

Marine environment trends affecting poor coastal communities in Least Developed Countries (LDCs) and Small Island Developing States (SIDS), and Sida's corresponding SDG 14 portfolio 2018

Key observations include:

- Global warming is happening faster than previously expected, with impacts being increasingly serious in coastal and marine environments, especially affecting poor coastal communities in SIDS and coastal LDCs
- Pollution in marine ecosystems and associated human suffering and societal costs are being increasingly recognized in coastal communities in LDCs and SIDS
- Globally, fish stocks are fully utilized or overfished and hence competition for resources between actors is increasing especially in coastal LDCs and SIDS and especially affecting small-scale fishers
- Sida's current portfolio in support of SDG 14 amounts to 33 contributions with an agreed amount of roughly SEK 2 000 million and focuses on SDG 14.1, 14.2, 14.4, 14.7 and 14.B.



MARINE ENVIRONMENT TRENDS

The levels of pollutionⁱ (Sewage and waste water, persistent organic pollutants (including pesticides), heavy metals, oils, nutrients and sediments and marine litter) in marine environments is increasing globally with large regional differences in both type of pollutants and quantityⁱⁱ. For example, the mercury content of surface waters has tripled compared to pre-anthropogenic conditions.ⁱⁱⁱ An estimated 80 percent of marine pollution originates from land^{iv}. Growing populations in coastal regions cause increasing pollution pressure on coastal and marine ecosystems^v. Agricultural runoff and sewage discharge leads to algal blooms and eventually “dead zones” with large impacts on life under water. Because of nutrient pollution there are about 500 such zones globally where fish and other marine life cannot thrive^{vi} and the number of eutrophic coastal areas has increased dramatically since 1990^{vii}. These factors put together will seriously affect poor coastal communities and the resources upon which they depend.

Marine litter is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment.^{viii} Currently, 60 to 80% of the marine litter is different types of plastics^{ix} and the amount in the sea is increasing rapidly and it has been estimated that there will be more plastic than fish in the sea by 2050 under a business as usual scenario^x. A third of all plastic produced in the world ends up in the world's oceans corresponding to eight thousand million kg of plastics every year^{xi} and the highest densities are found in

the convergence zones.^{xii} There is a strong commitment to eliminate plastic pollution in the sea, as highlighted by the recent UNEA resolution on marine litter and microplastics (UNEP/EA.3/L.20)

The ocean plays a key role in climate regulation. Most of the heat from human-induced global warming since the 1970s – a staggering 93% - has been absorbed by the ocean^{xiii}. Hence, global temperatures are significantly lower than they would have been if the oceans had not functioned as a heat and carbon reservoir. However, it is uncertain how long the ocean will absorb a disproportionate amount of the heat. Ocean warming is accelerating and is already affecting ecosystems from polar to tropical regions, driving entire groups of species to migrate to colder waters with significant impacts on species and ecosystems^{xiv}. Increased temperatures are expected to damage fish stocks and lead to reduced catches in some regions and increases in other areas, but most severe effects of climate change on fisheries will be in SIDS and least developed countries (LDCs)^{xv} and especially affect artisanal and small-scale fishers who are among the most vulnerable groups in these countries. In South-East Asia, harvests from marine fisheries are expected to fall by between 10% and 30% by 2050 relative to 1970-2000, as the distributions of fish species shift, under a high 'business as usual' greenhouse gas emission scenario.^{xvi} The warming of the oceans has also contributed to an observed 2% decrease in global oxygen content since 1960 and a fourfold increase in anoxic ocean water volume^{xvii}. The oceans have absorbed about one fourth of carbon dioxide emissions from human activities since the beginning of industrialization, additional to the absorption of heat mentioned above (REF). The resulting ocean acidification^{xviii} hampers formation of corals, shells of shellfish and other fundamental processes that can impact ecosystems and the services they provide to society at large scale, including small-scale fisheries, tourism, and coastal protection all important sectors for the securing livelihoods of coastal communities in LDCs and SIDS

