

ANALYSIS OF INTERNATIONAL FUNDING FOR THE SUSTAINABLE MANAGEMENT OF CORAL REEFS AND ASSOCIATED ECOSYSTEMS



Analysis of International Funding for the Sustainable Management of Coral Reefs and Associated Coastal Ecosystems

UN Environment, International Coral Reef Initiative and UN Environment World Conservation Monitoring Centre, 2018

Recommended citation

UN Environment, International Coral Reef Initiative, UN Environment World Conservation Monitoring Centre. (2018). Analysis of international funding for the sustainable management of coral reefs and associated coastal ecosystems. Available at: wcmc.io/coralbrochure.

Acknowledgements

Contributions were made by Jerker Tamelander¹, Francis Staub², Hazel Thornton³, Lizzie Walsh², Corinne Martin³, Rachael Scrimgeour³, Holly Griffin³, Roger Ingle³, Osgur McDermott-Long³, Lauren Weatherdon³ and Steve Fletcher³.

¹UN Environment, ²International Coral Reef Initiative, and ³UN Environment World Conservation Monitoring Centre.

Front cover image

Aerial view of coral reefs, Ishan, Maldives, Unsplash_118581

Inside and back cover image

Hard coral reef and large seafan with diver, A_Visual, Similan North Andaman, Thailand, AdobeStock_163431429

Design

Adam Turney³

ABOUT THIS ANALYSIS

Between 2010 and 2016, more than USD 1.9 billion was committed to implement, monitor and enforce the conservation and sustainable management of tropical coral reefs and associated mangroves and seagrasses, yet coral reef ecosystems alone provide society with living resources and services equating approximately USD 375 billion per year¹. This analysis explores the intended purpose and spatial and temporal distribution of funding allocations. The alignment of funding with policy ambitions related to coral reefs and associated ecosystems is assessed, along with implications for future investment in the conservation of these ecosystems.

This analysis was conducted by UN Environment, the International Coral Reef Initiative (ICRI) and UN Environment World Conservation Monitoring Centre, in response to United Nations Environment Assembly (UNEA) Resolution 2/12 on sustainable coral reef management and the ICRI 2016-2018 Action Plan Goal 1.2, which encourages financing for projects and initiatives helping to protect and restore coral reefs, mangroves and seagrasses. The analysis was funded by the Government of France.

Trends in international funding for the conservation and sustainable management of coral reefs and associated ecosystems were drawn from a dataset of 314 projects with project initiation dates ranging from 1 January 2010 to 31 December 2016. The dataset was collated and verified between mid-2017 and early 2018 through desk-based online searches, supplemented by direct contact with funders, where possible. Spatial analyses were conducted at national and regional levels. Funding allocations were categorised under eight broad themes focused on the objectives of the funding: conservation and sustainability; marine protected areas management; promoting sustainable living and alternative livelihoods; fisheries management and governance; climate change resilience; communication and awareness; monitoring and research; and policy and legislation. In instances where co-financing information was not provided, the reported financial value was taken to represent the primary funding value.

While effort has been made to capture as many projects as possible in the analysis, data on projects and funding is not always in the public domain or easily accessible, and sufficiently detailed information to determine the breakdown of allocations by country and by type of funding (e.g. grant, loan, co-financing, etc.) is often absent. It is therefore recognized that the underlying dataset is not exhaustive. Efforts will be made to update the data and revisit the analysis in the future, as possible.

The analysis provides an initial and indicative overview of trends in international donor funding for the conservation and sustainable management of coral reefs and associated ecosystems, including funding for ecosystem-based management of tropical coastal marine areas. It is intended to support a wide range of entities in identifying and addressing funding gaps and priorities. It may also help identify opportunities for international collaboration and innovative approaches that leverage further and more diverse investments in coral reefs and thereby strengthen progress toward global policy ambitions.

The data informing this analysis, as well as a technical briefing paper on the approach used and results, are available on the **Coral Reef Funding Landscape website (wcmc.io/corals)**. This site allows users to explore past and current funding efforts across the world, including details of total project cost, spatial and temporal scales, funders, beneficiaries, and purpose.

¹ Estimated by The Economics of Ecosystems and Biodiversity (TEEB) initiative, as reported in the Report on the Sixth Replenishment of the GEF Trust Fund.

FUNDING ALLOCATIONS

WHERE ARE FUNDS COMING FROM?

