission except for small-scale family fishing (Chapter 3, Article 22). Small-scale family fishing gear and other fishing gear permitted to operate in the marine fisheries domain of Cambodia must be defined by the proclamation of the Ministry of Agriculture.
- ❖ Government fishing enterprises and groups of fishermen that use fishing boats or vessels in the marine fisheries domain must additionally have the following licenses: a fishing boat or vessel license allowing them to operate in the sea (to be issued by the fisheries authority after technical control), and a license from the police institution (for administrative control) (Chapter 3, Article 23).
- ❖ The fishing activities of foreigners in Cambodia's marine fisheries domain must have the approval of the Council of Ministers (Chapter 3, Article 24).
- ❖ Fishermen who are permitted in the marine fisheries domain must respect the order or act mentioned in the fishing license. Records must be regularly kept on the quantity of fish and other organisms caught every day, and they must report this to the provincial-municipal fisheries authority monthly (Chapter 3, Article 25).
- ❖ All kinds of fishing gear, which extends across the stream, inlet or navigable channel of coastal zones, must have a free space of one-third of its width during low tide to enable the navigation of all types of vessels (Chapter 3, Article 26).
- ❖ Mackerel (*camon or pla thu*) fishing during the spawning season from 15 January to 31 March is forbidden (Chapter 3, Article 27).

- ❖ Trawling in shallow water (less than of 20 m) is absolutely forbidden, except where special permission is granted by the Department of Fisheries for scientific research (Chapter 3, Article 28).
- ❖ Fishing in Cambodia by using electric fishing gear and all kinds of explosive or modern fishing gear, which are not mentioned in the Proclamation of the Ministry of Agriculture, are absolutely forbidden (Chapter 3, Article 29).

Forestry Law

The Forestry Management Law (Forestry Law - State Council No. 35) was passed in June 1988. It defines types of forests and states that forests are divided into forest concessions and protected forests. Limitation of forest boundaries and forest uses are to be determined by a sub-decree. All sectors of society are obliged to protect the forests. Exploitation of forests without a permit is prohibited and logging operations are subject to government tax. Hunting of all species of animals is also prohibited.

3.2.5 Industrial Laws

Law on Mineral Exploitation and Mining Resources (still being drafted)

This law is still in draft form and relates to the management and monitoring of mineral resources and mineral exploitation. It sets provisions for the sustainable development of the mining sector with the objective of improving the national economy but prevents natural resources depletion. This draft law is divided into 10 chapters as follows:

- ❖ General Provisions;
- ❖ Regulation of Mineral Resource Licenses;
- ❖ Kinds of Mineral Resource Licenses;
- ❖ Form or Process of Mineral Resources License Issue;
- ❖ Investigation Operation and Mineral Resources Exploitation;
- ❖ Persons and Stakeholders;
- ❖ Financial Regulation;
- ❖ Penalties;
- ❖ Transitory Regulations; and
- ❖ Final Provisions.

The draft Mining Law stipulates the responsibilities of the government agency in issuing mining permits and controlling mineral exploration activities. All of the mining activities covered under the draft law would be subjected to environmental protection requirements including preparation of an environmental protection plan prior to mining activities and a plan for implementation during operations.

Sub-decree on Industrial and Handicraft Environmental Management and Monitoring

This sub-decree is still a draft and relates to the management and monitoring of handicraft industries. It intends to promote sustainable development in the industry, improve the national economy and prevent harmful industrial impacts to the environment. The sub-decree was written in 1995 and is divided into five chapters as follows:

- ❖ General Provisions;
- ❖ Rights, Authority, Management and Inspections;
- ❖ Rights and Duties of Owner of Industry Site Handicraft;
- ❖ Penalties; and
- ❖ Final Provisions.

Draft Industrial Zone Act

This act provides for the development of the industrial zones in the Kingdom of Cambodia. It also aims to promote economic development in the industrial sector while maintaining environmental protection. This act was written in 1995 and is divided into six chapters as follows:

- ❖ General Provisions;
- ❖ Establishment of Industrial Zone;
- ❖ Authority of Industrial Zone in Cambodia;
- ❖ Location of Factories and Warehouses;
- ❖ Penalties; and
- ❖ Final Provisions.

3.2.6 *Transport Laws*

In order to ensure safety in transport as well as develop other modes of transport, the MPWT has issued many laws and declarations, some of which are also related to maritime transport in the coastal zone.

Sub-decree on Private Transport Services

Under this sub-decree, passed in July 1991 by State Council No. 13, the State provides the private sector the right to transport passengers and goods by roads and waterways. Among other things, this law specifies that the owners of sea-going vessels with a capacity of less than 30 tons are required to register and get an operating license at the province or city where they are based. Vessels with a capacity of more than 30 tons are required to register and get their license at the General Directorate of Transport (GDT), Ministry of Public Works and Transport (MPWT). Besides this, sea-going vessels with a capacity of both less and more than 30 tons that cross the border are required to register and get a license from the GDT, MPWT (Article 3).

Declaration on the Management of Vehicle Transport and Inland Waterway Transport

Declaration No. 41 issued by the MPWT on September 1993 states that the operating license is valid only for a one-year period. Two months before expiration, the owners are required to ask for an extension from the Ministry should they want to continue their services. Failure to apply during this period shall lead the Ministry to consider that the owners are discontinuing their businesses.

Common Circular on Overloaded Trucks, Especially Logging Trucks

Common Circular No. 461 was issued by the Ministries of Public Works and Transport, Economic, Finance and Agriculture, Forestry and Fisheries on February 1995. Among other things, the law seeks to ensure the safety of persons and vehicles on the road. It defines technical standards that include:

- ❖ Maximum load limit to 18 tons except RN4, which is limited to 25 tons. In special cases, overloading is allowed by the authority;
- ❖ Maximum load on the truck's axial is limited to 10 tons; and
- ❖ MAFF is responsible for logging truck loading.

Declaration on Ship Construction

Declaration No. 549 issued by the MPWT on July 1995 concerns the reassembly of vehicles and ship. Among other things the law states that:

- ❖ Persons who want to build sea-going vessels are required to file an application with the MPWT and attach the following necessary documents:

- a) The construction design in 1/50 scale;
 - b) Name and address of the shipyard owner as well as the shipyard name; and
 - c) Certificate of residence of the applicant.
-
- ❖ Construction will start after permission from the MPWT is obtained. During the construction, the Ministry will assign one supervising engineer in order to ensure that the ship has the required safety features;
 - ❖ After the construction, a technical control will take place together with other formalities that has to be completed before license for operation can be received.

Declaration on Issuing Business Licenses for Tourist Boats

Declaration No. 224 issued by the Ministry of Tourism on February 1996 states that the operating license for tourist boats must be issued by the Ministry of Tourism. It requires the owner or manager of the boat to have the following documents:

- ❖ Boat certificate issued by the MPWT;
- ❖ Boat pilot license issued by the MPWT;
- ❖ Mechanical certificate issued by the MPWT;
- ❖ Technical control log book;
- ❖ Registration certificate; and
- ❖ Other information required by the Ministry of Tourism.

Sub-decree on River Navigation

Sub-decree No. 06 issued by the Council of Ministry on March 1986 is applicable to coastal navigation and is divided into seven chapters. The main provisions are related to:

- ❖ Moving aside, overtaking and berthing;
- ❖ Lights and signals;
- ❖ Use of whistle during navigation;
- ❖ Boat accidents and rights of authority; and
- ❖ Penalties.

Draft Declaration with Respect to the Act of Registration of Merchant Ships

This Declaration was prepared by the GDT, MPWT in 1995 and consists of seven sections and 60 articles. The main sections of the draft includes:

- ❖ Administrative authority: Appointment of Director and Deputy Director of Maritime Affairs, delegation of functions, records relating to vessels, authority to take declarations and acknowledgement, authority to issue licenses and certificates, authority to issue radio station licenses, power to suspend and revoke licenses, certificates and fees;
- ❖ Law and jurisdiction: general maritime law, general penalty, jurisdiction and appeal, liability of the Director, Deputy Director and agent respectively;
- ❖ Registration of vessels: general provisions, regulations, exemption from registry, power to waive requirements in exceptional cases, registration fees and tonnage tax, annual tonnage tax, application of registration, condition precedent to issuance of permanent certificate of registry, measurement of ship, forms of certificates and other documents, cancellation of certificate and others;
- ❖ Mortgages; and
- ❖ General provisions: This section specifies national colors for the Cambodian ships, penalty for not showing colors, crew list of Cambodia ships, standards of seaworthiness and other regulations.

Declaration No. 018 on Overloaded Ferries, Riverboats and Sea-going Vessels

The Declaration was issued by the MPWT in August 1995. It specifies that the owners of sea-going vessels that operate along coastal waters must strictly respect the technical conditions specified by the MPWT and Provincial or City Department of Transport. Conditions include the loading of cargo and passengers especially during the rainy season, when prevailing strong winds and high water levels can cause damage to life and property.

Violators of this law will be punished and operating licenses will be canceled by the Ministry.

3.2.7 *Tourism Laws*

The Royal Decree on the Establishment of the Ministry of Tourism

According to this decree, the Ministry of Tourism was established on 24 January 1996. Its mission is to provide direction and encourage the development of the tourism industry in the Kingdom of Cambodia.

Sub-decree on the Organization and Functioning of the Ministry of Tourism

The sub-decree was issued on 05 August 1997 by the Second Prime Minister. It defines the administrative structure of the Ministry of Tourism and its role and duty in tourism management. The organizational structure is composed of central and local administrations. The main responsibilities of the Ministry especially related to coastal tourism management are:

- ❖ To define the tourism policy and strategies and to prepare plans for tourism development;
- ❖ To encourage tourism investment in accordance with the national strategies;
- ❖ To develop and manage the tourism industry;
- ❖ To direct and administer other services related to tourism;
- ❖ To direct, control and maintain natural and artificial recreational resorts, tourism areas and tourism zoning in the Kingdom;
- ❖ To study proposals for establishing, recognizing and controlling private schools and professional training for the tourism sector;
- ❖ To promote tourism locally and overseas;
- ❖ To appoint tourism representatives to various countries in cooperation with the Ministry of Foreign Affairs and International Cooperation;
- ❖ To sign contracts which relate to tourism upon government's approval;
- ❖ To issue operating permits for tourism firms, agencies and guides;
- ❖ To control tourism services and other tourism-related activities; and
- ❖ To conduct tourism inspection.

With regard to issuing licenses, there are various declarations such as:

- ❖ Circular on the Licensing of Travel Agencies, 1994;
- ❖ Declaration on the Licensing of Tourist Guides, 1996;
- ❖ Declaration on the Licensing of Tourist Boats, 1996;
- ❖ Declaration on the Licensing of Tourist Vehicles, 1996;

- ❖ Declaration on the Licensing of Hotel and Guest Houses, 1996;
- ❖ Declaration on the Licensing of Resorts, 1996;
- ❖ Declaration on the Licensing of Catering Establishments, 1996; and
- ❖ Declaration on the Licensing of Massage Parlors, 1996.

3.2.8 Environmental Laws

Law on Environmental Protection and Natural Resource Management

Cambodia's first law specifically concerned with environmental issues is the Law on Environmental Protection and Natural Resource Management, which was adopted by the National Assembly on 24 December 1996.

The development of environmental legislation is one of the national government's priorities. This law can be considered as the framework for subsequent sectoral laws, sub-decrees and regulations for environmental protection and natural resources management. This law contains 11 chapters and 27 articles.

