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I4CE
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How solidarity levies can help bridge the climate and development finance gap

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EXECUTIVE SUMMARY

The climate and development finance gap is large and widening, as Official Development Assistance (ODA) declines and needs multiply. With shrinking fiscal space in vulnerable countries, solidarity levies are gaining attention as a predictable source of international finance. Launched at COP28 by Barbados, France, and Kenya, the Global Solidarity Levies Task Force (GSLTF) is the main initiative in this space.

This report contributes to this discussion by focusing on the "use" side of solidarity revenues for climate action. Combining quantitative analysis of climate-related development finance flows, qualitative insights from expert consultations, a bottom-up assessment of selected countries' climate strategies, and a review of existing frameworks for the allocation of concessional finance for climate and development, it finds that:

- **Debt-free concessional climate finance is declining, particularly for adaptation and resilience,** while non-concessional lending is increasing, exacerbating debt pressures. Least Developed Countries (LDCs) and Small Island Developing States (SIDS) face severe financing mismatches, with over 40% of SIDS already in or nearing debt distress. The opportunity provided by new sources of highly concessional, debt-free finance is therefore critical and its use should be considered carefully.
- **LDCs and SIDS themselves prioritize grants for adaptation, resilience, and loss and damage,** with a specific focus on sectors that maximize climate and development co-benefits, with limited alternative sources of funding (for example, disaster risk management, early warning systems and coastal zone protection).
- **Allocation frameworks for concessional (and a fortiori grant) resources remain scarce and fragmented,** with some convergence on high-level principles but inconsistent treatment of most parameters – vulnerability, indebtedness, leverage, etc.

Based on country strategies and expert consultations, we identify **four guiding principles** for allocating solidarity levy revenues:

1. **Align the broad use of revenues generated by solidarity levies with their tax base.** Without necessarily requiring earmarking, the consensus among experts and lessons from the French Solidarity Fund for development show that such alignment is an effective way to reinforce the legitimacy and public acceptance. For example, revenue from levies on carbon emissions could preferably be used for climate- or resilience-related activities following the polluter-pays principle.
2. **Prioritize adaptation, resilience, and loss and damage,** where there is the highest degree of consensus on large, unmet needs, lower finance flows and important development dividends for countries.
3. **Focus on sectors without viable private investment potential and optimal climate-development co-benefits** such as disaster risk management, early warning systems, and coastal protection, and invest in institutional capacity to deliver impact.
4. **Orient allocation based on climate and economic vulnerability** rather than solely income, reflecting the specific constraints of LDCs and SIDS.

While acknowledging other potential use cases such as health or biodiversity, the report focuses on the climate–development nexus, consistent with the GSLTF mandate. If well-structured and transparently linked to measurable outcomes, solidarity levies could play a catalytic role in bridging the climate-development finance gap. They would complement, not replace, ODA, providing predictable, debt-free resources for countries most vulnerable to climate and economic shocks.

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INTRODUCTION

The global financing gap for climate and development is large and widening *(UNCTAD, 2024a).* Public, concessional flows such as Official Development Assistance (ODA) are becoming increasingly scarce. For the first time in six years, international aid fell by 7.1% in 2024 compared to 2023. ODA budgets are decreasing rapidly across key donors with a forecasted 9%-17% drop in ODA in 2025 and a possible regression to 2020 levels as soon as 2027 *(OECD, 2025).* At the same time, we are witnessing the emergence of new funding needs drawing on these already constrained budgets – from the war in Ukraine and humanitarian funding to new financial commitments for nature under the recently adopted Global Biodiversity Framework. This combined effect further reduces the real amount of concessional, debt-free flows available for long-term development and climate action.

Global solidarity levies have been identified as a promising option to address this challenge. For example, the International High-Level Expert Group on Climate Finance (IHLEG) has found that "other concessional flows" – including solidarity levies[1] – should increase by a factor of x14-16, to $US 140bn and $US 160bn by 2030 to meet climate- and nature-related needs in emerging and developing countries other than China *(IHLEG, 2024)*. While they represent a small share of total spending requirements – about 6% of the $US 2,440 billion modeled by the IHLEG – levies are identified as key enablers due to their highly concessional nature.

As a result, the Global Solidarity Levies Task Force (GSLTF) was launched at COP28 in November 2023. Co-chaired by Barbados, France and Kenya, the Task Force builds on strong international calls such as the Bridgetown Initiative[5], the Nairobi Declaration adopted during the first African Climate Summit, and the Pact for Prosperity, People and the Planet (4P).

The GSLTF aims to explore feasible, scalable and sensible options for levies to raise additional resources for climate and development action. Since 2023, the political momentum for solidarity levies has grown[2] *(see box n°1)*, culminating in the launch of a solidarity coalition for levies on premium flyers during the 4th UN Conference on Financing for Development in Sevilla in June 2025. In the climate finance space, solidarity levies are also expected to feature prominently in COP30 discussions and negotiations in Belém, in the context of the publication of the "Baku to Belém Roadmap to 1.3T" aiming at scaling up climate finance to developing countries to $US 1.3 trillion by 2035[3].

Past discussions have focused on the revenue collection side, with comparative, technical, and feasibility analyses of mechanisms and potential tax bases – fossil fuel or carbon damages, windfall profits, financial transactions, air and maritime transport, etc. *(Capelle-Blancard and Persaud, 2025; Pereira da Silva et al., 2025; GSLTF, 2025a).*

However, the question of how the revenues are used and distributed is equally important to the design of levies and countries' political support:

- **Consultations with GSLTF members, experts and stakeholders** have confirmed that public and political support for a levy can be strengthened through a clear understanding of how the proceeds would be used.*(GSLTF, 2025b).*
- **Previous successful examples of such mechanisms** have tackled in parallel the intertwined questions of "how?" – i.e. the technical design of the taxes and related collection mechanism and "why?" – i.e. the political narrative and strategic objectives associated with it – as evidenced by the example of the "Chirac tax" on air tickets in France, clearly linked to the fight against HIV[4].
- **The literature on best practices** regarding other climate-related taxation schemes has highlighted that a robust reflection on the use of revenue can be approached through a 4-block framework *(Figure 1, taken from I4CE, 2024).*.

1. Among other flows such as philanthropic funding.
2. Several references made to the GSLTF and solidarity levies in key international processes and documents (COPs, G7, G20, FFD4).
3. The recent report of the Circle of Finance Ministers convened by Brazil ahead of COP30 – a key input for the B2B roadmap – calls to explore "options for new sources, including levies, to meet urgent climate and related development needs in developing countries, with a focus on the most vulnerable".
4. The French levy on airline tickets, or "Chirac tax" was established in 2006, providing each year €210 million to the French Solidarity Fund for Development (FSD) which, in turn, finances part of France's multilateral action on global health and climate.

FIGURE 1: AN ANALYTICAL FRAMEWORK TO EXPLORE THE QUESTION OF THE USE OF CARBON TAX REVENUES

Source : I4CE, 2024

This policy report focuses on the first block: defining the purpose and exploring relevant use cases for additional, concessional and debt-free flows that could be generated by the implementation of a new generation of solidarity levies, especially in the context of the first coalitions set up through the GSLTF.

While political declarations and position statements by various negotiation groups highlight the need to link such levies to the funding of climate and development action, **underlying evidence and analyses remain scarce and fragmented.** This policy report contributes to filling this gap by:

- **Documenting and providing quantitative and qualitative evidence regarding the unique role, necessity and scarcity of concessional debt-free financial resources** – such as those levied through the GSLTF coalitions – in the current climate finance ecosystem.

- **Reviewing potential use cases for the allocation of solidarity levy revenues, through a top-down and bottom-up review of funding needs and country priorities** for broad categories of interventions (mitigation, adaptation, loss and damage), sectors, and countries – with a focus on least developed countries (LDCs) and Small Island Developing States (SIDS).

Recognizing the depth and breadth of issues surrounding the use of revenues from solidarity levies, this policy report deliberately narrows down the analysis to:

- **The analysis of allocation priorities and country needs and preferences,** leaving out other important parameters of the overall design of effective solidarity levies such as institutional and administrative arrangements related to the operationalization of levy-based financing, the political economy of allocation depending on the scale of collected revenues, or high-level principles related to matters of equity, tax sovereignty, additionality, transparency and accountability. These important parameters are the focus of other reports and consultations currently conducted by the GSLTF or could be the focus of further work.[5]

- **Climate and development,** which sit at the core of the GSLTF mandate, thus leaving out of the analysis use cases that would be exclusively focused on human development or the preservation of nature.

5. The GSLTF has issued a Call for Proposals for potential mechanisms that can effectively manage these financial flows in a manner that is efficient, equitable, and accountable.

BOX N°1: REFERENCES TO SOLIDARITY LEVIES & POTENTIAL USE CASES IN HIGH-LEVEL POLITICAL DOCUMENTS

The political declarations that led to the creation of the GSLTF all link the creation of solidarity levies to the need for increased funding for climate and development action:

- **The Bridgetown Initiative 2.0** links them to the financing of the Fund for Responding to Loss and Damage.
- **The Pact for Prosperity, People and the Planet** (4P), stresses that solidarity levies "could be channeled towards financing needs for adaptation and actions responding to loss and damage" and just transitions in selected sectors.
- **The Nairobi Declaration** signed during the first African Climate Summit promotes a "global carbon taxation regime" to "provide dedicated, affordable, and accessible finance for climate-positive investments at scale".
- **Most recently, the Baku to Belém Roadmap to 1.3T jointly delivered by the COP29 and COP30 presidencies recommends that "interested governments could further explore and/or pilot options for new levies to meet urgent climate and related** development needs in developing countries with a focus on the most vulnerable", stressing that such instruments still "require judgements on the share of proceeds which would be directed toward climate action in developing countries."

However, such "linkages" remain discussed as high-level principles, without detailed proposals either about specific objects that could or should be financed by revenues from solidarity levies, or about the implementing mechanisms needed to allocate them.

I. WHAT THE NUMBERS SHOW: CONCESSIONAL CLIMATE FINANCE IN PERSPECTIVE

A review of existing macro-level (or top-down) estimates of the climate finance gap, complemented by quantitative analyses of climate-related development finance data from the OECD[6] shows the **growing scarcity of debt-free concessional finance for climate action,** particularly for adaptation-related finance. Combined with a growing share of non-concessional sources for both SIDS and LDCs, this demonstrates a real need for grant-based concessional finance especially given the indebtedness of both SIDS and LDCs.

Trends in debt-free concessional finance for climate

At COP29, the New Collective Quantified Goal on Climate Finance (NCQG) emphasized the need for grant-based and highly concessional finance for "adaptation and responding to loss and damage in developing countries" *(UNFCCC, 2025a).* However, it did not specify targets for concessional funding within the US$ 300 billion total, nor identify recipient countries or allocation shares – simply highlighting that small island developing states (SIDS) and least developed countries (LDCs) have particularly serious needs for assistance pertaining to adaptation and loss and damage *(WRI, 2025)*. The NCQG did however acknowledge "alternative sources" of finance such as international taxation or solidarity levies as part of the 300 billion.

The fourth report of the High-Level Expert Group on Climate Finance (IHLEG) provides more granular insights and estimates that US$200–300 billion in concessional finance per year will be needed by 2030, alongside a doubling of grant financing from US$25.6 billion (2022 levels). On loss and damage, 28 countries have pledged US$ 768 million, but only 19 have released initial funding commitments *(FRLD, 2025).*

Yet highly concessional finance remains scarce for climate action. In 2022, 39% of bilateral and 9% of multilateral climate finance was provided as grants, mostly to low-income countries. Between 2016 and 2022, low-income countries received 64% of their climate finance through grants, compared with 12% for middle-income countries *(OECD, 2024a).* The Climate Policy Initiative (CPI) reports that of US$109 billion in ODA grants in 2022, 35% were climate-related grants *(CPI, 2024a).* The loan-to-grant ratio has remained stable for ODA since 2019 – 57% loans and 43% grants *(CPI, 2024b)*. It further shows that between 2019 and 2022 42% of international concessional climate finance went to mitigation, whereas adaptation and resilience received only 36% of the total finance, and the remaining 22% went to activities serving both adaptation and mitigation objectives.