A total of 314 projects were identified from 60 funders between 2010 and 2016, with a total value of USD 1.9 billion in total project costs, including USD 343.2 million in primary funding (i.e. in-cash donor funding). Individual funding allocations ranged from USD 1,600 to USD 36,000,000 in primary funding, or USD 1,600 to more than USD 344,700,000 in total project costs (i.e. including loans, in-kind financing, etc.). Multilateral and intergovernmental agencies and funds and philanthropic foundations awarded the largest amount of funding, with the top five funders collectively

allocating nearly USD 1.6 billion of the total project cost commitments identified to date (Table 1; Figure 1).

Many projects are relatively small. Of projects for which detailed funding information was available (294 of 314 projects), 120 received up to USD 100,000 and a further 92 up to USD 1 million (see Table 2), with a total combined value of USD 40.4 million. In contrast, 33 projects received in excess of USD 10 million each, collectively accounting for USD 1.72 billion of the total funding commitments since 2010.

Based on available information, these results suggest that the majority of funding for work related to coral reefs and associated ecosystems is driven by a few funders, while nearly three-quarters of all projects consists of small-scale initiatives.

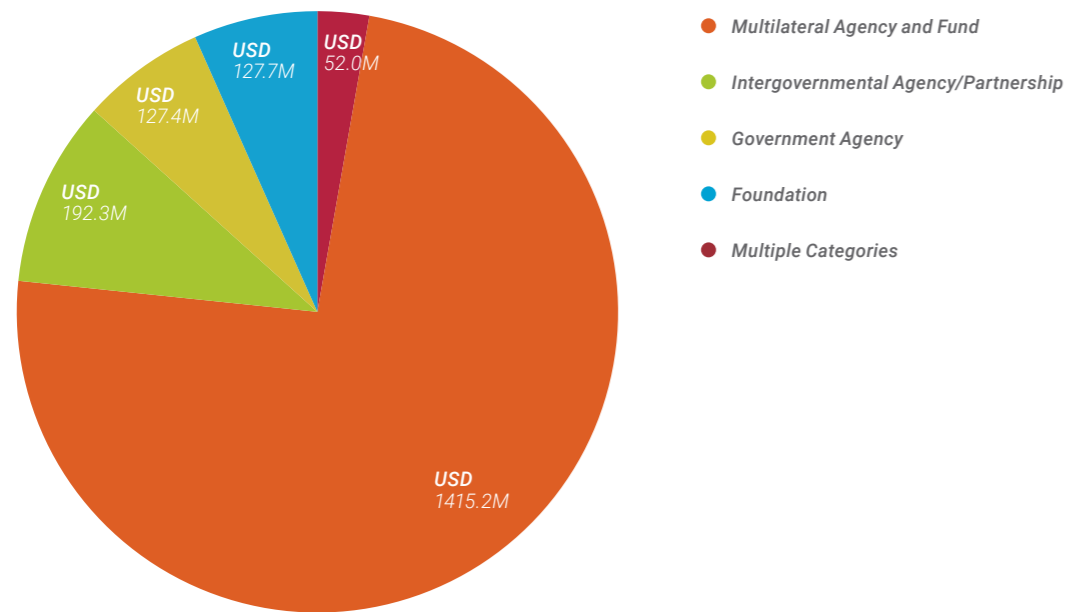


Figure 1 Breakdown of funding allocations by funder type, based on reported total project costs in USD million (including co-financing and loans). 'Multiple categories' refers to projects in which multiple categories of funders were recorded.

Table 1 List of top five funders listed by the greatest to least amount of allocated primary funding for projects (i.e. grant-only funding in USD), along with accompanying loans, in-kind financing, etc. (reported as 'Total project cost').

Top Five Funders				
Rank	Funders	Number of projects	Primary funding (USD)	Total project cost (USD)
1	Global Environment Facility (GEF) Trust Fund	24	168,019,254	1,426,199,212
2	Green Climate Fund	1	36,000,000	38,900,000
3	Oak Foundation	45	20,774,903	93,608,605
4	European Union	1	19,132,653	19,132,653
5	European Commission Framework Programme 7	8	15,816,364	18,618,108
Total			259,743,174	1,596,458,578

Table 2 Number and cumulative value of projects by range of reported total project cost (USD million, including co-financing, loans, etc.). This excludes 20 (of 314) projects due to a lack of funding information.