The Environmental Law does not attempt to establish specific environmental management systems or standards. Rather, it leaves these tasks to subordinate legal instruments to be prepared in the future. The main objectives of this law are to protect, manage and enhance the environment and to promote socioeconomic development in a sustainable way. This law is a general legal framework for environmental protection and management throughout the Kingdom, including the protection, conservation and management of the coastal zone and marine resources.

The important objectives in this law related to environmental management of coastal resources of Cambodia are as follows:

- ❖ To conduct Environmental Impact Assessments (EIAs) for all investment projects and economic activities that might affect the environment (Article 6, Chapter 3);
- ❖ To conserve, develop, manage and use natural resources in a sustainable way (Article 8, Chapter 4);
- ❖ To protect the coastal environment through the identification of pollutants, toxic and hazardous substances (Chapter 5);
- ❖ To prepare national and regional plans for environmental protection and natural resources management (Chapter 2);
- ❖ To suppress any acts which abuse the environment, in conformity with the "Polluter Pays" principle. Those who violate this law are to be fined and/or put in jail in accordance with the degree of the violations.

The law gives high priority to the Ministry of Environment to take its mandated responsibility for environmental protection and natural resources management. However, the enforcement of the law should not be carried out by the Ministry of Environment alone but in coordination with the relevant sector agencies.

Sub-decree on the Organization and Functioning of the Ministry of Environment

The Sub-decree on the Organization and Functioning of the Ministry of Environment was ratified by the Council of Ministers in late 1997. This sub-decree contains 9 Chapters and 20 Articles. Accordingly, the Royal Government of Cambodia gives the Ministry the authority to supervise and manage the environment in the Kingdom.

Royal Decree on the Creation and Designation of Protected Areas

Protected area management was mandated under Royal Decree on the Creation and Designation of Protected Areas on 01 November 1993. There are 23 protected areas designated in the country and some of these protected areas are found along the coastline of Cambodia (Table 8).

Table 8. Protected Areas along Cambodia's Coastline.

Category	Type of Protected Area	Area (ha)
I	National Parks	
	1. Kirirom, Koh Kong	35 000
	2. Botum Sakor, Koh Kong	171 250
	3. Phnom Bokor, Kampot	140 000
	4. Kep, Kampot	5 000
	5. Ream, Kompong Som	150 000
II	Wildlife Sanctuaries	
	1. Phnom Aural, Koh Kong	253 750
	2. Peam Krasaop, Koh Kong	23 750
	3. Phnom Samkos, Koh Kong	333 750
III	Multiple Use Area	
	1. Dong Peng, Koh Kong	27 700
	Total	1 140 200

The Ministry of Environment is currently preparing a proposal for a Sub-decree on Protected Areas Management. The purpose of this sub-decree is to implement the Law on Environmental Protection and Natural Resource Management and to

implement the Royal Decree of 01 November 1993. At present, the Ministry of Environment faces major management problems in the designated protected areas, especially in preventing violations such as illegal logging and hunting.

Sub-decree on Water Pollution Control

A Draft Sub-decree on Water Pollution Control is under review by the Ministry of Environment. The purpose of this sub-decree is to control effluent discharge into water bodies and require standards for water quality.

Sub-decree on Environmental Impact Assessment

Provisions have been put into the Law on Environmental Protection and Natural Resource Management for rules and regulations relating to Environmental Impact Assessments (EIAs). The draft sub-decree specifies the following environmental review process:

- ❖ Screening;
- ❖ Initial environmental impact assessment; and
- ❖ Full-scale environmental impact assessment.

As specified in the Law on Environmental Protection and Natural Resource Management, this review process applies to proposed, existing and on-going projects and activities by both public and private sectors. Pending the passing of the EIA Sub-decree, the Ministry of Environment, through its Department of EIA, implements an informal process of EIA reporting for projects requiring government approval. This includes all projects in the coastal zone involving foreign participation. Where a foreign investor proposes a project requiring a license or permit, he/she is required to submit a proposal to the Council for the Development of Cambodia (CDC).

This is the central government agency that processes all proposed foreign investments. On receipt of the proposal by the proponent, the CDC will forward the proposal to the relevant ministries interested in the proposed project. This may include the Ministry of Environment that shall review the EIA report.

Where there is no requirement for an EIA report, the ministry will also require the proponent to enter into an agreement to comply with any conditions set in the Ministry's initial evaluation as a precondition to the grant of any license or permit.

NATIONAL LEGAL FRAMEWORK

- Constitution of the Kingdom of Cambodia
- Land Law and Land Management Law
- Law on Investment and Labor Law
- Fisheries and Forestry Laws
- Industrial Laws
- Transport Laws
- Tourism Laws
- Environmental Laws

3.3 INTERNATIONAL AND REGIONAL ARRANGEMENTS

3.3.1 *Law of the Sea Convention*

Cambodia is concerned about law enforcement, promotion of scientific research, conservation of living and non-living resources and the utilization of such resources in its marine environment. Cambodia abides by the United Nations Convention on Law of the Sea (UNCLOS), which was established in 1982 and in force since 1994. The Law of the Sea consists of 17 Parts and 320 Articles. It discusses the management of the seas and oceans of the world in the spirit of international cooperation, peace, security and friendly relations among nations and in accordance with the principles of the UN Charter. Most of the articles prescribed in this law relate to sovereignty, integrity and management of the seas and oceans, which mainly belong to coastal states. Thus, the Law of the Sea provides the authority and rights to coastal states to manage their coastal and marine resources.

Since Cambodia's economy is open to the world through international seaborne trade, shipping activities are expected to increase rapidly with various ships entering its territorial seas and international ports. As a result, pollution from ballast water and daily ship operations (including collisions, grounding, anchoring and oil spills) may occur in Cambodian seas, causing damage to coral reefs, mangrove areas and the whole marine environment.

Cambodia, as with other coastal states, is bound by the UN Law of the Sea to manage their coastal and marine resources. This includes marine environmental protection from ship-based pollution and damage within its territorial seas and EEZ. In the territorial sea, Cambodia has the right to pursue the following tasks:

- ❖ To develop laws and regulations related to the rights of innocent passage (Article 21), which include:
 - a) The safety of navigation and the regulation of maritime traffic;
 - b) The conservation of its marine living resources;
 - c) The prevention of violation to its fisheries law;
 - d) Environmental preservation and the prevention, reduction and control of pollution from shipping activities; and
 - e) Marine scientific research and hydrographic surveys.

- ❖ To take necessary steps to prevent passage which is not innocent (Article 25).

In the EEZ, Cambodia has:

- ❖ Sovereign rights to explore, exploit, conserve and manage the natural resources, whether living or non-living, in the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for economic development of the zone.
- ❖ Jurisdiction to establish and use artificial islands, installations and structures to conduct marine scientific research, and to protect and conserve the marine environment (Article 56).

For the conservation of living marine resources (Article 61), Cambodia's obligations are:

- ❖ To determine the allowable catch of the living resources in the EEZ;
- ❖ To ensure proper conservation and management measures to avoid overexploitation of living resources in the EEZ;
- ❖ To take such measures to restore populations of harvested species at levels which can promote the maximum sustainable yield;
- ❖ To contribute and exchange available scientific information, catch and fishing effort statistics and other data relevant to the conservation of fish stocks through competent international, regional and local organizations.

For the utilization of living resources in the EEZ (Article 62), the law gives Cambodia the authority to:

- ❖ Promote the objective of optimum utilization of the living resources in Cambodia's EEZ;
- ❖ Determine the capacity to harvest the living resources in its EEZ;
- ❖ Take into account all relevant factors including the significance of the living resources in the area to the economy and national interests;
- ❖ Set up measures to regulate fishing and conserve its fishery resources (Article 62).
As such, Cambodia will have to establish the following:
 - a) Licensing of fishermen, fishing vessels and equipment;
 - b) Determining the species which may be caught and fixing catch quotas, whether in relation to particular stocks, groups of stocks or catch per vessel over a period of time;

- c) Regulating seasons, areas of fishing as well as the types and sizes of gear and fishing vessels that may be used;
- d) Fixing the age and size of fish and other species that may be caught;
- e) Specifying information required of fishing vessels, including catch and effort statistics and vessel position reports;
- f) Requiring the conduct of specified fisheries research programs;
- g) Placing of observers or trainees on board such vessels;
- h) Landing of all or any part of the catch by such vessels in the ports;
- i) Terms and conditions relating to joint ventures or other cooperative arrangements;
- j) Requirements for the training of personnel and transfer of fisheries technology; and
- k) Enforcement procedures.

With regard to the implementation of UNCLOS for the purpose of sustainable natural resource use in the EEZ and territorial seas, and according to Article 73 of UNCLOS, Cambodia may take necessary measures including boarding, inspection, arrest and judicial proceedings to ensure compliance with its laws. However, penalties for violations of fishery laws and other legal instruments in the EEZ exclude imprisonment. For the management of Cambodia's coastal and marine zone, the UNCLOS further gives rights to the Government of Cambodia to determine its maritime boundaries, some parts of which overlap with the borders of Thailand and Vietnam in the Gulf of Thailand.

3.3.2 *UNEP Coordinating Body of the Seas of East Asia*

The Coordinating Body of the Seas of East Asia (COBSEA) was established in 1981 and the action plan for "the protection and management of the marine environment and coastal areas of the East Asian region" was adopted the same year. A revised action plan and a long-term strategy for COBSEA for the 1994 to 2000 period was developed in 1994. Cambodia became a member of COBSEA in 1995. For political and economic reasons, Cambodia has not paid the Environmental Trust Fund to COBSEA since 1997. Other COBSEA-related issues for Cambodia include the lack of development policy guidelines, action plans, capacity building, technical and financial resources support and particularly a lack of data and information concerning the problems of land-based sources of marine pollution.

Since its adoption, attempts have been made to strengthen the links and to implement the "Global Programme of Action for the Protection of the Marine Environment from Land-based Activities" in East Asian Seas. The Global Programme of Action was adopted in Washington, D.C. in November 1995. This global program was designed to:

- ❖ Deal with all land-based impacts;
- ❖ Develop national action programs on the basis of national priorities and strategies;
- ❖ Implement these programs;
- ❖ Cooperate to build capacities and mobilize resources for the development and implementation of such programmes;
- ❖ Take immediate preventative and remedial action using existing knowledge, resources, plans and processes;
- ❖ Promote access to cleaner technologies, knowledge and expertise to address land-based activities that degrade the marine environment;
- ❖ Cooperate on a regional basis to coordinate efforts for maximum efficiency and to facilitate action at the national level;
- ❖ Encourage available external financing;
- ❖ Promote the available management tools and financing options in implementing national or regional programs of action;
- ❖ Give priority to the treatment and management of wastewater and industrial effluents; and
- ❖ Act to develop a global, legally binding instrument for the reduction of land-based marine pollution.

3.3.3 *Association of Southeast Asian Nations (ASEAN)*

Cambodia gained access to the Treaty of Amity and Cooperation in Southeast Asia in 1995. Cambodia joined the Association of Southeast Asian Nations (ASEAN) in 1999. Cambodia created an ASEAN Directorate at the Ministry of Foreign Affairs to facilitate the implementation of ASEAN programs and responsibilities. Thereafter, each ministry could establish an ASEAN Department or office in accordance with its relevant duties and responsibilities. Unfortunately, in 1997 Cambodia was not permitted to become a member state of ASEAN due to the political situation that occurred in early July 1997. However, in April 1999, Cambodia became a full member of ASEAN.

