

Ba Na-Nui Chua Nature Reserve

Alternative site name(s)

Ba Na

Province(s)

Da Nang city

Area

38,210 ha

Coordinates

15°57' - 16°08'N, 107°49' - 108°04'E

Agro-ecological zone

South Central Coast

Decreed by government

Yes

Management board established

Yes

Investment plan prepared

Yes

VCF eligibility criteria met

A, B, C

Social screening criteria met

None

Conservation needs assessment prepared

No

Operational management plan prepared

No

Tracking tool completed

No

Map available

Yes

Management history

Ba Na-Nui Chua was included on Decision No. 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986, which decreed the establishment of a 5,217 ha nature reserve in former Quang Nam-Da Nang province (MARD 1997).

In 1994, an investment plan for Ba Na-Nui Chua Nature Reserve was prepared by Quang Nam-Da Nang Provincial Department of Forestry. This investment plan proposed establishing a 43,327 ha nature reserve in what are now Hien district, Quang Nam province and Da Nang city. This investment plan was approved by Decision No. 2294/TT-UB of Quang Nam-Da Nang Provincial People's Committee, dated 21 December 1994 (Anon. 1994). However, a nature reserve management board was not established at this stage.

After Quang Nam-Da Nang province was divided into Quang Nam province and Da Nang city in 1997, The area proposed for nature reserve status was divided into two areas. The area in Da Nang city was designated as Ba Na-Nui Chua Nature Reserve, with a total area of 8,838 ha, comprising a strict protection area of 3,589 ha, a forest rehabilitation area of 5,189 ha and an administration and services area of 70 ha. In addition, a buffer zone of 8,803 ha was defined (Mr. Dung, Forest Management and Protection Department, Da Nang City FPD verbally 2000). The area in Quang Nam province, however, was not designated as a

Special-use Forest (Mr. Nguyen, Forest Management and Protection Department, Quang Nam Provincial FPD verbally 2000).

A management board was established for Ba Na-Nui Chua Nature Reserve in March 1999. The management board currently has 10 permanent members of staff and 10 contracted staff, based at the headquarters and three forest guard stations (Tran Van Thang, Director of Ba Na-Nui Chua Nature Reserve verbally 2003).

Ba Na-Nui Chua is included on a list of Special-use Forests to be established by the year 2010, prepared by the FPD of MARD, as a 38,210 ha nature reserve (FPD 2003); this list has not yet been approved by the government.

Topography and hydrology

Ba Na-Nui Chua Nature Reserve is centred on Mount Ba Na, a 1,487 metre-high mountain on the border between Da Nang city and Quang Nam province. Mount Ba Na is situated to the south-east of the mountain ridge that stretches across central Vietnam, from the Annamite mountains to the Hai Van pass. However, Mount Ban Na and the montane habitats it supports are isolated from this ridge by intervening areas of lower elevation.

Streams and rivers originating in the north-west of the nature reserve feed the Ca De river, which flows

into the north of Da Nang bay, while those originating in the south and east of the nature reserve feed the Yen river, which flows into the south of the bay.

Biodiversity values

The main natural vegetation types present at Ba Na-Nui Chua Nature Reserve are lowland evergreen forest and lower montane evergreen forest. The lowland evergreen forest is characterised by the presence of tree species in the Dipterocarpaceae family, which are absent from the lower montane forest. The lower montane evergreen forest is dominated by species in the Lauraceae, Fagaceae and Podocarpaceae families. Areas which have been cleared of forest support secondary vegetation. The summit of Mount Ba Na was cleared of forest by the use of herbicides during the Second Indochina War and now supports grassland (Hill *et al.* 1996).

According to the investment plan, 543 species of vascular plant have been recorded at Ba Na-Nui Chua Nature Reserve. These include 12 species listed in the *Red Data Book of Vietnam*: including *Dalbergia cochinchinensis*, *Decussocarpus fleuryi*, *Melanorrhoea usitata* and *Dipterocarpus grandiflorus* (Anon. 1994).

According to the investment plan, 61 mammal species, 178 bird species and 17 reptile species have been recorded at Ba Na-Nui Chua (Anon. 1994). Many of the species listed in the investment plan were also recorded during surveys by Frontier-Vietnam in 1994 and 1995, which recorded 472 vascular plant species, 29 mammal species, 106 bird species, 20 reptile species, six amphibian species, 33 fish species and 126 butterfly species (Hill *et al.* 1996). Further survey work is required, however, to determine the current status of species of conservation concern at the site.