In addition to the above mentioned marine pollution levels increasing, and consequences of climate change, overfishing continues to be a major problem with an increasing rate of fish stocks overexploited or collapsed. One billion people, primarily in developing countries, depend on fish as their main protein source and another

two billion get over 20% of their animal protein from fish and in addition fish and seafood is a key source of nutrition and health for many poor coastal communities that depend on their proteins and essential micronutrients, in particular for women of child-bearing age and young children.^{xix} In 2014, 31.4 percent of fish stocks, for which data is available, were estimated as fished at a biologically unsustainable level and therefore overfished and another 58.1 percent as fully fished stocks. ^{xx}These multiple stressors can cause the system to be fundamentally altered and switch into completely different states and hence communities with a low resilience will have it harder to adapt to these changes, this being typically the case in poor coastal communities in LDCs and SIDS

Marine Protected Areas (MPAs) offer a low-tech and cost-effective way for maintaining or restoring the health of ocean and coastal ecosystems^{xxi} and can also help mitigate effects from climate change^{xxii} and connected to tourism could be a potential area for new livelihoods for coastal poor communities in LDCs and SIDS.

The ocean covers 73% of the planet surface and has a high diversity and by the year 2100, without significant changes, more than half of the world's marine species may stand on the brink of extinction^{xxiii}. To address part of this issue a process of developing an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction has been started (A/72/L.7) and it becomes imperative to strengthen the voice in of the LDCs in this process as they as of yet have a low level of utilization of these areas

The recent UN resolution *Our Ocean, Our Future: Call for Action* (A/RES/71/312) emanating from the high-level United Nations Conference to Support the Implementation of SDG 14 in New York in June 2017^{xxiv} and the subsequent appointment of a UN special envoy for the ocean^{xxv} has laid the foundation for a process to follow up the voluntary commitments made at the ocean conference and to conserve and sustainably use our oceans, seas and marine resources. The process will be further strengthened by the nine thematic multi-stakeholder Communities of Ocean Action, launched by United Nations, that will also catalyze and generate new voluntary commitments and facilitate collaboration and networking amongst different actors in

support of SDG 14 with a intent to report back at the follow-up conference in 2020.



Agenda 2030 recognizes that social and economic development depends on the sustainable management of ecosystems and is through Goal 14 aiming to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

RESPONDING TO THE CHALLENGES - SIDA SDG 14 PORTFOLIO 2018

To responds to the challenges highlighted in the previous sections to primarily coastal communities in LDCs and SIDS Sida has developed a portfolio contributing to the fulfilment of SDG 14 and its sub-targets encompasses 33 ongoing contributions

(as of 31 December 2018) with agreements from year 2000 until 2022 and with a total agreed amount of SEK 1 964 193

000. The disbursed amount in 2018 to these 33 contributions totals SEK 384 700 000 (Table 1). Fifty-six percent out of the total disbursed amount 2018 is going to contributions where SDG 14 is the primary focus, and this makes up 50 percent out of the total number of contributions. The other 50 percent of the contributions have a mix of SDGs as their primary focus but are also partly focusing on one or several SDG 14 sub-targets.

A total of nine strategies contribute to the 33 contributions and then mainly from the *Strategy for Sweden's global development cooperation in the areas of environmental sustainability, sustainable climate and oceans, and sustainable use of natural resources 2018–2022 (Global Environment Strategy)*, *Strategy for Sweden's regional development cooperation in Asia and the Pacific region 2016–2021 (Asia/Pacific Strategy)* and the *Results strategy for Sweden's support for democracy, human rights and environment in Russia 2014-2018 (Russia Strategy)* (Table 1) and these three strategies make up the main share of the disbursed amounts in 2018 (77 %).