In order to promote environmentally sound economic development, ASEAN has recently called for urgent measures to combat climate change and ozone depletion, protect ocean and marine ecosystems from pollution, protect freshwater resources, ensure sustainable management of all forests and conserve biological diversity.

Specifically, the most significant objective of this call is strategy 6, which is to "promote the protection and management of coastal zones and marine resources".

As in other ASEAN countries (except Laos), Cambodian coastal and marine resources have been under pressure from illegal fishing and overfishing, shrimp farming, chronic pollution from shipping, pesticide run-off from agriculture, urbanization and industrial development. Coral reefs are also being degraded and require protection and sound management. Therefore, there is an urgent need for the protection of Cambodia's coastal zone and marine resources. In order to achieve the goals of regional cooperation, Cambodia had established links with the United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), Global Environment Facility (GEF), Asian Development Bank (ADB) and others.

3.3.4 CITES Convention

The Convention on International Trade in Endangered Species of Wild Fauna and Flora, generally called CITES, was initiated in Washington in 1973 and has been in force since 1975. It has been ratified by more than 100 states. Cambodia signed the CITES Convention on 07 December 1975, but did not accede to it until 02 October 1997.

CITES establishes lists of endangered species for which international trade is either prohibited or regulated through a permit system. The objective is to combat illegal trade and overexploitation. Inclusion of species in the most restrictive categories requires a two-thirds majority vote of the parties to the convention. A single party may make inclusions to the list, but such inclusions would fall into the least restrictive category. A conference of parties is held every two years. The convention has financed population studies of endangered flora and fauna in order to provide a basis for intervention. Records of permits granted are sent annually to the convention secretariat for review. The secretariat is provided by UNEP and is located in Geneva.

3.3.5 MARPOL Convention

The International Convention on the Prevention of Marine Pollution from Ships (MARPOL) deals with various forms of marine pollution from ships and other vessels. Cambodia ratified the Convention on 28 November 1994. The Convention includes five technical annexes as follows:

- | | |
|------------|-------------------------------------------------------------------------|
| Annex I: | Prevention of Pollution by Oil |
| Annex II: | Control of Pollution by Noxious Liquid Substances |
| Annex III: | Prevention of Pollution by Harmful Substances Carried in Packaged Forms |
| Annex IV: | Prevention of Pollution by Sewerage |
| Annex V: | Prevention of Pollution by Garbage |

In Cambodia's case, the implementation of MARPOL is the responsibility of the Harbor Master Office of the International Port of Sihanoukville.

3.3.6 Ramsar Convention

The Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention of 02 February 1971) provides for the specific protection of wetland areas and the plant and animal species that inhabit these areas. The Ramsar Convention seeks to protect the habitat of species by identifying wetlands of international importance. It is hoped that this will both protect waterfowl and their habitat and limit the degradation, drainage and dewatering of areas of marsh, fen, peat land, etc., which are known to be very productive areas in terms of biology and wildlife.

Cambodia has nominated three sites for listing under the convention. One of these sites is at Koh Kapik while the surrounding areas in Koh Kong province are significant for its mangroves and coastal habitats for migratory water birds. Cambodia is a party to the Convention since 1999.

3.3.7 Biodiversity Convention

The Convention on Biological Diversity was adopted during the UN Conference on Environment and Development (UNCED) on 03-24 June 1992 in Rio de Janeiro, Brazil. The purpose of the convention was to conserve earth's biodiversity, promote the sustainable use of its components and encourage equitable sharing in the benefits arising from the utilization of genetic resources. There were 157 states and other entities that signed the convention in Rio. Since its adoption, signing, ratification and enforcement, the convention has emerged as a fundamental legal document, which establishes a new regime governing the utilization and conservation of biological resources. The Royal Government of Cambodia ratified the Biodiversity Convention in January 1994.

The provisions in the Convention for *in situ* conservation recognize that Cambodia's environmental resources should be locally preserved. In provisions for *ex situ* conservation the interest to protect biological resources is recognized. There are also other provisions of the Biodiversity Convention, such as those on research and training, public education and awareness and the need for impact assessment with respect to projects that may threaten genetic resources, species or habitat. These provisions allow for the development of a technical, social and management infrastructure conducive to better protection of the earth's biological diversity. Sharing of information and cooperation among parties to the convention are other important elements.

Cambodia, as well as the other member states of the convention, focuses on three priority areas:

- ❖ Coastal and marine ecosystems and environmental threats;
- ❖ Biodiversity conservation and sustainable development; and
- ❖ Management strategies for conservation and sustainable development.

Cambodian marine flora and fauna obviously constitute a large part of its biodiversity. The marine and coastal resources of Cambodia are seriously threatened by water pollution, overfishing, coastal developments and other forms of habitat destruction. Thus, there is a need to protect, conserve and manage such resources and in that respect Articles 56, 61, 62, 192 and 194 of the UNCLOS can be considered as complementary and supportive to the Biodiversity Convention.

The management of Cambodia's coastal biodiversity will require close coordination among relevant government agencies as well as with local communities.

3.3.8 Climate Change Convention

The United Nations Framework Convention on Climate Change was adopted in 1992 also at the UNCED in Rio de Janeiro. This marked the culmination of international initiatives which have been ongoing since the United Nations Conference on the Human Environment (held in Stockholm, 1972). Cambodia ratified the Convention on 18 December 1995. The convention's objective is to regulate levels of greenhouse gas concentrations in the atmosphere so as to avoid a change in the global climate to a degree that would be harmful to economic development and that would impede food production activities.

INTERNATIONAL AND REGIONAL ARRANGEMENTS

- Law of the Sea Convention
- UNEP Coordinating Body of the Seas of East Asia
- Association of Southeast Asian Nations (ASEAN)
- CITES Convention
- MARPOL Convention
- Ramsar Convention
- Biodiversity Convention
- Climate Change Convention

The convention is founded on the principles that parties should take courses of action, in respect of their economic and social activities, and with regard to the convention's requirements, which will protect the climate system for present and future generations. The Ministry of Environment of Cambodia presented a statement on climate change Third Session of the Conference of the Parties in the United Nations Framework for the Convention on Climate Change (UNFCCC-COP3) in Kyoto, Japan, December 1997. The Cambodian Government intends to be involved in a global mechanism to deal with this critical issue.

Chapter 4

Local Utilization and Management

4.1 ACCESS TO COASTAL RESOURCES

Cambodia, as well as other Southeast Asian countries, are predominantly dependent on coastal resources. Mangrove swamps serve as good habitats for fish and they also provide other economic benefits. It is estimated that 30-50% of people in the coastal areas are involved in fishing. Other coastal residents are into logging, trading, farming, charcoal production and non-timber forest product harvesting.

Although the mangrove areas have been designated as fishing domains, communities with free access continue to exploit the mangrove resources with little law enforcement to stop any illegal activities.

Currently, management responsibility for coastal resources lies with the government as the primary decision-makers based on a top-down approach. Another approach would be to have more community involvement in managing these resources in a more sustainable way.

Most of the people have sold their recently cleared land to land speculators who already paid a small amount to the local community members early in 1996 through an arrangement assisted by the local administrative authority. An example is a land area of 700 ha which had been reportedly purchased by an outside investor from Sihanoukville for shrimp farming. However, no concrete development has been made and the local people are getting limited (or no) benefit from making canals and clearing the mangrove forests.

4.2 LOCAL UTILIZATION

4.2.1 *Mangrove Charcoal Kiln*

Coastal people have two sources of charcoal: trees from inland forests and mangroves. A 1994 estimate stated that in Koh Kong there were more than 300 charcoal kilns producing over 24 000 tons of charcoal of which about 94% was exported to Thailand. An estimated 100 000 tons of mangrove wood is needed to

"Currently, management responsibility for coastal resources lies with the government as the primary decision-makers, based on a top-down approach so to speak. Another approach would be to have more community involvement in managing these resources in a more sustainable way."

produce this amount of charcoal. The mangrove charcoal producers west of Bokor National Park, Sihanoukville complain that little mangrove can be cut because most of the mangrove forest land (about 700 ha) is owned by a private investor who prohibits mangrove harvesting.

4.2.2 *Fishing*

Fishing operations along the coastline are generally confined to just one trip per day due to a traditional preference among local fishermen and to some extent due to types of fishing boats, equipment, landing ports and market availability. At present, most fishing vessels compete to exploit inshore rather than offshore resources. Most marine products (particularly from Koh Kong) are exported to Thailand due to the lack of local markets and transport facilities. Less than 20% of the total marine products are consumed locally. Fishermen used to sell their catches to private middlemen, processors and retailers but the price they obtained was often not fair.

The income generated from fishing activities has gradually decreased during the last 5 years due to the following vital factors:

- ❖ Market constraints;
- ❖ Poor preservation technology;
- ❖ Resource depletion; and
- ❖ Security

Furthermore, the increase of motorized push netters—a prohibited fishing gear—has contributed to the increased exploitation of fishery resources in the coastal areas. More detailed surveys need to be done to get reliable estimates on fish production and its value for the local communities and the nation as a whole.

4.2.3 *Fish Processing*

Fish processing also provides employment opportunities to the local communities and it is a source of employment for women. Subsequently, increased job opportunities will contribute to the upgrading of the living standards by providing extra income. Marine fish species are processed for human and animal consumption. Most processed products are consumed domestically while higher quality, higher-valued products are exported mainly to other Southeast Asian markets. Principal species processed include

finfish and shrimp (dried, iced and frozen), squid, octopus, crab and sea cucumber. Processing involves a range of basic preservation techniques. These techniques include sun drying, smoking and steaming. In addition, there is a significant volume of traditional processed fishery products (fermented fish, fish paste and fish sauce). Traditional processing absorbs high volume of small fish.

4.2.4 Medicinal Plants

Coastal people have traditionally used mangroves, or its associated fauna, for medicine and other purposes. In Koh Kong, the species of *Exciocaria agallocha* is used to treat diarrhea. A fungus called *Sam Bok Sramoch* (literally Home of Ant) is dried and used as a medicine for a certain lung disease. There are many more traditional uses of mangroves as have been mentioned by other authors.

4.2.5 Aquaculture

The techniques for shrimp farming along the coastal areas are intensive, involving high stocking densities, formulated feed, aeration and regular water exchange. This system can provide maximum annual production of up to 9-10 tons/ha. However, the aquaculture industry in Koh Kong province has increasingly started to experience the serious negative side effects of intensive shrimp farming. These effects include economic losses due to shrimp disease and self-pollution of culture areas caused by indiscriminate discharge of pond effluent. Resource use conflicts, particularly with farms located in or near mangrove areas, has also become a concern in the province.

In Kampot, there are 1 438.8 ha of proposed aquaculture development along the coastline. However, only 197 ha of aquaculture area are legal. Some shrimp farms and mangrove areas have also been converted to salt pans. Along the whole Kampot coastline, 1 079 ha has been selected and designated as fishery reserve. Certain mangrove areas are also preserved to protect the forest and the aquatic species. However, the economic interest in salt is a threat, and there is great danger that salt pan development will encroach into these reserves.

4.2.6 Coastal Tourism

Eco-tourism is seen as a way of addressing resource conservation and economic development. In Cambodia, there are four major coastal areas which attract both local and foreign tourists—Sihanoukville and Kep beaches and two national parks, Kirirom and Bokor.

