



Briefing Note

Marine and coastal biodiversity

The background

Intact marine and coastal ecosystems, with their immense biological diversity, are vitally important for humanity. Besides supplying us with food and clean air, they provide inputs for countless other products, such as active ingredients for pharmaceuticals. Millions of people rely on marine and coastal biodiversity for their food security, income and socio-cultural and economic development. For coastal regions and their local communities, this biodiversity is the natural system on which life depends.

But this life support system is under threat. The oceans and coasts supply us with energy and raw materials, are used as transport routes and recreation areas, and are expected to provide food for the world's growing population. Shipping, overfishing and poor fishing practices, and high-risk oil extraction methods are putting marine and coastal biodiversity at risk. Increased nutrient input and wastewater discharge – caused mainly by the proliferation of unsustainable forms of aquaculture, more intensive agriculture, and a burgeoning tourism industry – pose a further threat to these ecosystems.

The damage is impossible to ignore. Mangrove forests are vanishing, salt marshes and seagrass beds are being destroyed, and coral reefs – the 'rainforests of the sea' – are dying off. This in turn limits the sustainable provision of marine and coastal ecosystem services.

Our position

In this context, GIZ takes the following positions:

1. Spatial planning and sustainable use help to conserve biodiversity

Sustainable use of maritime and coastal regions supports the conservation of marine and coastal biodiversity. Viable socio-economic development is only possible with effective conservation and sustainable use of ecologically or biologically significant regions. A balance between diverse user interests can only be achieved if planning and management take account of all the various stakeholders' environmental, economic and social concerns. Forward-looking spatial planning in marine areas and along coasts helps to reconcile the interests of conservation and utilisation. This can alleviate the pressure on biodiversity and promote its sustainable use. But this also means that due consideration must be given to biodiversity in regional and development planning from the outset.

2. Public participation is a prerequisite for conservation

The active involvement of indigenous and local communities in planning and management as well as governance processes of marine and coastal areas is crucial for the long-term conservation of ecosystems. So it is essential to develop and strengthen stakeholders' institutional, legal and social capacities; otherwise, affected communities cannot participate on an equal footing.

Their participation in determining what should be protected and by whom, and how resources should be used, is essential in safeguarding ‘ownership’ of measures which aim to conserve marine and coastal biodiversity. This ownership is a prerequisite for effective conservation and sustainable use of these ecosystems.

3. Equitable benefit-sharing creates incentives for biodiversity conservation

Fair and equitable sharing of benefits arising out of the utilisation of marine and coastal ecosystems’ genetic diversity creates additional incentives for their conservation. In this context, it is important to develop mechanisms to regulate access to genetic resources and equitable benefit-sharing (ABS). The provision of advice during the negotiation and implementation of ABS rules for specific value chains plays an important role in this context.

4. Codes of conduct and standards help to preserve diversity

Codes of conduct and social and production standards in the fisheries sector help to promote responsible and sustainable (small-scale) fishing. Examples are the FAO Code of Conduct for Responsible Fisheries (CCRF) and, for capture fisheries, the standards introduced by the Marine Stewardship Council (MSC) and *Naturland* Wildfish. In the aquaculture industry, eco-standards and the related certification schemes, such as those established by the Aquaculture Stewardship Council (ASC) and the *Naturland* Standards for Organic Aquaculture, aim to reconcile ecological concerns with economically effective management. For example, the sustainable production of high-value fishery products can be combined with bans on the destruction of mangroves to make way for pond construction. Conditions may also be imposed to curb or prevent eutrophication – the over-enrichment of coastal ecosystems by nutrients – in pond farming operations.

Our recommended actions

International cooperation can assist partner countries to conserve their marine and coastal biodiversity. Sustainable and effective management and a fair use and governance of these resources is the prime goal.

GIZ considers the following the most important recommendations for action:

1. Adopt a forward-looking approach to ecosystem management

Vulnerability analyses, which investigate and assess the impacts of climate change on ecosystems and their utilisation, provide the basis for planning measures to support adaptation to climate change impacts. These measures should focus on people and nature alike. The management and restoration of marine and coastal ecosystems – such as the sustainable management of mangrove, coral, seagrass and salt meadow ecosystems – are important in mitigating the impacts of climate change. Here, international cooperation can assist partner countries and support the establishment, networking and institutional management of marine and coastal protected areas.

2. Institutionalise environmental management tools

Strategic environmental assessments (SEAs) and environmental impact assessments (EIAs) are well-established environmental management tools. International cooperation can do much to support the introduction and legal establishment of these instruments and their integration into partner countries’ environmental legislation.

3. Mainstream biodiversity concerns in spatial and development planning

Biodiversity and ecosystem services are factors which should be considered as a matter of course in spatial and development planning. Further research is required to facilitate this process, however, and this too is a potential area for international cooperation.



4. Create sustainable financing mechanisms

The conservation and restoration of marine and coastal biodiversity cannot be undertaken without sustainable financing strategies. The requisite funding can be generated from payments for ecosystem services or through the implementation of REDD (Reducing Emissions from Deforestation and Forest Degradation) in areas of mangrove forest, for example. This puts a financial value on mangrove forests and their capacity to store CO₂, thereby creating sound economic reasons to avoid the carbon emissions from mangrove clearance.

5. Involve the public

Monitoring the various protection and conservation measures and their outcomes is not just an issue for governments; it is also, and above all, a matter of public interest. Participatory planning and monitoring processes, for example, must therefore be put in place to facilitate the public's involvement.

6. Develop education strategies for local communities

International cooperation can assist partner countries to develop education strategies for local communities. Together with the provision of basic and advanced training for local managers and experts, this is a significant factor in promoting sustainable development.

7. Safeguard access, regulate benefit-sharing

Local communities must continue to have access to coastal and marine biodiversity, so it is important to introduce regulations guaranteeing them such access. Regulations which ensure that they share equitably in the benefits which others derive from the utilisation of marine and coastal biodiversity are also important.

8. Reduce pollution of coastlines and coastal waters

This can be achieved through adaptive catchment and wastewater management.

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