

Institutional and Policy Issues in the Management of Fisheries and Coastal Resources in Cambodia

Pum Vicheth

Ministry of Environment, Cambodia

Toby Carson

IDRC-Wetlands International, Cambodia

Ngoun Narin

Ministry of Industry Mines and Energy, Cambodia

Sin Chhay

Ministry of Public Works and Transportation, Cambodia

Srun Lim Song

Ministry of Agriculture, Cambodia

Chan Dara

Ministry of Environment, Cambodia

Ouk Siphon

Ministry of Tourism, Cambodia

Vann Monyneath

Ministry of Environment, Cambodia

Mao Kosal

IUCN-Wetlands International, Cambodia

Bernard O'Callaghan

Wetlands International, Cambodia

Magnus Torell

ICLARM – The World Fish Center, Malaysia

ABSTRACT

This chapter raised several important issues on the legal, institutional and policy frameworks coastal resources 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.

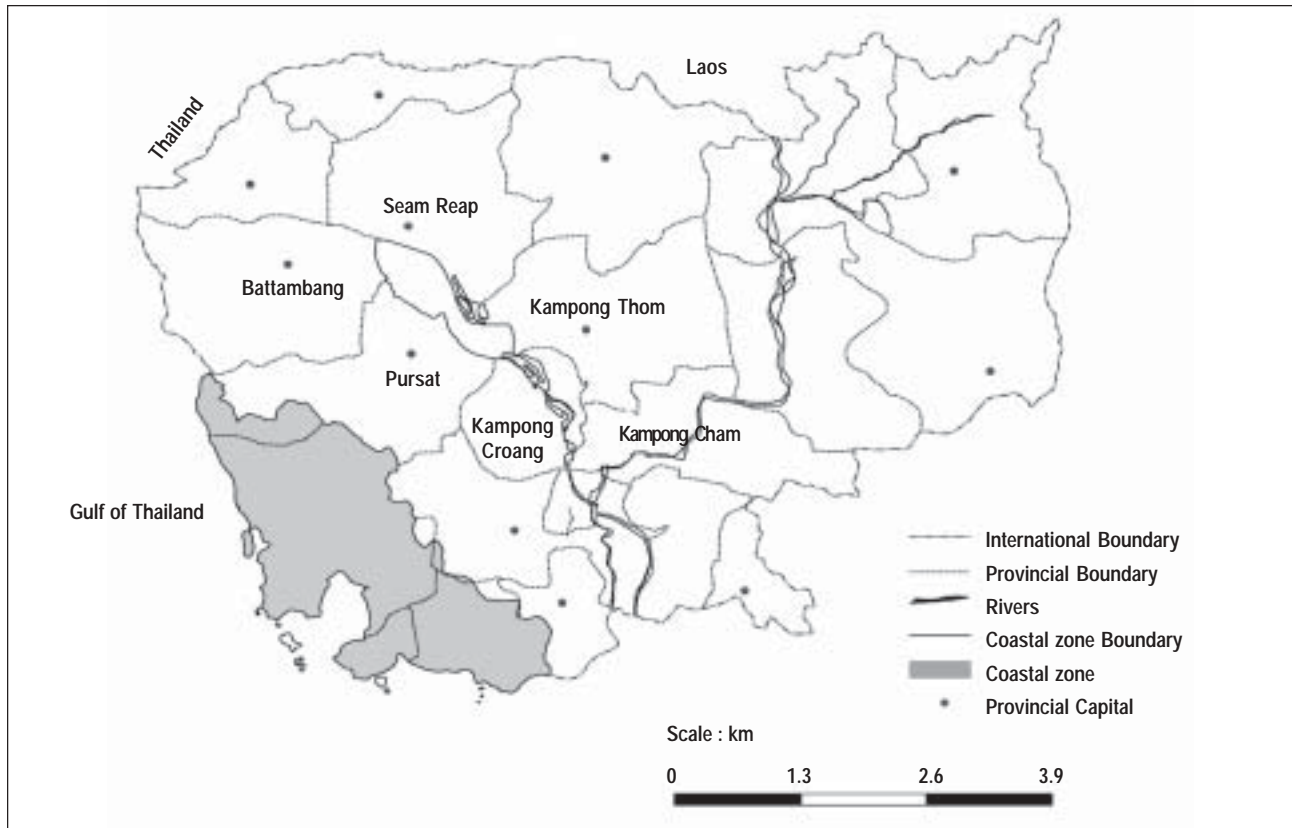
BACKGROUND

Geographical Characteristics

Cambodia covers 181 035 km² and shares its 2 428 km land border with Thailand on the north-west, Lao PDR 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 2.1). The coastal zone of Cambodia contains extensive forests and numerous bays and beaches with several offshore islands. The largest town on the coast is Sihanoukville, which has deep seaport facilities and is considered one of the economic

Figure 2.1 Administrative Map of Cambodia.



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 of 35°C in April and a minimum 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 is rocky and bordered by the rugged and largely uninhabited Cardamom-Elphant Mountains. The northern coast is protected by hard rock, but the southern coastline is eroded by strong waves during the southwest monsoon. The streams of many valleys are salty. Storms drive surges of saline water into coastal paddies increasing soil salinity in some areas. Mud irrigation is practiced where muddy floodwater can be directed onto the rice fields. The major coastline attributes are sandy shorelines, estuaries, lagoons and reefs. The coastline is characterized by waves, currents, river flows and tides depositing sediments such as sand, gold and clay. Cambodia's coastline is currently being subjected to various stresses including mangrove deforestation and sand mining. The coastal

areas lack freshwater, especially during the dry season. Accurate information regarding the ground water resource situation in these areas is lacking.

Economic Patterns

Civil disturbance 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, 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 the mid-1990s. Cambodia made remarkable progress in its economic growth from 1.2% GDP in 1990 to 7.6% in 1995, due largely to the strong performance of the industrial sector (growing at an average of 11% a year), trade and transport (each growing at an average of 10% a year) and the service sector (growing at an average of 8% a year). Economic growth continued to be robust in early 1996 reaching 6.5%. The slight reduction in GDP growth for 1996 was due largely to severe flooding that occurred

in September and October. The flooding caused internal displacement, damaged infrastructure and reduced crop output. More than 70% of investments come from the private sector including about 37% as direct foreign investment.

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 infrastructures. 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 multiplier effect of increased public investment and the rehabilitation of transport and communications resulted in increased contributions to growth. 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. The positive effects of efficient public utilities and social infrastructure on service and industry emphasize the need to maintain public investment

in core areas.

Employment

In 1997, the active labor force was estimated at 4.5 million, 75% of which are employed in agriculture (farming, forestry and fishing), while 20.5% are employed in the service sector (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. About 135 000 jobs have to be created each year to accommodate new entrants to the labor market, including those from the planned reductions of the armed services administration reform. The main features of the labor market are summarized in Table 2.1.

Population

In 1998, Cambodia's population was estimated at 11 million, with an annual growth rate of approximately 2.8%. Khmer constituted about 90% of the population while ethnic Chinese, Cham, Vietnamese and upland people make up the rest. About 80% of the population lived in rural areas. It is estimated that some 250 000 Cambodians have settled overseas since 1970, wherein around 175 000 are in the USA and around 40 000 are in France, while the rest are in Canada, Australia and other countries.

Table 2.1 Employment Characteristics (Ministry of Planning 1997).

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

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 professionals such as engineers, masters and doctorate degree holders.

The average population density of Cambodia is 61 persons per km². Coastal areas are two to three times less populated than the average, and in Koh Kong Province, there are only nine persons per km². Figure 2.2 shows the population density in the coastal zone of Cambodia.

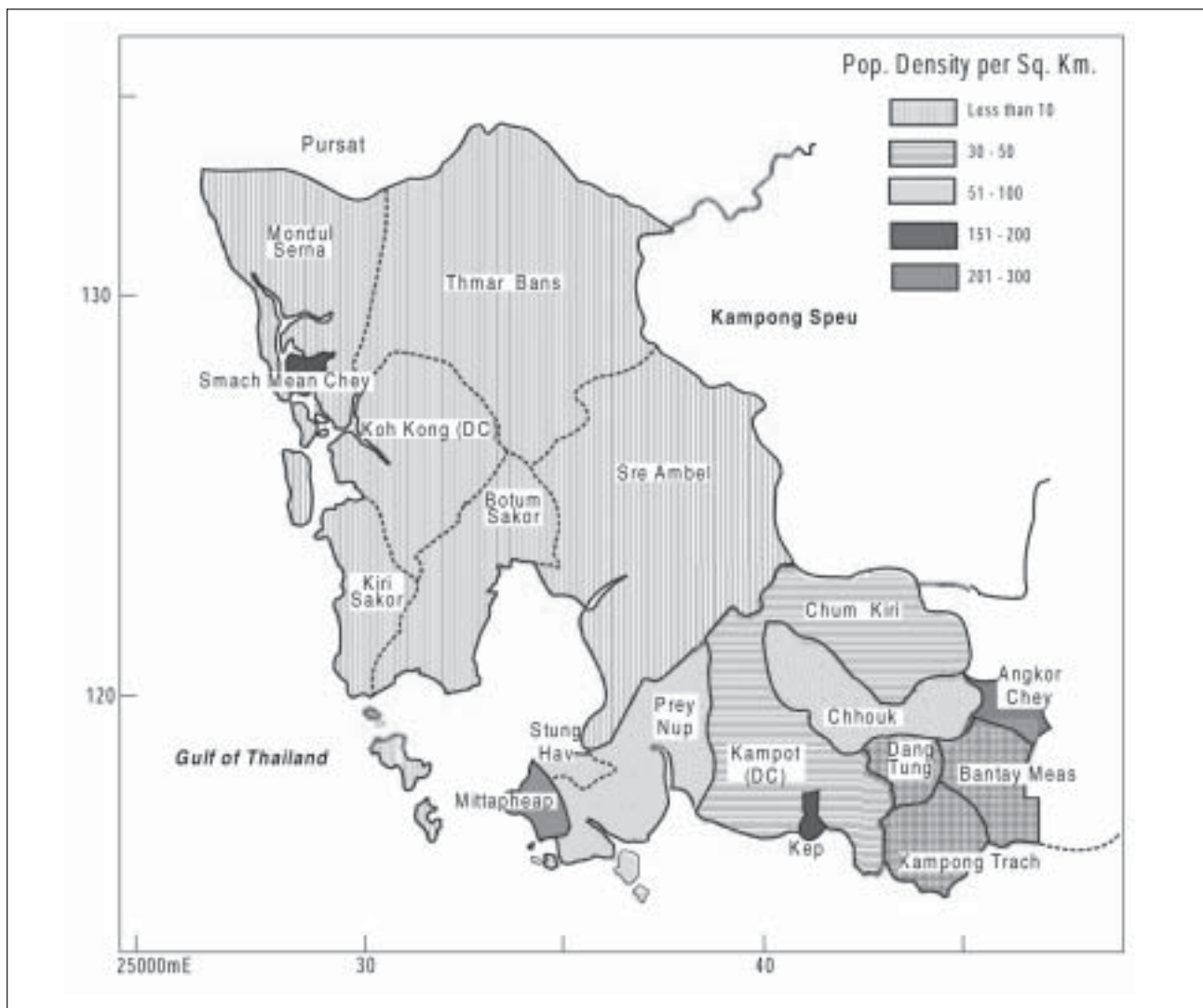
The official language is Khmer, spoken by roughly 90% of the population. Until the 1970s, French remained the second language until the arrival of English as a language widely taught in schools. The main religion is Buddhism.