The offshore islands are presently being developed as natural resorts. These include Koh Rong, Koh Thash and Koh Rongsanlem whose coral reef and seagrass beds are in very good condition. It is anticipated that the local communities will get

the opportunity to benefit from these tourism developments by being provided with a market to sell their agricultural products and handicrafts as well as by being able to develop boat and car rental services, etc. However, being at this stage, local communities should be made aware of the importance of conserving and protecting coastal resources in order to attain local and national economic growth.

4.2.7 *Value of Marine and Coastal Resources*

No comprehensive estimates have been made on the real and potential values of Cambodia's marine and coastal resources. Present figures underestimate the levels of catch, the value of fish caught and the potential for tourism. This in turn leads to an undervaluation of these resources and their potential when compared to what seems to be more profitable industrial development.

4.3 LOCAL MANAGEMENT EXPERIENCES

4.3.1 *Initiative on Coastal Resource Management*

Fishery associations do not as yet exist among Cambodia's coastal communities. However, informal interaction among fishermen or groups of fishermen takes place in connection with the actual task of fishing or related activities on shore. Among more "well off" fishermen, there have been an increasing use of walkie-talkies. The improved communication has been used to support each other when they are fishing. In the event of accidents at sea, it is reported that good cooperation exists among fishermen.

In 1997, the Department of Nature Conservation and Protection (DNCP) hosted a workshop funded by the World Conservation Union (IUCN) to review the draft Management Plan of Ream National Park. Fishermen, forest resource users and the commune leaders were invited to participate in the workshop. Activities such as this can encourage them to organize themselves into associations, cooperative, or other interest groups so that they can better manage and protect their coastal resources.

4.3.2 *Current Mangrove Management*

After the 1993 general election held under the auspices of the United Nations Transitional Authority of Cambodia (UNTAC), the Kingdom developed into a free market open for foreign and local investments. As a result, there is now a heavy pressure on the coastal resources as the capacity to manage and control the development has not kept pace with the increased rate of exploitation.

“...the Kingdom developed into a free market open for foreign and local investments. As a result, there is now a heavy pressure on the coastal resources as the capacity to manage and control the development has not kept pace with the increased rate of exploitation.”

In Koh Kong province, the charcoal production was uncontrolled which led the government to intervene and dismantle the charcoal kilns in the mangrove areas. In 1996, the Ministry of Environment's DNCP took action and destroyed the charcoal kilns that was built in the Ream National Park. Effective prohibition of charcoal production would reduce the threat to continued destruction of mangroves. However, the present reality is that these activities will unfortunately continue as many smaller kilns are still operating inside the mangrove areas.

4.3.3 *Fishing and other Detrimental Practices*

The fish catch per unit effort (CPUE) will continue to drop as more people are engaged in fishing. The growing number of people engaged in fishing together with the use of improved fishing technology will increase pressure on existing resources. If fishing effort is allowed to increase, coastal areas will experience reduction of available fish stocks in the future.

The present types of trawling practiced in shallow waters are reducing the resources available for small-scale fisheries. These trawling practices are continuing illegally, although according to the Fisheries Law, trawling in waters of less than 20 m depth is prohibited.

Before the 1970s, the mangrove areas have been reported to provide good habitat for fish and other aquatic animals. There were plenty of resources around and the coastal people did not have to spend much investment for fishing gear. The exploitation of mangroves for firewood and charcoal started to grow after 1979 and intensified in the early 1990s.

4.3.4 *Development of Salt Pans*

In Kampot province, the salt pan expansion in 1998 have caused the destruction of mangroves, biodiversity loss and reduced subsistence benefits for local communities and the development have disrupted the coastal ecosystem. Salt pan expansion also reduces the natural value of coastal areas, thus, affecting tourism as well.

The fishery resources are the main source of long-term income and livelihood for the local people, especially with regards to the subsistence of poor families. The destruction of mangroves in these areas, therefore, will affect the people directly not only with regard to fish availability but also on the domestic use of firewood.

Apart from what have been mentioned in relation to the resources within the mangroves, the destruction of mangroves will also cause erosion and sedimentation in coastal areas. Furthermore, it will reduce the natural ability of the ecosystem to protect itself against strong winds.

4.4 RELIGION AND TRADITIONAL BELIEF

4.4.1 *Ethnicity and Religion*

Buddhism is the state religion of Cambodia. About 90% of Cambodians are Buddhists. The remaining population is either Muslim or Catholic. The majority of people in the coastal areas are Khmer (Koh Kong 90% and Kampong Som 89.8%, respectively) followed by Cham (5.6% and 6.1%, respectively), Vietnamese (1.8% in both provinces), Chinese (0.2% and 2.2%, respectively), Thai (2.3% in Koh Kong and the numbers for Kampong Som is not known) and Soach (no data in Koh Kong and 0.08% in Kampong Som). It is estimated that the number of Vietnamese should be higher in Kampot as it is the coastal province closest to Vietnam (ADB/RETA 5552, 1996). Inhabitants in Cham and Soach are Muslims.

Muslim coastal communities are largely fishing communities. The Working Group found that in the coastal villages composed of different ethnic and religious groups, such as Tropaing Ropov (Kampot Province) and Tomnop Rolork (Sihanoukville Province), the Muslims and the Vietnamese are almost 100% dependent on capture fisheries. The Thai and Malaysian are doing aquaculture (cage culture in this case), the Chinese (Chinese-Khmer) are fish collectors and/or middlemen. The ethnic Khmer are largely doing crop cultivation.

An emerging concern is that, if fish production and availability of aquatic resources will drop then fishing dependent groups like the Soach in Samrong and Ream communes of Prey Nop district, Sihanoukville, will have to turn to something else such as logging.

4.4.2 *Traditional Belief*

There is a strong belief among coastal villages in the "ocean spirit". Elements in these beliefs are connected with good or bad luck. The dolphin is an example. Fishermen never wish to catch dolphins, whether accidentally or intentionally, as this will bring bad luck to them throughout the year. If they happen to catch one, they usually release the live (or dead) dolphin back into the sea with the hope of getting back their good luck. If bad luck is perceived to be coming, it is common to invite Buddhist monks to get rid of the bad luck.

Furthermore, fishermen in coastal areas respect the Grand Lady known as "Yeay Mao". It is believed that her hands hold the entire Gulf of Thailand (not only the Cambodian waters) and the destiny of those fishing there is in her control. Usually prayers to "Yeay Mao" is done when fishers are threatened in the sea.

4.5 INITIATIVES TO COMBAT THE DEGRADATION OF MANGROVES AND OTHER COASTAL RESOURCES

The coastal areas—where the mangroves, fishery resources and other natural resources are found—have not been defined or delimited yet in any official documentation by the Government. Such delimitation should at least include the wetlands and watershed areas of the coastal provinces.

A major form of degradation of coastal resources has been the clear cutting of mangroves by community members and others. Although the Fisheries Law states that the mangroves should be managed from the basis of being a fishery domain business, people encourage the clearing of mangroves to make way for shrimp farms and salt pans by arguing that it is more profitable than other ventures. In 1995, the area for shrimp farms in Koh Kong Province increased to 1 000 ha. Out of this total, about 280 ha were actually in operation while 150 ha were under construction and the remaining plots were waiting to be sold or put up as joint ventures with Thai shrimp farmers (ADB/RETA 5552, 1996).

In Lork village, Kampong Trach of Kampot Province, one villager has replanted a half-hectare mangrove area since 1996. So far, no one from the commune has continued this initiative as they say they find it difficult to protect the plantation. But positive signs are coming. The local community has collaborated with the Australian People for Health, Education and Development Abroad (APHEDA) to prepare plans to replant mangroves in a 30-ha area. The provincial fishery and agricultural office have expressed willingness to participate in this effort (Kampot Fisheries Office, 1998). If the plans will materialize, it would perhaps be a step towards better interaction between villagers and government institutions in resource management.

To reduce the threats to mangroves, a series of five workshops were conducted by APHEDA for 130 participants from 26 villages in Kampot province. They were taught guidelines on the conservation and sustainable use of mangrove resources. The Laws on "fisheries domain" and the establishment of protected areas provide a legal mandate to conserve and manage the coastal resources.

To address the issue of unregulated increases in the number of shrimp farms, the Fisheries Department has established the following conditions:

**Management of Fisheries, Coastal Resources and the Coastal Environment in Cambodia:
Institutional, Legal and Policy Perspectives**

- ❖ Clearing of mangrove forests for shrimp farming is prohibited;
- ❖ Wastes from shrimp ponds must be treated before these are discharged into the sea;
and
- ❖ Shrimp ponds must be constructed at least 150 m behind the shoreline.

However, these conditions are to a large extent not observed even though shrimp farmers are aware of the negative impact of their operation on the environment.

Chapter 5

National Policy and Planning

5.1 NATIONAL POLICY

There is no national policy specifying the development, use and management of natural resources in the coastal zone. However, the National Program to Rehabilitate and Develop Cambodia has implications for the development and management of the coastal zone. The Program sets out the vision of the Royal Government to establish a market economy and to facilitate the emergence of a strong private sector. The main elements of the approach include:

- ❖ Reforming the state apparatus and public service;
- ❖ Realizing political stability and economic growth;
- ❖ Establishing a legislative and regulatory framework conducive to a fair and stable investment climate;
- ❖ Providing for the required physical infrastructure, developing human resources, gradually integrating the country into the regional and world economic environment while optimizing the sustainable use of natural resources; and
- ❖ Re-establishing the country within the community of nations as a sovereign state, with people committed to the rule of law.

"This national program clearly reflects a policy based on a process of legal reform, establishment of a legal framework based on democracy and market economy."

This national program clearly reflects a policy based on a process of legal reform, establishment of a legal framework based on democracy and market economy. It also sets the framework for national policy and planning in all sectors related to Cambodia's coastal zone.

The First Five Year Socioeconomic Development Plan (1996-2000) considers environmental protection as an equally important element in the ambition to develop the country.

This plan also stresses the need to alleviate poverty and improve the quality of life of rural communities, thus reducing pressure on the natural resources by decreasing the amount of uncontrolled resource exploitation. In addition to the general national development policy, there are some important sectoral

policies that relate to the management of fisheries, coastal resources and the coastal environment.

5.1.1 Fisheries Policy

The Fisheries Department has the mandate to manage the fisheries sector. The main elements related to the management of marine fisheries mentioned in this policy are:

- ❖ To create job opportunities and upgrade the livelihood of the local communities;
- ❖ To ensure equitable access to and distribution of fisheries benefits including export earnings;
- ❖ To encourage the integration of fisheries management with overall rural development in fishing communities;
- ❖ To extend the institutional responsibilities of fisheries management to fishing communities;
- ❖ To enhance the protection and sustainable use of fishery resources; and
- ❖ To promote aquaculture and mariculture development to fulfill the nutritional requirements of the people and to reduce the catch of wild resources.

The local authorities are now working together with the local communities to try to define coastal areas in terms of their importance to fisheries. One of the objectives is to designate zones that should be reserved for conservation as well as those that would be kept open for sustainable use.

