Ba Be National Park

Alternative site name(s)
Pia Bioc, Phia Booc
Province(s)
Bac Can
Status
Decreed
Management board established
Yes
Latitude
$22^0$21' - $22^0$29'N
Longitude
$105^0$34' - $105^0$42'E
Bio-unit
06a - Tropical South China

Conservation status

Ba Be was decreed as a 5,000 ha cultural and historical site on 24 January 1977, following Decision No. 41/TTg of the Prime Minister. The status of the site was reiterated by Decision No. 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986, which assigned the then Ministry of Forestry and other relevant authorities to carry out surveys and prepare an investment plan for the site (Anon. 1995).

An investment plan for Ba Be National Park was prepared by FIPI in 1992. The investment plan was approved by government Decision No. 83/TTg, dated 10 November 1992, thereby formally establishing the national park. The area given in the investment plan was 7,610 ha, comprising a strict protection area of 3,226 ha, a forest regeneration area of 4,084 ha, and 300 ha of lake surface. A management board was established by Cao Bang Provincial People's Committee on 10 November 1992 but was not ratified by MARD until 1997 (Anon 2000). Ba Be National Park is currently managed by the FPD of MARD.

The *Biodiversity Action Plan for Vietnam* (Government of SRV/GEF 1994) included a proposal to extend the national park to 50,000 ha. In 1995, an investment plan was prepared, which proposed extending the national park to 23,340 ha (Cao Bang Provincial People's Committee 1995), although this has yet to be approved by MARD. The 2010 list also includes a proposal to expand Ba Be National Park to 23,340 ha, of which 13,373 ha will be natural forest (FPD 1998).

Since the establishment of the national park, the Cao Bang-Bac Can provincial border has been re-aligned, and the national park now lies entirely within Bac Can province.

Topography and hydrology

Ba Be National Park is centred on Ba Be lake. The name Ba Be means "three lakes", although the lake is one continuous water body, 8 km long and up to 800 m wide. At an altitude of 178 m, Ba Be is the "only significant natural mountain lake in Vietnam" (Scott 1989). It is up to 29 m deep, and contains numerous small limestone islets.

The site ranges in altitude from 150 to 1,098 m. The geology of the area is predominantly limestone, with numerous rugged peaks and deep, steep-sided river valleys. The limestone karst landscape contains many caves, the largest being the 300 metre-long Phuong cave, through which the Nang river passes.

Ba Be lake is fed by the Ta Han, Nam Cuong and Cho Leng rivers, which form the above-ground hydrological system in the southern part of the national

park. The lake drains into the Nang river, which flows through the north of the park. The Nang river then flows southwards, eventually meeting the Lo river in southern Tuyen Quang province, before joining the Red River west of Hanoi.

Biodiversity value

The forest at Ba Be can be classified in to two main types: limestone forest and lowland evergreen forest. The limestone forest is distributed on steep limestone slopes with shallow soil, and covers a large proportion of the national park. This forest type is dominated by *Burretiodendron hsienmu* and *Streblus tonkinensis*. Lowland evergreen forest is distributed on shallow slopes with deeper soils. This forest type has a higher tree species diversity than limestone forest and has a richer ground flora (Hill *et al.* 1997).

Levels of disturbance are generally high, and selective logging and clearance for agriculture are commonplace. Consequently, much of the forest in the national park is disturbed and few areas of undisturbed forest remain (Hill *et al.* 1997).

A total of 603 species of vascular plant in 137 families have been recorded at Ba Be National Park, including 10 species listed in the *Red Data Book of Vietnam* (Hill *et al.* 1997).

Few in-depth faunal studies have been conducted at Ba Be to date, and the fauna of the park is still incompletely known. The best studied group has been butterflies, with 332 species having been recorded during 1997 and 1998, 22 of which were new records for Vietnam (Monastyrskii *et al.* 1998).

