

Con Dao Proposed Marine Protected Area

Alternative site name(s)

Con Son, Poulo Condore

Province(s)

Ba Ria-Vung Tau

Area

29,400 ha

Coordinates

8°34' - 8°49'N, 106°31' - 106°45'E

Agro-ecological zone

South-eastern

Decreed by government

No

Management board established

No

Investment plan prepared

No

VCF eligibility criteria met

None

Social screening criteria met

None

Conservation needs assessment prepared

No

Operational management plan prepared

No

Tracking tool completed

No

Map available

Yes

Management history

On 1 March 1984, the establishment of Con Dao National Park was decreed by Decision No. 85/CT of the Chairman of the Council of Ministers. The area given in this decree was 6,000 ha (MARD 1997). On 31 March 1993, an investment plan for Con Dao National Park was approved by Decision No. 135/TTg of the Prime Minister. The area of the national park given in this investment plan was 15,043 ha (ADB 1999), comprising a terrestrial component of 6,043 ha and a marine component of 9,000 ha (Anon. 1990). On 16 May 1998, a revised investment plan for the national park was approved by Ba Ria-Vung Tau Provincial People's Committee. The area of the national park given in the revised investment plan was 19,998 ha, comprising a terrestrial component of 5,998 ha and a marine component of 14,000 ha (Anon. 1997). Con Dao National Park is one of only a few decreed protected areas in Vietnam to include a marine component.

The establishment of a marine protected area at Con Dao was first proposed by Hai Phong Institute of Oceanography in 1995. In this proposal, the area of the proposed marine protected area was not defined (Nguyen Huy Yet and Vo Si Tuan 1995). Con Dao was subsequently included on a list of 16 proposed marine protected areas compiled on behalf of the former MOSTE in 1998 (Nguyen Chu Hoi *et al.* 1998). The proposal to establish a marine protected area at Con

Dao was reiterated by the Asian Development Bank (ADB 1999) in its marine and coastal protected areas systems plan for Vietnam. In the ADB proposal, the area of the proposed marine protected area was given as 29,400 ha, comprising a marine component of 23,000 ha and a terrestrial component of 6,400 ha.

Topography and hydrology

Con Dao proposed marine protected area is centred on an archipelago of 14 islands, the largest of which, Con Son, covers 5,800 ha. The archipelago is situated about 80 km off the coast of southern Vietnam. The highest point on Con Son island is 577 m, while the deepest point of the marine component is 50 m below sea level. However, most of the marine waters around the islands are less than 30 m deep.

Biodiversity values

The shallow waters of Con Dao proposed marine protected area support coral reefs, seagrass beds and mangroves. There are around 1,000 ha of coral reef within the marine protected area, and over 300 coral species have been recorded to date (Con Dao National Park Management Board *in litt.* 2003). A recent survey made 11 new distribution records of coral species for Vietnam (WWF 2002). The commonest coral reef forms are fringing reefs and patch reefs. The dominant coral genera include *Acropora*, *Porites*, *Pachyseris*, *Montipora* and *Pavona*. The coral reef ecosystem

supports a high diversity of coral reef fish; 202 species have been recorded to date. The recorded density of coral reef fish at Con Dao is higher than at any other site in Vietnam (ADB 1999).

The proposed marine protected area supports around 200 ha of seagrass beds (Con Dao National Park Management Board *in litt.* 2003). These seagrass beds are dominated by *Thalassia hemprichii* and *Halophila ovalis* (ADB 1999). These beds are an important feeding ground for the globally threatened Dugong *Dugong dugon*, which is known to occur at Con Dao (Cox 2000).

The mangroves are characterised by *Bruguiera gymnorrhiza*, *Avicennia alba* and *Rhizophora mucronata*, and are an important nursery area for fish species (ADB 1999).

The beaches of the Con Dao archipelago are nesting grounds for the globally threatened Green Turtle *Chelonia mydas* (Nguyen Thi Dao 1999). Up to 300 females visit a total of 14 nesting sites each year, forming over 1,000 nests. Nesting is concentrated between April and October, with nearly 80% of the total between June and September (Nguyen Truong Giang 2003). Hawksbill Turtles *Eretmochelys imbricata* also still nest on the Con Dao archipelago but only very rarely, and in low numbers (N. Cox *in litt.* 2003).

Finally, a number of cetaceans have been recorded in the waters of Con Dao proposed marine protected area (Con Dao National Park Management Board *in litt.* 2003).