5.1.2 Industrial Sector Policy

The policies of the industrial sector are defined as follows:

- ❖ To encourage the development of the industry that can ensure political, economic and social stability and to reduce the trade gap;
- ❖ To develop an industrial base with the aim of maximizing the benefits of the utilization of existing natural resources, attracting greater foreign investment, promoting technology transfer and stimulating human resource development;
- ❖ To support the goals of the Ministry of Education and others agencies in developing vocational training centers to provide the needed trained personnel for continued industrial development;

"One of the objectives is to designate zones that should be reserved for conservation as well as those that would be kept open for sustainable use."

- ❖ To increase effectiveness, competitiveness and modernization of industry within the context of a free market economy;
 - ❖ To create special economic zones that facilitate new industrial establishments;
 - ❖ To support national economic and social development through effective industries, by creating added value to natural resources, sustainability of economic development, job opportunities and thereby upgrading the living standard of the people;
- ❖ To develop a Petroleum Training Institute and a training institute in the mines and geology sector; and
 - ❖ To develop agro-manufacturing and food processing industries to support the agriculture sector.

5.1.3 *Tourism Policy*

With regard to the management of tourism, the Ministry of Tourism has set up the following tourism policy:

- ❖ To increase foreign exchange earnings;
- ❖ To increase and encourage investment in all areas of tourism;
- ❖ To create employment opportunities for local people;
- ❖ To stimulate regional development;
- ❖ To enhance and preserve the national cultural heritage; and
- ❖ To develop and conserve the physical and environmental resources in the coastal areas.

5.1.4 *Policy of the Ministry of Public Works and Transport*

Transport development includes the following policy objectives:

- ❖ To transform the Kang Keng airport into a regional airport;
- ❖ To upgrade the port facilities and infrastructure of Phnom Penh and Sihanoukville ports;
- ❖ To reconstruct the southern and northern railway branches; and

- ❖ To develop Phnom Penh and Sihanoukville ports as "dry ports" in order to accommodate future growths in traffic demand, especially with reference to container traffic.

The development of civil aviation and airports (particularly those at Koh Kong and Sihanoukville) is an important priority of the royal government since it provides vital transport and tourism links to and from Cambodia.

5.1.5 Environmental Policy

Based on the Law on Environmental Protection and Natural Resource Management and the National Program to Rehabilitate and Develop Cambodia, the objectives are:

- ❖ To implement the national policy or national programs;
- ❖ To protect the environment from the ill-effects of economic development;
- ❖ To conserve the environment through the creation of protected areas;
- ❖ To ensure the development and implementation of laws and sub-decrees on environmental conservation and protection of the coastal environment;
- ❖ To prepare and implement national and regional action plans through inter-agency coordination; and
- ❖ To ensure sustainable economic development activities in order to promote economic, social and political stability.

Due to unclear (or lack of) policy or policy guidelines at the ministerial levels, it may be very difficult for the departments or local authorities at the provincial levels to define their own responsibilities or functions.

However, the uncertain situation is still existing despite the fact that the National Environmental Action Plan was prepared by representatives from the line ministries, such as the Ministries of Environment; Agriculture, Forestry and Fisheries; Rural Development; Tourism; Industry, Mines and Energy; and Public Works and Transport.

5.2 NATIONAL PLANNING

Apart from abiding by national programs, each ministry is also required to develop intermediate-level plans in accordance with their mandates. Usually, each ministry has to prepare short (1-2 years) to medium-term (5 years) plans of its own, which are to be submitted to the government for final integration with the national plan.

5.2.1 Fisheries Plan

There are several objectives for the management and protection of marine fishery resources as follows:

- ❖ To increase fisheries production for local consumption and export;
- ❖ To create job opportunities for rural farmers;
- ❖ To upgrade aquaculture/mariculture to reduce the exploitation of natural fisheries;
- ❖ To enhance the protection and conservation of fishery resources and to ensure law enforcement; and
- ❖ To ensure human resource development and capacity building in the fisheries field.

5.2.2 Industrial Strategy and Planning

For its mandate to manage and develop the industrial sector through environmentally sound planning, the MIME has defined the following objectives:

- ❖ To promote industrial activities in order to create jobs and to attract foreign investments;
- ❖ To identify four critical sectors for investment:
 - a) The fuel and energy sector as a strategic sector for the country;
 - b) Other sectors of high priority (i.e., labor-intensive industries, high value-added industries and wood factories);
 - c) Sectors of higher need (i.e., agro-manufacturing, factories for consumable goods); and
 - d) Small business-related industries.
- ❖ To create policies that promote industrial and economic development by attracting foreign and domestic private investments. These policies include the formulation of laws such as the investment law that will make government institutions responsive to the needs of investors; and
- ❖ To prioritize the establishment of growth centers through the development of infrastructure, industrial zoning and export processing zones in Phnom Penh and Sihanoukville.

5.2.3 *Tourism Zoning Strategy*

The Ministry of Tourism has proposed a tourism zoning strategy for Cambodia. The tourism zoning strategy gives priority to eight development areas that include the coastal areas of Sihanoukville, Kep and Kampot province. The tourism potential in these areas includes lovely offshore islands. These islands are ideal sites for resort development owing to their attractive beaches and rich marine life.

5.2.4 *National Environmental Action Plan*

The National Environmental Action Plan (NEAP) was adopted by the Council of Ministers in December 1997. This action plan was initiated by the Ministry of Environment to provide strategic guidance to public and private stakeholders in integrating environmental concerns into national and local development policies, economic decision-making and investment planning. It was prepared through a participatory process involving government and nongovernment stakeholders.

The action plan summarizes the key thematic issues related to coastal areas such as:

- ❖ Forestry policy;
- ❖ Coastal fisheries management;
- ❖ Biodiversity and protected areas management;
- ❖ Energy development and the environment; and
- ❖ Urban waste management.

"This action plan was initiated by the Ministry of Environment to provide strategic guidance to public and private stakeholders in integrating environmental concerns into national and local development policies, economic decision-making, and investment planning. It was prepared through a participatory process involving government and non-government stakeholders. "

The NEAP presents a pragmatic five-year program (1998 to 2002) to improve environmental management in Cambodia. The first phase of the program (Years 1 and 2) focuses primarily on strengthening policy and regulatory frameworks, while the second phase (Years 3 to 5) would involve the mobilization of investments needed to improve environmental management. The components presented in the NEAP should be implemented by the different ministries, as appropriate, according to the thematic issues and existing legal framework.

5.2.5 National Wetlands Action Plan

A draft of the National Wetlands Action Plan has been circulated among different groups for comments. The Wetlands Action Plan was adopted by the Government in December 1998. The action plan is the result of detailed discussions among different ministries, departments and organizations responsible for the management and sustainable use of wetlands in Cambodia.

The National Wetlands Action Plan (1998) outlines the cultural and economic importance of wetlands. Over 30% of Cambodia's land area consist of wetlands, according to an internationally accepted criteria for wetland identification (as defined by the Ramsar Convention). The Action Plan states that over 20% (36 500 km²) of the country may be classified as wetlands of international importance. Cambodia ratified the Ramsar Convention in 1999. One of Cambodia's proposed Ramsar sites is located in the coastal estuaries of Koh Kapik.

The Action Plan calls for a formal policy to be developed for the management of wetland areas, including coastal zone resources.

5.2.6 Conservation Plan

A conservation plan for coastal natural resources does not exist in a specific document. However, it is already covered essentially in both national and international laws such as the Fisheries Law, the Forestry Law, the Royal Decree on the Creation and Designation of Protected Areas, the Law on Environmental Protection and Natural Resource Management, the Ramsar Convention and so on.

"The Action Plan calls for a formal policy to be developed for the management of wetland areas, including coastal zone resources."

Chapter 6

Policy, Legal and Institutional Constraints and Issues

The implementation of sustainable resources and environmental management in coastal areas of Cambodia has faced numerous setbacks due to policy, legal and institutional constraints.

6.1 POLICY CONSTRAINTS

National policies and sector policies seem to be too broad or too "demanding" in relation to available financial resources. There is no specific focus on coastal areas in the policies related to the environment, fisheries, industry, transport and tourism. There is, subsequently, no specific coastal zone policy, even with regard to integrated or coordinated coastal zone management.

Lack of implementation and unclear responsibilities for the implementation of these policies among local authorities are the main constraints in the protection, conservation and management of coastal and marine environmental resources. The political situation greatly affects the development and implementation of the integrated coastal zone planning and management policies and strategies. Policy implementation is also constrained by the existing legal and institutional frameworks.

6.2 LEGAL CONSTRAINTS

One of the Royal Government's central ambitions is to develop Cambodia into a state with a functional legal and administrative system. Many royal decrees, laws, sub-decrees and other legal instruments have been issued or are being developed. The present process of making law is usually done by a combination of national and international experts. Most of these are funded through international funding agencies.

In spite of the ambitions, several constraints in the legal framework persists, including the following:

"Lack of implementation and unclear responsibilities for the implementation of these policies to local authorities are the main constraints to the protection, conservation and management of coastal and marine environmental resources. "

- ❖ Most laws and sub-decrees, which have been adopted, do not have supportive documents stating their rationale and objectives including guidelines for their interpretation. The result is that different interpretations are being made by different persons, even in one region.
- ❖ The Royal Decree on the Creation and Designation of Protected Areas (adopted on 01 November 1993) covers areas that are also covered in the fisheries and forestry laws in the context of protected areas. However, the Decree seems to give no clear responsibility to the Ministry of Environment, or other specific ministry, to manage the designated protected areas. The Royal Decree does not define any measure to prosecute anyone who violates it. The penalties are to be established by laws or sub-decrees. Furthermore, the Decree does not make any reference to the determination of buffer and core zones of protected areas. The result is a situation of unclear institutional mandates and weak enforcement mechanisms.
- ❖ Many laws, sub-decrees and other legal instruments are needed to address and regulate economic development. The process of developing laws is presently trying to keep pace with the rapid emergence of economic opportunities. The result is a situation where (by certain necessities) laws are drafted "too quick" and sufficient time is not being given for consultations with communities, resource users and other stakeholders which in turn leads to difficulties in law enforcement.
- ❖ The key provisions of many laws are not specified. The specifications are generally left to be defined in separate laws or sub-decrees. The result is that, due to the time needed to develop new laws and decrees, these definitions will take some time before they can be used. This will, in turn, affect the enforcement.
- ❖ Many laws that are presently being enforced are outdated, in parts or as a whole, and do not reflect the real current situation. For instance, the Fisheries Law of 1987 has the following constraints:
 - a) no provisions to limit the size or age of harvestable marine fish or the protection of endangered species; and
 - b) no prohibition in the use of mechanized push gear (for the gathering of shellfish) which destroys the seabed ecosystem.
- ❖ Periods of political instability affect not only the effective enforcement of the laws but also the development of new laws and regulations.

6.3 INSTITUTIONAL CONSTRAINTS

Government institutions are facing many constraints both at national and local levels. At the local level, there are the provincial authority, provincial sector departments, district authorities, communal and village offices, which are all part of the government structure. In terms of constraints, they have at least two major problems in common—they are all suffering or hampered by the unstable political situation and they all lack financial resources.

6.3.1 *Human Resources Constraints*

The main immediate constraints with regards to human resources are:

- ❖ Inadequate knowledge, skill and experience among responsible persons, officers and staff in the provincial government institutions in the field of coastal resources and environmental management. The needed management skills include:
 - a) The know-how to implement sustainable management of fisheries, forestry, industry, tourism, transportation, etc.;
 - b) Environmental planning and management;
 - c) Skills to strengthen law enforcement (including the capacity to understand the context of laws, sub-decrees and related instruments issued at both national and international levels); and
 - d) The capability to promote environmental awareness to the public.