RESOURCE STATUS, BENEFITS AND THREATS

Fishery Resources

Results of marine fisheries research in Cambodia's territorial seas from 1983-1986 conducted by Russian scientists show that there were 435 fish species from 97 families in offshore waters (from 20 m deep up to the outer border) with a total stock of 50 000 tons per year. The same source identified seven shrimp species, one squid species

Figure 2.2 Population Density in the Coastal Zone of Cambodia (1996-1997).



and two cuttlefish species. The latter stock was estimated at about 1 300 tons per year.

Previous studies on the species composition of inshore catches found 109 finfish species. Twenty percent of these were not identified in the research done in 1983-1986.

Research indicated that two major groups predominated, scad and mackerel, with more than 10% of the total fish stock. In the 1980s, Dr. Veravat Hongskul studied the spawning movements and seasons of migratory species in the Gulf of Thailand. He also studied the importance of these two groups of fish and indicated migratory patterns and spawning areas in the Gulf of Thailand. Knowledge on these patterns is known to local fishers in the region.

Mackerel and scad purse seining was introduced to Cambodia in around 1958. This was later followed by the introduction of trawls. Operation of purse seines at that time was mostly done inshore and vessels had an engine capacity of less than 50 hp. The total number of fishing vessels recorded before 1975 (purse seine, trawler, long line and nylon gill nets) was about a few hundred units. The rest of the fishing vessels were small non-motorized canoe using traditional fishing techniques such as fishing weirs, stack traps, beach seines and so on. Shrimp trawling was introduced after the 1970s.

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 seines were reported to have been used at the same time. Fishing was allowed only in Sihanoukville Bay and selected fisher groups settled in two areas—in Thmar Sar/Chamlang Kor, Koh Kong Province and in Tomnop Rolork of Sihanoukville. Fish catches were locally consumed and used for the production of 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 trawlers and monofilament gill nets) developed rapidly from 1981 due to the boom in the shrimp market. This subsequently led to a dramatic decrease in almost all purse seine fishing and the traditional fishing operations, such as those using fishing weir and stake trap. The target species for the Koh Kong fisheries are shrimp, crab, squid, tuna, Spanish mackerel and rock fish, which were in demand in the Thai market. Surpluses of scad, mackerel and other low-value fish were also exported to Thailand. In the last decade, depletion of the shrimp stock has led to a gradual change in the methods used for catching.

Shrimp trawlers have ceased operation, while shrimp gill-netters have increased. Shrimp production from gill nets, which has recorded a yield of higher than 6 000 tons per year in the 1990s, will decrease if this situation continues. Tables 2.2 and 2.3 show the current fishing and catch efforts within the area of Koh Kong Province. Table 2.4 shows an estimate of fish catch production. The estimated or recorded catches by shrimp gill net and crab gill net would probably be at least double if the amount not registered for tax purposes is considered.

The marine fishery production in Cambodia is officially estimated at 30 000 tons annually, which is about 30% of the total estimated fish production. The total estimated production (including freshwater fish) is around 110 000 tons annually. According to the National Environment Action Plan (Ministry of Environment 1998), the actual catch may be higher because the figures as shown in Table 2.4 do not include the harvests of foreign fishing fleets that land their catch out of Cambodia, illegal commercial boats and subsistence or family fishing. Some fishers do not register their catches to avoid tax.

Aquaculture

Cultivating shrimp is an important aquaculture activity in Koh Kong Province. Other cultured species such as oysters and green mussels are not as significant in terms of production and role in the economy. The main shrimp species is *Penaeus monodon*. Pond yields are reported to be up to 7-8 tons per ha for the new farms, and profit from these farms are attracting further investment. However, the shrimp industry in Koh Kong is experiencing

Table 2.2 Number of Fishing Effort of Koh Kong Province (Koh Kong Provincial Fishery Office 1997).

Fishing Gear	Targeted Resource	Capacity	Number	Fishing Ground
Purse seines	Mackerels, scad	-<50Hp	8	
	Anchovys, shrimp	->50Hp	15	Inshore
		-<50Hp	33	Inshore
		->50Hp	257	Inshore/offshore
Drift gill net	Spanish mackerel	-<5000m	28	Inshore/offshore
Set gill net	Mullet	-<5000m	141	Inshore/offshore
	Seabass		18	
	Mackerel		259	
	Crab		208	
	Shrimp		262	
Trap	Crab	-non motorized canoe	87	Inshore
	Squid	-<50Hp	80	
Stake trap	Fish	->50Hp	2	
Long liner	Shark/stingray	-<50Hp	42	Inshore/offshore/coral reef area
	Snapper/grouper		10	
Engine boat push net	Fish/shrimp	-<50Hp	34	Inshore
Portable push net		-non motorized canoe	20	Inshore
Beach seine	Fish/squid	-non motorized canoe	6	Inshore

Table 2.3 Catch-Effort (tons) (Koh Kong Provincial Fishery Office 1997).

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

serious problems such as shrimp disease and pollution of culture areas. The shrimp culture generates effluents that are discharged into the adjacent areas and the sea. This creates damage to other ecosystems and subsequently disrupts economic activities.

Surveys of shrimp farming management conducted by the Network of Aquaculture Centers in Asia and the Pacific (NACA) in the early 1995 concluded that intensive shrimp farms had an average annual production of 7 545 kg per ha, valued at 42 million Riel. Although intensive shrimp farms generated a high profit, shrimp farmers faced significant environmental problems, particularly those farms located in acid sulphate soils and/or acidic sandy soils. An estimated 14.5 million Riel per year is lost due to disease. Total environment related losses are estimated at 28.6 million Riel 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 took involves the issuance of a moratorium on the licensing of additional shrimp farms.

Mangrove Forests

Based on Landsat data in 1992, the total mangrove area of Cambodia was 83 700 ha. Seventy-five percent of these mangroves can be found in Koh Kong, while 16% 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 are reported to be some of the most pristine mangrove forests left in the

region. There are other estuaries with mangrove flora such as Koh Por, Koh Yor, Dong Tong, Anduong Tuk and Sre Ambel, but they cover small areas.

Fishery laws promulgated in 1987 considered the exploitation of mangroves illegal for any purpose except by special license 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, resulting in the serious degradation of this resource. Another cause of mangrove degradation is the establishment of intensive shrimp culture in mangrove areas.

Coral Reefs

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

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 the democratic election was held in May 1993. Since its earliest days, Cambodia has always relied on agriculture. Its importance in the economy is exemplified by the high regard the Khmer culture holds for the virtues of the farmer — initiative, hard work and self-sufficiency. However, agricultural production figures

Table 2.4 Fish Production (tons) (DoF 1997).

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

indicate that this reverence for the farmer and his trade may be misplaced. Farmers have never been self-sufficient since they have always been dependent to a large extent on factors outside their control such as the weather, agricultural facilities, fertilizers and the prices they receive for their products. Agricultural infrastructure is not efficiently developed. The yield of paddy cultivation is as low as 1 ton per ha. Rubber production remains lower than 1 ton per ha.

Before the Khmer Rouge in the 1960s, industry in Cambodia was divided into two sectors. There was a flourishing private sector and a public sector experiencing problems due to high dependence 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. The cement was of good quality. A urea factory was planned to be erected near the petroleum refinery in Sihanoukville, but it was halted by the events of March 1970. A small fertilizer phosphate-milling factory was erected near one of two small phosphate deposits at Touk Meas, Kampot Province. The factory was inefficient due to poor management.

Another sector in the coastal zone having great potential was agricultural raw materials and agro-industries. The predominant feature in the 1960s was the small and medium scale rice mills. They produced rice of good quality and they were also able to use the by-products. Rice was exported from those mills. Many cottage industries produced food paste and fish sauce as well as traditional salted meat, vegetables and fish. In 1968, the Khmer Distillery Company erected a modern brewery at Sihanoukville with a capacity of 1 000 000 hectoliters of beer of excellent quality. Most 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 late 1993, foreign firms began returning to 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 licenses. The government established a 900 ha Industrial Zone and a 260 ha Export Processing Zone in Sihanoukville (MIME 1994). 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 2.5).