According to the IHLEG, the slow growth of concessional finance is a key reason behind the US$100 billion goal shortfall, with grants accounting for only 26% of total international flows of public climate finance (2016–2020) *(IHLEG, 2022)..*

The OECD also points to an increase in non-concessional lending, partly brought about by the expansion of the multilateral development system's financing capacities. This is particularly concerning given heightened debt risks in developing countries. Recent increases in the volume of flows transiting through the multilateral development system have predominantly come from earmarked contributions to crisis response, particularly to Ukraine. The OECD is concerned given the decline in core contributions, suggesting a preference for crisis-driven earmarked funds instead of funds reserved for long-term development. They argue that the "fragmentation of the multilateral architecture poses a significant challenge to aid effectiveness". In fact, the OECD's Multilateral Development Report shows that the legacy MDBs[7] increasingly compete for scarce resources with vertical funds, suggesting that donors are increasingly preferring earmarked funds *(Figure 2).*

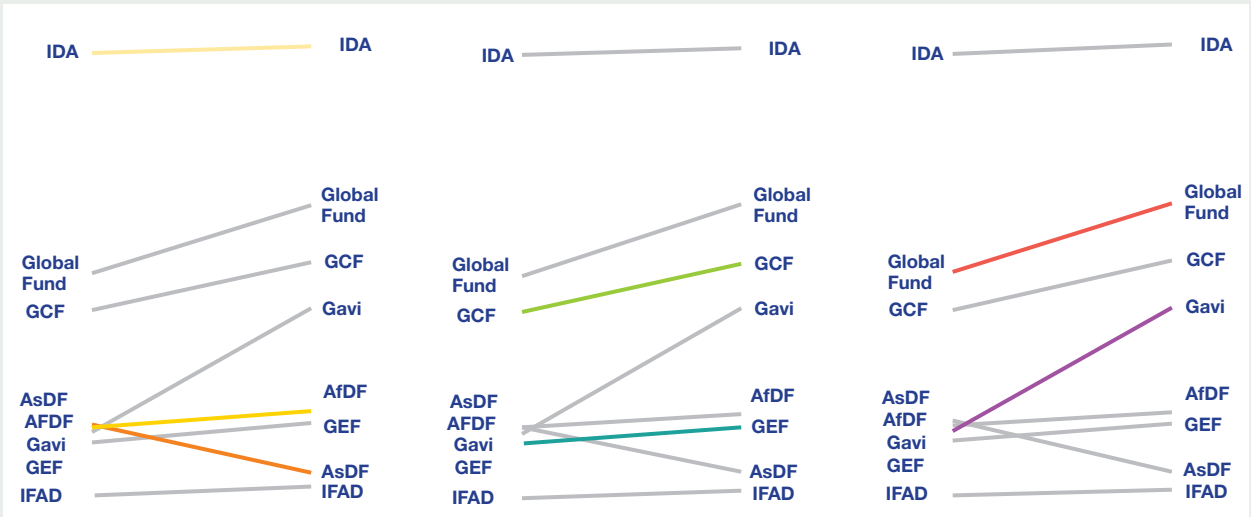
All of this is happening in the context of SIDS and LDCs facing increasing debt pressures. Between 2016 and 2020, all SIDS received a total of $US 1.5 billion in climate finance, while 22 of them paid over $US 26.6 billion to external creditors – nearly 18 times more *(Eurodad, 2022)*. By

6. The analysis relies on commitments from the OECD's Climate-related Development Finance (CRDF) datasets from 2020-2023. Data from 2024 was not available at the time of writing.
7. Legacy MDBs are defined by the OECD's Multilateral Development Finance Report as the Inter-American Development Bank (IADB), The International Bank for Reconstruction and Development (IBRD), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD) and the African Development Bank (AfDB)

2023, more than 40% of SIDS were already in or approaching debt distress, and 70% exceeded the debt-to-GDP sustainability threshold of 40 percent *(IIED, 2025).* According to the IMF, 20 out of the 43 LDCs are either already in debt distress or at high risk of debt distress *(UNCTAD, 2024b).*

LDCs and SIDS display specific trends in terms of access to highly concessional resources for climate action. LDCs received 34% of total concessional finance between 2019 and 2022, with over half of this being grants. 80% of overall grant funding went to adaptation and projects targeting both adaptation and mitigation, and 45% of low-cost concessional debt went to mitigation. On the other hand, some other analyses show that half of climate finance from 2021 to 2022 allocated to LDCs and SIDS were loans *(Oxfam, 2025).* The UN Report on Financing for Development for Small Island Developing States (SIDS) points to a moderate growth in ODA to SIDS from 2000 to 2018 of around 3.2% annually, but highlights that ODA to SIDS mainly tends to be crisis-driven *(UN-OHRLLS, 2022).*

FIGURE 2: THE CONCESSIONAL WINDOWS OF THE LEGACY MDBs COMPETE FOR RESOURCES WITH THE VERTICAL FUNDS[8]



Source : OECD Multilateral Development Finance Report (2024)

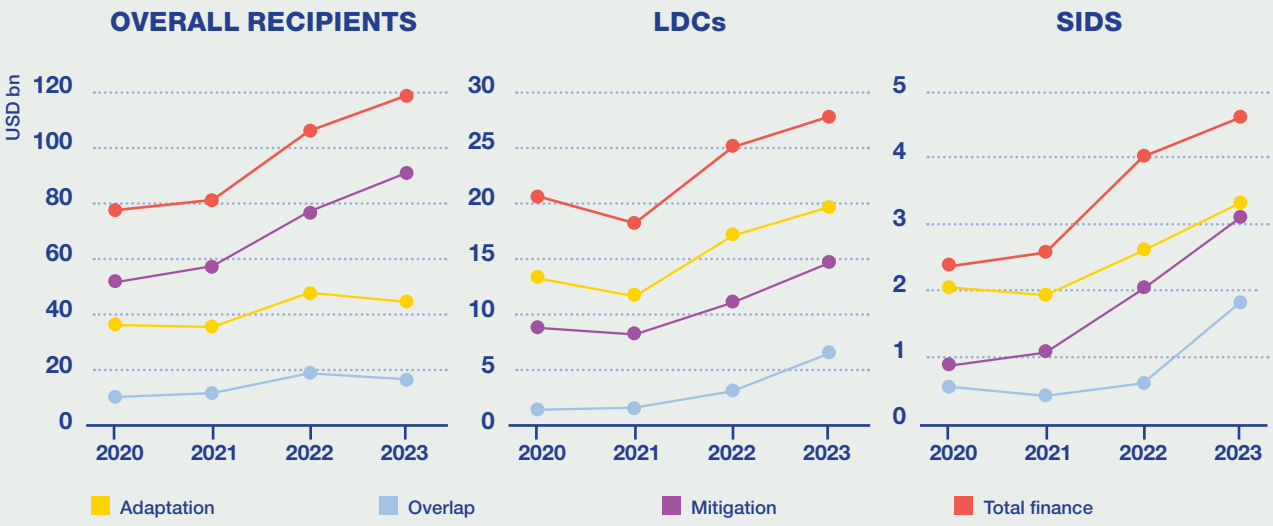
Quantitative trends in climate-related development finance

In addition to existing analyses, we conduct a complementary analysis of the OECD's Climate-Related Development Finance data from 2020-2023 which confirms the growing scarcity of debt-free concessional finance for climate action, particularly in adaptation-related finance. Combined with a growing proportion of non-concessional sources for both SIDS and LDCs, this demonstrates a real need for grant-based concessional finance.

When comparing SIDS to both LDCs and all recipients, there is a notable convergence between levels of finance for adaptation and mitigation in recent years *(Figure 3).* This is partly explained by the increase in finance labelled as both relevant for adaptation and mitigation. In 2023 SIDS had US$1.8 billion of their total US$4.6 billion labelled as overlap. LDCs experienced a particularly sharp decline in climate related development finance from 2020-2021 due to the Covid-19 pandemic.

8. The comparison uses the third-to-last replenishment as baseline (not the penultimate) to avoid using the years of the COVID-19 pandemic as baselines. The lines represent the evolution of replenishment pledges (volume) between the latest and the third-to-last replenishment. The chart shows that while the MDB concessional windows have been stable (With the exception of a notable decrease for the Asian Development Fund) as seen on the left panel, there has been an increase for Green Funds and Health Funds as shown on the central and right panel.

FIGURE 3: EVOLUTION OF CLIMATE-RELATED DEVELOPMENT FINANCE ACROSS COUNTRY CATEGORIES

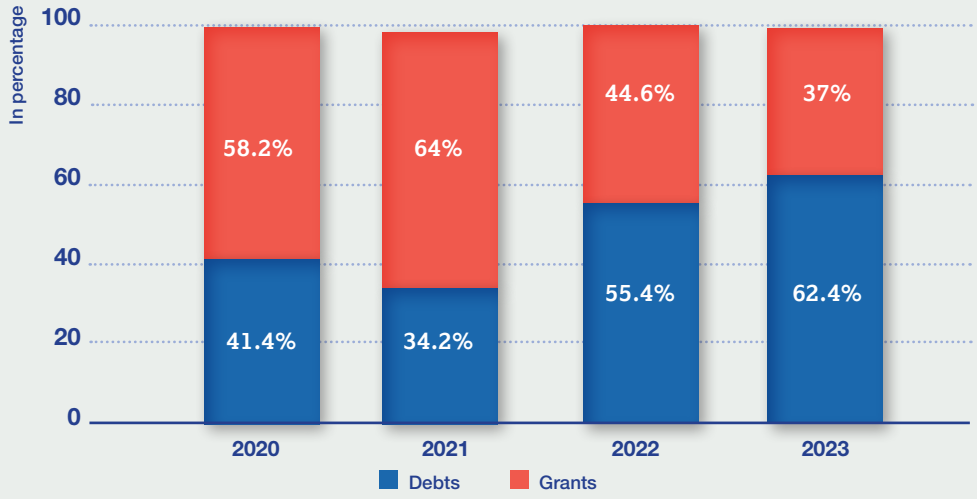


Source : OECD Climate-related development finance dataset

A SIGNIFICANT DECLINE IN DEBT-FREE CONCESSIONAL FINANCE

SIDS are receiving fewer concessional debt-free grants. In 2022, loans overtook grants for overall climate-related development finance, due to decrease in grants from 44.6% of all climate-related development finance to 37% *(Figure 4)*. In absolute terms, the amount of grants to SIDS decreased from US$1.57 billion to US$1.51 billion from 2022-2023.

FIGURE 4: CLIMATE-RELATED DEVELOPMENT FINANCE IN SIDS – GRANTS VS. LOANS

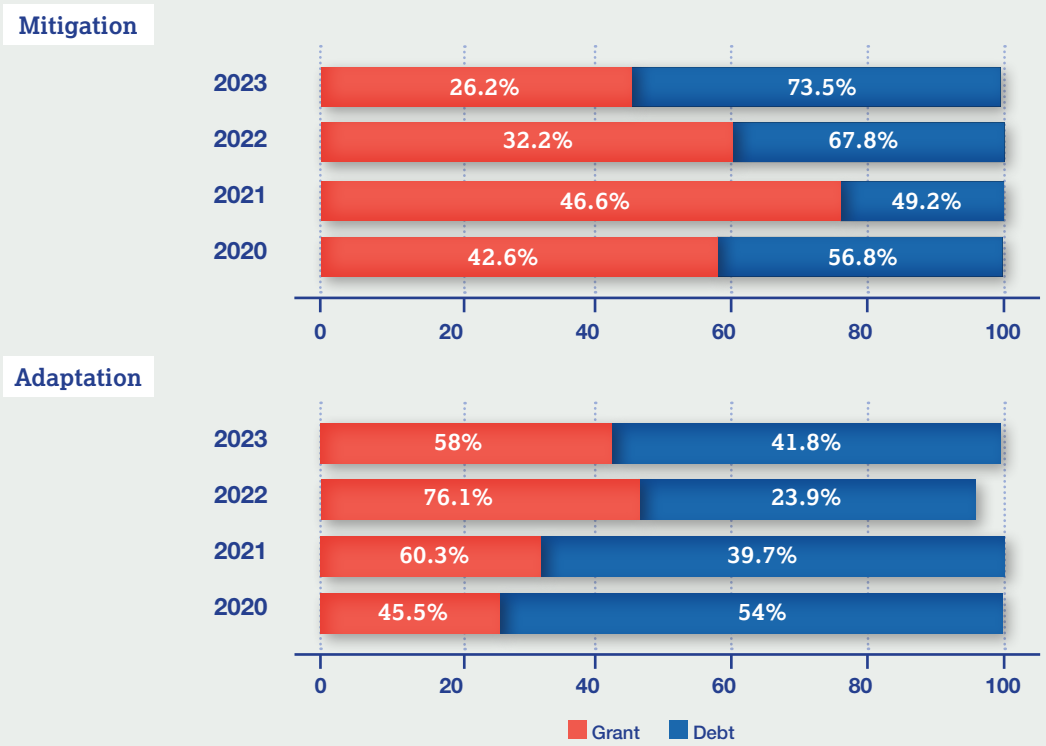


Bars do not sum to 100 pct. as a minimal amount of equity and shares in collective investment vehicles are excluded from the chart.

Source : OECD Climate-related development finance dataset

For adaptation, this meant a reduction of grants from 60.3% to 45.5%, whereas debt increased from 39.7% to 54% in 2023. Similarly, mitigation grants declined from 32.2% in 2022 to 26.2% in 2023 *(Figure 5)*.

FIGURE 5: CLIMATE-RELATED DEVELOPMENT FINANCE IN SIDS – INSTRUMENT MIX FOR MITIGATION AND ADAPTATION

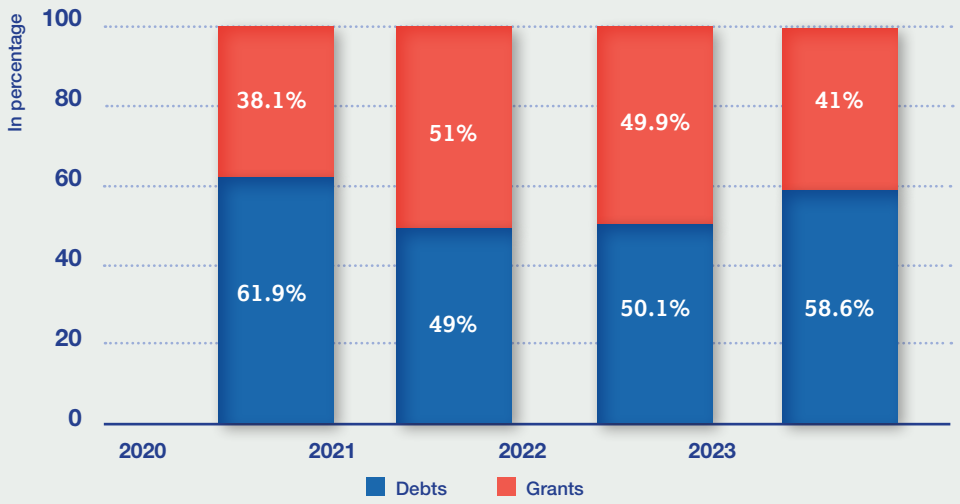


Bars do not sum to 100 pct. as a minimal amount of equity and shares in collective investment vehicles are excluded from the chart.

