

Transboundary Water Management between Kampot Province (Cambodia) and Kien Giang Province (Vietnam)

Importance of Coastal Ecosystems and Resources in the Transboundary Waters of Kampot and Kien Giang Provinces

The transboundary waters between the two provinces of Kampot, Cambodia and Kien Giang, Viet Nam are characterised by shallow water conditions favourable to the growth of seagrass and coral reefs, whilst the adjacent coastlines support important mangrove habitats. As a result, the area supports abundant living marine resources that sustain adjacent villages.

Based on initial assessments, the seagrass area in these transboundary waters is more than 37,000ha including 12,000ha in Kien Giang and more than 25,000ha in Kampot Province, making them the most extensive in the South China Sea. The seagrass meadows in Kampot are located in parallel to the coastline of Prek Ampil, and extend 150-300m from the shoreline, being widest in front of Bokor National Park. The area has a gentle slope with seagrass occurring at depths from 1-4m. Seagrass beds in Kien Giang Province are mainly distributed in the shallow coastal waters of the Phu Quoc archipelago.



Joint meeting between the Management Boards of Phu Quoc and Kampot Demonstration Sites

Based on recent taxonomic surveys 10 seagrass species have been identified in the transboundary waters, while data collected in Phu Quoc indicates that

associated species richness is high with 113 species of macro-algae; 71 species of molluscs; 26 species of crustaceans; 19 species of annelids; and 15 species of echinoderms.

Based on surveys conducted in 2006 around 6,240 tonnes marine products are harvested from the seagrass beds in Kampot Province per year, with an approximate annual value of 7,500,000 US dollars. Based on fishing household surveys the catch per unit effort of fishermen has been declined annually since 2000 due to an increase in the number of fishermen and the use of illegal fishing gear.



Molluscs from shallow waters and seagrass beds are an important resource in the transboundary waters

Phu Quoc is an important landing area and fishing ground in Kien Giang Province. Total fisheries yield has increased from 30,969 tonnes in 1993 to 50,000 tonnes in 2000 and to 60,246 tons in 2006. The main fishing grounds are south of Phu Quoc in the vicinity of the An Thoi islands where squid is an important component of the catch and to the east of Phu Quoc island which is an important swimming crab spawning ground.

Finfish are the main contributors to total fisheries production and around 67 species of teleost fish are caught in the area, of which representatives from the families Carangidae, Scombridae, Hemirhamphidae, Serranidae, Lutjanidae, Lethrinidae and Synodontidae are the dominant demersal species. Trevallies, jacks, mackerel, and anchovies dominate the pelagic catches. In 2001 landings of mackerels and anchovies were around 3,500 and 12,500 tonnes respectively.

The most important endangered species found in the transboundary waters is the Dugong (*Dugong dugon*) which is frequently encountered in the north and north-east of Phu Quoc Island, and also in Kampot coastal areas. According to reports of the Kien Giang Department of Fisheries (2004 – 2005) 5 species of dolphins were recorded in the waters of Kien Giang, including: *Orcaella brevirostris*, *Tursiops aduncus*, *Sousa chinensis*, *Stenella longirostris*, *Stenella coeruleoalba*. However, appearance and movement of dolphin herds in transboundary waters are not well known. In addition, 3 sea turtle species have been recorded from the area, including: Green Turtle (*Chelonia mydas*), Hawksbill (*Eretmochelys imbricata*) and leatherback (*Dermochelys coriacea*). Recent surveys in Phu Quoc suggest that sea turtle numbers are declining and that only five nesting beaches are still in use in the Phu Quoc archipelago.

Transboundary Problems in Environment Management

Increases in the number of fishing boats and better fishing gear causes increasing pressure on the resources and habitats that could lead to decline in fish stocks and yields. Trawl fishing, which is not allowed in the near shore waters of either Cambodia or Viet Nam, occurs commonly on seagrass beds and in shallow waters of both Kampot and Kien Giang provinces. This is one of the greatest sources of damage to seagrass habitats and biodiversity, particularly young seagrass shoots, small juvenile fauna, and endangered species. Transboundary fishing activities occur daily as fishing boats from Viet Nam fish in seagrass beds adjacent to the Kampot coastline and *vice versa*. Fishing using toxins and electricity still take place in the waters of both provinces.