Range of total project cost (USD million)	Number of projects	Cumulative project cost (USD)
0 to 0.1	120	5,629,551
> 0.1 to 1	92	34,728,280
> 1 to 2	26	36,044,900
> 2 to 10	23	115,000,439
> 10 to 20	13	187,727,271
> 20 to 50	10	348,855,479
> 50 to 60	10	1,178,461,701
Total	294	1,916,287,621

Table 3 Top five countries ranked by primary funding (in USD) received between 2010 and 2016. 'Funding per coral reef area' is calculated based on the primary funding.

Top Five Countries				
Rank	Country	Primary funding (USD)	Total project costs, including loans and co-financing (USD)	Primary funding per coral reef area (USD / km ²)
1	Tuvalu*	36,000,000	38,900,000	40,979
2	Indonesia	28,672,000	184,463,633	1,426
3	United States**	20,526,377	59,423,215	4,830
4	Samoa	14,810,274	26,988,274	73,613
5	Australia	14,800,750	14,908,750	458
Total		114,809,401	324,683,872	

*Comprises USD 38.9 million in funding (USD 36 million of which is primary) from the Green Climate Fund.

**Includes overseas territories.

HOW HAS FUNDING CHANGED OVER TIME?

The 2012 United Nations Conference on Sustainable Development, or Rio+20, resulted in a commitment to “support international cooperation with a view to conserving coral reef and mangrove ecosystems,” which were recognised for their “significant economic, social and environmental contributions” (“The Future We Want,” UNGA A/RES/66/288). Funding allocations increased significantly after 2012 (Figure 2), suggesting a response to global decisions and commitments such as marine-related resolutions by the UN General Assembly, Aichi Biodiversity Target 10, and more recent declarations on coral reefs and associated ecosystems such as UN Environment Assembly Resolution 2/12. In 2014, the launch of the sixth replenishment of the Global Environment Facility Trust Fund included a particular focus on expanding the area of coral reefs within marine protected areas, as per Program 6 (‘Ridge to Reef Program’), making a direct contribution to Aichi Target 11. Specifically, Program 6 targeted the identification and establishment of marine protected area networks and large marine protected areas, the management of which would help to reduce pressures on coral reefs². Management of coral reefs and associated seagrasses and mangroves is also addressed under the

² Program 6, Report on the Sixth Replenishment of the GEF Trust Fund.
³ Represents total project cost, including co-financing, loans, etc.

Global Environment Facility International Waters focal area and, in particular, through Large Marine Ecosystem projects. From 2014 onwards, the largest primary funding grants were associated with the Global Environment Facility and the Green Climate Fund: funding from the Global Environment Facility trust fund and small grants programme increased from USD 4.7 million in 2012 to USD 23.4 million and USD 27.7 million in 2013 and 2014, respectively. A USD 38.9 million project was launched in 2016 by the Green Climate Fund. It should be noted that this also includes funding through projects that address coastal ecosystem-based management that is not specifically and directly targeted at coral reefs. Moving forward, the funding impacts of the UN 2030 Development Agenda, and the Paris Agreement are anticipated. The International Coral Reef Initiative has also declared 2018 the third ‘International Year of the Reef’, one objective of which is to catalyse increased funding for the sustainable management of coral reefs.

WHERE ARE FUNDS GOING?

Funded projects for coral reefs and associated ecosystems were identified in a total of 83 countries and territories, out of more than 100 countries and territories where tropical corals are known to exist. Of 314 projects, 279 focused on a single country,

⁴ For both primary funding and total project costs, estimates only include projects implemented in single countries to avoid double counting. This is due to a lack of information on the breakdown of funding allocations per country in projects occurring in multiple countries.

totalling USD 729.1 million, whereas USD 118.7 million was awarded to 35 projects spanning multiple countries, some across different regions (Figure 3). The top five most funded countries in primary funding (i.e. direct grants) were Tuvalu, Indonesia, United States (including overseas territories), Samoa and Australia, which collectively received USD 114.8 million of primary funding allocations (see Table 3). The top five most funded countries in total project costs³ were Indonesia, Mexico, Sri Lanka, United States (including overseas territories), and Tuvalu⁴, which collectively received more than a quarter of total project costs identified to date (USD 488 million) (see Table 4). Large, individual coastal management and climate resilience projects drive the pattern for Tuvalu and Sri Lanka.

Figure 4 on page 8 represents the spatial distribution of projects, highlighting the different thematic objectives. Some countries with large coral reef area received comparatively low amounts of donor funding per unit area of reef. This includes the Federated States of Micronesia, with a reef area of 3,192 km² (sixth-greatest of all countries) and donor funding just over USD 2 per km²; Fiji, at USD 57 per km² (3,404 km², fifth-greatest); and India, with just over USD 100 per km² (2,036 km², twelfth-greatest)⁵. Countries with smaller coral reef area such as Sri Lanka (122.5 km²) and Ecuador (126.3 km²) received USD 529,220 per km² and USD 187,988 per km² respectively.