Source : OECD Climate-related development finance dataset

The same trend also applies to LDCs where grants overtook debt for overall finance only in 2021 and decreased in 2022-2023 from 49.9% to 41% of total finance *(Figure 6)*. Notably, debt also overtook grants for adaptation finance in 2023 with 52.2% of all adaptation finance to LDCs coming from debt. Debt dominates mitigation finance for LDCs, with an increase of grants in 2021 and 2022. However, 2022-2023 saw a significant increase in debt for mitigation from 52.3% to 66.8% *(Figure 7)*.

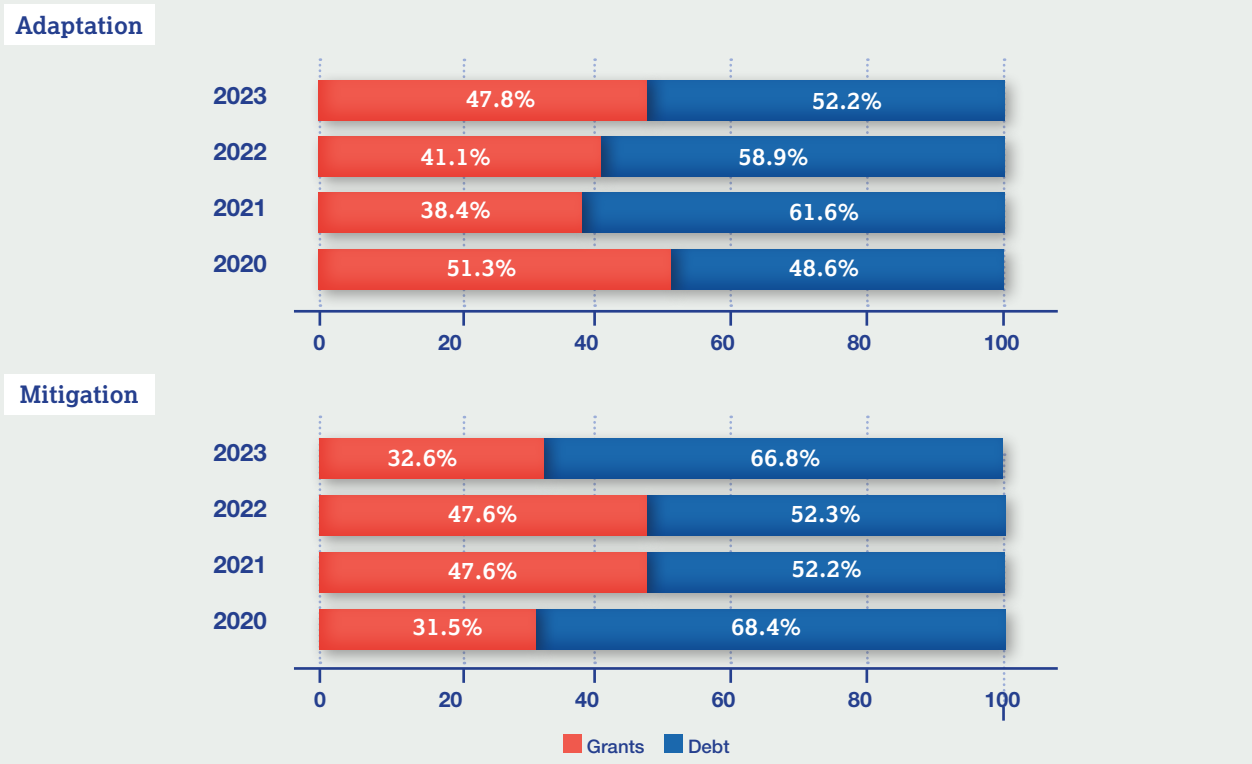
FIGURE 6: CLIMATE-RELATED DEVELOPMENT FINANCE IN LDCS – GRANTS VS. LOANS



Bars do not sum to 100 pct. as a minimal amount of equity and shares in collective investment vehicles are excluded from the chart.

Source : OECD Climate-related development finance dataset

FIGURE 7: CLIMATE-RELATED DEVELOPMENT FINANCE IN LDCs – INSTRUMENT MIX FOR ADAPTATION AND MITIGATION



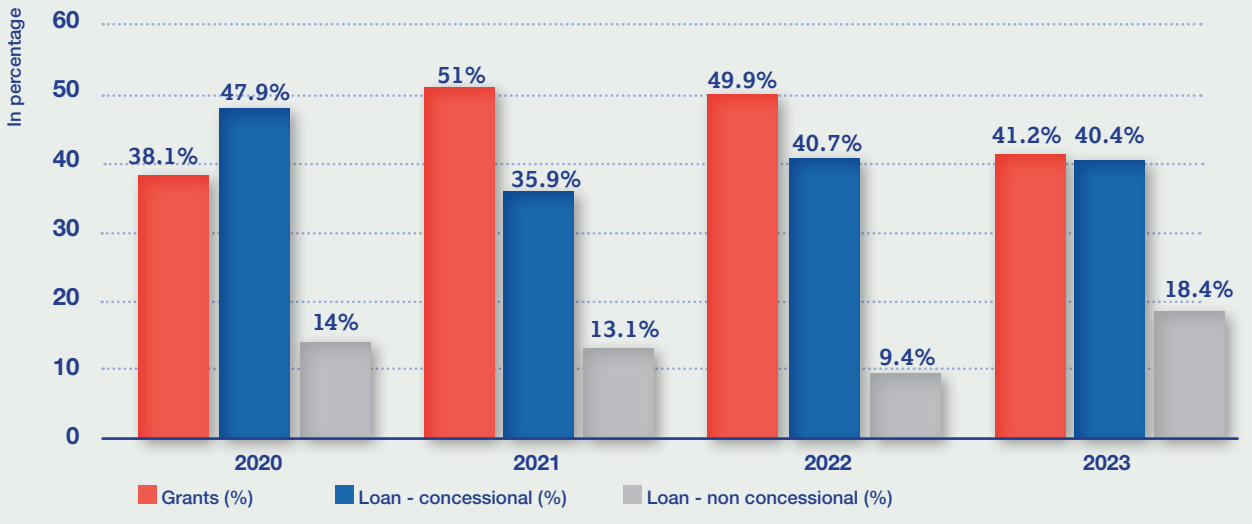
Bars do not sum to 100 pct. as a minimal amount of equity and shares in collective investment vehicles are excluded from the chart.

Source : OECD Climate-related development finance dataset

NOTABLE INCREASE IN NON-CONCESSIONAL FINANCE

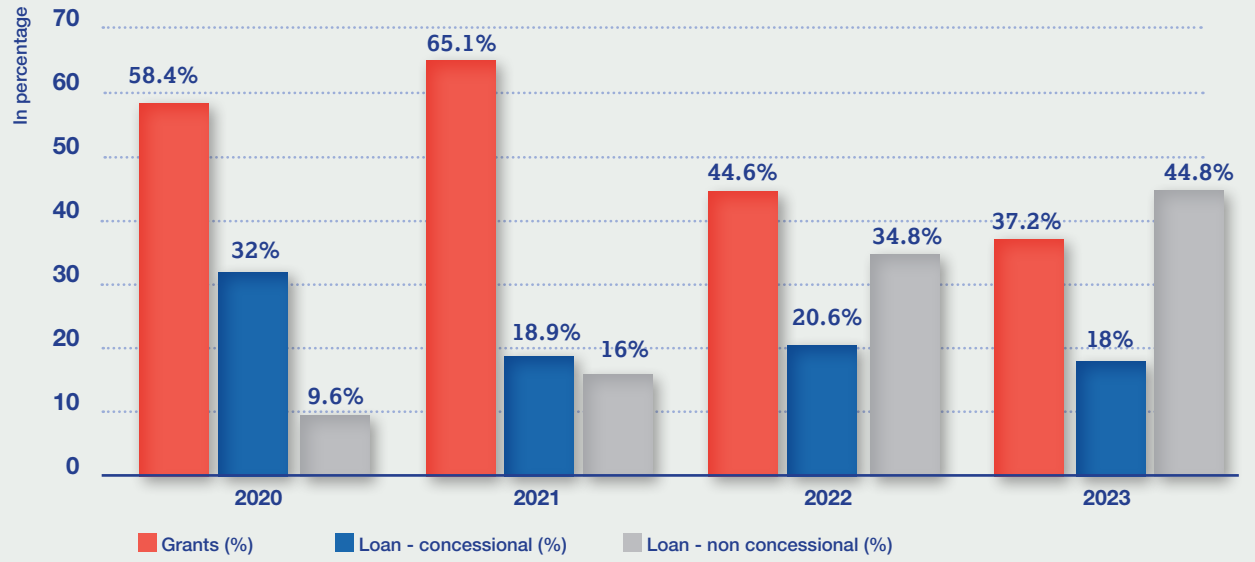
LDCs have seen their share of total climate-related development finance coming from non-concessional finance increase from a low of 9.4% in 2022 to 18.4% in 2023, the highest in the years of 2020-2023 *(Figure 8).*

FIGURE 8: CONCESSIONAL VS. NON-CONCESSIONAL CLIMATE FINANCE IN LDCs



While LDCs still have a lower proportion of non-concessional finance than the average for all recipients (42.5%), SIDS have a higher proportion of non-concessional loans than all recipients with 44.8% in 2023, up from 34.8% in 2022 and 9.6% in 2020 *(Figure 9)*.

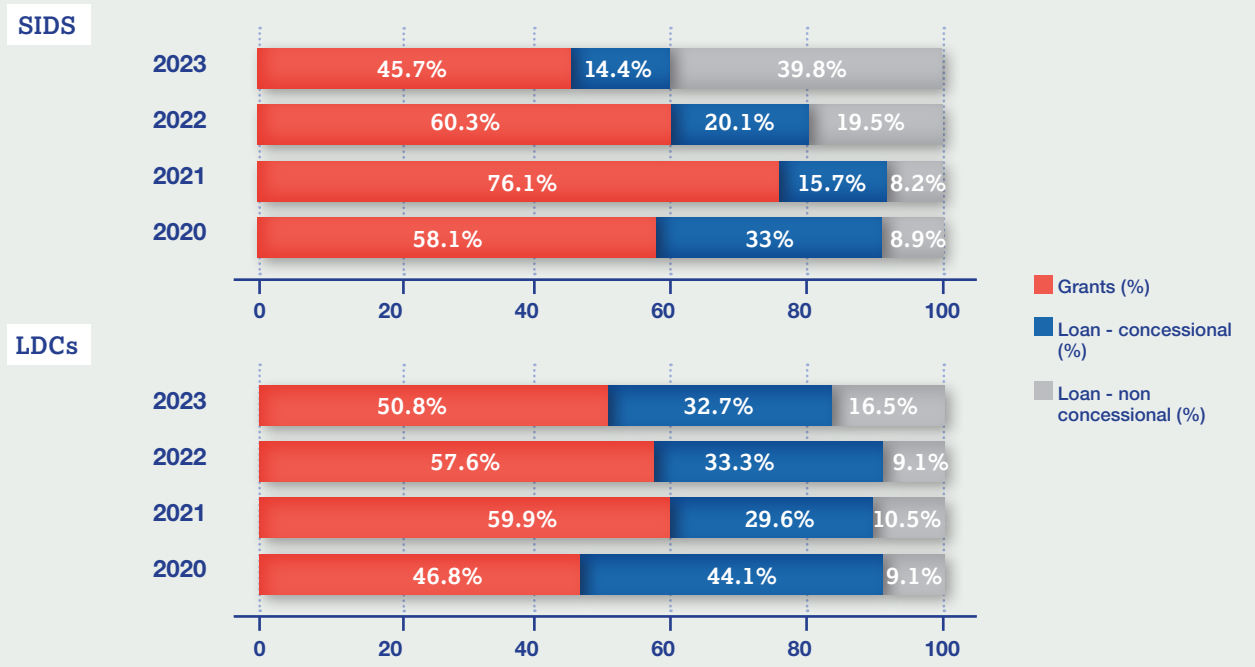
FIGURE 9: CONCESSIONAL VS. NON-CONCESSIONAL CLIMATE FINANCE IN SIDS



Source : OECD Climate-related development finance dataset

For adaptation finance in SIDS, non-concessional loans overtook concessional loans in 2023 for the first time with 39.8% being non concessional and 14.4% being concessional *(Figure 10)*. This is higher than the share for overall recipients at 34.3%. This is a stark reversal of 2020 where only 8.9% were non-concessional and 33% were concessional. While the share of concessional loans for adaptation finance has proven more stable for LDCs, there is still a notable increase from 9.1% in 2022 to 16.5% in 2023 *(Figure 10)*.

