

Phong Dien Proposed Nature Reserve

Alternative site name(s)

None

Province(s)

Thua Thien Hue

Status

Proposed

Management board established

No

Latitude

16°18' - 16°35'N

Longitude

107°03' - 107°21'E

Bio-unit

05c - North Annam



Conservation status

Prior to 1993, the forest at Phong Dien proposed nature reserve was classified as production forest and, as such, was managed by logging enterprises administered by the provincial department of forestry. The value of preserving the area as a water catchment was recognised, and, in 1992, a proposal was submitted to central government for changing the status of the site to watershed protection forest.

In 1998, following the rediscovery of Edwards's Pheasant *Lophura edwardsi* at the site, Phong Dien was included on the 2010 list as a 33,900 ha nature reserve (FPD 1998). In June and July 1998, the BirdLife International Vietnam Programme and FIPI conducted a field survey in order to assess the feasibility of upgrading Phong Dien and the adjacent Dakrong Watershed Protection Forests to Special-use Forest status. The feasibility study proposed that the total area of the nature reserve should be 34,406 ha (Le Trong Trai *et al.* 1999).

In January 2000, after the contents of the feasibility study had been approved by Thua Thien Hue Provincial People's Committee, BirdLife and FIPI worked closely with the Thua Thien Hue Provincial FPD to prepare a nature reserve investment plan for Phong Dien. The draft investment plan proposes

establishing 41,548 ha nature reserve in Phong Dien and A Luoi districts. In January 2001, the draft investment plan was submitted to Thua Thien Hue Provincial People's Committee for review and approval, and it is expected that the provincial people's committee will approve the investment plan in February 2001 (R. Hughes pers. comm.).

Topography and hydrology

The topography of Phong Dien proposed nature reserve is dominated by a ridge of low mountains, which extends south-east from the Annamite mountains and forms the border between Quang Tri and Thua Thien Hue provinces. The highest points within the proposed nature reserve are Coc Ton Bhai (1,408m), Ca Cut (1,405m), Ko Va La Dut (1,409m), Coc Muen (1,298m) and Co Pung (1,615m). The proposed nature reserve is drained by three main river systems: the My Chanh, O Lau and Bo rivers.

Biodiversity value

Phong Dien proposed nature reserve, together with the contiguous Dakrong proposed nature reserve, supports the largest remaining area of lowland evergreen forest in the Annamese Lowlands Endemic Bird Area (EBA) (Le Trong Trai *et al.* 1999). Lowland areas are the most extensively deforested areas of

Vietnam (Wege *et al.* 1999), and lowland evergreen forest is perhaps the most threatened forest type in the country.

Phong Dien proposed nature reserve supports six of the nine restricted-range bird species that occur in the Annamese Lowlands EBA: Edwards's Pheasant, Annam Partridge *Arborophila merlini*, Crested Argus *Rheinardia ocellata*, White-cheeked Laughingthrush *Garrulax vassali*, Short-tailed Scimitar Babbler *Jabouilleia danjoui* and Grey-faced Tit Babbler *Macronous kellei* (Le Trong Trai *et al.* 1999, Stattersfield *et al.* 1998).

Perhaps the species of greatest conservation importance at Phong Dien is Edwards's Pheasant. Until its rediscovery in 1996, this species was believed to have been extinct in the wild. Edwards's Pheasant has a very restricted range in central Vietnam, and is only known to occur at a handful of sites. Rather little information is available about the population of Edwards's Pheasant at Phong Dien but reports from hunters suggest that this species is still relatively common in the proposed nature reserve. Detailed information is also lacking on the status of other key species recorded at the site, such as Annam Partridge and Short-tailed Scimitar Babbler, although the 1998 BirdLife/FIPI survey confirmed that Crested Argus is still common. In February 2000, an Imperial Pheasant was captured in a forest area adjacent to Phong Dien proposed nature reserve (Le Trong Trai pers. comm.). This globally threatened restricted-range species may also occur within the boundaries of the proposed nature reserve. For these reasons, Phong Dien proposed nature reserve can be considered a key site for the conservation of bird diversity in the Annamese Lowlands EBA.

The mammal fauna of Phong Dien includes a large number of species of global conservation concern, including two recently described species: Saola *Pseudoryx nghetinhensis* and Giant Muntjac *Megamuntiacus vuquangensis*. Saola and Giant Muntjac are endemic to Indochina, as are two other mammals found at Phong Dien: Buff-cheeked Gibbon *Hylobates gabriellae* and Red-shanked Douc Langur *Pygathrix nemaeus nemaeus*. Recent survey results suggest that the populations of a number of large mammal species at Phong Dien are small in size and

scattered, presumably due to the effects of hunting and disturbance (Le Trong Trai *et al.* 1999).

