

Coastal resources in danger



Over the past 40 years, the country has undergone tremendous changes in its pursuit of economic growth, and at the local level there has been a movement away from subsistence livelihoods to an increased focus on monetary income. The main challenges the country now faces are the rapid degradation of marine and coastal resources and the multiple consequences of urbanization and industrial and tourism development. The unsustainable development models in use are placing a tremendous strain on the limited marine and coastal resources and the livelihoods of small-scale fishers, while policies and legislative, institutional and operational frameworks fail to support local communities in exercising their constitutional rights.

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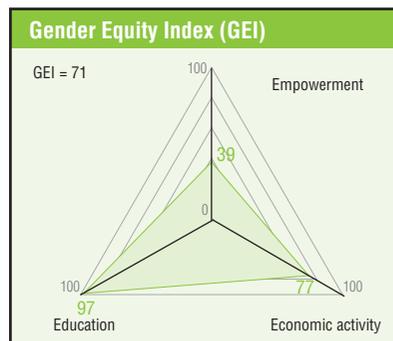
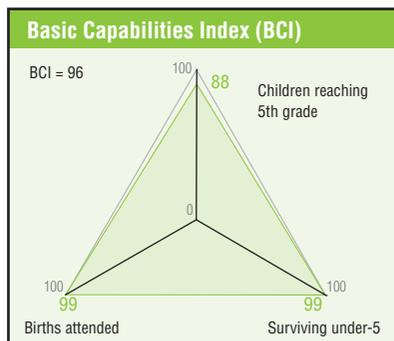
The lives and livelihoods of around 13 million Thai are directly dependent on the use of marine and coastal resources. Thailand's waters cover an area of around 350,000 km² and the country has some 35,000 km² of coastal land.¹ Important natural habitats and natural resources include beach forests, sea grass beds, minerals, ores, oil and natural gas. The country also has an estimated 12,000 km² of coral reefs with a biodiversity of at least 240 different species, and 1,964 km² of mangrove forests comprising 35 different species.²

Major industries dependent on marine and coastal resources include capture fishery, aquaculture fishery, tourism, transportation of produce and merchandise, heavy industry and power generation. Thailand is estimated to derive some THB 7,500 billion (around USD 250 million) from its marine and coastal resources each year.³

Thailand's coastal waters have traditionally been rich and productive, characterised by high biodiversity and large, healthy populations. These abundant resources have contributed to the development of a robust fisheries sector. Both capture fishery and aquaculture fishery are important to the country's economy, with Thailand accounting for 3% of total fish catch and nearly 2% of total aquaculture production globally in 2003. Its annual marine fish catch is valued at over THB 120 billion (around USD 4 billion).

Small-scale fishing

Thailand's 2007 Constitution enshrines the rights of traditional or local communities to participate in the conservation, care, management and balanced and sustainable use of natural resources and the environment. However implementation and operation by Government agencies at the local level often fail



to promote, support and facilitate local communities in exercising their constitutional rights, and in many cases the approaches employed by Government agencies contradict those rights.

That is, for example, the situation in the case of small-scale fishers. Over 60,000 households from 4,000 villages are engaged in fishing, of which around 93% are small-scale fishers who account for around 9% of the country's annual catch.⁴ They make use of traditional, handmade fishing boats and fishing gear, which effectively limit them to fishing only in waters within 3 to 5 km of the shore. This makes them especially vulnerable to local changes in the condition of marine and coastal resources.⁵

Sustainability challenges

Marine animal populations in Thailand's waters are in a degraded state as a result of fishing beyond the sea's carrying capacity. The Gulf of Thailand has been particularly affected, and the country has been exceeding the highest sustainable annual catch (1.4 million tons) since 1972.⁶ Other challenges include the failure to eradicate the use of push nets, the

lack of control over the use of dragnets, and the fuel subsidies and low-paid migrant labour that allow the commercial fishery sector to maintain artificially low costs.