Conservation issues

ADB (1999) reports over-exploitation of marine products by both local fishers and fishers from other areas, which has led to the disappearance of lobsters, sea cucumbers and rare molluscs from some reefs. In addition, Con Dao National Park Management Board (*in litt.* 2003) report that destructive fishing techniques, including the use of cyanide and illegal trawling inside the national park, are a major threat to biodiversity. Many fishing boats visit the islands to resupply with freshwater or to shelter from storms. This results in anchor damage to reefs, habitat disturbance and pollution (ADB 1999).

The population of Dugong at Con Dao has declined in recent years and now is estimated to be less than 12 individuals (Con Dao National Park Management Board *in litt.* 2003). The main causes of the population decline are believed to be entanglement in fishing nets and loss of seagrass beds. If unchecked, these factors threaten to cause the local extinction of Dugong within a few years (Nguyen Thi Dao 1999, Cox 2000).

The loss of seagrass beds is also a threat to Green Turtles, for which they are an important food source. Seagrass beds are very susceptible to environmental changes, especially siltation and changes in hydrology, which result from infrastructure development on the islands. Other threats to marine turtles at the proposed marine protected area are use of high intensity lights by fishers, collection of turtle eggs for food, pollution and loss of nesting beaches to infrastructure development (Nguyen Thi Dao 1999, Con Dao National Park Management Board *in litt.* 2003).

The population of the islands is expected to grow to 10,000 people within the next 5 to 10 years, which will place increased pressure on the marine ecosystem. ADB (1999) reports that the district and national park authorities have serious concerns about the effects of current and future infrastructure development, population growth and tourism development on the environment. By the end of 2003, the construction of Co Ong Airport on the islands will have been completed, which will facilitate rapid tourism development (Nguyen Truong Giang 2003).

Since 1993, the activities of Con Dao National Park management board have included patrolling and protecting the marine environment. For these tasks, the national park has a marine patrol group with two high-speed boats and one wooden patrol boat (ADB 1999, Con Dao National Park Management Board *in litt.* 2003). The national park management board also protect the marine turtle nesting beaches, and have established turtle hatcheries on four islands, with support from the WWF Indochina Programme (Nguyen Thi Dao 1999). If a marine protected area is established at Con Dao in the future, it is not clear whether the marine component will continue to be managed by the national park management board or be placed under a different management authority.

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Other documented values

Around the Con Dao archipelago are some of the most important fishing grounds of southern Vietnam, and the waters of the archipelago are an important breeding and nursery area for a range of marine organisms. In this way, the waters of Con Dao proposed marine protected area contribute to the maintenance and sustainability of the region's fisheries and the local economy (ADB 1999).

In addition, Con Dao marine protected area has high potential for the development of ecotourism in the form of snorkeling, diving and visiting marine turtle nesting beaches. This potential is already beginning to be realised, although with negative as well as positive environmental impacts.

Related projects

A number of conservation projects with a focus on marine conservation have been implemented at Con Dao in recent years. First, for the last eight years, the WWF Indochina Programme has been working with Con Dao National Park Management Board to implement a marine turtle conservation project. This project has initiated a turtle monitoring programme, and has set up five artificial hatcheries to protect turtle eggs from natural damage. This project has been funded by WWF International, WWF US, WWF Netherlands and Danida (N Cox *in litt.* 2003). Second, the WWF Indochina Programme, Nha Trang Institute of Oceanography and Hong Kong University of Science and Technology implemented a Danida-funded project on marine biodiversity conservation in 1998. Third, WWF, together with Global Environmental Consultants Ltd., implemented the *Con Dao Coastal and Marine Environmental Management Demonstration Project*, with funding from ADB. The objectives of this project were to develop a coastal and marine environmental management plan and an ecotourism plan for the national park. Fourth, the WWF Indochina Programme implemented a second Danida-funded project on marine biodiversity conservation in 2000.

Between 2003 and 2006, a medium-sized UNDP/GEF project entitled *Sustainable Use of Coastal and Marine Resources in the Con Dao Islands*

Region will be implemented. This project has been developed by the WWF Indochina Programme, in partnership with UNDP/GEF, Ba Ria-Vung Tau Provincial People's Committee and Con Dao National Park. The aim of this project will be to protect globally significant coastal and marine biodiversity in the Con Dao islands. This will be achieved through institutional strengthening, development of sustainable financing mechanisms and improved management.

Conservation needs assessment

A conservation needs assessment has not been conducted for the site.

Operational management plan

An operational management plan has not been prepared for the site.

Eligibility against VCF criteria

The site is ineligible for VCF support because it is not a Special-use Forest.

Criterion	Eligibility
A _I	
A _{II}	
B _I	
B _{II}	
B _{III}	
C _I	
C _{II}	

Social screening requirements

A social screening report has not been prepared for the site.

Criterion	Eligibility
A	
B	
C	
D	

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