Description of New Indicators

2014 Eco-Audit

Healthy Reefs
for healthy people

pwc

THEME 1. MARINE PROTECTED AREAS

1f. Generation of alternatives for fishers within the network of MPAs

Justification: Fisheries management strategies should provide alternative livelihoods for fishers and other communities whose income may be affected by the establishment of **"Fully Protected (Replenishment) Zones"** which prohibit fishing. Alternative income programs can assist fishers in fishing fewer days per year, while maintaining or increasing their total income from other diversified sources.

Ranking Criteria
5– A national-level strategy to provide fishers with sustainable livelihoods alternatives generated by the recovery of ecosystems through productive activities and/or payment of ecosystem services exists and is being implemented in between 85-100% of MPAs
4 – A national-level strategy to provide fishers with sustainable livelihoods alternatives generated by the recovery of ecosystems through productive activities and/or payment of ecosystem services exists with implementation in between 50-84% of MPAs
3 – A national-level strategy to provide fishers with sustainable livelihoods alternatives generated by the recovery of ecosystems through productive activities and/or payment of ecosystem services is being developed, with some alternative or sustainable livelihoods programs being implemented in between 20-49% of MPAs
2 – At least one program exists (in one MPA) that provides fishers in at least one locality with sustainable livelihoods alternatives through productive activities and/or payment of ecosystem services
1 – No documented action that meets the criteria to achieve a higher score is available

Means of Verification: copy of documents, publications, grant and project reports from the government or any other institution presenting an incentive program.

THEME 2. ECOSYSTEM-BASED FISHERIES MANAGEMENT

2d. Transform all open-access fisheries to rights-based sustainable fisheries management systems

Justification: Throughout the MAR region, fisheries management has not achieved sustainability, in large part due to reliance on open access and traditional management approaches and the inability to control illegal fishing, especially in remote areas. The lack of a clear allocation of fishing rights is a major factor contributing to overfishing, and tends to encourage unsustainable fishing practices such as the race-to-fish and illegal fishing. Open access also fuels conflict for fishing areas. Transforming fisheries management to a rights-based approach in the MAR region will promote better management of the fisheries stocks by fostering stewardship by fishers of designated fishing areas, facilitating the regulation of fishing through sustainable catch limits, and promoting community-based management of fisheries in the region.

Ranking Criteria
5- More than 90% of total catch* is under a form of regulated rights-based fisheries management (RBM) covering at least three of the most economically valuable species/taxonomic groups
4- 26-50% of total catch is under a form of regulated rights-based fisheries management, covering at least two of the most valuable species/taxonomic groups
3- At least two fisheries and/or 25% of fishing communities is under a form of regulated rights-based fisheries management, covering at least one of the most valuable species/taxonomic groups
2- At least one fishery and/or one community is implementing regulated rights-based fisheries management
1- No documented action that meets the criteria to achieve a higher score is available

Means of Verification: Fisheries management plans with areas recognized under a form of right-based fisheries; case studies of managed access or ITQ's that demonstrate with at least once component of RBM in place (limited access, catch limits, community-based committee, etc.).

* Rights-based management includes any system of allocating exclusive fishing rights to fishermen, fishing vessels, enterprises, cooperatives or fishing communities (including managed access systems and ITQ's.) Such systems, which exist in many fisheries management regimes in one form or another, basically define the rights to use fisheries resources. Fishing rights have a value and may be traded. [1]

THEME 3. COASTAL ZONE MANAGEMENT

3b. Watershed management plans[2] related to coastal zone planning

Justification: Effective, integrated land-use planning inside the watersheds of the MAR is essential to preventing erosion, sedimentation, and nutrient pollution into coastal and marine waters. In particular, nutrients are a major cause of the overgrowth of algae that can kill corals. Nutrients cause a major damage in reefs and benthic ecosystems. High water quality standards help to maintain coral reefs. Proper watersheds management includes appropriate land-use practices in erosion-prone areas and is essential for preserving water quality and ensuring that the transport of sediment, nutrients, and other pollutants to coral reefs is minimized. If sound watershed management plans are implemented, nutrient and sediment delivery are likely to be reduced, promoting recovery of degraded reefs. Watershed-based management plans foster sustainable development, and compliment similar coastal development plans along the coastline. This indicator measures the spatial extent and development of such plans or steps toward developing them.

Ranking Criteria

5 – A spatially comprehensive[3] and integrated watershed management plan(s) that regulate the coastal and marine resources, exists for the country (or state within the MAR area) and have been legally adopted

4 – A spatially comprehensive and integrated watershed management plan(s) that regulate the coastal and marine resources management, exists for the country (or state within the MAR area) but has (have) not been legally adopted; or have at least **50%** of watershed area within plan(s) or zoning regulations that are legally adopted

3 – There is work (monitoring water quality programs, drafts in progress, consultation reports, research or strategic plans) leading to an integrated watershed plan(s) in at least **50%** of watershed area

2 – There is work (monitoring water quality programs, drafts in progress, consultation reports, research or strategic plans) leading to an integrated watershed management plan(s) in at least **10%** of watershed area

1 – No documentation of actions that meet the criteria to achieve a higher score is available

Means of Verification: copies of zoning plans (table of contents, legislation #), documentation of planning ordinances and regulations (includes drafts), and consultation reports, research and strategic plans relevant to coastal planning and watershed planning and use.

