

## CURRENT THREATS AND FUTURE DEVELOPMENT OF SETIU WETLANDS, MALAYSIA

ROSNIZA RAMLI<sup>1</sup>, NIK MOHD KAMEL NIK HASSAN<sup>2</sup> and ZALEHA KASSIM<sup>3</sup>

<sup>1</sup>Environmental Consultant, Dr. Nik & Associates Sdn. Bhd., 24, Jalan 1/27F, Section 5, Pusat Bandar Wangsa Maju, 53300 Kuala Lumpur, Malaysia  
(Tel: +603-41428866, Fax: +603-41458877, e-mail: rosniza@drnik.com.my)

<sup>2</sup>Managing Director, Dr. Nik & Associates Sdn. Bhd. 24, Jalan 1/27F, Section 5, Pusat Bandar Wangsa Maju, 53300 Kuala Lumpur, Malaysia  
(Tel: +603-4145888, Fax: +603-41458877, e-mail: irdrnik@drnik.com.my )

<sup>3</sup>Lecturer, Department of Marine Sciences, University College of Sciences & Technology Malaysia, Mengabang Telipot, 21030 Kuala Terengganu, Malaysia  
(Tel: +09-6683320, Fax : +09-6694660, e-mail: zalehakassim@kustem.edu.my)

Setiu Wetlands are among the prominent features of Terengganu coastline and comprised of several ecosystems of environmentally sensitive areas (Figure 1). This natural occurrence has provided Setiu Wetlands as a very unique environment rich in fisheries and coastal resources. These resources are currently being utilized by the locals and become a very major source of income through various aquaculture and local tourism activities. Setiu Wetlands comprise of lagoon (northern and middle part), mudflats, freshwater (southern), estuarine, mangroves, seagrass beds, open beaches as well as 24 small islands. However, despite of its important ecological functions and services (Ayyad, 2003), the Setiu Wetlands are threatened by several anthropogenic activities which continuously degrading its environment. These are agriculture, aquaculture, destruction of mangroves, boating and etc. Besides that, it is also prone to natural forces i.e erosion, siltation causing the river mouth to be frequently shifted, making it very risky and unsafe for navigation for the local fishermen. It is obvious that there are three major factors which are deemed important to be considered, implemented and integrated i.e. (1) conserving or protecting its ecology and natural resources, (2) mitigating or eliminating the cause of pollution and habitat destruction, (3) meeting the safety need of the locals. Conserving, developing and managing such wetlands are not necessarily incompatible. These shall and should be in the context of a wider sustainable integrated coastal zone management that coordinates the needs of various sectors (Basiron, 1998).

*Keywords:* wetlands, resources, threats, sustainable

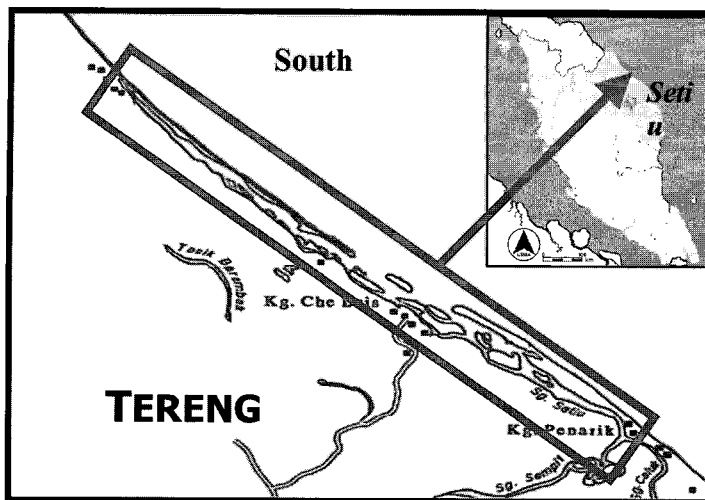


Fig. 1 Setiu Wetlands

#### REFERENCES

- Ayyad, M.A (2003). Case studies in the conservation of biodiversity: degradation and threats. *Journal of Arid Environments* (2003) 54: 165–182.
- Basiron, M.N (1998). The implementation of Chapter 17 of Agenda 21 in Malaysia Challenges and Opportunities. *Ocean & Coastal Management*. 41:1-17.