Table 1. Number of marine relevant contributions (31 December 2018) and disbursed amount 2018 per strategy, number of contributions in parenthesis indicate co-financed contributions

Strategy	Number of contributions	Disbursed amount 2018 (MSEK)
Strategy for Sweden's regional development cooperation in Asia and the Pacific region 2016–2021	4	49
Strategy for Sweden's global development cooperation in the areas of environmental sustainability, sustainable climate and oceans, and sustainable use of natural resources 2018–2022	14(6)	196,9
Results strategy for Sweden's support for democracy, human rights and environment in Russia 2014-2018 (extended 2019)	6	41
Strategy for Sweden's regional development cooperation in Sub-Saharan Africa 2016-2021	1	20
Strategy for research cooperation and research in development cooperation 2015-2021	4	34,1
Strategy for Sweden's development cooperation for Mozambique 2015-2020	1	14,3
Strategy for support via Swedish civil society organisations for the period 2016–2022	2	17,4
Strategy for Sweden's development cooperation with Liberia 2016–2020	1	2
Strategy for Sweden's global development cooperation in the areas of sustainable economic development 2018-2022	1	10
TOTAL	33	384,7

It is clear from mapping the number of contributions to the relevant SDG 14 sub-targets that Sida has a well-covered portfolio (Figure 1) regarding reducing marine pollution (14.1), protection and restoration of marine ecosystems (14.2), sustainable fishing (14.4), increased economic benefits from sustainable use of marine resources for low-income countries and SIDS (14.7) and access for small-scale non-industrial fishers to marine resources and markets (14.b). The portfolio is less focused on ocean acidification (14.3), protection of marine areas (14.5), ending subsidies contributing to overfishing and IUU^{xxvi} fishing (14.6), marine knowledge transfer (14.a) and implement and enforce international sea law (14.c).

On the strategy level (Figure 1), the contributions of the *Global Environment Strategy* follow the same sub-target distribution trend as the portfolio as a whole, the *Russian strategy* however has a clear main distributional focus on the sub-target of reducing marine pollution (14.1), so does the *Asia/Pacific Strategy* on the sub-target of protection and restoration of marine ecosystems (14.2), the remaining six strategies, put together, have slight distributional focus on the sub-target of sustainable fishing (14.4).

