



Priority Actions to Achieve

AICHI BIODIVERSITY TARGET 10

for Coral Reefs and Closely
Associated Ecosystems

Annex to decision XII/23 of the
Conference of the Parties to the
Convention on Biological Diversity



Convention on
Biological Diversity



Background

Coral reefs and associated ecosystems (such as mangroves and seagrasses) are some of the world's most biodiverse marine ecosystems, home to a significant proportion of the world's known marine species. These ecosystems not only have a high ecological value, but are also of critical socio-economic importance, providing essential services such as buffering against storm surge, stabilizing coastal and nearshore areas against erosion, serving as nursery habitats for commercially important fish species and supporting livelihoods and economic activities, such as tourism and fishing.



Coral reefs and associated ecosystems are also regarded as one of the most stressed ecosystems globally and amongst the most vulnerable to climate change, which is threatening the goods and services they provide to millions of people. Furthermore, coral reefs and associated ecosystems are facing threats due to the interactive effects of multiple stressors, including both global stressors (e.g., rising sea temperature, the effects of tropical storms and rising sea levels, as well as ocean acidification) and local stressors (e.g., overfishing, destructive fishing practices, land-based and sea-based pollution, coastal development, tourism and recreational use). Increased sea temperature also increases risks to coral reefs from pathogens. There are additional interactions, often synergistic, among all these stressors.

In 2010, the Conference of the Parties to the Convention on Biological diversity (CBD) adopted the Strategic Plan for Biodiversity 2011–2020 and 20 Aichi Biodiversity Targets, which are focused on reducing global biodiversity loss and supporting the role of biodiversity in maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people. Target 10 calls for, by 2015, the minimizing of the multiple anthropogenic pressures on coral reefs and other vulnerable ecosystems impacted by climate change or ocean acidification, so as to maintain their integrity and functioning.

The fourth edition of the *Global Biodiversity Outlook* (GBO-4), released in 2014, found that, based on available evidence, we have actually moved away from achieving this target, and that significantly accelerated actions are needed to reverse this trend. In order to address this need, the Conference of the Parties (COP) adopted, at its twelfth meeting, a set of priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems (annex to CBD COP decision XII/23). These priority actions update the previous version of the specific work plan on coral bleaching (decision VII/5, annex I, appendix), which was adopted by COP in 2004 primarily to address the significant effects of mass coral bleaching events on coral reef ecosystems.

These actions, which are presented in this booklet, aim to support the management of coral reefs and associated ecosystems as socio-ecological systems undergoing change due to the interactive effects of multiple stressors, focusing on actions that address, in particular:

- a) Reducing the impacts of multiple stressors, in particular those stressors that are more tractable at the regional, national and local levels;
- b) Enhancing the resilience of coral reefs and closely associated ecosystems through ecosystem-based adaptation;
- c) Maintaining sustainable livelihoods and food security in reef-dependent coastal communities and providing for viable alternative livelihoods;
- d) Increasing the capability of local and national managers to forecast and plan proactively for climate risks and associated secondary effects; and
- e) Enhancing international and regional cooperation in support of national implementation of priority actions.

In adopting the priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, the COP urged Parties and invited other Governments and relevant organizations to implement the activities contained therein, where applicable and in accordance with national capacity and circumstances, for enhanced implementation toward achieving Aichi Biodiversity Target 10 (paragraph 11, decision XII/23).





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*Annex to decision XII/23 of the Conference of the Parties
to the Convention on Biological Diversity*

PRIORITY ACTIONS TO ACHIEVE AICHI BIODIVERSITY TARGET 10 FOR CORAL REEFS AND CLOSELY ASSOCIATED ECOSYSTEMS

1. Pursuant to paragraph 13 of decision XI/18 A, the following action items were prepared to update the specific workplan on coral bleaching (appendix 1 of annex I to decision VII/5) through an addendum to the workplan, taking into account the submissions¹ made by Parties, other Governments and relevant organizations in response to notification 2013-108.²
2. As such, the action items build on the existing specific workplan (appendix 1 of annex I to decision VII/5) and are in line with operational objective 2.3 of the elaborated programme of work on marine and coastal biological diversity (annex I to decision VII/5) as well as the elements of a workplan on physical degradation and destruction of coral reefs, including cold-water corals (appendix 2 of annex I to decision VII/5).
3. The priority actions will contribute to the achievement of Aichi Biodiversity Target 10: *By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized,*

¹ Contained in document UNEP/CBD/SBSTTA/18/INF/7.

² Ref No. SCBD/SAM/DC/JL/JG/82124, issued on 26 November 2013.

so as to maintain their integrity and functioning. They will also facilitate achieving Aichi Biodiversity Targets 6 and 11.

