CAPACITY DEVELOPMENT FOR CLIMATE CHANGE IN SMALL ISLAND DEVELOPING STATES

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Abstract

This report explores the ways donors can best support sustainable and effective climate-related capacity development in Small Island Developing States (SIDS), in terms (1) access to climate finance; (2) climate data and services; (3) working with non-governmental partners; (4) regional and triangular approaches; and (5) effective delivery of capacity development. Based on OECD data, it provides an overview of bilateral official development assistance trends for climate-related capacity development in SIDS during 2015-21. Drawing from donor project and programme evaluations, interviews, two case studies and a literature review, the report identifies good practices and makes recommendations to donors.

Foreword

Despite the manyfold constraints that Small Island Developing States (SIDS) face, they are determined to lead by example in the implementation of the Paris Agreement, for instance by submitting more ambitious Nationally Determined Contributions (NDCs) or embarking on National Adaptation Plans (NAPs). At the same time, SIDS suffer some of the highest climate-related risks in the world, and climate impacts are projected to intensify in the future. They thus need to strengthen their capacities at individual, organisational, and systemic levels to improve their climate resilience. As their main partners in development, members of the Development Assistance Committee (DAC) have an essential role to play there.

In that context, this report explores how donors can be more effective in delivering their climate-related capacity development official development assistance (ODA) in SIDS. Donors have supported SIDS through capacity development for many years, yet the effectiveness and sustainability of their interventions has been repeatedly questioned by partner countries, civil society, evaluations and academia. This report provides good practices and entry points for donors in terms of (1) access to finance; (2) climate services and data; (3) partnering with non-governmental stakeholders; (4) regional and triangular co-operation approaches; and (5) the broader effectiveness agenda.

The report draws on the OECD DAC Creditor Reporting System to provide an overview of bilateral ODA trends for climate-related capacity development in SIDS during 2015-21. It also reviews the academic literature, as well as data and reports on SIDS, climate change and capacity development; selected DAC donor reports; and selected SIDS climate change strategies and plans, including NAPs and NDCs, to assess the strengths and weaknesses of current donor approaches. Finally, it draws upon the conclusions of two workshops organised in 2022, together with the United Nations Framework Convention on Climate Change (UNFCCC) Paris Committee on Capacity Building Network, and findings from over 50 interviews conducted to São Tomé and Príncipe (February 2023) and the Comoros (March 2023). Finally, additional interviews were conducted over 2022-23 with experts and practitioners working on climate-related capacity development in SIDS to validate findings and provide additional illustrations of donor strengths and weaknesses.

Two annexes offer methodological information, notably regarding the OECD DAC Creditor Reporting System and the analysis to provide an overview of bilateral ODA trends for climate-related capacity - development in SIDS during 2015-21.

The findings of this report are meant to encourage discussions and dialogue among capacity development practitioners, academics, partner countries, and donors while filling evidence and knowledge gaps in donor perspectives on capacity development in SIDS.

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Abbreviations and acronyms

AIS	Atlantic, Indian Ocean and South China Sea region
CRS	Creditor Reporting System
DAC	Development Assistance Committee
GHG	Greenhouse gas
IKLK	Indigenous knowledge and local knowledge
LDCs	Least-developed countries
LICs	Low-Income Countries
LMICs	Lower-Middle-Income Countries
NAP	National Adaptation Plan
NAS	National Adaptation Strategy
NDC	Nationally Determined Contribution
ND-GAIN	Notre Dame Global Adaptation Initiative
NDP	National Development Plan
NGOs	Non-governmental organisations
ODA	Official development assistance
OOF	Other official flows
PARIS21	Partnership in Statistics for Development in the 21st Century
SAMOA	SIDS Accelerated Modalities for Action
SIDS	Small Island Developing States
SLR	Sea-level rise
UMICs	Upper-Middle-Income Countries
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar

Executive summary

Small Island Developing States (SIDS) are a diverse group of countries and territories in the Caribbean, Pacific, Africa region, Indian Ocean and South China Sea. Although SIDS are among the jurisdictions least responsible for climate change, they are on the frontlines of its impacts. These circumstances have led to their recognition as a special case for support by the international community. The Intergovernmental Panel on Climate Change (IPCC) indicated that they present the most urgent needs for capacity development support, notably for climate change adaptation.

The climate-related activities that SIDS implement in the coming years will determine whether they meet their Nationally Determined Contributions and Sustainable Development Goals by 2030. It is therefore crucial that SIDS accelerate the pace, scale and breadth of the transformation needed to face the climate crisis. This not only depends on the financial resources they are able to mobilise, also to a great extent on the capacity of individuals, of organisations, and broader, systemic capacity to enable such a change.

Over 2015-21, the members of the OECD Development Assistance Committee (DAC) provided on average USD 323 million annually in official development assistance (ODA) for SIDS' climate-related capacity, which represents 35% of total climate-related ODA to SIDS. While this figure illustrates DAC members' level of commitment in this area, a closer look shows that, often, DAC members struggle to meet the growing climate-related needs of all SIDS partners: ODA funds are unequally distributed within and across regions, with a small number of bilateral donors concentrating the bulk of investments on a small number of SIDS. Although many DAC members are indirectly active in SIDS through the multilateral system, SIDS welcome further bilateral engagement on climate-related capacity development to increase donor awareness on SIDS realities and needs. Finally, interviews, research and evaluations show that many capacity development activities in SIDS do not achieve sustainable results.

DAC members and other providers of development co-operation thus need to rethink where and how to deliver capacity development, taking individual SIDS' circumstances and needs into account. Overall, SIDS need more flexible approaches to accommodate their unique circumstances and overstretched capacities. The major capacity constraints faced by their public sectors affect all stages of the policy process, hindering in turn the effectiveness of development co-operation. In that context, SIDS value current capacity development approaches (e.g. workshops, 'fly-in-fly-out' consultants) but question the sustainability of their results. Donors need to reconsider when to use these approaches and ensure that they do no harm (e.g. introduce perverse incentives or distort local labour markets). To do so, they can emulate a number of approaches that are proven to work, such as end-to-end project accompaniment, peer-to-peer exchange, or mentoring.

Overall, the report finds that donors need to urgently renew their efforts to supporting capacity development in SIDS, pointing to the following priorities:

- **The complex, fragmented climate-finance landscape exacerbates capacity constraints in SIDS** and places them at a disadvantage compared to other developing countries. To make climate-specific funding windows more easily accessible, and increase capacity to access them, donors can embed climate finance experts in domestic institutions, set up helpdesks in their own

headquarters or in regional institutions, or promote basket funds to co-ordinate ODA for capacity development.

- **SIDS need more capacity to explore alternative and innovative financing structures and instruments, including blended finance**. DAC members could target SIDS' and donors' private sectors and financial system to develop business cases, identify new investment partners, work with governments to raise finance through fiscal reforms, or by harnessing remittances (e.g. to align and co-ordinate remittances with climate-related needs).
- **More robust climate data and services are essential inputs for policies aimed at preventing climate-related hazards, attracting investment, and accessing international climate finance**. SIDS need donors to be more open to the use of local data for project design or monitoring. Strengthen and promote the development of climate data services, such as early-warning systems, which are crucial for the protection of populations and economies, and subsequently for attracting private investment (e.g. in tourism).
- **To remedy the fragmentation of climate- and development-related investments, the objectives of capacity development efforts must align with wider socio-economic and governance objectives**, for example by focusing on ocean-based sectors and marine ecosystems, or taking a gender lens.
- **Donor exit strategies should consider that capacity development and resilience efforts require longer timeframes** in SIDS than in other settings, and that results can be more precarious. Donors must also provide multi-year capacity development, as longer timeframes build domestic buy-in and help focus on the systemic causes of vulnerability and marginalisation. Approaches such as landscape-based or integrated sector management enable longer-term timeframe thinking.
- **SIDS need new types of partnerships that ground capacity development locally**. Investing in the capacity of micro-, small- and medium-sized enterprises, academia, or communities can help harness and develop existing or new technical, local knowledge. These actors often have very precarious means to deliver on their mandates – but have inherently different motivations than governmental actors (e.g. advance scientific knowledge in the case of academia, or the pursuit of economic profit in the case of the private sector). Investing in their capacity, in line with the principles of aid effectiveness or the Principles for Locally Led Adaptation, put forward by the Global Center for Adaptation, for example, could be a way forward for donors. For example, this makes most sense in SIDS which have multiple and varied ecosystems that can be best studied and understood locally. These encourage donors to engage with governance structures, knowledge, and capacities outside of governments, as they are often informal. Peer-learning among diverse stakeholders could also be fostered across SIDS through triangular co-operation and regional approaches, which would also help to diversity the pool of donors able to provide capacity development.

1 Climate-related risks and constraints in Small Island Developing States

There are several definitions of Small Island Developing States (SIDS). According to the United Nations, SIDS are a heterogeneous group of 57 countries and dependent territories (UN-OHRLLS, 2021[1]). SIDS are not always geographically small (e.g. Cuba, Papua New Guinea), islands in whole (e.g. Haiti, Timor-Leste) or even in part (e.g. Belize, Guinea-Bissau, Guyana, Suriname), developing countries (e.g. Bahrain, Singapore), or even states (e.g. British and US Virgin Islands). This paper focuses on the 35 SIDS that the OECD Development Assistance Committee (DAC) listed as eligible to receive Official development assistance (ODA) during 2015-21.[1] Within this subset, there remain vast differences in terms of geography, natural resources and territorial area, history, culture and language, population size and density, governance systems, and economic development. Despite these differences, ODA-eligible SIDS share unique inherent environmental, economic, and social characteristics, such as small populations, a narrow resource base, natural-environment-dependent economies, remoteness from international markets, and reliance on fossil fuel imports (OECD, 2018[2]). These factors affect the adaptive capacity and resilience of SIDS, making them vulnerable to biodiversity loss and climate change (UNDP, 2022[3]). This section takes stock of the climate-related risks and impacts in SIDS, as well as their current capacity development constraints to respond to and address them.

1.1. SIDS in the context of climate change

Since the United Nations Conference on Environment and Development in 1992, SIDS have been recognised as particularly vulnerable to climate change impacts on development (UN, 1993[4]; IPCC, 2022[5]). The INFORM Risk Index and Notre Dame Global Adaptation Initiative Country Index (ND-GAIN), which look at the interplay of climate-related risks, show that SIDS are among the most vulnerable country groupings (ND-GAIN, n.d.[6]; DRMKC, 2022[7]). Although they play a minor role in anthropogenic climate change, their geographic isolation, limited capacity, and resources explain and exacerbate their vulnerability (UN, 1993[4]; OECD, 2022[8]). The International Panel on Climate Change (IPCC) considers SIDS' vulnerability a result of eight interconnected risks:

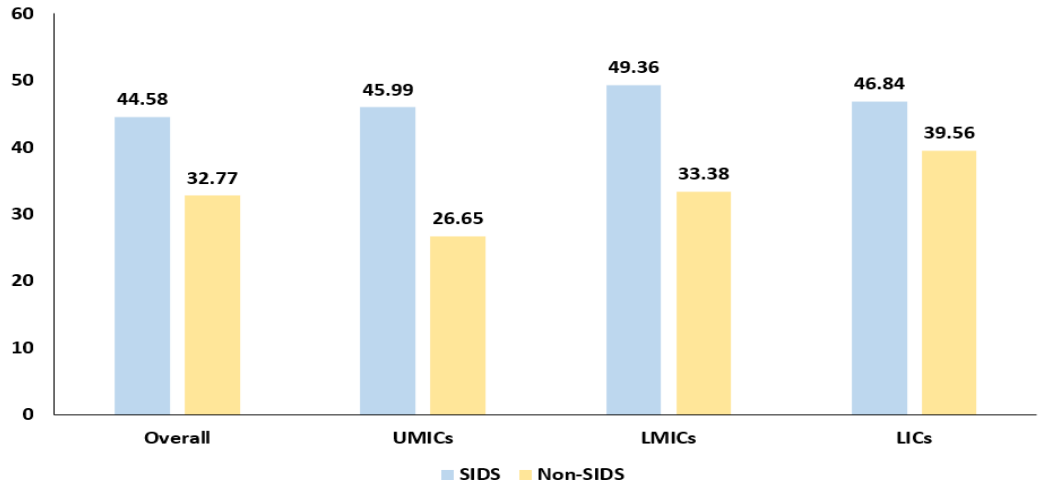
1. **Marine and coastal biodiversity/ecosystem loss** – coral bleaching negatively impacts reefs in SIDS (IPCC, 2018[9]; Hoegh-Bguldberg et al., 2018[10]). Corals are necessary for economic activities (e.g. fisheries, tourism) and play a role in climate change mitigation and resilience (e.g. carbon storage, wave attenuation) (Woodhead et al., 2019[11]). Moreover, a range of SIDS face seagrass decline, partly due to climate change and coastal erosion (Short et al., 2016[12]; Arias-Ortiz et al., 2018[13]). Climate change and sea-level rise (SLR) also impact mangroves (Sippo et al., 2018[14]), while beaches' vital ecosystems and socio-economic value are threatened by more frequent and intense extreme-weather events (Ellison, 2017[15]).

2. **Terrestrial biodiversity/ecosystems loss** – SIDS host 12% of the global bird population and 10% of mammals, yet many species are at risk of extinction due to climatic and human drivers (IPCC, 2022[5]). Sea-level rise and extreme-weather events cause costal erosion (Albert et al., 2016[16]; Ratter, Petzold and Sinane, 2016[17]; Cambers, 2009[18]), undermining options for ecosystem-based adaptation (Mercer et al., 2012[19]). Growing inland migration, tourism, natural resource exploitation, and urbanisation further degrade terrestrial ecosystems (Bellard et al., 2014[20]; Wetzel et al., 2012[21]).
3. **Sea-level rise** (SLR) – is projected to increase, which will lead to significant flooding and storm surges (IPCC, 2022[5]), especially in coastal areas, and most of the population in some SIDS lives in areas at or below 10 meters of elevation (Cashman and Nagdee, 2017[22]; Mycoo, 2017[23]). For example, the Comoros estimate a loss of 734 hectares of agricultural land and displacement of about 10% of the population across the archipelago by 2050, with SLR of 20 centimetres (Ratter, Petzold and Sinane, 2016[17]); and the country has already lost 45% of its beaches (Union des Comores, 2016[24]). Degraded coral reefs remove SIDS' natural protection (OECD, 2021[25]). By 2060-70, some Pacific coral islands will experience flooding over their entire territories (Storlazzi et al., 2019[26]). Moreover, SLR will persist even if the temperature goals in the Paris Agreement are met (OECD, 2021[25]).
4. **Water security** – freshwater in SIDS is vulnerable to climate change (IPCC, 2018[9]), affecting populations (FAO, 2016[27]; Holding et al., 2016[28]). Research finds that 44% of SIDS have reached the water-stress threshold (Karnauskas et al., 2018[29]; Cashman, 2014[30]; IPCC, 2022[5]) due to urbanisation and population growth, and longer and more intense droughts (FAO, 2016[27]; Anshuka, Van Ogtrop and Vervoot, n.d.[31]).
5. **Loss and damage** – settlements and infrastructure are increasingly exposed to extreme events in SIDS (IPCC, 2022[5]), with sizeable impacts on climate-sensitive sectors such as agriculture, fisheries, transport, energy, and tourism. These sectors are key to SIDS' Gross Domestic Product (GDP) and strain public finances by increasing expenses and the cost of borrowing after weather events strike (Cevik, 2022[32]). For example, tuna stocks are expected to decline due to climate change, causing important economic losses to Pacific SIDS (Bell et al., 2021[33]). Between 1900-2022, approximately a thousand disasters (climatological, meteorological, and hydrological) in SIDS were recorded, with estimated economic losses reaching over USD 78 billion and 129 000 deaths, mostly after 2000 and mostly in the Caribbean (EM-DAT, 2022[34]). However, these figures might be much higher (OECD and World Bank, 2016[35]), reflecting capacity gaps in data-gathering in many SIDS. For example, the World Meteorological Organization estimates that SIDS have lost USD 153 billion since 1970 due to weather, climate, and water-related hazards (OECD, 2021[25]). When looking at individual losses and damages in specific SIDS, these figures take on another dimension: the World Bank estimates that a natural disaster can cause economic losses equal to 200% of GDP in SIDS, as happened in 2004 with Hurricane Ivan in Grenada (World Bank, 2017[36]).
6. **Health and well-being** – SIDS face significant health risks associated with extreme-weather events (Weatherdon et al., 2016[37]). Temperature increases are expected to lead to more mortality and reduce well-being among outdoor workers, and greater exposure to and prevalence of diseases (e.g. malaria or dengue fever) (WHO, 2017[38]; IPCC, 2022[5]; Méndez-Lázaro et al., 2018[39]). Climate change risks also impact the local food system, which will challenge food security, increase malnutrition, and lead to higher rates of food-borne and non-communicable diseases (WHO, 2018[40]). In 2019, Cyclone Kenneth severely damaged the agricultural sector in the Comoros, wiping out 16% of its GDP, making the country dependent on humanitarian aid, and exacerbating food insecurity (Central Bank of Comoros, 2019[41]).
7. **Economic decline** – economic growth in SIDS is relatively low compared to other developing countries, up to 2 percentage points lower on average annually over 2000-15 (OECD, 2018[2]), and highly concentrated in a few sectors. For example, fish export makes up nearly 60% of GDP in

Kiribati and the Marshall Islands, while tourism makes up 50-80% of GDP in the Maldives, Palau, and Vanuatu (OECD, 2021[25]). Compared to other groups, SIDS have a 26% higher economic vulnerability (Figure 1.1). As a result, SIDS are very exposed to external shocks and could face continuous economic decline (Robinson, 2020[42]; OECD, 2018[2]; OECD, 2021[25]).

8. **Loss of heritage and cultural resources** – SIDS have rich cultures resulting from their complex histories, and variety of languages and traditions (UNESCO, 2022[43]). Under the Mauritius Strategy (UN, 2005[44]) and the SIDS Accelerated Modalities of Action Pathway (SAMOA Pathway) (UN-OHRLLS, 2014[45]), their cultural and natural heritage is key to advancing sustainable development. Climate change strains their capacity to safeguard their cultural resources (UNESCO, 2014[46]), which in turn increases their vulnerability to climate change because culture, historical knowledge of the natural environment, and social capital foster SIDS' adaptive capacity and resilience (Petzold and Ratter, 2015[47]; Nunn et al., 2017[48]), as well as impact the tourism sector (Wolf et al., 2021[49]).

Figure 1.1. Average economic vulnerability score across country income groups, 1990-2018



Note: UMICs= Upper-Middle-Income Countries; LMICs= Lower-Middle-Income Countries; LICs=Lower-Income Countries.
This figure follows the rationale and methodology of the Environmental Vulnerability Index (EVI). The figure includes 32 SIDS: Antigua and Barbuda, Belize, Cabo Verde, the Comoros, Cuba, Dominica, the Dominican Republic, Fiji, Grenada, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, the Maldives, the Marshall Islands, Mauritius, Micronesia, Palau, Papua New Guinea, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, São Tomé and Príncipe, the Seychelles, the Solomon Islands, Suriname, Timor-Leste, Tonga, Tuvalu, and Vanuatu. There is no data for the Cook Islands, Montserrat, and Niue. Depending on the year and country income group, the averages do not have the same sample size because of data availability. Some included SIDS are not currently on the DAC list of ODA recipients, but all have been ODA recipients during the period of analysis of this report.
Source: Authors based on Foundation for Studies and Research on International Development (2018[50]), EVI, https://ferdi.fr/en/indicators.

These climate-related risks have been exacerbated by the COVID-19 pandemic. In addition to the human toll of COVID-19, the pandemic triggered a global economic crisis, with significant costs for SIDS (Box 1.1). The OECD estimates that their GDP contracted 6.9% on average in 2020, which is 2.1 percentage points higher than for other developing countries (OECD, 2022[51]). Many SIDS that rely on tourism and imports closed their economies given limited health infrastructure and were disproportionately affected (UNDP, 2020[52]). Tourism flows to SIDS fell more than 70% in 2020 (OECD, 2022[51]). While GDP levels have since recovered in other developing country groupings, the GDP of SIDS was estimated to not return to 2019 levels until 2023 (OECD, 2022[51]), and in the case of the Eastern Caribbean States, until 2025 (Piemonte, Kim and Cattaneo, forthcoming[53]). Further, Russia's large-scale aggression against Ukraine disrupted supply chains, shipping routes, the price of raw materials, food and fuel security, and increased debt servicing (which was partially mitigated by the debt service suspension initiative, (Piemonte, 2021[54])).

Box 1.1. The impact of COVID-19 in Fiji and Samoa

The economies of Fiji and Samoa experienced severe pandemic-induced economic downturns. Fiji's real GDP fell 15.1% in 2020, representing the largest economic contraction in Fiji's modern history (OECD, 2022[55]). Similarly, Samoa's GDP declined in every quarter of 2020, with the country being downgraded from upper-middle to lower-middle income status (OECD, Forthcoming[56]). This translated to poor labour market outcomes in both countries. At least one-third of Fiji's labour force was affected by job losses and reduced work hours. Meanwhile, in Samoa, year-over-year employment growth was negative in every quarter between Q1-2020 and Q3-2022 (inclusive).

The pandemic's adverse economic impact in Fiji and Samoa was mainly spurred by the suspension of international tourism. Arrivals during Samoa's peak tourist season dropped from nearly 75 000 in 2019 to under 1 000 in 2021 (OECD, Forthcoming[56]). As a result, the contribution of tourism-related industries (e.g. restaurants and accommodation) to aggregate economic output collapsed. In Fiji, the contribution of tourism to GDP diminished 50% between 2019 and 2020 (OECD, 2022[55]). The waning tourism sector had economy-wide repercussions, reflecting its profound linkages with the rest of the economy. Many merchants and vendors – including in the fisheries sector – for whom tourism-induced demand was a major source of revenue, closed.

The ramifications of COVID-19 were exacerbated by other shocks. A measles outbreak in Samoa in late 2019 preceded the COVID-19 containment measures of early 2020, such that the economic contraction associated with the latter compounded that of the former. Recovery from COVID-19 has been hindered by external shocks, including natural disasters. Fiji was hit by three tropical cyclones (two of Category 5) during the COVID-19 pandemic. The estimated economic costs of the two largest storms, Harold and Yasa, totalled USD 13 million and USD 12 million respectively (OECD, 2022[55]). The recent, global economic downturn and inflation surge has also hampered economic prospects. Following Russia's large-scale aggression against Ukraine in 2022, the IMF revised its projections for Samoa's real GDP growth from just over 0% in early 2022 to near -5% in late 2022 (OECD, Forthcoming[56]).

Source: OECD (Forthcoming[56]), Towards a Blue Recovery in Samoa: Appraisal Report; OECD (2022[55]), Towards a Blue Recovery in Fiji: Covid-19 Appraisal Report, https://doi.org/10.1787/a3661a09-en.

Addressing these risks would require raising sufficient resources domestically to finance government spending. But this is a challenge for many SIDS, making them dependent on international development finance and debt, while vulnerability to shocks makes gains in domestic resource mobilisation fragile (OECD, 2022[51]). Prior to the COVID-19 economic crisis, some SIDS' debt levels were higher than average for other developing states, or they depended on development co-operation to finance operational costs – a situation that worsened (Piemonte, 2021[54]; OECD, 2018[2]). The COVID-19 crisis showed how vulnerable these countries are to shocks (UN, 2022[57]), which can derail domestic efforts toward sustainable development. Saint Lucia had been successfully bringing down its debt-to-GDP ratio prior to COVID-19, only to see revenues drop approximately 40% and debt-to-GDP rise 25% during the COVID-19 crisis. This landscape becomes complicated when crises compound, such as when several exogenous shocks occur simultaneously or successively. For example, tropical cyclone Harold affected several Pacific Island states during 2020, while people and systems were responding to COVID-19 (OECD, 2021[25]).

1.2. Climate-related capacity development bottlenecks in SIDS

While SIDS' vulnerability can be reduced, its root causes might not be possible to fully contain (Piemonte, 2021[58]). SIDS are not able to keep pace with growing climate-related risks and challenges (IPCC, 2022[5]). They need policies and reforms that foster economic recovery and curb the adverse impact of exogenous crises on public finances in a way that promotes resilience and limits the impact of future climate-related shocks (Cevik, 2022[32]). At the same time, SIDS' capacity development constraints limit their ability to face climate change risks and impacts (UN, 1993[4]; OECD, 2018[2]), and formulate policies in the first place. Barriers arise in the inherent limitations of their financial and human resources, which percolate through domestic governance arrangements. This context calls for comprehensive approaches that develop their individual, organisational and systemic capacities (Box 1.2). Given the root causes of SIDS' vulnerability, the international community plays an important role in complementing domestic efforts to develop and enhance capacity (Robinson, 2020[42]). Donor support is thus needed to overcome capacity gaps (UN-OHRLLS, 2014[45]), especially in areas related to climate change (UN-OHRLLS, 2016[59]).

Box 1.2. Capacity development by the OECD Development Assistance Committee

Development Assistance Committee (DAC) members have been supporting SIDS' capacity development efforts, including those related to climate change, for many years. The DAC understands capacity development as "the process whereby people, organisations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time" (OECD, 2006[60]). This definition considers capacity development as a process on three interacting levels that contributes to:

- The competencies of the individual, such as the knowledge, skills, and ability to set and achieve objectives (i.e. "soft" competencies, such as building relationships, trust and legitimacy, and "hard" competencies such as technical, logistical, and managerial skills).
- The organisational structures, functions, and systems that enable the capacities of individuals to come together to fulfil the mandate of an organisation or achieve defined objectives.
- The enabling environment: the policy, legal, regulatory, economic and social support systems in which individuals and organisations operate (e.g. national policies, rule of law, accountability, transparency, and information flows) (Casado Asensio, Blaquier and Sedemund, 2022[61]).

These levels innately interact and capacity development at the individual level depends on the organisations in which people work. In turn, the operation of organisations is influenced by the enabling environment. The DAC developed guidance to support the capacity of governments and providers of development co-operation on environment (OECD, 2012[62]) and explored the application of this concept to climate change (Casado Asensio, Blaquier and Sedemund, 2022[61]).

Sources: OECD (2006[60]), The Challenge of Capacity Development: Working towards Good Practice, https://doi.org/10.1787/oecd_papers-v6-art2-en; OECD (2012[62]), Greening Development: Enhancing Capacity for Environmental Management and Governance, https://www.oecd.org/dac/environment-development/greening-development-9789264167896-en.htm; Casado-Asensio, Blaquier and Sedemund (2022[61]), Strengthening capacity for climate action in developing countries: Overview and recommendations, https://doi.org/10.1787/0481c16a-en.

