

# Ea So Proposed Nature Reserve

## Alternative site name(s)

Eaka, Ea Kar

## Province(s)

Dak Lak

## Area

22,000 ha

## Coordinates

12°49' - 13°02'N, 108°29' - 108°44'E

## Agro-ecological zone

Central Highlands

## Decreed by government

No

## 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

Prior to 1999, the Ea So area was under the management of Ea Kar Forest Enterprise. An investment plan for Ea So was prepared by the Agroforestry Department of Tay Nguyen University in 1998 (Anon. 1998). This investment plan proposed establishing a nature reserve of 27,800 ha, comprising a strict protection area of 15,959 ha, a forest rehabilitation area of 9,816 ha, and an administration and services area of 2,025 ha. The investment plan also defined a buffer zone of 34,981 ha. The investment plan was approved by Dak Lak Provincial People's Committee on 25 March 1999, following Decision No. 598/QD-UB, although it is yet to be approved by MARD (Dak Lak Provincial DARD *in litt.* 2000).

A nature reserve management board was established on 21 April 1999 by the provincial people's committee. The management board currently has 49 permanent members of staff and six contracted staff, and is under the management of Dak Lak Provincial DARD (*in litt.* 2000, 2003).

Ea So is included on a list of Special-use Forests to be established by the year 2010, prepared by the FPD of MARD, as a 22,000 ha nature reserve (FPD 2003); this list has not yet been approved by the government.

## Topography and hydrology

Ea So is situated in the Central Highlands of Vietnam. The proposed nature reserve is bisected by the Ea Puich stream, which flows from west to east. To the north of this stream lie low mountains; to the south lie lowlands, c.300 m in elevation. The proposed nature reserve ranges in elevation from 140 m in the valley of the Ea Puich stream, to 1,046 m on the north-western side of the Chu Ble Ya mountain range. All rivers and streams within the proposed reserve drain into the Ba river, which flows through Phu Yen province before entering the sea at Tuy Hoa town.

## Biodiversity values

Ea So proposed nature reserve supports a range of natural habitat types, including 11,274 ha of evergreen forest, 4,513 ha of semi-evergreen forest and 144 ha of deciduous forest. Blocks of forest are interspersed with areas of natural grassland, which is an important habitat for large mammals, particularly wild cattle (Anon. 1998). A total of 709 species of plant in 139 families are listed in the investment plan (Anon. 1998) as occurring at Ea So proposed nature reserve. This list includes 14 species listed in the *Red Data Book of Vietnam*.

Ea So proposed nature reserve supports populations of several globally threatened large mammal species.

Of particular note, the proposed nature reserve supports populations of both Gaur *Bos gaurus* and Banteng *B. javanicus* (Duckworth and Hedges 1998). The investment plan also list Asian Elephant *Elephas maximus* and Tiger *Panthera tigris*. However, Duckworth and Hedges (1998) consider Asian Elephant to be extinct at the site, the last animal being shot in the late 1980s. Furthermore, the authors consider the continued occurrence of Tiger at the site to be unconfirmed. Another mammal record of particular significance is that of the globally threatened Smooth-coated Otter *Lutrogale perspicillata*: six individuals were seen along a remote rocky stretch of the Ea Puich stream in 1997 (Duckworth and Le Xuan Canh 1998).

During a survey in 1998, Brickle *et al.* (1998) recorded two globally threatened bird species, Green Peafowl *Pavo muticus* and Pale-capped Pigeon *Columba punicea*, at Ea So, while a third globally threatened species, Germain's Peacock Pheasant *Polyplectron germaini*, was recorded at a nearby site, although not confirmed within the proposed nature reserve. As a result of its importance for globally threatened and biome-restricted bird species, Ea So qualifies as an Important Bird Area (Tordoff 2002).

### Conservation issues

According to Dak Lak Provincial DARD (*in litt.* 2000), the major threats to biodiversity at Ea So proposed nature reserve are hunting, illegal extraction of forest products and clearance of forest for agriculture. These threats are being intensified by increasing population pressure resulting from migration into Ea So commune of people from northern Vietnam and elsewhere in Dak Lak province. Only 134 people live inside the proposed nature reserve but over 3,700 people live in the buffer zone (Dak Lak Provincial DARD *in litt.* 2000).

Hunting is a particularly severe threat to the populations of large mammals at Ea So. Le Xuan Canh *et al.* (1997) reported that at least four Gaur and two Banteng were shot in the area in 1995-1996, and poaching has continued since the establishment of the nature reserve management board (Vietnam News 2003). Given the assumed small sizes of remaining

large mammal populations, these levels of hunting are unlikely to be sustainable.

The government of Vietnam is currently planning to build a highway through the area of the proposed nature reserve, to provide basic infrastructure to this remote area, and to link Dak Lak and Phu Yen provinces. This highway will improve access to the forest and grasslands of the proposed nature reserve, and, as a result, levels of human disturbance are likely to increase. Furthermore, the highway is likely to act as a focus for future migration into the area.

Spontaneous migration into the proposed nature reserve, is already a conservation issue. Lao Dong (2003b) reported that Ea Kar District People's Committee will resettle 31 households from inside the strict protection area and 11 households from inside the forest rehabilitation area; these households are in-migrants from northern Vietnam who have settled in the area since 1997.

An additional conservation issue at Ea Son is livestock grazing. Lao Dong (2003a) reported that the managers of Ea So proposed nature reserve have been renting out land within the proposed nature reserve to the Phuc An Coffee Company for grazing cattle.

### Other documented values

Ea So proposed nature reserve plays a role in protecting the watershed of the Ba river system, the most important river in Tuy Hoa province (Anon. 1998).

### Related projects

The national 661 Programme is currently supporting forestry activities at Ea So proposed nature reserve.

### 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.

## Ea So Proposed Nature Reserve

### Eligibility against VCF criteria

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

Criterion	Eligibility
A <sub>I</sub>	SA1 - Ea So Complex
A <sub>II</sub>	VN033 - Ea So
B <sub>I</sub>	Proposed Special-use Forest
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	

### Literature sources

Anon. (1998) [Investment plan for Ea So Nature Reserve]. Buon Ma Thuot: Department of Agroforestry, Tay Nguyen University. In Vietnamese.

Brickle, N. W., Nguyen Cu, Ha Quy Quynh, Nguyen Thai Tu Cuong and Hoang Van San (1998). The status and distribution of Green Peafowl *Pavo muticus* in Dak Lak province, Vietnam. Hanoi: BirdLife International Vietnam Programme and the Institute of Ecology and Biological Resources.

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Nguyen Cu (2000) Biodiversity conservation potential of Ea So proposed nature reserve, Dak Lac province. Lam Nghiep [Vietnam Forest Review] June 2000: 21-23. In Vietnamese.

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Vietnam News (2003) Ea So poachers prosecuted. Vietnam News 10 March 2003.