Thai Thuy Proposed Nature Reserve

Alternative site name(s)
Thai Thuy estuary
Province(s)
Thai Binh
Status
Proposed
Management board established
No
Latitude
$20^0$28' - $20^0$37'N
Longitude
$106^0$35' - $106^0$42'E
Bio-unit
06a - Tropical South China

Conservation status

The Thai Thuy district side of the Thai Binh estuary was one of seven key wetland sites in the coastal zone of the Red River Delta identified by Pedersen and Nguyen Huy Thang (1996b). In 1996, Thai Thuy District People's Committee nominated the area for nature reserve establishment, and this proposal was supported by Thai Binh Provincial People's Committee and MARD (Nguyen Huy Thang *et al.* 2000). An investment plan for Thai Thuy was prepared by FIPI and Thai Thuy District FPD in July 1997, which proposed establishing a nature reserve of 13,696 ha, comprising a strict protection area of 4,463 ha, a forest rehabilitation area of 7,695 ha and an administration and services area of 1,538 ha (Anon. 1997). Thai Thuy is included on the 2010 list as a 13,696 ha nature reserve, including 2,939 ha of forest (FPD 1998).

Topography and hydrology

Thai Thuy proposed nature reserve is bordered by the Tra Ly river to the south and by the Thai Binh river to the north. The proposed nature reserve is bisected by the Diem Ho river, which flows into the sea between the Tra Ly and Thai Binh rivers. To the south of the Thai Binh river mouth are located extensive areas of mudflats, formed as a result of deposition of sediment. To the west lies an area of salt pans and, adjacent to the Tra Ly river, is a region of aquaculture ponds.

Biodiversity value

Thai Thuy proposed nature reserve includes the largest remaining tract of old-growth mangrove forest in the Red River Delta. Approximately 400 ha of natural mangrove forest, dominated by *Sonneratia caseolaris*, remains at Thai Thuy. This old-growth forest is estimated to be about 50 years old. Most of the mangrove forest at Thai Thuy, however, consists of plantations of *Kandelia candel* (Pedersen and Nguyen Huy Thang 1996b).

Anon. (1997) identified four main habitat types at the proposed nature reserve. Natural mangrove forest dominated by *Sonneratia caseolaris* occupies 300 ha of the proposed nature reserve, and is distributed near the mouths of the Thai Binh and Tra Ly rivers. This habitat type also contains *Kandelia candel* and *Aegiceras corniculata*, and is a suitable habitat for waterbirds. Mangrove plantations dominated *Kandelia candel* covers 2,588 ha of the proposed nature reserve. Plantations of *Casuarina equisetifolia* cover 44 ha of the proposed nature reserve. Aquacultural ponds dominated by *Cyperus malaccensis* and *Phragmites vallatoria* mixed with *C. tegetiformis*, which cover 175 ha in the north of the proposed nature reserve, are

an important nesting habitat for several species of waterbird.

Thai Thuy proposed nature reserve supports wintering populations of at least three globally threatened or near-threatened species of waterbird: Black-faced Spoonbill *Platalea minor* (critically endangered), Saunders's Gull *Larus saundersi* (endangered) and Black-headed Ibis *Threskiornis melanocephalus* (near-threatened) (Pedersen and Nguyen Huy Thang 1996b).

Conservation issues

Hunting is, perhaps, the biggest threat to biodiversity at Thai Thuy. Hunters from Thai Binh town and Hai Phong city often come to Thai Thuy in the winter to hunt birds. Pedersen and Nguyen Huy Thang (1996b) reported the use of mist nets, airguns and shotguns in the old-growth forest. Also, the authors observed buffalo and cattle grazing in the mangrove forest, people extracting wood from the mangrove forest, and women collecting *Phragmites* from the aquacultural ponds for fuel.

Nguyen Huy Thang *et al.* (2000) consider that the following factors should be taken into consideration for future management of the site: (i) further expansion of aquacultural ponds within the wetland is likely to have a serious negative impact on the ecosystem and should, therefore, be prohibited or kept to a minimum; (ii) if agricultural runoff in the form of chemical pesticides, fertilizers and growth hormones continues to flow into the rivers unchecked, it will have a devastating effect on both the ecosystem and the fisheries harvest; (iii) waste treatment at two existing industrial processing enterprises is not thorough, and is having a negative impact on the ecosystem of the Diem Ho river; and (iv) future land-use planning needs to consider the dumping of domestic waste to avoid potential negative impacts.

Other documented values

Thai Thuy proposed nature reserve includes a large area of aquacultural ponds, which are managed using a variety of methods. Aquaculture is based on fish and crabs, although algae is also harvested from the ponds. Shellfish are collected on the intertidal mudflats, however, afforestation with mangrove has reduced their utility for shellfish collection. The unique area of old-growth mangrove at Thai Thuy has potential educational value (Pedersen and Nguyen Huy Thang 1996b).

Related projects

The coastal zone of Thai Thuy district was the focus of a project entitled the *Thai Binh Environmental Preservation Project*, implemented by Danish Red Cross and Vietnam Red Cross. The principle objectives of this project were to plant mangrove and to protect existing mangrove. In the first two years of the project, 1,000 ha of mangrove were planted in the five coastal communes of Thai Thuy district (Humphries 1995).

The Mangrove Ecology and Research Division of the Centre for Natural Resources and Environment Studies are currently developing a medium-sized Global Environment Facility (GEF) project throught 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.

Literature sources

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