In 1994, foreign trading companies registered with the Ministry of Commerce accounted for 1 200 establishments along with a great number of Foreign Direct Investments (FDI) in the industrial sector were registered with the MIME. At present, Cambodia has a large pool of cheap labor. There is great potential for increases in agricultural primary production as well as in the development of mineral deposits scattered all over Cambodia.

LOCAL USE AND MANAGEMENT

Access to Coastal Resources

Cambodia and other Southeast Asian countries are predominantly dependent on coastal resources. It is estimated that 30-50% of people in the coastal areas are involved in fishing. Other coastal residents are engaged in logging, trading, farming, charcoal production and harvesting non-timber forest products. Mangrove swamps serve as good habitats for fish and provide other economic benefits. Although the mangrove areas were designated as fishery domains, communities still continue to exploit the mangrove resources with little law enforcement to stop 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 paid a small amount to the local community members early in 1996 through an arrangement assisted by the

Table 2.5 List of Factories in Coastal Provinces (Planning Department, MIME 1997).

Number	Name	Products	Location	Status	Number of Employees
1	Food, breweries and cigarette				
a	Sun Wah Fisheries Co. Ltd	Frozen shrimps	Sihanoukville	Working	780
b	Angkor Beer Factory (Cambrew)	Beer and soft drink, Angkor and Pepsi Cola	Sihanoukville	Working	100
2	Textile, apparel and leather industries				
a	Rao Yuan Garment Corp.	Garments	Sihanoukville	Working	360
3	Manufacture of chemicals, petroleum, coal, rubber and plastic products				
a	Phosphate Fertilizer Factory	Phosphate fertilizer	Touk Meas, Kampot	Not Working	160
4	Manufacture of non-metallic mineral products, except petroleum and coal				
a	Naga Cement Factory	Cement	Chakrey Ting, Kampot	Working	319
b	Thai Bun Rong	Cement	Phnom Laang, Kampot	Under Construction	
c	Golden Dauphin	Cement	Touk Meas, Kampot	Under Construction	304

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.

Forms of Local Use

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

Fishing

Fishing operations along the coastline are generally confined to one trip per day as traditionally practiced among local fishers and to some extent due to types of fishing boats, equipment, landing ports and availability of markets. 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 in Cambodia. Less than 20% of the total marine products are consumed locally. Fishers used to sell their catches to private middlemen, processors and retailers but the price they obtain is often low.

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

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

The increase of motorized push netters, a prohibited fishing gear, has contributed to the increased exploitation of fishery resources in the coastal areas. 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.

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 a high volume of small fish.

Medicinal Plants

Coastal people have traditionally used mangroves and its associated fauna for medicine and other purposes. In Koh Kong, a mangrove species, *Excoecaria 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.

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 per 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 diseases and pollution of culture areas caused by indiscriminate discharge of pond effluent. Resource use conflicts, particularly with farms located in or near mangrove areas, have also become a concern in the province.

In Kampot, 1 438.8 ha is being proposed for 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 saltpans. Along the whole Kampot coastline, 1 079 ha has been selected and designated as fishery reserves. Certain mangrove areas are also preserved to protect the forests and the aquatic resources. The economic interest in salt is a threat, and there is a danger that saltpan development will encroach into these reserves.

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 reefs 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. However, 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.

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 exploitation, 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.

Local Management Experiences

Initiative on Coastal Resources Management

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

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. Fishers, 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, cooperatives, or other interest groups so that they can better manage and protect their coastal resources.

Current Mangrove Management

Following the 1993 general election held under the auspices of the United Nations Transitional Authority of Cambodia (UNTAC), the country's economy opened up. As a result, there is additional pressure on the coastal resources. The capacity to manage and control the development has not kept pace with increased exploitation.

In Koh Kong Province, charcoal production was uncontrolled. The government intervened and dismantled the charcoal kilns in the mangrove areas. In 1996, the MoE's DNCP took action and destroyed the charcoal kilns built in the Ream National Park. Effective prohibition of charcoal production would reduce the threat to continued destruction of mangroves. However, the reality is that the destruction will continue as many smaller kilns are still operating inside the mangrove areas.

Impact of Current Fishing Practices

The fish catch 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 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.

Prior to the 1970s, the mangrove areas provided good habitats for fish and other aquatic animals. There were plenty of resources and the coastal people did not have to invest large sums for fishing gear. Exploitation of mangroves for firewood and charcoal increased after 1979 and intensified in the 1990s.

Development of Salt pans

In Kampot Province, saltpan expansion since 1998 has caused the destruction of mangroves, loss of biodiversity, and reduced subsistence benefits for local communities. Saltpan expansion also reduces the natural value of coastal areas, which affects tourism as well.

The fishery resources are the main source of long-term income and livelihood for the people, especially with regards to the subsistence of poor families. The destruction of mangroves in these areas will affect the people directly with regard to fish availability and the domestic use of firewood. Apart from what has been mentioned in relation to the resources within the mangroves, the destruction of mangroves will also cause erosion and sedimentation in coastal areas and will reduce the natural ability of the ecosystem to protect itself against strong winds.

Religion and Traditional Belief

Ethnicity and Religion

Buddhism is the state religion of Cambodia.

About 90% of Cambodians are Buddhists. The remaining population is either Muslim or Christian. The majority of people in Cambodia's coastal provinces, Koh Kong and Kampong Som, are:

Khmer	90.0% in Koh Kong and 89.8% in Kampong Som;
Cham	5.6% in Koh Kong and 6.1% in Kampong Som;
Vietnamese	1.8% in Koh Kong and 1.8% in Kampong Som;
Chinese	0.2% in Koh Kong and 2.2% in Kampong Som;
Thai	2.3% in Koh Kong and no data for Kampong Som; and
Soach	(no data for 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 (Ministry of Environment et al. 1996). Cham and Soach are Muslims.

Muslim coastal communities are often 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 Vietnamese are almost 100% dependent on capture fisheries. Thais and Malaysians are active in cage aquaculture and the Chinese (Chinese-Khmer) are fish collectors and/or middlemen. The ethnic Khmer are mainly involved in crop cultivation. An emerging concern is that if fish production drops, fishing dependent groups like the Soach will have to turn to something else such as logging.

Traditional Belief

There is a continuing belief by coastal villagers in the "ocean spirit". Many aspects of this tradition are concerned with good or bad luck. Fishers do not want to catch dolphins accidentally or intentionally as they believe this will bring them bad luck. If they happen to catch one, they release the dolphin back into the sea with the hope their good luck will return. It is common to invite Buddhist monks to perform ceremonies to expel bad luck. Fishers in coastal areas respect the Grand Lady known as "*Yeay*

Mao". It is believed that her hands hold the entire Gulf of Thailand and the destiny of those fishing there is in her control. Usually prayers to *Yeay Mao* are offered when fishers are threatened at sea.

Local Initiatives to Combat the Degradation of Mangroves and Other Coastal Resources

The coastal areas have not been defined or delimited in any government regulation. The wetlands and watershed areas of the coastal provinces should be set aside when boundaries or reserves are established.

A major form of degradation of coastal resources has been the clearcutting of mangroves. Although the Fisheries Law states that the mangroves should be managed based on their being a fishery domain, people are encouraged to clear mangroves to make way for shrimp farms and salt pans because 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 (Ministry of Environment et al. 1996).

Since 1996, one villager from Lork Village, Kampong Trach of Kampot Province has replanted a half-hectare mangrove. So far, no one from the commune has continued this initiative as they find it difficult to protect the plantation. However, there are positive signs. 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). Should the plan proceed, it would be a step towards improved interaction between villagers and government institutions in resource management.

To reduce the threats to mangroves, a series of five workshops was conducted by APHEDA for 130 participants from 26 villages in Kampot Province. They were shown 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 this coastal resource.

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

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

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 non-government organizations (NGOs) that are also key players in managing this area.

Figure 2.3 Organizational Structure of the Fisheries Department.

