

# Ke Go Nature Reserve

## Alternative site name(s)

Ho Ke Go

## Province(s)

Ha Tinh

## Area

24,801 ha

## Coordinates

18<sup>00</sup>' - 18<sup>09</sup>'N, 105<sup>50</sup>' - 106<sup>07</sup>'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

Ke Go is located in Huong Khe, Cam Xuyen and Ky Anh districts in southern Ha Tinh province; the site does not include Ke Go reservoir. Prior to 1990, the Ke Go area was under the management of Cam Ky Forest Enterprise, which managed all the forested areas in Ky Anh and Cam Xuyen districts. In 1990, Cam Ky Forest Enterprise ceased logging operations and part of the area under its management was designated as Ke Go Reservoir Watershed Protection Forest (WPF). On 1 June 1994, following Decision No. 773 QD/UB of Ha Tinh Provincial People's Committee, a management board was created for Ke Go Reservoir WPF (Le Trong Trai *et al.* 1999).

Ke Go is situated in the Annamese lowlands, an area noted for the occurrence of several endemic bird species, including the globally endangered Vietnamese Pheasant *Lophura hatinhensis* (Stattersfield *et al.* 1998). BirdLife International, in collaboration with the Centre for Natural Resources and Environmental Studies (CRES), first initiated field surveys for Vietnamese Pheasant and other endemic bird species in 1988. In early 1990, the two organisations identified the forests of Ke Go as being potentially important for the conservation of these species (Le Trong Trai *et al.* 1999). Following the rediscovery of Vietnamese Pheasant in southern Ha Tinh province in 1988 (Robson *et al.* 1991), an investment plan for Ke Go Nature Reserve was published by BirdLife

International and the Forest Inventory and Planning Institute (FIPI) in August 1996 (Le Trong Trai *et al.* 1996). This investment plan gave the total area of the nature reserve as 24,801 ha, comprising a strict protection area of 20,537 ha and a forest rehabilitation area of 4,264 ha. Following Prime Ministerial Decision No. 970/TTg, dated 28 December 1996, Ke Go Nature Reserve was decreed by the government of Vietnam. The nature reserve comprised 11,385 ha previously under the management of Ke Go Reservoir WPF, 7,511 ha previously under the management of Ky Anh II Forest Enterprise and 5,905 ha previously under the management of Ha Dong Forest Enterprise (Le Trong Trai *et al.* 1999).

The establishment of the nature reserve was approved by Ha Tinh Provincial People's Committee on 3 May 1997, following Decision No. 519/QD-UB, and a management board was formed on 12 June 1997. The management board currently has 68 permanent members of staff and 30 contracted staff, based at the headquarters and five guard stations.

Ke Go Nature Reserve is currently under the management of Ha Tinh Provincial DARD (*in litt.* 2000). Ke Go Nature Reserve is included on a list of Special-use Forests to be established by the year 2010, prepared by the FPD of MARD, as a 24,801 ha nature reserve (FPD 2003); this list has not yet been approved by the government.

## Topography and hydrology

The northern boundary of Ke Go Nature Reserve follows the southern shore of Ke Go reservoir. To the south, the nature reserve extends to the border between Ha Tinh and Quang Binh provinces. The topography of the nature reserve is comprised of low, gently undulating hills, a landscape typical of the midlands of central Vietnam. Elevations in the nature reserve range between 50 and 497 m, although most of the nature reserve is below 300 m.

There are three main catchments in Ke Go Nature Reserve. The Rao Boi catchment feeds Ngan Sau river, a tributary the Ngan Pho river, which in turn flows into the Lam River, and thence into the South China Sea. The catchment of Ke Go reservoir comprises a number of rivers and permanent streams, and covers the largest area of the nature reserve. The Chin Xai-Cat Bin watershed feeds the Khe Canh river, which flows south into Quang Binh province and, eventually, joins the Gianh river.

## Biodiversity values

Ke Go Nature Reserve supports 24,284 ha of natural forest, equivalent to 98% of the total area. However, the forest has been selectively logged in the past, 76% of it is classified as heavily disturbed, and undisturbed primary forest is virtually absent. Lightly disturbed forest is concentrated at higher elevations, while heavily disturbed forest is distributed in more accessible lowland areas. Below 300 m, the tree flora is dominated by *Michelia* spp., *Cinnamomum* spp., *Madhuca pasquieri* and *Erythrophleum fordii*. Above 300 m, the tree flora is dominated by *Hopea* spp. (Le Trong Trai *et al.* 1999).

To date, 46 species of mammal, 270 species of bird and 562 species of plant have been recorded at Ke Go Nature Reserve. A number of globally threatened mammal species have been recorded at the nature reserve. However, several of these species, in particular Asian Elephant *Elephas maximus*, Gaur *Bos gaurus* and Tiger *Panthera tigris*, may already be extinct or reduced to relict populations as a result of hunting (Le Trong Trai *et al.* 1999).

Ke Go Nature Reserve is situated in the Annamese Lowlands Endemic Bird Area, and supports five

restricted-range bird species: Vietnamese Pheasant, Imperial Pheasant *Lophura imperialis*, Crested Argus *Rheinardia ocellata*, Short-tailed Scimitar Babbler *Jabouilleia danjoui* and Grey-faced Tit Babbler *Macronous kelleyi*. Of greatest significance, Ke Go Nature Reserve, together with the adjacent forest area in northern Quang Binh province, is the only site in the world known to support a population of Vietnamese Pheasant. Because of its importance for the conservation of globally threatened and restricted-range bird species, Ke Go qualifies as an Important Bird Area (Tordoff *et al.* 2002).

