Phong Nha-Ke Bang National Park

Alternative site name(s)
Dong Phong Nha, Phong Nha
Province(s)
Quang Binh
Area
85,754 ha
Coordinates
$17^0$21' - $17^0$40'N, $105^0$58' - $106^0$24'E
Agro-ecological zone
North 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

The site 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 5,000 ha cultural and historical site (MARD 1997). The principal objective of the cultural and historical site was not biodiversity conservation but the protection of the extensive cave systems at the site.

In 1992, an investment plan was prepared for the site, which proposed the establishment of a 41,132 ha nature reserve (Anon. 1992). Following the approval of the investment plan, a nature reserve management board was established by Quang Binh Provincial People's Committee on 5 December 1993 (Quang Binh Provincial FPD *in litt.* 2000).

In 1999, the Forest Inventory and Planning Institute prepared a revised investment plan for the site. This investment plan proposed extending the site to incorporate the Ke Bang limestone area to the north-west, and revising the management category from nature reserve to national park. Following the approval of this investment plan, the establishment of Phong Nha-Ke Bang National Park was decreed by Decision No. 189/TTg of the Prime Minister, dated 12 December 2001. According to the Prime Minister's decision, the total area of the national park is 85,754 ha, comprising a strict protection area of 64,894 ha, a forest rehabilitation area of 17,449 ha, and an administration and services area of 3,411 ha. The boundaries of the national park decreed by the Prime Minister do not include an approximately 60,000 ha section of the Ke Bang limestone area in Minh Hoa district, which was proposed for inclusion within the national park in the investment plan.

Following the revision of the establishment of Phong Nha-Ke Bang National Park, the nature reserve management board was restructured as a national park management board, by Decision No. 24/QD-UB of Quang Binh Provincial People's Committee, dated 20 March 2002. The management board currently has 228 members of staff, based at eight guard stations, and is under the management of the provincial people's committee (Nguyen Tan Hiep, Director of Phong Nha-Ke Bang National Park *in litt.* 2003).

Phong Nha-Ke Bang National Park is included on a list of Special-use Forests to be established by the year 2010, prepared by the FPD of MARD, with an area of 85,754 ha (FPD 2003); this list has not yet been approved by the government.

In 1998, the site was nominated as a UNESCO World Heritage Site. As well as its biodiversity values, the justification for inscription included the outstanding cave systems and limestone karst landscape at the site (Nguyen Ngoc Chinh *et al.* 1998). In 2003, Phong Nha-Ke Bang National Park was inscribed as Vietnam's fifth World Heritage Site.

Topography and hydrology

Phong Nha-Ke Bang National Park is located in western Bo Trach district, close to the international border with Laos. The national park is situated in one of the largest areas of contiguous limestone karst in Indochina, which also includes Hin Namno National Protected Area in Laos. The limestone massif is located in a transitional zone between the northern and central Annamite mountains.

The topography of the national park is characterised by precipitous karst ridges, which rise to elevations of around 400 m. Scattered among these ridges are narrow valleys and pockets of igneous rock formations. Because of the limestone topography, drainage is complex and there are few permanent water courses. There are, however, the Chay, Son and Trooc rivers, all of which are fed by underground streams, which emerge from the En, Vom, Toi and Phong Nha cave systems. All three rivers flow into the Gianh river, which empties into the East Sea.

Biodiversity values

The three most comprehensive biodiversity surveys of Phong Nha-Ke Bang National Park are those of Le Xuan Canh *et al.* (1997), Kouznetsov *et al.* (1999) and Timmins *et al.* (1999). These surveys, together with the work of numerous other researchers, have recorded a high diversity of animal and plant species at the site, including a number endemic to the limestone karst massif.