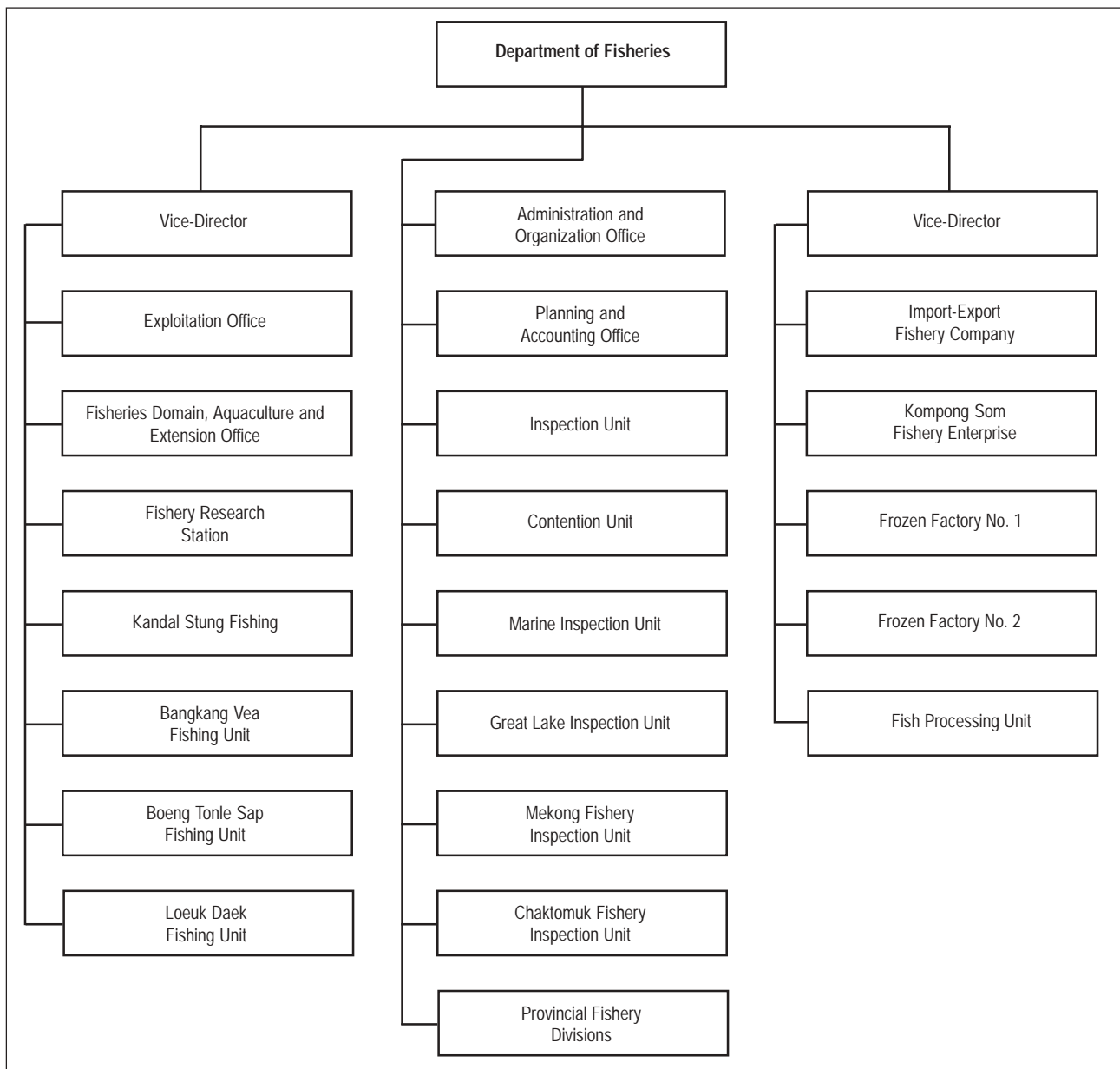
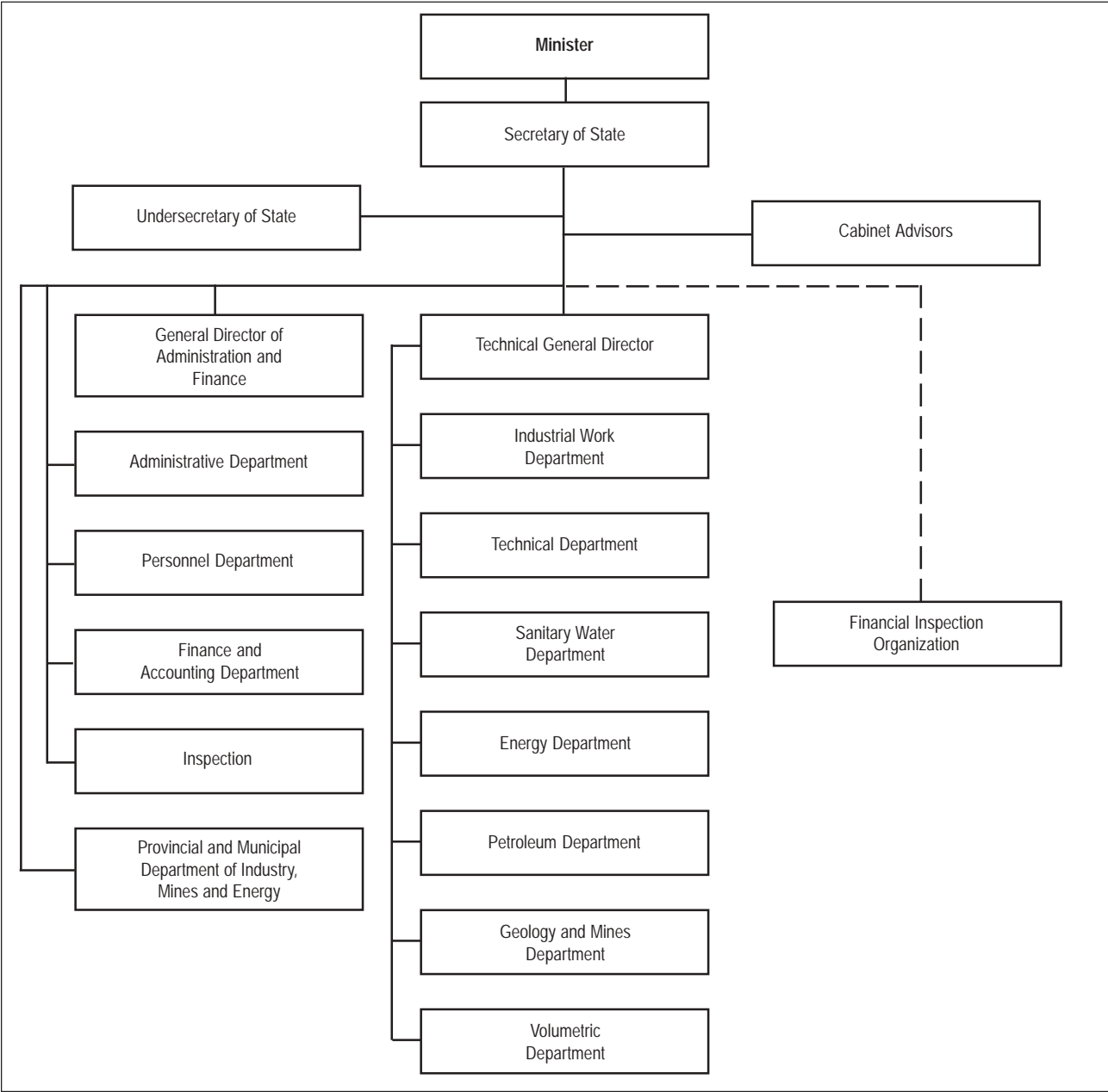


Figure 2.4 Organizational Structure of the Ministry of Industry, Mines and Energy.



Line Ministries

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 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 2.3) is mandated to manage activities related to water, fisheries, flooded forests, mangroves, swamps and industrial fisheries and is responsible for the management and use of Cambodia’s inland forest resources and the protection of wildlife.

Ministry of Industry, Mines and Energy

The Royal Government of Cambodia established the MIME in accordance with the Constitution. The MIME acts as one of the principal catalysts to create a conducive atmosphere for 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 (Figure 2.4). 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:

- To promote the economy and generate employment opportunities through the development of industrial activities, especially in the Sihanoukville region;
- 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.

Ministry of Tourism

The MoT was established by a Royal Decree (1996) as an administrative organization (Figure 2.5) placed under the authority of the Royal Government of Cambodia assigned to direct and encourage the tourism industry.

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

- To work with other ministries to preserve the coastal zone;
- To develop accessible infrastructure in 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.

Ministry of Public Works and Transport

The MPWT is responsible for the development and implementation of policies and legislation for

the transportation sector throughout the country. The MPWT (Figure 2.6) is also responsible for all transport infrastructures in the country including roads, railways, airports, ports and waterways as well as public buildings.

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 2.7). This Ministry should be consulted in the development of community-based projects.

Ministry of Environment

The MoE 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. The planning and management of the protected area system in the coastal zone falls under its jurisdiction. The management structure of the Ministry is divided into central and local administrations (Figure 2.8).

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

- To develop an environmental policy based on sustainable development and to implement the National and Regional Environmental Action Plans in cooperation with other ministries;
- To prepare and implement 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 for the system;
- To prepare inventories on the source, nature

and amount of pollutants and to take measures to prevent, reduce and control environmental pollution;

- To prepare inspection procedures as mentioned in Article 9 of the Law on Environmental Protection and Natural Resources Management;
- To prepare and conduct 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 the environment is protected in the Kingdom.

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 strengthen law enforcement through coordination. The provincial authorities are divided into districts, which are then divided into communes and villages (Figure 2.9).

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

- To ensure public order, security and safety in the province;

Figure 2.5 Organizational Structure of the Ministry of Tourism.

