

# Lang Sen Proposed Nature Reserve

## Alternative site name(s)

Dong Thap Muoi

## Province(s)

Long An

## Area

1,124 ha

## Coordinates

10°45' - 10°49'N, 105°45' - 105°49'E

## Agro-ecological zone

Mekong Delta

## Decreed by government

No

## Management board established

No

## Investment plan prepared

Yes

## VCF eligibility criteria met

A, B

## Social screening criteria met

None

## Conservation needs assessment prepared

No

## Operational management plan prepared

No

## Tracking tool completed

No

## Map available

Yes

## Management history

Lang Sen is not included on any government decision or official set of proposals regarding the national Special-use Forests system (MARD 1997, FPD 2003). However, the establishment of a nature reserve at Lang Sen was proposed by Long An Provincial People's Committee in 1994, at which time an investment plan was prepared by Ho Chi Minh City Forest Inventory and Planning Sub-institute (Anon. 1994). This investment plan proposed establishing a 1,124 ha nature reserve, with the name Dong Thap Muoi (Anon. 1994). The proposal to establish a nature reserve at Lang Sen is still under consideration by MARD, and, to date, a management board has not been established. Part of the site, including much of the remaining *Melaleuca* forest, is designated as production forest, under the management of Tan Hung Forest Enterprise (Buckton *et al.* 1999, Nguyen Duc Tu 2002).

## Topography and hydrology

Lang Sen is situated in the Plain of Reeds area of the Mekong Delta. This area, which was originally dominated by seasonally inundated grasslands, has mostly been converted to agricultural land. Unlike the majority of the Mekong Delta, Lang Sen proposed nature reserve is not drained by the Mekong River, but by the western branch of the Vam Co river.

Acidification of the soil at Lang Sen appears to be severe: Buckton *et al.* (1999) recorded pH measurements as low as 3.5 in the main river channels.

## Biodiversity values

During a survey of the key wetland sites in the Mekong Delta by BirdLife International and the Institute of Ecology and Biological Resources, Lang Sen was the only site visited where semi-natural *Melaleuca* forest occurs along a natural river channel, and, as such, is of notable biodiversity value (Buckton *et al.* 1999).

The semi-natural *Melaleuca* forest occurs in patches in swampy areas, together with *Syzygium* spp., *Eleocarpus hygrophilus*, *Ficus microcarpa* and *Cassia grandis*. The majority of the *Melaleuca* forest at the site is, however, plantation forest. The ground layer of the plantation forest includes *Lasia spinosa*, *Cayratia trifolia* and *Flagellaria indica* (Buckton *et al.* 1999).

Substantial areas of lotus swamp are also present at Lang Sen. This vegetation type is characteristic of the Plain of Reeds but is now seldom found anywhere to any great extent. The plant community of lotus swamp is dominated by lotus *Nelumbo nucifera*, as well as *Nymphaea nouchali*, *N. pubescens* and *N. tetragona*. *Eleocharis dulcis*, *Ludwigia adscendens*, *Centrostachys aquatica*, *Hymenachne acutigluma*, *Coix aquatica* and *Leersia hexandra* also occur in the lotus swamp (Buckton *et al.* 1999).

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Recorded levels of bird species richness and abundance at Lang Sen low relative to certain other sites in the Mekong Delta. The commoner wetland bird species at the site include Little Cormorant *Phalacrocorax niger*, Chinese Pond Heron *Ardeola bacchus*, Cinnamon Bittern *Ixobrychus cinnamomeus*, Yellow Bittern *I. sinensis*, Black Bittern *Dupetor flavicollis* and Spot-billed Duck *Anas poecilorhyncha* (Buckton *et al.* 1999). Nevertheless, reports were received in 2002 of significant numbers of large waterbirds, including the globally vulnerable Sarus Crane *Grus antigone* and the globally near-threatened Painted Stork *Mycteria leucocephala*, using the site each year for short periods, suggesting that Lang Sen may be an important stop-over area for large waterbirds en route between their breeding areas in Cambodia and their non-breeding areas in the Mekong Delta of Vietnam (Nguyen Duc Tu 2002). Consequently, Lang Sen qualifies as an Important Bird Area (Tordoff 2002).

## Conservation issues

The area of habitat with high biodiversity values at Lang Sen is quite small. Furthermore, as the site does not yet have any effective protection, exploitation of the remaining areas of *Melaleuca* forest continues. The river channel and adjacent canals carry high levels of boat traffic and many people live in and around the site. As a result, the current levels of exploitation at Lang Sen are unsustainable. Rice cultivation and human settlement surround and encroach the site, even the semi-natural *Melaleuca* forest, which has the greatest biodiversity values (Buckton *et al.* 1999).

## Other documented values

Lang Sen proposed nature reserve is one of two large remaining semi-natural areas in the Plain of Reeds wetland ecosystem, the other being Tram Chim National Park (see site card). Currently, the site has not been developed for ecotourism. However, if well managed and protected the site has potential for recreation, ecotourism, conservation education and scientific research.

## Related projects

Lang Sen is one of the demonstration sites of the *Mekong River Basin Wetland Biodiversity Conservation and Sustainable Use Programme, Phase I*. This programme is being implemented by IUCN, the Mekong River Commission and UNDP, with funding from UNDP/GEF and SIDA. The goal of this programme is to assist countries in the Lower Mekong sub-region to develop new approaches to integrating the protection and sustainable use of wetland biodiversity with economic development. At Lang Sen proposed nature reserve, the main demonstration activities will focus on ecotourism.

The national 661 Programme is currently funding forestry activities at the site.

## 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

Lang Sen is currently ineligible for VCF support because it is not under appropriate conservation management.

Criterion	Eligibility
A <sub>I</sub>	LMF2 - Northwestern Mekong Delta Wetlands
A <sub>II</sub>	VN007 - Lang Sen
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>	
C <sub>II</sub>	

## Social screening requirements

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

## Lang Sen Proposed Nature Reserve

Criterion	Eligibility
A	
B	
C	
D	

### Literature sources

Anon. (1994) [Investment plan for Dong Thap Muoi Nature Reserve, Lang Sen, Vinh Hung district, Long An province]. Tan An: Long An Provincial Department of Agriculture and Rural Development and Ho Chi Minh City Sub-FIPI. In Vietnamese.

Buckton, S. T., Nguyen Cu, Ha Quy Quynh and Nguyen Duc Tu (1999) The conservation of key wetland sites in the Mekong Delta. Hanoi: BirdLife International Vietnam Programme.

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Nguyen Duc Tu (2002) Report on a visit to Long An province, 26 to 29 March 2002. Unpublished report to the BirdLife International Vietnam Programme.

Scott, D. A. (1989) A directory of Asian wetlands. Gland: IUCN.

Tordoff, A. W. ed. (2002) Directory of important bird areas in Vietnam: key sites for conservation. Hanoi: BirdLife International in Indochina and the Institute of Ecology and Biological Resources.