## Conservation issues

The major threats to biodiversity at Ke Go Nature Reserve are hunting, illegal timber extraction, charcoal production, fuelwood collection and fragrant oil extraction (Le Trong Trai *et al.* 1999). There are 8,873 households in the buffer zone of Ke Go Nature Reserve, with a total of 39,917 people, belonging mainly to the Kinh ethnic group (Ha Tinh Provincial DARD *in litt.* 2000). Around half of these households supplement their incomes through the exploitation of forest resources such as firewood, charcoal, palm leaves, rattans and honey (Le Trong Trai *et al.* 1999).

Fragrant oil distillation is widely practised and has significantly contributed to the degradation of the forest at Ke Go Nature Reserve. Fragrant oil is distilled from *Cinnamomum parthenoxylum* and other members of the Lauraceae family. It is estimated that, for each tree fragrant oil is distilled from, 1 km<sup>2</sup> of forest is negatively affected, because the process requires large quantities of firewood (Le Trong Trai *et al.* 1999).

Timber is extracted for use locally in construction but is also illegally exported abroad. The tree species favoured for timber are *Hopea* spp., although other species of lower value are also exploited (Le Trong Trai *et al.* 1999).

Hunting also plays an important role in the local economy. Prior to the opening of Vietnam's economy, animals were hunted principally for local consumption. However, the opening of Vietnam's economy has changed this pattern significantly: foreign demand for wild animals has broadened the range of species subject to hunting and increased overall hunting pressure. Populations of large and medium-sized mammals suffer from constant hunting pressure.

Moreover, the use of non-specific hunting methods, such as traps and snares, threatens ground bird species, such as Vietnamese Pheasant (Le Trong Trai *et al.* 1999).

Ke Go Nature Reserve is contiguous with a large area of natural forest in northern Quang Binh province. This area is included within Khe Net proposed nature reserve (see Khe Net site card). Together, the two sites contain one of the largest remaining areas of natural forest in the Annamese lowlands.

## Other documented values

Ke Go Nature Reserve protects a large proportion of the watershed of Ke Go reservoir. This reservoir has high economic importance, since it supplies domestic water for Ha Tinh town and irrigates 22,000 ha of agricultural land. Similarly, the nature reserve protects part of the watershed of the Gianh river, an important source of water for irrigation in Quang Binh province (Le Trong Trai *et al.* 1999).

The potential timber and tourism values of the nature reserve are less apparent. Due to the intensity and duration of past commercial logging, the commercial timber value of the forest at Ke Go has declined significantly, to the extent that commercial logging is of questionable economic viability. The nature reserve remains, however, an important source of timber and non-timber forest products for local communities. The presence of numerous globally threatened and restricted-range bird species could attract a small number of specialised ecotourists, particularly overseas bird watchers. Overall, however, the proposed nature reserve can be considered to have low potential for general ecotourism because wildlife populations have been seriously depressed by hunting, to the point at which most mammals and large birds are very difficult to observe. In addition, Ke Go is a lowland area and lacks any major landscape features, and the nature reserve currently has no visitor facilities (Le Trong Trai *et al.* 1999).

## Related projects

Prior to the establishment of Ke Go Nature Reserve, CRES, Ky Anh District People's Committee and Ha Tinh Provincial Department of Science, Technology and the Environment implemented a

project to protect the Gat Che Me area in the east of the nature reserve. This project was supported financially by ORO-VERDE.

Between 1992 and 1998, with funding from the National Environment Programme of Vietnam, the Institute of Ecology and Biological Resources conducted a biodiversity survey of the Ke Go area.

In 1996, as part of the European Union-funded project *The Conservation of Biodiversity in the Annamese Lowlands and the Da Lat Plateau, Vietnam*, BirdLife and FIPI prepared an investment plan for Ke Go Nature Reserve.

In 1996, with funding from the Danish Embassy in Hanoi, BirdLife and Oxfam UK-Ireland implemented a one-year environmental education project. This project worked in collaboration with Ky Anh District Department of Education and Training in the buffer zone of Ke Go Nature Reserve.

Between 1997 and 1999, with funding from the British Birdwatching Fair, BirdLife implemented the *Ke Go Forest Project*. Project activities include construction of two guard stations, provision of motorbikes and other equipment, and training for nature reserve staff.

Between 1998 and 2002, the Non-timber Forest Product Research Centre of the Forest Science Institute of Vietnam and IUCN implemented the project *Sustainable Utilisation of Non-timber Forest Products*, with funding from the Netherlands Government. The aim of the project was to promote the conservation of biodiversity through the sustainable use of non-timber district forest products. Certain project activities were carried out in Cam Xuyen district, in the buffer zone of Ke Go Nature Reserve (Raintree *et al.* 1999). In 2002, a second phase of this project began implementation, and will continue until 2007.

Since 1998, the Department for International Development of the United Kingdom government has been funding a poverty alleviation programme in Ha Tinh province entitled the *Ha Tinh Poverty Programme*. This programme is being implemented by ActionAid, Oxfam Great Britain and Save the Children (UK), in collaboration with the Vietnam Women's Union (Anon. 1997a, 1998, 1999).

Forest protection activities at Ke Go Nature Reserve are currently being supported through the national 661 Programme.

## 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

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

Criterion	Eligibility
A <sub>I</sub>	NA5 - Ke Go and Ke Net Lowlands
A <sub>II</sub>	VN019 - Ke Go
B <sub>I</sub>	Decision No. 970/TTg, dated 28/12/96
B <sub>II</sub>	Nature Reserve
B <sub>III</sub>	Under provincial management
C <sub>I</sub>	Management board established
C <sub>II</sub>	

## Social screening requirements

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

Criterion	Eligibility
A	
B	
C	
D	

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