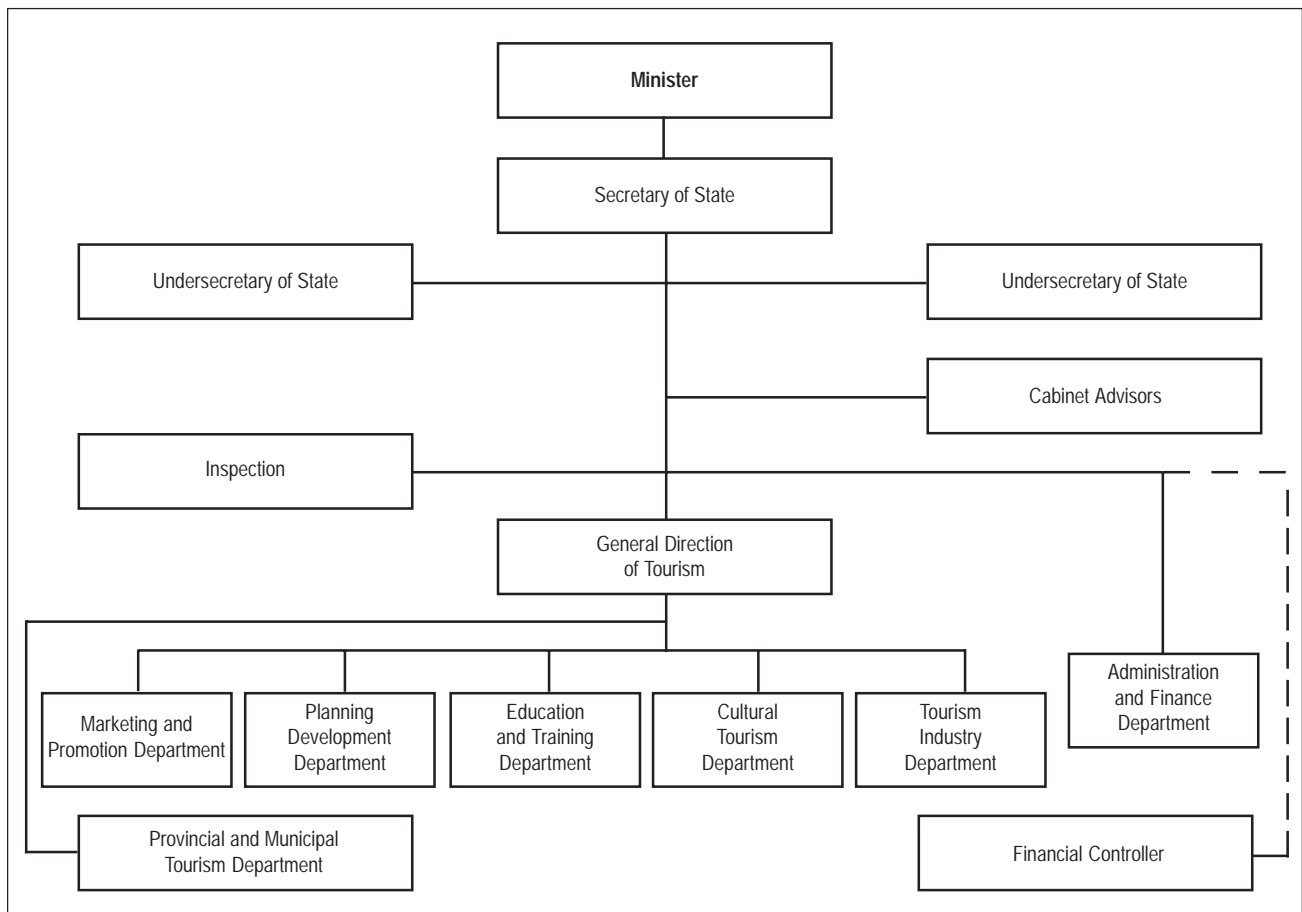
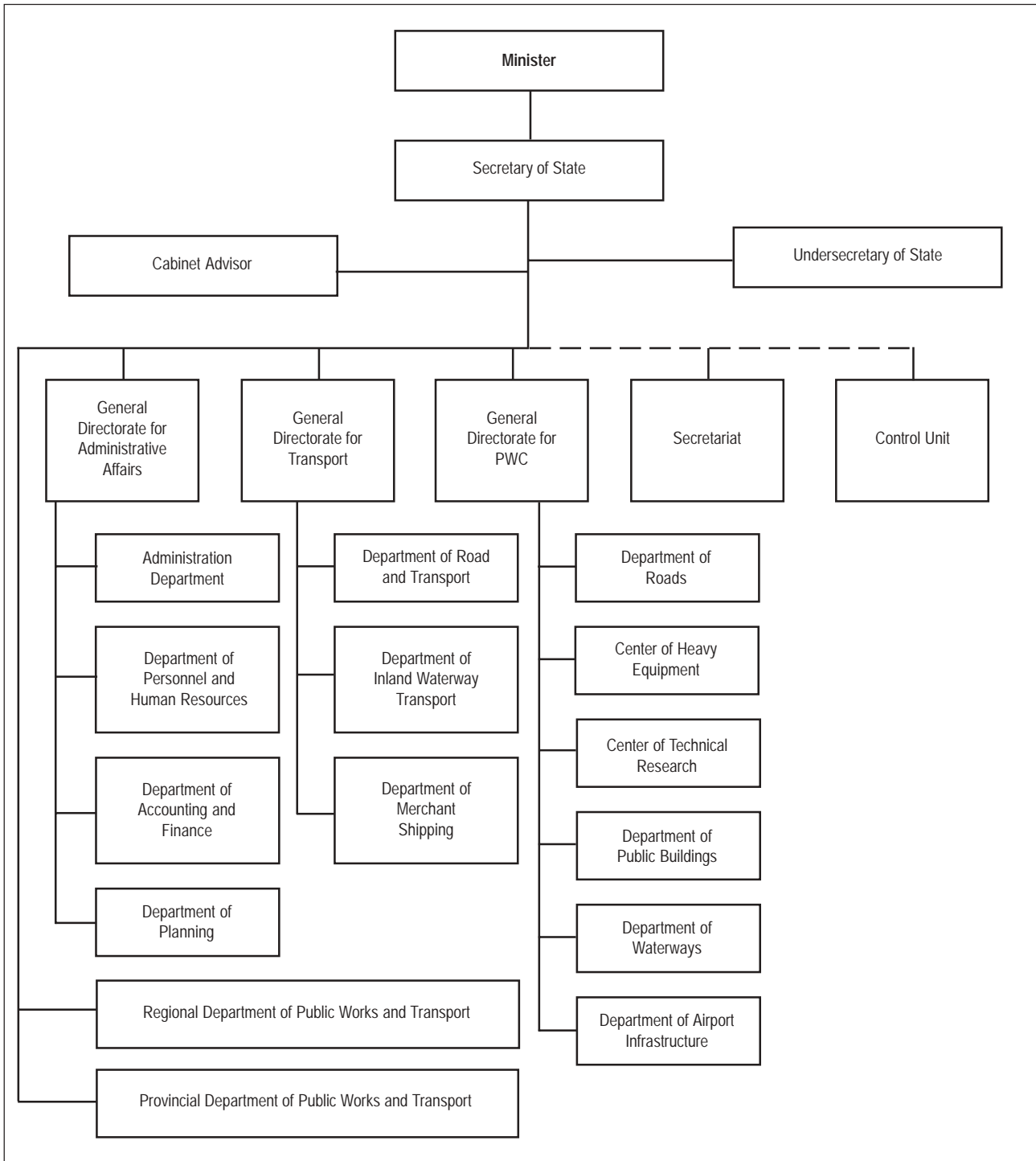
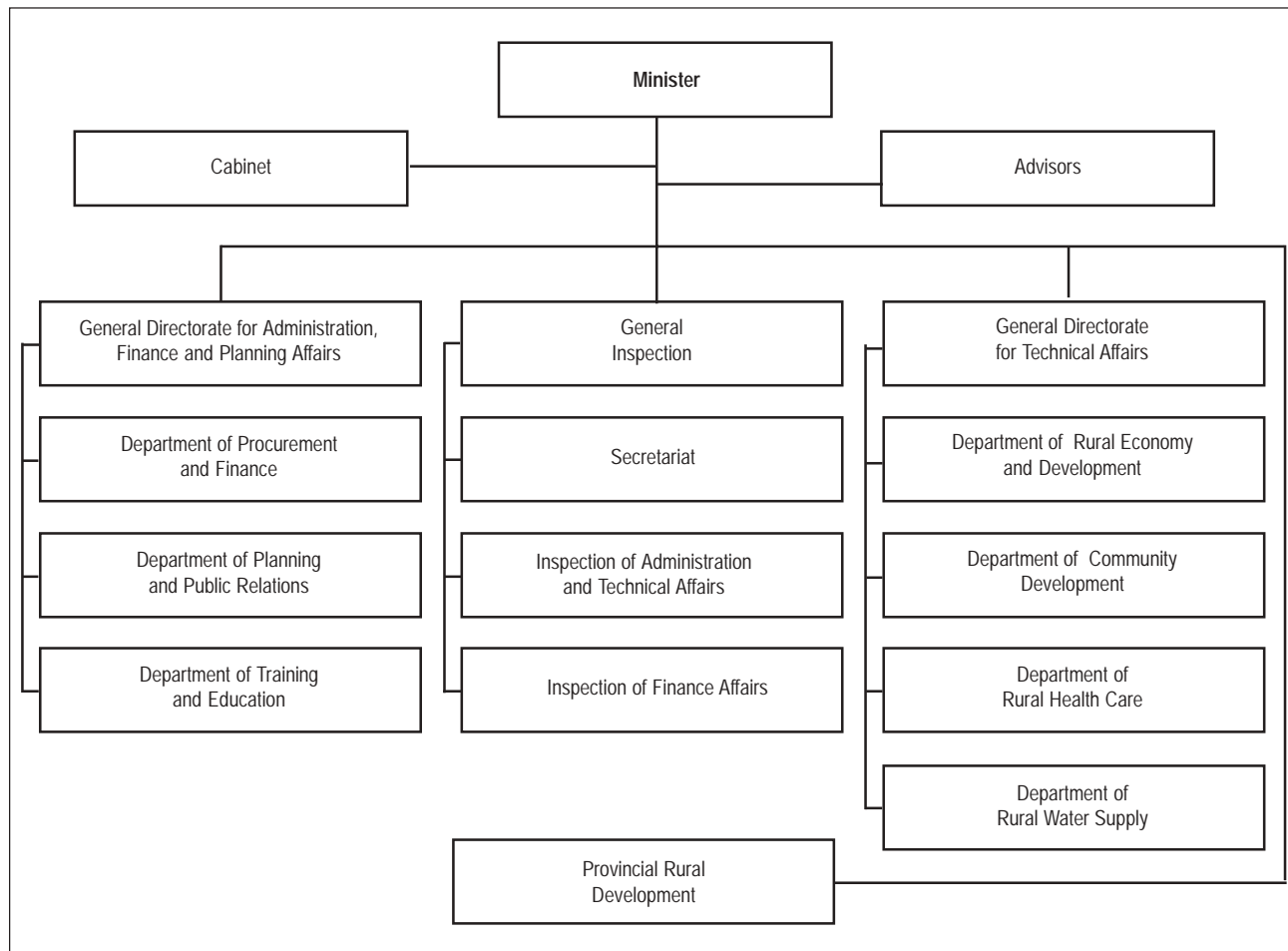


Figure 2.6 Organizational Structure of the Ministry of Public Works and Transport.