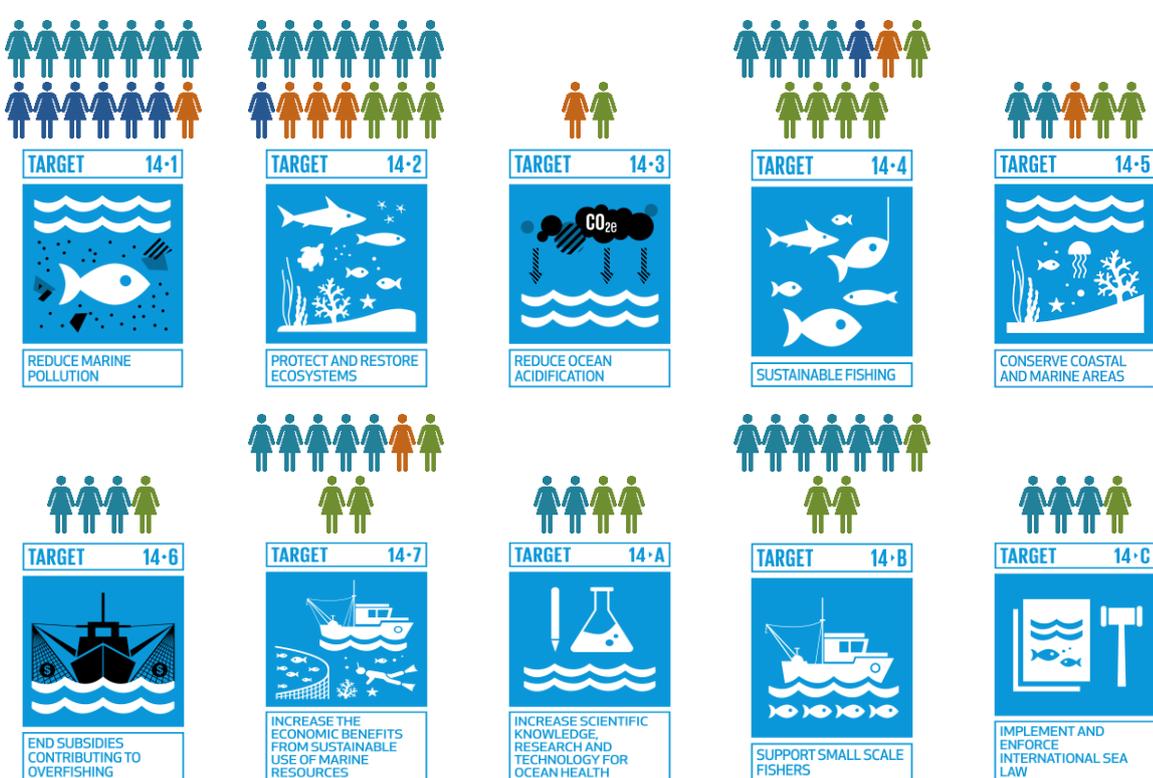


Figure 1. Number of contributions per SDG 14 sub-target. Contributions from specific strategies are displayed in following colors: Global Environment Strategy in light blue, Russia Strategy in blue, Asia/Pacific Strategy in orange, remaining strategies in green (*N.B. the figure reflects that some contributions add to the achievement of more than one sub-target*)

SIDA PORTFOLIO: Cross strategy/contribution thematic examples

1. The voluntary guidelines for small-scale fisheries

Support for the implementation of the voluntary guidelines for small-scale fisheries (SSF-guidelines) is a shared theme for the cooperation with to the Food and

agriculture organization of the United Nations (FAO), Danish Institute for Human Rights (DIHR) and the Swedish Society for Nature Conservation (SSNC). The collaboration with FAO aims to contribute to the implementation of the FAO crafted SSF-guidelines. The implementation emphasizes strengthening marginalized small-scale fishers and their organizations' capacity to engage in policy

processes relevant to their livelihoods. The ocean related support to DIHR focus on developing *good practice* routines, tools and guidelines assuring that fishing and aquaculture workers' human rights are respected by employers within these sectors. A work in which DIHR has joined forces with FAO. The ocean related support to SSNC in turn takes its starting point in small-scale fisheries organizations and local civil society organizations (CSOs) and aims to facilitate local civil society organizations and networks participation in the implementation of recent accepted guidelines and policies on sustainable small-scale fisheries (SSF) and management and restoration of marine and coastal ecosystems in African and Asian countries.

2. Improved livelihoods and resource base for poor coastal communities and their small-scale fisheries in LDCs and SIDS

Small-scale fisheries are a common theme for the support to FAO/United Nations Environment Programme (UNEP), World Wildlife Fund (WWF), WorldFish, Stockholm University (SwedBio), the World Bank fund ProBlue and the Pacific-European Union Marine Partnership Programme (PEUMP). The regional FAO/UNEP contribution in Africa adopts an ecosystem-based approach in the work of strengthening regional actors towards sustainable management and use of common marine ecosystem services, this in order to increase fish stocks and food security for small-scale fisheries and coastal communities. The support to WorldFish is part of a bigger support to CGIAR and finances small-scale fishery research in South East Asia, Africa and the Pacific. WorldFish collaborates with Swedbio's global programme with a focus on building capacity among poor fishers and CSOs in poor coastal nations to influence fishery and marine policy forums governing resources upon which these groups depend for their livelihoods. Within the programme SwedBio is also collaborating with African Women Fish Processors and Traders Network (AWFISHNET), International Collective in Support of Fishworkers (ICSF) and *The Sustainable Poverty Alleviation from Coastal Ecosystem Services* (SPACES) project. One focus of the support to the World Bank's global initiative ProBlue is to quantitatively and qualitatively increase the financing to the fishery and aquaculture sector in development economies, this includes promoting of private investments into the sector. Partners to ProBlue includes both national governments

