

Xuan Thuy Nature Reserve

Alternative site name(s)

None

Province(s)

Nam Dinh

Status

Decreed

Management board established

Yes

Latitude

20°11' - 20°16'N

Longitude

106°30' - 106°37'E

Bio-unit

05c - North Annam



Conservation status

Xuan Thuy Nature Reserve is located in Giao Thuy district, Nam Dinh province (formerly Xuan Thuy district, Nam Ha province). On 6 August 1988, the government of Vietnam nominated Xuan Thuy wetlands as the country's first Ramsar Site, by Official Letter No. 1302/KG of the Chairman of the Council of Ministers (Anon. 1993). Xuan Thuy was designated as a Ramsar Site by the Bureau of the Convention on Wetlands of International Importance (Ramsar Convention) on 20 September 1988, with an area of 12,000 ha (Ramsar 2000). On 20 January 1989, Vietnam became a contracting party to the Ramsar Convention (Anon. 1993).

In 1993, an investment plan was prepared by FIPI, which proposed establishing a 5,640 ha nature reserve (Anon. 1993). On 5 September 1994, by Official Letter 4893/KGVX, the government of Vietnam decreed the establishment of Xuan Thuy Nature Reserve, with an area of 7,100 ha (MARD 1997). In 1995, a revised investment plan was prepared by FIPI, which proposed establishing a 7,680 ha nature reserve (FPD 1998). This investment plan was approved by the former Ministry of Forestry on 19 January 1995, by Decision No. 26/KH-LN (Nam Dinh Provincial FPD 2000).

Following the approval of the revised investment plan, a management board was established by the former Nam Ha Provincial People's Committee on 1 October 1995. Xuan Thuy Nature Reserve is managed at the provincial level by Nam Dinh Provincial Forest Protection Department (Nam Dinh Provincial FPD 2000). Xuan Thuy is included on the 2010 list with a total area of 7,680 ha, including 855 ha of forest (FPD 1998).

Topography and hydrology

Xuan Thuy Nature Reserve is situated in the coastal zone of the Red River Delta, at the mouth of the main channel of the Red River, known as the Ba Lat river. The site comprises three islands and intervening areas of intertidal mudflats. Ngan island, the largest island, consists mainly of aquacultural ponds, most of which contain mangrove. Lu island consists of a large sandy area, as well as coastal marshes and a small area of aquacultural ponds. Xanh island, the smallest island, is a thin sandy island, which is still increasing in size as a result of deposition of sediment carried by the Red River. This island, together with parts of Luu island, is submerged at high tide.

The southern boundary of the nature reserve is formed by the estuary of the Vop river. The maximum elevation at the site is only about 3 m, while the marine

part of the site reaches depths of up to 6 m below sea level.

Biodiversity value

Xuan Thuy Nature Reserve supports a total of 14 habitat types, including both natural and man-made ones (Pedersen and Nguyen Huy Thang 1996). The habitat types with the greatest biodiversity value are undisturbed mudflats and natural mangroves. The dominant mangrove species is *Kandelia candel*, although a few *Sonneratia caseolaris* have been planted, and *Aegiceras corniculatum* and *Acanthus ilicifolius* have spread naturally (Pedersen and Nguyen Huy Thang 1996). Much of the mature mangrove at the site has been enclosed within aquacultural ponds, although large areas of mudflat in the south of the site have been planted with a monoculture of *K. candel*. In 1996, a 300 ha *Phragmites* sp. reedbed occurred in aquacultural ponds on Ngan island (Pedersen and Nguyen Huy Thang 1996). However, this reedbed had largely disappeared by 2000 (J. Eames pers. comm.). Luu island supports extensive *Casuarina equisetifolia* plantations, which are an important habitat for migratory passerines.

As a result of its habitat diversity and relative intactness, Xuan Thuy Nature Reserve is an important staging and wintering area for migratory waterbirds. During surveys in 1988 (Scott *et al.* 1989) and 1994 (Pedersen *et al.* 1996), more than 20,000 waterbirds were observed. During the spring of 1996, it was estimated that more than 33,000 shorebirds passed through the nature reserve (Pedersen and Nguyen Huy Thang 1996).

