



EXECUTIVE SUMMARY

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For national consultations

BACKGROUND

In April 2009, the Bay of Bengal Large Marine Ecosystem Project commenced.

This five year project involving Indonesia, Malaysia, Thailand, Myanmar, Bangladesh, India, Sri Lanka and the Maldives aims to *improve the lives of the coastal populations through improved regional management of the Bay of Bengal environment and its fisheries.*

The BOBLME countries have a combined total population of 1.78 billion. This is equivalent to 25% of the world's population, and includes a coastal population of 450 million people. The region is rich in natural resources that include extensive mineral and energy resources, marine living resources that support major fisheries, and forest and land resources. The current fisheries production is 6 million tonnes per year, which amounts to more than 16% of the world's marine catch.

The LME supports a wide range of habitats, including extensive tracts of mangroves (12% of the world's mangroves), coral reefs (8% of the world's coral reefs) and seagrass beds. It is an area of high biodiversity, with a large number of endangered and vulnerable species. The LME and its natural resources are of considerable social and economic importance to the bordering countries. Activities such as fishing, marine farming, tourism and shipping contribute to food security, employment and national economies.



Over 50% of the world's coastal poor people live in the BOBLME countries. The marine living resources are extremely important for the livelihoods of millions of people and their communities, in particular as source of food.

There are over 400,000 fishing boats (both motorized and non-motorized) operating in the LME, and over 4.5 million people employed in the associated fisheries activities.

Rapid population growth, high dependence on aquatic resources for food, trade, livelihoods, and as well as increased land use are having major impacts on the marine ecosystem. As a result, it is not clear how much longer the Bay of Bengal will be able to support the aspirations of the many sectors wanting to use the resources, including the poor coastal populations that depend on them for survival.

THE TRANSBOUNDRY DIAGNOSTIC ANALYSIS

The BOBLME TDA is the culmination of seven years of work.

A TDA identifies, quantifies and ranks water-related environmental transboundary issues, and their causes, according to the severity of environmental and/or socio-economic impacts. The BOBLME's TDA is the culmination of seven years of work, including numerous studies and extensive regional and national consultations held with stakeholders. The TDA provides the scientific basis for the collaborative development of the Strategic Action Programme that will formulate nationally and regionally coordinated activities to address the issues and their causes.



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THE TDA IDENTIFIES THREE MAIN AREAS OF CONCERN

1. *Overexploitation of the marine living resources*
2. *Degradation of mangroves, coral reefs and seagrass*
3. *Pollution*

A causal chain analysis was undertaken on these three areas, and this has resulted in the identification of the priority issues under each area of concern, and their underlying causes. A summary of the TDA is presented in the following boxes.

It should be noted that some important national issues may not be included in this TDA. A transboundary issue is defined as an environmental problem in which either the cause of the problem and/or its impact is separated by a national boundary; or the problem contributes to a global environmental problem and finding regional solutions is considered a global environmental benefit.

The TDA also reviews the socio-economic, institutional, legal, administrative, and climate change driving forces at work in the BOBLME. These forces pose a range of constraints and challenges to the success of actions implemented to address the three main areas of concern. This information will be an important input to the development of the Strategic Action Programme.



OVEREXPLOITATION OF THE LIVING MARINE RESOURCES

The major issues

1. Decline in overall availability of fish resources
2. Changes in species composition of catches
3. High proportion of juvenile fish in the catch
4. Changes in marine biodiversity, especially through loss of vulnerable and endangered species

The transboundary nature of the major issues

- Many fish stocks shared among BOBLME countries either through transboundary migration of fish or larvae
- Fishing overlaps national jurisdictions, both legally and illegally - overcapacity and overfishing in one location forces a migration of fishers and vessels to other locations
- All countries (to a lesser or greater degree) are experiencing difficulties in implementing fisheries management, especially the ecosystem approach
- BOBLME countries contribute significantly to the global problem of loss of vulnerable and endangered species

The root causes of the issues

- “Open access” regime
- Increasing fishing effort, especially trawlers and purse seiners
- High consumer demand for fish, including for seed and fish meal for aquaculture
- Weak fisheries MCS and enforcement
- Strong incentives to encroach into areas with better returns



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DEGRADATION OF CRITICAL HABITATS

The major issues

1. Loss and degradation of mangrove habitat
2. Degradation of coral reefs
3. Loss and damage to seagrasses

The transboundary nature of the major issues

- All three critical habitats occur in all BOBLME countries
- Coastal development for other uses of the land and sea are common in all BOBLME developing countries
- Trade in products from all the habitats is transboundary in nature
- Climate change impacts are shared by all BOBLME countries

The root causes of the issues

- Food security needs of the coastal poor
- Lack of national, provincial/state coastal development plans
- Increasing trade (both domestic and export) for habitat-related products
- Coastal development and industrialization
- Ineffective marine protected areas and lack of enforcement
- Intensive upstream agricultural practices.
- Increasing tourism
- Climate change



POLLUTION

The major issues

1. Sewage-borne pathogens and organic load
2. Solid waste/marine litter
3. Increasing nutrient inputs
4. Oil pollution
5. Persistent organic pollutants (POPs) and Persistent toxic substances (PTSs)
6. Sedimentation
7. Heavy metals

The transboundary nature of the major issues

- Discharge of untreated/partially treated sewage is a common problem; sewage and organic discharges from the Ganges-Brahmaputra-Meghna system are likely to be transboundary
- Plastics and derelict fishing gear can be transported long distances across national boundaries
- High nutrient discharges from rivers could intensify large-scale hypoxia; atmospheric transport of nutrients is inherently transboundary
- Differences among countries with regard to regulation and enforcement of shipping discharges may drive discharges across boundaries; tar balls are transported long distances
- POPs/PTSs and mercury including organomercury undergo long-range transport
- Sedimentation and most heavy metal contamination tend to be localized and lack a strong transboundary dimension

The root causes of the issues

- Increasing coastal population density and urbanization
- Increasing per capita consumption
- Migration of industry into BOBLME countries, and a proliferation of small industries
- Low per-capita GDP