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

Figure 2.7 Organizational Structure of the Ministry of Rural Development.



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).

Committees

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

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 (CCU) based at the MoE serving as its secretariat. The committee membership includes:

- The Minister of Environment (Chair);
- Undersecretaries of State from: Ministry of Agriculture, Fisheries and Forestry (Vice Chair), Ministry of Tourism, Ministry of Industry, Mines and Energy, Ministry of Public Works and Transport, and Ministry of Rural Development;
- Governors of the coastal provinces;
- Representative from the Cambodian Development Council;
- Representative from the Danish Ministry of Foreign Affairs (Danida);
- Observers from coastal projects; and

- Representatives from NGOs and international organizations.

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 national development priorities. The committee also provides technical advisers in preparing proposals for coastal projects. For instance, the proposal for 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 MoE, there is still a need for office

Figure 2.8 Organizational Structure of the Ministry of Environment.

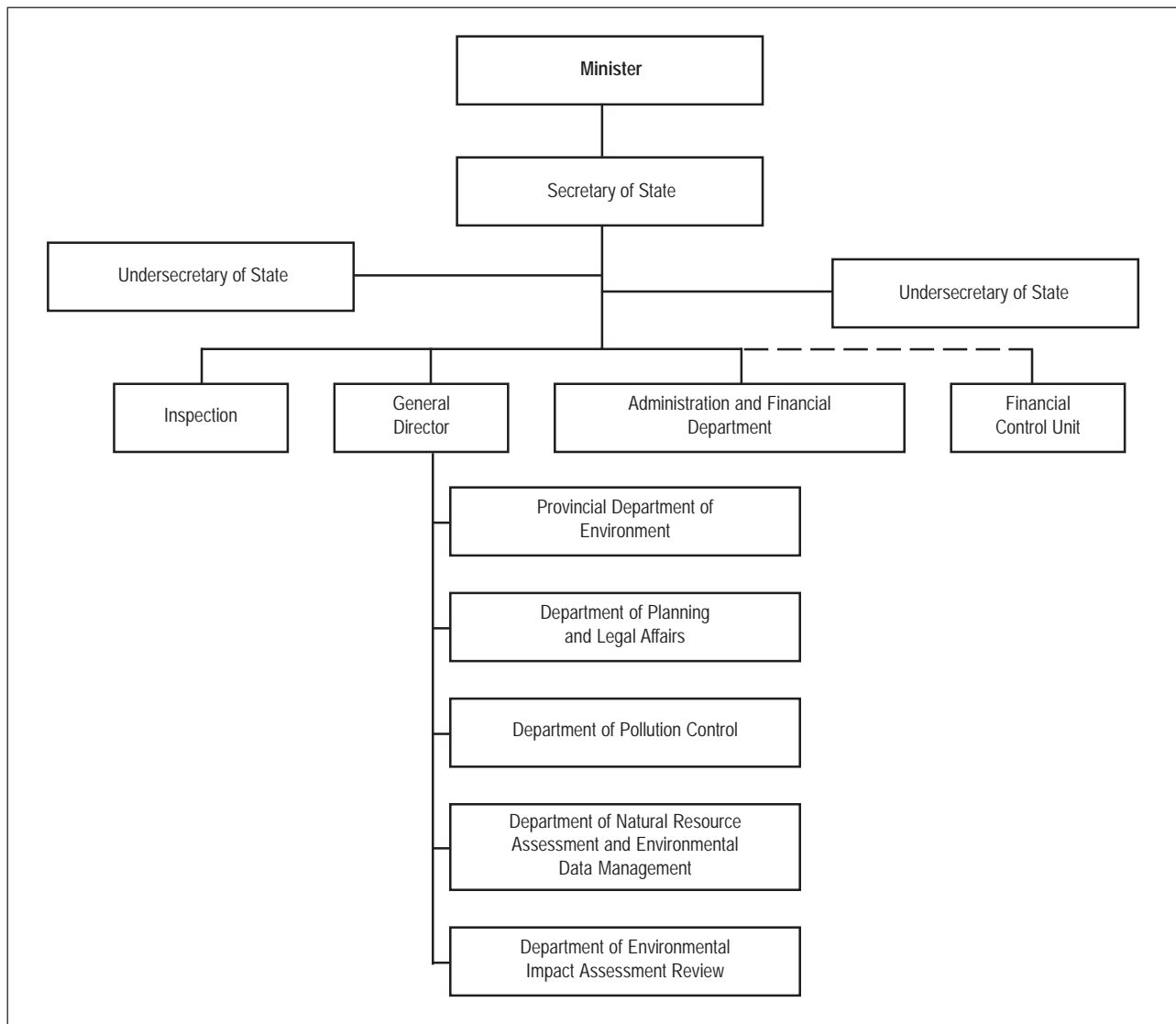
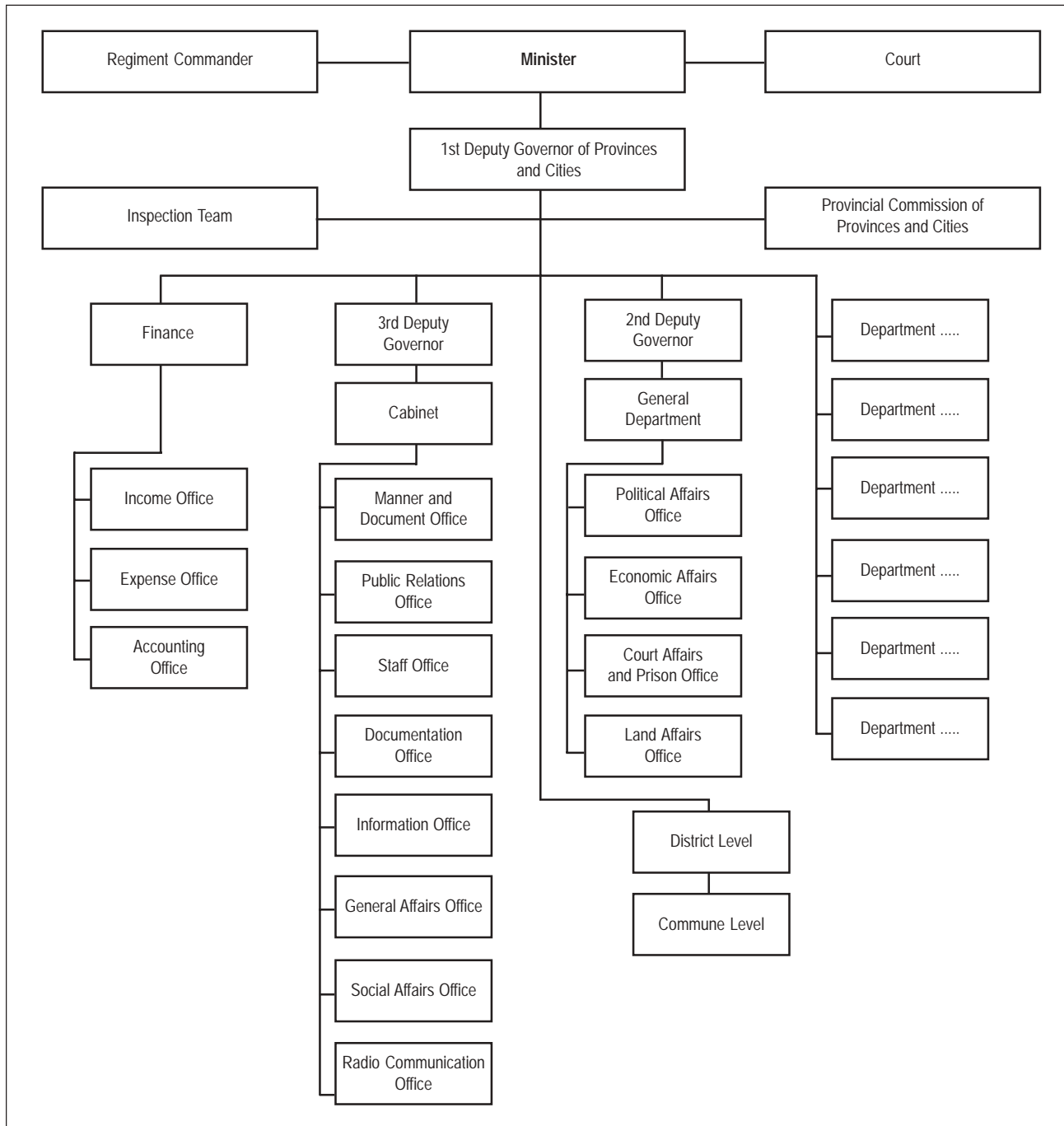


Figure 2.9 Organizational Structure of the Ministry of Provinces and Municipalities.



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 discussed at 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 MoE 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 CCU was created in 1996 as part of MoE to help coordinate 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 the private sector 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 MoE on coastal activities; and
- Provide information and advice on the positive and negative environmental impacts of projects in the coastal zone.

The Unit also coordinates with other international bodies such as the Coordinating Body on 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 CCU 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 will be joining with the National Coastal Steering Committee.