4. The priority actions aim to address the urgent need to consolidate and further strengthen current efforts at local, national, regional and global levels to manage coral reefs as socio-ecological systems undergoing change due to the interactive effects of multiple stressors, including both global stressors (e.g., rising sea temperature, the effects of tropical storms and rising sea levels, as well as ocean acidification,) and local stressors (e.g., overfishing, destructive fishing practices, land-based and sea-based pollution, coastal development, tourism and recreational use, etc). The priority actions recognize that increased sea temperature also increases risks to coral reefs from pathogens and that there are additional interactions, often synergistic, among all these stressors.

5. In particular, the priority actions focus on actions that will help:

- (a) Reduce the impacts of multiple stressors, in particular by addressing those stressors that are more tractable at the regional, national and local levels, noting that this would have multiple benefits and that benefits can be expected regardless of the impacts of ocean acidification;
- (b) Enhance the resilience of coral reefs and closely associated ecosystems through ecosystem-based adaptation to enable the continued provisioning of goods and services;
- (c) Maintain sustainable livelihoods and food security in reef-dependent coastal communities, including indigenous and local communities, and provide for viable alternative livelihoods, where appropriate;
- (d) Increase the capability of local and national managers to forecast and plan proactively for climate risks and associated secondary effects, applying ecosystem-based adaptation measures; and
- (e) Enhance international and regional cooperation in support of national implementation of priority actions, building upon existing international and regional initiatives and creating synergies with various relevant areas of work within the Convention.

6. To this end, Parties should develop national coral reef action strategies, or equivalent policies, strategies, plans or programmes, consolidating existing national initiatives, as platforms to mobilize inter-agency and cross-sectoral partnerships, as well as close coordination among national and subnational governments and with indigenous and local communities. National strategies should be complemented by regional strategies to address common stressors. National and regional strategies could include actions outlined below.

7. Recalling paragraph 4 of decision XI/20, Parties are also urged to advocate and contribute to effective carbon dioxide emission reductions, by reducing anthropogenic emissions by sources and by increasing removals by sinks of greenhouse gases under the United Nations Framework Convention on Climate Change, noting also the relevance of the Convention on Biological Diversity and other instruments.³

Parties are encouraged to undertake the following actions:

8. Strengthen existing sectoral and cross-sectoral management to address local stressors, such as overfishing, destructive fishing practices, land- and sea-based pollution, coastal development, tourism and recreational use:

- 8.1. Sustainably manage fisheries for coral reefs and closely associated ecosystems:
 - a. Conduct national assessments to determine the level of unsustainable fishing practices;
 - b. Promote community-based measures, including community rights-based management, to manage fisheries sustainably;
 - c. Introduce new, or strengthen existing, national regulations and management measures, including the application of the ecosystem approach to fisheries, to address unsustainable fishing practices, including overfishing, illegal, unreported and unregulated fishing and destructive fishing practices, and ensure effective enforcement, using relevant guidelines of the Food and Agriculture Organization of the United Nations;⁴
 - d. Identify and implement appropriate and practical management measures for multispecies reef fisheries to reduce unsustainable fishing practices;
 - e. Sustainably manage populations of key reef fish and invertebrate species targeted by export-driven fisheries or by the aquarium and curio trades, through appropriate and practical measures;
 - f. Prioritize the recovery and sustainable management of reef species with key ecological functions, in particular herbivorous reef fish populations.
- 8.2. Manage land-based and sea-based sources of pollution:
 - a. Identify all sources of significant land-based and sea-based pollutants affecting coral reefs and set up comprehensive national/local water quality monitoring programmes;

³ <http://www.cbd.int/doc/decisions/cop-11/cop-11-dec-20-en.pdf>

⁴ FAO Code of Conduct for Responsible Fisheries, FAO guidance and tools on Ecosystem Approach to Fisheries (EAF).