Eastern Africa, the Wider Caribbean and the East Asian Seas regions received comparably more funding than the

⁵ Values represent total funding (including loans, co-financing, etc.) in USD per coral reef area (km²).
⁶ Aichi Target 11: “By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved”.
⁷ SDG Target 14.5: “By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on best available scientific information”.

South-East Pacific, West and Central Africa, and the Red Sea and Gulf of Aden (see Figure 3). Funding in Eastern Africa was largely driven by allocations from the Western Indian Ocean Marine Science Association (WIOMSA) Trust and the Global Environment Facility Trust Fund.

Though not taking into consideration funding needs, these results could support identification of geographic funding priorities including, for instance, to ensure adequate funding for coral reef management in areas where social and economic dependence is high and/or areas that are climate refugia or where biodiversity conservation outcomes can be maximized.

WHAT IS BEING FUNDED?

Identified funding allocations broadly aligned with eight thematic project objectives linked to policy ambitions (Table 5).

Projects addressing ‘conservation and sustainability’ of coral reefs (98 projects) and ‘marine protected area management’ (46 projects) have received the greatest proportion of funding, equating to USD 1.2 billion and USD 239.4 million respectively. This funding aligns with Aichi Biodiversity Target 11⁶ and Target 14.5 of the Sustainable Development Goals (SDGs)⁷, among others. Similarly, thematic project objectives related to ‘climate change resilience’ (23 projects; USD 78.2 million)

Funding by year:



2010 \$55.3M 31 projects	2014 \$306.9M 50 projects
2011 \$44M 34 projects	2015 \$312.8M 51 projects
2012 \$55.7M 42 projects	2016 \$864.9M 50 projects
2013 \$268.5M 56 projects	

Figure 2 Total funding allocations (based on total project costs in USD million) by year for coral reefs and associated ecosystems, from 1 January 2010 to 31 December 2016. Numbers of projects includes those that began in that year, but exclude information on financial allocations.

Funding by region:

