Can Gio Man and the Biosphere Reserve

Alternative site name(s)
Lam vien Can Gio [Can Gio forest park]
Province(s)
Ho Chi Minh City
Status
Designated as a Man and the Biosphere Reserve by UNESCO in 2000
Management board established
Yes
Latitude
$10^0$22' - $10^0$40'N
Longitude
$106^0$46' - $107^0$01'E
Bio-unit
05a - Mekong Delta

Conservation status

The Can Gio area once supported natural mangrove forest but this was almost fully destroyed by herbicides during the Second Indochina War. Between 1978 and 1986, the area was reforested with mangrove under the direction of Duyen Hai Forest Enterprise. Subsequently, from 1986 to 1990, Ho Chi Minh City People's Committee allocated the land in the Can Gio area to 23 forest enterprises and state farms (ADB 1999). On 29 May 1991, Can Gio was designated as a coastal protection forest, following Decision No. 173/CT of the Chairman of the Council of Ministers (Nguyen Dinh Cuong 1994).

In 1999, a proposal to designate Can Gio as a Man and the Biosphere Reserve was prepared and submitted to UNESCO (ADB 1999). Can Gio was designated as Vietnam's first Man and the Biosphere Reserve on 21 January 2000, with a total area of 75,740 ha, comprising a core zone of 4,721 ha, a transition zone of 29,880 ha and a buffer zone of 41,139 ha, and including a marine component of 4,370 ha (UNESCO 2000, Vietnam News 2000a). ADB (1999) give a figure of only 42,630 ha as the total area of the site.

In 2000, a management board for Can Gio Man and the Biosphere Reserve was established by Ho Chi Minh City People's Committee (Vietnam News 2000b). The site is currently under the management of Can Gio District People's Committee and the management board for protected forests of Ho Chi Minh City DARD (UNESCO 2000).

Topography and hydrology

Can Gio Man and the Biosphere Reserve is located in Can Gio district (previously Duyen Hai district), in the coastal zone of Ho Chi Minh City. The area is situated in a recently formed estuary complex of tidal flats, where the Vam Co, Saigon and Dong Nai rivers discharge into the sea. The topography of Can Gio is low-lying and dynamic. The site is divided by a network of canals and rivers.

Biodiversity value

The major habitat types found at Can Gio are plantation mangrove, of which there is about 20,000 ha, and naturally regenerating mangrove, of which there is about 7,000 ha (ADB 1999). The principal mangrove species used for replantation has been *Rhizophora apiculata*, although *R. mucronata* has also been used in smaller amounts (Vien Ngoc Nam 1994). In addition to the mangroves, the site also supports seagrass beds dominated by *Halophyla* sp., *Halodule* sp. and *Thalassia* sp. (ADB 1999).

A total of 18 mollusc, 27 crustacean, 45 fish and three amphibian species have been recorded at the site. There are annecdotal reports of local farmers shooting an Estuarine Crocodile *Crocodylus porosus* at the site in around 1990, although there have been no records since then. Also, Dugong *Dugon dugong* has been reported to occur seasonally in seagrass beds at the site, although these reports have not been confirmed (ADB 1999).

The mudflats and sandbanks at the Man and the Biosphere Reserve are an important habitat for migratory shorebirds. ADB (1999) report that Wood Sandpiper *Tringa glareola*, Common Redshank *T. totanus*, Common Sandpiper *Actitis hypoleucos*, Grey Plover *Pluvialis squatarola*, Lesser Sand Plover *Charadrius mongolus* and Black-winged Stilt *Himantopus himantopus* occur at the site. In addition, several globally threatened and near-threatened waterbird species have been recorded at Can Gio, including Nordmann's Greenshank *Tringa guttifer*, Asian Dowitcher *Limnodromus semipalmatus*, Spot-billed Pelican *Pelecanus philippensis* and Painted Stork *Mycteria leucocephala* (Eames and Tordoff in prep.).

Conservation issues

According to ADB (1999), the core and buffer zones of Can Gio Man and the Biosphere Reserve have a human population of 1,500. There are several threats to biodiversity arising from the local population, the most significant of which are cutting mangrove trees for timber and fuelwood, and conversion of mangrove forest into aquacultural ponds. ADB (1999) report that, in recent years, pressure to develop aquaculture has increased. ADB (1999) identify several other major human impacts, including destructive fishing techniques, oil spills and sewage discharge from nearby urban areas.

Other documented values

The mangrove forest at Can Gio performs many valuable ecological functions, including coastal stabilisation, and protection against coastal erosion, oil spills and storm surges. The mangrove forest is a source of fuelwood and construction materials (ADB 1999). Being close to Ho Chi Minh City, Can Gio Man and the Biosphere Reserve has great potential as a site for tourism, public education, scientific research and training. Already, the site receives a large number of visitors from Ho Chi Minh City. Can Gio could also serve as a demonstration site for mangrove afforestation projects elsewhere in Vietnam.

Related projects

Action for Mangrove Reforestation, Japan (ACTMANG), the European Union (EU), the John D. and Catherine MacArthur Foundation, Oxfam America and UNESCO/UNDP have all funded projects to research or support mangrove rehabilitation activities at Can Gio. Between 1994 and 1996, for example, the EU funded a two-year project from entitled *Environmental Assessment of Mangrove Reforestation as a Means of Improving Coastal Protection, Stability and Fisheries Production*. This project was implemented by the Mangrove Ecosystem Research Division of the Centre for Natural Resources and Environmental Studies.

Literature sources

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