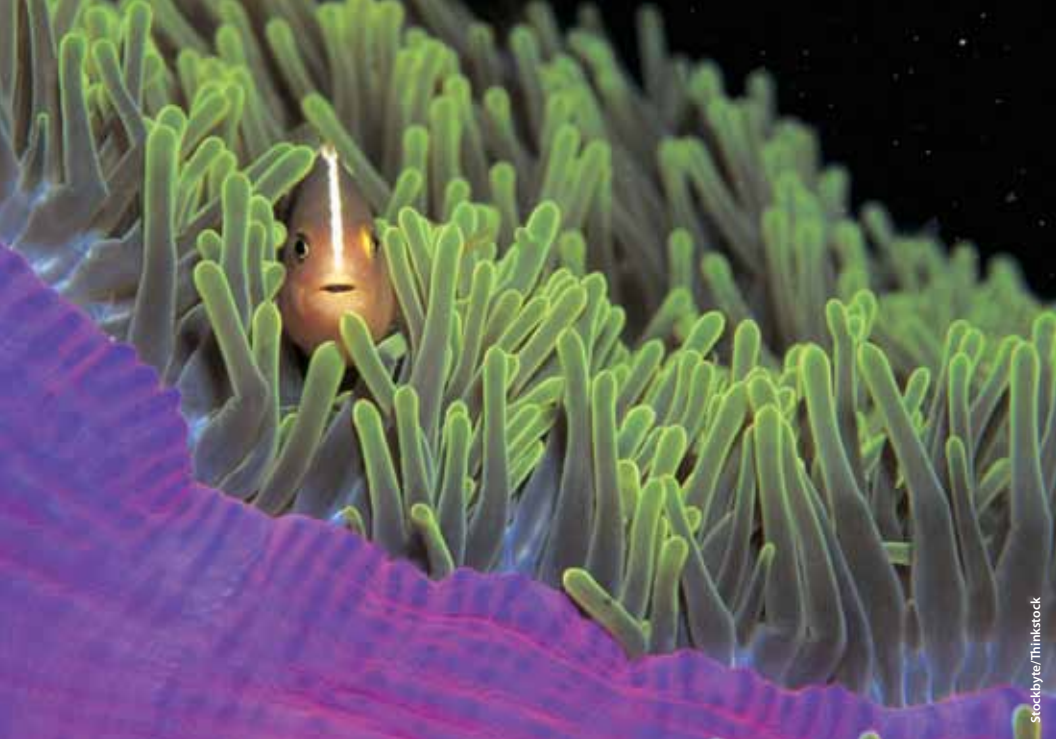
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- b. Implement comprehensive watershed and coastal water quality management plans that reduce all major types of pollution, especially those causing eutrophication, sublethal effects on corals, lower seawater pH or other negative impacts;
 - c. Implement watershed management policies that include reforestation; erosion control; runoff reduction; sustainable agriculture and mining; reduction of pesticides, herbicides, fertilizer and other agrochemical use, and wastewater management and treatment;
 - d. Prioritize the reduction of nutrient and sediment pollution from watersheds, and the management of pollution “hotspots” (areas that produce the highest pollution loads);
 - e. Implement best practice standards for marinas, docks, mariculture, tourism or recreational operations conducted in coral reefs or adjacent environments.
- 8.3. Increase, within their national jurisdictions, spatial coverage and effectiveness of marine and coastal protected and managed areas in coral reefs and closely associated ecosystems:
- a. Improve the management of existing areas protecting coral reefs and related ecosystems, including mangrove and seagrass habitats, so that they meet their management and broader ecological objectives;

- b. Prioritize the full protection of existing healthy, resilient and resistant coral reefs through the development and effective management of marine and coastal protected areas or as part of locally managed marine areas (LMMAs);
 - c. Integrate ecological and social resilience factors of coral reefs and closely associated ecosystems into the design and management of marine protected area networks;
 - d. Prioritize the enhancement of conservation and management measures for coral reefs and closely associated ecosystems in areas described to meet the scientific criteria for ecologically or biologically significant marine areas;
 - e. Improve the design of coral reef related marine protected area networks to improve the ability of coral reefs to cope with future climate and ocean change effects;
 - f. Develop adaptation plans for marine protected areas to help improve the resilience of ecosystems, giving priority to coral reefs and related ecosystems;
 - g. Encourage and support community-based marine managed areas, in line with national policies for marine and coastal management, national or legislative frameworks or other measures.
- 8.4. Manage coastal development to ensure that the health and resilience of coral reef ecosystems are not adversely impacted:
- a. Prioritize the protection of coral reef ecosystems in coastal development and in land-use and sea-use management in coastal areas, through the application of area-based management measures, such as marine and coastal protected areas and/or marine spatial planning;
 - b. Ensure that the consideration of long-term climate related impacts is integrated into coastal development and land-use and sea-use planning;
 - c. Manage impacts from large-scale tourism development and consequent habitat loss and alteration in coral reefs and closely associated ecosystems, and support sustainable tourism by providing socioeconomic incentives and empowering coastal community for eco-tourism operation.
9. Identify and apply measures to improve the adaptive capacity of coral reef-based socio-ecological systems within the local context, which will ensure sustainable livelihoods of reef-dependent coastal communities, including indigenous and local communities, and provide for viable alternative livelihoods:



- a. Develop and apply socio-ecological vulnerability monitoring and assessment protocols in coral reef regions, including socio-ecological vulnerability maps, and identify highly vulnerable areas for prioritizing management actions and to inform planning and management as part of a resilience- and ecosystem-based approach;
- b. Prioritize poverty-reduction programmes for reef-dependent coastal communities, including indigenous and local communities, to promote livelihood strategies that are socially and ecologically resilient and to reduce poverty-induced overexploitation of reef ecosystems;
- c. Develop and implement socioeconomic incentives to encourage coastal communities, including indigenous and local communities, to play a central role in conservation and sustainable use of coral reefs and closely associated ecosystems, including through, inter alia, the use of tax benefits or other economic incentives for sustainable fishing, conservation agreements that reward users who forego unsustainable activities, and community-based conservation trust funds supported by fees from ecotourism and fines for unsustainable use;
- d. Apply ecosystem-based adaptation tools and indicators for use in coral reef regions and incorporate ecosystem-based adaptation principles and practices into coral reef management;
- e. Incorporate social drivers of coral reef degradation, such as projected human population increase and food security needs, into forecasts of multiple stressor impacts.