While countries' overall capacity levels are essential to determining the scope of climate-related capacities, climate change has unique characteristics that affect how capacity development should be designed and implemented (Casado Asensio, Blaquier and Sedemund, 2022[61]). Among these are the multi-scalar and multidimensional nature of climate change, its context-specificity and urgency to act, the uncertainty of climate impacts and of technology, and equity considerations. Climate-related capacity development thus requires developing generic capacities – such as access to education, health services, income

opportunities and political participation – in combination with specific, climate-related capacities to mitigate greenhouse-gas (GHG) emissions and adapt to climate change risks. Article 6 of the United Nations Framework Convention on Climate Change (UNFCCC) recognises the importance of improving capacity building through educational and public awareness programmes, and better access to climate-related information and training (UNFCCC, 1992[63]). Under Article 11 of the Paris Agreement, capacity building is recognised as an avenue to address climate change and engage in sustainable development, especially for countries such as SIDS, having the least capacity and being particularly vulnerable (UNFCCC, 2015[64]). Such calls are made repeatedly in the UNFCCC Conferences of the Parties (COP), most recently with the COP27 Sharm el-Sheikh Implementation Plan, which calls for long-term, country-driven capacity building interventions and for enhancing their effectiveness, success, and sustainability (UNFCCC, 2022[65]).

While the literature acknowledges that the more capacity countries have, the more developed they are, and the better-equipped to face climate change (Nautiyal and Klinsky, 2022[66]), this is not always the case for SIDS. SIDS are demonstrably more vulnerable than other developing countries to climate impacts and a single, climate-related event can undo years of capacity and broader development efforts. SIDS have been recognised as a special case due in part to their inherent, severe capacity gaps and complex climate-related risks (Mycoo, 2021[67]). The literature highlights many bottlenecks in climate-related capacity development, including in SIDS (UNDP, 2022[3]; OECD, 2020[68]; Piemonte, 2022[69]; GIZ, 2019[70]; OECD, 2018[2]). Many of these interact, leading to vicious cycles that call for comprehensive action to address multiple constraints simultaneously. Otherwise, and as in other developing country contexts, climate-related capacity development aimed at a single stakeholder, policy, or institution is unlikely to succeed (Ballard, Reason and Coleman, n.d.[71]; Shakya et al., 2019[72]). SIDS' main barriers in this area include:

- **Limited finance and access to finance** – according to Theokritoff et al. (2022[73]), finance is SIDS' largest constraint, also validated by recent evaluations of the Green Climate Fund (Independent Evaluation Unit, 2020[74]). SIDS lack the financial resources for robust assessments of climate-related needs and priorities, and to design and implement climate plans. SIDS often rely on external sources, and domestic climate investments are often unconnected to development plans.
- **Lack of climate-related data and information** – key climate data (e.g. historical data, observational data, slow-onset data, damage data) are not reliably collected and available in many SIDS (Theokritoff et al., 2022[73]; GEF - UNDP, 2019[75]; Benjamin and Thomas, 2018[76]), which undermines modelling observed impacts, understanding exposure, and assessing losses and damages, among other challenges (IPCC, 2022[5]). Further, SIDS often also lack demographic and socio-economic data (IPCC, 2022[5]). When available, data might not be sufficiently downscaled to capture local and specific characteristics, or are not systematic enough (Benjamin and Thomas, 2018[76]) – a particular problem for SIDS with microclimates, such as São Tomé and Príncipe, or those scattered cross large territories, such as the Marshall Islands or Maldives – and where country-level data might not correspond to local realities. Limited data also complicates monitoring, evaluation, and learning processes and undermines SIDS' efforts to formulate a case to access climate finance. In turn, it hinders their ability to develop climate services, such as for anticipatory action or insurance products.
- **Limited human capacity** – SIDS often have small job markets, which undermines the attraction and retention of skilled staff (GEF - UNDP, 2019[77]; GEF - UNDP, 2019[75]; OECD and World Bank, 2016[78]). This leads to a shortage of expertise in jobs that address climate change (e.g. meteorologists, hydrologists, geographers, biologists), can process climate-related data and information, or must access and understand opportunities to fund climate-related activities (e.g. preparing bankable projects, communicating in English). As a result, climate-related activities are often conducted without engaging the full range of experts needed.
- **Governance challenges** – SIDS face important governance gaps around climate change (IPCC, 2022[5]), with small, stretched institutions, inadequate policy frameworks, and limited co-ordination, which result from underdeveloped institutional setups and staff turn-over. These are a direct

function of limited capacities and resources. As a result, SIDS are inadequately prepared to manage climate strategies and integrate climate needs into national development plans. According to (Atteridge, Verkuijl and Dzebo, 2019[79]), of 172 priority actions listed in seven Nationally Determined Contributions (NDCs),[2] 44% slightly overlap with their respective national development plans, 26% specifically overlap with these, and 30% do not overlap at all. Further, the range of sectors included in NDCs is narrower and does not reflect the scope of national development plans. This undermines climate-resilient action in SIDS (Bird, Monkhouse and Booth, 2017[80]) and their NDCs' longer-term success (Theokritoff et al., 2022[73]). This disconnect also affects capacity development. For example, Vanuatu's national development plan includes concrete, climate-related capacity development actions in agriculture, health, nutrition, and other sectors impacted by climate change (Republic of Vanuatu, 2016[81]), but these are not always reflected in its NDC (Republic of Vanuatu, 2021[82]). Similar situations are observed in São Tomé and Príncipe (República Democrática de Sao Tomé e Príncipe, 2020[83]) and the Comoros (Union des Comores, 2020[84]).

These barriers impact what SIDS can autonomously do, and most SIDS therefore engage in short-term, sectoral and small-scale climate-related actions (IPCC, 2022[5]). At the same time, SIDS are not a monolithic group: they have different levels of capacity and different capacity development constraints, which requires tailored and context-specific approaches (Klöck and Nunn, 2019[85]). Many of these constraints are documented in NDCs (Carraro, 2018[86]; Mohan, 2022[87]), which can direct climate finance allocations to where needs are greatest (Atteridge, Verkuijl and Dzebo, 2019[79]). There is a call for capacity development as a condition for implementation in 91% of SIDS' NDCs, compared to 74% of other developing countries (Pauw et al., 2020[88]; Casado Asensio, Blaquier and Sedemund, 2022[61]). A recent analysis by the United Nations Development Programme (UNDP) unpacks some of the varying needs expressed by SIDS in their NDCs (Box 1.3).

Box 1.3. Capacity needs underlying the UNDP's Climate Promise initiative

The UNDP's Climate Promise provides technical support for developing countries to take bold action to reduce their emissions, increase their resilience to climate impacts, and support sustainable development priorities (UNDP, n.d.[89]). Among supported SIDS, 29% indicated that technical or capacity support was still needed to implement planned NDC actions. For example, the Comoros aims to develop the capacity of sectoral ministries to implement climate policies in key sectors, while Vanuatu needs to develop its capacity to implement the Paris Agreement's Article 6 (Transparency). In addition, 29% of SIDS requested support in planning for and securing climate finance. For instance, Grenada aims to develop financing tools and investment opportunities for a National Cooling Action Plan and renewable energy needs, while the Dominican Republic would like to increase the involvement of the private sector in climate action by identifying suitable entry-points to tap into this financing source. The third most-needed area for support is strengthening NDC co-ordination and engagement mechanisms, with 21% of SIDS indicating they needed such assistance. For example, Belize aims to develop a Strategic Plan for its National Climate Change Office to guide implementation of its NDC and low-emission development strategy, while São Tomé and Príncipe needs to establish a national climate change institution, building upon its National Climate Action Committee (UNDP, 2022[3]).

Source: UNDP (2022[3]); The State of Climate Ambition. Snapshot Small Island Developing States (SIDS), https://climatepromise.undp.org/sites/default/files/research_report_document/Climate%20Ambition-SIDS%20v2.pdf; UNDP (n.d.[89]), Climate Promise (website), https://climatepromise.undp.org/.

Similar conclusions can be drawn from the available National Adaptation Plans (NAPs) of SIDS, which establish a process to identify and address medium- to long-term priorities of developing countries in

adapting to climate change (UNFCCC LEG, 2020[90]). As of March 2023, only 10 SIDS submitted NAPs,[3] and all include capacity development as a component to adapt to climate change risks (UNEP, 2022[91]). Capacity is at the core of those to be developed (such as in São Tomé and Príncipe, which launched the process in 2022), to implement an integrated approach to climate adaptation planning at all levels and across sectors (UNEP, 2022[91]).

2 Trends in climate-related capacity development in Small Island Developing States

2.1. Development Assistance Committee donors' engagement with Small Island Developing States

Article 9 of the Paris Agreement acknowledges the role of international climate finance in promoting capacity building in Small Island Developing States (SIDS) (UNFCCC, 2015[64]). While development co-operation and official development assistance (ODA) alone cannot address all the financing needs of SIDS, they remain important to SIDS' climate and development priorities. Bilateral donors' role in SIDS is primarily linked to their ability to provide grants (GEF - UNDP, 2019[75]), which is also the typical ODA modality to deliver capacity development. Such grants take many forms, including non-financial resources (e.g. technical assistance, in-kind support, consulting and workshops), and have been used to support SIDS in all climate-related areas (OECD, 2020[68]; OECD, 2018[2]; Casado Asensio, Blaquier and Sedemund, 2022[61]).

Capacity development is among the most complex areas of international development practice (Brinkerhoff and Morgan, 2010[92]), and developing capacity in SIDS is even more complex given their specific circumstances (OECD, 2018[2]). Donors acknowledge this special case, with developing the capacity of SIDS in the area of climate change specifically mentioned in the OECD Development Assistance Committee (DAC) High-Level Meeting Communiqué (OECD, 2020[93]) and the *DAC Declaration on a new approach to align development co-operation* (OECD, 2021[94]). The Communiqué commits the DAC to "improving how [DAC member] policies and programmes address the particular needs of SIDS, and to working with them to address obstacles they encounter in accessing finance for resilient and sustainable development" and absorbing this finance (OECD, 2020[93]). The Communiqué also sees capacity development as key to "support developing countries to achieve their own transitions to environmentally sustainable, low-emission and climate-resilient development pathways." In turn, the Declaration recognises the need to support adaptation actions in SIDS; to protect the oceans that support communities in coastal developing countries and SIDS; and to access and absorb international climate and environmental funds, and multilateral and private finance (OECD, 2021[94]). The Declaration also emphasises developing the capacity of partner countries.

DAC members engage with SIDS in myriad ways to deliver on these commitments (OECD, 2021[95]; OECD, 2020[68]; OECD, 2018[2]). While few members have specific targets, policies, strategies, or tools for development co-operation that focus on SIDS (France, Ireland, Japan, New Zealand),[4] most include SIDS' concerns across sectoral (Australia, Germany, Korea, Luxembourg, Norway), geographic (Sweden), or broader development co-operation (Denmark, Germany, EU) strategies. For a few, smaller DAC members, SIDS are outside the scope of chosen priority countries and support might flow via the multilateral development system, notably through climate-focused vertical funds, such as the Global Environmental Facility (GEF) or the Adaptation Fund (Austria, Belgium, Netherlands, Slovak Republic).[5]

These varying frameworks mean that DAC members each engage differently with SIDS, and not all have practical tools and instruments, including for capacity development (OECD, 2012[96]). Building upon (Mizan

et al., 2020[97]; Kuhl, van Maanen and Scyphers, 2020[98]; Casado Asensio, Blaquier and Sedemund, 2022[61]), and the Intergovernmental Panel on Climate Change (IPCC) list of enablers that foster climate action in SIDS (IPCC, 2022[5]), climate-related capacity development would require action on:

- **Understanding the cause and effects of climate change better** (i.e. sources of emissions, physical manifestations of change, implications for economic activities and livelihoods). This understanding needs to occur at individual, institutional, and systemic levels (e.g. share lessons and knowledge on climate-related approaches; bridge the gap between research, climate policy, and action; raise awareness at sectoral and subnational levels; tackle the climate and gender equality nexus; engage with civil society).
- **Improving the ability to formulate and implement national actions** through climate change mitigation measures, and to reduce risks and adapt to them (e.g. develop or facilitate access to tools and guidance on climate change, risk management or mainstreaming; assess climate-related technology needs; train stakeholders to adjust practices to target or incorporate climate risks; ensure capacity is developed to draft climate-related project proposals to access financing).
- **Analysing, building consensus on, and articulating the national interest** in the United Nations Framework Convention on Climate Change (UNFCCC) negotiations, and other international climate-related discussions and activities, including at regional level (e.g. Association of Southeast Asian Nations, African Union).

These dimensions provide a starting point for donors to organise climate-specific capacity development efforts in SIDS. Several initiatives point to growing support by DAC Members for SIDS along these lines. The United Kingdom (UK) supports SIDS' access to finance through initiatives including co-chairing (with Fiji) the Taskforce on Access to Climate Finance, work with Belize and Fiji on a SIDS Access to Concessional Finance Roundtable Process (UK Government, 2021[99]), and through the Commonwealth Climate Finance Access Hub, which also receives support from Australia, the United Nations Institute for Training and Research (UNITAR), and the Nationally Determined Contributions (NDC) Partnership (The Commonwealth, 2022[100]). The UK's Blue Planet Fund offers integrated climate, biodiversity, and environmental sustainability solutions to SIDS, including capacity development activities such as in marine science, policy management and tools, and education (UK Government, 2023[101]). Italy develops the capacity of Pacific SIDS' negotiators and young politicians to participate in international climate and ocean negotiations, while Portugal does so for Portuguese-speaking countries. Australia supports the participation of women in climate-related negotiation processes through the Pacific Women Climate Change Negotiators Training (OECD, 2021[95]).

2.2. Overview of official development assistance trends

The OECD DAC Creditor Reporting System provides statistical information on bilateral ODA flows to SIDS, including on climate change and capacity development. However, the statistical system has no accurate way of tracking capacity development activities and views differ on what counts as capacity development (Khan et al., 2018[102]; Hedger and Nakhooda, 2015[103]). This report uses the methodology developed in Casado Asensio et al (2022[61]) to estimate these amounts, using the DAC Rio markers for climate change adaptation and mitigation for activities classified as technical assistance and technical co-operation (types of aid D01, D02 and E01), to which a number of purpose codes that could also be seen as contributing to developing capacities in partner countries are added (Annex 3.A).

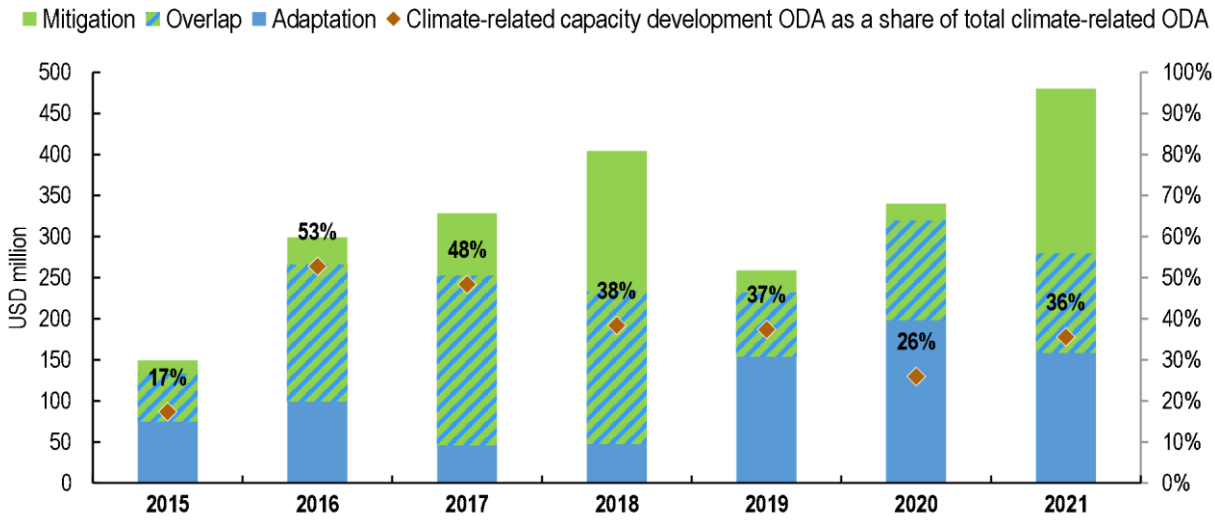
Flows increased to bilateral climate-related capacity development ODA in SIDS

DAC members provided USD 323 million per year on average over 2015-21 in bilateral, climate-related capacity development ODA to SIDS. This represents 35% of total bilateral climate-related ODA to SIDS

(USD 931 million or 33% of total ODA allocated to SIDS per year on average). These shares are similar for non-SIDS. Figure 2.1 illustrates that climate-related capacity development ODA increased 222% over 2015-21, compared to 57% for bilateral climate-related ODA to SIDS over the same period. In non-SIDS, both these figures increased 19%. The strong growth of climate-related ODA in SIDS suggests that climate-related capacities have become a major part of support for capacity development in SIDS. These volumes indicate an agenda increasingly relevant for DAC members, which should lead to approaches that ensure effectiveness and sustainable results.

Figure 2.1. Total climate-related capacity development trends in SIDS, 2015-21

Commitments, USD million, 2021 constant prices



Source: OECD (2023[104]) Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

Over 2015-21, DAC members focused on climate-related capacity development activities targeting: adaptation and mitigation (USD 134 million), followed by adaptation activities (USD 111 million), and mitigation activities (USD 78 million). Looking at the evolution over time, climate-related capacity development activities overlapping between adaptation and mitigation increased 110% (compared to 31% in non-SIDS), while adaptation- and mitigation-related capacity development activities increased 111% and 1135%, respectively (compared to 69% and -28%, respectively, in non-SIDS). This contrasts with overall climate-related ODA flows to SIDS, which primarily focused on adaptation (USD 417 million per year on average), followed by activities targeting adaptation and mitigation (USD 325 million), and mitigation (USD 189 million). Despite the smaller ODA flows to climate change mitigation, donors could consider increasing such investments, including in capacity development, as they help SIDS achieve low-carbon, climate-resilient development (Box 2.1).

Box 2.1. Capacity development for climate change mitigation in SIDS

SIDS are determined to lead by example in the implementation of the Paris Agreement and committed to reaching carbon-neutrality by 2050, reaffirmed in their revised Nationally Determined Contributions (NDC) (UNDP, 2022[3]). Caribbean SIDS pledged to reduce their GHG emissions 15-70% by 2030 (Mohan, 2022[105]). The Government of Mauritius developed a roadmap to increase the share of renewable energy to 35% of the electricity mix by 2025 and 40% by 2030. Many SIDS identified their capacity needs in the energy sector: São Tomé and Principe developed a technology needs assessment (UNEP TNA, n.d.[106]; República Democrática de Sao Tomé e Príncipe, 2020[83]) that would help reduce CO_2 emissions 27% through renewables (to reach 50% by 2030) if needs are met (Ministry of Infrastructures and Natural Resources, 2021[107]). The Comoros' revised NDC (2021-30) aims at a 23% net reduction of GHG emissions (excluding land use and land-use change) compared to the baseline scenario (Union des Comores, 2020[84]).

Beyond this vision, there are concerns about traditional energy systems in SIDS, which make them vulnerable to climate change impacts. SIDS rely on imported fossil fuels to generate the bulk of their electricity, with high transport costs from being disconnected from continents. These factors make energy costs much high in SIDS than in other countries. SIDS are also more likely than other developing countries to feel global energy price fluctuations and associated financial risks, which undermines their fiscal space for manoeuvre, especially after an exogenous shock such as a climate-related event. On top of creating a financial challenge for SIDS, traditional energy systems generate environmental and health concerns, which explains why renewable energy generation is a priority in many SIDS (Lucas et al., 2017[108]). Yet, the energy transition is more difficult for SIDS: they lack the technology, finance, capacity, and physical space in some cases to deploy renewable solutions such as solar plants. SIDS are implementing policies to reduce GHG emissions and encourage investment in renewable energy technologies. Proximity to ocean resources offers SIDS the potential to leverage marine energy to facilitate decarbonisation, but as noted, several issues constrain their ability to harness this potential.

The current trajectory indicates that many SIDS will not meet their energy-related NDC commitments by 2030 with existing policies (Mohan, 2022[105]). Progress is hampered by capacity constraints and often conditional on external support. SIDS require a boost in capacity development investments in this sector (Piemonte, 2022[69]; Soomauroo, Blechinger and Creutzig, 2023[109]). ODA initiatives could help SIDS eliminate energy subsidies; introduce carbon taxes and fees, and rebates on low-emission products; improve energy efficiency; develop legal frameworks to decarbonise the energy and transport sectors (Cevik, 2022[32]); and close the gap in policy research (Atkinson, Preckel and Gotham, 2022[110]). DAC donors are helping SIDS transition towards net-zero, climate-resilient pathways, and could continue doing so. Canada provided USD 60 million to establish a Renewable Energy in SIDS Program at the World Bank. This funding provides training and employment opportunities for women in non-traditional, sustainable-technology sectors in SIDS, among other things. Denmark, France, Germany, Italy, Japan, New Zealand, Norway, United Arab Emirates (UAE) and United States contribute to the International Renewable Energy Agency's (IRENA) SIDS Lighthouses Initiative, which develops capacities and shares knowledge on the development of bankable energy-related projects, fostering access to finance and closer co-operation with the private sector.

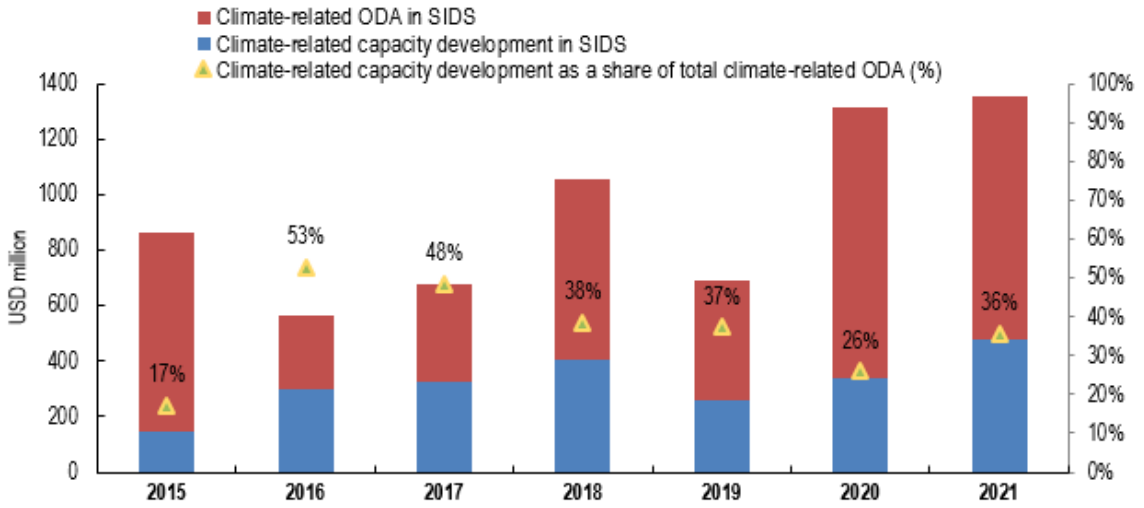
Source: Atkinson, Preckel, and Gotham (2022[110]), Costs and trade-offs associated with renewable energy policies for Small Island Developing States: Case study for Jamaica, https://www.sciencedirect.com/science/article/pii/S0038012122001690; Cevik (2022[32]), Waiting for Godot? The case for climate change adaptation and mitigation in small island states, https://www.imf.org/en/Publications/WP/Issues/2022/09/09/Waiting-for-Godot-The-Case-for-Climate-Change-Adaptation-and-Mitigation-in-Small-Island-523277; Lucas et al. (2017[108]), Critical challenges and capacity building needs for renewable energy deployment in Pacific Small Island Developing States (Pacific SIDS), https://www.sciencedirect.com/science/article/pii/S0960148117300290#:~:text=a%20larger%20scale.-,Challenges%20for%20RE%20deployment%20in%20islands%20can%20be%20grouped%20in,vi)%20socio%2Dcultural%20impediments;

Ministry of Infrastructures and Natural Resources (2021[107]), Sao Tomé and Príncipe. Nationally Determined Contributions (NDC-STP) Updated; Mohan (2022[105]), Climate finance to support Caribbean Small Island Developing States efforts in achieving their Nationally Determined Contributions in the energy sector, https://www.sciencedirect.com/science/article/abs/pii/S0301421522004281; Piemonte (2022[69]), SIDS' access to green funds; República Democrática de São Tomé and Principe (2020[83]), Relatório de avaliacao das necessidades tecnológicas sobre análise das barreiras e o enquadramento estrutural (BA&EF) para a mitigação, https://tech-action.unepccc.org/wp-content/uploads/sites/2/2021/03/tna-report-ii-baef-mitigation-stp.pdf; Soomauroo, Blechinger and Creutzig (2023[109]), Electrifying public transit benefits public finances in small island developing states, https://www.sciencedirect.com/science/article/pii/S0967070X23001208; UNEP TNA (n.d.[106]), São Tomé and Principe (website), https://tech-action.unepccc.org/country/sao-tome-and-principe/; Union des Comores (2020[84]), Contribution Determinée au Niveau National (CDN actualisée). Rapport de synthèse 2021-2030; UNDP (2022[3]); The State of Climate Ambition. Snapshot Small Island Developing States (SIDS), https://climatepromise.undp.org/sites/default/files/research_report_document/Climate%20Ambition-SIDS%20v2.pdf

Interestingly, DAC members have sustained their efforts to support climate-related capacity development in SIDS relative to total ODA provided for climate action (Figure 2.2). As such, while total climate-related ODA dropped from 2020 to 2021, commitments for climate-related capacity development in SIDS increased 41% from USD 340 million to USD 480 million (whereas they decreased 8% in non-SIDS). While 2020-21 were marked by the DAC's response to the COVID-19 crisis and thus not representative of an underlying trend, it would be important to monitor this evolution in the future.