Aquaculture fishery has also greatly affected the condition of marine and coastal resources. The Department of Marine and Coastal Resources reports that nearly 74,640 hectares of mangrove forest have been used for aquaculture fishery, in particular shrimp farms.⁷

In the Trang province (on the Andaman Sea coastline), large commercial fishing boats employing destructive fishing gear such as push-nets and dragnets have devastated local marine resources, drastically reducing fish populations in a very short period of time and bringing damage and destruction to invaluable marine ecosystems such as coral reefs and sea grass beds. Such large commercial fishing boats have been found operating within the 3,000 metres nearshore zone reserved specifically for small-scale fishing, and even within the boundaries of local marine protected areas.

In the Nakorn Sri Thammarat province on the Gulf of Thailand coastline, illegal dredging for surf clams has caused rapid degradation of the marine environment.⁸ The illegal dredgers tend to operate during the monsoon season (when small-scale fishers are unable to put to sea) and excavate material from the seabed to a depth of 1 metre or more. An area dredged in this way can take five or six years to return to its previously abundant state. Furthermore, illegal dredging can also cause

1 Thailand Reform Office, *Reforming the Structure of Marine and Coastal Resource Management*, (Bangkok: March 2011), pp. 1–2.

2 Ibid., p. 1

3 C. Cheung, et al. (comp.), *Marine Protected Areas in Southeast Asia* (Los Baños, Philippines: ASEAN Regional Center for Biodiversity Conservation – Department of Environment and Natural Resources, 2002), p. 86.

4 M. Unkulvasapaul, et al., *Thailand Environment Monitor 2006: Marine and Coastal Resources* (Washington, DC: International Bank for Reconstruction and Development / The World Bank, 2007), pp. 8–10.

5 R. Prasertcharoensuk and J. Shott, *Samudra Mongraph: Time for a Sea Change – A Study of the Effectiveness of Biodiversity Conservation Measures and Marine Protected Areas Along Southern Thailand's Andaman Sea Coastline*, (Chennai, India: International Collective in Support of Fishworkers, 2010), <www.icsf.net/icsf2006/uploads/publications/monograph/pdf/english/issue_110/ALL.pdf>.

6 Ibid.

7 Ibid.

8 Ibid.

damage and destruction to the fishing gear of local small-scale fishers.⁹

When marine and coastal resources become degraded, small-scale fishing tends to be more severely affected than commercial fishing. Unlike commercial fishers, small-scale fishers are unable to venture further out into deep offshore waters. While in theory they might decide to travel daily to neighbouring areas where resources are less severely degraded, in practice they have very meagre incomes, so additional fuel costs could threaten their livelihoods.

Urbanization, industrial development and tourism

Thailand's coastal provinces have been transformed by urbanization, industrialization and tourism development, which have had a range of negative effects on both marine and coastal resources and the livelihoods of small-scale fishers. There is increased demand and competition for land, with the privatization of coastal land and nearshore waters restricting access. Moreover, environmental changes and pollution have affected the availability and condition of marine and coastal resources and have exacerbated existing issues such as coastal erosion.

Small-scale fishing communities must, through necessity, be located on the coastline, because they typically moor their boats on sandy beaches or in coastal inlets. Even relatively small developments that affect the navigation of nearshore waters, such as the construction of privately owned marinas, can have a profound impact on them because of the additional fuel, and therefore additional expenditure, required to navigate around such structures.

Mangrove forests have been threatened by encroachment for settlement and industry as well as by the use of timber for firewood, charcoal, furniture and construction. Thailand's almost 10,400 hectares of sea grass beds have been negatively affected by sediment arising from coastal construction, deforestation and agriculture, the release of waste water in coastal areas and the use of illegal fishing gear such as push-nets. Severe coastal erosion causes Thailand to lose 3 km² of land to the sea each year, at an estimated cost of THB 6 billion (around USD 200 million). Although coastal erosion is brought about by a combination of both natural and human influen-

ces, factors related to coastal development include activities that disrupt the natural accumulation of sediment, including dam construction, sand mining and dredging deep-water channels to facilitate marine transportation.¹⁰