There are some NGOs that assist 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), and the American Friends Service Committee (AFSC).

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 development and management of the coastal zone. The Program sets out the vision of the 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 physical infrastructure, developing human resources, gradually integrating the country into the regional and world economy while optimizing the sustainable use of natural resources; and
- Re-establishing the country as a sovereign state within the community of nations, 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 a 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.

Fisheries Policy

The Fisheries Department has a 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 livelihoods of people in local communities;
- To ensure equitable access to and distribution of fisheries benefits including export earnings;
- To extend the institutional responsibilities of fisheries management to fishing communities;
- To enhance the protection and sustainable use of fishery resources;
- To promote aquaculture and mariculture to fulfill the nutritional requirements of the people and to reduce the catch of wild resources; and
- To encourage the integration of fisheries management with overall rural development in fishing communities.

Local authorities are now working together with 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.

Industrial Sector Policy

The policies of the industrial sector are defined as follows:

- To encourage the development of industry to ensure political, economic and social stability and to reduce the trade gap;
- To develop an industrial base to maximize the benefits of the 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 other agencies in developing vocational training centers to provide trained personnel for industrial development;
- 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.

Tourism Policy

With regard to the management of tourism, the MoT 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.

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 priority of the government since it provides vital transport and tourism links to and from Cambodia.

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 policy or policy guidelines at ministerial levels, it may be difficult for departments or local authorities to define their own responsibilities or functions. The uncertain situation exists despite the fact that the National Environmental Action Plan (NEAP) was prepared by representatives from the following Ministries:

- Forestry
- Tourism
- Industry
- Fisheries
- Agriculture
- Environment
- Mines and Energy
- Rural Development

- Public Works and Transport

NATIONAL PLANNING

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

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 and mariculture to reduce the exploitation of natural fisheries;
- To enhance the protection and conservation of fishery resources and to ensure enforcement; and
- To ensure human resource development and capacity building in the fisheries field.

Industrial Strategy and Planning

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 investment
- 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 industries.

- To create policies to promote industrial and economic development by attracting foreign and domestic investments. These policies include the formulation of 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.

Tourism Zoning Strategy

The MoT has proposed a tourism zoning strategy for Cambodia. The 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 offshore islands. These islands are ideal sites for resort development owing to their attractive beaches and rich marine life.

National Environmental Action Plan

The NEAP was adopted by the Council of Ministers in December 1997. This action plan was initiated by the MoE 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 action plan summarizes the key thematic issues related to coastal areas such as:

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

The NEAP presents a pragmatic five-year program (1998 to 2002) to improve environmental management in Cambodia. Years one and two of the program focus on strengthening policy and regulatory frameworks, while years three to five would

involve the mobilization of investments needed to improve environmental management. The components presented in the NEAP should be implemented by the different ministries according to the thematic issues and existing legal framework.

National Wetland Action Plan

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

The National Wetland Action Plan (1998) outlines the cultural and economic importance of wetlands. Over 30% of Cambodia's land area consists 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.

Conservation Plan

A conservation plan for coastal natural resources does not exist as 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.

LEGAL FRAMEWORK

Legislative Hierarchy

The Constitution

The Constitution is the supreme law of the Kingdom of Cambodia. All other laws must strictly

conform to 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 may be enacted by the assembly through a two-thirds vote.

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.

Kram

This is the Royal Promulgation by the King.

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.

Decree (Kret)

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

Sub-Decree (Anu-Kret)

Sub-decrees are signed by the Prime Minister 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.

Declaration (Ministerial Prakas)

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

Decision (Sechkdei Samrech)

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

Circular (Sarachor)

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

Arete (Provincial Deka)

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

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, 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 where the law does not stipulate any legal provisions, the cases are then tried on the bases of customs, traditions, conscience and equity.

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 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.

National Legal Framework

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.** Traditional Cambodian law was non-adversarial. Traditionally, accepted figures in society mediated disputes and facilitated their resolution rather than imposing a settlement.
- **1870-1954.** The French system was progressively introduced during the protectorate and colonial period.
- **1954 - 1975.** The dual system of traditional and French laws were 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 re-institute 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 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.

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 to this. Article 59 of the Constitution stipulates that the Government of Cambodia must protect the environment and maintain ecological balance.

The Kingdom of Cambodia is a constitutional monarchy. The Constitution confers three levels of power — 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.

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 on 10 August 1992 and it is now being enforced. This law prescribes the management of land and the system of property rights such as state or private property. Private property rights in fisheries and forest reserves, however, are not provided.

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.

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.

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.

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 the following:

- Fishery resources are comprised of living animals 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; and
 - b) Marine fisheries domain extends from the coastline to the outer boundary of the EEZ. Fisheries domain is the property of the state.
- Fishery exploitation, aquaculture and processing in Cambodia's marine fisheries 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 in the marine fisheries domain of Cambodia must be defined by the proclamation of the Ministry of Agriculture.
 - Government fishing enterprises and groups of fishers that use fishing boats or vessels in the marine fisheries domain must have the following additional 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 (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).
 - Fishers who are permitted in the marine fisheries domain must respect the order or act mentioned on the fishing license. Records must be kept on the daily catch of fish and other organisms, and reporting this monthly to the provincial-municipal fisheries authority (Chapter 3, Article 25).
 - All kinds of fishing gear, extending across a 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 vessels (Chapter 3, Article 26).
 - Mackerel (*camon* or *pla thu*) fishing during

the spawning season from 15 January to 31 March is prohibited (Chapter 3, Article 27).

- Trawling in shallow water (less than 20 m) is prohibited, 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 prohibited (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.

Industrial Laws

Law on Mineral Exploitation and Mining

The Law on Mineral Exploitation and Mining is still a draft 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.

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 including preparation of an environmental protection plan prior to mining activities and a plan for implementation during operations.

Sub-Decree on Industrial and Handicraft 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 on the environment. The sub-decree was written in 1995.

Draft Industrial Zone Act

This act provides, written in 1995, 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.

Transport Laws

In order to ensure safety in 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

This sub-decree, passed in July 1991 by State Council No. 13, 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 be required to register and get an operating license in 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), MPWT. 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 Vehicles and Inland Waterways Transport

Declaration No. 41 issued by the MPWT on September 1993 states that an 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 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;
- RN4 is limited to 25 tons;
- Overloading is allowed in special cases;
- 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 ships. 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; and
- Following construction, a technical review together with other formalities will be completed before a license to operate is issued.

Declaration on Issuing Business Licenses for Tourist Boats

Declaration No. 224 issued by the MoT on February 1996 states that the operating license for tourist boats must be issued by the MoT. 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 MoT.

Sub-decree on River Navigation

Sub-decree No. 06 issued by the Council of Ministers 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 include:

- 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: specifies national colors for Cambodian ships, penalties for not showing colors, crew lists 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.

Tourism Laws

Royal Decree on the Establishment of the Ministry of Tourism

According to this decree, the MoT 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 5 August 1997 by the Second Prime Minister. It defines the administrative structure of the MoT 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 in various countries in cooperation with the Ministry of Foreign Affairs and International Cooperation;
- To sign contracts that relate to tourism upon government 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.

Environmental Laws

Law on Environmental Protection and Natural Resource Management

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

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 sustainable socioeconomic development. 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 EIAs for all projects and economic activities that might affect the environment (Article 6, Chapter 3);
- To conserve, develop, manage and use natural resources sustainably (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); and
- 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 jailed in accordance with the degree of the violation.

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

The Sub-decree on the Organization and Functioning of the MoE was ratified by the Council of Ministers in late 1997. 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 the Royal Decree on the Creation and Designation of Protected Areas on 1 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 2.8).

The MoE 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 1 November 1993. At present, the MoE 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 MoE. The purpose of this sub-decree is to control effluent discharge into water bodies and set standards for water quality.

Sub-decree on Environmental Impact Assessment

EIA provisions are incorporated in the Law on Environmental Protection and Natural Resource Management. The draft sub-decree specifies the following environmental review process: screening, initial EIA and full-scale EIA.

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 MoE, 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, they submit a proposal to the Council for the Development of Cambodia (CDC). This is the central government agency that processes all proposed foreign investment. 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 MoE that will review the EIA report.

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

International and Regional Arrangements

United Nations Convention on the Law of the Sea

Cambodia is concerned about law enforcement, promotion of scientific research, conservation of living and non-living resources and the use 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. It pursues 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 sovereign rights to coastal states to manage their coastal and marine resources.

Since Cambodia's economy is open to the world through international sea-borne 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 its 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 the 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; and 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; and
- 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 use of living resources in the EEZ (Article 62), the law gives Cambodia the authority to:

- Promote optimum use of the living resources in its 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 fishers, 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;
 - 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 arrange-

- j) Requirements for the training 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.

UNEP-Coordinating Body on the Seas of East Asia

The 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 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 programs;
- Take immediate preventive 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 globally, legally binding instrument for the reduction of land based marine pollution.

Association of Southeast Asian Nations

Cambodia signed the Treaty of Amity and Cooperation in Southeast Asia in 1995, and joined 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. Cambodia was not permitted to become a member state of ASEAN until 1997 due to the political situation that occurred in early July 1997. Cambodia only became a full member in April 1999.

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 Lao PDR), the country’s coastal and marine resources have been under pressure from illegal and overfishing, shrimp farming, chronic pollution from shipping, pesticide runoff 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), Asian Development Bank (ADB), Global Environment Facility (GEF), and others.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

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 7 December 1975, but did not accede to it until 2 October 1997.

CITES establishes a 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.

MARPOL Conventions

The International Convention on the Prevention of Marine Pollution from Ships (MARPOL) deals with various forms of 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; and
- 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.