Conservation issues

In the past, the forest at Ba Na-Nui Chua was logged by forest enterprises, and gold mining and exploitation of other minerals took place at the nature reserve. Tungsten was reportedly still being exploited in 1995 (Hill *et al.* 1996).

Ba Na-Nui Chua Nature Reserve is situated close to the major population centre of Da Nang city and access to the site is good. Exploitation of forest resources is

widespread and occurring at unsustainable levels. Hunting directly threatens populations of a number of globally threatened mammal and bird species (Hill *et al.* 1996). In addition, local people occasionally go to the forest to collect rattans and other forest products, but this takes place at a relatively low level (Tran Van Thang, Director of Ba Na-Nui Chua Nature Reserve verbally 2003).

Unsustainable tourism development represents a further threat to biodiversity at Ba Na-Nui Chua, in addition to infrastructure development, visitors increase the risk of forest fire, and collect ornamental plants from within the nature reserve (Tran Van Thang, Director of Ba Na-Nui Chua Nature Reserve verbally 2003).

Other documented values

The forest at Ba Na-Nui Chua Nature Reserve protects the watersheds of the Ca De and Yen rivers. These rivers are an important source of water for irrigation, and domestic and industrial use in Da Nang city.

In 1919, the French colonists established a hill station at the summit of Mount Ba Na (Hill *et al.* 1996). In recent years, a tourism resort has been re-established at the site, with hotels, guesthouses, a cable car and a road to the summit of Mount Ba Na. Hill *et al.* (1996) warn that tourism development represents a potential threat to the biodiversity of the nature reserve. The tourism resort is managed separately, by a tourism management board, and the nature reserve management board does not currently receive any of the tourism revenue (Tran Van Thang, Director of Ba Na-Nui Chua Nature Reserve verbally 2003).

Related projects

The national 661 Programme is currently funding forestry activities in the nature reserve and buffer zone, including forest protection contracts with 200 local households and establishment of plantations of native tree species (Tran Van Thang, Director of Ba Na-Nui Chua Nature Reserve verbally 2003).

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 eligible for VCF support because it meets criteria A, B and C.

Criterion	Eligibility
A _I	CA1 - Central Annamites
A _{II}	
B _I	Decision No. 194/CT, dated 09/08/86
B _{II}	Nature Reserve
B _{III}	Under provincial management
C _I	Management board established
C _{II}	

Social screening requirements

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

Criterion	Eligibility
A	
B	
C	
D	

Literature sources

Anon. (1994) [Investment plan for Ba Na-Nui Chua Nature Reserve, Quang Nam-Da Nang province]. Da Nang: Quang Nam-Da Nang Provincial Department of Forestry. In Vietnamese.

Da Nang City (2002) [Poetic Ba Na]. Da Nang: Da Nang Publishing House. In Vietnamese.

Eve, R. (1996) Bach Ma, Hai Van, Ba Na: why protect them? Hue: EC/WWF Bach Ma National Park Project. In English and French.

Eve, R. (1996) Bach Ma, Hai Van, Ba Na: why protect them? Hue: EC/WWF Bach Ma National Park Project. In English and Vietnamese.

Eve, R. (undated) [Bach Ma, Hai Van and Ba Na: important areas for the conservation of endemic galliformes in Vietnam]. Hue: EC/WWF Bach Ma National Park Project. In Vietnamese.

Ghazoul, J., Le Mong Chan and Liston, K. (1994) Scientific report for Ba Na Nature Reserve, Vietnam. Hanoi: SEE Vietnam Forest Research Programme.

Hill, M. J. and Monastyrskii, A. L. (1999) Butterfly fauna of protected areas in north and central Vietnam collections 1994-1997. *Atalanta* 29: 185-208.

Hill, M., Le Mong Chan and Harrison E-M. (1996) Ba Na Nature Reserve: site description and conservation evaluation. London: Society for Environmental Exploration.

Le Mong Chan (undated) Some primary information on forest status and flora in the national park of Ba Be (Cao Bang), the natural reserves of Ba Na (Quang Nam-Da Nang) and Hoang Lien (Lao Cai). Unpublished report to Xuan Mai Forestry College.

Le Vu Khoi (2000) The biodiversity of the terrestrial vertebrates in Bana Nature Reserve (Quang Nam province and Da Nang city). *Tap Chi Sinh Hoc [Journal of Biology]* 22(15)CD: 154-163. In Vietnamese.

Vietnam News (2000) Foreign investment urged for Ba Na tourist park. *Vietnam News* 25 November 2000.