Conservation issues

Historically, the forest at Phong Dien has been threatened by a number of factors. The impact of war has been dramatic, and, whilst the indirect legacy of war continues to exert an influence on habitats and wildlife, new threats are now more significant. Hunting levels are now probably lower than in the post-war years due to lower animal abundance and lower availability of weapons. However, it is possible that hunting patterns have now changed in response to lower animal numbers, with the use of snares now more common than in previous years. Forest fires continue to exert an important and widespread influence on forest cover but clearance of forest for swidden agriculture is now less common (R. Hughes pers. comm.).

Different threats have distinctly different impacts on habitats and wildlife. For example, it seems likely that the most direct threat to the wildlife of Phong Dien is hunting, as this has a disproportional impact on species of highest conservation concern, notably pheasants and large mammals. Nearly half the mammals known to occur at Phong Dien are listed in the 1996 IUCN Red List of Threatened Animals, and these are usually the species most vulnerable to hunting. In the case of large carnivores, such as Tiger *Panthera tigris* and Clouded Leopard *Pardofelis nebulosa*, heavy hunting pressure on prey species may have contributed significantly to their low population densities at Phong Dien today. Alongside hunting, collection of timber and non-timber forest products (NTFPs) may well represent the most substantive threat to the remaining forest. Further research will be required to understand better whether these practices are being undertaken at sustainable or non-sustainable levels, and to explore ways of addressing these issues effectively (R. Hughes pers. comm.).

In summary, the main threats to biodiversity at Phong Dien proposed nature reserve are hunting (particularly through use of snares); collection of firewood and other NTFPs (although sustainable levels require assessment); illegal timber cutting (either for house construction or by loggers from outside the

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area); forest fires (caused by swidden cultivation, deliberate setting of fires to collect metal from bomb and shell casings, and spontaneous detonation of unexploded ordnance); and clearance of forest land for agriculture (R. Hughes pers. comm.).

Birdlife and FIPI have undertaken a number of biodiversity and socio-economic surveys in the area, and have drawn attention to the global significance of Phong Dien proposed nature reserve for a number of species of conservation importance.

Thua Thien Hue Provincial FPD have undertaken some activities aimed at conserving the biodiversity of the site. With the support of the WWF Indochina Programme, they have implemented a conservation awareness programme focussing on Tiger and globally threatened pheasant species, part of which has involved raising awareness among local communities of the threat to biodiversity posed by hunting. Another aspect of this programme has involved working with local communities to remove snares and traps. Furthermore, the WWF Indochina Programme has provided training to strengthen the capacity of local FPD staff in biodiversity conservation and management.

Other documented values

The forest at Phong Dien proposed nature reserve is likely to play an important role in protecting downstream water supplies and reducing flooding in the lowlands of Thua Thien Hue province. Poor management of the forest at Phong Dien is likely to have negative impacts on downstream communities, in the form of more severe and more sudden floods, and shortages of water for drinking, irrigation and other uses. These impacts are very likely to be significant in economic terms.

Unfortunately, the low density of large mammals, combined with a lack of prominent landscape features, limits the potential of Phong Dien proposed nature reserve for ecotourism. The nearest area of interest for tourism is Hue city, and some residual tourism could be expected to reach the proposed nature reserve from there (Le Trong Trai *et al.* 1999). With a creative approach to marketing, it may be possible to develop niche aspects of tourism in Phong Dien, especially if combined with visits to other sites in the area, for example, Tam Giang lagoon, Cau Hai lagoon, Bach

Ma National Park and the A Luoi valley, as well as sites of historical and cultural interest in Hue city itself.

Related projects

An integrated rural development project entitled the *Thua Thien Hue Rural Development Project* is currently being implemented in two districts of Thua Thien Hue province, one of which is Phong Dien. The project is funded by the government of Finland through FINIDA. The project is currently working to identify priority/critical sub-catchments, in order to improve the watershed protection services that the forest at Phong Dien provides to downstream water users. A similar project, also funded through FINIDA, operates in Quang Tri province, and offers the opportunity of providing support for contiguous forest areas within Dakrong proposed nature reserve.

The *A Luoi Area Development Project* is currently being implemented in A Luoi district and focuses on integrated development activities in agriculture, health, education and capacity-building. This project is supported by World Vision International.

Literature sources

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