10. Establish or further enhance integrated management and coordination mechanisms to effectively address multiple stressors to coral reefs, including through the implementation of national coral reef action strategies/plans, as described in paragraph 6 above:

- a. Integrate ecosystem-based approaches for management and adaptation into development planning and legislative frameworks at the local, subnational and national level, and identify and remove barriers to implementation;
- b. Apply cross-sectoral, area-based management tools, including watershed and marine spatial planning approaches, to effectively reduce local stressors from multiple sources and mitigate their impacts to coral reefs and closely associated ecosystems;
- c. Incorporate watershed-based management approaches into reef management through the application of an integrated land-sea planning approach;
- d. Integrate national coral reef action strategies/plans into existing national mechanisms⁵ and broader national priorities such as poverty reduction and sustainable development strategies (including those for population health, coastal development and food security);

⁵ National Adaptation Programmes of Action (NAPAs), national biodiversity strategies and action plans (NBSAPs).

- e. Set in place an inter-agency steering committee at national and/or subnational levels, as appropriate, to coordinate, support and monitor the implementation of national coral reef action strategies/plans;
 - f. Empower coastal communities, including indigenous and local communities, in reef-management, particularly in remote regions or where capacity is low, by providing necessary resources and capacity-building, and devolution of management responsibilities in line with national/subnational management guidelines;
 - g. Enhance public awareness of the socio-cultural and environmental values of coral reefs and improve the capacity of civil society to contribute to monitoring, including through the use of mobile data applications.
11. Promote activities with regard to information exchange, knowledge sharing, awareness building, capacity-building, sustainable financing, and research and monitoring:
- 11.1. Education, awareness and capacity-building:
 - a. Develop or expand national and regional networks of coral reef managers to promote exchange of information, knowledge and best practices;
 - b. Facilitate wide implementation of existing training programmes on priority tools and approaches for coral reef management and develop additional training materials in support of implementing priority actions;
 - c. Integrate information about coral reefs, environmental conservation and ecosystem-based management into existing curricula at all levels of national education systems;
 - d. Develop and implement targeted education and awareness campaigns for diverse stakeholders on how communities and stakeholders can increase coral reef resilience by reducing the direct threats facing coral reefs;
 - e. Provide training and other capacity development opportunities in support of community-based management initiatives that increase socio-ecological resilience at the local or subnational level.
 - 11.2. Sustainable financing:
 - a. Secure, through national sectoral budget systems (e.g., fisheries, environment, climate-change adaptation fund, coastal development, tourism, etc.), the necessary financial resources to implement national coral reef action strategies;

- b. Apply comprehensive and diverse financing schemes for coral reef management, and explore opportunities for innovative financing to support local implementation;
 - c. Remove key bottlenecks and improve access to funding through capacity-building and streamlining of funding processes;
 - d. Demonstrate and increase awareness of the socioeconomic importance of coral reefs and associated ecosystems to local and national economies.
- 11.3. Research and monitoring programmes:
- a. Research on multiple stressor interactions and effects on coral reefs, at the species, population and ecosystem levels, to identify the most damaging local stressors affecting coral reefs ecosystems at the site-based level;
 - b. Research to support a resilience-based approach to coral reef management that is embedded within an integrated ecosystem-based management framework;
 - c. Develop and implement early warning systems for major reef health incidents such as bleaching or disease events, tropical storms and flood plumes;
 - d. Develop water chemistry monitoring programmes for coastal and inshore waters to determine the natural spatial and temporal variability of ocean carbon chemistry, and detect trends;
 - e. Research on the sensitivity of species, habitats and communities within coral reefs to changes in ocean carbon chemistry and whether there is a potential for adaptation to ocean acidification in reef organisms;
 - f. Incorporate into the framework of management actions a set of broadly applicable and robust indicators for resilience and stressor assessment, and use these indicators to support regular assessments of management effectiveness;
 - g. Further develop ecological and socioeconomic criteria and variables for use in vulnerability assessments in coral reef regions, building on existing work;
 - h. Develop mapping tools that combine data on the current status of coral reefs, management efforts and their effectiveness with predictive modelling of stressor effects to generate future scenarios of reef condition and ecosystem service provision.



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