and ministries, and FAO, UNEP, World resources Institute (WRI) and WWF. The support to PEUMP in turn focus on improving sustainable management of fish stocks in the Pacific Ocean region to increase food security, economic incomes and simultaneously contribute to climate resilience and conservation of marine biodiversity, this with both coastal fisheries and communities as well as commercial and deep-sea fisheries as target groups. PEUMP is conducting the work in collaboration with the Pacific Communities (SPC), the Pacific Islands Forum Fisheries Agency (FFA) and the Secretariat of the Pacific Region Environment Program (SPREP). Several of these programmes also contribute to protecting and restoring marine ecosystems and hence to the fulfilment of SDG 14.2.

3. Decreased marine pollution in LDCs and SIDS to improve livelihoods for poor coastal communities

Marine pollution is a common theme for the Sida support to ProBlue, UNEP, International Union for Conservation of Nature (IUCN) and UNEP/Coordinating Body on the Seas of East Asia (COBSEA). The support to ProBlue also focuses on preventing/decreasing levels of marine pollution and litter, and restoration of marine and coastal ecosystems. The support to UNEP's global marine programmes focuses on reducing marine pollution through assisting countries in their work to adopt action plans to decrease coastal and ocean pollution, and emissions of untreated sewage water. Moreover, the support also focuses on increasing the number of countries committing to follow relevant marine conventions and protocols about land-based pollution sources. The Regional support to the partnership between UNEP and COBSEA in turn focuses on reducing marine littering in East Asia. The work of the partnership is conducted with a circular economy and source-to-sea approach, with activities to reduce usage of the most harmful and difficult to recycle plastics and increase the recycling of remaining plastics. The partnership is active in the whole East Asia region with specific activities in Cambodia, China, Malaysia, Indonesia, Philippines, Singapore, South Korea, Thailand and Vietnam. The support to IUCN's *Marine Plastics & Coastal Communities* initiative mainly focus on impact mapping and mobilizing business support in combating plastic pollution, but also on local/regional capacity building and legal reforms. The

initiative is active in African and Asian countries within the Indian and Pacific Ocean regions.

SIDA PORTFOLIO: Geographic distribution

Out of Sida's 33 contributions, 14 contributions have a global focus and agreement partners consist of four multilateral organizations (five contributions), three non-governmental organizations (NGOs), two think-tanks, one Swedish authority, one partnership for research financing, and one university. An example of the global contributions is ProBlue that besides focusing on small-scale fishery and marine pollution/litter also focus on promoting sustainable blue economies (e.g. tourism, energy production and transport) and an integrated management of marine resources with a source-to-sea approach. Another example of global contributions is the support to FAO's work focusing on strengthening of small-scale fisheries through institutional capacity building in LDCs, increased cooperation, stock monitoring, and bridging of research-policy gaps to achieve policy reforms.

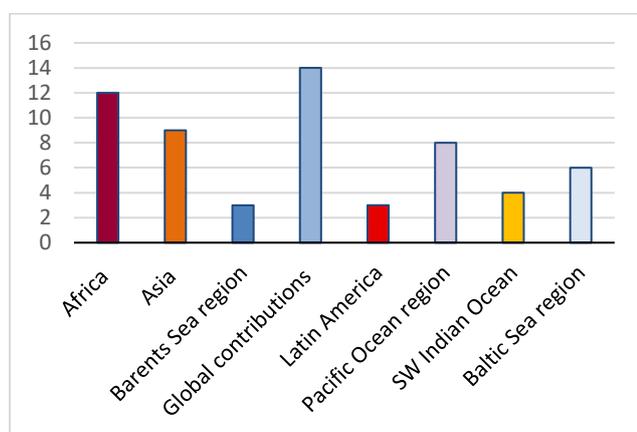


Figure 2. Geographic distribution of Sida SDG 14 contributions 2018 (N.B. the figure reflects that some contributions are present in more than one specific regions)