Figure 2.2. Climate-related capacity development ODA relative to overall climate-related ODA in SIDS, 2015-21

Commitments, USD million, 2021 constant prices

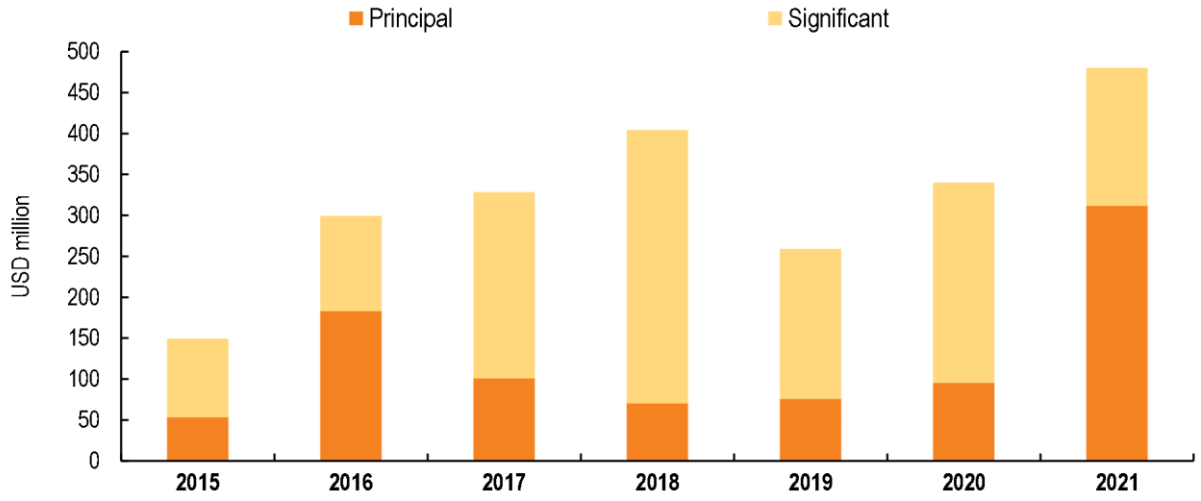


Source: OECD (2023[104]), Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

Capacity development activities that address climate change as a "principal" objective increased 484% over 2015-21, compared to 76% for activities where it is a "significant" objective. This suggests that capacity development was increasingly prioritised in DAC members' climate-related activities in SIDS (Figure 2.3), which calls for ensuring that such activities are designed and embedded to avoid them being an add-ons (Rokitzki and Hofemeier, 2021[111]). Further, "principal" activities represented 39% (USD 127 million) of total climate-related capacity development ODA per year on average, while activities that include climate change as a "significant" objective totalled 61% (USD 196 million).[6]

Figure 2.3. Bilateral climate-related capacity development trends in SIDS by objective, 2015-21

Commitments, USD million, 2021 constant prices



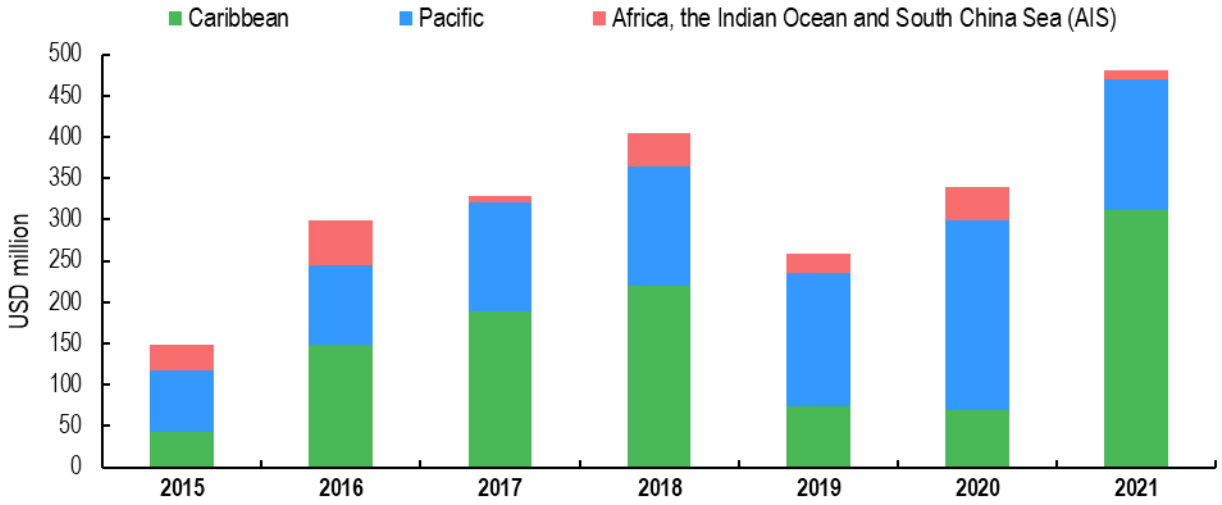
Source: OECD (2023[104]) Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

Bilateral climate-related capacity development ODA concentrates in Caribbean and Pacific SIDS

Regional breakdowns of climate-related capacity development ODA flows between 2015-21 (Figure 2.4) show that the Caribbean SIDS received the most (47% or USD 151 million per year on average), followed by the Pacific (44% or USD 142 million), and Africa, the Indian Ocean and South China Sea (AIS) (9%, USD 30 million). In contrast, for climate-related ODA flows to SIDS, the Pacific was the most targeted region (47%, USD 441 million), followed by the Caribbean (35%, USD 330 million), and AIS (17%, USD 160 million). These findings hold when the analysis considers the number of SIDS per region (which is unequal and varies over 2015-21 due to the number of graduating countries in these regions) and are consistent with the broader climate-related ODA literature (Klöck and Fagotto, 2020[112]). However, these trends are not uniform across and within regions.

Figure 2.4. Bilateral climate-related capacity development ODA trends in SIDS by region, 2015-21

Commitments, USD million, 2021 constant prices



Source: OECD (2023[104]), Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

Climate-related capacity development ODA flows focus on countries that are not necessarily the most vulnerable

SIDS account for a significant share of some DAC members' climate-related ODA portfolio. In Portugal, SIDS accounted for 72% of climate-related ODA in 2015-21 (e.g. Cabo Verde, Guinea-Bissau, São Tomé and Príncipe, and Timor-Leste). Other members with important investments in SIDS include New Zealand (46%) and Australia (41%). DAC members' support to SIDS centres around challenges these countries face, focusing on climate change adaptation, promoting disaster risk reduction, and curbing fossil fuel dependence through access to renewable energy.

Table 2.1 shows the top ten climate-related capacity development ODA per bilateral donor and recipient country over 2015-21. Over this period, the top five contributed 81% of total climate-related capacity development ODA allocated to SIDS (and the top ten, 96%).

Table 2.1. Top ten climate-related capacity development donors and partner countries, 2015-21

Annual average, commitments, USD million, 2021 constant prices

Donors	USD million	Recipients	USD million
Australia	97.5	Papua New Guinea	69.6
EU institutions (excl. EIB)	70	Dominican Republic	54.6
France	47	Haiti	53.7
Japan	32.5	Cuba	17.3
Korea	14	Fiji	16.2
United States	13.7	Guyana	11.9
New Zealand	11.4	Samoa	11.5
Canada	10.3	Timor-Leste	10.7
Norway	8.7	Vanuatu	10.5
Germany	5.3	Solomon Islands	9.3

Source: OECD (2023[104]), Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

Most SIDS depend on a small group of providers for their climate-related capacity development (and also for climate-related and overall) ODA (Table 2.2, e.g. Papua New Guinea mainly receives support from Australia; while the Dominican Republic and Cuba does so from France, and the EU is heavily invested in Haiti), and research shows that 'donor herding' takes place in the case of SIDS – bilateral donors targeting SIDS when other donors are already present (Weiler and Klöck, 2021[113]). Such donor concentration leaves 'orphan' SIDS with fewer partners and opportunities (e.g. the Comoros has physical presence only from France and the EU in Moroni, its capital, and São Tomé and Príncipe has representation only by Portugal and the EU in its capital, São Tomé – even though the EU offices are dependent of the Gabon and Madagascar Embassies, respectively), exacerbating their financial fragility and making them dependent on these few donors for requests. In contrast, 'darling' SIDS see their capacities stretched by additional co-ordination efforts: the presence of multiple donors, each with their own missions and reporting requirements, imposes high transaction costs, in turn leading donors to further prioritise SIDS with greater capacities to absorb and manage donor funding (Christ et al., 2020[114]).

Table 2.2. Breakdown of top ODA providers and SIDS recipients of climate-related capacity development, 2015-21

Annual average, USD million, 2021 constant prices

Top recipients/donors	Australia	EU Institutions	France	Japan	Korea	Other donors	All donors
Papua New Guinea	64.3	0	0	1.6	0.1	3.7	69.6
Dominican Republic	0	4.1	30.4	5.1	11.5	3.6	54.6
Haiti	0	26.9	5.3	0.9	0	20.5	53.7
Cuba	0	5.4	8.1	0	0	3.8	17.3
Fiji	4.2	0.3	0	8.9	0.3	2.5	16.2
Guyana	0	5.5	0	0	0	6.3	11.9
Samoa	3.6	5.1	0	1.6	0.1	1.1	11.5
Timor-Leste	1.7	5.8	0	0.8	0.4	2	10.7
Vanuatu	9	0	0.4	0.3	0.2	0.7	10.5
Solomon Islands	6	0	0	1	0.3	1.9	9.3
Other recipients	8.8	16.8	2.8	12.3	1.1	15.8	57.5

Source: OECD (2023[104]), Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

Some climate-related capacity development projects, such as for flood management systems, are equally costly no matter how big the population is, which partially justifies higher per-capita flows to smaller countries such as SIDS (Fouad et al., 2021[115]). Considering ODA commitments for climate-related capacity development by a per capita basis, the main SIDS recipients were Tuvalu, Nauru, and Palau (all with more than USD 100 per capita on average over 2015-21), and the top 9 SIDS per capita ODA recipients were in the Pacific region (average of USD 90 per capita on average over 2015-21) and all classified as upper middle-income countries (except Tuvalu, which is an LDC) (Table 2.3). These amounts are well beyond average per capita amounts provided to non-SIDS countries (under USD 15 per capita on average over 2015-21).

Table 2.3. Main SIDS recipients of climate-related capacity development by a per capita basis, 2015-21

USD million, 2021 constant prices

SIDS	USD per capita
Tuvalu	283.1
Nauru	148.6
Palau	100.8
Marshall Islands	72.4
Tonga	59.7
Samoa	52.5
Kiribati	38.4
Vanuatu	33.0
Micronesia	24.0
Dominica	22.4
Fiji	17.5
Guyana	14.7
Solomon Islands	13.1
Sao Tome and Principe	12.4
Timor-Leste	8.1

Note: Due to data limitations on population size, this ranking excludes Montserrat, Niue and Cook Islands.
Source: ODA allocations were calculated using OECD (2023[104]), Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1 and country populations using the World Development Indicators datasets, World Bank (2021[116]), Population, total (database).

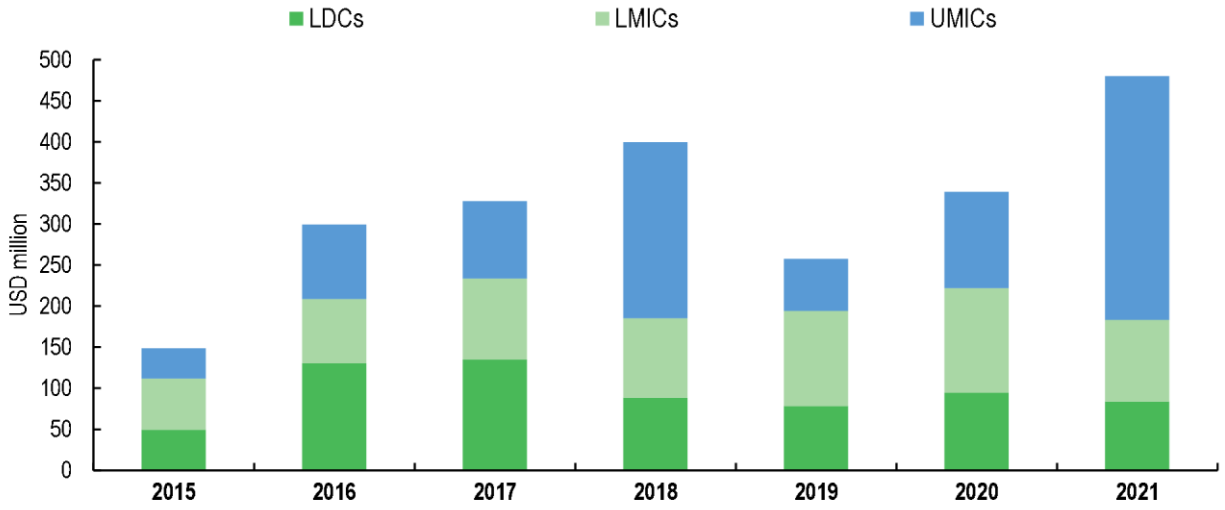
In addition, the distribution of climate-related capacity development ODA to SIDS is uneven across and within regions. This is unsurprising as SIDS differ in their level of vulnerability: they are disproportionately but not equally affected by climate change and each region has specific climate-related risks. However, the top recipients of climate-related capacity development ODA are not always the most vulnerable (Annex A). While the relationship between ODA and vulnerability must be interpreted with caution (as many variables influence donor decisions), the findings are consistent with the literature (Klöck and Fagotto, 2020[112]; Donner, Kandlikar and Webber, 2016[117]) and at odds with donor commitments to support SIDS in the face of their vulnerability to climate change. A recent study shows indeed that donors tend to reward developing countries with strong institutional capacity and political commitments to climate change (Jain and Bardhan, 2023[118]). These findings call for deeper assessment of the allocation of ODA to SIDS, potentially in line with on-going UN work to develop a Multidimensional Vulnerability Index (MVI) that could help direct ODA flows to SIDS most in need (United Nations, 2023[119]). The findings also call for greater donor attention to capacity development on climate change, notably its institutional dimension.

Climate-related capacity development ODA mostly targets upper-middle income SIDS

The largest share of climate-related capacity development ODA to SIDS during 2015-21 targeted upper middle-income countries (UMICs), at 40% (USD 130 million per year on average) of the total, compared to 35% in non-SIDS, followed by lower middle-income countries (LMICs) at 30% (USD 97 million), compared to 38% in non-SIDS, and low-income and least-developed countries (LDCs) at 29% (USD 94 million), compared to 27% in non-SIDS (Figure 2.5). The similar distribution of ODA flows across categories is surprising as most SIDS are classified as UMICs.[7]

Figure 2.5. Climate-related capacity development ODA in SIDS by country income group, 2015-21

Commitments, USD million, 2021 constant prices



Note: Upper middle-income countries (UMICs), lower middle-income countries (LMICs), and low-income and least-developed countries (LDCs). More advanced developing countries and territories were excluded, representing USD 1.2 million or 0.4% of total climate-related capacity development ODA to SIDS.
Source: OECD (2023[104]), Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

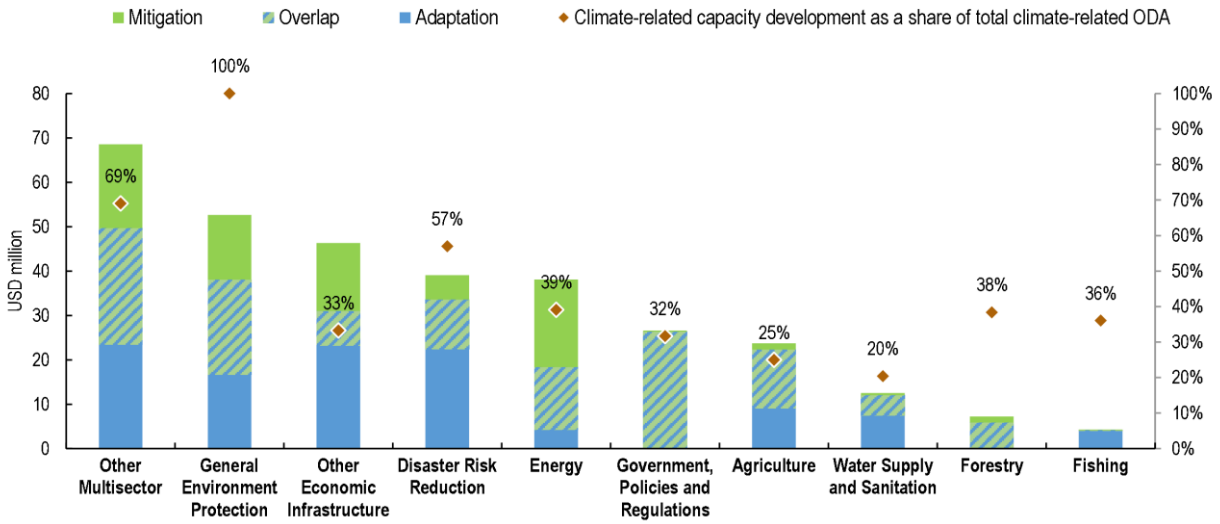
This pattern reveals that SIDS require similar levels of capacity development, irrespective of their income group, given their inherent capacity constraints. Middle-income countries might be able to self-finance some or most of their capacity development needs, compared to the poorest, low-income, or fragile countries, which depend more on ODA flows (Guicquero, 2015[120]; OECD, 2012[96]). However, this logic breaks down in the case of SIDS because exogenous shocks – including climate-related events – can quickly reverse development gains, independent of income status. These findings call for more capacity development to all types of SIDS as a pre-condition to enhancing absorptive capacity and the ability to mobilise and deploy financing.

Climate-related capacity development ODA concentrates in a limited number of sectors

The top five sectors targeted by DAC members for climate-related capacity development ODA represented 76% of the total on average over 2015-21 (Figure 2.6). These were driven by multisector (21% or USD 69 million), general environment protection (16% or USD 53 million), and activities in the economic infrastructure category (14% or USD 46 million). For adaptation-only interventions, the main targets were multisector with 21% (e.g. support for rural and urban development activities or scholarships), and other economic infrastructure with 21% (e.g. transport policy and administrative management). Mitigation-only interventions were driven by energy (25%) and other multisector (24%). And interventions targeting both adaptation and mitigation were driven by multisector (20%) and government, policies and regulations (20%), such as public and macroeconomic policy activities.[8] Some sectors are mainly capacity development type of sectors, e.g. general environment protection or other multisector, as well as most disaster risk reduction interventions.

Figure 2.6. Top sectors for climate-related capacity development ODA in SIDS, 2015-21

Annual average, commitments, USD million, 2021 constant prices



Note: This analysis excludes unspecified and unallocated ODA by sector, corresponding to USD 0.16 million climate-related capacity development ODA in SIDS.
Source: OECD (2023[104]), Creditor Reporting System (database), https://stats.oecd.org/index.aspx?DataSetCode=CRS1.

2.3. Beyond bilateral official development assistance: The role of multilateral donors

Beyond ODA from DAC members, SIDS also receive development finance from multilateral institutions (and regional institutions, discussed later). Reviews of this area by (Piemonte, 2022[69]) reveals trends that complement what DAC members do in SIDS. For example, all multilateral development banks support partner countries in implementing their NDCs (Casado Asensio, Blaquier and Sedemund, 2022[61]). They also improve access to international climate finance, notably through grants to help access multilateral funds (Piemonte, 2022[69]). At the same time, these institutions' mandates differ from those of bilateral donors, as do the modalities they employ. Importantly, they make greater use of concessional loans (rather than grants) and develop and test innovative finance mechanisms such as debt-for-nature or -for-resilience swaps, blending, regional financing mechanisms, bonds, or insurance. The World Bank's Blue Economy programme and NDC Trust Fund support the Pacific Blue Shipping Partnership to decarbonise the shipping sector with capacity development, research and other programmes in Fiji, the Marshall Islands, Samoa, Solomon Islands, Tuvalu, and Vanuatu (UNDP, 2017[121]). In contrast to the work of bilateral donors, these tend to be ancillary activities to infrastructure-type of projects (Independent Evaluation Unit, 2020[74]). As discussed with stakeholders in the Comoros and São Tomé and Príncipe, capacity development delivered by multilateral institutions tends to ensure that project-specific capacity needs are met, whereas bilateral DAC donors focus on broader capacity limitations in SIDS.

Access to funding from multilateral institutions is often seen as complex, especially for SIDS. Bilateral DAC donors can use their positions on the boards and committees of multilateral development banks to advocate for more streamlined processes, and more specific financing and capacity development windows for SIDS. These could go along with bilateral initiatives, such as the US-Caribbean Partnership to address the Climate Crisis, which is exploring options to improve access to finance in cases of extreme events for countries that graduated from multilateral financial assistance.

Non-DAC bilateral, South-South co-operation providers, and private philanthropies also support SIDS. In 2017, the Abu Dhabi Fund for Development and the International Renewable Energy Agency provided a loan of USD 10 million to Mauritius to train and install solar photovoltaic systems on the rooftops of 10 000 households as part of the government's efforts to alleviate poverty while contributing to national renewable energy targets (UNOSSC, 2021[122]). The United Arab Emirates supports the Caribbean Renewable Energy Fund, which provided USD 50 million in grants for renewable energy projects in Caribbean SIDS. The Fund aimed to expand technical experience in designing, implementing, and managing renewable energy projects, to facilitate faster and lower-cost deployment in the future (UNOSSC, 2021[122]). In another example of South-South co-operation to promote engagement with the private sector, Pacific SIDS and the Federation of Indian Chambers of Commerce and Industry exchange information, promote joint implementation of programmes and projects, implementation of promotional activities, training and capacity development programmes, and exchange of experts (UNOSSC and PIFS, 2019[123]). These activities are relevant and captured in OECD DAC Creditor Reporting System statistics to some extent but are beyond the scope of this report. A review of their activities would be useful to understand the full breadth of bilateral donor action in SIDS, given the growing importance of non-DAC and South-South providers and heightened needs for donor co-ordination in SIDS.

3 Entry points and good practices for effective climate-related capacity development in Small Island Developing States

This section synthetises evidence across five themes, presenting in separate sections:

1. Access to climate finance
2. Climate services and data
3. Partnering with non-governmental stakeholders
4. Regional and cross-regional support
5. Effectiveness issues.

These themes were identified through interviews with experts and practitioners working on climate-related capacity development in Small Island Developing States (SIDS) and echo the main concerns and needs expressed by SIDS, as found in the literature and Nationally Determined Contributions (NDCs). Other approaches to individual, institutional, or systemic capacity development than those presented here are still needed and demanded by SIDS (e.g. workshops to develop individual capacity), including in other thematic areas, and donors will continue implementing these (e.g. policy and legal support). The five themes highlighted here are entry points to sustainably support the capacity of SIDS on climate-related issues. Challenges, initiatives, and promising or successful interventions are highlighted across each theme. Importantly, all five areas link to each other, and cross-references are included where relevant.

Theme 1: Improving SIDS' access to climate finance and developing flexible, long-term finance opportunities

1.a Increase SIDS' capacities to engage with a complex climate finance landscape

1.b Help SIDS find and navigate initiatives that support access to finance

1.c Build on and scale up capacity development approaches that support SIDS' access to finance

1.d Develop SIDS' capacities to absorb climate finance

1.e Explore SIDS' domestic and alternative sources of climate finance

OECD research shows that developing countries can choose from over 1 000 instruments to finance their development (Morris, Cattaneo and Poensgen, 2018[124]). The terms and conditions of these vary and require great levels of technical expertise, which can create barriers to accessing them – especially where capacities are stretched, such as in SIDS. Though conditions for accessing funds are necessary to guarantee accountability, SIDS have limited capacity to navigate the development finance landscape, including the part dealing with climate change (Independent Evaluation Unit, 2019[125]). As mentioned in the mid-term review of the S.A.M.O.A Pathway (2019), SIDS require support to access sustainable development finance, including grant, concessional, climate and disaster relief finance (UNDESA, n.d.[126]).

1.a Increase SIDS' capacities to engage with a complex climate finance landscape

SIDS must be able to independently access climate-related funding, but capacity barriers prevent them from materialising or increasing the ambitions put forward in their NDCs, which testifies to their capacity needs (IPCC, 2022[5]; Climate Finance Delivery Plan, 2022[127]). Not surprisingly, finance is the most requested area of support in the NDC Partnership (GIZ, 2022[128]), including by SIDS. Requests cover topics including development of climate finance strategies and financial roadmaps; integration of NDCs into national planning, budgets, and revenue; resource mobilisation; and the development of bankable projects and pipelines. The implementation of NDCs in many SIDS is conditional on accessing climate finance (Mohan, 2022[87]) – a situation that makes them depend on external financing to advance towards low-carbon and climate-resilient pathways (Box 3.1).

The process to access climate funds is complex and slow. Guidelines to write proposals to access finance, and accreditation and application processes are seen as unclear, bureaucratic, bearing heavy reporting aspects, time-consuming, and having high transaction costs (LDC Expert Group, 2020[129]). Stakeholders also confirmed that communication with donor entities is limited, especially after an application is submitted. In some cases, governance arrangements and capacity to access climate finance are split across stakeholders. In Samoa, responsibility for access to Global Environment Facility (GEF) funding lies with the Ministry of Natural Resources, while to access funding to Green Climate Fund (GCF) the Ministry of Finance is the focal point. Most SIDS only have one person or a very small staff to deal with a myriad of initiatives (e.g. focal point for UNFCCC, National Designated Authority and contact for GCF country programme, contact for NDC Partnership, etc.) and limited time to develop project pipelines (Independent Evaluation Unit, 2020[74]). Donors have different requirements, forcing applicants to adjust projects by funder (Theokritoff et al., 2022[73]). Application processes in SIDS take two to three years on average, which makes it difficult to synchronise international finance with national budgets, while domestic realities can change drastically (Piemonte, 2022[69]). In addition, SIDS (especially higher-income SIDS) need to co-finance climate-related projects. While this can promote country ownership, it is a major challenge. Finally,

proposals require local and detailed information to justify projects, which is often unavailable due to limited climate-related data (Theokritoff et al., 2022[73]).

Box 3.1. Roadmap for Carbon Sustainability on Príncipe Island

Despite having an NDC, a national inventory, and several other documents, São Tomé and Príncipe does not have a long-term, low-emission development strategy or national climate strategy. Against this backdrop, the Autonomous Region of Príncipe (ARP) prepared a Roadmap for Carbon Sustainability with funding from the Environmental Fund of the Portuguese Ministry of Environment and Climate Action and with support from the Efrican Foundation. The Roadmap inventoried greenhouse gas emissions in the transport, energy, land use and land use change, forestry and waste management sectors, and possible alternatives and mitigation avenues to 2050. The Roadmap thus became a decision-support tool for the ARP, helping it comply with Article 4 of the Paris Agreement. The Roadmap resulted from a participatory process, which included the main stakeholders of the proposed mitigation measures (Fundo Ambiental, 2021[130]). Portugal and the Efrican Foundation are implementing the first set of Roadmap projects, namely for the Island to become an "Afrosmart" e-mobility spot and contribute to the Island being a carbon sink still in 2050.