The nature of the terrain at Phong Nha-Ke Bang National Park has restricted encroachment into limestone areas (Timmins *et al.* 1999). As a result, the limestone karst is almost entirely forested, apart from steep cliff faces. The only clearance of forest has been in flat valleys within the limestone massif, and in lowland areas bordering it. Natural forest covers the majority of the national park. The most widespread forest type is limestone forest but there are also significant areas of lowland evergreen forest distributed on non-calcareous substrates in valleys among the limestone karst.

The limestone forest ecosystem at Phong Nha-Ke Bang supports a high diversity of plant and animal species. Of perhaps the greatest conservation significance are several species found at the site that are endemic to this part of central Vietnam and Laos. These include Sooty Babbler *Stachyris herbeti*, a globally near-threatened species that went unrecorded between its discovery in Laos in the 1920s and its rediscovery at the site in 1994 (Eames *et al.* 1995). Phong Nha-Ke Bang also supports populations of two endemic primates, Annamese Leaf Monkey *Trachypithecus hatinhensis*, and an all-black form referred to as Black Leaf Monkey *T. ebenus*. Although Timmins *et al.* (1999) advise caution regarding the exact status and taxonomic identity of the all-black form at Phong Nha-Ke Bang.

Timmins *et al.* (1999) recorded a number of globally threatened mammals in the area, including Owston's Civet *Hemigalus owstoni* and Southern Serow *Naemorhedus sumatraensis*. In addition, the globally endangered Red-shanked Douc *Pygathrix nemaeus* has been recorded at the site by a number of authors, although the failure of Timmins *et al.* (1999) to record this species, led them to conclude that there may have been a major decline in the species there. Also, the recently described Annamite Striped Rabbit *Nesolagus timminsi* was recorded at Phong Nha-Ke Bang in 1998 (Surridge and Timmins 1999, Timmins *et al.* 1999).

With regard to the avifauna of Phong Nha-Ke Bang National Park, Timmins *et al.* (1999) recorded several globally threatened and near-threatened species, including Crested Argus *Rheinardia ocellata*, Chestnut-necklaced Partridge *Arborophila charltonii*, Red-collared Woodpecker *Picus rabieri* and Short-tailed Scimitar Babbler *Jabouilleia danjoui*. On the basis of the occurrence of four restricted-range bird species, Phong Nha-Ke Bang lies within the Annamese Lowlands Endemic Bird Area (Stattersfield *et al.* 1998). Timmins *et al.* (1999) consider Phong Nha-Ke Bang to be of particular importance for bird conservation, because the populations of species of conservation concern are not at immediate risk of extirpation or major population declines. Both Phong Nha and the adjacent Ke Bang limestone area (including the portion in Minh Hoa district, outside of the national park) qualify as Important Bird Areas (Tordoff 2002).

Conservation issues

Currently, the biggest threat to biodiversity at Phong Nha-Ke Bang National Park is hunting. Hunting takes place throughout the national park, although it is most frequent within a days walk of habitation. Most hunting is commercially orientated, with a well established wild animal trade in the area. There has been substantial commercial hunting of primates, which have resulted in major population declines. In addition, widespread snaring is of particular concern because of its effects on populations of terrestrial mammals and birds. Some large mammal species may already be on the verge of local extinction as a result of hunting, and Phong Nha-Ke Bang is no longer of significance for the conservation of Tiger *Panthera tigris*, Asian Elephant *Elephas maximus* and wild cattle (Timmins *et al.* 1999).

The national park management board currently has too few members of staff to adequately enforce national park management regulations. Because of this, timber extraction is widespread in the national park. The illegal timber trade is highly organised and networked, and it is not unusual to witness the extraction of up to 1,000 kg of timber per day. Extraction is focussed on economically valuable timber species, such as *Diospyros* spp. and *Pterocarpus macrocarpus*, and information from timber cutters indicates that these species are becoming increasingly rare, necessitating longer journeys into more remote areas to find large specimens (J. Hardcastle *in litt.* 2000).