Sida has 12 contributions focusing on Africa (Figure 2 and 3), these are conducted by: three universities, two nature conservation NGOs, two multilateral organization's (one contribution), two research networks, one international union for nature conservancy (two contributions), one think-tank, and relevant ministries in one country. An

example of the contributions in Africa is the support to the FAO/UNEP regional programme that, beside above-mentioned focus on small-scale fisheries role in securing food supplies, also focus on increasing African coastal communities' climate change and natural disaster resilience. The FAO/UNEP contribution has regional focus on eastern and southern Africa, with pilot components in tentatively four eastern African countries. Another example of African contributions is the support to IUCN work with point of departure in three provinces in Mozambique that will develop enhanced capacities of men and women from local coastal communities and national authorities to sustainably govern and manage their natural resource base, and strengthen and restore the role and value of coastal and marine ecosystem goods and services to improve social, economic and ecological resilience to climate change. Yet another example of African contributions is the support to WWF's work in Tanzania, Mozambique, Madagascar and Comoros with strengthening of CSO's and the civil coastal populations capacities to exert influence over the marine resource management along the coast of eastern Africa (including influencing policy and legislation), this to reach a sustainable usage of marine resources in the region.

The nine contributions that focuses on Asia (Figure 2 and 3) are conducted by: one international union for nature conservancy (two contributions), one multilateral organization, one human rights institute, one university, one think-tank, one research network, one nature conservation NGO, one multi-national marine habitat/fishery management organization. An example of the contributions focusing on Asia is the support to IUCN's programme *Mangroves for the future* that aims to strengthening the sustainable management of mangrove ecosystems in low income coastal zones and to contribute to knowledge about restoration and sustainable marine resource use among coastal populations in 11 Asian countries from Pakistan in the west to Indonesia in the east.

The eight contributions that focus on the Pacific Ocean region (Figure 2 and 3) are conducted by: two multilateral organizations, one international union for nature conservancy (two contributions), one human rights institute, one nature conservation NGO, one research network, one multi-national marine habitat/fishery

management organization. Among the contributions in the region is the support channeled through European Union to the PEUMP partnership (see previous headline). Yet another example of contributions in the region is the support to WorldFish's research programme on small-scale fishery, a support which is part of a larger CGIAR contribution assessed by FORSK.

In total Sida's 33 contribution contains 77 country specific engagements (in 33 different countries) of which 38 are located in coastal LDSs and SIDS (Figure 3).