The Roadmap is seen as good practice of supporting SIDS to develop a decision-making tool for a low-carbon pathway that emphasises the sustainable management of natural resources. Its success led decision-makers to extend the process and tool to São Tomé Island. However, the challenges of financing and diversifying the set of partners engaged in supporting São Tomé and Príncipe hamper the implementation of this vision on both islands. Few donors are present in São Tomé and Príncipe, and there is limited awareness among the donor community of the Roadmap process, achievements, and technical and financial needs for implementation. Portugal and the Efrican Foundation are working with the ARP to disseminate the Roadmap, such as by organising a launch event at UNFCCC COP26. Further efforts could be considered, in dialogue with the authorities of São Tomé and Príncipe, to support the country to tap international finance (e.g. organising roadshows to present the project to bilateral and multilateral donors, using domestic or EU investment platforms to engage the private sector, or fostering matchmaking through triangular co-operation marketplaces).

Source: Fundo Ambiental (2021[130]), Roadmap for Carbon Sustainability of Principe Island, https://roteiroco2principe.com/en/.

SIDS are at a disadvantage in a one-size-fits-all system where they compete with other developing countries (and other SIDS), and that puts countries with greater capacities in a better position to access finance. Stakeholders in the Comoros and São Tomé and Príncipe note that many opportunities are lost because SIDS have limited knowledge and capacity to engage in climate negotiations (e.g. modalities for dedicated funds or facilities) where funding priorities are discussed and agreed. As a result, many SIDS hesitate to dedicate staff to proposal-writing to access finance, especially from institutions that distribute central funds in response to bidding (such as the GEF or the GCF) since it does not guarantee success, and prefer to engage with bilateral donors, which tend to have easier access requirements and deliver support through country-based programmes (but that also have smaller project sizes). Many bilateral donors support SIDS to access finance from multilateral institutions, and stakeholders say they would value capacity development that goes beyond merely supporting access to finance from these outlets.

At the same time, SIDS' size gives them limited capacity to absorb ODA unless there is a corresponding increase in the capacity-base to support implementation (ADB, 2017[131]; ADB, 2014[132]; World Bank, 2019[133]; World Bank, 2018[134]). SIDS are supported by intermediaries (e.g. UN organisations, multilateral institutions, bilateral agencies) that create parallel structures to implement activities financed by vertical funds without their own implementation capacity. The GCF estimates that international development

partners manage the bulk of GCF-financed projects. While this strengthens the quality of proposals and projects, and ensures projects are successfully implemented, it creates longer and more complex funding and delivery (i.e. a multi-step process with intermediaries that collect service fees). More importantly, as documented in the field of development co-operation, this system does not necessarily develop the domestic capacities of SIDS, and it reduces the resources available for projects. Indeed, it reflects conflicting incentives for short-term delivery and needs for long-term development in partner countries. It puts SIDS in a vicious cycle in which the lack of domestically managed GCF funding is driven by capacity constraints, but also reduces the potential to develop capacities.

Further, donors' modalities might also not enable capacity. The typical capacity development modality (i.e. training workshops) does not develop sustainable or sufficient capacity to develop concept notes (GIZ, 2022[128]). Another typical modality used in capacity development, the "fly-in fly-out" consulting model is considered damaging and increasingly irrelevant for SIDS that want more control of climate finance delivery (McNamara, Westoby and Clissold, 2022[135]). As discussed below, project- rather than programme-based donor initiatives are time-bound or have too narrow a focus (usually only on climate-related capacities). Some donors follow a "single-project" logic, which is important to concretise short-term deliveries, while others view capacity development as a long-term process. However, short-term funding linked to specific access-to-climate-finance projects hinders SIDS' ability to initiate and maintain learning cultures within organisations and thus access finance independently. In addition, doing so might not meet local needs or draw from indigenous/local knowledge, undermining local ownership when capacity development is perceived as external, which undercuts sustainability. Investments over multiple years allow time to build partnerships and open opportunities to share successes and failures in organisational and individual capacity development. They also connect better with broader capacity development needs.

1.b Help SIDS find and navigate initiatives that support access to finance

Many initiatives help developing countries and SIDS in particular access climate finance (Table 3.1). Given the large number of initiatives and tools, donors could rationalise this space by mapping initiatives and guidance, extracting lessons about their use and determining their effectiveness. Further, new resources committed to supporting SIDS' access to climate finance could flow through established initiatives (as they are or by improving/updating them), rather than create additional ones.

Table 3.1. Initiatives and resources to support SIDS' access to climate finance

Initiative	Objective	Method	Members
Taskforce on Access to Climate Finance (TACF)	Address key barriers that developing and vulnerable countries face in accessing climate finance.	Proposes a new, co-ordinated and coherent programmatic approach based on partners' national climate action plans and priorities to mobilise different sources of financing and enable a more predictable and easy flow of finance. Develops principles and recommendations to deliver this new approach and pilot the approach in five countries, including two SIDS (Fiji and Jamaica).	Since March 2021. Co-chaired by the UK and Fiji, and a Steering Committee including Belize, Bhutan, Germany, Malawi, Rwanda, Senegal, Sweden, United States of America, Green Climate Fund and the World Bank.

Initiative	Objective	Method	Members
NDC Partnership services	Support countries in accessing finance to implement their ambitious climate commitments and highlight areas in which co-operation can be strengthened.	Work in eight topics describing relevant partnership activities and proposing additional activities for each. A Support Unit acts as a matchmaker (e.g. through the Climate Funds Explorer, a searchable database of open climate funds), with specific contributions to enhance access, including through the NDC Investment Planning Guidance, supporting the development of Project Identification Notes or convening major sources of climate finance. Finally, the NDC Partnership Economic Advisory Initiative supports governments in preparing climate compatible recovery packages by embedding economic advisors into ministries of finance and/or planning.	All developing countries, including SIDS.
Climate Finance Access Network (CFAN)	Support SIDS in securing and structuring climate finance investments.	With the full support of host country governments, hires local experts and provides five months of training before sending them to host institutions.	Established in 2020 with Canada and implemented in eight Pacific SIDS.
OECD-GEF Toolkit to Enhance Access to Adaptation Finance	Support access to the international climate finance landscape	Outlines a spectrum of "tools" that could help countries navigate the evolving architecture of climate finance and seize opportunities for accessing finance for adaptation.	All developing countries, including SIDS.
UNFCCC Needs-Based Finance	Facilitate access and mobilisation of climate finance to implement priority, mitigation and adaptation projects that address needs identified by developing countries.	Provides analysis, including an assessment of climate finance flows and needs, mapping sources and identifying access barriers. Helps develop a strategy, including identification of priorities and strategy actions, a finance strategy and a project pipeline. Helps mobilise climate finance by getting high-level political endorsement for the strategy, reaching out to finance institutions, and matching priorities with funds.	Response to requests by the COP and leads to regional and national projects in over 100 countries, including SIDS.
GCF Readiness 2.0 and Preparatory Support Programme	Develop capacities in partner countries and ease their access to climate finance.	Simplified Approval Process to significantly reduce time and effort required to go from project conception to implementation for small-scale projects.	Launched in 2014. Applies to all developing countries, including SIDS.
NDC Assist II (BMZ) and GIZ's Partnering for readiness	Disseminate effective readiness measures in partner countries, including SIDS.	Support the NDC Partnership through the provision of technical assistance and strategic advice on financing strategies and investment plans to Partnership member countries and other stakeholders to enable the financing and implementation of NDCs.	Since 2016. NDC Assist II started in 2021. Applies to all developing countries, including SIDS.
USAID's Climate Ready Activity	Support partners to access climate finance from international organisations, such as the GCF, the Adaptation Fund and the GEF.	Provides targeted technical support for the development and submission of bankable project proposals that are translated into country-driven actions to respond to the urgent climate change priorities of Pacific SIDS.	Pacific SIDS.
Local Climate Adaptive Living Facility (LoCAL)	Help local authorities and their communities access climate finance through government fiscal transfer systems, and capacity building and technical support to respond and adapt to climate change.	Combines technical and capacity-building support with performance-based climate resilience grants to channel climate finance and improve responses to climate change at the local level while offering strong incentives for improvements in enhanced resilience.	All developing countries, with focus on LDCs and SIDS.

Initiative	Objective	Method	Members
UNDESA Financing for SIDS initiative (FINS)	Strengthen SIDS country-level capacity to align and mobilise financing with their national development priorities and the SDGs in the COVID-19 era.	Using Integrated National Financing Frameworks, FINS provides support to countries on two levels. At national level, the initiative helps countries to develop, implement, monitor, and review their integrated national financing strategy to achieve their national development priorities. At regional and global level, FINS encourages SIDS-to-SIDS information transfer and peer learning on INFF implementation good practices and lessons learned.	All SIDS, with a maximum of 4 SIDS in the first operational phase.
The Commonwealth Climate Finance Access Hub (CCAH) and its Toolkit	Strengthen institutional capacity by closing gaps in institutional and financial knowledge, skills, and technical capabilities.	Provides technical support and capacity building to enhance access to international climate finance, meet countries' ongoing requirements for tools that help them navigate and maximise their access to available opportunities in the global finance landscape. The Hub embeds Commonwealth National and Regional Climate Finance Advisors within, respectively, governmental departments and regional institutions to work specifically with ministries and other stakeholders focused on climate change. A Toolkit offers an overview of the dedicated international climate funding opportunities, and the associated procedures, policies, and requirements of the various climate funds. It provides experiences, good practices and lessons learnt through the work of the Hub across: • Project pipeline development • Technical and policy support • Climate finance readiness • Human and institutional capacity development • Knowledge management – generation, learning, and sharing • Gender and youth mainstreaming	Since 2015, the Hub covered 18 Commonwealth member countries, including SIDS. The programme was initially funded by the UK and Australia, the Commonwealth Secretariat, and Mauritius. Additional resources came from the NDC Partnership and the United Nations Institute for Training and Research (UNITAR).
Toolkit by Acclimatise and the Climate and Development Knowledge Network (CDKN) to develop GCF Proposals	Facilitate the formulation of a good GCF project and demonstrate how the initiative will contribute to achieving a paradigm shift to a country's low-emission and climate-resilient development pathway.	Helps partner countries and intermediaries acquaint themselves with the essentials to develop a GCF project proposal, the key project design elements, the GCF proposal template, the steps to take to put together a funding proposal, the GCF project cycle and support available to prepare a proposal.	Launched in 2017 and applies to all developing countries, including SIDS.
Women's organisations and climate finance engagement in processes and accessing resources	Enhance women's role in access to climate finance.	Provides an overview of climate finance mechanisms, including the framework and approach for integrating gender equality across funds, and the challenges and opportunities to engage for women's funds and their partner organisations.	Focus on Asia-Pacific but applies to all developing countries, including other SIDS.

Initiative	Objective	Method	Members
ODI's Climate Finance Fundamentals	Understand the quantity and quality of financial flows going to developing countries.	Outlines the principles of public climate finance and the global climate finance architecture, and addresses the instruments, needs and funding amounts for adaptation, mitigation, and forest protection (reducing emissions from deforestation and forest degradation, REDD+).	All developing countries, including SIDS.
LEDS Global Partnership Resource guide for NDC finance	Present a selection of resources on financing NDCs and low-emission development strategies (LEDS).	Presents several themes, such as understanding the situation, planning and co-ordinating, creating an enabling environment, using public finance, designing financial instruments, and developing good projects, each including several resources to draw upon.	All developing countries, including SIDS.
NAP Global Network Financing National Adaptation Plan (NAP) Processes	Assists countries with determining how to secure the financing for their NAP processes.	Presents the range of potential sources of finance, identifies which sources may be more appropriate for different phases of the NAP process and suggests practical steps that countries might take throughout the NAP process to increase their likelihood of securing finance from different sources.	All developing countries, including SIDS.

Source: Adapted from GIZ (2022[128]), Initiatives and Options for Promoting Access to Climate Finance, particularly for Small Island Developing States (SIDS) and Least Developed Countries (LDCs); and authors' compilation including LoCAL-UNCDF (2022[136]), LoCAL Annual Report 2021. Accelerating climate action through locally led adaptation; Fayolle and Odianose (2017[137]), Green Climate Fund Proposal toolkit 2017, https://cdkn.org/sites/default/files/files/GCF-project-development-manual.pdf; WEDO (2019[138]), Women's Organizations and Climate Finance: Engaging in Processes and Accessing Resources, https://wedo.org/wp-content/uploads/2019/06/WomensOrgsClimateFinance_EngaginginProcesses.pdf; NDC Partnership (n.d.[139]), Climate Funds Explorer, https://ndcpartnership.org/climate-finance-explorer; ODI (n.d.[140]), Climate Finance Fundamentals, https://odi.org/en/publications/climate-finance-fundamentals/; Rawlins, Halstead and Watson (2017[141]), Resource guide for NDC finance, https://ledsgp.org/app/uploads/2017/11/CDKN_LEDS_FinanceResouceGuide_Final_Static_WEB.pdf; The Commonwealth (2022[100]), Toolkit to Enhance Access to Climate Finance. A Commonwealth Practical Guide, https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/s3fs-public/2022-03/Toolkit_to_Enhance_Access_to_Climate_Finance_UPDF.pdf?VersionId=DRLRxyeqBil43xd_HddZPBxp; OECD (2015[142]), Toolkit to enhance access to adaptation finance: For developing countries that are vulnerable to adverse effects of climate change, including LIDCs, SIDS and African states, http://www.oecd.org/environment/cc/Toolkit%20to%20Enhance%20Access%20to%20Adaptation%20Finance.pdf; NDC Partnership (n.d.[143]), Economic Advisory Initiative, https://ndcpartnership.org/economic-advisory-support; NAP Global Network (2017[144]), Financing National Adaptation Plan (NAP) Processes: Contributing to the achievement of nationally determined contribution (NDC) adaptation goals. Guidance note, https://napglobalnetwork.org/resource/financing-national-adaptation-plan-nap-processes-contributing-achievement-nationally-determined-contribution-ndc-adaptation-goals/; UNDESA (n.d.[126]), Financing for SIDS Initiative – FINS.

Many of these are standalone initiatives (e.g. OECD-GEF toolkit), pilots (e.g. Taskforce on Access to Climate Finance), new (e.g. NDC Partnership Action Fund), or specific (e.g. women's access to finance resource toolkit). Others exist since several years (e.g. GCF's readiness or the NDC Partnership) and some concern SIDS exclusively (e.g. CFAN). Despite these differences, many could complement each other. For example, TACF could leverage CFAN advisors' work at technical level (GIZ, 2022[128]). Others overlap, such as the NDC Partnership and UNFCCC NBF initiative. Given the lack of co-ordination among donors on this topic, the landscape appears deeply fragmented and implies heavy transaction costs. There are also doubts as to how these initiatives will scale up or link to each other in the future. While an evaluation of these initiatives could be useful to determine their effectiveness – note the partial evaluations of GCF activities (Independent Evaluation Unit, 2020[74]; Independent Evaluation Unit, 2019[125]) – some lessons and good practices are already emerging.

1.c Build on and scale up capacity development approaches that support SIDS' access to finance

SIDS require technical assistance, notably by addressing underlying human capacity constraints, to develop evidence-based and competitive project proposals for access to finance. Typical capacity development approaches have delivered results in terms of access to finance in SIDS. For example, USAID's Climate Ready supports capacity development efforts in Pacific SIDS by working closely with government officials and agencies through technical assistance. It secured USD 26.7 million from international funds, prepared bankable project proposals valued at USD 147.8 million and submitted as final applications to the GEF, and is working on additional proposals to access over USD 280 million for programmes in the region (USAID, n.d.[145]).

SIDS that successfully accessed climate finance (e.g. increased the number of project proposals, or improved their quality and success rate) received donor support that sustainably developed their capacities. While SIDS have innate interest in investing in these capacities domestically, there is not always high-level political support or a strong vision for increasing climate finance teams beyond what would be viable and feasible in the medium- to long-run given fundamental constraints in SIDS. Against this background, donors can fund additional domestic capacity, e.g. through in-country facilitators or advisors placed in critical ministries and entities in SIDS. Literature, evaluations, and the interviews conducted for this report conclude that the most direct and effective way to support SIDS in accessing finance is placing experts directly in governmental institutions (Loft, 2021[146]; UN-OHRLLS, 2022[147]). Such a "capacity surge" – with experts preferably hired locally or regionally – is essential for SIDS: additional staff bring expertise, can conduct training, human resource development, and ensure talent retention. Results observed by using this approach include:

- As of August 2022, the CFAN Pacific advisors submitted funding concept notes for projects in Fiji, Papua New Guinea, Samoa, Tonga, and Vanuatu, and for a regional project for Kiribati, Tonga and Vanuatu. This pipeline amounts to almost USD 50 million, and there are additional USD 121 million in concepts for future submission. CFAN plans to expand its scope to deploy 50 advisors across Pacific, Caribbean, and Sub-Saharan African SIDS by the end of 2023 (GIZ, 2022[128]).
- As of April 2023, the Commonwealth Climate Finance Access Hub (CCFAH) provided support to several developing countries, including SIDS, mobilising approximately USD 252.5 million of climate finance in 13 countries with 64 projects approved. This included efforts to establish a Project Development Unit in the Ministry of Economy of Fiji; operationalise the national climate fund in Antigua and Barbuda; establish a Climate Finance Unit in Belize; strengthen and enhance institutional arrangements for long-term planning and timely reporting of transparency-related activities in Jamaica; help smallholder farmers adapt to climate change in Mauritius; or improve solar energy generation in Tonga, among others (Loft, 2021[146]).

SIDS increasingly demand this type of support, but it is important to design and implement such programmes so that they are effective and sustainable over the long-term (Loft, 2021[146]). Donors can increase their impact by:

- **Ensuring that additional personnel are embedded for long periods**. To do so, support could go beyond focusing on developing project proposals and to ensuring programmatic, end-to-end support mechanisms.
- **Pooling advisory services**, such as when adding staff is not perceived as the solution for a particular SIDS because capacity has been sufficiently developed, but gaps persist.
- **Absorbing trained staff from previous capacity interventions** to foster capacity retention, such as through embedding processes.
- **Developing tailored capacity development activities** for domestic stakeholders. For example, the CCFAH organises climate change proposal "writeshops"[9] with embedded personnel to

exchange good practices and develop a critical mass of officials in the Government to mirror the work of CCFAH (Commonwealth Secretariat, 2022[148]).

- **Training embedded staff continuously on climate-related issues**. For example, the CFAN provides on-the-job continuous training to advisors, with good results (GIZ, 2022[128]).
- **Using or creating regional support networks** to promote peer-to-peer exchange on issues related to access to finance, notably for successful SIDS to share experiences with others.

1.d Develop SIDS' capacities to absorb climate finance

For climate finance to yield sustainable outcomes, donors must be mindful of SIDS' absorption capacity. This means using resources effectively and ensuring that accessed finance is put to good use during the implementation phase through appropriate capacities. An Asian Development Bank (ADB) review of the financing needs of Pacific SIDS found that absorptive capacity was improving (as evidenced by positive trends in portfolio performance) due to efforts to ensure that projects are 'spade-ready' once financing is approved, to proactive measures to address capacity limitations, to greater co-ordination with partners, and to new and flexible approaches (ADB, 2019[149]). For SIDS with the lowest capacity, donors could explore a phased approach that recognises the need for long-term capacity development, with some access to respond to local needs and strengthen systems, alongside broader capacity development to facilitate greater access in the future (UK Government, 2021[99]). Doing so would combine shorter funding cycles of capacity development to achieve short-term gains, and longer, predictable financing to ensure that developed capacity is sustained over time. The LoCAL mechanism, designed by the UN Capital Development Fund is an example of how capacity development can be delivered successfully in a comprehensive and staged way using performance-based climate resilience grants (Box 3.2), notably with a focus on the local level where budget support usually fails to develop capacities (Morris, Cattaneo and Poensgen, 2018[124]).

Box 3.2. The Local Climate Adaptive Living (LoCAL) mechanism

LoCAL, designed in 2011 by the UN Capital Development Fund (UNCDF), is an internationally ISO-labelled, country-based mechanism that channels climate finance for locally led adaptation in developing countries (ISO, 2022[150]). LoCAL combines performance-based climate resilience grants (PBCRGs), which ensure programming and verification of climate change expenditures at local level, while offering strong incentives for improvements in resilience and providing capacity development. Minimum conditions and measures ensure basic safeguards on public financial management and track performance. These are monitored through annual performance assessments linked to PBCRG allocations. Performance is appraised in terms of how additional resources have been used to build resilience and promote adaptation to climate change, and audits are undertaken as part of the regular national process. The annual performance-assessment results inform subsequent allocations, and the process provides an opportunity to tailor capacity development. PBCR grants are performance-based, which provides a mechanism and incentive to integrate climate change adaptation into regular, local government public financial management systems and processes.

LoCAL engages with 34 countries, among which are Fiji, Guinea-Bissau, Jamaica, São Tomé and Príncipe, the Solomon Islands Tuvalu, and Vanuatu. Among these, Tuvalu was the first to pilot the mechanism, while the other SIDS are in the scoping/design phase and expected to begin Phase I (pilot) in 2023-24 as resources are mobilised. The mechanism operates in three phases, each associated with criteria to determine its maturity and the absorption capacity of local governments in the country:

- **Phase I. Piloting** consists of initial testing in 2-4 local governments.

- **Phase II. Consolidating** takes place in at least 5-10 local governments in a country. It involves collecting lessons and demonstrating the mechanism's effectiveness at a larger scale.
- **Phase III. Scaling-up** through a national roll-out of LoCAL, based on the results of the previous phases and lessons learned. LoCAL is gradually extended to an increasing number of local governments, with domestic or international climate finance, and becomes the national system for channelling adaptation finance to the local level.

An interesting feature of LoCAL is its Board, comprising all member countries and development partners, which meet annually, and where all countries can exchange and learn.

In Tuvalu, the LoCAL programme covered three Kaupules (districts): Nanumea, Nukuefetau, and Nukulaelae, starting in 2015. LoCAL evaluations show that these Kaupules qualified to receive a PBCR grant in 2019 thanks to continued capacity development support over the implementation period, with performance improving in key areas of planning and budgeting, financial management, asset-management, and climate resilience investments. Better-performing Kaupules receive greater grants, motivating them to improve performance and ensuring that spending goes where there is greater absorptive capacity. Notwithstanding, Kaupules remain weak in several areas, such as budget projections and control, fiscal efforts, procurements, records, and documentations – areas prioritised for capacity development in the next round of the programme. Tuvalu has asked to expand LoCAL to other Kaupules (UNCDF-LoCAL, 2019[151]).

Source: ISO (2022[150]), ISO 14093:2022. Mechanism for financing local adaptation to climate change — Performance-based climate resilience grants — Requirements and guidelines, https://www.iso.org/standard/68511.html; UNCDF-LoCAL (2019[151]), Annual Performance Assessment Report of Kaupules LoCAL Programme in Tuvalu Nanumea, Nukufetau and Nukulaelae June 2018.

Absorbing climate finance points to broader issues, such as improving co-ordination among donors (Theme 5). Beyond these, donors supporting SIDS to access climate finance could consider:

- **Broadening the lens beyond climate change** and removing the artificial separation between climate and development activities (IPCC, 2022[5]). Separately funding adaptation, disaster risk reduction, and development hinders SIDS' progress towards sustainable development (Theokritoff et al., 2022[73]), as possible co-benefits and synergies are not addressed (UN-OHRLLS, 2022[147]). Good practices include multisectoral projects, which are a feature of the CCFAH. For example, Barbados' "Roofs to Reefs" programme, promotes national resilience through interventions in housing, water, energy, waste, land-use, and ecosystems management, in line with the country's NDC and national development plan (Loft, 2021[146]). Another example is the SIDS Ecosystem Restoration Flagship (2022-25) operating in Vanuatu, Comoros and Saint Lucia, which puts marine and coastal ecosystems restoration and conservation through a connected 'ridge to reef' and seascape management approach to build back better and bluer. The Flagship supports ongoing restoration projects' sites in (i) connecting ecosystem restoration to economic recovery and sustainable growth, (ii) ensuring ridge to reef and multi-sectoral approaches, (iii) applying decision-support tools to decide where and how to invest in restoration to best deliver environmentally sound and sustainable blue economic opportunities, and (iv) linking local level efforts to national level structural changes. In addition, the Flagship promotes policy dialogue, advocacy, sharing of inspiring success stories, peer learning as well as SIDS-SIDS co-operation within and between the three SIDS regions (UNEP, 2022[152]).
- **Ensuring data to develop climate projects is available**. For example, under the CommonSensing Project, the Commonwealth Secretariat is working with Fiji, the Solomon Islands, Vanuatu, and a consortium of partners (including Australia's Department for Foreign Affairs and Trade) to build climate resilience and enhance decision-making through satellite remote-sensing technology, thus providing additional data for climate finance proposals.

1.e Explore SIDS' domestic and alternative sources of climate finance

Beyond accessing international finance, donors can support SIDS to find alternative sources of climate-related finance, although research shows that many SIDS face challenges to do so (Piemonte, Kim and Cattaneo, forthcoming[53]). This is important because several SIDS are likely to graduate in years to come,[10] implying less access to ODA (and its most concessional forms) and given that international climate finance is likely to continue being stretched in the future. Donors can support SIDS through capacity development activities that mobilise domestic finance, remittances and innovative finance, recognising that resource limitations inherently constrain SIDS and their government capacities (given small budgets).

While domestic finance can help SIDS increase their climate ambition, it receives little attention from governments (Mohan, 2022[87]). Caribbean SIDS' NDCs hardly mention fiscal policy reform, reviewing fiscal incentives (e.g. removing subsidies for fossil fuels), or using public finance to implement climate action (Mohan, 2022[87]). Donors can improve the institutional framework and promote public sector reform, including robust and transparent public financial management systems and processes; promote digitalisation; identify incentives or subsidies that undermine low-carbon or climate-resilient activities (Cevik, 2022[32]); and introduce new fiscal measures. The IMF recently advised Samoa to consider new tax measures and expand existing ones to incentivise and finance climate action. This included increasing excise taxes on kerosene and liquified petroleum gas, and taxing electricity at a standard VAT rate of 15%, which could incentivise climate change mitigation (IMF, 2022[153]).