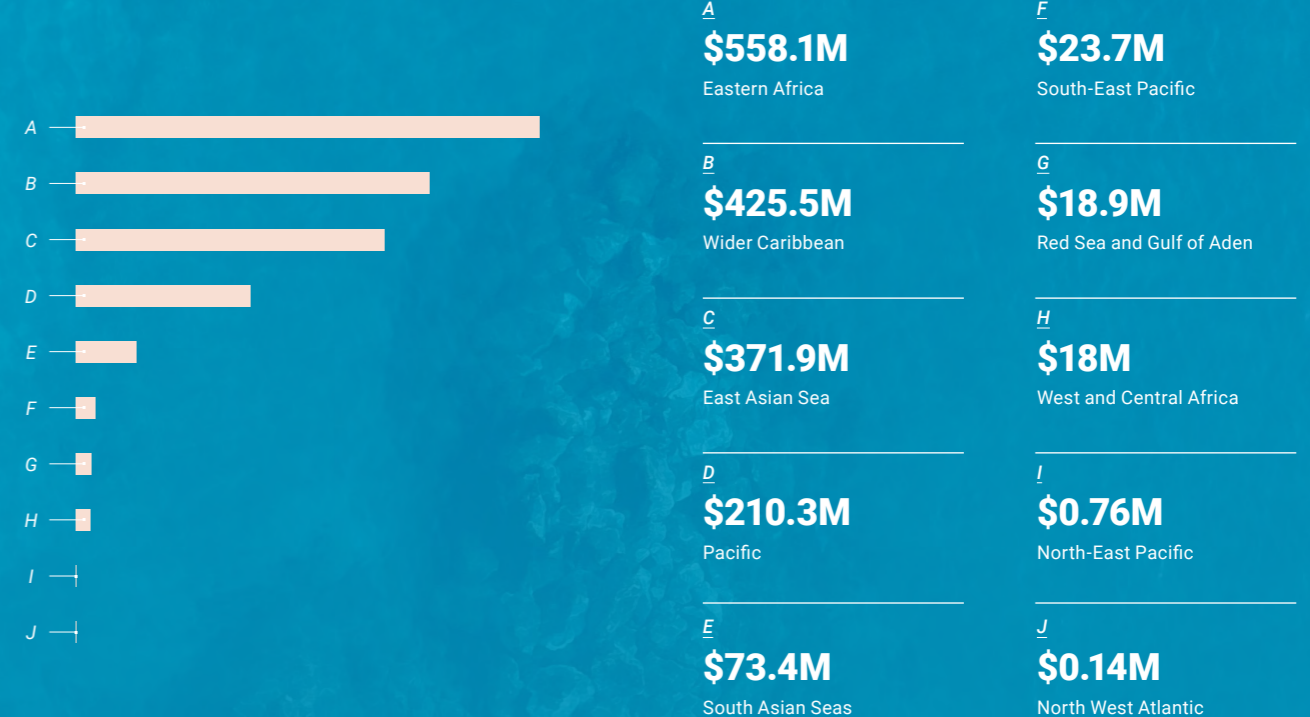


Figure 3 Funding (representing total project costs in USD million) by region. Known gaps in information for West and Central Africa and the South-East Pacific.

align with Aichi Biodiversity Targets 10⁸ and 15⁹ by aiming to protect ecosystems providing essential services such as flood protection and mitigation of storm surges, and by enhancing coastal resilience.

Over the last seven years, fewer identified records of allocated funding have been identified for the other thematic objectives, such as 'communications and awareness' (USD 19.0 million), 'policy and legislation' (USD 14.3 million), and 'monitoring and research' (USD 19.3 million). This may be due in part to fewer readily available (i.e. easily identified and extracted) records for these thematic objectives. Furthermore, many 'conservation and sustainability' and 'marine protected area management' projects encompass policy development, monitoring and outreach

activities, especially larger and regional projects. Funding for research can often be large; however, in the context of this study, these allocations were not considered to be representative of international donor funding, and so have largely been excluded (see Table 5). Nonetheless, these thematic areas are essential to the sustainable management and conservation of coral reefs and associated ecosystems. 'Monitoring and research' activities inform the development and adaptability of conservation and management measures. In turn, without strengthening and continual development of relevant 'policy and legislation', efforts to conserve and sustainability manage coral reefs and associated ecosystems may be undermined, particularly in light of future development aims. Thus, further 'monitoring

and research' activities could prove beneficial by informing future policy development and thereby catalysing funding opportunities for the development of policies related to coral reefs and associated ecosystems.

agreements including the Convention on Biological Diversity as well as Regional Seas Conventions and Action Plans, and United Nations General Assembly and Environment Assembly Resolutions. Of these, two-thirds were global in scope (35), while the remainder were regional.

Within these 53 entries in the policy dataset, 219 relevant provisions were identified. Of these, more than three-quarters (166 provisions) explicitly referenced coral reefs and/or associated ecosystems. Some provisions were more generic, relating to the wider conservation of the marine and coastal environment and related biodiversity (e.g. 'to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life'¹⁰).

Table 4 Top five countries ranked by total project costs (in USD) received between 2010 and 2016. 'Funding per coral reef area' is calculated based on the total project costs.

Country	Primary funding (USD)	Total project costs, including loans and co-financing (USD)	Total project costs per coral reef area (USD / km ²)
Indonesia	28,672,000	184,463,633	9,175
Mexico	14,240,000	140,325,390	150,678
Sri Lanka*	2,784,163	64,854,590	529,220
United States**	20,526,377	59,423,215	13,982
Tuvalu***	36,000,000	38,900,000	44,280
Total	102,222,540	487,966,828	

* Includes a USD 45 million loan from World Bank, ** Includes overseas territories, *** Comprises USD 38.9 million in funding (USD 36 million of which is primary) from the Green Climate Fund

Table 5 Number of projects and total funding allocation (representing total project costs in USD million) by thematic project objective.

Theme	Total number of projects (2010 -2016)	Total funding allocation (2010 - 2016; USD million)
Conservation and sustainability	98	1,177.8
Marine protected areas management	46	239.4
Promoting sustainable living, alternative livelihoods and tourism	37	178.1
Fisheries management and governance	26	125.5
Climate change resilience	23	78.2
Communications and awareness	32	19.0
Policy and legislation	4	14.3
Monitoring and research	27	19.3

ALIGNMENT OF FUNDING WITH POLICY AMBITIONS

Alignment between funding efforts and internationally agreed coral reef conservation and management ambitions can be analysed by comparing project funding with globally and regionally adopted policy decisions and their financial provisions.