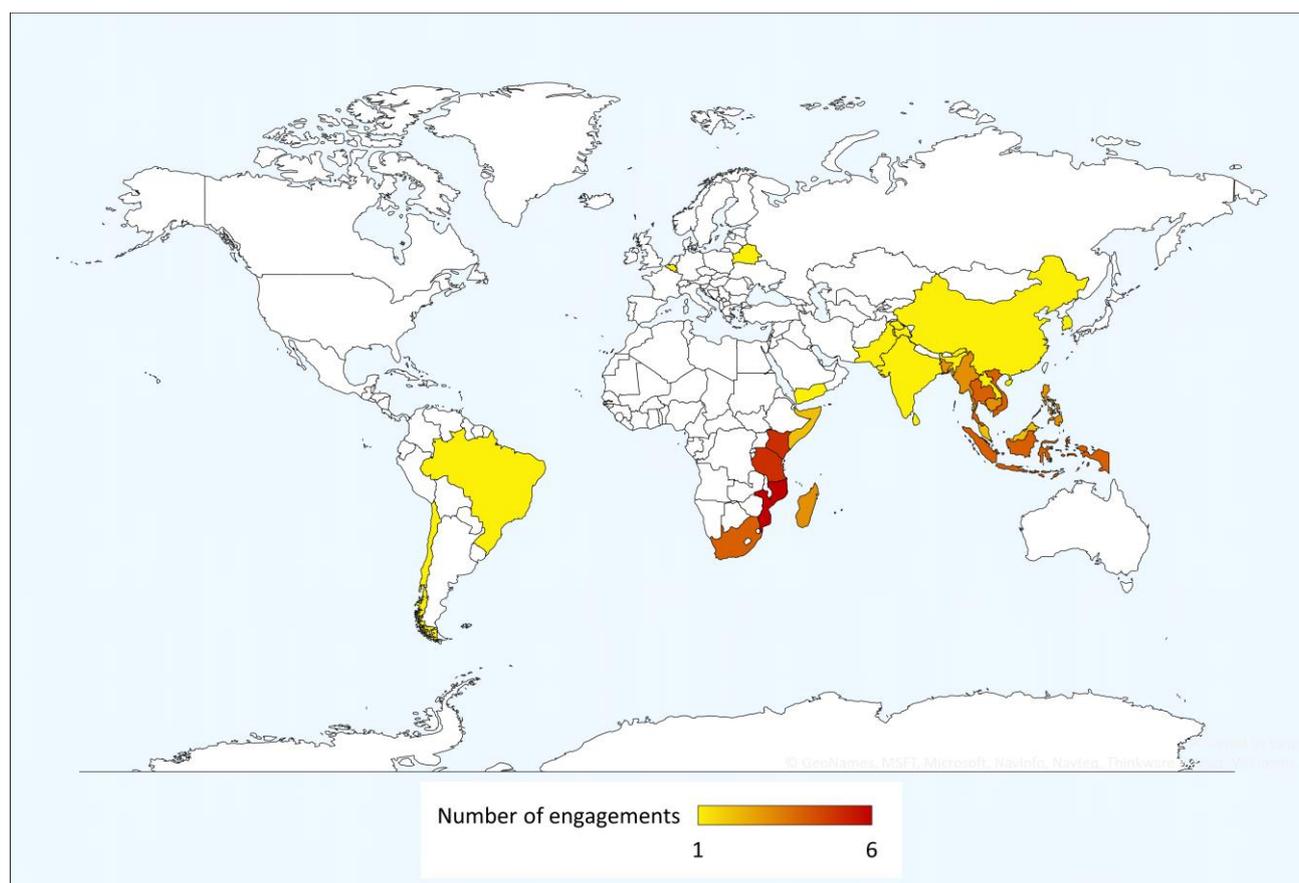


Figure 3. SIDA PORTFOLIO: Geographic country distribution of Sida SDG 14 contributions 2018. (N.B. the figure reflects that some contributions have engagements in more than one specific country)

ⁱ OECD statistical definition - Marine pollution refers to direct or indirect introduction by humans of substances or energy into the marine environment (including estuaries), resulting in harm to living resources, hazards to human health, hindrances to marine activities including fishing, impairment of the quality of sea water and reduction of amenities.

ⁱⁱ United Nations 2017, World Ocean Assessment

ⁱⁱⁱ Lamborg et al 2014, A global ocean inventory of anthropogenic mercury based on water column measurements. Nature 512: 65–68

^{iv} Allsop et al 2006 referenced in United Nations, 2017 World Ocean Assessment

^v <http://ocean2016.org/marine-pollution/> Accessed 2017-01-31

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^{vii} UNEP, 2012, GEO-5 Summary for policymakers

- viii UNEP, <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/marine-litter/>
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- xvi *Ibid.*
- xvii Schmidtko. Stramma & Visbeck,(2017) Decline in global oceanic oxygen content during the past five decades. Nature 542: 335–339
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- xxiv <https://oceanconference.un.org/>
- xxv <https://www.un.org/sg/en/content/sg/personnel-appointments/2017-09-12/mr-peter-thomson-fiji-special-envoy-ocean>
- xxvi Illegal Unreported and Uregulated fishing