- **Donors can therefore help SIDS harness broader domestic finance, which would indirectly help finance climate ambitions**. A sample review of corporate tax files in the Comoros by the United Nations Development Programme (UNDP), audited through triangular co-operation with Burkina Faso fiscal auditors, found a 38% shortfall (UNDP, 2023[154]). Recent studies estimate that the revenue forgone for the main taxes (value added tax (VAT), import duties, excises, and the corporate income tax (CIT)) represents about 4.0 to 6.5 percent of GDP in Antigua and Barbuda, as well as Dominica and St. Kitts and Nevis, and above 7 percent of GDP in Grenada, St. Lucia, and St. Vincent and the Grenadines (Schlotterbeck, 2017[155]). Introducing sustainable tourism taxes could also help capture the revenue-generating potential of the tourism industry (OECD, Forthcoming[56]); while curbing illegal, unreported, and unregulated fishing, e.g. through technological improvements and capacity to survey and effectively govern fisheries, can raise domestic resources (OECD, 2022[51]; OECD, 2022[156]). The Caribbean Regional Technical Assistance Centre (CARTAC) of the IMF, supported by donors such as Canada and in collaboration with other organisations such as the Inter-American Development Bank, serves as the central platform to provide capacity development in public financial management and tax administration to Caribbean SIDS. CARTAC focuses on improving compliance management through capacity development in areas such as registration, filing, payment, audit, and arrears management. Antigua and Barbuda received assistance to implement a new Performance Management System for Inland Revenue Department staff, while Saint Lucia benefitted from the Administration Diagnostic Assessment Tool assessment, which reviewed the relative strengths and weaknesses of the tax system setting a baseline for reform programme prioritisation and facilitating support for reform efforts. Finally, donors can support SIDS to set up Reducing Emissions from Deforestation and Forest Degradation (REDD+) schemes – an untapped opportunity to tackle climate change with only four SIDS having adopted them. For REDD+ schemes to be successful, SIDS need to develop Monitoring Reporting and Verification systems for forests, to receive results-based payments for verified emissions reductions (Mohan, 2022[157]) – which again requires capacity development. Further, understanding how to adapt the systems developed for REDD+ to include blue carbon from mangroves or utilise existing capacity to create new systems may be a good way forward as well for SIDS (OECD, 2020[68]). These solutions and platforms can create a more efficient fiscal system, which can domestically finance climate-related needs.

Another promising avenue includes harnessing remittances (Mills, 2023[158]) beyond what these private transfers already do to increase resilience (e.g. among recipient households). Remittances can take the form of cash, goods, or services, and be targeted to households, transportation, agriculture, entrepreneurial purposes, or community-level infrastructure projects. They accounted for 13% of the Comoros' Gross Domestic Product (GDP) in 2022 (Zhu and Grydehøj, 2023[159]), over 20% in Haiti and Jamaica, over 30% in Samoa, and over 50% in Tonga in 2022 (Mills, 2023[158]). Climate-related applications of remittances include renewable energy, energy efficiency, and a range of climate change resilience and adaptation activities.

- Donors could make greater use of such 'green' remittances, e.g. by pooling them to fund collectively owned infrastructure or capacity development, or to finance community-scale projects. An example is the programme to distribute solar lanterns to households in Haiti, funded through remittances (Mills, 2023[158]). Donors can raise awareness among remittance-providers and recipients, such as to identify and pool applicable locally available goods and services, or assure quality. A feasibility study is underway in Pacific SIDS for a financial vehicle to allow workers of Pacific descent in Australia and New Zealand to invest in climate-resilient infrastructure in their home countries and develop the capacities of communities (BASE, 2022[160]). However, challenges to the use of remittances remain, given that they are based on the goodwill of individual recipients and their collective agreement to such climate-related schemes.

Further, capacity development can be extended to broader sustainable finance investments (IPCC, 2022[5]). In recent years, financial markets witnessed the exponential growth of sustainable finance and the emergence of instruments based on green, blue, or sustainability goals. A 2020 survey by Responsible Investor found that 9 of 10 institutional investors are interested in financing the sustainable ocean economy (Responsible Investor, 2020[161]).

- **Donors could help SIDS in issuing green or blue bonds, which require appropriate frameworks, typologies of eligible projects and criteria for each sector**. Proceeds from the sale of such bonds can finance projects that fulfil criteria outlined in the framework. In return, issuers of bonds might be able to tap into a new investor base (e.g. impact investors) and potentially benefit from lower interest rates. In 2018, the Republic of Seychelles, launched the world's first sovereign blue bond, with support from the World Bank and the GEF (OECD, 2020[68]); while Fiji recently issued a Green, Social and Sustainability bond earmarking climate change adaptation as one of the eligible use-of-proceeds categories (Amundi and IFC, 2022[162]; Climate Bonds Initiative, n.d.[163]).
- **Donors could also help with the capacity of SIDS to engage in debt-for-climate-and-nature swaps**, where a portion of external debt is relieved or restructured in exchange for domestic investment in climate action (IIED, 2023[164]). In 2021, Belize signed a debt-for-nature swap (Owen, 2022[165]), while Cabo Verde and Portugal recently agreed on a debt-for-climate swap (IIED, 2023[164]). Ultimately, bonds and swaps are effective and credible only if underpinned by a governance framework that includes strong institutions and mandates, strategies and policies, clear regulatory frameworks, and monitoring and enforcement (ADB, 2021[166]). Donors can support SIDS in all these areas through capacity development to make sure that bonds are financially sustainable (and can be fully repaid) or to design working swap schemes (Morris, Cattaneo and Poensgen, 2018[124]; Piemonte and Fabregas, 2020[167]).

Theme 2: Climate data and services

2.a Improve SIDS' capacity to gather and use climate-related data and services

2.b Rationalise donor-led resources to support SIDS in climate data and services

2.c Take holistic approaches to develop climate data and service capacities

Awareness among SIDS about the importance of climate-related data is rising, but challenges remain around collecting, disaggregating, managing, and using data consistently (Theokritoff et al., 2022[73]). The Outcome Document of the High-Level Review of the SAMOA Pathway (paragraph 20) recognises that improved data collection and statistical analysis are needed for SIDS to effectively plan, follow upon, evaluate the implementation of and track success in attaining the SDGs and other internationally agreed development goals (UNDESA, n.d.[168]). Capacities vary across SIDS, with some having environmental or climate change statistical compendia and environmental information systems, while others track climate issues in broader development data requirements (ECLAC and PARIS21, 2022[169]). Among Caribbean SIDS, robust national environmental data platforms were put in place in Antigua and Barbuda, Dominica, Saint Lucia, and Suriname. In addition, an increasing number have environmental statistical compendia: 11 countries, with a significant increase in 2020 (CEPAL, n.d.[170]). At the same time, 56% of SIDS require stronger statistical capacity, including around climate change, to inform their development pathways (GPEDC, 2019[171]). For example, a recent study by the OECD shows that government capacity for data analysis and use needs strengthening for integrated policy making in Samoa (Guerrero-Ruiz, Kirby and Sachin, 2021[172]). This includes investing in and using national statistical systems to inform, monitor, and report on national agendas and development co-operation efforts; using shared indicators to harmonise data collection needs and reduce parallel systems; and harnessing the potential of big data and new digital tools to change how data are collected and shared, particularly in remote regions.

2.a Improve SIDS' capacity to gather and use climate-related data and services

Building more efficient ways in SIDS to collect, analyse, and disseminate data is crucial given the small sizes of their national statistical offices and systems. Tokelau's entire national statistical office has only four staff members (PARIS21, 2022[173]), which is large in terms of its population but too small to deal with data collection across all areas – which reflects the fundamental constraints of SIDS: some climate-related projects are equally costly no matter how big the population is, and require similar levels of capacity to be implemented effectively (Fouad et al., 2021[115]). In the area of climate change too, meteorological institutes are understaffed and overstretched. Two full-time staff in São Tomé and Príncipe take care of the meteorological and hydrological stations of the country, act as focal points for a range of UN Conventions, and provide information to the airport and port of São Tomé.

As a result, SIDS (and many developing countries) have limited baseline historical and observation data on climate-related phenomena such as land surface temperature and rainfall; partial historical climatological, environmental, and socio-economic data; patchy geospatial coverage; insufficient climate-related tools; and weak data- and knowledge-management capacity (Independent Evaluation Unit, 2020[74]). Often data is imputed using neighbouring countries and that may have little to do with the realities of SIDS (e.g. a country from the mainland that is a carbon emitter when SIDS tend to be carbon sinks). Another gap noted by stakeholders concerns limited mid-term or seasonal forecasts (beyond long-term scenarios based on IPCC predictions), which hampers sector-level action (such as in agriculture, water, or coastal zone management). While more information is available in larger SIDS, data does not capture key climate-related variations relevant to an island context (Theokritoff et al., 2022[73]).

Donor-led projects could fill some of these data gaps, but this often provides only partial information because there is limited monitoring after projects end and limited incentives for the information to enter the public domain. To build sustainability in climate-related data collection and use, donor-led projects must bring capacity to national statistical systems. Climate data is often disaggregated by regional institutions but, even there, it remains difficult to see the impacts on an island or at local scale (e.g. to account for the situation of individual islands, or where islands have various micro-climates).

As a result, climate services are similarly limited in SIDS. These include the translation, communication, and use of climate data to inform climate-sensitive decision-making, policy, and planning (Climate Services Partnership, 2021[174]), including at the local level. For example, climate systems can help households and communities get "cyclone-ready," such as by preserving food for emergencies and preparing houses and gardens for high wind speeds (Klöck and Nunn, 2019[85]). Climate services need to be based on the best available science but there are many barriers for these to emerge in SIDS (GCF, 2022[175]).

Among these are disconnected scientific, practitioner, and policy communities (producing data, implementing projects, and developing climate regulatory frameworks, respectively). This disconnect leaves policymakers and practitioners without the capacity to access, decipher, gain trust, and integrate climate data into their work. Climate scientists, in turn, often do not have the capacity to communicate and tailor complex climate data to users – or the incentives to engage with other stakeholders on the data produced. For example, scientists in the Comoros struggle to share data published in international (anglophone) peer-reviewed journals with an administration that does not speak English. Academic research also struggles with financing, meaning that the bulk of climate-related work is produced in OECD countries, or through domestic or foreign consultants who prepare research reports for a particular donor, which might not be shared in the public domain – although this is starting to change (GCF, n.d.[176]).

Further, even when climate data is available, institutional silos disable cross-sectoral knowledge-exchange and joint planning among interested communities (Thomas et al., 2020[177]). Among the most pressing issues in the Caribbean region are lack of co-ordination in the national statistical system and with the broader data ecosystem (including civil society, academia, and the private sector), of established data-sharing protocols, of sustained resources, and of strategic capacity development for climate change data (ECLAC and PARIS21, 2022[169]) (Box 3.3). Agencies in charge of climate reporting under international agreements might have no institutional connection with agencies that produce data on weather, agriculture, or other climate-related topics. Often, data needed by one ministry to compile climate change statistics and reports is held by another, but institutional barriers to data-sharing and interoperability obscure a system-wide view (PARIS21, 2022[178]).

Having data can generate scientific assessments at the local levels where mitigation and adaptation projects are planned and implemented. Spatial downscaling techniques have made it possible to refine the resolution of satellite images to interpret spatial variations in climate-related parameters at island-scales – as was done in Mauritius, offering potentially valuable insight on the extent to which a vulnerable SIDS has been impacted by the changing climate (Singh Doorga, 2022[179]). Finally, as noted earlier, submitting proposals requires knowledge of donor policies and systems, and substantial technical and professional skills in a range of subjects, including how to set up baselines and indicators, how to ensure environmental and social safeguards, or how to use available science to articulate the climate additionality of proposals. Public and private investors need robust and timely evidence on what to prioritise, how, for whom, and at what costs/benefits to inform policy changes and guide investment. This rationale underpins the Systematic Observations Finance Facility (SOFF) created by the World Meteorological Organization, the UNDP and UNEP to support SIDS in collecting, processing and exchanging climate data for effective adaptation efforts and investments (WMO, 2021[180]). SOFF envisions to leverage the private sector – as both a producer and user of observational data. More broadly, via stronger data access SOFF can catalyse local private sector investment related to data, while also helping financial institutions better understand seasonal and climate change trends and the impacts these have on local markets (Tsan et al., 2019[181]). SOFF technical assistance is provided by advanced national meteorological offices on a peer-to-peer basis

– and its achievements are still to be evaluated – but the approach taken here is already noteworthy. In fact, improved human and technological capacity for data collection and analysis are needed to increase the role of financial markets in financing coastal conservation and restoration, and to build the kinds of risk models that the finance industry requires (OECD, 2020[68]).

Box 3.3. Weak collaboration and a fragmented data ecosystem: PARIS21 evidence on statistical capacity challenges in the Caribbean region

Fostering collaboration and data-sharing within national statistical systems and beyond – including with relevant non-state actors – is crucial to overcome fragmentation along the climate change data value chain, and to guarantee a participatory approach in climate change reporting and national policy and project life cycles. Current collaboration channels remain weak, and greater efforts need to be placed in building synergies across the data ecosystem.

During a Regional Seminar – *Strengthening environment, climate change and disaster information in the Caribbean*, held in August 2022 by the OECD's Partnership in Statistics for Development in the 21st Century (PARIS21) in collaboration with United Nations Economic Commission for Latin America and the Caribbean (UNECLAC) – representatives from the Ministries of Environment and National Statistical Offices of 13 Caribbean countries (Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Suriname, and Trinidad and Tobago) rated their satisfaction with collaboration among producers and users of climate change data in their country as "poor" or "very poor" (ECLAC and PARIS21, 2022[169]; PARIS21, 2022[182])

Building bridges involves identifying the main players across the ecosystem and their potential roles, including those of non-state actors like CSOs, the private sector, media, academia, and development partners. In March 2023, PARIS21 conducted a national workshop in Grenada to mobilise its Climate Change Data Ecosystem (CCDE) and mainstream climate change data into the National Strategy for the Development of Statistics process. The results identified mapping stakeholders beyond the national statistical system as the main challenge experienced during the assessment of Grenada's CCDE and kick-starting action. Stakeholder-mapping can be a difficult exercise, as actors can fail to understand others' – and their own – interactions and roles in the system as a whole, hindering the identification of how they can contribute and connect the dots.

Source: ECLAC and PARIS21 (2022[169]), Regional Seminar: Strengthening environment, climate change and disaster information in the Caribbean. Summary Note, https://comunidades.cepal.org/estadisticas-ambientales/sites/eambientales/files/2022-10/Summary%20Note_Regional%20Seminar_August%202022.pdf; PARIS21 (2022[182]), How small island developing states in the Caribbean are building climate change data ecosystems to understand and address the climate crisis, https://www.paris21.org/how-small-island-developing-states-caribbean-are-building-climate-change-data-ecosystems-understand.

Underfunding exacerbates understaffing. This is due to both the lack of national budget available and limited human capacity. The smallest SIDS will never have the human capacity of bigger countries. This fits within a broader problem noted by the Global Partnership for Effective Development Co-operation (GPEDC), which found that 56% of SIDS felt they would benefit from stronger statistical capacity to provide updates on progress with development programmes (GPEDC, 2019[171]). This includes investing in and using national statistical systems to inform, monitor, and report on development co-operation efforts; using shared indicators to harmonise data collection needs and reduce the use of parallel systems; and harnessing the potential of big data and new digital tools to change how data are collected and shared, particularly in remote regions. On top of these challenges, persistent resource and capacity constraints, and outdated legal and regulatory frameworks limit the ability of government actors to use climate change data to its full extent (PARIS21, 2022[178]). Barriers remain due to limited SIDS budgets to address and take these up (GCF, 2022[175]), or because donors are not planning for long-run projects, although this is

starting to change (GCF, n.d.[176]). Further efforts are needed to transform data into trusted inputs that drive early action, build on local expertise, and innovative approaches, including from youth, women and the elderly – which can also (re)introduce traditional knowledge. These gaps call on SIDS to prioritise what is essential and identify in-country capacity gaps, and to point to areas where donors could achieve sustainable support (e.g. generating and processing data through automated systems with external support to alleviate stretched capacities).

2.b Rationalise donor-led resources to support SIDS in climate data and services

As noted earlier, producing new climate-related data or using existing data to drive action on the ground and develop climate services is also essential for submitting proposals to access climate finance. This also explains why SIDS' NDCs express the need for capacity development in climate data and services (Theokritoff et al., 2022[73]), often identifying these elements as pre-conditions for accessing climate finance (Mohan, 2022[87]). Given persistent data challenges, a proliferation of actors and initiatives is working to collect data for different purposes, and multiple donors support these efforts, making data one of the most fragmented sectors in developing countries, including SIDS (Clearinghouse for Financing Development Data, n.d.[183]). Table 3.2 provides an overview of the initiatives and resources that support SIDS to develop climate-related data and services.

Table 3.2. Initiatives and resources to support SIDS in climate data and services

Initiative	Objective	Method	Members
IPP CommonSensing, Decision Support System and Knowledge Hub	Support and build climate resilience and enhance decision-making.	Use of satellite remote sensing technology to set new standards for requesting and reporting on climate funds, to strengthen national and regional climate action policy, and to reduce the impact and improve risk management of natural disasters (Decision Support System). Development of capacity to translate data into actionable intelligence for policymaking and action by embedding specialists within government structures. Several web GIS tools developed to discover, view, and download datasets related to climate data. Finally, the Hub provides a repository of knowledge, documentation, and additional training resources.	Partnership between Fiji, the Solomon Islands, Vanuatu, and a consortium of international partners (UK Space Agency's International Partnership Programme, United Nations Institute for Training and Research, UK Met Office, Sensonomic, Spatial Days Ltd., and University of Portsmouth).
Community-based Risk Screening Tool – Adaptation and Livelihoods (CRISTAL)	Identify and prioritise climate risks at the community level.	The tool helps identify livelihood resources most important to climate adaptation and uses these as a basis for designing adaptation strategies.	All developing countries, including SIDS.
Caribbean Disaster Emergency Management Agency's Climate Risk Information System (CRIS)	Establish, enhance, and maintain adequate emergency disaster response capabilities among participating states.	Provides an integrated platform for geo-spatial data, disaster risk management and climate change adaptation information to improve prediction of the impacts of climate change and disasters, and to improve digital modelling technologies and urban planning policies.	Caribbean SIDS.

Initiative	Objective	Method	Members
Climate Vulnerability and Capacity Analysis (CVCA)	Understand climate risks and adaptation strategies.	By combining local knowledge with scientific data, provides a framework for dialogue within communities, and between communities, local and national government agencies, and other stakeholders. The results help identify practical strategies to facilitate community-based adaptation to climate change.	All developing countries, including SIDS.
Participatory Monitoring, Evaluation, Reflection and Learning Manual (PMERL)	Measure, monitor and evaluate changes in local adaptive capacity, for better decision-making in community-based adaptation.	Provides a platform for local stakeholders to articulate their own needs and preferences, and access data and information on climate change issues.	All developing countries, including SIDS.
Caribbean Climate Impacts Database	Provide information on the climate system and socio-economic processes, including adaptation and mitigation.	Provides information and datasets concerning observed climate, regional climate model projections of future climate, future scenarios of weather, downscaled regional climate model projections, and scenarios of weather-derived from hypothetical tropical cyclone events.	Caribbean SIDS
Caribbean Climate Online Risk and Adaptation Tool (CCORAL)	Support decision-making on climate resilience.	Helps users undertake a quick screening of climate risks, understand climate influences, and apply climate risk management processes. Decision-makers are thus able to demonstrate to funders, investors, and donors that climate resilience has been considered and integrated into relevant activities.	Caribbean SIDS.
World Bank Climate and Disaster Risk Screening Tools	Help policymakers understand the need to screen for climate and disaster risks.	Database provides information on why, how, and when to screen, and screening tools across a range of sectors.	All developing countries, including SIDS.
World Bank Climate Change Knowledge Portal	Centralise climate-related information, data, and tools.	Online platform to access and analyse comprehensive data related to climate change and development. Provides global data on historical and future climate, vulnerabilities, and impacts (via country and watershed views).	All developing countries, including SIDS.
Climpact	Calculate climate indices relevant for the health, agriculture, and water sectors.	Software helps calculate indices based on daily weather data to help researchers deliver useful and relevant climate information to sector users.	Developed by the World Meteorological Organization, it applies to all developing countries, including SIDS.
ECLAC learning tools	Strengthen statistical capacity and knowledge sharing on environment, climate change, and disaster statistics and indicators.	Regional Network of Environment and Climate Change Statistics and a platform with learning courses, e.g. on environment statistics for the Caribbean region.	Caribbean English-speaking SIDS.
UN Statistics Division Global Network of Data Officers and Statisticians and Global Network Webinars	Support governments to build resilient and sustainable national data and information systems for the full implementation of the SDGs, including on climate change.	Online network with events, publications and general information related to statistics. UNSD is also developing a Global Set of Climate Change Statistics and Indicators covering five areas relevant for climate change: drivers, impacts, vulnerability, mitigation, and adaptation to support countries in developing robust indicators for reporting and policymaking.	All developing countries, including SIDS.

Initiative	Objective	Method	Members
OECD Partnership in Statistics for Development in the 21st Century (PARIS21) Climate Change Data Ecosystem	Help countries make their climate change data ecosystems more inclusive and coherent to facilitate data availability for climate action.	Framework that proposes four steps to assess the national priorities and statistical capacity needs, and develop an action plan to mobilise actors and resources for more and better climate change data in countries.	All developing countries, including SIDS.
UNDESA Data for SIDS Initiative (DATAS)	Support SIDS National Statistical Systems' capacities and enhance informed decision-making, SDG implementation and monitoring.	Provides capacity development for data governance, production, dissemination and SIDS-to-SIDS collaboration.	All SIDS.
CREWS initiative	Promote early action, transform data to inform action on the ground, and improve communication and preparedness planning.	Impact-based forecasting to ensure that data generated is used by the target users in key sectors, and to ensure information is delivered to women. Ensures that finance covers all stages of the early-warning value chain process. CREWS has USD 70 million worth of capacity development budget and implements projects.	Caribbean SIDS, Haiti, Pacific SIDS (covering the Cook Islands, Fiji, Kiribati, Niue, and Tuvalu, with some services extending to Micronesia, the Marshall Islands, Nauru, Palau, Samoa, the Solomon Islands, Tonga, Tokelau, and Vanuatu), Papua New Guinea, the South West Indian Ocean (the Comoros, Mauritius, the Seychelles), and SIDS from West Africa (Cabo Verde, the Gambia, Guinea-Bissau).
Clearinghouse for Financing Development Data	Help countries, donors and development agencies identify funding opportunities, bring projects to scale, advocate for support to data and statistics, and connect to new partners.	Platform with information and services to match the supply and demand of financing for data and statistics to foster transparency, accountability, and alignment and facilitate co-ordination among donors and partner countries. Donors can use it to identify data funding gaps in recipient countries, benchmark their country's data funding, and highlight opportunities for joint projects with other donors.	All developing countries, including SIDS.
UNESCAP Asia-Pacific Risk and Resilience Portal	Promote risk-informed policy decisions.	User-friendly, one-stop platform for policymakers to access a vast array of scientific information and decision-support tools.	South China Sea and Pacific SIDS.
Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI)	Understand, model, and assess risk with information available for regional assessments.	Collects, processes and develops geo-referenced data of hazards and socio-economic information for risk modelling. The data are stored and accessible through the Pacific Risk Information System.	15 Pacific SIDS.

Source: UNITAR (2020[184]), Independent Midline Evaluation of the CommonSensing Project, https://www.unitar.org/results-evidence-learning/evaluation/independent-midline-evaluation-commonsensing-project; CommonSensing (n.d.[185]), CommonSensing Knowledge Hub, https://common-sensing.cern.ch/training/; CommonSensing (n.d.[186]), CommonSensing Open Portal, https://projects.csopenportal.co.uk/; CRiSTAL (n.d.[187]), CRiSTAL. Community-based Risk Screening Tool - Adaptation and Livelihoods, http://www.iisd.org/cristaltool/; CARE (2019[188]), Climate Vulnerability and Capacity Analysis Handbook (CVCA), https://careclimatechange.org/cvca/; CARE (2014[189]), Participatory Monitoring, Evaluation, Reflection and Learning Manual, https://careclimatechange.org/pmerl/; CARIWIG (n.d.[190]), The Caribbean Weather Impacts Group (CARIWIG) Portal, http://cariwig.caribbeanclimate.bz/#info; World Bank (n.d.[191]), World Bank Climate and Disaster Risk Screening Tools, https://climatescreeningtools.worldbank.org/; CCCCC (n.d.[192]), CCORAL Risk Management Tool, https://www.caribbeanclimate.bz/caribbean-climate-chage-tools/tools/; UNSD (n.d.[193]), Global Network of Data Officers and Statisticians, https://unstats.un.org/capacity-development/global-network-of-data-officers-and-statisticians; World Bank (n.d.[194]), Climate Change Knowledge Portal, https://climateknowledgeportal.worldbank.org/; Climpact (n.d.[195]), Climpact, https://climpact-sci.org/; ECLAC and PARIS21 (2022[169]), Regional Seminar: Strengthening environment, climate change and disaster information in the Caribbean. Summary Note, https://comunidades.cepal.org/estadisticas-ambientales/sites/eambientales/files/2022-10/Summary%20Note_Regional%20Seminar_August%202022.pdf; Clearinghouse for Financing Development Data (n.d.[183]), Smarter financing for development data, https://smartdatafinance.org/about-us; PCRAFI (n.d.[196]), Pacific Risk Information System Community, http://pcrafi.spc.int/; CREWS (n.d.[197]), Climate Risk and Early Warning Systems, https://www.crews-initiative.org/en.

There is limited research on the uptake of these resources in SIDS and (IPCC, 2022[5]) notes that climate data remains insufficient and uneven in SIDS despite efforts made in this area. Some initiatives focus on climate data issues specifically, others include climate within the broader data needs of SIDS, while still others focus on the link between climate data and services, notably risk management and early-warning systems. Many of these are for particular SIDS, while others are developed at regional level (notably in the Caribbean and Pacific), which makes sense given the economies of scale to produce regional-level data on climate and regional similarities in terms of climate impacts (ECLAC and PARIS21, 2022[169]). As seen in Theme 1, it would be useful to evaluate the effectiveness of these approaches and understand complementarities, overlaps and possible further needs, across them – as well as potential extension and replication of successes.

2.c Take holistic approaches to develop climate data and service capacities

Donors can support SIDS in climate change data by taking a holistic vision rather than project lenses (e.g. data to monitor project implementation or prepare a proposal) **or reporting lenses** (e.g. as part of international requirements, such as for the UNFCCC, or to feed into a ministry's programmes). Strengthening the role of national statistical and meteorological services and their capacities to deliver robust climate information requires intentional, domestic and international resource allocation and capacity development. Assessing challenges, opportunities, and lessons of operations in this area shows that bridging the provider-user gap can support sustainable climate services, notably for locally led adaptation. Columbia University's International Research Institute for Climate and Society (IRI) provides good practices to support developing countries in bridging this gap (Box 3.4). The IRI approach goes beyond one-off trainings and top-down processes. Its co-production of climate services considers the ecosystem in which decision-makers operate to maximise synergies between stakeholders, strengthen trust within local institutional networks, and build sustainable local capacity and ownership (Goddard et al., 2020[198]). Such approaches are well-suited for SIDS, including those that need simple and practical solutions because national data ecosystems are underdeveloped, such as in the Comoros or São Tomé and Príncipe.