Also at the village level, there is generally a lack of awareness on causes and effects in the process of environmental degradation. The APHEDA workshop referred to earlier, which aimed to promote environmental consciousness fell a bit short of its target possibly due to funding constraints. The difficulty to actually reach

the target in terms of capacity building could also be noticed in the component for the training of government staff within a Danida-funded coastal project. There is a need for these initiatives to be continued and expanded in scope.

" In terms of constraints, they have at least two major problems in common; they are all suffering or hampered by the unstable political situation and they all lack financial resources."

6.3.2 *Constraints in Law Enforcement*

The main laws related to the management of coastal natural resources are:

- ❖ Fisheries Law 1987 (FiL);
- ❖ Forestry Law 1988 (FoL);
- ❖ Land Law 1992 (LL);
- ❖ Law on Land Management, Urbanization and Construction 1994 (LLM);
- ❖ Law on Environmental Protection and Natural Management 1996 (LEP);
- ❖ Royal Decree on the Creation and Designation of Protected Areas System 1993 (RD).

These laws are not well implemented due to the following constraints:

The "political" influence, uncontrolled development and the impact of wealthy people's interests are leading to:

- ❖ Anarchy of logging in large- and small-scale manner and transportation;
- ❖ Anarchy of fishing in which about 50% of fishing boats do not have permits, illegal use of fishing gear, use of bombs or grenades in some places, fish transportation and depots and encroachment of mangrove areas for salt pans and shrimp farms;
- ❖ Anarchy of constructions—especially in the cities;
- ❖ Encroachment of forest land and mangrove areas for agriculture; and
- ❖ Lack of monitoring or control (e.g., checkpoints at roads) leading to anarchy in the use of natural resources and in the transportation of natural products (these checkpoints are actually not required or referred to in the Fisheries and Forestry Laws).

Aside from the above, there are also technical constraints which include:

- ❖ Lack of qualified officers and staff in law enforcement;
- ❖ Lack of monitoring equipment (e.g., patrol boats);
- ❖ Unfamiliarity of the local people with the law; and
- ❖ The responsible departments or offices in the provinces do not have enough power (resources) to control activities regarding the use of natural resources.

6.3.3 Constraints in the Management Systems

As mentioned earlier, the responsibility for coastal zone management and coastal development is shared by many ministries, departments and offices. Sometimes, their duties and responsibilities are not in conformity with the given laws, sub-decrees

or government decisions. In other cases, these offices work independently of each other without any cooperation. This often leads to management overlaps and conflicts between and among the responsible authorities.

The main activities (current and potential) that lead to, or could lead to overlaps and conflicts (see Tables 9 and 10) among institutions in the coastal areas are:

- ❖ Land expansion (i.e., conversion) for agriculture, ricefields and industrial crop cultivation, salt pans and urban development;
- ❖ Mangrove deforestation for charcoal production, shrimp farming and other purposes;
- ❖ Expansion of tourism areas and activities into protected areas;
- ❖ Increase in transportation activities (maritime transport, port development and congestion in ports); and
- ❖ Increased use of pesticides and fertilizers for agriculture.

Presently, there is a trend to move from a decentralized management system to a more centralized one. This process has also become a constraint among responsible provincial departments or offices as it has put them in a situation where lines of authority are unclear.

Table 9. Current and Potential Overlaps and Conflicts within Sectors.

Responsible Depart/Off	In	Fo	Fi	Ag	To	Tr	Lu	Rd	En
1 Industry (In)		P	CP	P	P	P	CP		CP
2 Forestry (Fo)	P		CP	CP	P	P	CP	P	CP
3 Fisheries (Fi)	CP	CP		CP	P	CP	CP	P	CP
4 Agriculture (Ag)	P	CP	CP		CP		CP		CP
5 Tourism (To)	P	P	P	CP		P	CP		P
6 Transportation (Tr)	P	P	CP		P				CP
7 Land Use (Lu)	CP	CP	CP	CP	CP			CP	CP
8 Rural Development (Rd)		P	P				CP		CP
9 Environment (En)	CP	CP	CP	CP	P	CP	CP	CP	CP

6.3.4 Financial Constraints

The main income for the provinces and municipalities comes from the government budget, which in turn, is coming from provincial and municipal tax collection. At this point, all tax revenue is transferred to the Ministry of Economics and Finance by the provincial and municipal departments of finance. In return, for any expenditure mentioned in the Law on Financing and Property Regime in Provinces and Municipalities adopted in 1998 (Article 19), the provinces and municipalities should

Table 10. Current and Potential Overlaps and Conflicts within the Legal System.

Legal Systems	FoL	FIL	LEP	LL	LLM	RD
1 FoL		CP	CP			CP
2 FIL	CP		CP			CP
3 LEP	CP	CP				
4 LL	P				CP	CP
5 LLM				CP		
6 RD	CP	CP		CP		

Note: C- Current Overlaps and Conflicts
P- Potential Overlaps and Conflicts

submit proposals in order to get budget allocations from the Ministry of Economic and Finance. Usually, only a small amount of the incomes gained and revenues collected can be used directly by the provinces and municipalities. Thus, they are facing difficulties in collecting money for their budgetary needs.

Today, Cambodia is generally dependent on foreign financial assistance. The lack of funds from both internal and external sources prevents the ministries and other agencies from fulfilling their mandates.

Chapter 7

Recommendations

As mentioned earlier, government has not made any policies specific to coastal zone management. Sectoral policies for fisheries and industry, for example, are taken as applicable enough approaches to coastal zone management.

The objectives if the suggested recommendations for the development of policies coastal zone management are as follows:

- ❖ To promote the economic growth of all productive sectors and services, which in turn will ensure political, economic and social stability;
- ❖ To enhance the administrative infrastructure of provinces through human resources development and financial support;
- ❖ To encourage the development of laws, sub-decrees, or other legal requirements pertaining to coastal zone management;
- ❖ To ensure compliance with laws, sub-decrees, or other requirements through capacity building; and
- ❖ To protect the natural resources and the environment of the coastal zone.

For the successful implementation of these policies, some strategic action needs to be taken.

Action Strategy 1: Promotion of economic growth in the whole coastal zone

1.1 Attract foreign investments in all productive sectors and services in the coastal areas in order to increase local employment opportunities and incomes;

1.2 Increase support for the following sectors:

- a) Agricultural production, mainly rice and industrial crops (about 90% of the population are farmers) to support the development of agricultural products for agro-industrial development, local consumption and export;

- b) Livestock, animal husbandry, mariculture and fisheries and aquatic products;
- c) Forest products in forest concession areas and reforestation activities; and
- d) Industrial manufacturing of goods such as cement, fertilizer, clothing, fish sauce, canned products and salt products.

1.3 Develop services based on natural resources, such as recreational resorts, marine sanctuaries, sport fishing sites, etc; and

1.4 Development of transport infrastructure and markets to facilitate an equitable distribution of goods.

Action Strategy 2: Enhancement of administrative infrastructure and development of human resources

2.1 Strengthen the central administrative system from each ministry as well as the districts and communes in order to ensure that decisions with regard to natural resources pass through all relevant government authorities;

2.2 Improve government service delivery to investors and the public;

2.3 Train local government officials from the village to the provincial level in the methods of integrated coastal zone management to ensure sustainable development;

2.4 Ensure that recruited government officials are appointed to positions in accordance with their levels of education and experience; and

2.5 Increase salaries of government officials.

Action Strategy 3: Development of laws or other related instruments pertaining to coastal zone management

3.1 Develop laws specific to coastal zone management to complement existing laws on environmental protection;

3.2 Formulate sub-decrees on marine pollution and solid waste prevention;

3.3 Incorporate commitments in international conventions into national laws or sub-decrees; and

3.4 Set up mechanisms for local community participation in the formulation of laws.

Action Strategy 4: Strengthening of law enforcement

- 4.1 Enhance the capacity to enforce existing laws throughout the government hierarchy;
- 4.2 Amend as needed some of the existing laws, such as the fisheries and forestry laws;
- 4.3 Train government officials in understanding the content of the laws to improve implementation;
- 4.4 Develop procedural guidelines for circulation to local communities so that they can understand and participate in the development and enforcement of laws;
- 4.5 Strengthen monitoring systems including measures for legal action against violators of laws on environmental protection;
- 4.6 Foster cooperation among responsible authorities, from the line ministries to the villages, in the effort to enforce the laws; and
- 4.7 Engage the assistance of relevant NGOs in monitoring and enforcement of laws on the protection of the environment.

Action Strategy 5: Protection of coastal resources

- 5.1 Develop a master plan for the whole coastal zone and for each coastal provinces and municipality;
- 5.2 Promote environmental awareness at the community level through schools and media and in the process, relate to elements of indigenous belief;
- 5.3 Encourage the conduct of coastal and marine scientific research and natural resource inventories.
- 5.4 Develop a marine research center; and
- 5.5 Foster cooperation between government agencies and international organizations to facilitate the exchange of information and technical know-how and to provide for extension of needed financial support to improve coastal zone management and natural resources protection.

Action Strategy 6: Empowerment of local communities to manage their own coastal resources

- 6.1 Provide opportunities for communities to demonstrate their commitment to manage their natural resource and economic base;

6.2 Ensure that communities and government agencies cooperate in the management of mangrove forests and fishery resources to benefit local villages (co-management); and

6.3 Offer community-based training for coastal resource management.

SUMMARY OF RECOMMENDATIONS

- Action Strategy 1: Promotion of economic growth in the whole coastal zone
- Action Strategy 2: Enhancement of administrative infrastructure and development of human resources
- Action Strategy 3: Development of laws or other related instruments pertaining to coastal zone management
- Action Strategy 4: Strengthening of law enforcement
- Action Strategy 5: Protection of coastal resources
- Action Strategy 6: Empowerment of local communities to manage their own coastal resources

References

- EVS Environment Consultants, Ltd. 1996. Coastal and marine environmental management for the Kingdom of Cambodia. Prepared by EVS Environment Consultants Ltd. Vancouver, Canada (Asian Development Bank RETA 5552: Coastal and Marine Environment in the South China Sea.) Ministry of Environment, Phnom Penh.
- Anon. 1998. ASEAN renewal, 03 July 1998: 10.
- Ban Chang Regional Development Co., Ltd. & Act Consultant Co., Ltd. 1994. Presentation Text for Feasibility Study Tasks of Sihanoukville Industrial Zone.
- Bernard, P. 1934. Le problème économique Indochinois. Biblioteque National, Paris.
- Brunier, H. 1914. Essai d'atlas statistique de l'Indochine Française. Biblioteque National, Paris.
- Collard, P. 1925. Le Cambodge et les Cambodgiens. Biblioteque National, Paris.
- Csavas, I., D.J. Doulman, T.O. Petr, J. Prado and L. Debas. 1994. Cambodia rehabilitation and development needs of the fisheries sector. FAO Fisheries Circular No 837, Rome.
- MoE/IDRC (Ministry of Energy/International Development Research Center). 1995. Mangrove forest resources and local communities: Phnom Penh, Cambodia.
- Dreyfus, P. 1914. Le Cambodge économique. Biblioteque National, Paris.
- Ebihara. 1968. Svay, a Khmer village in Cambodia. Columbia University, New York. Ph.D dissertation.
- ESCAP. 1993. Atlas of mineral resources of ESCAP Region. ESCAP, Bangkok. 10 (87).
- ESCAP. 1995. Towards integrated coastal zone management in Asia, development and management of non-living resources in the coastal zone of the ASIA and Pacific. Unlimited. Unted Nations. New York. Volume 1.
- Henry, Y. 1932. Economic agricole de l'Indochine. Biblioteque National, Hanoi.

