

2015 GSDR - Chapter 3: The Oceans, Seas, Marine Resources and Human Well-being Nexus

Annex I: Extended version of Table 3-4: Selected regional and local case studies of addressing threats affecting the nexus (Extended version) –IN PROGRESS

Table 3-4 – Selected regional and local case studies of addressing threats affecting the nexus (Extended version) –IN PROGRESS

Case study	Challenges faced	Measures undertaken	Impact on Oceans, Seas and Marine Resources	Implications for Human well-being
Regional level				
Marine litter, regional seas in Europe¹	Mortality of marine species (e.g., through entanglement and ingestion); loss of ecosystem functioning and services; marine habitat alteration, degradation, or destruction	Prevention through awareness-raising/market-based instruments (e.g. plastic bag reduction by banning or taxing); Regional Action Plan for the Management of Marine Litter, including adequate waste reducing/reusing/recycling measures; extended producer responsibility; establishment of voluntary agreements with retailers and supermarkets; clean-up of litter	<ul style="list-style-type: none"> • Reduced risk of environmental impacts due to reduced marine litter such as plastic items (e.g. significant reduction of plastic bag usage) 	<ul style="list-style-type: none"> • Maintenance of fish catch and tourism revenue • Revenue through levies and taxes • Reduced marine litter removal activities and damage to nautical equipment
Marine ecosystem conservation: preserving the wealth of natural capital, Mediterranean region²	Biodiversity in region severely at risk: 19% of all species threatened with extinction and 1 % already extinct at regional level	Network of Marine Protected Areas (170 MPAs; 2 UNESCO World Heritage Sites and 5 Biosphere Reserves); MedPan as coordination framework for conservation activities; changes of unsustainable fisheries practices (catch monitoring etc.)	<ul style="list-style-type: none"> • Increase in diversity, abundance, and average size of exploited species • Ecosystems rebuilt • Preservation of ecological processes and coastal and marine habitat 	<ul style="list-style-type: none"> • Support of economically valuable activities (e.g., tourism, small scale sustainable fisheries) • Maintenance of associated cultural values
Economic, social and environmental benefits from sustainable management of tuna fisheries: The GEF/UNDP Pacific Islands Oceanic Fisheries Management Project, Western Pacific³	Over-exploitation of the region's oceanic fishery resources	Regional Strategic Action Programme (SAP) for International Waters of Pacific Islands to integrate national and regional sustainable development priorities; Sustainable management of regional/transboundary fish stocks	<ul style="list-style-type: none"> • Catches of bigeye, albacore, and yellow fin tuna at or below maximum sustainable yield (stocks at lower risk of being overfished) • Decreased discarding of non-target species – rates for longliners targeting albacore, bigeye, and yellowfin tuna have decreased from an average of 12.4, 3.5 and 3.85% respectively to nearly 0% for all species. Similar decreases were seen for purse seine fishery. 	<ul style="list-style-type: none"> • Increase in fish catches by a factor of 2 • Number of people employed by local inshore tuna processing facilities doubled • Increase in fishery exports by US\$ 134 million, representing a third of the region's overall exports • Increase in foreign fishing access fees by 24%
Nutrient pollution reduction, Danube/Black Sea Basin⁴	Fertilisers used in agriculture leading to nutrient pollution (nitrogen, phosphorus) from farm run-off plus	Danube and Black Sea Strategic Action Programmes-reform of policies, legislation and institutions related to reducing nutrient pollution in	<ul style="list-style-type: none"> • Substantial reduction in nutrient pollution • Restoration of good water quality • Decrease of biomass of 	<ul style="list-style-type: none"> • Restoration and maintenance of environmental and socioeconomic benefits for nearly 160 million