Box 3.4. Bridging the user-provider gap: the IRI approach to climate services

The disconnect between the scientific community (producing climate information), the practitioner community (implementing adaptation strategies), and the policy community (developing regulatory frameworks to strengthen resilience) calls for cross-sectoral co-ordination to develop the capacities of providers and users of climate information to produce reliable climate services tailored to decision-makers' needs. Leveraging its experience, Columbia University's International Research Institute for Climate and Society (IRI) is working with developing countries, including SIDS, to create Climate Services Academies that: (1) facilitate stronger relationships between producers and users of information; (2) develop competency-based training on the production, translation, communication, and use of climate information (including local installation of climate products and decision support tools); and (3) foster active engagement of local stakeholders in all stages of the co-production of climate services (IRI, 2022[199]).

Jamaica is an early example of this approach: in 2013, recognising the provider-user gap, the Meteorological Service of Jamaica reached out to IRI and USAID to support the integration of their products into decision-making in climate-sensitive sectors. The IRI facilitated a joint training and co-production workshop, bringing together experts from the Agriculture Ministry and the Meteorological Service, leading to the development of a drought early-warning tool. When in 2014 a record drought hit the country (due to a major El Niño event), project evaluations showed that farmers who did not have access to the service lost 70% of their production or income, while farmers who had access to the service lost only 35-40% because they had stored water; invested in irrigation, mulching and higher-value crops; and shifted planting time or took the year off from farming.

Source: IRI (2022[199]), Final ACToday (Year 1-5) Output Monitoring Report: November 2017-June 2022.

Similar ecosystem approaches are put forward by the OECD's Partnership in Statistics for Development in the 21st Century (PARIS21). PARIS21's Climate Change Data Ecosystem (CCDE) mobilisation framework helps countries improve their data ecosystems through a participatory approach that engages traditional national statistical system actors and relevant non-state data actors for climate change. The framework offers a process to assess national climate change data priorities, data gaps, and capacity needs, to develop and implement an action plan to mobilise the CCDE, unlocking resources for improving national data access, sharing, and use (Box 3.5).

When data is available, **donors can support SIDS as part of a holistic approach to establish and maintain knowledge-management systems** (e.g. climate change portals, repositories, or databases) that support decision-making, develop climate finance proposals, and establish early-warning systems. The government of Vanuatu is working with the Secretariat of the Pacific Regional Environment Programme to develop a project on Climate Information Services for Resilient Development. The activity gathered data to better understand the country's climate information service needs and will inform the development of a proposal to the GCF. This process included workshops and consultations with a range of national and local stakeholders, government officials, and policy developers to understand their needs. The Programme is a leading example for SIDS, having gone through the entire project cycle of the GCF (GCF, n.d.[176]). Donor efforts might provide support statistical capacity in ocean-based sectors, as well (OECD, 2022[156]).

When data systems are not available or cannot be developed fast enough, donors can rely on or build upon existing data. This approach would ensure that official statistics, administrative data, and data from non-governmental sources (including unofficial structures) can be used for reporting and policymaking. Vanuatu's Volunteer Rainfall Observer Network engages volunteers to record rainfall

observations, demonstrating the potential for integration of local knowledge into contemporary weather-forecasting (Chand et al., 2014[200]). In addition, traditional knowledge, experiences, and learnings – often tacit and place-based – provide useful sources of data, notably on how communities mobilise their capacity to deal with climate-related impacts and plan effective adaptation strategies and manage disaster risks (Clissold et al., 2023[201]). Such sources of information are not well-known or researched, despite their potential. In the Cook Islands, indigenous knowledge establishes baselines to understand local impacts and vulnerability (Clissold et al., 2023[201]), while Comorian society has informal capacities to help communities thrive (Zhu and Grydehøj, 2023[159]). Donors can help SIDS identify, document, and share such information. In São Tomé and Príncipe, local knowledge has been incorporated into some climate-related projects – such as to create the low-carbon roadmap of Príncipe Island – although other projects show the opposite (Mikulewicz and Podgórska, 2020[202]). Donors can also support co-creation processes among representatives of government, civil society and researchers, which can ensure interdisciplinarity and foster mutual learning among participants, as was piloted, e.g. to deliver coastal climate services in the Maldives to prevent erosion and adapt to sea-level rise (Hinkel et al., 2023[203]).

Box 3.5. PARIS21 framework for Mobilising National Climate Change Data Ecosystems for effective climate action

Critical responses to climate change challenges in SIDS, require quality data to identify most vulnerable populations, design interventions that consider priority needs, and monitor their effectiveness. The Climate Change Data Ecosystem (CCDE) approach is a multistakeholder understanding of climate change data that includes traditional national statistical system actors and non-state data actors: civil society, the private sector, academic and scientific communities, and regional and international agencies. These create, transform and use climate-related statistics and data (PARIS21, 2022[182]), considered alongside dynamic social relationships inscribed in a given legal and policy environment, and technological landscape (UNDP, 2017[121]). Adopting a CCDE approach aims to enable access to and use of localised climate change data and information in a participatory and integrated manner for effective decision-making.

PARIS21 proposes a framework to mobilise national CCDEs that helps countries define and implement a strategic approach to statistical capacity development by connecting climate change data and capacity needs to funding opportunities. The CCDE framework proposes four steps: (1) assess the national climate-related data priorities; (2) identify data and capacity needs; (3) map and engage national statistical system actors and non-state actors in the ecosystem; and (4) develop an action plan to mobilise actors and resources for more and better climate change data in each country, linking the strategy to ongoing projects and using it to advocate for national funding.

In 2023, PARIS21's CCDE framework is being implemented in Francophone Africa and Caribbean SIDS to strengthen national ecosystems for climate change data for improving data practices, governance, and use. It also empowers stakeholders within and beyond national statistical systems to use available data to develop effective climate change responses that address national priorities.

Source: PARIS21 (2022[182]), How small island developing states in the Caribbean are building climate change data ecosystems to understand and address the climate crisis, https://www.paris21.org/how-small-island-developing-states-caribbean-are-building-climate-change-data-ecosystems-understand; UNDP (2017[121]), Financing the SDGs in the Pacific islands: Opportunities, Challenges and Ways Forward, https://www.undp.org/content/dam/papua_new_guinea/img/img/Publications/Financing%20the%20SDGs%20in%20the%20Pacific%20Islands--Opportunities,%20Challenges%20and%20Ways%2.

Because no single technology or data source can provide the quantity and quality of information that SIDS require, donors can rely on a mix of technological solutions to disseminate data. In Samoa, the Climate Risk and Early Warning Systems (CREWS) initiative uses different systems to disseminate climate services across villages (e.g. mass-broadcast of SMS, church mass, traditional leadership in villages) and

with different standard operating procedures (e.g. regularly running simulations and testing evacuation routes for different hazards). **Donors can also make greater use of open-data networks, communities of practice, and observatories for information exchange and to discuss and transform data**. Such initiatives can increase efficiency and overcome capacity constraints – especially in technical and specialised areas like weather-forecasting – and help fill data gaps. For example, donors could encourage the work of SIDS with the Least Developed Countries Universities Consortium on Climate Change, or promote SIDS-to-SIDS university activities to learn from other countries' experiences, develop common projects, or implement capacity activities, which can develop the capacities of universities in SIDS, in turn.

Taking regional approaches can help fill data gaps. As many SIDS share vulnerabilities, especially at regional level, taking regional approaches can be effective to achieve economies of scale, delivery efficiency, and share knowledge, lessons, expertise and technology. Exploring and establishing regional data collection systems that draw on capacity across neighbouring SIDS can be ways forward. For example, donors could develop the capacities of the Caribbean Community Climate Change Centre or the Organisation of Eastern Caribbean States. However, striking a balance between national and regional approaches, and ensuring that regional initiatives are responsive to the priorities and circumstances of each country will remain important. According to (PARIS21, 2022[178]), in areas where resources or issues are primarily national, regional initiatives can underplay national differences and might complicate local-level processes. Donors would need to identify and differentiate between activities that can be effectively carried out at the regional level, those that need to be financed at national level, and those that require complementary action at both levels.

Broader systemic approaches of donors could also consider the role of education to foster climate action and ambition. Education is rarely mentioned in SIDS' NDCs (except for education about the impacts of climate change), but investment in education is consistent with a broader approach to developing climate data and services. Yet, investments in education and supporting capacity development there are often declining in many SIDS, notably when these transition to higher income levels (Morris, Cattaneo and Poensgen, 2018[124]). Education can reduce climate vulnerability and improve the capacity of communities to respond to climate change. It can improve people's ability to understand and manage risks, and it provides the foundations for people to reduce poverty or improve health (Crossley and Sprague, 2014[204]). It can offer the core competences that are needed for a country to engage in climate-related action. Closing the gap between climate change and education interventions can overcome some of SIDS' challenges with climate data and services, notably by raising knowledge and awareness of climate issues. Changing this situation concerns the whole education system, including academic training in universities, and concerns teachers and students alike. Often, too, SIDS only have one university (in the capital island), which means that students need to travel there to continue training or stop studying (for example, this is the case of Cabo Verde and São Tomé and Príncipe). Examples of change are showing that it is possible to improve the situation. The Samoa Ocean Strategy, the country's national policy framework for ocean management, lists ocean knowledge (both contemporary and traditional) as a priority thematic area, and underscores the importance of educational interventions for fostering this knowledge and building awareness and capacity for sustainable coastal management (Government of Samoa, 2020[205]). The Seychelles instituted environmental education from a very young age, creating a strong "environmental ethos", which enables environmental protection in national strategies, plans, and projects (Rokitzki and Hofemeier, 2021[111]). Other SIDS show similar experiences with donor-supported education in climate change projects, such as by the EU in the Comoros (Ratter, Petzold and Sinane, 2016[17]). In São Tomé and Príncipe, climate change mitigation and adaptation, impact reduction, and early-warning measures were introduced in school curricula, a manual was developed for secondary education, and ongoing pilots integrate these themes in higher education (Thomas et al., 2020[177]). Importantly, multilingual education can enable SIDS' participation in international climate discussions and access to climate finance. For countries like the Comoros, the language barrier hampers possibilities for co-operation with neighbouring countries or other SIDS; while limited English knowledge in São Tomé and Príncipe still

drives the capacity development efforts of donors (República Democrática de São Tomé e Príncipe, 2021[206]) for the country to engage effectively in UNFCCC discussions and processes.

Theme 3: Partnering with non-governmental stakeholders

3.a Work with private actors and consider alternative entry-points to reach them

3.b Leverage academic actors as knowledge and legacy partners for capacity development

3.c Develop the capacities of local actors for sustainable results

While national ownership at the central level is vital for interventions to develop capacity sustainably, donors can also work with a range of non-governmental actors, such as academia or the private sector, and directly with the local level and communities. These actors can be the direct beneficiaries of interventions to embed capacities for the long-term, or become legacy partners to retain and take forward the knowledge and capacities developed, thus helping donors conclude a project smoothly. Such approaches reverse the paradigm for donor-led capacity development related to climate change in which the main beneficiaries are governmental actors – notably environment ministries – and the main centres of knowledge production and dissemination are international organisations, other donors, consultants, and international non-governmental organisations (Khan et al., 2018[102]). Such partnership can overcome the constraints of centralised agencies regarding resource absorption and address local climate issues. Moreover, environment ministries must delegate implementation to other levels of government. Many might not cope with broadened mandates because the availability of human and financial resources has not kept pace (OECD, 2012[62]). Here, academia, the private sector, or local institutions might be preferred partners.

3.a Work with private actors and consider alternative entry-points to reach them

SIDS have great potential to leverage private finance for climate action (UNDP, 2022[3]), but structural barriers constrain private investment in most cases (Piemonte, Kim and Cattaneo, forthcoming[53]). For example, micro-, small- and medium-sized enterprises (MSMEs) may only have capacity to produce small volumes of inconsistent quality, unsuitable for potential trading partners. MSMEs in SIDS tend to be isolated, far from markets, with limited access due to poor infrastructure, with weak negotiation positions and limited capacity to upgrade and meet formal market requirements, as well as limited access to information, technology, and finance (Carias Vega, Page and Ota, 2023[207]). In Pacific SIDS, the private sector largely comprises agriculture and fishing enterprises that provide subsistence needs and limited export opportunities. Microstates such as Kiribati, the Marshall Islands, and Tuvalu have even smaller business communities. Notwithstanding, some SIDS have more dynamic private sectors than others. Some African SIDS such as the Seychelles or Mauritius have a fast-growing tourism industry and sizeable fisheries, while the Comoros has a more nascent private sector with low awareness of climate questions and opportunities.

Investment remains below its potential in most SIDS, and unlocking or deploying private funds for sustainable (blue and green) initiatives is often constrained by capacity challenges, unfriendly business environments (e.g. regulatory problems), issues of scale, and a dearth of investable projects (OECD, 2022[55]). National development plans in SIDS often highlight actions to strengthen the private sector, but these are rarely picked up by NDCs (Atteridge, Verkuijl and Dzebo, 2019[79]). An exception, Kiribati's NDC refers to "strengthening and greening the private sector" as a whole, and Jamaica emphasises efficiency and ecological stewardship by the private sector. In the Caribbean, some NDCs refer to specific private sectors, generally identified as climate-exposed (e.g. tourism in Jamaica or fisheries in Belize), while others signal a willingness to engage with the whole private sector: Belize through public-private partnerships; Saint Lucia via private financing; and Saint Vincent and the Grenadines by developing private sector capacity (Mohan, 2022[87]).

Overcoming these constraints requires long-term dedication and resources, and comprehensive public and private capacity development strategies (OECD, 2022[55]). Australia supports Pacific SIDS to develop pipelines of investment-ready projects to increase private financing, including by bridging the gap between project proponents and financiers. This includes supporting governments' visions for private investment, helping them identify and engage with partners, and co-ordinating arrangements across line ministries and levels of government; identifying priority sectors; tracking private investment; and monitoring and evaluating arrangements. To enhance private-sector investment in energy, Australia and other donors work to strengthen legislative, regulatory and policy frameworks, institutional capabilities, individual capacity development, and financial policies that remove barriers (Dornan, 2015[208]; Michalena, Kouloumpis and Hills, 2018[209]). These activities can promote a paradigm shift in domestic (and international) investment behaviour (Taibi et al., 2016[210]). For example, Fiji's Sustainable Energy Financing Project (SEFP), supported by the World Bank in partnership with the Australia and New Zealand Banking Group and Fiji Development Bank, increased the uptake of renewable energy by guaranteeing 50% of participating banks' lending through the World Bank's risk-mitigation facility while developing national capacities to remove barriers to investing in the sector (Department of Energy, n.d.[211]). Lessons from the SEFP could be used by donors to mobilise resources to support and design similar initiatives in other SIDS.

Despite its relevance, knowledge remains limited about the capacity gaps of the private sector, and the capacity development efforts it needs to address climate change (Casado Asensio, Blaquier and Sedemund, 2022[61]). Further, the typical donor conception of the private sector in SIDS does not correlate to its micro-scale and low capital base reality (Independent Evaluation Unit, 2020[74]). The private sector is not yet identified as a target for climate-related capacity development and few initiatives address this issue – with a tendency to be fragmented and project-driven when they do. Several entry-points for donors could overcome some challenges:

- **Working through co-operatives, industry groups, or chambers of commerce** can provide important entry-points for capacity development (as recommended by (Piemonte and Fabregas, 2020[167]) in the case of the Solomon Islands, for example). Exploring work with these representatives of the private sector on climate-related capacity development could be a starting point to, for example, integrate climate risk and resilience into business planning processes, scale up and leverage financial instruments and mechanisms for climate-resilient investments, or enable learning-by-doing and peer-to-peer exchanges at the local, national and regional levels.
- **Thinking of alternative entry-points** to develop the capacities of private sector actors. For example, using marketplaces might provide alternative entry-points for climate action in Vanuatu, especially at the local level. Through women vendors, the marketplaces act as bridges across multiple communities and households, creating a multiplier effect that can expand the reach of capacity development interventions (McNamara, Clissold and Westoby, 2020[212]). Another entry point are value chains, which enable developing the capacity of economic actors, notably of micro, small and medium enterprises, provided they are included in a value chain (e.g. see (Carias Vega, Page and Ota, 2023[207]) for a case study on sandalwood, canarium nuts or whitewood in Vanuatu).
- **Harnessing large private sector actors for climate action**. Most SIDS have a small number of large private sector actors. In São Tomé and Príncipe, these include two telecommunications operators (CST and Unitel Telecom), two large agrobusiness companies (Agripalma and Satocao), two hotel groups (Pestana Group and HBD), and an airline (TAP). Some of these can contribute to broader climate action in the country. For example, the services provided by Agripalma's meteorological stations could be expanded to increase coverage of the country; while others, such as the Pestana Group, require weather-related data to sustain eco-tourism activities and could benefit from additional climate services. Given the small number of actors, donors could promote dialogue and co-ordination, not least through corporate social responsibility activities.

3.b Leverage academic actors as knowledge and legacy partners for capacity development

Universities and academic institutions are key players in capacity development (Ensor and Harvey, 2015[213]). They have been developing capacity and facilitating change in domestic culture regarding climate change for decades. They are permanent institutions that can deliver education, training, public awareness, research and technology development, generating both generic and specific capacities (Khan, Mfitumukiza and Huq, 2020[214]). They can render national and regional scientific advances, data, and information on climate change more accessible to the broader public (Conway and Vincent, 2021[215]), including by engaging with and raising the profiles of local actors and their needs (Westoby et al., 2020[216]). Universities can address climate challenges by providing knowledge, leadership, educational curricula, workforce development, and technological innovation (Miquelajauregui et al., 2021[217]).

However, universities and academic institutions are often left out of donor-led capacity development processes (Westoby et al., 2020[216]). While not all SIDS have universities, many do, and these institutions require further capacity development themselves to live up to their potential. Universities in developing countries, including SIDS, face significant challenges in implementing capacity programmes for sustainability. These include deficient co-ordination and staff training, lack of leadership, inadequate financial support, administrative constraints, lack of alignment between institutional and societal needs, and lack of assessment tools to monitor progress and quantify and evaluate programmes and initiatives (Miquelajauregui et al., 2021[217]). They also face capacity retention challenges, for students to stay engaged in academia or be absorbed by the local market, resulting in efficiency losses. Donors could therefore:

- **Help empower universities and research institutes in SIDS so they can develop expertise in relevant areas and foster exchange of practices among academics**. Universities and academic institutions could be supported to offer certificate programmes for stakeholders, including government officials and non-governmental organisations or the private sector. Donors support such programmes in São Tomé and Príncipe, where Portugal has several partnerships with local universities. The French Adapt'Action facilities accompanies the Organisation of Eastern Caribbean States (OECS) and its universities (West Indies University and Université des Antilles) in rethinking what the Caribbean can – and must – be within a climate-changing context, through the reform of university programmes, which has to ensure the future graduates' disposal of relevant knowledge to take up the future climate-related urban challenges (AFD, n.d.[218]).
- **Ensure SIDS seize the opportunities offered by scientific and technologies advances in ocean-based sectors**. Much ocean knowledge and innovation produced in donor countries could be shared through networks and international co-operation initiatives to benefit SIDS. These could take the form of knowledge transfers and collaboration, and the encouragement and facilitation of participation of SIDS in these networks and projects, e.g. the Oceanic Platform of the Canary Islands, the Atlantic International Research Centre or the Indian Ocean Rim Association (OECD, 2020[68]). As an example, the Commonwealth Blue Charter promotes ocean exploration and marine mapping projects in interested coastal countries and SIDS that are conducted in partnerships with United Kingdom oceanographic institutions (The Commonwealth Secretariat, 2020[219]).
- **Enhance knowledge of what academic institutions do on the ground and remain supportive over time**. Often, donors are unaware of research being conducted in local universities, as seen in the Comoros, where ocean- and ecosystem-related projects often bypass these institutions and instead seek international consultants for expertise. Further, institutions are forced to discontinue activities once projects end because they lack the resources and capacities to pursue them, also as a consequence of donor funding models (project-driven, short-term). In the Comoros, a master training on ocean sustainability sponsored by a World Bank was discontinued once the project ended because local authorities could not sustain it.

- **Donors could support academia by enhancing the policy-science interface**. Recent research demonstrates how enhancing the capacity of academia and communication between researchers and policymakers can improve climate-related policy and practice (Conway and Vincent, 2021[215]; Pardoe, Vincent and Conway, 2018[220]). The University of Comoros provides scientific information at Board of the National Parks Agency meetings, and National University of Samoa is an observer of the National Ocean Steering Committee. Stakeholders interviewed for this report highlighted how Cabo Verde can structurally change its climate approach by implementing a national strategy to develop domestic scientific capacities. Another example is the Dominican Republic's National Climate Change Council, which collaborates with one of the largest banks in the country and the Pontifical Catholic University to organise capacity development programmes for civil society and grassroots organisations.
- **Explore alternative academic institutions as entry points, both domestically and regionally**. Technical colleges in Vanuatu proved to be a mechanism for knowledge and skill transfers, helping demonstrate and pilot the introduction of new ideas and practices, leading to effective climate change adaptation results (Westoby, Clissold and McNamara, 2021[221]). Furthermore, donors could explore economies of scale, as in the case of West Indies University in the Caribbean and the University of the South Pacific.

All in all, donors could better explore the potential of working with academia to develop capacities – including the capacities of academic institutions themselves – and to map current practices, unearth good practices and engage in dialogue with academic actors in both donor and partner countries to increase the effectiveness of current approaches.

3.c Develop the capacities of local actors for sustainable results

The stakeholders and literature consulted for this report highlight the important role of other actors – such as communities, civil society organisations, and other local structures – in fostering climate-related capacity development in SIDS. Their buy-in is indispensable for climate action, due to the importance of customary land rights and traditional governance structures. For example, community actors can create awareness of vulnerability and future risks, and can mobilise local knowledge and skills, build trust, and connect to higher-level authorities, experts and resources in an effective way (Ratter, Petzold and Sinane, 2016[17]). Similarly, initiatives funded by local bodies are more likely to perform well, perhaps because they are familiar with the local context and socio-cultural nuances. In São Tomé and Príncipe, work by the Portuguese faith-based non-governmental organisation *Leigos para o Desenvolvimento* in the Porto Alegre Community Group has helped residents of Ponta Baleia formulate their own interests vis-à-vis outside development agents and empower themselves to oppose capacity development activities that ignore those interests (Mikulewicz and Podgórska, 2020[202]). As a result, in-coming capacity development and development co-operation activities are leading to more sustainable results. In the Comoros, research also shows how local associations have been instrumental in enhancing small-scale fisheries management effectively (Freed et al., 2016[222]). Donors could therefore:

- **Use local structures as much as possible to deliver capacity with good results**. Partner country experts are well placed to know what will work with local participants, ensuring that assistance and support is appropriate. Pacific SIDS (Westoby, Clissold and McNamara, 2021[221]) found that project implementers were able to secure management over, and ongoing commitment to, an adaptation project because they used existing structures. Another example is provided by the EU Partnerships for Sustainable Cities programme, which connects local authorities from inside and outside the EU to boost urban development and promote decentralised co-operation (European Commission, n.d.[223]). The District of Agua Grande in São Tomé and Príncipe and Spain's Consorcio de la Ribera work on environmentally friendly and climate-smart policies, notably in waste management, which raise climate change awareness by, for example, running informative and participatory presentations and exchanges. More generally, ICLEI Africa's Urban Natural

Assets for Africa (Local Governments for Sustainability-UNA) programme provides capacity-enabling support, which could expand to African SIDS (Kanovic and Bulkeley, 2023[224]).

- **Using alternative capacity development modalities when engaging locally**. Strengthening the capacity at local level will require a mix of capacity development activities, including awareness raising, training and the provision of information, notably through direct exchanges, which are more accessible and understandable ways to reach the local population, rather than through producing documents and reports. In Comoros, possible entry points are village- or community-level associations on top of local governments (Klöck, 2023[225]). These could be key for emergency-related operations centre and could receive and provide training, equipment and resources locally, in co-ordination with local and national emergency response strategies (OECD, 2022[156]).
- **Apply the Principles for Locally Led Adaptation**. Local stakeholders in SIDS ought to also have more agency in climate-related capacity development actions (Scobie et al., 2023[226]). The Principles for Locally Led Adaptation are intended to guide donors as they move programmes, funding and practices towards climate change adaptation activities that are increasingly owned by local partners. While not intended to SIDS only, they build on progress and lessons learned to enhance understanding of what is needed for effective, equitable locally led adaptation. On capacity development, the Principles highlight the need to provide patient and predictable funding that can be accessed more easily locally; and to invest in local capabilities to leave an institutional legacy (WRI, n.d.[227]).
- **Harness ongoing international labour mobility programmes**. These provide an avenue for knowledge-exchange on adaptation. (Dun et al., 2023[228]) show that participation in Australia's Seasonal Worker Programme opened possibilities for adaptation in agriculture in Pacific SIDS using workers' exposure to different agricultural skills and ideas around Australia, combined with their knowledge and experience of crop production in their home countries. Such adaptive agricultural knowledge and skills exchanges are not organised, but studies of Jamaican farm workers in Canada show how participation in the such schemes can enable livelihood benefits as seasonal workers try new crops, agricultural techniques, and agronomic skills upon returning to their home countries, in line with the FAO Migration Framework (FAO, 2019[229]). New Zealand's scheme also offers a model for integrating training into labour mobility programmes beyond workers' immediate workplace. This includes resources and courses on solar power, climate change resilience, building, plumbing, small business, and leadership (Dun et al., 2023[228]).

Theme 4: Regional and triangular co-operation support

4.a Shift capacity paradigms to foster regional and triangular co-operation

4.b Tap into bountiful regional and triangular co-operation opportunities for donors

4.c Develop triangular approaches using bilateral and regional programmes

There is a largely one-directional flow in capacity development activities, from donors to partner countries. An underlying narrative in capacity development is that Global North actors are knowledge producers while those in or from the Global South are knowledge consumers (Nautiyal and Klinsky, 2022[66]). In this narrative, donors, governments, practitioners, and academics focus on deficiencies, finding "problems" to "solve" (McNamara, Westoby and Clissold, 2022[135]). This paradigm misses the opportunity to consider the expertise and capacities of partner countries. One area for more donor work is to tap partner countries' knowledge (e.g. experts and peers, traditional learning practices), disseminate it across partners through regional and triangular co-operation (OECD, 2012[96]), and foster further SIDS-to-SIDS collaboration. Such good practices are echoed by other OECD work, e.g. in Samoa (Guerrero-Ruiz, Kirby and Sachin, 2021[172]).