**Management of Fisheries, Coastal Resources and the Coastal Environment in Cambodia:
Institutional, Legal and Policy Perspectives**

- Hou Youn. 1955. *La paysannerie du Cambodge et ses projet de modernisation*. Biblioteque National, Paris.
- Hu Nim. 1965. *Les services publics economiques au Cambodge*. Biblioteque National, Phnom Penh.
- Khan Sambourn and Touch Sambath. 1995. Status and issues of the coastal zone management in Cambodia. Paper presented at the 1st Coast Plan Regional Working Group Meeting/ Coordinating Committee for Coastal and Offshore Geosciences Program in East and Southeast Asia, Bangkok, Thailand.
- Long Rithirak. 1995. "Sea Grass". Ministry of Environment, Phnom Penh.
- Mekong Committee. 1992. Fisheries in the Lower Mekong Basin. Main Report of the Interim Committee for Coordination of Investigations of the Lower Mekong Basin. Mekong River Commission, Bangkok.
- Ministry of Environment with IDRC and EVS Environment Consultant, Ltd. 1996. Coastal zone management in Cambodia. Ministry of Enviroment, Phnom Penh.
- Ouk Sisovann. 1997. Inventory for coral and coral reefs in Cambodia. Ministry of Environment, Phnom Penh. Unpublished.
- PADECO Co. 1996. Regional technical assistance to the Greater Mekong Sub-region for the mitigation of non-physical barriers to cross-border movement of goods and people. Completion Report, PADECO Co., Ltd. ADB.
- Pou Sothirak. 1996. Policy Position Paper for Sectorial Investment in the Industrial, Energy and Mineral Sector.
- Sluiter, L. 1992. *The Mekong currency project for ecological recovery*. Terra, Bangkok.
- SweRoad in association with Lanxang International and Mari Term. 1994. Cambodia Transport Rehabilitation Study, ADB TA 1866.CAM. Co-financed by SIDA and UNDP, Phnom Penh.
- Tana T. S., et al. 1995. Evolution of the pelagic fisheries in Cambodia.
- Touzet, A. 1939. *Le Regime monetaire de l'Indochine*. Biblioteque National. Paris.
- Vimoul, Pen SPP. 1996. Country Report: Coastal zone management in Cambodia. Hat Yai, Thailand.

Appendix 1

List of Legal Instruments

The Constitution of the Kingdom of Cambodia, 1993.

Land Law, 1992.

Law on Land Management, Urbanization and Construction, 1994.

Law on Investment, 1994.

Labor Law, 1994.

Law on Fisheries Management and Administration, or Fisheries Law, 1987.

Law on Forestry Management or Forestry Law, 1988.

Law on Environmental Protection and Natural Resources Management, 1996.

Law on Financing and Property Regime in Provinces-Municipalities, 1998

Draft Law on Mineral Exploitation and Mines Resources, 1997.

Royal Decree on the Creation and Designation of Protected Areas, 1993.

Royal Decree on the Establishment of the Ministry of Tourism, 1997.

Industrial Zone Act Draft, 1995.

Sub-decree on Private Transport Services, 1991.

Sub-decree No. 06 on River Navigation, 1986.

Sub-decree on the Organization and Functioning of the Ministry of Environment, 1997.

Sub-decree on the Organization and Functioning of the Ministry of Tourism, 1997.

Sub-decree on the Organization and Functioning of National Committee on Urbanization and Construction, 1997.

Sub-decree on the Organization and Functioning of the Council for the Development of Cambodia (CDC), 1995.

Sub-decree on the Implementation of the Law on Investment of the Kingdom of Cambodia, 1997.

Draft Sub-decree on Industrial and Handicraft Environmental Management and Monitoring, 1995.

Draft Sub-decree on Protected Areas Management, 1998.

Draft Sub-decree on Water Pollution Control, 1998.

Draft Sub-decree on Environmental Impact Assessment, 1998.

Declaration on Management Related to Vehicle Transport and Inland Waterway Transport, MPWT, 1993

Declaration No. 549 on Ship Construction, MPWT, 1995.

Declaration No. 224 on Issuing the Business License for Tourism Boats, MoT, 1996.

Declaration (No. 018 on Overloaded Ferries, River Boats and Sea-Going Vessels, MPWT, 1995.

Declaration on the Licensing of Hotels and Guesthouses, MoT, 1996.

Declaration on the Licensing of Tourist Guides, MoT, 1996.

Declaration on the Licensing of Catering Establishments, MoT, 1996.

Declaration on the Licensing of Travel Agencies, MoT, 1996.

Declaration on the Licensing of Tourist Boats, MoT, 1996.

Declaration on the Licensing of Tourist Vehicles, MoT, 1996.

Declaration of the Licensing of Tourist Resorts, MoT, 1996.

Declaration on the Licensing of Massage Parlors, MoT, 1996

Draft Declaration Referring to the Act of Registration of Merchant Ships, MPWT, 1995.

Common Circular (No. 461) on Overloaded Trucks, Especially Logging Trucks, MPWT, 1995.

Appendix 2

List of Conventions and Regional Agreements

UN Convention on the Law of the Sea, 1982 (entered into force 1994). Cambodia became a member to this Convention in 1994.

Coordinating Body of the Seas of East Asia (COBSEA). Cambodia became a member of COBSEA in 1995.

Association of Southeast Asian Nations (ASEAN). Cambodia had acceded to the Treaty of Amity and Cooperation in Southeast Asia since 1995 and joined the ASEAN in 1999.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Cambodia signed the CITES Convention on 07 December 1975 but did not accede to it until 02 October 1997.

International Convention on the Prevention of Marine Pollution from Ships (MARPOL). Cambodia signed MARPOL on 28 November 1994.

Convention on Wetlands of International Importance (Ramsar Convention). Cambodia has nominated three sites for listing under the convention.

Biodiversity Convention. Cambodia signed this convention in January 1994.

World Network of Biosphere Reserves. The Tonle Sap Great Lake was officially added to the list in October, 1997. Coastal areas are also considered as potential additions to the UNESCO list.

Climate Change Convention. This convention was ratified by Cambodia on 18 December 1995.

Appendix 3

Workshop Report

Report of the Workshop on the Management of Fisheries,
Coastal Resources and the Coastal Environment in Cambodia:
Institutional, Legal, and Policy Perspectives
23 June 1998, Ministry of Environment

I. WORKSHOP OBJECTIVES

The workshop served to bring together experts, interested and concerned institutions, central government agencies, provincial authorities, NGOs and international organizations to discuss the contents and findings of the study as presented in the report. Feedback was sought to revise, as needed, the report and its recommendations. Furthermore, by assessing the level of support by key policies/decision makers it was an aim to try to build momentum in the process of improving the framework for planning and management of coastal development.

The workshop focused on how institutions, legal frameworks, policy and planning affect the management of fisheries, coastal resources and the coastal environment. The participants raised issues and concerns regarding the state of Cambodia's coastal areas and gave suggestions on coastal zone management for sustainable development. The workshop results were used as the basis for the draft report.

The workshop was funded by Sida through ICLARM. The workshop was organized by the following persons:

Ms. Pum Vicheth, Team leader. Deputy Director of Natural Resources Assessment and Environmental Data Management Department.

Mr. Toby Carson	Project assistant
Mr. Ngoun Narin	Team member
Mr. Sin Chhay	Team member
Mr. Srun Lim Song	Team member
Mr. Chan Dara	Team member
Mr. Ouk Siphon	Team member

Mr. Vann Monyneath
Mr. Mao Kosal

Team member
Team member

II. THE PARTICIPANTS

The participants came from the Ministries of Environment, Agriculture (Department of Fisheries), Industry, Mine and Energy, Tourism, Public Work and Transportation and Rural Development, the PMMR Project, the Environmental Management of Coastal Zone Project, the EIA Project, the AIT Project, the AFSC Organization, USAIO, UNDP, IDRC, WI, CDC, Coastal Resources Institute in Thailand, and the governors and officials from the provinces of Koh Kong, Kampot, Sihanouk Ville, Kep City. A total of 53 people attended the workshop.

III. ORGANIZATION OF THE WORKSHOP

Before the opening ceremony, Mr. Vann Monyneath, Head of the Coastal Coordinating Unit, gave an introduction and presented the goals of the workshop. Dr. Magnus Torell, an ICLARM representative, presented a background of the regional project.

The workshop was opened and honoured by the presence of H.E. Dr. Mok Mareth, Minister for the Environment. H.E. Dr. Mok Mareth spoke on the importance of the coastal and marine natural resources of the Kingdom of Cambodia, which provide various economic opportunities for the local communities. He expressed his concern about the accelerating development and urbanisation that progresses without assessments of the effects on coastal and marine resources. He also stressed the importance of cooperation with all concerned from the grassroots to government and the private sector to protect the coastal and marine environment. After the opening ceremony, Ms. Pum Vicheth, the Project Team Leader, made a short presentation on the results of the project based on the report that was distributed to the participants before the meeting. She also mentioned that Cambodia is still facing many problems with regard to legal and institutional policy adequacy and implementation and local capability building for coastal zone management. Finally, she highlighted the policies, strategies and measures needed to successfully implement the project recommendations.

After the presentation, the participants were divided into three small working groups. Each group was assigned to deliberate on the issues of institutional setting, legal framework, and policy and planning. Each group had its own rapporteur and facilitator. After the discussions, each group nominated a representative to present the results of their discussions. The workshop summary and evaluation were made and presented to the workshop by Messrs. Vann Monyneath and Toby Carson. H.E. Ing Hoc Lim, Deputy Director-General of the Ministry of Environment, graced the closing ceremony.

During the closing ceremony, H.E. Ing Hoc Lim said that the government gave priority to the protection of the coastal and marine environment. The effectiveness of this protection requires, however, close cooperation among government and private agencies, local authority, people in the communities and other organizations. He firmly believed that this cooperation is essential in the future. Finally, he expressed his thanks to all participants for the valuable time they spent for the workshop which had resulted in very good ideas, suggestions and recommendation—not only to the project but also for the government of Cambodia..

IV. WORKSHOP RESULTS

Following is a summary of the discussions of the three working groups:

Group I: Institutional Setting

Question:

- Who are involved in
- Coastal Zone Management (functions, roles, and responsibilities)
 - Law Enforcement
 - Strategic Policy and Planning (i.e., lack of coordination and integration)?

Results:

1. Relations between Provincial Authority and Ministries
 - a) Provincial authority shall manage the budget provided by the government.
 - b) Provincial authority cooperates with relevant ministries to prevent illegal activities and protect coastal resources and environment.
 - c) Provincial authority manages administration of the province and encourages cooperation between itself and other relevant departments in the province.
 - d) The provincial authority has more power than the departments in the province.
 - e) There is a lack of good relations between the provincial authority and central governmental ministries.

Issues:

- a) Lack of budget.
- b) Titles to land, salt pans and shrimp farms were issued without consulting with the relevant agencies.

-
- c) Local authorities do not follow established plans (i.e. master plan, etc.).
 - e) Some relevant institutions have been involved or consulted in decision-making at the local level.