In this scoping analysis, 53 resolutions, commitments and recommendations were reviewed and compiled into a dataset, including, inter alia, United Nations Convention on the Law of the Sea, global and regional multilateral environmental

Financial commitments

A number of broad recommendations have been made regarding the need for financial support, including from private sector companies, international development banks, and countries (e.g.

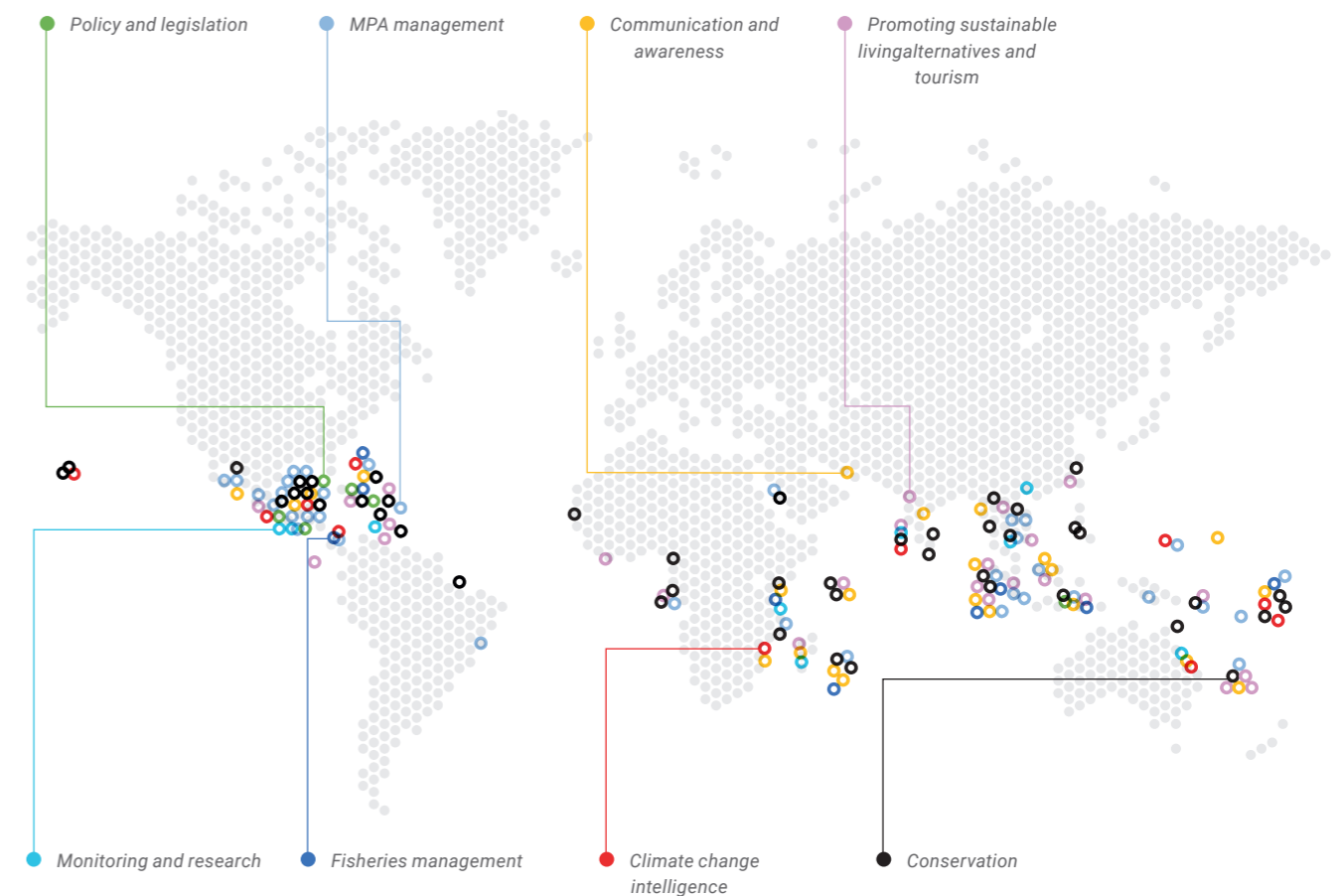


Figure 4 Spatial distribution of funded projects related to coral reefs and associated ecosystems, differentiating by thematic project objectives.