Convention on Wetlands (Ramsar, Iran, 1971)

The Convention on Wetlands (Ramsar, Iran, 1971) provides for the specific protection of wetland areas and the plant and animal species that inhabit these areas. The Convention on Wetlands seeks to protect the habitats of species by identifying wetlands of international importance. It is hoped that this will both protect waterfowl and their habitats and limit the degradation, drainage and dewatering of areas of marsh, fen, peatland, 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.

Convention on Biological Diversity

The Convention on Biological Diversity was adopted during the UN Conference on Environment and Development (UNCED) in 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 use 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 use 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 the 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 habitats. 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 and other member states of the convention focus on three priority areas:

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

The marine flora and fauna obviously constitute a large part of the country's biodiversity. The marine and coastal resources of Cambodia are seriously threatened by water pollution, coastal developments, overfishing, 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 and local communities.

UN Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 also at the UNCED in Rio de Janeiro. This marked the culmination of international initiatives that 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 global climate change to a degree that would be harmful to economic development and that would impede food production.

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. MoE presented a statement on climate change at the Third Session of the Conference of Parties in Kyoto, Japan, December 1997. The Cambodian Government intends to be involved in a global mechanism to deal with this critical issue.

POLICY, LEGAL AND ORGANIZATIONAL CONSTRAINTS

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

Policy Constraints

National policies and sector policies seem 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 affects the development and implementation of integrated coastal zone planning and management policies and strategies. Policy implementation is also constrained by the existing legal and institutional frameworks.

Legal Constraints

One of the government's central ambitions is to develop Cambodia as a state with a functioning legal and administrative systems. Many decrees, laws, sub-decrees and other legal instruments have been issued or are being developed. The current process of lawmaking is usually carried out by a team of national and international experts. Most of these efforts are funded through international agencies.

In spite of the ambitions, several constraints in the legal framework persist. First, 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 the same region. Second, The Royal Decree on the Creation and Designation of Protected Areas (adopted on 1 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 MoE, 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. Third, many laws, sub-decrees and other legal instruments are needed to address and regulate economic development. The process of developing laws is attempting to keep pace with the rapid emergence of economic opportunities. The result is a situation where laws are drafted quickly and insufficient time is being given for consultations with communities, resource users and other stakeholders which in turn leads to difficulties in law enforcement. Fourth, 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. Fifth, many laws that are presently being enforced are outdated, in whole or part, and do not reflect the 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.

Finally, the periods of political instability affect not only the effective enforcement of the laws but also the development of new laws and regulations.

Organizational Constraints

Government institutions are facing many constraints both at national and local levels. At the local level, there are the provincial authorities, 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 from or are hampered by the unstable political situation and they all lack financial resources.

Human Resources Constraints

The immediate constraints with regards to human resources are the inadequate knowledge, skills and experience of some staff in provincial field offices regarding coastal resources and environmental management. The needed management skills include the expertise to implement sustainable management of fisheries, forestry, industry, tourism, transportation, etc.; environmental planning and management; 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 the capability to promote environmental awareness to the public.

At the village level, there is a lack of awareness on the cause and effect of environmental degradation. The APHEDA workshop referred to earlier, which was intended to promote environmental consciousness, fell short of its target due to funding constraints. The difficulty in reaching the capacity building target could also be noticed in the training component for government staff within a Danida funded coastal project. There is a need for these initiatives to be continued and expanded in scope.

Law Enforcement Constraints

The main laws related to the management of coastal resources are Fisheries Law, 1987; Forestry Law, 1988; Land Law, 1992; Law on Land Management, Urbanization and Construction, 1994; Law on Environmental Protection and Natural Management, 1996; and Royal Decree on the Creation and Designation of Protected Areas, 1993.

These laws are not well implemented due to the political influence, uncontrolled development and the impact of selfish interests. These led to:

- Disorder in logging and transportation;
- Disorder in fishing where about 50% of boats do not have permits, use of illegal gear, use of bombs or grenades in some places, illegal fish transportation and depots and encroachment of mangrove areas for saltpans and shrimp farms;
- Disorder in construction, 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 disorder in the use of natural resources and in the transportation of natural products (checkpoints are not referred to in the Fisheries and Forestry Laws).

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

- Lack of qualified law enforcement officers and staff;
- Lack of monitoring equipment (e.g., patrol boats);
- Local people's unfamiliarity with the law; and
- Provincial departments do not have the power or resources to monitor the use of natural resources.

Management System Constraints

As mentioned earlier, the responsibility for coastal zone management and coastal development is shared by many ministries and departments. On occasion, their duties and responsibilities are not

consistent with laws, sub-decrees or other government decisions. In some cases, departments work independently. This leads to management overlap and conflicts. The main activities that lead to, or could lead to overlap and conflict in the coastal areas are (see also Tables 2.6 and 2.7):

- Land expansion (i.e., conversion) for agriculture, rice fields and industrial crop cultivation, saltpans 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 centralized one. This process has become a constraint for provincial departments as it has created situations where the lines of authority are ambiguous.

Financial Constraints

The main income of the provinces and municipalities comes from the national budget, which are in turn derived from provincial and municipal tax collection. All provincial and municipal tax revenue is transferred to the Ministry of Economics and Finance by the provincial and municipal departments of finance. Due to this, 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 submit proposals in order to get budget allocations from the Ministry of Economics and Finance. Only a small part of the income and revenue collected can be directly used by the provinces and municipalities. They then face difficulties in collecting sufficient revenue for their requirements. The lack of funds from both internal and external sources prevents the ministries and other agencies from fulfilling their mandates. As such, bilateral and multilateral financial assistance provides important support.

RECOMMENDATIONS

The Cambodian government has no policies specific to coastal zone management. Sectoral policies for fisheries and industry, for example, are taken as applicable approaches to coastal zone management. The objectives of suggested recommendations for the development of policies for 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 relating to coastal zone management;
- To ensure compliance with laws, sub-decrees, and other requirements through capacity building; and
- To protect the natural resources and the

Table 2.6 Current and Potential Overlaps and Conflicts between Sectors.

Responsible Department/Office	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

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

environment of the coastal zone.

For the successful implementation of these policies, some strategic actions need to be taken.

Strategy 1: Promote economic growth in the coastal zone

- 1.1 Attract foreign investment to the coastal areas to increase employment opportunities and incomes;
- 1.2 Increase support for the following sectors:
 - a) Agricultural production, develop agricultural products for agro-industrial use, local consumption and export;
 - b) Livestock, animal husbandry, mariculture, and aquatic products;
 - c) Forest products in concession areas, reforestation; and
 - d) Manufacture of cement, fertilizer, clothing, fish sauce, canned products and salt products;
- 1.3 Develop services based on natural resources such as, eco-tourism, marine sanctuaries, sport fishing; and
- 1.4 Develop transportation infrastructure.

Strategy 2: Enhance administrative infrastructure and develop human resources

- 2.1 Strengthen the central administrative system of each ministry to ensure that decisions affecting natural resources are reviewed by all relevant authorities;

- 2.2 Improve delivery of government services to investors and the public;
- 2.3 Train officials in methods of integrated coastal zone management and sustainable development;
- 2.4 Ensure that officials appointed to positions of responsibility are qualified; and
- 2.5 Increase salaries of government officials.

Strategy 3: Develop laws on coastal zone management

- 3.1 Develop laws on coastal zone management to complement existing laws on environmental protection;
- 3.2 Formulate sub-decrees on marine pollution and solid waste;
- 3.3 Include commitments to international conventions in national laws and sub-decrees; and
- 3.4 Develop mechanisms for local community participation in the formulation of laws.

Strategy 4: Strengthen law enforcement

- 4.1 Strengthen the enforcement of existing laws;
- 4.2 Amend some of the existing laws, such as the fisheries and forestry laws;
- 4.3 Train officials to understand the content of laws, improving implementation;
- 4.4 Develop procedural guidelines to ensure communities 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;

Table 2.7 Current and Potential Overlaps and Conflicts within the Legal System.

Legal Systems	FoL	FiL	LEP	LL	LLM	RD
1	FoL - Forestry Law, 1987	CP	CP			CP
2	FiL - Fisheries Law, 1988	CP	CP			CP
3	LEP - Law on Environmental Protection and Natural Management, 1996	CP	CP			
4	LL - Land Law, 1992	P			CP	CP
5	LLM - Law on Land Management, Urbanization and Construction, 1994			CP		
6	RD - Royal Decree on the Creation and Designation of Protected Areas, 1993	CP	CP	CP		

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

- 4.6 Foster cooperation among authorities from the 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.

Strategy 5: Protect coastal resources

- 5.1 Develop a coastal zone master plan for each coastal province and municipality;
- 5.2 Promote environmental awareness at the community level through schools, 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 expertise and provide for extension of needed financial support to improve coastal zone management and natural resources protection.

Strategy 6: Empower local communities to manage coastal resources

- 6.1 Provide opportunities for communities to demonstrate their commitment to manage their natural resources 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; and
- 6.3 Offer community-based training for coastal resource management.

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APPENDIX

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 PHNOM PENH, CAMBODIA

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 of key policies/decision-makers, it was an aim 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 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, USAID, UNDP, IDRC, WI, CDC, CORIN in Thailand, and the governors and officials from the provinces of Koh Kong, Kampot, Sihanoukville, Kep City. A total of 53 people attended the workshop.

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.).
- d) 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 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 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 is not clear.
 - b) Lack of human resources
 - c) Overlapping of responsibilities
 - d) Political instability
 - e) Poverty
 - f) The new management system(s) employed by line agencies is(are) not doing well.
3. 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.

On the whole, the workshop was thought to be useful. It provided an opportunity for cooperation among government ministries, provincial governments, NGOs, international organizations and other agencies and to discuss and cooperate to address crucial issues.