The rate of habitat loss at Phong Nha-Ke Bang is currently low relative to other sites in the region, and is restricted to more easily accessible areas around the periphery of the national park (Timmins *et al.* 1999). However, the potential for future habitat loss and disturbance resulting from infrastructure development is high. Two planned roads will pass close to or cut through the national park, one of which will cause high levels of disturbance to known sleeping areas of Annamese Leaf Monkey and Black Leaf Monkey (J. Hardcastle *in litt.* 2000).

Tourism development is another threat to biodiversity at the site. Already the Quang Binh Tourism Company is attempting to both promote Phong Nha-Ke Bang's natural assets and manage the burgeoning numbers of visitors. Ecotourism studies by the WWF LINC project have warned of the potential risks of uncontrolled tourism development and of opening areas of the forest for picnics and tours. There is, as yet, no adequate provision for ecotourism at the national park (J. Hardcastle *in litt.* 2000).

Phong Nha-Ke Bang National Park is contiguous with Hin Namno National Protected Area in Laos and the section of the Ke Bang limestone area in Minh Hoa district. All three areas support similar limestone habitats, and the conservation of biodiversity at the three sites is inextricably linked. Transboundary cooperation is a high priority in the area, as, for example, natural resources in one country may be exploited by people from the other. First steps towards such cooperation were made by the WWF LINC Project, as part of which, meetings were held between provincial leaders and protected area managers from the two countries in 1998.

Other documented values

Phong Nha-Ke Bang has a spectacular limestone karst topography and extensive cave systems, which make it one of the most outstanding geological sites in the country. The centrepiece of the site is the Phong Nha cave, through which an underground river flows. The mouth of this cave is 30 m wide and 18 m high, and it is possible to enter up to 1.5 km into the cave (Limbert *et al.* 1990). In addition to the Phong Nha cave, 16 other caves have been surveyed to date at the site, with a total length of over 60 km (Nguyen Ngoc Chinh *et al.* eds. 1998).

The Phong Nha cave system is an increasingly popular tourist destination, with recent investment in facilities and upgrade of access. Large numbers of tourists visit the caves daily, stretching the carrying capacity. A large area of the national park has been earmarked for potential tourism development, which could have negative impacts on the limestone forest ecosystem. There clearly exists, however, the potential for successful ecotourism development that brings widespread benefits to the national park and local communities alike (J. Hardcastle *in litt.* 2000).

The Phong Nha-Ke Bang area is home to members of the Ruc and Arem sub-groups of the Chut ethnic group. Until recently, these people lived in caves. They

have now been settled in villages. The indigenous knowledge and customs of these people have yet to be adequately researched. Their existing or potential role in conservation needs to be assessed.

Related projects

During 1998, Fauna and Flora International (FFI) implemented a two-part project at Phong Nha-Ke Bang. The first part consisted of a training course for national park staff, while the second part consisted of a survey of large mammals, bats and birds (Timmins *et al.* 1999).

Quang Binh Tourism Company have been operating at Phong Nha-Ke Bang since 1995, controlling tourism to Phong Nha cave (J. Hardcastle *in litt.* 2000).

With funding from the UK Department for International Development and WWF-UK, the WWF Indochina Programme implemented a project entitled *Linking Hin Namno and Phong Nha through Parallel Conservation*. The first phase of this project ran from 1998 to 1999, and the second phase ran from 2000 to 2002. These phases focussed on capacity building for national park staff, collecting baseline data and environmental education.

With funding from the British Environmental Fund and the Flagship Species Fund of the UK Department of Environment, Food and Rural Affairs, FFI implemented the *Phong Nha-Ke Bang Conservation Awareness Project* between 2001 and 2003. The focus of this project was primate surveys and awareness raising for school pupils and visitors.

Counterpart International are currently developing an integrated conservation and development project for Phong Nha-Ke Bang National Park.

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	NA6 - Central Indochina Limestone
A_{II}	VN039 - Phong Nha; VN040 - Ke Bang
B_I	Decision No. 189/TTg, dated 12/12/01
B_{II}	National Park
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	

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