

Shrimp Farming : A Coastal Crisis

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At present, the major non-point source pollution of coastal seas in Thailand is the large amount of waste which is discharged daily from shrimp farms directly into the sea. Natural bio-degradability could be sustained in the open seas, but it tends to be much more difficult to sustain in enclosed coastal seas, which are distributed along 2,600 km. of the coastline of Thailand. The area of shrimp farms, which was recorded as 121 sq.km in 1974, has cumulatively grown to 1,804 sq.km. in 1982. Because the profit per unit of investment period in shrimp farming is very high, investors and local people seaked available areas in order to expand their farms, or became shrimp farmers in place of their previous occupation. Areas suitable for shrimp farming are mangrove and overlapped areas between mangrove and paddy fields. Thus, the expansion of shrimp farming resulted in the reduction of mangrove area from 3,127 sq.km. in 1975 to 1,806 sq.km. in 1989.

The insufficiencies of the current control systems on shrimp farming can be identified as : outdated laws, poor enforcement on regulations and zoning, lack of specific policies for enclosed coastal seas, conflict and lack of integration among agencies concerned, corruption, shortage of available oceanographic data and of oceanographers, insufficient concern for education and mass media, lack of NGOs pertaining to enclosed coastal sea, and weak environmental ethics of shrimp farmers. The reorganization of the Office of National Environment Board (ONEB) and the improved environmental law based on the concept of "Polluter Pay Principle" are failing to cover non-point source polluters such as shrimp farmers. However, integrated management, sea water irrigation and simple waste treatment systems including shrimp waste utilization have been used and studied to improve the quality as sustainable development tools in some enclosed coastal seas in order to protect mangrove encroachment and polluted sea water.