FIGURE 10: CONCESSIONAL VS. NON-CONCESSIONAL ADAPTATION FINANCE IN SIDS AND LDCs



Source : OECD Climate-related development finance dataset

INCREASING LEVELS OF CROSSCUTTING FINANCE FOR LDCs AND SIDS

SIDS and LDCs received a higher share of climate-related development finance labelled as both mitigation and adaptation than overall recipients. In 2023, overlap accounted for 16.9% of total climate-related development finance, but 23.8% for LDCs and 39.1% for SIDS, rising from US$0.6 billion to US$1.8 billion for the latter. This overlap is mainly loan-driven. While the causes remain unclear, one concern is that donors may be overreporting cross-cutting projects not genuinely targeting both goals.

II. WHAT COUNTRIES SAY THEY NEED: BOTTOM-UP INSIGHTS ON THE ROLE OF GRANT-BASED FINANCE

BOX N°2: MAIN TAKEAWAYS FROM THE ANALYSIS OF COUNTRY PLANS AND PREFERENCES[9]

- **Grounding climate finance discussions in country-driven perspectives reveals distinct priorities and financing gaps.** An analysis of official strategies and documents from seven sample countries - Barbados, Bangladesh, Fiji, Nepal, Senegal, Somalia, and Zambia - shows that national approaches to grant-based financing are deeply shaped by context.
- **Nevertheless, countries consistently prioritize adaptation and resilience** as the main use cases for grant-based finance, due to lack of other financing options.
- **Loss and damage are also recognized as a critical use case for grants.** Despite growing recognition, most national plans still lack clear costing and implementation frameworks in this area.
- **Limited private sector involvement strengthens the case for grants in several key sectors:** coastal protection, disaster risk management and resilient infrastructures.

COUNTRY	OVERALL FOCUS FOR GRANTS	SECTORS HIGHLIGHTED FOR GRANTS	SELECTED COST ESTIMATES
> BARBADOS	Adaptation & resilience	Water security & climate resilient infrastructure.	**US$ 450 million** until 2035 could create resilience in the water sector.
> BANGLADESH	Adaptation & loss and damage	Post-disaster response & resilient infrastructure	**US$ 25 million** could plant enough mangroves to sequester 30 million tons of CO_2 in 25 years and protect people from coastal flooding avoiding damage *(World Bank, 2022a).*
> FIJI	Adaptation & loss and damage	Disaster risk, management, relocation of vulnerable communities & coastal protection.	US$ 430,000 could relocate a climate vulnerable community. **US$ 6.45 million** could relocate all 15 climate vulnerable communities in Fiji *(Government of Fiji, 2022).*
> NEPAL	Adaptation & loss and damage	Not specified	**US$ 1 billion** over 20 years to develop disaster risk reduction and climate adaptation at federal and local level *(Government of Nepal, 2021).*
> SENEGAL	Unclear[10]	Disaster risk management and coastal zone management	**US$ 28 million** to implement nature-based solutions in Dakar *(World Bank, 2024).*
> SOMALIA	Adaptation & loss and damage	Not specified	**US$ 200 million** to develop a loss and damage strategy and set up systems to track loss and damage and to address slow-onset climate shocks and extreme events.
> ZAMBIA	"Climate resilience"	Not specified	**US$ 29.8 million** from 2023 to 2030 to fund early warning systems with a focus on agriculture, livestock and fisheries *(Republic of Zambia, 2025).*

9. The full analysis of individual countries can be found in annex 2.
10. In addition to adaptation-related needs, Senegal's mitigation targets are also highly conditional.

Country selection and analytical framework

Beyond aggregate estimates of flows, needs and gaps, it is essential to ground the debate around the use of solidarity levy revenues in concrete country preferences and needs. In this section, we review what countries with significant climate and development finance needs themselves say about the role of grant-based financing within their official strategies, through a qualitative analysis of their NDCs, NAPs and country-level documents and strategies.

Seven countries – Bangladesh, Barbados, Fiji, Nepal, Senegal, Somalia, and Zambia – were selected to provide a qualitatively representative sample of what countries with significant climate and development finance needs themselves say about the role of grant-based financing within their official strategies.

The sample characteristics cover a wide variety of situations:

- **In terms of geographic diversity** – spanning the Caribbean (Barbados), South Asia (Bangladesh and Nepal), the Pacific (Fiji), and Sub-Saharan Africa (Senegal, Somalia, and Zambia).
- **In terms of income and development level** – with one upper-middle income country (Barbados), several Least Developed Countries in the process of graduating (Bangladesh, Nepal and Senegal)[11], and LDCs (Somalia, Zambia). The sample also captures variation in terms of vulnerability, including two SIDS (Barbados, Fiji), two land-locked countries (Nepal, Zambia) and one fragile and conflict-affected country (Somalia).
- **In terms of indebtedness and access to capital markets** – Debt sustainability as defined by the IMF and the World Bank vary considerably within the sample, from low in Nepal to high in Zambia.
- **Finally, all selected countries have costed national climate documents** such as NDCs, National Adaptation Plans (NAPs) that outline how they prioritize and justify the need for debt-free concessional resources.

We have consulted a wide array of official government sources, including:

- The most recent **Nationally Determined Contributions (NDC),** where possible the NDC 3.0 and, when available, NDC Implementation Frameworks ;
- **Long-Term Low Emission Development Strategies** (LT-LEDS) ;
- **National Adaptation Plans** (NAPs) ;
- Other **specific country plans** such as climate finance strategies, green industrial plans or national investment plans, on an ad hoc basis.
- The World Bank's **Country Climate and Development Reports** (CCDRs) were used to cross-check and inform the results[12] ;
- When relevant, **specific climate and development projects** for which countries applied for grant-based financing – especially towards vertical climate and environment funds – were also reviewed.

Main findings from the literature on bottom-up needs

A recent analysis from the Climate Policy Initiative (CPI) of all 168 available NDCs concluded that – for the 110 NDCs that contain explicit estimates of finance – an average of US$ 400 billion per year through 2030 will be needed, with 69% dedicated to mitigation, 21% for adaptation and the remaining 10% for cross-cutting initiatives. While this analysis does not provide specific insights on the use of grant financing, it shows that 47% of all estimated needs are conditional on international support – and therefore some level of concessionally.

Another bottom-up study of developing countries' climate and development needs *(Isah et al., 2024)* arrive at a higher number, with an annual climate finance needs estimate exceeding $US 600 bn by 2030. It also points to an interesting trend: **updated NDCs tend to show a decrease in mitigation finance needs and an increase in adaptation finance needs.** However, they find that in developing countries climate finance needs for mitigation are more clearly costed and specified than for adaptation.

11. Both Bangladesh and Senegal remain LDCs but are scheduled to graduate from this status later in the decade (Bangladesh in 2026 and Senegal in 2029), while Nepal is also expected to graduate in 2026.
12. Although not really "bottom-up" and country-owned documents, the CCDRs offer detailed analysis of the countries' investment plans and cost estimates.

Finally, the UNFCCC Secretariat also publishes a synthesis report of the NDCs. The 2022 report suggest a high level of heterogeneity between NDCs in terms of the quality and granularity on information related to financial needs and means of implementation – with only 44% providing quantitative estimates *(UNFCCC, 2022).* The most recent UNFCCC report, from October 2025, highlights that costed needs were presented by 21% more countries than previously, particularly for adaptation, suggesting an improvement in sectoral coverage in the NDCs *(UNFCCC, 2025b).*

The abovementioned studies are on a macro scale and focus exclusively on NDCs. In this section, our purpose is slightly different, as we are not looking to qualify overall estimates for climate and development finance. Instead, we intend to systematically go through bottom-up sources to identify what countries themselves say about the most effective allocation of grant-based concessional finance.

Priority n°1: A strong focus on adaptation and resilience as priority sectors for debt-free finance

Bridging the adaptation finance gap is consistently identified as one of the priority use cases for grant-based financing across country documents. Bangladesh, for instance, identifies an annual shortfall of US$ 4.5 billion for adaptation and reflects on the limited potential for non-concessional sources to bridge this gap. The World Bank's analysis of Nepal is instructive in explaining the barriers to mobilizing private finance in these areas, and points to an "absence of localized climate risk and vulnerability data for specific investments, a lack of policies and institutional structures at the sectoral level to enable private sector participation, and weak financial incentives to address risks/higher costs" *(World Bank, 2022b)*.

Barbados explicitly states that there are "few blended finance modalities available for resilience building and adaptation", making grants particularly important. Bangladesh clearly calls for grants to be used in building resilient infrastructure in its NAP. Fiji has in the past mainly accessed and applied for grants for the purposes of climate resilience and disaster risk management. Nepal makes an even clearer statement, stating that it will prioritize grants for adaptation and loss and damage, whereas other sources of finance can be used for climate vulnerability and enhancing community resilience *(Government of Nepal, 2025).*

On the other hand, no country explicitly calls for grants to fund mitigation efforts - while some of them acknowledge the interest in blended finance schemes for mitigation. For example, Senegal's green industrial strategy outlines significant conditional mitigation needs but does not specify grants as the preferred instrument.

Priority n°2: There is a clear need for grant money for loss and damage, but it is insufficiently costed

Country documents also show a clear pattern of loss and damage being suitable for grants. Bangladesh's loss and damage strategy for instance is fully conditional on international support. While countries report various estimates of damage caused by climate change, only a handful of them provide clear estimates for loss and damage costs. Bangladesh has a clear strategy and is asking for "adequate, predictable, and accessible grant-based finance" (*Government of the People's Republic of Bangladesh, 2025).* Somalia provides the clearest need and is asking for US$ 200 million to develop a loss and damage strategy and implement early warning systems *(Federal Government of Somalia, 2025).*

Priority n°3: Allocation of grants ought to be based on vulnerability, not solely income

Barbados explicitly calls for grant allocation based on vulnerability, not per capita income, and recommends to factor in indebtedness when allocating grants. Fiji also expresses high needs despite their relatively higher income than LDCs. Nepal is expected to graduate from LDC status in 2026 but also shows high adaptation and loss and damage needs.

Priority n°4: Implementation and institutional capacity are areas with funding gaps

Somalia, Bangladesh, Senegal, and Nepal all list funding gaps related to the technical implementation and steering of their development and climate plans. As these kinds of costs drain on government budgets and have no private sector involvement, these are possible avenues for grant-based concessional finance. For instance, Bangladesh estimates that US$ 18 million[13] will be needed to prepare a roadmap for its NAP. *(Government of the People's Republic of Bangladesh, 2022)* and Senegal also requires $US 9.9 million for the coordination and overall steering of the NAP (*Government of Senegal, 2025).* Consistent with expert opinions collected throughout our research, this shows that grant money can be "catalytic" outside of classic blended finance schemes aimed at mobilizing the private sector: it can also generate significant leverage when it unlocks implementation capacity relating to adaptation and resilience.

Priority n°5: Limited private sector role strengthens cases for grants

Country plans rarely refer explicitly to prioritization and optimal use of grant-based financing for specific sectors or objectives. A proxy for these areas can be to identify sectors where governments do not imagine or expect private sector involvement at all. For instance, the World Bank expects no private sector involvement in Senegal in the following sectors: coastal zone management, disaster risk management, solid waste management, social protection, education and health *(World Bank, 2024).* Across country plans, disaster risk management and coastal protection consistently show up in national documents as sectors without potential for private sector involvement, and hence as priority sectors for the use of concessional, debt-free financing.

Somalia's NDC also identifies sectors where private sector involvement is possible (and by deduction not the most appropriate for grant based-financing): renewable energy, climate-resilient agriculture, waste management, reforestation, and land restoration.

13. 1 BDT:0.0082 USD.

II. THEORETICAL FRAMEWORKS AND EXPERT INSIGHTS ON ALLOCATING GRANT BASED FINANCE FOR CLIMATE AND DEVELOPMENT

Allocating scarce concessional resources involves navigating complex tradeoffs among principles such as equity, effectiveness, and efficiency. A review of existing literature indicates that few frameworks explicitly address these tradeoffs. Concessional finance is often treated as a single category, with limited distinction between concessional loans and pure, debt-free grants, suggesting the need for further research to clarify their respective roles.

However, based on the literature and consultations with experts within and beyond the GSLTF Expert Group *(see appendix n°3)*, several frameworks and guiding principles emerge for the allocation of limited concessional resources for climate action.

Existing frameworks for allocating grant-based concessional finance

There are few studies providing clear criteria for the allocation of grants. Some analysts seek to determine what kind of finance is best suited for various activities. For instance, in 2022 *Bhattacharya et. Al, 2022* developed a financing heatmap to show what kind of finance is particularly well suited for different activities *(Figure 11)*. Notably, they do not distinguish between concessional loans and grants within the ODA category. They argue that ODA is particularly well suited for the Agriculture, Forestry and Other Land Uses sector (AFOLU) as well as for adaptation and resilience purposes. It is moderately well suited for human capital and not very well suited for infrastructure, where multilateral non-concessional funds are more appropriate. Lastly, ODA is seen as most important in low-income countries.