Nine species of globally threatened and near-threatened birds are regularly recorded at the nature reserve: Black-faced Spoonbill *Platalea minor*, Chinese Egret *Egretta eulophotes*, Nordmann's Greenshank *Tringa guttifer*, Saunders's Gull *Larus saundersi*, Spot-billed Pelican *Pelecanus philippensis*, Spoon-billed Sandpiper *Calidris pygmeus*, Painted Stork *Mycteria leucocephala*, Asian Dowitcher *Limnodromus semipalmatus* and Grey-headed Lapwing *Vanellus cinereus*. Of greatest note, Xuan Thuy supports 26% of the known world population of Black-faced Spoonbill and 2% of the estimated world

population of Saunders's Gull (Pedersen and Nguyen Huy Thang 1996).

Conservation issues

Despite the fact that Xuan Thuy is Vietnam's only Ramsar Site, it has insufficient funding, infrastructure and equipment, and the staff have limited training. Due to these constraints, the nature reserve staff are unable to plan and implement effective wetland management. The staff also lack access to the means of learning from successful management approaches elsewhere. As a result of these constraints, critical management practices at the site are incompatible with biodiversity conservation. Most seriously, mudflats, which are the preferred feeding habitat of Black-faced Spoonbill, Saunders's Gull, Spoon-billed Sandpiper and several other globally threatened bird species, are being planted with mangrove, with the objectives of land reclamation and foreshore protection. This is changing the nature of the substrate, and threatening to make these areas unsuitable for the globally threatened bird species. Furthermore, sandy islands in the nature reserve, which support dune and saltmarsh vegetation, are being afforested with the Australasian exotic tree species *Casuarina equisetifolia*, resulting in a reduction in the area of natural habitat.

Additional threats to conservation at Xuan Thuy are the steady intensification of aquaculture, which is leading to a die-back of emergent vegetation, and unsustainable levels of fishing and shellfish collection in the intertidal zone, which may be disturbing the globally threatened bird species, either directly and indirectly. These threats arise from the high population density in the Red River Delta, the shortage of agricultural land and economic pressures. However, they also reflect a lack of appreciation among key stakeholders of the ecological and economic importance of wetlands in the context of regional development.

In order to ensure the long-term sustainability of the nature reserve, three things are necessary. Firstly, a programme of training for nature reserve staff. Secondly, a management plan that balances the economic, coastal protection and biodiversity values of different habitat types and promotes environmentally sustainable land-use practices. Thirdly, a financing

mechanism for the nature reserve that reduces the dependence of nature reserve managers on funds for mangrove afforestation, an activity which is incompatible with conservation of mudflats and the globally threatened bird species that depend on them.

Other documented values

Xuan Thuy Nature Reserve is of considerable importance for fisheries production. In the former Xuan Thuy district as a whole, about 200 tonnes of shrimps, 50 tonnes of crabs and 1,200 tonnes of molluscs were produced in 1987. The nature reserve contains a large area of aquacultural ponds, and a large number of people collect shellfish on the intertidal mudflats. The production of honey used to be important for the local economy. In 1988, honey output of the area reached 50 tonnes per year, with bees feeding on mangrove nectar. By 1993, this had fallen sharply to 10 to 15 tonnes per year, due to loss of mangrove associated with aquacultural pond construction (Anon. 1993).

Xuan Thuy Nature Reserve receives few visitors at the present time, due to difficult access, necessity of written permission and shortage of suitable accommodation. However, as Vietnam's first Ramsar Site, Xuan Thuy Nature Reserve has high potential as a site for ecotourism, public education and training of forest protection staff from other wetland protected areas.

Related projects

Prior to 1999, the national 327 Programme was the main source of investment funding for the activities of Xuan Thuy Nature Reserve management board. Since 1999, the national 661 Programme has replaced the 327 Programme as the most important source of investment funding.

The Mangrove Ecology and Research Division (MERD) of the Centre for Natural Resources and Environment Studies (CRES) are currently developing a medium-sized Global Environment Facility (GEF) project through UNDP. This project, which is entitled *Conservation of Coastal Wetlands in the Red River Delta, Vietnam*, is expected to be implemented at five sites in three provinces: Ninh Binh, Nam Dinh and

Thai Binh. The objective of this project will be the long-term conservation and sustainable use of biodiversity in the coastal zone of the Red River Delta.

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