



Before-and-after photographs of a coral bleaching event in American Samoa (The Ocean Agency/XL Catlin Seaview Survey).

Oceans and Coastal Zones Case Story

Global Coral Reef Partnership

The 2017 Yearbook described the many initiatives established that recognize the central role that oceans play in regulating the climate, and how vulnerable they are to the impacts of climate change. The increase in ocean temperatures since the beginning of the 20th century has led to impacts such as changes in the geographic distribution of fish and coral bleaching – a stress response caused by above-average sea surface temperatures that can lead to death of corals.

For coral reefs in particular, human resource use, development, a range of land-based activities (agriculture, deforestation and other land-use change) and, increasingly, climate change and ocean acidification, are fundamentally altering reef systems around the world. This threatens coral reef biodiversity as well as many ecosystem services provided by the reefs, like fish production, shoreline protection and the opportunities for tourism on which the society depends. In acknowledgement of this, initiatives have been formed to scale up and strengthen coral reef protection and management. One such initiative is the [Global Coral Reef Partnership](#) that aims to promote and demonstrate ecosystem-based marine management in coral reef areas by means of supporting the development and exchange of

methods, tools and policy frameworks. The partnership follows the triple bottom line approach, taking environmental, social and economic aspects into considerations.

Coral reefs, which cover 284,803 km², are at a critical stage. Repeated coral bleaching has been recorded in most regions since the mass bleaching event of 1998, which caused an estimated 16 per cent of the world's coral reefs to die. The global coral bleaching event of 2014-2017, the longest on record, affected about 93 per cent of the reefs on Australia's Great Barrier Reef, and also impacted reefs in Hawaii, the Caribbean, the Red Sea and in the Indian Ocean. If pressures on reefs continue unabated there is a risk of causing permanent change to the ecology, with negative impact on productivity. The goods and services provided by almost one fifth of the global reef area have already been lost, and the fifth [Global Environment Outlook](#) (GEO 5) predicts that if local and global threats are left unchecked, many tropical coral reefs could rapidly die by 2050 due to ocean acidification and warming.^a

The [Oceans & Climate Initiative Alliance](#) works to identify synergies between international initiatives and acts as a catalyst

a. Sources: UN Environment (2018), available at: http://coral.unep.ch/Coral_Reefs.html and the Guardian (2016), available at: <https://www.theguardian.com/environment/2016/jun/21/coral-bleaching-event-now-biggest-in-history-and-about-to-get-worse>

Oceans and Coastal Zones Case Story – Global Coral Reef Partnership

for progress. It ensures that civil society voices are heard at the international level and it also aims to reduce knowledge gaps on oceans and climate and to stimulate scientific awareness. It has various work streams covering ocean acidification, climate change and migrations, marine protected areas, coasts and coastal population climatic resilience and marine ecosystem resilience. The Global Coral Reef Partnership is part of the Marine Ecosystem work stream.

The initiative was launched in 2014 by the United Nations Environment Programme (UN Environment) and the Regional Seas Convention and Action Plan (Regional Seas). It supports countries to deliver internationally agreed coral reef commitments through ecosystem-based management, as called for in the Global Strategic Directions for the Regional Seas 2013-2016. It directly contributes to Sustainable Development Goal 14 (to conserve and sustainably use the oceans, seas and marine resources) and Aichi Target 10 (to minimise the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification by 2015).

The Partnership delivers results under four work areas: (1) building coral reef resilience in the face of climate change and ocean acidification; (2) strengthening public-private collaboration and use of coral reef ecosystem service values in decision making; (3) enhancing data and information for ecosystem-based coral reef planning and management; and (4) institutional support and outreach.

To help governments and other entities set priorities for reef management, the Partnership has downscaled [climate model projections](#) for future coral bleaching conditions. This provides a high-resolution (4 km) dataset to identify coral reef climate change refugia,^b which are conservation priorities. It also has direct application in vulnerability assessment and adaptation planning. The Partnership has also developed a [Guide to Resilience Assessment of Coral Reefs for Decision support](#), covering indicators, field methods, analysis and management planning. The Guide provides reef planners and managers clear and concise guidance on how the management actions can be designed and implemented to protect and enhance resilience of reefs through systematic conservation planning, marine spatial planning and other stress reduction efforts. A [small grants scheme](#) was also implemented in 2017 with the [International Coral Reef Initiative](#) for innovative projects that build resilience.

The Partnership also supports the development and implementation of the [Green Fins](#) Initiative for sustainable dive tourism, which was originally established by the UN Environment, COBSEA (Coordinating Body on the Seas of East Asia) and Reef-World Foundation in 2004. By promoting and facilitating environmental stewardship in the dive tourism industry, Green Fins brings about measurable reduction in

negative environmental impacts associated with diving and snorkelling. This contributes to Blue Economy development efforts based on coastal tourism. Green Fins is presently active in nine countries, namely, Dominican Republic, the Maldives, Malaysia, Singapore, Thailand, Vietnam, Indonesia, the Philippines and Palau, and further expansion is being pursued.

To strengthen cross-sectoral efforts to manage climate change impacts on reefs, the Partnership is also prioritizing implementation of Green Fins in areas identified as climate change refugia based on downscaled climate model projections. Reducing direct pressure from reef tourism in such locations contributes to protection of places particularly important to the survival of reef systems during climate change.

The Partnership also integrates gender considerations throughout its work on Green Fins, including in outreach, training for dive centres and other partners, as well as training of Green Fins assessors and assessor trainers. While the SCUBA diving industry remains relatively male dominated in many places, the partnership is making significant progress - in the 2017-2018 biennium, Green Fins has 43 active assessors across 9 countries, of which 15 are female (34.9 per cent).

Recognizing that marine environmental management is often over-dependent on public resources and as a result often under-funded, the initiative is working to diversify funding for coral reefs. This is done through development of guidance on the use of economic instruments to finance reef management and testing of approaches through pilot projects. Such pilot projects are being implemented in the Caribbean in collaboration with the Regional Activity Centre for Protocol on Specially Protected Areas and Wildlife (SPAW RAC) of the Caribbean Environment Programme and [Blue Finance](#) ECRE, combining a co-management structure based on a public-private partnership agreement and a Payment for Environmental Services (PES) scheme. This aims to generate sufficient finance flows from the private sector to cover a significant portion of the necessary funds to establish and manage Marine Managed Areas. Based on these efforts, the Partnership will seek replication of the approach in other sites covered by the Regional Seas.

By working together with the Regional Seas, a long-established programme aimed at addressing the accelerating degradation of the world's oceans and coastal areas through a 'shared seas' approach, the Global Coral Reef Partnership makes sure its technical expertise can be useful for a more informed decision-making process in member countries. It also ensures that the methods, tools and policy frameworks that it produces and supports can be applied and replicated in similar areas, so as to improve guidance, awareness and capacity development in coral reef management. Efforts to this end are being stepped up in the context of the third [International Year of the Reef](#), in 2018.

b. Refugia: an area where special environmental circumstances have enabled a species or a community of species to survive after extinction in surrounding areas.