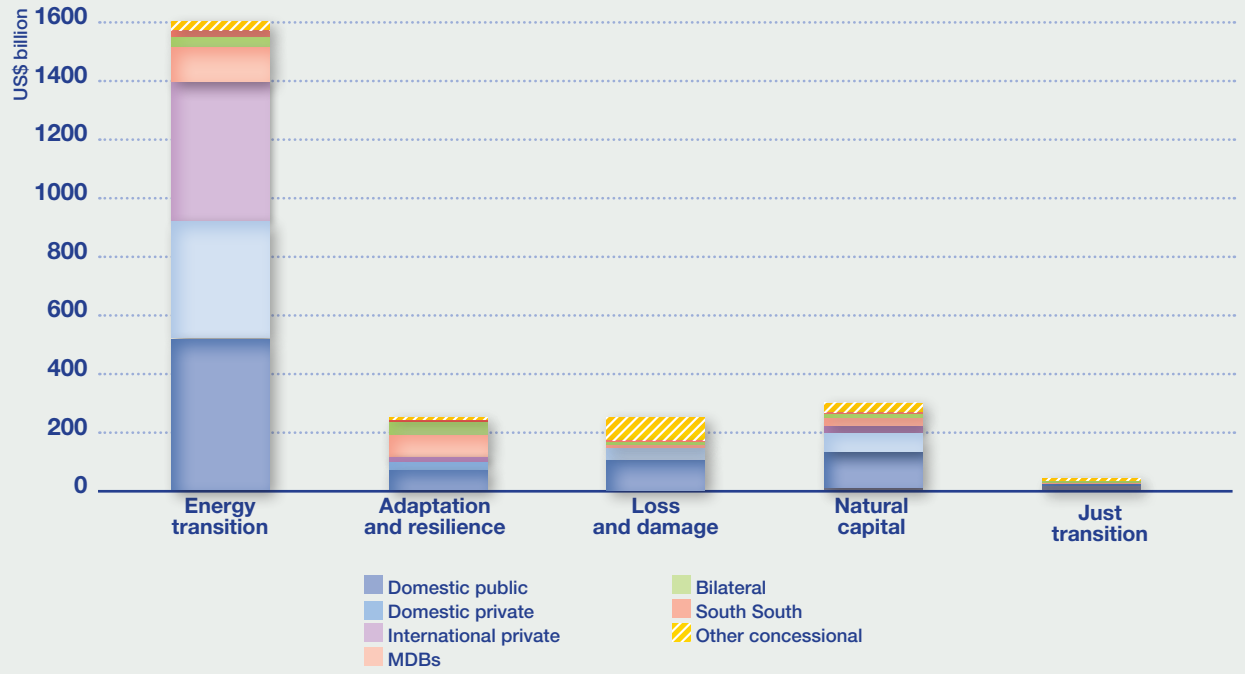
FIGURE 11: A FINANCING "HEATMAP" FOR THE ALLOCATION OF DIFFERENT TYPES OF FINANCING FLOWS TO CLIMATE AND DEVELOPMENT ACTION

	DOMESTIC RESOURCE MOBILISATION	OFFICIAL FINANCE		PRIVATE FINANCE
		ODA (OFFICIAL DEVELOPMENT ASSISTANCE)	MULTILATERAL NON-CONCESSIONAL	
HUMAN CAPITAL	High	Medium	Medium	Low
INFRASTRUCTURE	Medium	Low	High	High
AFOLU	Medium	High	Medium	Medium
ADAPTATION AND RESILIENCE	Medium	High	Medium	Low
LOW-INCOME	Medium	High	Low	Low
LOWER MIDDLE-INCOME	Medium	Medium	High	Medium
UPPER MIDDLE-INCOME	High	Low	Medium	High

Source: Bhattacharya et. al (2022)

In 2022, the International High-Level Expert Group on Climate Finance (IHLEG) – chaired by Songwe, Stern and Bhattacharya – developed a series of investment and spending priorities for climate action and development goals. They argued that debt-free finance was particularly appropriate and suitable in **four areas: 1 Early phase-out of coal; 2 Coping with loss and damage**; **3 Afforestation and conservation; 4 Biodiversity.** Interestingly, this study sees adaptation and resilience as appropriate to be covered by long-term MDB finance and concessional finance *(IHLEG, 2022).* In an updated report published in 2024, the IHLEG goes a step further by explicitly proposing an allocation key for "other concessional" resources, which include solidarity levies *(IHLEG, 2024).* In their analysis, about half of the US$ 140 to 150 billion of "other concessional" flows should be focused on loss and damage. Another quarter is invested in natural capital while smaller shares are channelled toward the energy transition, just transition, and adaptation and resilience *(Figure 12).*

FIGURE 12: PROPOSED ALLOCATION KEY FOR "OTHER CONCESSIONAL" FLOWS (INCLUDING SOLIDARITY LEVIES) BY THE IHLEG

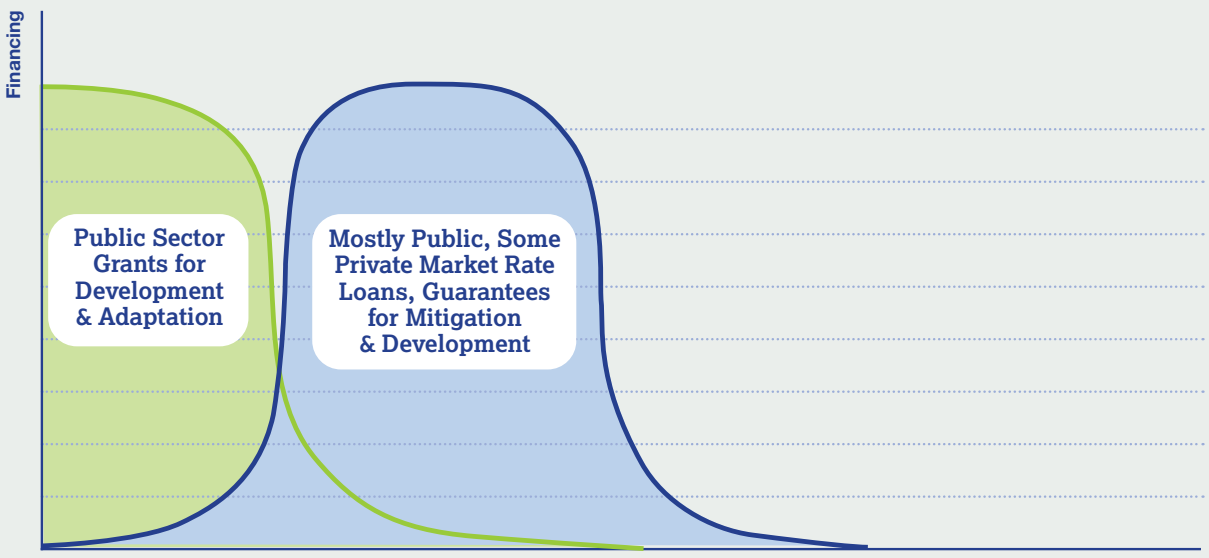


Source: IHLEG (2024).

The Gates Foundation proposes the most explicit principles for allocating grant-based finance for climate and development. Based on a review of three criteria (investment return, risk profile and time-to-impact), authors argue that highly concessional finance including grants should be ring-fenced to support the *"the most acute development and climate adaptation needs of lower income countries" (Gates Foundation, 2024).* Among high-impact adaptation investments, this analysis identifies – among other things – flood-resilient public infrastructure, sea walls and urban cooling shelters, efficient individual irrigation systems, and agriculture R&D for drought-resilient livestock breeds and crops. Conversely, this work does not recommend using grants for mitigation-related activities, even in low-income countries (LICs). On this basis, they provide a list of "optimal capital sources flowing to highest priority needs" in LICs. Finally, this analysis also suggests carefully planning concessional investments so as to maximize triple and double co-benefits between development, adaptation, and climate. In this light, investments to reduce food loss and waste, water efficiency measures and irrigation are also identified as relevant investments.

Ultimately, literature that criticizes the use of concessional finance – a fortiori grants – for mitigation is growing. Authors usually point to due its limited impact on global decarbonization, its limited effectiveness, its significant crowding out impact on other development objectives – education, health, etc. – and its distortion effect on the allocation of total climate and development finance *(FERDI, 2025)* – with less resources going to the poorest and most vulnerable countries, to education and health, etc. Such analyses conclude that *"we should ring-fence grant resources for the urgent development and adaptation needs of the poorest countries and use the considerable leverage of multilateral banks to support public financing at scale for mitigation and development finance in middle-income countries." (Figure 13 from Kenny, 2025).*

FIGURE 13: AN ALLOCATION FRAMEWORK FOR CLIMATE AND DEVELOPMENT FINANCE



Source: Kenny (2025)

Lesson n°1: A consensus on adaptation and loss and damage

Expert consultations reveal a broad consensus that revenues from global solidarity levies should primarily support adaptation and loss and damage. In addition to the experts interviewed, several research and non-governmental organizations reach the same conclusion: CPI argues that a higher percentage of concessional resources should flow to adaptation and resilience, given these projects' limited ability to leverage commercial flows *(CPI, 2024a).* Other analyses similarly highlight the need to prioritize grants for adaptation finance and the "most vulnerable", or to prioritize. Oxfam emphasizes prioritizing grant-based financing for adaptation in SIDS and LDCs (*E3G, 2025; Oxfam, 2025).*

Lesson n°2: Aligning the use of revenues with the characteristics of the levy

Expert interviews consistently emphasized the importance of aligning the use of revenues with the nature of the tax base. In particular, many experts highlighted that proceeds from taxes on activities contributing to pollution or emissions should be directed toward climate-related purposes. Loss and damage was frequently cited as an intuitive and legitimate use of such revenues.

Fiji's Climate Relocation of Communities Trust Fund illustrates this approach in practice. The fund, which supports the relocation of communities affected by climate change, is financed through a 3% contribution from revenues generated by the value-added tax on prescribed services, as well as from plastic and superyacht levies. It is designed to assist:

- **Communities, settlements, and groups** that are highly vulnerable to climate impacts and lack viable local adaptation options.
- **Individuals or communities displaced** by climate-related or disaster events who require resettlement.

Lesson n°3: Focus on indebtedness

One consistent result across the literature review and expert interviews is that income alone does not capture a country's need for grant-based concessional finance. When factors such as vulnerability and debt levels are considered, the needs of SIDS are particularly clear. Studies consistently show that SIDS carry higher debt burdens than other developing countries *(King and Tennant, 2015),* prompting one analysis to conclude that "debt is one of the main issues for SIDS after graduation" *(IDS et al., 2019).*

Between 2016 and 2020, all SIDS received a total of US$ 1.5 billion in climate finance, while 22 of them paid over US$ 26.6 billion to external creditors – nearly 18 times more. By 2023, more than 40% of SIDS were already in or approaching debt distress, and 70% exceeded the debt-to-GDP sustainability threshold of 40 percent *(IIED, 2023).*

Graduation from LDC status does not guarantee capacity to mobilize necessary funds. Countries for instance lose access to programs supporting adaptation planning and financing. This limits access to mechanisms such as the Green Climate Fund (GCF), particularly for SIDS with small administrations and limited technical capacity. A 2021 study reinforces this finding, showing that SIDS have significantly lower access to the GCF compared to other country groups, largely due to limited administrative and technical capacity *(Climate Analytics, 2021).*

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Lesson n°4: Vulnerability matters for the allocation of concessional resources

Most analyses and policy frameworks emphasize that vulnerability – climatic, economic, and social – should play a central role in allocating debt-free concessional resources.

Songwe, Stern, and Bhattacharya have called for revising allocation criteria to explicitly include climate vulnerability *(IHLEG, 2022).* Other authors argue that vulnerability should be the primary criterion for adaptation finance, while mitigation finance should prioritize emission reduction potential (Michaelowa et al., 2020), also stressing that allocation systems should be purpose-specific, with distinct criteria for mitigation, development, and adaptation finance *(FERDI, 2023).*

Despite these recommendations, evidence shows that adaptation finance does not consistently reach the most vulnerable countries. One study finds that greater vulnerability is negatively correlated with funding from the Adaptation Fund[15] *(Stadelmann et al., 2014),* while another analysis finds that LDCs in Africa struggle to access funds from the GCF, suggesting that institutional capacity rather than vulnerability and need is a major factor in determining a country's access to funding *(Garschagen and Doshi, 2021).* Similarly, a study of World Bank adaptation financing reveals that from 2014 to 2023 vulnerable countries received much less adaptation finance per capita than countries with higher capacity, though funding to vulnerable nations has increased over time, suggesting gradual improvement in targeting *(CGD, 2025).*

Variation persists, however, in how vulnerability is defined and applied across multilateral providers of concessional finance, resulting in inconsistent eligibility and allocation practices. Some, like the International Development Association (World Bank Group) and the Asian Development Fund (Asian Development Bank), link grant eligibility mainly to debt distress, treating vulnerability indirectly through debt sustainability. Others, such as the Global Environment Facility, apply mixed criteria combining environmental benefits, performance, and socioeconomic factors, only marginally accounting for climate vulnerability through minimum "floors" for SIDS or disaster-prone countries. A few, like the Caribbean Development Bank, explicitly integrate vulnerability into performance-based allocation systems, while the Inter-American Development Bank[16] combines income, creditworthiness, and exposure to external shocks. Overall, vulnerability remains unevenly operationalized and rarely serves as the primary determinant of concessional resource allocation.

15. The authors test whether Adaptation Fund projects are going to vulnerable countries against several different vulnerability indices. They also use GDP as proxy for "support for the poorest countries". Notably the Adaptation Fund itself does not define vulnerability precisely.
16. Due to is specific mandate, regional focus, and shareholding structure, the CDB is not directly comparable to other multilateral institutions mentioned in this paragraph.

Lesson n°5: The catalytic use of grants is recognized but needs further clarification

Finally, some experts acknowledged the importance of using limited concessional resources in a catalytic way to maximize their impact. Some emphasized leveraging grants to mobilize additional finance, while others raised concerns about the political feasibility of channeling public funds to private actors. One perspective also framed the concept of "unlocking capacity" – through technical assistance and capacity building – as a catalytic effect in its own right.