3c. Mangrove extent as an indicator of the effectiveness of coastal zone management plan implementation.

Justification: Mangroves are regionally 'protected' on different levels through regulations requiring permits for their removal. However, even with the strictest regulations, many illegal clearings occur. Ultimately we need to

[1] http://ec.europa.eu/dgs/maritimeaffairs_fisheries/consultations/rbm/index_en.htm

[2] Must include water quality monitoring.

[3] Spatially comprehensive refers to coverage of the entire coastline.

track the remaining extent of mangroves in order to help protect their critical ecosystem functions, which include shoreline protection, provision of fisheries habitat, and biodiversity.

Ranking Criteria
5 – A spatially comprehensive and integrated plan or mangrove regulations, that contribute to the objectives of the coastal zone management plans, exist for the country (or state within the MAR area) and has been legally adopted, having mangrove coverage preserved in 90% from baseline status (probably 1990). Or more than 90% of the mangroves in the country or state are legally and effectively protected.
4 – A spatially comprehensive and integrated plan or mangrove regulations that contributes to the objectives of the coastal zone management plans, exist for the country (or state within the MAR area) but have not been legally adopted, having mangrove coverage preserved in 70% from original status. Or more than 70% of the mangroves in the country or state are legally and effectively protected.
3 – There is work (monitoring mangrove extent, drafts in progress, consultation reports, research or strategic plans) leading to a spatially comprehensive and integrated plan or mangrove regulations, or at least 50% of original mangrove cover is maintained or legally protected.
2 – A plan or strong mangrove regulations exist, but doesn't contribute to the objectives of the coastal zone management plan or are poorly enforced, with many public records of illegal activity.
1 – No documentation of actions that meet the criteria to achieve a higher score is available.

Means of Verification: copies of zoning plans (table of contents, legislation #), documentation of planning ordinances and regulations (includes drafts), and consultation reports, research and strategic plans relevant to coastal planning and mangrove protection and use, historical maps of mangrove coverage from the coastline to inland.

THEME 4. SANITATION AND SEWAGE TREATMENT

4c. Reduce upstream watershed pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) through better management practices, action plans and regulations in each sector

Justification: The high level of nutrients, pesticides and other agro-chemicals used can result in pollution downstream. Sewage also contains bacteria and viruses known to harm marine life, including corals. Wastewater (including sewage and industrial effluent) must be treated and controlled to reduce the nutrients and toxins that reach coral reefs.

Ranking Criteria
5 – "Better management practices", action plans and/or regulations exist and are under implementation, addressing 80% of the pollution sources occurring in the watersheds (agriculture, livestock, urban/tourism, industrial, rural, deforestation -those which occur in an analyzed watershed- not all occur in all watersheds) covering at least 80% of watershed areas, with demonstrated water quality improvements
4- "Better management practices", action plans and/or regulations exist for at least 4 of the 6 pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) covering 50% of watershed areas, with some demonstrated water quality improvements
3- "Better management practices", action plans and regulations exist for at least 2 of the 6 pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) covering 30% of watershed areas, with some demonstrated water quality monitoring
2- "Better management practices", action plans and regulations for 1 of the 6 pollution sources (agriculture, livestock, urban/tourism, industrial, rural, deforestation) covering at least 10% of the watershed area
1 – No documentation of actions that meet the criteria to achieve a higher score is available

Means of verification: "better management practices" reports, action plans, copies of regulations, water quality monitoring results.

THEME 7. GLOBAL ISSUES

7c. Develop incentives for carbon sequestration programs.

Justification: As human populations grow, so do the resource demands imposed on ecosystems. The environmental impacts of anthropogenic actions, which are processes or materials derived from human activities, are becoming more apparent. This indicator measures the application and progress of an incentive program of ecosystem services for carbon sequestration.

Ranking Criteria
5 – An incentive program of ecosystem services for carbon sequestration exists with 10% of the MAR land area
4 – An incentive program of ecosystem services for carbon sequestration exists and it´s being implemented within the MAR land area
3 – An incentive program of ecosystem services for carbon sequestration does exist but is not being applied
2 – There are plans to develop an incentive program of ecosystem services for carbon sequestration
1– No documented action that meets the criteria to achieve a higher score is available

Means of Verification: copy of documents, publications, reports from the government or any other institution presenting an incentive program of eco system services for carbon sequestration.