8 Aichi Target 10: "By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning"
9 Aichi Target 15: "By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration"
10 Article 194, UNCLOS (<http://wcmc.io/coral10>)

the UN General Assembly “invites the international community to continue and to enhance its support through the provision of financial resources” (A/RES/71/224), and UNEA 2/12 “Invites Governments and donors to provide technical and financial support for the conservation and management of coral reefs, including in developing countries”). However, although decisions often acknowledged the need to identify financial requirements and to secure funding, few explicitly identify funding necessary to achieve policy ambitions or entities responsible for providing funding. Enhanced consideration of potential funding sources would therefore be useful at the negotiation stage of policy documents and commitments. Exceptions include the UN Environment Caribbean Environment Programme’s Workplan and Budget for the Specially Protected Areas and Wildlife (SPAW) Subprogramme (2017-2018), for instance, which provides specific financial information and different funding mechanisms. To date, over 180 voluntary commitments focusing on coral reefs or mangroves and related systems, with financial provisions, have been registered in relation to delivering SDG 14¹¹.

Funding for conservation of coral reefs and associated ecosystems benefits a number of economic sectors through ecosystem services such as shoreline protection, recreational opportunity, livelihoods and food security. Increasingly considering funding for coral reefs an investment in the natural capital of local, national and regional economies could contribute to achieving greater private sector investment, alongside traditional forms of funding from foundations, multilateral funds and governmental agencies.

Transboundary cooperation

This analysis has shown that almost nine out of every 10 projects occur in a single country, yet coral reefs are highly transboundary systems. Effective management of these systems requires collaboration—or at the very least coherence—between neighbouring countries, in line with the ecosystem approach. Large Marine Ecosystem (LME) projects financed through the Global Environment Facility embody this approach. Regional Seas Conventions and Action Plans provide intergovernmental frameworks that can advance such collaborations. This may include the development of regional coral reef action plans, with clear policy, technical and financial prioritization, as well as provisions for monitoring progress against set targets. This would also help ensure that the many small projects being funded – nearly three-quarters of the projects reviewed each received less than or equal to USD 1 million of funding – are complementary, to achieve a greater impact.

Funding policy ambitions

Identified funding allocations for ecosystem-based management of coral reefs and associated ecosystems, as well as marine protected area management, illustrate delivery on policy ambitions through project financing, including contributions to SDG 14. Funding efforts to ‘promote sustainable living,

alternative livelihoods and tourism’ align with recent policy ambitions at global and regional scales, including the 2011 UN General Assembly resolution 65/150¹² and the 2016 UNEA Resolution 2/12 on sustainable coral reefs management¹³, adopted in May 2016. International recognition of coral reefs and associated ecosystems for their cultural and socioeconomic value through designation of World Heritage Sites or Man and Biosphere Reserves may also bring additional funding for sustainable management.

International attention to the impacts of climate change on the condition of coral reefs and associated ecosystems—often considered in the context of the corresponding impacts on coastal populations, economic sectors and development prospects—is growing. Preliminary results suggest that funding allocations for coral reefs are increasing, particularly in the context of enhancing resilience to climate change. The newly implemented Green Climate Fund has to date launched 53 projects. While only a few of these projects encompass coastal ecosystem-based management efforts, the fund may be leveraged in supporting climate-resilient development based on coastal adaptation and mitigation linked to the services provided by coral reefs, mangroves and seagrass beds¹⁴.

This analysis suggests that additional focus on thematic objectives such as ‘communications and awareness’, ‘policy and legislation’ and ‘monitoring and research’ in relation to coral reef management and conservation is warranted. Monitoring provides information necessary to inform as well as review the impact of policy and legislation, as well as projects. Further efforts to strengthen ocean literacy through communication and outreach are also needed to catalyse action by a range of stakeholder groups through enhanced awareness. In this respect, improved understanding of the importance of coral reefs and associated ecosystems to human wellbeing is critical to engaging citizens and encouraging stakeholder participation in management and conservation efforts.

¹¹ Number of voluntary commitments identified through a keyword search (‘coral reef’) via the UN Ocean Conference’s Commitments Database (<http://wcmc.io/coral11>)

¹² Resolution expressed concerns regarding the impacts of climate change and human activities on coral reefs and urged Member States “to take all practical steps at all levels to protect coral reefs and related ecosystems for sustainable livelihoods and development” (UNGA A/RES/65/150).

¹³ Resolution invited “initiatives for the development of sustainable tourism, including through the Sustainable Tourism Programme of the 10-Year Framework of Programmes on Sustainable Consumption and Production”.

¹⁴ Information obtained by browsing the Green Climate Fund’s ‘recent projects’ database.

WAY FORWARD

This preliminary analysis of projects on coral reefs and associated ecosystems funded between 2010 and 2016 provides insights into thematic, spatial and temporal elements of international funding allocations.