Proposed Measures

- a) The national committees should be aware of the problems happening in local communities and help communities to address them.
- b) Relevant institutions should inform and advise provincial authority in decision-making on projects.
- c) Issuing titles or rights to establish and use salt pans should be prohibited.

2. Law Implementation

Issues:

- a) The implementation of the law in local communities is limited.
- b) The relationship among government departments at the provincial level is not good.
- c) Local authorities are not consulting relevant departments in the implementation of their activities.
- d) Some laws are out of date.
- e) Roles and responsibilities overlap between government in as far as the implementation of the the law.
- f) Land titles in the coastal areas were issued without consulting relevant agencies.
- g) Laws and regulations have not been disseminated to local communities in a good way.
- h) Laws are enforced only on people who have no power.
- i) There is a lack of facilities to implement and enforce the law.
- j) Some laws have penalties that are too lenient.
- k) The sanctions included in the law of fisheries are not appropriate.

Proposed Measures:

- a) Proposed documents or projects should be submitted to the relevant technical agencies.

- b) Clarify roles and responsibilities of relevant government agencies in coastal zone management.
- c) Provincial authority should consult with technical agencies before making decisions on investment projects and before issuing any land titles in coastal zones and national parks.
- d) Set up guidelines for local authorities to grant permissions for investment.
- e) Propose additional laws and regulations and to improve the existing laws and regulations.
- f) Set up small-scale industries to attract investment.
- g) Build a hydropower station in Kamchay Mountain that could generate power for four provinces.
- h) Human resources training at the provincial, district and commune level should be encouraged, especially with regard to coastal resource management.
- i) Build a research center for coastal resources.
- j) Set up a master plan for the management and use of coastal lands and natural resources.

Group II: Legal Framework

Question:

- Who are involved in
- Coastal Zone Management (Functions, Roles and Responsibility)
 - Law Enforcement
 - Strategic Policy and Planning (Lack of coordination and integration)?

Results/Issues:

1. Law Implementation

- a) Difficulty in educating of the public about the law.
- b) Lack of good cooperation.
- c) Gaps in the legal system.
- Discrepancies in law enforcement.
- Overlap of roles and responsibilities between agencies.

-
- Lack of human resources to develop the law and legal provisions.

2. Roles and Responsibility

- a) The responsibility of respective (technical) agencies in law enforcement and the management of human resources are not clear.
- b) Lack of human resources.
- c) Overlap of responsibility.
- d) Political instability.
- e) Poverty
- f) The new management system(s) employed by line agencies are not doing well.

2. Proposed measures

- a) Develop a master plan for the four provinces.
- b) Development of law or sub-decrees for marine pollution.
- c) Strengthen and improve the vertical line of management responsibilities of (technical) agencies.
- d) Encourage the implementation of international laws and conventions such as UNCLOS, MARPOL and RAMSAR.
- e) Amend coastal related laws to improve coastal zone management.
- f) Set up an Integrated Committee for Coastal Zone Management at the provincial level.

Group III: Policy and Planning

Question:

- Who are involved in
- Coastal Zone Management (functions, roles, and responsibilities)
 - Law Enforcement
 - Strategic Policy and Planning (i.e., lack of coordination and integration)?

Results/Issues:

1. Policy
 - a) Policies should meet the needs of the people.
 - b) The policies of government agencies should follow national policy and should be appropriate to the tradition of the communities.
 - c) Identify the institutions that are responsible for the management of the coastal zone.
 - d) A clear national policy for the coastal zone should be developed in collaboration with the relevant (technical) agencies.
2. Strategic Planning
 - a) Plans should be made with complete data and information.
 - b) The management of coastal resources should involve local communities.
 - c) Develop a master plan for the coastal zone in collaboration with relevant (technical) agencies.
3. Consequences
 - a) Government's plans do not meet the people's needs.
 - b) Plan implementation is not done well because of faults in the administrative system.
 - c) The cooperation of agencies is limited.
4. Proposed Measures
 - a) Review and improve the existing laws.

V. WORKSHOP EVALUATION

The evaluation was based on direct interviews with participants conducted by the workshop organizers. It assessed the participation, the content and the organization of the workshop.

Participation

Most participants said that the workshop was well attended. The presence of representatives from various institutions, local agencies, non-government organizations and international organizations made the discussions dynamic and successful.

Content

Participants said that the synthesis report (presented before the workshop), the case studies and the short presentation by Ms. Pum Vicheth were important. They learned from these and can share the information from the results of the study results to others. The results of the report were used as basic inputs in the discussions.

The discussion in small groups went very well because they had participants from many relevant agencies. However, some participants thought that the discussions were often about the legal perspectives yet there were not enough lawyers to talk authoritatively about them.

The workshop organizers received many ideas, suggestions and recommendations from the discussions that can serve as inputs to improve the project report.

Organization

Participants said that the workshop agenda was well developed. However, some complained that they needed more time for discussion.

The language used in the workshop was Khmer. It was easy for participants to understand and communicate with each other.

The workshop was well organised. Participants knew each other very well which allowed them to discuss freely. The facilitators were also good at ensuring discussion. Everything went as scheduled.

VI. CONCLUSION

The workshop was thought to be useful. It provided the opportunity for cooperation among government ministries, provincial governments, NGOs, international organizations and other agencies as well as to discuss and work together on crucial issues. The discussions met the objectives of the workshop. The ideas, suggestions and recommendations were made and incorporated into the synthesis report.

Appendix 4

List of Participants and Guests

GROUP I: INSTITUTIONAL SETTING

- | | | |
|-----|---------------------|---------------------------------------------------------|
| 1. | H.E. Hull Lim | Undersecretary of State, MIME |
| 2. | Mr. So Mora | Director General, Ministry of Tourism |
| 3. | H.E. Khiev Muth | Director General, Ministry of Environment |
| 4. | Mr. Teng Huy | Department of Tourism, Sihanoukville |
| 5. | Mr. Koe Neam | Department of Agriculture, Kampot |
| 6. | Mr. Chhun Hin | Department of Industry, Kampot |
| 7. | H.E. Chy Hout | Kep City |
| 8. | H.E. Prum Neakreach | Undersecretary of State, Ministry of Rural Development. |
| 9. | Mr. Nin Vantha | IDRC Project |
| 10. | Mr. Mao Kosal | Facilitator |
| 11. | Mr. Srun Lim Song | Documentor |
| 12. | Van Monyneath | Observer |

GROUP II: LEGAL FRAMEWORK

- | | | |
|-----|--------------------|---------------------------------------------------------------------------|
| 1. | Mr. Ngoun Neov | Director of Planning Department, MIME |
| 2. | H.E. Pou Sovachana | Undersecretary of State, MoT |
| 3. | Mr. Srey Sereywath | Vice Chief Office of Exploitation, General Directorate of Transport |
| 4. | Mr. Sam Chamroeun | Department of Planning, Policy and Legal Affairs, MoE |
| 5. | Mr. Sao Sinnthoun | Director of Environment Department, Koh Kong |
| 6. | Mr. Hem Saroeun | Director of Environment Department, Sihanoukville |
| 7. | Mr. Khorn Vuthyna | Department of Agriculture, Sihanoukville |
| 8. | Mr. Khem Bunheng | Director of Department of Environment Kampot |
| 9. | Mr. Chhurb Kao | Director of Environment Department, Kep City |
| 10. | Mr. Sam Nissay | Danida Project |
| 11. | Mr. Chy Sona | Department National Resources Assistant and Environmental Data Management |
| 12. | Mr. Chan Dara | IDRC Project, Facilitator |
| 13. | Mr. Ouk Siphon | Documentor |
| 14. | Dr. Magnus Torell | Observer |

GROUP III: POLICY AND PLANNING

- | | | |
|-----|--------------------|--------------------------------------------------------|
| 1. | Mr. Prum Sitha | Senior Staff, Fisheries Department |
| 2. | Mr. Ho Vicheth | Director of Technical Department |
| 3. | Mr. Ruos Sam Ear | Director, Department of Planning, Ministry of Tourism. |
| 4. | Mr. Chay Samith | Director, Department B, MoE |
| 5. | Mr. Hout Thong | Director, Department of Agriculture, Koh Kong |
| 6. | Mr. Pum Samphear | Transport Department Sihanoukville |
| 7. | H.E. Soun Sarith | Governor, Kampot |
| 8. | Mr. Tep Yuthy | Tourism Department, Kep City |
| 9. | Mr. Kim Nong | IDRC Project |
| 10. | Mr. Mop Kim | Agriculture Department, Kep City |
| 11. | Mr. Heng Neathmony | |
| 12. | Mr. Hem Van Yuth | |
| 13. | H.E. Ing Hoc Lim | Deputy Director General, MoE |
| 14. | Mr. Sin Chhay | Facilitator |
| 15. | Mr. Ngoun Narin | Documentor |
| 16. | Mr. Toby Carson | Observer |

NGOs AND INTERNATIONAL ORGANIZATIONS

- | | | |
|----|--------------------------|--------------------------------------------|
| 1. | Mr. Tim Colyrove | USAID |
| 2. | Meussa Marschico | IDRC |
| 3. | Makiko Omura | UNDP |
| 4. | Erwin Nacuray | Natural Resources Specialist, AFSC |
| 5. | Dr. Somsak Boromthanasat | Corine Institute, Thailand |
| 6. | Mr. Adrew Mcnaughton | Senior Consultant, Program Management |
| 7. | Mr. Jyrki Wartiovaara | Environment Specialist, ADB |
| 8. | Mr. Joost Vander Veen | Executive Director of W.I. of Asia Pacific |

TRANSLATORS

- | | | |
|----|---------------------|-----|
| 1. | Mr. Lay Khim | MoE |
| 2. | Mr. Ken Serey Rotha | MoE |
| 3. | Mr. Sam Nissay | MoE |

CAMBODIA WORKING GROUP

Ms. Pum Vicheth	Ministry of Environment
Mr. Toby Carson	IDRC/Wetlands International
Mr. Ngoun Narin	Ministry of Industry, Mines and Energy
Mr. Sin Chhay	Ministry of Public Works and Transport
Mr. Srun Lim Song	Department of Fisheries (Ministry of Agriculture, Forestry and Fisheries)
Mr. Chan Dara	Ministry of Environment
Mr. Ouk Siphon	Ministry of Tourism
Mr. Vann Monyneath	Coastal Coordinating Unit (Ministry of Environment)
Mr. Mao Kosal	IUCN/Wetlands International
Mr. Bernard O'Callaghan	Wetlands International
Dr. Magnus Torell	ICLARM

Published working paper:

PRIAP-ICLARM Working Paper Series 1
Management of Fisheries, Coastal Resources and
Coastal Environment in Thailand: Institutional, Legal
and Policy Perspectives
*Ayut Nissapa, Awa Masae, Vichot Jungrungrot,
and Somsak Boromthanasat*

PRIAP-ICLARM Working Paper Series 2
Coastal and Marine Resources Management in
Indonesia: Legal and Institutional Aspects
Tommy Purwaka and Sunoto

Forthcoming working papers:

Management of Fisheries, Coastal Resources and the
Coastal Environment in Bangladesh: Legal and
Institutional Perspectives
Ehsanul Habib

Management of Fisheries, Coastal Resources and the
Coastal Environment in the Philippines: Policy, Legal
and Institutional Framework
Antonio G.M. La Viña