	increase in “point sources” of pollution from poorly or untreated wastewater and large scale livestock farms (manure) – creation of hypoxic/low oxygen conditions, a number of species and benthic ecosystems disappeared, economic losses	the basin, including adoption of best agricultural practices for manure management and fertiliser application, phase out of phosphorus-containing detergents, promotion of industrial cleaner production etc.; capacity-building and partnerships	phytoplankton <ul style="list-style-type: none"> • Return of key benthic “phylophora” habitat • Return of many species considered locally extinct 	residents of the basin
Local level				
Development of mariculture activities as an alternative livelihood option for coastal communities: Milkfish farming in Kilwa and Mtwara districts, Republic of Tanzania⁵	Increased overfishing and use of destructive fishing practices (e.g. dynamite fishing) resulting in decline of fish quality and quantity	Conservation measures, including marine parks, reserves and protected areas; development of mariculture activities as alternative livelihood	<ul style="list-style-type: none"> • Protection of oceans and marine and coastal biodiversity • Restoration and conservation of wild fishery 	<ul style="list-style-type: none"> • Welfare gains (e.g. improved dietary intake, better capacity to meet household food needs, ability to purchase new assets, ability to meet student requirements for school) • Improved food security (from two to three meals a day) • Enhancement of investments and savings
Community-based green sea turtle conservation, The Comoros⁶	Turtle poaching leading to conflicts between turtle poachers and community of Itsamia (willing to address issue of poaching)	Education of entire community and awareness raising; Beach patrols, monitoring of nesting sites, involvement of police, confiscation of poachers’ boats; Additional conservation efforts, incl. implementing and enforcing fishing regulations, cleaning of beaches and collection of household waste	<ul style="list-style-type: none"> • Significant reduction of turtle poaching • Maintenance of large fish populations • Increase in fish biomass from 16 to 32 kg/100m2 	<ul style="list-style-type: none"> • Creation of successful eco-tourism generating income and jobs • Poverty eradication benefits (e.g. health initiatives and acquisition of aid to subsidize local doctor and hospital visits) • Sustainability of fishing opportunities allows fishers to earn livelihood to meet their needs
Ban of queen conch harvesting by fisheries: A recent conservation co-management initiative in Banco Chinchoro, Quintana Roo, Mexico⁷	Conch fishery decline to unsustainable levels due to unsustainable and illegal fishing	Conservation and management measures, including designation of biosphere reserve (in consultation with local communities), no-take zones and conch harvesting bans; establishment of alternative livelihoods	<ul style="list-style-type: none"> • Increased health and quality of marine flora and fauna • Restoration and conservation of conch fishery 	<ul style="list-style-type: none"> • Lobster and deep-sea snapper harvests provide a new source of income and seafood for local communities • Increased emphasis on eco-tourism leading to significant improvements in community livelihoods
Ecosystem Health Report Card for Managing Chilika Lake of Odisha State: a collaborative approach, India⁸	Deterioration of the lake’s ecosystem due to natural processes and human activities	Restoration strategy based on ecosystem approach; development of “Ecosystem Health Report Card” to diagnose problems and identify intervention priorities; messages used in communication strategy to engage stakeholders for sustainable management of ecosystem	<ul style="list-style-type: none"> • Eight-fold increase in annual fish and prawn landings • Decrease of alien invasive species • Protection of marine environment from land-based activities 	<ul style="list-style-type: none"> • Increase in fish catch • Increase of monthly family income of fishermen • Development of community-based ecotourism as alternative livelihood
Linking Conservation and Livelihoods in the Oracabessa Bay Fish Sanctuary, Jamaica⁹	Severe degradation of marine ecosystems and high loss of biodiversity - declining fish catch and challenges for local	2-phase project to preserve the marine ecosystem and increase biodiversity and species population; creation of a no-fishing zone	<ul style="list-style-type: none"> • Increase in coral reefs by 153%, fish density by 272%, fish size by 16%, fish biomass by 564% • Reduction of algae by 	<ul style="list-style-type: none"> • Generation of alternative income opportunities through the project (fishermen re-employed as coral gardeners and

	tourism industry	protecting critical breeding areas and fish habitat; improve surveillance and monitoring of fish, turtle, and coral populations within sanctuary; strengthen community capacity to manage its marine resources; removal of debris from beaches	43% <ul style="list-style-type: none"> • Several species made a comeback or recovered • Improved sea turtle nesting conditions and hatching rates 	tour guides) <ul style="list-style-type: none"> • Income from ecotourism and collection/sale of nutrient-rich debris • Involvement of youth in project elaboration to ensure future marine conservation
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¹ UNDESA, UN-DOALOS/OLA, IAEA, IMO, IOC-UNESCO, UNDP, UNEP, UNWTO (2014): How oceans- and seas-related measures contribute to the economic, social and environmental dimensions of sustainable development: Local and regional experiences. Online publication.

² UNDESA, UN-DOALOS/OLA, IAEA, IMO, IOC-UNESCO, UNDP, UNEP, UNWTO (2014): How oceans- and seas-related measures contribute to the economic, social and environmental dimensions of sustainable development: Local and regional experiences. Online publication.

³ UNDESA, UN-DOALOS/OLA, IAEA, IMO, IOC-UNESCO, UNDP, UNEP, UNWTO (2014): How oceans- and seas-related measures contribute to the economic, social and environmental dimensions of sustainable development: Local and regional experiences. Online publication.

⁴ UNDP (2012). Catalysing Ocean Finance (Volume II).

⁵ UNDESA, UN-DOALOS/OLA, IAEA, IMO, IOC-UNESCO, UNDP, UNEP, UNWTO (2014): How oceans- and seas-related measures contribute to the economic, social and environmental dimensions of sustainable development: Local and regional experiences. Online publication.

⁶ Freed and Granek (2015). Case study: Community-based Green Sea Turtle conservation in the Comoros.

⁷ UNDESA, UN-DOALOS/OLA, IAEA, IMO, IOC-UNESCO, UNDP, UNEP, UNWTO (2014): How oceans- and seas-related measures contribute to the economic, social and environmental dimensions of sustainable development: Local and regional experiences. Online publication.

⁸ UNDESA, UN-DOALOS/OLA, IAEA, IMO, IOC-UNESCO, UNDP, UNEP, UNWTO (2014): How oceans- and seas-related measures contribute to the economic, social and environmental dimensions of sustainable development: Local and regional experiences. Online publication.

⁹ UNDP/GEF Project description (2011): Linking Conservation and Livelihoods in the Oracabessa Bay Fish Sanctuary, Jamaica.