IV. LESSONS FROM FRANCE'S SOLIDARITY FUND FOR DEVELOPMENT (FSD)

BOX N°3: MAIN LESSONS FROM THE FSD FOR THE GLOBAL SOLIDARITY LEVIES TASKFORCE

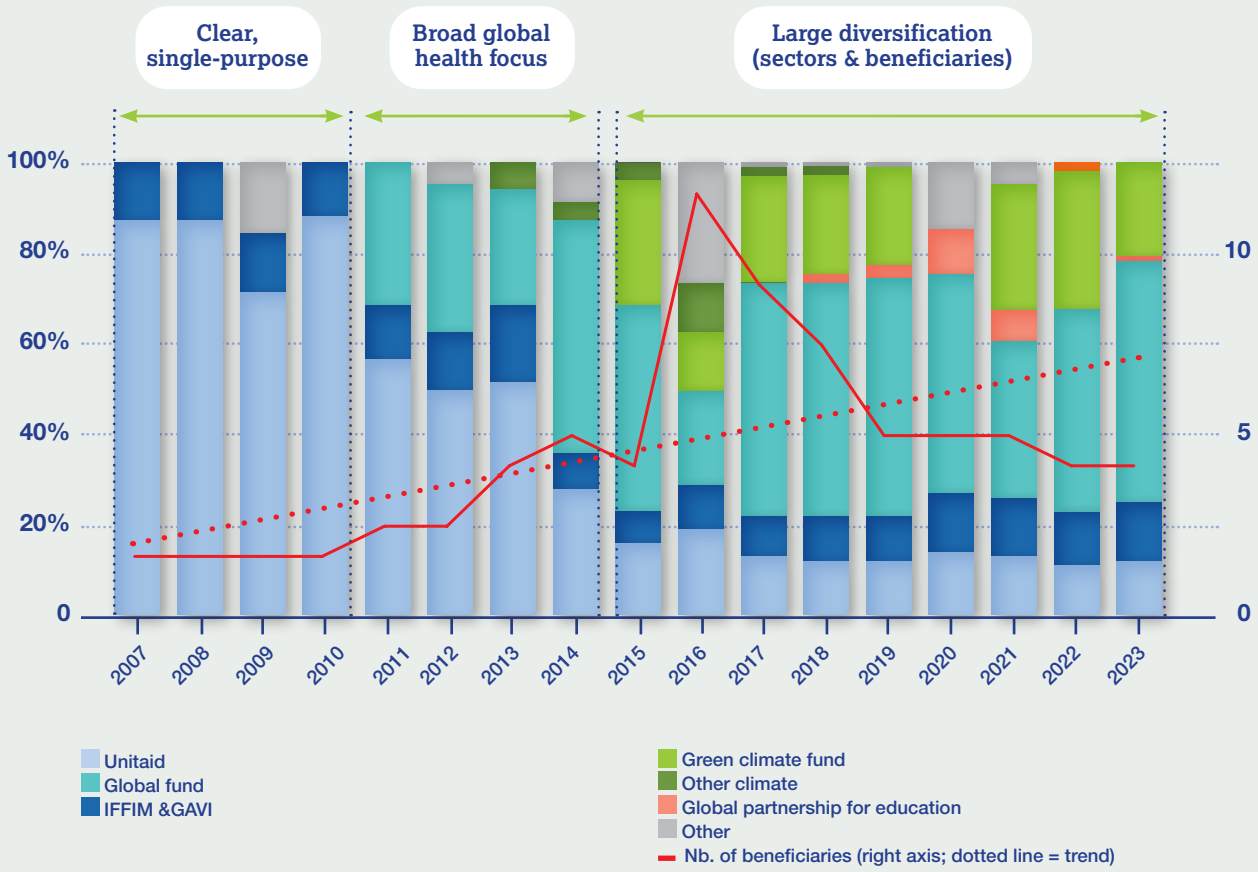
- As early as possible, it is crucial to develop a **high-level political narrative** defining a broad vision associated with the use of levy proceeds.
- This political narrative should be complemented by; i) a **mission-oriented policy** and/or concrete and measurable objectives; ii) **compelling estimates** of the impact associated to specific use cases.
- Even when a clear mission is defined, the specific use cases for the levy should be **as targeted and concrete as possible**, focusing on "solvable" issues – like the fight against HIV – rather than vague and large unmet needs.
- **Simplicity is a decisive factor to make it work:** single-purpose levies, clear links between the tax base and the use of proceeds and simple earmarking mechanisms are important elements to foster buy-in and ease implementation, as evidenced by the issues encountered by the FSD since 2025.
- Compared to "traditional" ODA, **solidarity levies have a clear and distinct value proposition:** their predictability, stability and, in some cases, their potential countercyclical role make them a crucial tool to finance climate and development at the international level.

The Solidarity Fund for Development (FSD) was established by France in 2006 to provide predictable and sustainable financing for international development, global health, and later, climate action. Its creation marked one of the earliest efforts to link innovative taxation with global solidarity objectives.

Structure & funding – The FSD was financed through two dedicated levies: an air-ticket levy (TSBA) established in 2006, applied to passengers departing from French airports and a financial transaction tax (TTF), introduced in 2012, applied to purchases of shares in large listed companies. Since 2017, a capped portion of the TTF and TSBA revenues has been allocated annually to the FSD, amounting to €738 million per year between 2017 and 2024. This cap – which replaced a system where a fixed share of proceeds was allocated to the FSD – coupled with growing revenues from the TSBA and TTF – has largely weakened the link between those two taxes and the FSD over time: in 2023, the FSD represented less than 40% of total revenues collected from the TSBA and TTF. Jointly supervised by the French ministries of finance and foreign affairs, the FSD is managed by the French Development Agency (AFD).

Allocation strategy – The FSD's resources were directed to a limited number of multilateral initiatives known for their measurable results, such as Unitaid, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Global Partnership for Education, and the Green Climate Fund *(Figure 14).* These earmarked funds allowed France to maintain consistent multi-year commitments and improve the predictability of its contributions, an important factor for organizations planning long-term programs. For example, solidarity levies have represented almost half of Unitaid's funding since its creation in 2006. It is interesting to note that the scope of the beneficiaries of the FSD widened substantially over time. At its creation in 2006, 90% of the proceeds went to Unitaid and 10% to vaccination through GAVI. In 2006, the Global Fund to fight AIDS, Tuberculosis and Malaria was added to the list of beneficiaries and became one of the main recipients of the FSD. Finally, in 2016, the list of beneficiaries was significantly expanded, opening up FSD financing to 29 organizations – even if not all of them received funding ultimately – and paving the way to FSD's expansion outside of global health, with significant amounts channeled towards education (GPE) and climate (GCF).

FIGURE 14: EVOLUTION OF FSD RECIPIENTS – FROM A SINGLE-PURPOSE VEHICLE TO A BROAD, "HEALTH, DEVELOPMENT AND CLIMATE" VEHICLE

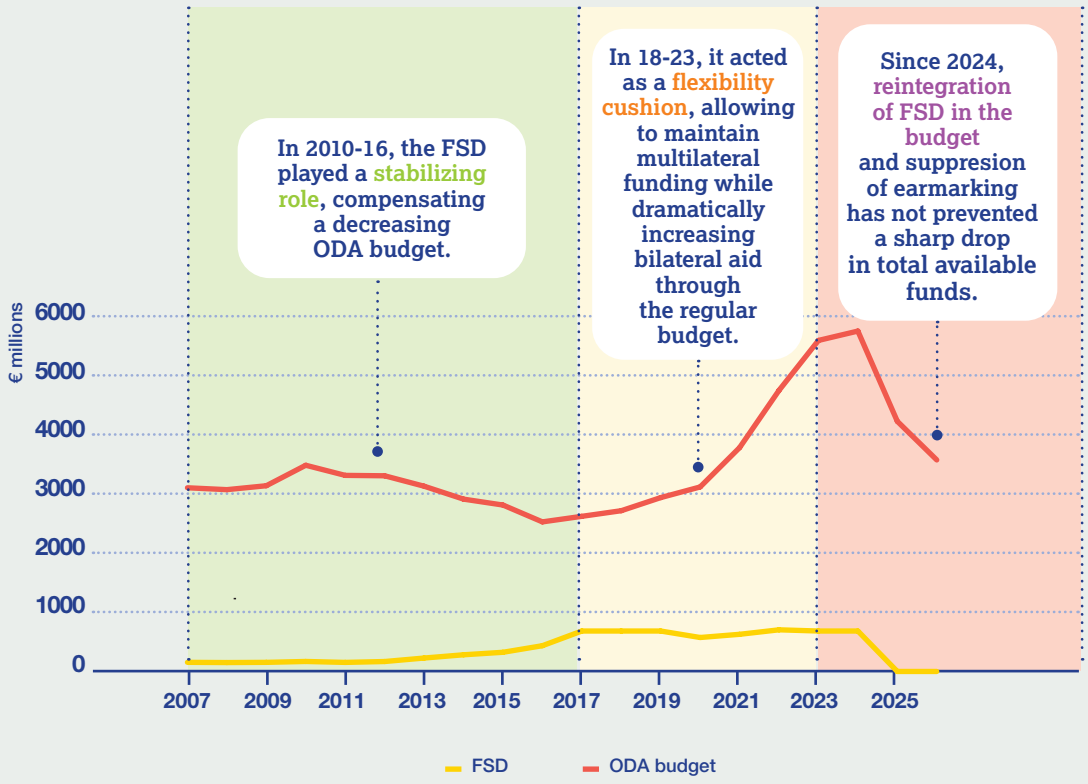


Source: DG Trésor, Cour des comptes, I4CE analysis.

Right from the start, the clarity of the political narrative and associated decisions on the use of revenues were decisive in the creation of the FSD and the establishment of solidarity levies in France. The process followed **three phases :** 1 **The political impetus came first,** in April 2003, during the French presidency of the G8 when President Chirac explicitly linked the question of global health and human development and the limited amount of ODA, suggesting that additional resources were needed, in the form of solidarity taxes. 2 **A technical phase followed,** with a taskforce of experts commissioned to write a report on the economic and operational feasibility of this proposal, which concluded, in 2004, that a levy on air tickets was the most promising option. 3 **Finally, the question of the mission and specific use cases for this levy came back at the center of the discussion.** The political narrative about *"taxes for global health and human development"* was narrowed down to the burning question of fighting the HIV/AIDS epidemic. This stage also involved the development of compelling impact estimates clearly quantifying the outcomes that could be expected from new levies (ex. US$ 2 billion would suffice to finance the entirety of HIV/AIDS-related research, US$ 1 billion to provide a menu of 10 basing and life-saving surgeries to the entire world population, etc.). Equipped with this new mission, the French government decided to narrow even more the role of the FSD to a specific intervention: pooled purchase of drugs and vaccines to strengthen access to HIV-related medical treatments in developing countries. At the end of the process, President Chirac was able to announce in parallel in 2006: 1 the establishment of a solidarity levy on air tickets, 2 the channeling of its proceeds to a newly created Solidarity Fund for Development (FSD) and 3 the creation of Unitaid, a global health initiative dedicated to bringing innovations to prevent, diagnose and treat major diseases in low- and middle-income countries, with an emphasis on HIV/AIDS.

Recent Developments – The 2025 Finance Law increased the rates of both the TSBA and the TTF but also ended the automatic earmarking of some of the proceeds to the FSD, de facto abolishing the existence of this autonomous, innovative solidarity fund. From 2025 onward, proceeds from these taxes are integrated into the general budget, and allocations to international programs are decided annually through the regular budget process. This reform, contested by the development community, weakens the predictability that had made the FSD distinctive.

FIGURE 15: EVOLUTION OF FSD'S FINANCING CAPACITY COMPARED TO THE GENERAL ODA BUDGET



Source: DG Trésor, Ministère de l'Europe et des affaires étrangères, Cour des comptes, I4CE analysis.

As a matter of fact, French **solidarity levies had distinct, stabilizing features compared to the overall development budget of France.** Until 2016 and the switch to an annual "hard cap" of €738 million, the FSD played an important countercyclical role, balancing the gradual decrease of the French ODA budget *(Figure 15).* From 2016 to 2024, its stable resources funding health and climate-related multilateral organizations, allowed France to manage the important increase in its ODA budget strategically, focusing budgetary resources on strengthening its bilateral aid. Since 2025, the suppression of the direct link between solidarity levies and the FSD, which became a regular budget line, has come with a drastic cut in France's ODA budget.

V. RECOMMENDATIONS & NEXT STEPS

Allocating scarce concessional resources is inherently complex and ultimately a political decision. While this report identifies key funding gaps and guiding principles, detailed allocation mechanisms will depend on several interconnected parameters and on the outcome of the negotiations conducted by the Global Solidarity Levies Taskforce regarding revenue expectations, governance arrangements, additionality, accountability and reporting mechanisms, etc. In particular, the funding gaps and potential use cases for solidarity levies identified by this analysis should be refined and revised, once there is more clarity about the levels of revenues from the global solidarity levies – accounting for the risk of limited additional revenue in the first years of the levies (before growing the coalition further) *(GSLTF, 2025c).*

Beyond specific use cases, concessional grant use – as with all public financial flows – should always align with national priorities reflected in NDCs, NAPs, LT-LEDS, and broader national development strategies. Country analyses confirm that needs and capacities vary widely, and "no one-size-fits-all".