4.a Foster regional and triangular co-operation

Peer approaches can increase the effectiveness of climate measures and generate sustained outcomes (Fisher, 2022[230]). Peers can form a horizontal community, keep conversations going after a capacity development intervention ends, look for and share knowledge and solutions, and promote learning about similar issues across countries and regions. Modalities that foster peer learning require a mindset that emphasises partnership rather than North-South flows of expertise and experience (Anderson and Swanepoel, 2022[231]). Regional and triangular co-operation11 are examples of such modalities, and require dedicated time during the design phase for authentic co-design and recognising long-term partnerships as an asset, continued investment in relationships to maintain trust and communication (Rokitzki and Hofemeier, 2021[111]) and the flexibility to respond to participants' interests (Fisher, 2022[230]). In this case, donors become brokers between potential peers, advocating for the value of the peer learning approach.

There are no one-size-fits-all solutions to climate change across SIDS, as the impacts of a changing climate are embedded in and intertwined with complex social, economic, and cultural conditions. But SIDS still have common valuable experiences, innovations, and lessons learnt, and inter-SIDS exchanges can identify home-grown solutions before turning to traditional, external donor knowledge (OECD, 2022[232]). SIDS express this role in NDCs and international fora (UN-OHRLLS, 2022[147]). Robinson and Dornan (2017[233]) note that Caribbean SIDS want Pacific SIDS to teach them to attract more financial resources. Further, SIDS can be seen as leaders in many areas of expertise. Guyana established a comprehensive, robust, and advanced measurement, reporting, and verification system for Reducing Emissions from Deforestation and Forest Degradation (REDD+), which helped measure and report its forest carbon-emissions. This contributed to global understanding of how small, forested countries can reliably and cost-effectively measure and report on their forest carbon emissions (Mohan, 2022[157]). Another example is the regulatory reform in Fiji's energy sector, which serves as a model for SIDS and includes the establishment of an independent regulator, which increased electricity tariffs, creating an opportunity for domestic private-sector investment (Dornan, 2015[208]). Finally, many SIDS[12] improved their national GHG emissions-inventory capacities and quality (Umemiya and White, 2022[234]), which can help others do the same.

4.b Tap into bountiful regional and triangular co-operation opportunities for donors

Many regional and triangular co-operation initiatives and platforms can help SIDS develop their climate-related capacities (Table 3.3). Regional approaches can lower transaction costs, making it easy for donors to support many SIDS in a region, including through cross-country collaboration. Most of these concentrate in the Pacific and Caribbean. The AIS region receives less attention, leaving gaps and untapped potential for learning and exchange. Regional hubs can collect data on SIDS regarding climate issues, manage knowledge and lessons learnt, and disseminate experiences across SIDS. Several institutions also support SIDS, such as the NDC Partnership Support Unit, valued for matchmaking, co-ordination, alignment, and as a neutral broker for promoting climate finance investments and more, including in SIDS (GIZ, 2022[128]).

At the regional level, SIDS are supported by regional inter-governmental organisations (Robinson and Dornan, 2017[233]) such as the Caribbean Community and Common Market (CARICOM), the Caribbean Community Climate Change Centre (CCCC), the Organisation of Eastern Caribbean States (OECS), the Pacific Islands Forum Secretariat (PIFS), the Pacific Islands Development Forum (PIDF), the Secretariat of the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme (SPREP), the Melanesian Spearhead Group, and the Indian Ocean Commission (IOC). For example, the Pacific Island Forum 2050 Strategy for the Blue Pacific Continent includes climate change and disasters as well as ocean and environment as two out of seven thematic areas. Strategic pathways include partnerships and co-operation in general. The Pacific Islands Development Forum (PIDF), a multipartite platform for Pacific leaders and representatives, holds a strategic plan 2019 to 2030 in which South-South co-operation as well as green and blue projects are key pillars.

Regional organisations have experience in developing portfolios of “bankable” climate-related projects, they help with service delivery and to harmonise financial legislation and rules for project development (UNDP, 2017[121]), and they obtain support from accredited regional entities (The Commonwealth, 2022[100]). Antigua and Barbuda worked with the OECS, which is accredited by the GCF to conduct project monitoring and evaluation (The Commonwealth, 2022[100]). The CCCC provides a framework for improved integration and co-operation at a political level, and practical support and co-ordination in the Caribbean (Thomas et al., 2020[177]), while the SPREP leads regional-level adaptation support in the Pacific. This enhanced regional co-ordination has led to the development of tools and web portals to support adaptation. For example, the CCCC developed the Caribbean Climate Online Risk and Adaptation Tool to help users identify appropriate adaptation actions and recommends four end-to-end climate risk-management tools to support adaptation planning; and in the Pacific, the SPREP established the Pacific Climate Change Portal as an information repository and a home for regionally relevant tools (Table 3.3). Finally, the PIDF supports South-South and triangular co-operation in the Pacific, including on climate issues, and where triangular co-operation is viewed as an adding value to on-going South-South co-operation efforts in the region.

Within this regional landscape, there is a gap in regional support to African SIDS, also noted by stakeholders interviewed in the Comoros and São Tomé and Príncipe. A Conference of Small Island Developing African States and Madagascar (SIDSAM) was held in December 2016 in Cabo Verde, which led to the establishment of the SIDSAM Group, a platform for consultation, discussion of issues of common interest, promotion of ways and means to overcome barriers, and making existing recommendations and commitments effective at regional and global levels. However, the Group has not met since and the African Union together with the African Development Bank, the UN Economic Commission for Africa, and other stakeholders could consider establishing a regional AIS SIDS platform to support these countries.

Table 3.3. Regional and triangular initiatives and resources to support SIDS

Initiative	Objective	Method	Members
Regional Pacific NDC Hub	Implement NDCs and contribute to sustainable and resilient development and promote a transition to a low-carbon development pathway in the Pacific.	Regional platform that consists of technical experts who deliver demand-driven technical assistance to implement NDCs. The Hub helps find the data, resources, and expertise needed.	Pacific SIDS.
Commonwealth Climate Finance Access Hub (CCAH)	Strengthen institutional capacity by closing gaps in institutional and financial knowledge, skills, and technical capabilities.	Promotes South-South, triangular, and regional co-operation, knowledge exchange, mutual learning and capacity development.	25 SIDS Commonwealth member countries.
Resilient and Sustainable Islands Initiative (RESI)	Improve the conditions under which SIDS can achieve financial sustainability, environmental justice, international alliances, and equitable societies.	Global advisory network to frame policy problems, influence international institutions, and find solutions to growing sustainability challenges in SIDS.	All SIDS.
UN DESA SIDS Online Platform and Partnership Toolbox	Promote the sharing of information, learning, and co-operation among SIDS.	Platform for programmes and projects, best practices and lessons learnt among SIDS, as well as a forum for engagement, including the formation of partnerships. The platform builds upon online databases, such as the Sustainable Development Platform or SIDS Action Platform. The Toolbox assists SIDS with the monitoring and review of partnerships.	All SIDS.
Southern Climate Partnership Incubator (SCPI)	Initiate, facilitate, and support partnerships that will help developing countries address climate change.	The initiative facilitates networking and partnership building and assists with policy exchange, technical assistance, and capacity development. It is also meant to accelerate access to green technologies on favourable terms and advocate for and promote successful policies, programmes, and case studies through reports and other knowledge products.	All developing countries, including SIDS.
SIDS Solutions Platform	Promote innovation and knowledge transfer across SIDS.	Collaborative platform for sharing knowledge, bringing together stakeholders from Pacific SIDS and other parts of the world. It allows SIDS to share solutions, good practices, and lessons learnt about sustainable development, including in the areas of agriculture, food security, and rural development.	Focus on Pacific SIDS, but other SIDS are also targeted.
Global Partnership Initiative on Effective Triangular Co-operation Marketplace	Promote triangular partnerships among DAC donors, developing countries, and other stakeholders.	A forum for dialogue on triangular co-operation, which includes a marketplace segment to exchange on potential triangular co-operation projects.	All developing countries, including SIDS.

Initiative	Objective	Method	Members
Pacific Islands Forum Pacific Resilience Facility	Develop the capacity and resilience of communities to effectively address the impacts of climate change and disasters, including gendered impacts.	Regional co-operation and collaboration facility to adopt a precautionary and forward-looking approach to protect the region's biodiversity, environment, and resources from exploitation, degradation, nuclear contamination, waste, pollution, and health threats.	Pacific SIDS.

Source: The Commonwealth (2022[100]) Toolkit to Enhance Access to Climate Finance. A Commonwealth Practical Guide, https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/s3fs-public/2022-03/Toolkit_to_Enhance_Access_to_Climate_Finance_UPDF.pdf?VersionId=DRLRxyeqBil43xd_HddZPBxp; GIZ (2022[128]) Initiatives and Options for Promoting Access to Climate Finance, particularly for Small Island Developing States (SIDS) and Least Developed Countries (LDCs); UN-OHRLLS (2019[235]), Guide. Small Island Developing States National Focal Points Network; UNDESA (n.d.[236]), UN Small Island Developing States Action Platform. SIDS Partnership Toolbox, https://sustainabledevelopment.un.org/content/documents/24009SIDS_Partnership_Toolbox.pdf; Pacific Islands Forum (2022[237]), 2050 Strategy for the Blue Pacific Continent, https://www.forumsec.org/wp-content/uploads/2022/08/PIFS-2050-Strategy-Blue-Pacific-Continent-WEB-5Aug2022.pdf.

4.c Develop triangular approaches using bilateral and regional programmes

Triangular co-operation brings value to other modes of development co-operation by providing a broader base and platform than bilateral co-operation for learning and sharing experiences – thus helping all partners address climate challenges. Triangular co-operation diversifies resources, stakeholders, technical expertise and experiences gathered over time. It can also draw on traditional indigenous knowledge systems (Anderson and Swanepoel, 2022[231]) and enable co-operation among countries sharing the same language or with similar climatic and geographic conditions (also cross-regional). Co-ownership and co-leadership contribute to building trust between partners, which can be used in agreements to meet global environmental, climate, and biodiversity targets. Triangular co-operation ensures that partners are receptive to exchange, as they feel close to the challenges of the other country (e.g. the potential partner was a recipient in the past). It offers ample possibilities for SIDS to take on different roles and enables donor's exposure to Southern experts who often cannot afford to attend international conferences. The exchange can become multidirectional and premised on all partners having value and expertise to share (OECD, 2022[232]).

There are several examples of successful triangular co-operation partnerships to develop the capacities of SIDS on climate issues. The World Food Programme facilitated co-operation between Caribbean SIDS to strengthen the disaster risk reduction capacities of the Dominican Republic and Haiti by learning from Cuban expertise. Building on these exchanges, peer learning for disaster risk reduction has been replicated and expanded to other countries in the region. In 2019, Honduras, Nicaragua and the Caribbean Disaster Management Administration shared their experiences in early-warning systems and disaster risk reduction in a sub-regional disaster risk management forum. In another example, Portugal and Brazil support other Portuguese-speaking countries – including Cabo Verde, Guinea-Bissau, São Tomé and Príncipe, and Timor-Leste – with UNFCCC negotiations, although the role of this programme could be expanded beyond workshops and the exchange of experiences. There are several ways in which donors could foster such triangular approaches:

- **Supporting SIDS to develop an enabling national ecosystem** for regional and triangular co-operation. This includes cultivating high-level political will and a related policy, strategy, or guiding document, and structures, resources, and procedures at the country level to enable engagement in and management of such activities (Anderson and Swanepoel, 2022[231]). Within this ecosystem, there is a role for a domestic intermediary or broker to foster triangular activities. The Comorian International Co-operation Agency promotes high-level partnerships between specialised agencies

and institutes (making it a logical entry-point to support the Comoros) but itself requires capacity development. Programmes like the Islamic Development Bank's 3.2C could reinforce this capacity and that of other member SIDS: Guinea-Bissau, Guyana, the Maldives, and Suriname.

- **Fostering triangular approaches by leveraging regional institutions** such as the African Union and its institutions, and regional economic commissions (OECD, 2022[232]). This can be done by relaxing conditions to obtain triangular co-operation support (e.g. removing contributions or accepting in-kind contributions) and being more flexible about the activities that fall under triangular co-operation (e.g. filling human resource gaps or buying equipment). Existing triangular co-operation approaches could be expanded to SIDS, for example the Islamic Development Bank's Reverse Linkage engages in matchmaking across its member countries, which could foster intra-SIDS exchanges to better understand their needs on climate-related issues.
- **Leveraging bilateral co-operation as a basis for triangular initiatives**. This is useful for donors who have small island territories, such as France, the United Kingdom or the United States. France has been supporting the Indian Ocean states, including Comoros and Mauritius since 2018, such as through the Adapt'action facility's "BRIO" (Building Resilience in the Indian Ocean) research programme, which aims to improve knowledge of climate impacts and integrate these issues into their public policies. It strengthens national meteorological services and their ability to conduct high-resolution climate simulations in the Indian Ocean basin with the support of Météo France and the World Meteorological Organization, and mobilises experts from Réunion island, a French overseas department (AFD, 2022[238]; AFD, n.d.[218]).

Theme 5: Promoting effective development co-operation in SIDS

5.a Apply the GPEDC principles on effective development co-operation to climate-related capacity-development in SIDS

SIDS place emphasis on development effectiveness principles and practice (Global Affairs Canada, 2022[239]). The Global Partnership for Effective Development Co-operation (GPEDC) principles on effective development co-operation include country ownership, a focus on results, inclusive partnerships, and transparency and mutual accountability (GPEDC, n.d.[240]). However, efforts at capacity development have been neither effective nor sustainable, which calls for rethinking the way capacity development is delivered in SIDS.

5.a Apply the GPEDC principles on effective development co-operation to climate-related capacity-development in SIDS

Research and evaluations point to the need for more progress, notably in SIDS, due to a mix of challenges, such as gaps in capacity to oversee project implementation, and fatigue with current capacity development approaches (Hayman, 2021[241]). Some of the main challenges are noted in (Global Affairs Canada, 2022[239]) and in the case of climate change include:

- **Weak local ownership –** as stated under Article 11 of the Paris Agreement, capacity development should be country-driven and answer to each country's needs (UNFCCC, 2015[64]). Donors could design capacity development interventions input from partner countries to ensure the approach to funding is responsive to individual and organisational capacity needs. Despite attempts to integrate local context into capacity development, there is a tendency for activities to be driven by and over-rely on external experts and resources, which can diminish local self-efficacy, agency, and existing capacity (McNamara et al., 2020[242]). OECD and World Bank (2016[78]) conclude that many donors implement most of their climate and disaster resilience projects through their own administrations or non-governmental organisations, rather than through partner governments. While tools to assess national and local needs abound (Casado Asensio, Blaquier and Sedemund, 2022[61]), including for SIDS, project evaluations note the need to better appreciate them. Limited ownership can lead to ad-hoc, isolated efforts that do not necessarily lead to long-term results (Westoby, Clissold and McNamara, 2021[221]).
- **Lack of stakeholder diversity** – capacity development success relates to multistakeholder involvement (Klöck and Nunn, 2019[85]; IIED, 2023[164]). Indigenous voices and knowledge, and community engagement can inform policy and practice when integrated in capacity development activities (Robinson, 2020[42]) and create awareness around cultural sensitivities and opportunities for donors. Participatory processes enrich the analysis (Monagas and Corral, 2022[243]) and can avoid maladaptation and policy misalignment (McNamara et al., 2020[242]). Community-based adaptation in the Pacific SIDS appears to show mixed results because stakeholders are not always consulted (Westoby et al., 2021[244]). A positive example concerns projects in São Tomé and Príncipe (Mikulewicz and Podgórska, 2020[202]): inclusiveness underlies the success of the West African Coastal Areas Management Program (WACA) implemented by the World Bank and the GEF to voluntary resettle climate vulnerable communities while offering annual trainings and re-trainings on climate risks, including for the government (World Bank, n.d.[245]). Other successes are France's support to the territorial development plan for Mohéli Island in the Comoros, which France and the EU seek to replicate on Grande Comore and Anjouan (AFD, 2022[246]).
- **Short-term planning** – evidence shows that, where financial resources are limited in duration, efforts and activities either come to an end or drastically slow down while additional funding is

sought. Having predictable and adequate financial resources allows activities to continue unhindered, leading to lasting impacts. These are general challenges in the field of development co-operation, but become more challenging in SIDS given their low-capacity base. Capacity development is a long-term process, and permanent resourcing is required in SIDS because work force capacity to implement and act on transferred knowledge and skills is small and rotates frequently. Without long-term finance, projects remain limited in scope and longevity. Similarly, where actions rely on only one source, they are placed at risk when that source disappears. While project design specification have included sustainability or exit strategies for quite some time now, these appear to be difficult to implement, especially in SIDS contexts. As noted earlier, capacity often uses "fly-in-fly-out" models whereby foreign consultants or experts provide short-term, project-based, technical assistance or prepare project proposals, which can be ineffective, over-simplify local contexts, and even harm local capacities (Khan, Mfitumukiza and Huq, 2020[214]).

- **Poorly co-ordinated donor efforts** – donor contributions in SIDS require co-ordination to ensure that climate finance is targeted strategically to achieve synergies. But co-ordination is often limited or lacking among donors on capacity development for climate change in SIDS. While many capacity development activities take place in most SIDS, these reflect different donor mandates and working methods, with different purposes and approaches. There are generally no central databases with information on what donors have done or who has benefited from capacity development activities, nor the extent to which knowledge and learning were translated into capacity. A GCF evaluation found no evidence of capacity development co-ordination between the GCF and SIDS' other international partners, which reflects limited capacity in SIDS to do so. And while SIDS's relatively small size should make co-ordination easier, capacity constraints make co-ordination equally as, if not more challenging than in other country setups (e.g. limited staff, limited expertise, rotation, proliferation of institutions to respond to donor projects).
- **Inflexible design** – the current architecture of projects is considered overly rigid from project design to implementation (Mikulewicz and Podgórska, 2020[202]). Improved co-production could overcome some of these rigidities but is less plannable than output- and activity-focused approaches that allow for efficient input resource planning (Rokitzki and Hofemeier, 2021[111]). A flexible approach is crucial for delivering capacity development related to climate change, especially given the long gaps between project approval and implementation, and realities on the ground that might change during this time. Changing some activities can be possible, but this rarely applies to project outcomes and outputs, which are difficult to amend once project funding is approved. New Zealand's approach in Vanuatu has shown flexibility in delivering a package of support to the country's recovery from tropical cyclone Harold in 2022. New Zealand adapted to changing needs by rapidly pivoting ongoing work packages and activities, and via close communication and co-ordination with Vanuatu (OECD, 2023[247]). As a result, several capacity-related activities were refocused by reallocating resources (e.g. to improve data collection about water), which should help Vanuatu be more resilient when the next disaster strikes.
- **Limited scale** – small, short-term projects lead to high transaction costs and limited results (which is not unique to capacity development or SIDS). Programme-oriented modalities (e.g. pooling resources in donor baskets, budget support, sector-wide approaches) remain the exception as most climate finance is implemented through small projects. Delivery modalities for climate finance have yet to adjust to the specific vulnerabilities and opportunities of SIDS (Robinson, 2020[42]). Good practices exist, including projects in operation since the 1990s (e.g. the IFAD COMPRAN project in São Tomé and Príncipe) or that plan for future activities, such as the GCF's 35-year (to 2050) project in the Maldives to manage climate-related water shortages, allowing the government to integrate a broader and more complete view of water supplies into planning (GCF, 2015[248]).
- **No learning from failure** – there are few lessons around poor performance, despite their potential value (McNamara, Westoby and Clissold, 2022[135]), and thus the wastage of resources in the process (Klöck and Nunn, 2019[85]). This calls for mechanisms and spaces within donors for

reflection and questioning regarding their own assumptions around what characterises good capacity development in the case of mitigation and adaptation, or who can best support capacity development, and to encourage and reward proactive sharing and learning, and define success in capacity development overall.

- **Lack of coherence across issues** – development interventions should be climate-compatible in SIDS, yet silo-thinking continues to dominate planning and implementation. Even where synergies could be realised, there might not be links between climate change and sustainable development or biodiversity (Klöck, Debelts and Fink, 2019[249]) or across ocean-based sectors, which are already the backbone of most SIDS' economies and key for climate action (OECD, 2021[250]; OECD, 2020[68]). Yet, developing the capacity of SIDS in these areas, e.g. to seize new ocean economy opportunities (Mohan, 2023[251]), can sustainably foster economic diversification and resilience (OECD, Forthcoming[56]).

Good examples of climate finance delivery in SIDS are not sufficiently mapped and knowledge of what might work best for climate finance providers supporting SIDS remains limited. Learning and knowledge-sharing seems to be the exception among both providers and governments. There is often little opportunity to integrate lessons from development successes and failures (Remling and Persson, 2015[252]; UNITAR, 2020[253]), as studies exploring sustainability patterns after the conclusion of capacity development interventions, resources, and expertise are rare. There are several ways forward for donors to avoid this:

- **Designing projects that include broad capacity assessments**, with realistic and tailored objectives (including in projects where capacity development is mainstreamed). The overall attitude regarding experts and non-experts needs to be revised, attaching greater importance to the experience of locals/practitioners, whereby donors facilitate capacity development processes rather than replace them with experts (Rokitzki and Hofemeier, 2021[111]). Reframing expectations of projects towards more realistic ambitions and targets (Mikulewicz and Podgórska, 2020[202]) also requires dialogue and time spent forging relationships between donors and recipients.
- **Fostering reciprocal learning between donors and grantees**, co-design, early communication, and adaptive management recognises the importance of shared ownership of initiatives and contextualise evolving relationships, enhancing iterative reflection on project goals and modalities, improved understanding, sharing goal-setting, and impact metrics. These increase the likelihood of behavioural change and overall programme success (Rokitzki and Hofemeier, 2021[111]). Using place-based analysis to recognise local agency, understand the diversity of knowledge, institutions and practices can indicate the barriers to resilience and focus interventions to target climate and non-climate issues (McNamara, Westoby and Clissold, 2022[135]).
- **Expanding donor thinking on what success means**. Projects could reveal unexpected or novel outcomes that might not be captured in intended metrics of success, or local metrics of success might be left out of formal evaluations, calling into question whose interests they represent (McNamara, Westoby and Clissold, 2022[135]). A fisheries-related project in the Comoros aimed to develop the value chains for several varieties of fish (e.g. octopus, tuna, cod, and lobster). Despite this objective, only octopus-related activities took hold among communities, whose capacity developed to sustainably manage this resource. While successful in this area, the project was deemed a failure overall even though local stakeholders consulted view the project as a good practice example of sustainable capacity development. A way forward could be to involve the direct beneficiaries of aid in monitoring and evaluation, using their level of satisfaction as an indicator of project success (Mikulewicz and Podgórska, 2020[202]).
- **Continuing monitoring once the project has been completed**, where partner countries have learning goals and a budget to ensure continuity after the end of an intervention (Vallejo and Wehn, 2016[254]). Also, earmarking funding to ensure that flexible approaches are possible in case the starting circumstances evolve over the course of project implementation. This would enable outcomes and success as and when opportunities arise, often with short windows for action.

  - **Making further efforts on co-ordination** – good co-ordination practices include the efforts of the EU and its members through the Team Europe Initiative, such as the Comoros' strong collaboration with France and the European Investment Bank (European Commission, 2021[255]; Niels et al., 2021[256]). The NDC Partnership also aims to co-ordinate all NDC-related work, including in SIDS (NDC Partnership, n.d.[257]), while there has been a trend in the Pacific toward developing Joint National Action Plans, which bring donors into a single, coherent framework around climate adaptation and disaster risk reduction (Nalau et al., 2016[258]). In turn, the first joint planning and programming of the GEF and GCF at country level already took place (GEF, 2018[259]). In-country co-ordination should continue and could stretch to non-DAC and other South-South providers. Country platforms could be established to bundle programming support from providers and recipients and co-finance projects To be successful, such platforms need to build upon existing planning tools, work towards concrete goals, ensure high-level political commitment, bring together different types of donors and modalities of capacity development and finance, and use public money strategically to mobilise private finance (Hadley et al., 2022[260]). Beyond this, co-ordination also requires strong country-level ownership, based around national development plans and climate strategies.

- **Pooling resources of donors** to promote country-level ownership and elevate the engagement between donors and recipients from technical discussion of individual donor projects to more systemic and strategic policy discussions (OECD and World Bank, 2016[78]). Such basket funds for capacity development can help in-country co-ordination among donors, and between donors and partner countries (OECD, 2012[96]). However, as confirmed by interviewed stakeholders, resource pooling seems to be less of a priority for many donors, partly because of the difficulties implementing pooled arrangements, including the significant transaction costs of differing donor requirements and systems, challenges in implementation speed, and complexity of programming.
- **Creating spaces that encourage co-ordination around learning and sharing**, and that can strengthen relationships between grantees and donors is essential. Meetings, conferences, or online convening spaces for the capacity development community (including beneficiaries, practitioners, donors, and academics) can strengthen relationships and encourage shared learning. These could include private sector actors, which are relatively few in SIDS.
- **Proposing other modalities of capacity development** can improve results. While workshops and training are crucial, overreliance on these is questioned. More interactive strategies include participatory videos and three-dimensional modelling, development of photo journals, or movie nights and mini-videos on smartphones that enable broader engagement. In Fiji and Palau, youth EcoCamps and culture-based platforms are used with good outcomes to raise awareness about adaptation and increasing environmental stewardship. The EU's Pacific Technical Vocational Education and Training on Sustainable Energy and Climate Change Adaptation Project increases capacity in disaster risk management and climate adaptation by using alternative modalities in Pacific SIDS. Other promising approaches include involving religious and spiritual leaders and organisations in awareness-raising (Clissold et al., 2023[201]; Luetz et al., 2023[261]; Thomas et al., 2020[177]).

Capacity development strategies are more effective when they promote integrated and holistic approaches to problems in a multi-objective manner (Ratter, Petzold and Sinane, 2016[17]). Donors must deal with the root causes of SIDS' vulnerability to climate change, and not only their consequences (Westoby, Clissold and McNamara, 2021[221]). This means integrating climate considerations across all new development interventions to address the drivers of climate vulnerability and adjust programmes where appropriate.