The country's coastal areas have been earmarked for the development of mass transportation systems and heavy industry under the Government's Southern Seaboard Development Plan. There are 37 projects planned, including deep-water ports, oil rigs, fuel depots, fuel transportation pipelines, heavy industry and power plants. The plan has emphasized the development of heavy industry without considering alternative forms of development potentially more appropriate to the socioeconomic circumstances and cultural ecology of the targeted areas, the economies of which are founded on fishery, agriculture, tourism, education and minor industry.¹¹

Thailand has witnessed many examples of inappropriate and unsustainable tourism development, as well as tourism activities that directly affect marine and coastal resources such as 'coral walks', which involve walking directly on coral reefs. But for many small-scale fishing communities living in some of Thailand's most important tourist areas, problems and conflicts relating to land and land rights are a much bigger issue. Conflicts have arisen between local communities and tourism operators who have been issued title deeds, or who have encroached on land without any right of ownership, in areas that overlap with community terrestrial forests, community mangrove forests, community settlements and public roads.¹²

Changing global, national and local socioeconomic contexts are placing increasing strains on limited marine and coastal resources. Over the past 40 years, Thailand has undergone tremendous changes in its pursuit of national-level economic growth, while at the local level rapidly changing expectations regarding standards of living and quality of life have moved away from subsistence livelihoods to an increased focus on monetary income. Despite great advances generally at the policy level,¹³ small-scale fishers still have no formal, established identity within existing policy and legislative frameworks, meaning that there is frequently a failure to identify and address the issues that affect their livelihoods and well-being.

New policies, but the same old practices

There is a significant gap between national level policies and legislation and implementation at the local level. Promising changes in policy direction¹⁴ fail to bring about tangible, widespread and lasting change at the local level because the intervening legislation, bureaucracy and administration are resistant. There is also lack of coordination, cooperation and integration between the various organizations and agencies related either directly or indirectly to the management of marine and coastal resources, which leads to at best inefficient and incoherent, and at worst conflicting and counterproductive implementation and operation at the local level. The lack of coherence between the approaches and practices of the diverse organizations and agencies highlights the need to rationalize the overlying and complex legislative framework applicable to the management of natural resources and the environment.

In many cases legislation has not been updated to reflect positive policy changes at the national level. In other cases existing legislation, that could potentially be beneficial to marine and coastal resources as well as to small-scale fishers, fails because enforcement is either poor, and so individuals are able to flout the law, or else it is arbitrary, with different standards being applied in different circumstances. Specific issues include legal loopholes that allow offenders to escape prosecution, penalties too lenient to act as useful deterrents, and insufficient resources or bureaucratic hindrances that prevent regular, comprehensive patrols from being carried out.¹⁵

Conclusion

Unsustainable development practices are having a negative impact on marine and coastal resources and the livelihoods of small-scale fishers. Although changing socioeconomic contexts at the global, national and local levels are certainly placing increasing strain on the limited marine and coastal resources, a range of other underlying issues are also to blame, all related to policy, legislative, institutional and operational frameworks that fail to support local communities in exercising their constitutional rights and also fail to control and suppress illegal, inappropriate and unsustainable practices. ■

9 S. Jitpiromsri, and Sustainable Development Foundation, "Strengthening the Capacity of Vulnerable Coastal Communities to Address the Risks of Climate Change and Extreme Weather Events: Community Study Report," reference document for Global Environment Facility / Special Climate Change Fund project development process, (Prince of Songkhla University, Pattani Campus, 2009), p.16.

10 Thailand Reform Office, op. cit., pp. 3–4.

11 Ibid., p. 6.

12 Ibid., pp. 5–6.

13 For example the policy to control the number of fishing vessels. See <www.fao.org/DOCREP/005/AC790E/AC790E02.htm>.

14 For health policies' changes see <www.ncbi.nlm.nih.gov/pubmed/12595131>; for monetary policies see T. Subhanji, *Household sector and monetary policy implications: Thailand's recent experience*, (Economic Research Department, Bank of Thailand, 2010), <ideas.repec.org/p/bth/wpaper/2009-06.html>.

15 Prasertcharoensuk and Shott, op. cit.