Potential use cases for solidarity levies outside of the climate-development nexus were also intentionally left out of the analysis. Past examples of solidarity levies and the literature do identify relevant use cases for concessional, debt-free resources in the field of global health, human development or the protection of biodiversity. However, the mandate of the GSLTF – which focuses on climate and development – the climate-related nature of most of the levy options under review[17] as well as the political circumstances under which the GSLTF was born – drawing from high-level calls to reform the international financial system to better address the dual challenge of "People and Planet" – make it relevant to focus on the climate-development nexus.

Moreover, focusing on climate action does not imply leaving out the development agenda: when focusing on carefully targeted interventions that match country priorities, climate action is indeed nothing less than "climate-smart development". This is particularly evident for adaptation and resilience: resilient infrastructure, sustainable agriculture, or early warning systems generate strong co-benefits across health, social protection, and economic resilience.

However, our analysis of climate-related development flows, top-down estimates, country priorities, as well as the review of the available literature and expert opinions all converge towards a set of four guiding principles for the allocation of solidarity levy revenues:

Principle n°1: Establish a clear use of the revenue and demonstrate impact

Connecting the use of revenue to the broad objective pursued by the levy – e.g. dedicating the use of proceeds from carbon emissions-related levies to the broader fight against climate change – ensures political legitimacy and fosters domestic support.

Fiji's Climate Relocation of Communities Trust Fund is a prime example of a clear tax base-use case alignment, with two climate-related levies – plastic and superyacht – funding a climate-related use case – the relocation of climate-vulnerable communities.

Principle n°2: Prioritize adaptation, resilience, and loss and damage

Top-down analysis of funding needs and gaps, bottom-up reviews of country priorities and the broad literature on optimal allocation frameworks all lead to the same conclusion: scarce grant-based finance should be ring-fenced for adaptation, resilience and loss and damage.

17. Including the first coalition on premium flyers.

This comes from a double imperative: 1 targeting grant money on areas that no other type of other official or private flows can adequately support; 2 maximizing the development impact of climate-related interventions in countries where climate change is only one aspect of a much broader development challenge.

Prioritizing adaptation and resilience is also an important way to address the indebtedness of SIDS and LDCs. A new flagship report on the returns on resilience shows a link between improved resilience and lowered borrowing cost when controlling for conventional macroeconomic determinants of sovereign bond spreads and credit worthiness *(Systemiq et al., 2025).*

Principle n°3: Focus on sectors with no investment case for private or non-concessional

Within adaptation, resilience and loss and damage, it would be relevant for solidarity levies to target specific interventions based on their comparative ability to attract other forms of private or non-concessional public investments.

In that perspective, disaster risk management, early warning systems and coastal zone protection are particularly relevant sectors. Focusing on these sectors targets the grey zone between adaptation and loss and damage, an important focus area according to several experts. Disaster risk management has been mentioned by experts as a particularly important sector to avoid setbacks in development.

There is widespread literature on the benefits of early warning systems in particular. Some studies estimate the cost-benefit ratio ranges from 4 to 36[18]. To illustrate the scale of the costs, the UN initiative "Early Warning Systems for All" *(UN, 2023)* suggests the following:

- **US$ 152 million** to develop regional data and products for flood and drought modelling for all LDCs and SIDS.
- **US$22.8 million** for capacity development on search and rescue operations for floods for all LDCs and SIDS
- **US$15.2 million** to conduct a simulation to test the effectiveness of flood and drought early warning systems in all LDCs and SIDS.

In addition, and given the limited resources that could be initially available, the use of revenues from solidarity levies would also benefit from a focus on technical assistance and capacity building, with grants playing a catalytic role by strengthening institutions and implementation capacity. This is an area where countries express important needs.

Principle n°4: Link allocation to climate and financial vulnerability rather than income

Eligibility for grant-based financing derived from solidarity levy revenues should consider broader dimensions of vulnerability rather than income alone, reflecting the needs of SIDS and LDCs in particular. Taking a broader perspective than just income has been a consistent highlight throughout the literature, bottom-up review and expert consultations. While the Multidimensional Vulnerability Index offers a starting point, definitions should remain context-specific and pragmatic.

Furthermore, the allocation of scarce debt-free resources should – quite self-evidently –target countries facing a high risk of debt distress and having limited fiscal space. The growing share of non-concessional finance for climate action in LDCs and SIDS underlines the urgency and relevance of providing additional debt-free resources.

18. This assessment does not take into account the possibility that reduced disaster losses can lead to accelerated economic growth, so actual economic benefits are probably understated.

Perspectives

Further work is needed to refine allocation criteria and quantify needs once several parameters for the Global Solidarity Levies become clearer. This paper has only scratched the surface of the complexity underlying the optimal allocation of concessional finance for climate action. It has also highlighted the general lack of disaggregation of concessional finance into loans and grants in both the literature and official frameworks, suggesting the need for future analyses.

Future analyses could include:

- Allocation scenarios, to provide guidance on strategic approaches for allocation and prioritisation across different areas for countries, balancing the size of the coalition, expected revenues, targeted countries, sectors, etc. The analysis could build on existing use cases mentioned in this report.
- A follow up analysis linking scenarios on allocation mechanisms to channels for delivery with a view to leveraging existing funding and building trust across stakeholders in the implementation process (exploring domestic channels and redistribution through multilateral frameworks).
- A systematic study of countries' access to different financing types and barriers to entry.
- Targeted consultations with government representatives on country priorities.
- Improved methodologies to estimate loss and damage needs.
- Expanding the analysis beyond the climate-development nexus to include biodiversity and nature-based finance.

IV. APPENDIX

1. SUMMARY TABLES – TOP-DOWN ANALYSIS OF CLIMATE-RELATED DEVELOPMENT FINANCE

TOTAL CLIMATE-RELATED DEVELOPMENT FINANCE (BN US$)				
GROUP	2020	2021	2022	2023
All recipients	96.8	98.0	129.8	145.1
LDCs	21.3	18.9	26.0	28.6
SIDS	2.4	2.6	4.0	4.6

ADAPTATION (BN US$)				
GROUP	2020	2021	2022	2023
All recipients	49.9	47.5	65.3	65.5
LDCs	13.8	12.2	17.9	20.3
SIDS	2.1	1.9	2.6	3.3

MITIGATION (BN US$)				
GROUP	2020	2021	2022	2023
All recipients	58.9	64.0	86.4	104.1
LDCs	9.0	8.5	11.4	15.0
SIDS	0.9	1.1	2.0	3.1

OVERLAP (BN US$)				
GROUP	2020	2021	2022	2023
All recipients	12.1	13.5	21.9	24.5
LDCs	1.5	1.8	3.3	6.8
SIDS	0.6	0.4	0.6	1.8

Notes: Values are sums for each year; units = billion current US$.

2. DEEP DIVE **ON COUNTRY PRIORITIES**

COUNTRY	DOCUMENTS
> BARBADOS	**First updated NDC** (2021), **Second updated NDC** (2025) **Barbados 2025: National Investment Plan** (2024) **Comprehensive Disaster Management Policy** (2024) **Proposals for Barbados, Adaptation Fund** (2024)
> BANGLADESH	**Third NDC** (2025), **National Adaptation Plan (**2022), **World Bank Country Climate and Development Report** (2022), **Proposals for Bangladesh, Adaptation Fund** (2024)
> FIJI	**NDC** (2020), **Climate Vulnerability Assessment** (2017), **Displacement Guidelines** (2019), **National Climate Finance Strategy** (2022), **LT-LEDS** (2018), **NDC Implementation Roadmap 2017-2030** (2017), **National Adaptation Plan** (2018) **and Planned Relocation Guidelines (**2018)
> NEPAL	**NDC 3.0** (2025), **National Adaptation Plan** (2021), **LT-LEDS** (2021) **and World Bank CCRD** (2022)
> SENEGAL	**NDC (**2020), **Green Industrial Strategy** (2023), **National Adaptation Plan** (2025), **World Bank CCRD** (2024).
> SOMALIA	**NDC 3.0** (2025), **National Adaptation Plan** (2025), **Proposals for Somalia, Adaptation Fund** (2024)
> ZAMBIA	**NDC 3.0 (**2025), **National Adaptation Plan** (2023) **and NDC Implementation Framework** (2023)

1. BARBADOS

Barbados is a Caribbean SIDS with a small and open economy. It is classified as a high-income country. Barbados highlights in its NDC that it needs to focus not only on mitigation but also on adaptation and resilience.

➜ VULNERABILITY

The documents of Barbados make a strong and compelling case for **allocating debt-free concessional resources on the basis of vulnerability** and not income alone.

Despite its relatively high income, **Barbados is particularly vulnerable** to both economic shocks and climate-related risks such as rising sea levels and natural disasters. Reliant on tourism (approx. 40% of GDP), Barbados recovered in this sector a decade after the financial crisis only to be hit by the COVID-19 pandemic. In 2010, Tropical Storm Tomas caused damage estimated at US$ 8.5 million. These events in turn increased its external debt. The NDC therefore urges the adoption of the UN Multidimensional Vulnerability Indexand looking beyond per capita income thresholds when allocating concessional finance.

➜ NEEDS

Barbados needs approximately US$ 1.1 billion until 2035 to implement the adaptation and resilience measures within its NDC. US$ 150 million will be raised unilaterally with the remaining interventions requiring international support.

For the comprehensive national investment plan, which focuses on social, economic, and climate resilience, the **total needs are US$ 11.6 billion by 2035**. 60% of this is estimated to come from the private sector, and US$ 5 billion will come from public sources. Barbados can fund US$ 450 million of this, and US$ 1 billion is estimated to come from debt swaps. This leaves a financing gap of US$ 3.6 billion. The government expects that **US$ 850 million of public international grants will be necessary** for the plan. The focus areas with no private involvement are “a safe home for empowered communities”, “a country in which every student thrives” as well as the operational costs to implement the investment plan, which are estimated at US$ 500 million.

➜ USE CASES FOR CONCESSIONAL FINANCE

Barbados is calling for finance that can be accessed quickly and easily, "as loans are not the best solution for the country at the moment" given its high debt profile. Because of its high debt-to-GDP ratio, it is "actively identifying opportunities to access grant financing for specific climate change activities". This is partly due to the fact that "few blended finance modalities are available for resilience building and adaptation" combined with the difficulty of attracting private sector money to adaptation projects. The NDC therefore describes it as "critical" that grants and loans go to adaptation projects, and the first NDC describes a "false dichotomy between development and resilience".

Barbados is therefore, together with a grant from the Green Climate Fund, investing close to 3% of GDP in climate resilience, without adding to the country's debt burden.

In terms of specific focus areas, **water security and the stress on water resources** is described as the "most severe threat to Barbados' population and economy over the medium to long term" and the "largest climate change factor that will impact Barbados". The adaptation interventions in the water sector will require US$ 450 million until 2035. An example here is Barbados' first Green Climate Fund Project, which granted US$ 45.2 million to, amongst other things, install photovoltaic solar and backup natural gas power for pumping stations and the implementation of a water sector master plan. Barbados has also applied for a US$ 10 million grant from the Adaptation Fund for "Building Climate Resilience in Barbados-Sustainable Water Management in the Agriculture Sector and Educational Institutions".

2. BANGLADESH

Bangladesh is a low-lying South-Asian country scheduled to graduate from LDC status in 2026. It is highly exposed to climate-related hazards such as cyclones, floods, and sea-level rise. Bangladesh has a strong focus on adaptation and loss and damage throughout its documents. There is also a strong focus on equity throughout the documents.

➜ VULNERABILITY

Bangladesh is a highly climate-vulnerable country ranking 7th on the 2021 World Climate Index. Given that 28% of its population lives in coastal areas, Bangladesh is particularly vulnerable to sea level rise.

➜ NEEDS

Bangladesh needs US$ 116.18 billion to implement its NDC 3.0., of which US$ 25.95 billion are unconditional, and US$ 90.23 billion are conditional.

The country estimates that the annual adaptation investment requirement will reach between US$ 12 and 14 billion by 2035.

The NDC states that Bangladesh needs US$ 8.5 billion a per year to implement adaptation priorities but only received 0.4 billion annually on average from 2021 to 2023 from international sources, with 88% of adaptation finance coming from the government budget. It therefore concludes an annual adaptation finance gap of US$ 4.5 billion.

The National Adaptation Plan estimates adaptation needs at US$ 230 billion from 2023 to 2050. This requires an increase of seven times the current spending, at a rate of US$ 8.5 billion per year, with US$ 6 billion per year coming from external sources, international climate funds and development partners. Private sector involvement is estimated at a modest 5.1% of total investment.

Within this figure, US$ 40.4 billion is needed to ensure climate resilience of the agriculture, fisheries, aquaculture and livestock, and ecosystems, wetlands and biodiversity sectors.

The Bangladesh Delta Plan 2100 with the goal of achieving a "safe, climate resilient and prosperous Delta", requires US$ 38 billion by 2030 (in 2015 prices) with 20% coming from private sector partners.

Its strategy to address **loss and damage** associated with adverse effects of climate change is **fully conditional on international support.**

➜ ACCESS TO ALTERNATIVES SOURCES OF FINANCING

The World Bank highlights that Bangladesh's banking sector is limited in its capacity to provide finance and price risk due to weak corporate and regulatory governance. The domestic capital market is nascent, and access to foreign borrowing is limited by a high level of foreign exchange restrictions.

➜ USE CASES FOR CONCESSIONAL DEBT-FREE FINANCE

For adaptation, Bangladesh is asking for enhanced access to the Green Climate Fund and the Adaptation Fund as well as **expanded opportunities for capacity building.** While the NDC 3.0 states that **Bangladesh will seek**

grants for the conditional target of its NDC, it does specify the uses for these grants.