Differences in economic development status and costs of reef management notwithstanding, this analysis shows significant variation in the amount of funding provided for coral reef management in different regions, including relatively low investment per unit area of reef in some regions and countries where reefs are extensive, highly biodiverse or hold a large proportion of climate refugia¹⁵. For instance, the Red Sea and Gulf of Aden appear to be one notable funding gap, while reefs in West and Central Africa—though modest in extent—have received very little funding towards managing them sustainably. While this brief identifies some major patterns, the full database can provide a valuable resource in defining future funding decisions and allocations, in combination with other relevant data. In terms of thematic objectives, increased focus on, for example, policy- and communications-related funding could help to strengthen stakeholder engagement in coral reef management and conservation and create an enabling environment for legislative and regulatory change. Moving forward, continued efforts to collate information on funding for coral reefs and associated ecosystems will be useful in tracking trends over time and reducing gaps in knowledge. This could be supported, for example, through the work of the International Coral Reef Initiative.

The results indicate that recent developments in international and regional policy, relating specifically to coral reef and associated ecosystems, are leading to increased funding efforts for the conservation and management of these ecosystems. In light of the International Year of the Reef 2018, combined with the launch of the Seventh Replenishment of the Global Environment Facility and the UN’s announcement of the Decade of Ocean Science for Sustainable Development (2021-2030), this trend is expected to continue. Sustainable use and conservation of these ecosystems can play critical roles in delivering the UN 2030 Development Agenda and the Paris Agreement, provided that this is prioritized in funding decisions.

However, the scale of funding for these ecosystems is still significantly less than required to meet international targets. The global funding effort for biodiversity has been estimated

to be between USD 51 and 53 billion annually, an order of magnitude lower than the estimated need of USD 300 to 400 billion annually¹⁶. Furthermore, progress toward targets seeking to reduce direct pressures on biodiversity, such as Target 10 on coral reefs, is slower relative to other targets¹⁷. Only around 25% of Aichi Target-related expenditure (USD 88.8 – 245.7 billion/year for the period 2013-2020) was allocated to targets contributing to biodiversity, climate action, water and other ecosystem services, including Target 10. While not specific to coral reefs and associated ecosystems, these patterns are very likely to apply to coral reefs and associated ecosystems.

Furthermore, this analysis likely overestimates the proportion of funding specifically allocated for coral reef-related work, as funding is often reported as a total rather than by project objective. For instance, large-scale Global Environment Facility and Green Climate Fund allocations often include multiple objectives, one of which is to conserve and sustainably manage coral reefs and associated ecosystems.

Sustaining the gains from coral reef ecosystem services—estimated at more than USD 375 billion¹⁸—requires continued investment into conservation and sustainable management of these ecosystems as natural assets. Diversification of investment portfolios is critical to bridge the financing gap. This may include innovative approaches, for instance development of investment funds for coral reefs, building on experiences from Indonesia’s Tropical Landscapes Finance Facility and the Brazilian Blue Initiative, or enhancing use of public-private partnerships to achieve biodiversity, ecosystem service, social and economic development outcomes.

While donor funding continues to be an important element in the sustainable management of coral reefs and associated ecosystems worldwide, greater consideration of these ecosystems as blue economy assets in development and economic decision-making, both in the public and private sector, will lead to broader and lasting benefits. Such a transition can be facilitated through donor funding, and in the longer term reduce reliance on donor funding.

Further information on this study, including the project database and a more detailed technical briefing, is located on the Coral Reef Funding Landscape website (wcmc.io/corals).

¹⁵ UN Environment (2017). *Coral bleaching futures: Downscaled projections of bleaching conditions for the world’s coral reefs, implications of climate policy and management responses*. URL: <http://wcmc.io/coral15>.

¹⁶ Parker, C., Cranford, M., Oakes, N., Leggett, M. ed., (2012) *The Little Biodiversity Finance Book*. Oxford (UK): Global Canopy Programme.

¹⁷ CBD High-Level Panel (2014). *Resourcing the Aichi Biodiversity Targets: An Assessment of Benefits, Investments and Resource needs for Implementing the Strategic Plan for Biodiversity 2011-2020. Second Report of the High-Level Panel on Global Assessment of Resources for Implementing the Strategic Plan for Biodiversity 2011-2020*. Montreal, Canada.

¹⁸ Estimated by The Economics of Ecosystems and Biodiversity (TEEB) initiative, as reported in the Report on the Sixth Replenishment of the GEF Trust Fund.