Systems-thinking can ensure that initiatives are comprehensive enough to avoid drawbacks (Mikulewicz, 2019[262]). Focusing on reducing specific climate risks without developing the underlying capacities of people and ecosystems to adapt to different kinds of change could result in less effective strategies, particularly for adaptation. This minimises the potential benefits of financial support when compared to

funding climate actions that advance more of the domestic development agenda simultaneously. (Ratter, Petzold and Sinane, 2016[17]) show how focusing on coastal erosion by building sea walls did not deter sand mining as a cause of erosion. In fact, sand mining in the Comoros is formally unlawful since 1994 yet the population massively still uses sand for building houses as other alternatives (using sand from volcanic rocks) is too expensive for most of the population, thus showing that the building sector is a major cause of coastal erosion – while also being highly vulnerable to climate-related hazards in the coast, and given that most of the population and the country's infrastructure concentrates in coastal zones (Klöck, 2023[225]). This calls for a different donor approach centred on capacity development and awareness-raising to change behaviour.

Securing long-term finance can develop national capacity for climate resilience because it strengthens national systems' ability to slowly integrate climate issues into domestic planning and financing. This strengthens capacity in core areas, like financial management, procurement, and safeguards (Thomas et al., 2020[177]), which require further attention. For example, only 28% of funds disbursed to the public sector in SIDS go through country public financial-management systems (GPEDC, 2019[171]). Donors are increasingly taking more-integrated approaches. For example:

- France supports the national park of Mohéli Island in the Comoros with an integrated landscape management approach the looks beyond biodiversity (AFD, 2022[246]).
- the EU's Green and Blue Pact programme (2021-27) in the Comoros integrates biodiversity, waste management, eco-tourism, food security, and land management goals. The programme takes a comprehensive approach to strengthen institutional governance capacities from within, including monitoring and evaluation of performance and results, co-ordinating actors, capitalising a bottom-up approach (learning by doing) at institutional level while streamlining top-down communication, like disseminating development action plans and sharing experience from other programmes and services/agencies (European Commission, 2021[255]).
- the GCF now considers integrated approaches from the start, such as by adapting planning at all levels and across sectors in São Tomé and Príncipe (GCF, 2020[263]). AFD supports the Comoros' development of the production value chain for compressed, stabilised earth-based bricks to rehabilitate 45 educational institutions (AFD, 2022[246]).
- donor support to systemic and institutional capacities in Kiribati, including strong governance systems built around a national ministry for long-term planning and financing, helped the country's absorptive capacity and to advance the Kiribati Adaptation Programme, which aimed to reduce vulnerability to climate change, climate variability and sea-level rise by raising awareness, assessing and protecting water resources and managing inundation (World Bank, 2017[264]; Republic of Kiribati, n.d.[265]).

Annex 3.A. Methodological and statistical considerations for ODA flow analysis

ODA in the DAC Creditor Reporting System

The OECD Development Assistance Committee (DAC) Secretariat monitors individual aid activities on Official Development Assistance (ODA) and Other Official Flows (OOF) in the Creditor Reporting System (CRS). This report focuses on ODA: flows to countries and territories on the DAC List of ODA Recipients and to multilateral development institutions, provided by official agencies, including state and local governments, or by their executive agencies, and where each transaction is concessional in character and administered with the main objective to promote the economic development and welfare of developing countries (OECD, 2022[266]; OECD, 2021[267]). In DAC statistics, this implies a grant element of at least 45% in the case of bilateral loans to the official sector of least-developed countries and other low-income countries (calculated at a discount rate of 9%), 15% in the case of bilateral loans to the official sector of lower middle-income countries (calculated at a discount rate of 7%), 10% in the case of bilateral loans to the official sector of upper middle-income countries (calculated at a discount rate of 6%), or 10% in the case of loans to multilateral institutions (calculated at a discount rate of 5% for global institutions and multilateral development banks, and 6% for other organisations, including subregional organisations).

The analysis focused on DAC members and ODA only. A broader study of climate-related capacity development would consider the activities of donors beyond the DAC, and of multilateral development banks and philanthropic institutions. Moreover, the analysis could also stretch to look at other official flows.

The Rio markers on climate change

Since 1998, the DAC monitors and reports development finance ODA flows and OOF in relation to the environmental objectives of the Rio Conventions, including the United Nations Framework Convention on Climate Change (UNFCCC), through four Rio markers on desertification, biodiversity, and climate change mitigation (introduced in 1998), and on climate change adaptation (introduced in 2010). To date, the Rio markers represent the most comprehensive, publicly available, activity-level data on climate-related development finance from bilateral donors. Rio markers may be reported on allocable ODA, a subset of ODA that excludes some activities that are not eligible for climate reporting according to DAC rules.[13] Reporting on the Rio markers is mandatory for ODA from DAC members. Concretely:

- Climate mitigation-related activities should be screened and marked if they meet one or several of the following criteria: (1) mitigating climate change by anthropogenic greenhouse-gas (GHG) emissions, including gases under the Montreal Protocol; (2) protecting and/or improving GHG sinks and reservoirs; (3) addressing climate changes issues in line with recipients' development strategies by engaging in activities related to research, institution-building, capacity development, and reinforcing the regulatory and policy structures; or (4) supporting recipients in meeting the obligations of the Convention (OECD, n.d.[268]).
- For climate change adaptation, activities are screened as adaptation-related if they aim to reduce "the vulnerability of human or natural systems to the current and expected impacts of climate change, including climate variability, by maintaining or increasing resilience, through increased ability to adapt to, or absorb, climate change stresses, shocks and variability and/or by helping

reduce exposure to them" by engaging in actives related to knowledge-production, capacity development, and the planning and implementation of adaptation actions (OECD, n.d.[268]).

Activities' objectives must explicitly indicate the activity documentation and/or contain clear measures that address the above definition. The Rio markers methodology has a three-tier scoring system:

- **Principal** (score 2), when the objective (climate-change mitigation or adaptation) is explicitly stated as fundamental in the design of or motivation for the activity.
- **Significant** (score 1), when the objective (climate-change mitigation or adaptation) is explicitly stated but is not the fundamental driver or motivation.
- **Not targeted** (score 0), meaning that the activity was examined but found not to target the objective (climate-change mitigation or adaptation) in any significant way.

The Rio markers apply to whole activities as, meaning that the score applies to all components of an activity, some of which might be more climate-related than others. For this reason, the markers are considered descriptive rather than strictly quantitative: they allow for an approximate quantification of development finance that targets climate objectives (mitigation, adaptation, or both). Consequently, a given activity can address climate mitigation and/or adaptation objectives at once. Therefore, assigning a double "principal" score (score 2) to an activity should be carefully justified. This report accounts for and removes double-counting.

Climate-related capacity development purpose codes

Previous OECD work underscored the lack of knowledge about climate-related capacity development and the disagreement on what should be considered capacity development (Casado Asensio, Blaquier and Sedemund, 2022[61]). Building upon previous OECD work, this analysis follows a methodology to account for capacity development ODA flows using the DAC Rio markers on climate change for activities classified in the CRS as donor country personnel,[14] other technical assistance,[15] and scholarships/training in a donor country[16] (co-operation modalities D01, D02, E01) (Casado Asensio, Blaquier and Sedemund, 2022[61]; OECD, 2022[266]). These activities are referenced as "core" capacity development activities and complemented with a range of purpose codes referred to as "additional" capacity development activities, which match the current UNFCCC definitions on capacity-building, which include education, training, awareness-raising, institutional capacity-building, and research and development activities (Annex Table 3.A.1). These have only been retained when the Rio markers on climate change have been applied by the donor.

Annex Table 3.A.1. Correspondence between CRS purpose codes and the definitions of capacity building under the UNFCCC and the Paris Agreement

Capacity-building elements	Description based on Paris Agreement and/or the UNFCCC	Relevant OECD-DAC Creditor Reporting System purpose codes
Education	Ensuring that education, as reflected in Article 6 of the UNFCCC and in Articles 11.1 and 12 of the Paris Agreement, is adequately considered in their contribution to capacity building	Education and training in water supply and sanitation (14081); Education and training in transport and storage (21081); Energy education/training (23181); Agricultural education/training (31181); Forestry

Capacity-building elements	Description based on Paris Agreement and/or the UNFCCC	Relevant OECD-DAC Creditor Reporting System purpose codes
Training	Impart/facilitate training to enable actions under the Paris Agreement; provide relevant training meeting the provisions in Article 13 of the Paris Agreement	education/training (31281); Fishery education/training (31381); Environmental education/training (41081)
Public awareness	Public access to information and awareness on issues addressed in the Paris Agreement, involving transparent, timely and accurate communication of information	Water resources conservation (including data collection) (14015); Meteorological services (15143)
Institutional capacity	Capacity building activities to support implementation of the Paris Agreement, including strengthening of institutional arrangements such as those under the UNFCCC aimed at enhancing the synthesis of relevant information and knowledge, and the provision of technical support and guidance to the Parties	Water sector policy and administrative management (14010); Transport policy and administrative management (21010); Transport policy, planning and administration (21011); Transport regulation (21013); Energy policy and administrative management (23110); Energy sector policy, planning and administration (23111); Energy regulation (23112); Forestry policy and administrative management (31210); Agricultural policy and administrative management (31110); Fishing policy and administrative management (31310); Environmental policy and administrative management (41010); Urban development and management (43030); Urban land policy and management (43031); Urban development (43032); Rural development (43040); Rural land policy and management (43041); Rural development (43042)
Research and technology development	Strengthening scientific knowledge and research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision making; mechanisms and activities to facilitate access to technology	Energy research (23182); Agricultural research (31182); Forestry research (31282); Fishery research (31382); Environmental research (41082)

Source: Casado-Asensio, Blaquier and Sedemund (2022[61]), Strengthening Capacity for Climate Action in Developing Countries: Overview, and Recommendations, https://doi.org/10.1787/0481c16a-en.

In addition, several other purpose codes are retained when CRS purpose-code definition pointed towards capacity development: Public transport services (21012); Energy conservation and demand-side efficiency (23183); Plant and post-harvest protection and pest control (31192); Agricultural services (31191); Agricultural financial services (31193); Biosphere protection (41020); Biodiversity (41030); Site preservation (41040); Disaster risk reduction (43060); Relief co-ordination and support services (72050); Disaster prevention and preparedness (740); and Multi-hazard response preparedness (74020). These additional activities may include activities that go beyond capacity development and can be seen as areas where capacity development is most likely to be mainstreamed.

It is difficult to quantify total funding dedicated specifically to capacity development for climate change because of the way donors conceptualise capacity development (i.e. a modality of development co-operation that is mainstreamed or that is cross-cutting) and the way the CRS is structured. The “additional”

components of capacity development (i.e. working through purpose codes) can help overcome some of these limits, but not all. These components reflect the fact that sector policy and regulatory reforms or other forms of capacity development often precede and support operational investments.

In addition, purpose codes within the OECD CRS dataset were classified within different socioeconomic areas for the purpose of this analysis, as seen in Annex Table 3.A.2.

Annex Table 3.A.2. Classification of socioeconomic areas

Socio-economic areas	Purpose code sectors
General environment protection	Environmental policy and administrative management, Biosphere protection, Biodiversity, Site preservation, Environmental education/training, Environmental research
Energy	Energy policy and administrative management, Energy education/training, Energy research, Energy conservation and demand-side efficiency, Energy generation, renewable sources - multiple technologies, Hydro-electric power plants, Solar energy for centralised grids, Solar energy for isolated grids and standalone systems, Solar energy - thermal applications, Wind energy, Marine energy, Geothermal energy, Biofuel-fired power plants, Energy generation, non-renewable sources, unspecified, Coal-fired electric power plants, Oil-fired electric power plants, Natural gas-fired electric power plants, Non-renewable waste-fired electric power plants, Hybrid energy electric power plants, Nuclear energy electric power plants and nuclear safety, Heat plants, District heating and cooling, Electric power transmission and distribution (centralised grids), Electric power transmission and distribution (isolated mini-grids), Retail gas distribution
Other multisector	Multisector aid, Urban development and management, Rural development, Non-agricultural alternative development, Food security policy and administrative management, Household food security programmes, Food safety and quality, Multisector education/training, Research/scientific institutions
Agriculture	Agricultural policy and administrative management, Agricultural development, Agricultural land resources, Agricultural water resources, Agricultural inputs, Food crop production, Industrial crops/export crops, Livestock, Agrarian reform, Agricultural alternative development, Agricultural extension, Agricultural education/training, Agricultural research, Agricultural services, Plant and post-harvest protection and pest control, Agricultural financial services, Agricultural co-operatives, Livestock/veterinary services
Water supply and sanitation	Water sector policy and administrative management, Water resources conservation (including data collection), Water supply and sanitation - large systems, Water supply - large systems, Sanitation - large systems, Basic drinking water supply and basic sanitation, Basic drinking water supply, Basic sanitation, River basins development, Waste management/disposal, Education and training in water supply and sanitation
Forestry	Forestry policy and administrative management, Forestry development, Fuelwood/charcoal, Forestry education/training, Forestry research, Forestry services
Other economic infrastructure	Transport policy and administrative management, Road transport, Rail transport, Water transport, Air transport, Education and training in transport and storage, Communications policy and administrative management, Telecommunications, Radio/television/print media, Information and communication technology (ICT), Construction policy and administrative management
Government, policies and regulations	Public sector policy and administrative management, Public finance management (PFM), Decentralisation and support to subnational government, Anti-corruption organisations and institutions, Domestic revenue mobilisation, Public Procurement, Legal and judicial development, Macroeconomic policy, Democratic participation and civil society, Elections, Legislatures and political parties, Media and free flow of information, Human rights, Women's rights organisations and movements, and government institutions, Ending violence against women and girls, Facilitation of orderly, safe, regular and responsible migration and mobility, Security system management and reform, Civilian peace-building, conflict prevention and resolution, Participation in international peacekeeping operations, Reintegration and SALW control, Removal of land mines and explosive remnants of war, Child soldiers (prevention and demobilisation), Business policy and administration, Privatisation, Business development services, Responsible business conduct, Trade policy and administrative management, Trade facilitation, Regional trade agreements (RTAs), Multilateral trade negotiations, Trade-related adjustment, Trade education/training
Disaster risk reduction	Disaster Risk Reduction, Food assistance, Material relief assistance and services, Emergency food assistance, Relief co-ordination and support services, Immediate post-emergency reconstruction and rehabilitation, Multi-hazard response preparedness, Import support (capital goods), Import support (commodities), Debt for development swap
Fishing	Fishing policy and administrative management, Fishery development, Fishery education/training, Fishery research, Fishery services
Education	Education policy and administrative management, Education facilities and training, Teacher training, Educational research, Primary education, Basic life skills for adults, Basic life skills for youth, Primary education equivalent for adults, Early childhood education, School feeding, Upper Secondary Education (modified and includes data from 11322), Vocational training, Higher education

Socio-economic areas	Purpose code sectors
Industry	Industrial policy and administrative management, Industrial development, Small and medium-sized enterprises (SME) development, Cottage industries and handicraft, Agro-industries, Forest industries, Textiles, leather and substitutes, Chemicals, Cement/lime/plaster, Energy manufacturing (fossil fuels), Pharmaceutical production, Engineering, Transport equipment industry, Clean cooking appliances manufacturing, Technological research and development
Unallocated / unspecified	Administrative costs (non-sector allocable), Sectors not specified, Promotion of development awareness (non-sector allocable)
Financial systems	Financial policy and administrative management, Monetary institutions, Formal sector financial intermediaries, Informal/semi-formal financial intermediaries, Remittance facilitation, promotion and optimisation, Education/training in banking and financial services
Other social infrastructure & services	Social Protection, Employment creation, Housing policy and administrative management, Low-cost housing, Multisector aid for basic social services, Culture and recreation, Statistical capacity building, Narcotics control, Social mitigation of HIV/AIDS, Labour rights, Social dialogue
Health	Health policy and administrative management, Medical education/training, Medical research, Medical services, Basic health care, Basic health infrastructure, Basic nutrition, Infectious disease control, Health education, Malaria control, Tuberculosis control, COVID-19 control, Health personnel development, NCDs control, general, Control of harmful use of alcohol and drugs, Promotion of mental health and well-being , Other prevention and treatment of NCDs, Research for prevention and control of NCDs, Population policy and administrative management, Reproductive health care, Family planning, STD control including HIV/AIDS, Personnel development for population and reproductive health
Tourism	Tourism policy and administrative management
Mineral resources & mining	Mineral/mining policy and administrative management, Mineral prospection and exploration, Coal, Oil and gas (upstream), Nonferrous metals, Precious metals/materials, Industrial minerals, Offshore minerals
General budget support	General budget support-related aid

Source: OECD (2022[266]), DAC and CRS code lists, https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/dacandcrscodelists.htm.

Country coverage

A total of 35 SIDS are included in this report. In 2021, 33 SIDS were categorised as eligible in the DAC List of ODA recipients (OECD, 2020[269]). These are Antigua and Barbuda, Belize, Cabo Verde, the Comoros, Cuba, Dominica, the Dominican Republic, Fiji, Grenada, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, the Maldives, the Marshall Islands, Mauritius, Micronesia, Montserrat, Nauru, Niue, Palau, Papua New Guinea, Saint Lucia, Saint Vincent and the Grenadines, Samoa, São Tomé and Príncipe, the Solomon Islands, Suriname, Timor-Leste, Tonga, Tuvalu, and Vanuatu. As the analysis covers the period 2015-21, some results include data from the Seychelles and Cook Islands, which graduated in 2018 and 2020 respectively (OECD, 2014[270]; OECD, 2018[271]).

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Annex A. Methodological approach of the climate change vulnerability analysis

Data sources: Notre Dame Global Adaptation Initiative and INFORM Risk Index

To explore the potential link between ODA flows and SIDS' vulnerability to climate change, two indexes and their respective datasets are used, namely the Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index and the INFORM Risk Index. The ND-GAIN Country Index assesses the vulnerability of countries to climate change risk, applying 45 indicators through two dimensions: vulnerability (comprising exposure, sensitivity, and capacity) and readiness (taking into account the economic, governance and social components) (ND-GAIN, n.d.[6]). The INFORM Risk Index assesses the vulnerability to climate change along three dimensions: Hazard and Exposure, Vulnerability, and Lack of copying capacity (DRMKC, 2022[7]). Using the two indices provides the aggregate climate vulnerability scores of Table A.1.

Table A.1. Aggregate average climate change vulnerability score for 2015-20

Rank	Country	2015-2020 average score
1	Mauritius	9.363
2	Grenada	9.349
3	Saint Lucia	8.865
4	Cabo Verde	8.225
5	Seychelles	8.129
6	Fiji	7.866
7	Antigua and Barbuda	7.864
8	Dominica	7.533
9	Jamaica	6.834
10	Maldives	6.828
11	Samoa	6.808
12	Cuba	6.775
13	Suriname	6.609
14	São Tomé and Príncipe	6.266
15	Dominican Republic	5.668
16	Guyana	5.453
17	Belize	5.345
18	Timor-Leste	5.060
19	Tonga	5.050
20	Comoros	4.265
21	Vanuatu	4.109
22	Solomon Islands	3.921
23	Micronesia	3.907
24	Guinea-Bissau	2.510
25	Papua New Guinea	2.219
26	Haiti	1.178

Note: Data from the INFORM Risk Index and ND-GAIN Index have been normalised. The aggregate score follows a rule where the higher score shows less vulnerability.
Source: Authors based on DRMKC (2022[7]) and ND-GAIN (n.d.[6]).

Relationship between climate change vulnerability and climate-related capacity development ODA flows

Testing for normality

The relationship between climate change vulnerability in SIDS and climate-related capacity development ODA flows was tested to appreciate the link between them. First, it was determined whether a parametric or a non-parametric correlation test was more appropriate. To do so, we tested for normality to see if samples follow a normal distribution, running a Shapiro-Wilk test, where:

- H0: the null hypothesis → the distribution of the data follows a normal distribution ($p > 0.05$).
- H1: the alternative hypothesis → the distribution of the data does not follow a normal distribution ($p < 0.05$).

The ODA sample did not follow a normal distribution, with a p-value of 3.331e-08 at a 95% level of confidence. The alternative hypothesis was accepted. Although the vulnerability samples for both indexes followed a normal distribution (p-value of 0.9779 for ND-GAIN and p-value of 0.06602 for INFORM Risk, at a 95% level of confidence), all samples needed to follow a normal distribution to run a parametric test. Because this was not the case for the ODA sample, a non-parametric test was more appropriate.

Testing for relationship

The Kendall's τ (tau) correlation non-parametric test was chosen as it handles ties in the samples. The two hypotheses for the correlation test were:

- H0: the null hypothesis → there is no correlation between ODA flows and climate change vulnerability in 2020.
- H1: the alternative hypothesis → there is a correlation between ODA flows and climate change vulnerability in 2020.

For the ND-GAIN Country Index, the Kendall's τ correlation test found a p-value of 0.3541. Therefore, there was no relationship at 95% level of confidence, between ODA flows and climate change vulnerability in 2020 ($\tau = -0.1298314$, $p > 0.05$). Therefore, the null hypothesis was accepted.

Regarding the INFORM Risk Index, The Kendall's τ correlation test found a p-value of 0.02002. Therefore, there was a weak relationship at 95% level of confidence, between ODA flows and climate change vulnerability in 2020 ($\tau = 0.3312715$, $p < 0.05$). H0 was rejected and the alternative hypothesis accepted.

Notes

[1] The 2022 DAC list of ODA recipients included 31 SIDS: Belize, Cabo Verde, the Comoros, Cuba, Dominica, the Dominican Republic, Fiji, Grenada, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, the Maldives, the Marshall Islands, Mauritius, Micronesia, Montserrat, Nauru, Niue, Papua New Guinea, Saint Lucia, Saint Vincent and the Grenadines, Samoa, São Tomé and Príncipe, the Solomon Islands, Suriname, Timor-Leste, Tonga, Tuvalu and Vanuatu. To retain valuable information, this report includes the Seychelles and Cook Islands, which recently graduated from list (in 2018 and 2020, respectively). Also, while Antigua and Barbuda and Palau graduated from the list on 1 January 2022 (Palau was reintegrated in June 2022), the most recent data on ODA dates from 2021, so these countries are also included. The report thus considers 35 SIDS.

[2] Belize, Fiji, Jamaica, Kiribati, the Marshall Islands, Saint Lucia, and the Seychelles.

[3] Cabo Verde, Fiji, Grenada, Haiti, Kiribati, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Timor-Leste, and Tonga.

[4] France's SIDS Strategy coincides with its ocean Three Oceans Policy; Japan developed the Pacific Bond KIZUNA Policy to engage with SIDS in the Pacific, including on climate-change, disaster-resilience, and sustainable oceans; New Zealand pledged 60% of ODA to developing Pacific SIDS and to align this ODA with the Pacific Islands Forum's Roadmap for Sustainable Development.

[5] In turn, most international organisations have ramped up their work with SIDS: the GEF made efforts to increase allocations and protect SIDS during replenishment shortfalls, while the World Bank and the Asian Development Bank introduced exceptions for more favourable financing terms (grants and concessional finance) for SIDS.

[6] Trends are similar in non-SIDS, where most capacity development activities had "significant" climate change adaptation or overlapping objectives (64% and 60%, respectively), while climate change mitigation activities mostly had "principal" objectives (71%). Further, in non-SIDS, bilateral capacity development activities that had a "principal" climate objective represented 48% of total bilateral climate-related capacity development ODA, while bilateral activities with a "significant" climate objective totalled 52% per year on average (compared to 37% for "principal" and 63% for "significant" objectives in the case of bilateral climate-related ODA).

[7] In the case of climate-related ODA, donors also focused on UMICs (with USD 350 million per year on average or 38% of total climate-related ODA, compared to 23% in non-SIDS), followed by LDCs (USD 288 million or 31%, compared to 31% in non-SIDS), and LMICs (USD 285 million or 31%, compared to 46% in non-SIDS).

[8] Similar trends are found in total climate-related ODA in SIDS over 2015-20, with most commitments targeting economic infrastructure (15% or USD 140 million), multisector (11% or USD 99 million), and energy (10% or USD 98 million). In relative terms, capacity development for climate action as a share of total climate-related ODA was focused on general environment protection (100%, mostly for environmental policy and administrative management), other multisector (69%, mainly to rural and urban development), and disaster risk reduction (57%, mainly for disaster preparedness and response) activities.

[9] CCFAH Climate Finance Writeshops are intensive, participatory workshops that bring together diverse participants to produce a written output – in this case a project concept-note or full proposal.

[10] Up to 11 SIDS might graduate by 2030: Montserrat and Nauru in 2023; Grenada and Mauritius in 2026; Saint Lucia in 2027; Cuba and Palau in 2028; the Dominican Republic and the Maldives in 2029; and Dominica and Guyana in 2030 (OECD, n.d.[289]).

[11] Triangular co-operation helps achieve the SDGs in innovative and collaborative ways, and can support solving today's most pressing environmental, economic, and social challenges, ensuring sustainable development in partner countries. The OECD sees three roles as common to triangular initiatives: (1) the beneficiary partner seeks support to tackle a specific development challenge; (2) the pivotal partner has experience in the issue and shares its resources, knowledge, and expertise; and (3) the facilitating partner connects the beneficiary and the pivotal partners, supporting their collaboration financially and technically. These roles can change throughout a project. There can be several actors along each edge of the triangle, representing countries, international organisations, civil society, the private sector, trade unions, or private philanthropy (OECD, 2022[232]).

[12] Belize, the Dominican Republic, Guinea-Bissau, Jamaica, Mauritius, Saint Lucia, and São Tomé and Príncipe.

[13] Allocable activities are defined through development co-operation modalities: sector budget support; core support to NGOs; support to specific funds managed by international organisations; pooled funding; projects; donor country personnel and other technical assistance; and scholarships in the donor country. The analysis therefore excludes flows under general budget support, core contributions to multilateral organisations, imputed student costs, debt-relief operations, and in-donor administrative costs, development awareness activities and refugee costs.

[14] Donor country personnel: experts, consultants, teachers, academics, researchers, volunteers, and contributions to public and private bodies for sending experts to developing countries.

[15] Other technical assistance: provision (outside projects described in category C01) of technical assistance in recipient countries (excluding technical assistance performed by donor experts reported under D01, and scholarships/training in donor country reported under E01). This includes training and research; language training; South-South studies; research studies; collaborative research between donor and recipient universities and organisations; local scholarships; and development-oriented social and cultural programmes. This category also covers ad-hoc contributions such as conferences, seminars and workshops, exchange visits, publications, etc.

[16] Scholarships/training in donor country: Financial aid awards for individual students and contributions to trainees.