Of the mammal fauna, the site is of particular interest for the presence of Francois' Leaf Monkey *Semnopithecus francoisi francoisi* and Owston's Banded Civet *Hemigalus owstoni*. It is highly unlikely, however, that the globally critically endangered Tonkin Snub-nosed Monkey *Pygathrix avunculus* continues to occur within the core zone of Ba Be National Park. This species was thought to be extinct until it was rediscovered at Na Hang proposed nature reserve in 1992. Recently, populations of this species have been found elsewhere in northern Vietnam. Information from Ba Be National Park staff suggests that the species may have occurred in the north-west of the site as recently 1997, whilst other interview information and hunting trophies point to the continued occurrence of up to three groups at the southern extent of the proposed extension (N. Lormee pers. comm.). If corroborated, the presence of Tonkin Snub-nosed Monkey would greatly increase the conservation importance of the national park. At the very least, the new information provides a strong argument for a serious review of the expansion proposal.

Ba Be is unique amongst Vietnamese protected areas for the diversity of freshwater habitats. This is reflected to some extent in the diversity of fish species found at the site. However, more work needs to be conducted in this area.

Conservation issues

A total of 2,871 people from the Tay, Dao, Hmong and Kinh ethnic groups live inside Ba Be National Park (Bac Can Provincial FPD 2000). The main economic activity of these people is rice cultivation, although, because of the shortage of suitable land, they also engage in hunting and collection of forest products. Communities in the buffer zone of the national park also exploit forest resources, especially the inhabitants of villages that lie along the main access road into the centre of the national park (Nong The Dien, Vice-director of Ba Be National Park pers. comm.).

Raintree *et al.* (1999) identified the main threats to biodiversity from households in the buffer zone as follows: illegal timber and firewood collection for domestic use; illegal harvesting of other NTFPs; hunting; continued occupation of agricultural land within the national park; grazing of cattle within the national park; pollution of lake waters due to dynamite and poison fishing techniques, and solid waste and fuel pollution from tourist boats; and sedimentation of the lake due to agricultural practices in the catchments of the three rivers that feed it.

The *Biodiversity Action Plan for Vietnam* (Government of SRV/GEF 1994) proposed implementing a landscape-level conservation project to maintain habitat corridors between Ba Be National Park and Na Hang proposed nature reserve to the west. Such an approach would increase the long-term viability of both sites. This recommendation is

currently being implemented in the form of the current PARC project.

The national park has a staff of 65, based at the park headquarters and four guard stations (Bac Can Provincial FPD 2000).

Other documented values

Ba Be lake is a popular tourist destination, which received 20,000 visitors in 1999 (Nong The Dien, Vice-director of Ba Be National Park, pers. comm.). Together with the river network, the lake is also an important means of communication for local communities, and the road heads on its eastern and western shores are linked by ferry. The lake is also an important source of fish for local communities, and plays an important role in the regulation of flooding of the Nang river. Ba Be lake, therefore, has numerous economic and environmental functions, both locally and on a wider scale.

The forest at the national park protects the watershed of Ba Be lake. Without this, disruption to the aquatic ecosystem from sediment inflow would occur. Siltation of the lake would eventually reduce its floodwater buffering capacity, which would have repercussions for downstream communities along the Nang river.

Related projects

The largest conservation project currently being implemented at Ba Be National Park is the project *Creating Protected Areas for Resource Conservation Using Landscape Ecology* (*PARC*). The project document was signed on 20 November 1998, and aims at a landscape ecology approach to conservation. The project is funded by the Global Environment Facility (GEF), and is also working in Na Hang proposed nature reserve and Yok Don National Park. In Na Hang and Ba Be, the PARC project is being implemented by Scott Wilson Asia-Pacific Ltd.

The Institute of Ecological Economics (Eco-Eco) is carrying out activities in the buffer zone of Ba Be National Park, under a project entitled *Sustainable Utilisation of Non-timber Forest Products*. This is being implemented by the Non-timber Forest Products Research Centre of MARD, with funding from the Netherlands government, and with technical support from IUCN.

Helvetas and FINNIDA are also implementing projects around the park, although no details are available at present.

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