There is a lack of coordination in fisheries management and the marine resources are exploited by fishermen from both provinces without definition of fishing ground boundaries. Informal trade in marine products, including endangered species, occurs daily between the two provinces and an effective mechanism for joint management of fisheries has not yet been developed for this large marine area.

Many recent development projects have occurred in the coastal waters of both provinces in order to meet development plans with respect to increasing income

for local government and communities. Given that poverty alleviation is the first priority of the Governments, environmental management for sustainable development has not been adequately considered in planning and practices and there remains a lack of coordination between economic development and environment management.

Lack of Awareness of Local Communities on Sustainable Use and Law Enforcement

Public awareness of the importance of seagrass in the local communities has improved. The knowledge of villagers regarding the sustainable use of resources is however still limited and local people concentrate on securing direct and short-term rather than long-term benefits. Law enforcement is not effective enough due to weak capacities of both provinces.

The management groups of Kampot (Cambodia) and Kien Giang (Vietnam) have been working closely to address these problems, including how to reduce illegal fishing and trade of endangered species. Initial steps have included the preparation of guidelines for assessment and monitoring, and how to provide training and share information between sites.



Field training of Cambodian community leaders and officials by Vietnamese scientists

Training on assessment, monitoring and transplantation of seagrass was provided by Vietnamese scientists to local staff of the Kampot Provincial Government and local community leaders, and agreement reached on survey methods to be used by both provinces. Both parties have agreed on the software and baselines for use in the joint GIS database and have developed a

joint programme of activities for funding by both governments and bilateral aid and assistance agencies.

Issues that need to be further addressed under this joint agreement include: collaborative actions to reduce illegal trade and illegal fishing; determining sustainable stock sizes and use rates; enhancing the capacity of technical staff; and strengthening of community involvement in resource management.

Development of a Coordination Mechanism and Cooperative Framework

The local governments of Kampot and Kien Giang Provinces have cooperated in matters of mutual interest under a friendship alliance since the early 1980. In the year 2003 cooperative mechanisms and agreements regarding administrative management between the two provincial governments were established, and yearly consultative meetings between both provincial governments on improving bilateral cooperation have been conducted.



Signing of the Memoranda of Agreement between Kampot and Kien Giang Provinces

In the year 2005, collaborative mechanisms to support natural resources and habitat management were established under the SCS project. Three Joint Meetings between the Management Teams of the Kampot and Phu Quoc Demonstration Sites were convened to discuss different areas of cooperation and to prepare guidelines and an operational framework, encompassing the sharing of data and information. In March 2008 a Memorandum of Agreement on the Framework for Cooperation in the Management of

Coastal Ecosystems and Natural Resources between the Province of Kampot (Cambodia) and Kien Giang (Vietnam) was signed by the Vice Chairperson of the Kien Giang Provincial Peoples Committee and the Deputy Governor of Kampot.

Goals and Objectives of the Cooperative Framework and Priorities in Joint Management

The goal of the agreement is to enhance and strengthen cooperation between the two provinces in the fields of biodiversity conservation, reversing environment degradation trends, and sustainable use of resources, in order to improve the livelihood of local communities

The objectives of the agreement are to: strengthen institutional arrangements for management of natural resources and marine environment in the transboundary waters between the two provinces of Kien Giang and Kampot; improve the management capacity for natural resources and marine environment in the transboundary marine zone; enhance awareness of managers and local communities regarding the importance of conservation within the two provinces of Kien Giang and Kampot; develop cooperative research programmes and exchange information, including sharing of data and databases; maintain financial sustainability for long term management, conservation of natural resources and marine environment in transboundary waters between the two provinces of Kien Giang and Kampot.

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