For its plan to tackle loss and damage, Bangladesh asks for **"adequate, predictable, and accessible grant-based finance".** However, the NDC does not give a specific figure for the implementation of the plan, which includes a comprehensive needs assessment.

Bangladesh experiences around US$ 3 billion (approx. 1% of GDP) in annual climate damage caused by cyclones, floods, droughts and heatwaves. The World Bank estimates the annual losses from tropical cyclones alone at US$ 1 billion, although individual cyclone events could result in more significant losses, and 2.5 percent of the population is estimated to have been displaced as a result of climate-related disasters in 2019. On average, the Bangladeshi government is estimated to spend US$ 810 million in post-disaster interventions annually. A 1 in 40-year flood case could result in a funding gap of more than US$ 1.7 billion, and the cost of responding to disasters with a 1 percent chance of occurring in any given year could exceed US$ 6.5 billion according to the World Bank.

The World Bank estimates that planting mangroves on a newly accreted coastal island would cost US$ 25 million and lead to a carbon sequestration of 30 million tons of CO2 in 25 years. In addition, they state that mangroves currently protect between 1.1 to 3.5 million people in Bangladesh from coastal flooding during cyclones, which avoids an average of US$ 1.56 bn in annual damages.

Bangladesh's National Adaptation Plan lists estimated private sector investment potential for each intervention. A few examples of ones that have no projected private sector involvement (and therefore would be appropriate for grant-based financing) and that are simultaneously listed as high priority are:

- **Drought management measures** for enhanced groundwater recharge and increased soil moisture in water-stressed areas (US$ 99 billion).
- **Ecosystems-based sediment management** along coasts and in estuaries (US$ 681 million).
- **Transboundary river basin management** and basin-level cooperation (U$S 74 million).
- **Maintenance of the environmental flows of aquatic ecosystems,** rivers and wetlands (US$ 131 million).
- Development of **city climate action plans** for major urban and peri-urban areas emphasizing the resilience of urban-poor communities and climate migrants (US$ 33 million).
- Preparation of a **roadmap for implementing the NAP** (US$ 18 million).
- **Generation of national, regional and local-level evidence and scenario-based climate information** through climate downscaling and publication of national climate outlook, risk and vulnerability atlas (US$ 41 million).

The NAP itself explicitly calls for the use of grants in case of building resilient infrastructure. Bangladesh has also applied for a US$ 10 million grant with the Adaptation Fund to enhance the capacity of local governments and vulnerable communities to build resilience to climate change impacts and enhance country systems to access climate finance and deliver on locally-led adaptation efforts.

3. FIJI

Fiji is a SIDS located in the South Pacific Ocean classified as an upper-middle income country highly vulnerable to external shocks.

➜ NEEDS

The most recent NDC at the time of writing estimates the cost of implementing the NDC at **US$ 2.97 billion between 2017 and 2035.**

The National Climate Vulnerability Assessment lists interventions that will reduce Fiji's climate vulnerability with an investment need at US$ 3.99 billion between 2017 and 2027.

This is further broken down into investments for land-use planning, resilient housing and strengthening of informal settlements at US$ 86.86 million. The assessment also provides investment costs in flood and coastal protection, US$ 215 million for pluvial and fluvial floods and US$ 688 million for costal floods. Investments in ecosystem conservation and natural resource management is estimated at US$ 33.11 million. Building socioeconomic resilience and providing support to people affected by natural hazards is estimated at an annual cost of US$ 989.000.

The Climate Finance strategy provides a clear breakdown of the annual needs within the disaster risk management sector at a total of US$ 118.6 million.

- Include **vulnerability assessment** and climate change and natural hazards impact projections in infrastructure and urban planning: US$ 25.2 million.
- Develop an **integrated policy,** approach and operational plan to effectively address disaster management: US$ 299,000.

- National and subnational budgets include **processes to plan for disaster events** and include **emergency funding** to respond to natural disasters: US$ 4,000.

- Ensure rural community buildings are cyclone and flood resistant: US$ 93.1 million.

➜ LOSS AND DAMAGE

In 2016, Cyclone Winston resulted in US$ 600 million in damage and US$ 300 million in losses, an estimated 20% of Fiji's GDP. The National Climate Vulnerability Assessment puts the annual costs of cyclones at US$ 217.5 million, representing more than 5% of GDP. It has not been possible to quantify the costs of droughts and landslides, but the assessment lists the economic losses caused by the 1998 drought in Fiji as between US$ 119.6 million and US$ 130 million.

➜ USE OF CONCESSIONAL DEBT-FREE FINANCE

The Climate Vulnerability Assessment highlights how Fiji has mainly accessed concessional funds to support climate resilience and disaster risk management.

The National Climate Finance strategy lists a series of prioritized projects for the Adaptation Fund, which can be seen as indicative of Fiji's priorities for debt-free concessional finance. Amongst other regional Pacific projects, the strategy highlights a project for climate-resilient homes for US$ 10 million, and a WWF Coral Reef Resilience Program at US$ 65 million. The strategy also highlights a Green Climate Fund project focusing on "Climate Information and Early Warning Systems" for 14 Pacific SIDS at US$ 189 million.

Crucially, t**he National Climate Finance Strategy lists the cost of relocating a community at US$ 430,000.** Fiji has identified 15 communities that will need to be relocated.

4. NEPAL

Nepal is a landlocked country in South Asia. The country is expected to graduate from the LDC status to developing country status in 2026.

➜ NEEDS

Nepal's NDC 3.0 lists total estimated mitigation target costs at US$ 73.74 billion. Of this, US$ 10.8 billion (14.68%) are unconditional, and **US$ 62.9 billion (85.32%) will come from international support.**

According to the NDC 3.0, Nepal's adaptation needs until 2035 are estimated to be between US$ 18 and 20 billion. The NAP specifies that the total needs to implement the NAP until 2050 are US$ 47.4 billion. Nepal will provide US$ 1.5 billion of these, and the remaining US$ 45.9 billion will come from external sources. This means an annual need of US$ 2.1 billion to implement the priorities in the NAP. This is in turn broken down on a sectoral level:

- Agriculture and food security US$ 11.2 billion

- Forest, Biodiversity and Watershed Conservation US$ 8.7 billion

- Water resources and energy US$ 5.35 billion

- Rural and urban settlements US$ 2.85 billion

- Industry, transport and physical infrastructure US$ 3.05 billion

- **Tourism, natural and cultural heritage** US$ 1.13 billion

- **Health, drinking water and sanitation** US$ 4.75 billion

- **Disaster risk reduction and management** US$ 8.05 billion

- **Gender, social inclusion, livelihood and governance** US$ 0.7 billion

- **National capacity building, research and awareness raising,** US$ 0.16 billion

The NAP further mentions specific projects such as Building Climate Resilience by Developing and Harmonizing Disaster Risk Management and Climate Adaptation at Federal to Local Levels through Policy Reforms (integration of Disaster Risk Reduction in local adaptation plans) estimated to cost a total of US$ 1 billion over 20 years.

➜ LOSS AND DAMAGE

Nepal is experiencing significant climate change-induced loss and damage from both extreme events (floods, landslides, Glacial Lake Outburst Floods, droughts, wildfires and heatwaves) and slow-onset events (increasing temperature, glacier melting, loss of biodiversity). It has one of the highest fatality rates in the world from landslide events. Extreme rainfall in 2024 is estimated to have caused losses reaching US$ 345 million, and a flood in the Melamchi River basin caused losses estimated at US$ 498 million.

➜ USE CASES FOR DEBT-FREE CONCESSIONAL FINANCE

Nepal's NDC clearly states that it will prioritize grants for adaptation and loss and damage. For addressing climate vulnerability, enhancing community resilience, and addressing loss and damage, it will instead mobilize domestic and international resources rather than prioritizing grants. Nepal's NAP states that "Nepal will need an over-arching approach that identifies the most strategic use of grant funds from the GCF, bilateral donors, and MDBs, and domestic spending at the national provincial and local levels".

The World Bank's CCDR identifies several barriers for mobilizing private finance for resilience and adaptation in Nepal. These include "absence of localized climate risk and vulnerability data for specific investments, a lack of policies and institutional structures at the sectoral level to enable private sector participation, and weak financial incentives to address risks/higher costs". On the basis of their analysis, **the World Bank concludes that "the government's call for concessional finance is justified and efforts to mobilize and provide such finance should be strongly supported".**

5. SENEGAL

Senegal is a West-African LDC scheduled to graduate from LDC status in 2029. The country has a growing fossil fuel sector. Emissions will increase faster as oil and gas resources are developed. The development of oil and gas reserves is described by the World Bank as a "major turning point" for Senegal, and the IMF estimated in 2019 that the revenues could add an extra 1.5% to Senegal's GDP from 2022 to 2043.

➜ NEEDS

Senegal's most recent NDC estimates the overall cost of implementing the NDC at US$ 13 billion, with US$ 8.7 billion for mitigation and US$ 4.3 for adaptation. Within this estimate, mitigation is broken down with US$ 3.4 billion being conditional and **US$ 5.3 billion being conditional.** For adaptation, US$ 1.4 billion is unconditional and **US$ 2.9 billion is conditional.**

With a growing fossil fuel export, Senegal has unique mitigation challenges. The conditional mitigation costs are broken down in the following sectors: electricity production (US$ 1.9 million), domestic fuels (US$ 210 million), energy efficiency (US$ 619 million), industry (US$ 488 million), transport (US$ 13 million), waste (US$ 1.17 million) and agriculture (US$ 471 million).

The NDC breaks the adaptation costs down into the following sectors with conditional needs: agriculture (US$ 514 million), livestock (US$ 251 million), fisheries (US$ 238 million), water resources (US$ 538 million), coastal zones (US$ 505 million), biodiversity (US$ 203 million), health (US$ 175 million) and floods (US$ 505 million). In addition, the NDC lists US$ 100 million as necessary for capacity building for the period of 2020-2030.

The World Bank highlights how four sectors account for almost 70% of adaptation needs. Water resource management (20%), flood risk management (17%), agriculture (16%) and coastal zone management (15%).

The 2025 adaptation plan gives a list of prioritized adaptation projects:

- Program for the Management and Valorization of Surface and Groundwater including strengthening the resilience of small producers and women producers to climate change and the promotion of precision irrigation at US$ 246.1 million.
- Climate Risk Management and Promotion of Good Practices for Resilient and Gender-Sensitive Agricultural Systems at US$ 201.3 million.
- Program for Research, Development and Dissemination of Climate-Adapted and Gender-Sensitive Agricultural Innovations at US$ 47.7 million

Senegal also lists a need of US$ 9.9 million for the coordination and overall steering of the NAP.

The World Bank estimates the cost of nature-based solutions in Dakar at US$ 28 million and US$ 69 million in Greater Dakar.

Senegal's clean cooking targets from the 2020 NDC require a total of US$ 137.5 million per year, with US$ 25.1 million from the public sector. The estimated benefit is US$ 3 billion per year, more than 21 times the public financing needed. However, there appears to be a large private sector potential with the World Bank expecting the private sector to take on more than 80% of the cost.

Senegal's Green Industrial Strategy further breaks down the conditional elements of the country's mitigation targets for the industrial sector.

- **Regulation** (feasibility studies, periodic audits, inspections). US$ 3.96 million with 0% conditionality.
- **Environmental/Energy Upgrading of Enterprises.** US$ 81 million with 70% conditionality.
- **Waste Recovery in the Agro-industry.** US$ 126 million with 95% conditionality.

- **Energy Efficiency in Cement Plants.** US$ 28.8 million with 100% conditionality.
- **Natural Gas.** US$ 138.6 million with 100% conditionality.
- **Clinker Substitution.** US$ 21.6 million with 100% conditionality.

➜ LOSS AND DAMAGE

Senegal is particularly vulnerable to sea level rise, as 52% of its population lives in coastal zones, in which 90% of its industrial facilities are located. Senegal has also experienced increasing losses from extreme weather events. Between 1980 and 2008, floods caused an average of US$ 42 million in damage. In 2017 a flood in the Dakar region caused an estimated US$ 230 million in damage (1.4% of GDP). Worsening environmental conditions and depleted natural resources are also expected to force up to 1 million people to migrate within Senegal by 2050, one of the highest migration rates among West-African Countries.

➜ USE CASES FOR CONCESSIONAL DEBT-FREE FINANCE

The World Bank's CCDR breaks each sector into expected public/private sector shares in costs. The sectors without any expected private sector involvement are Coastal Zone Management, Disaster Risk Management, Solid Waste Management, Social Protection, Education, and Human Health.

Senegal's JETP, signed in 2023, aims to mobilise 2.5 billion euros over a period of 3 to 5 years, with the objective to reach 40% of renewable energy in its energy mix by 2030. A detailed financing plan is expected, with the following mix of financing: 6.6% in the form of grants, and 69.2% in the form of concessional loans, the rest being on market terms.

Somalia is an African LDC. Troubled by social and economic fragility, climate change is expected to contribute to heightened tensions and conflict. Its NDC emphasizes that Somalia as a low-emitting country with high climate vulnerability, will prioritize adaptation and resilience.

6. SOMALIA

➜ NEEDS

Adaptation is "at the core" of Somalia's climate action strategy. The NDC 3.0 estimates climate-induced shocks to cost US$ 6.33 billion from 2025 to 2035. Within adaptation, Somalia identifies key sub-sectors such as agriculture, water resource management, health, infrastructure and social protection.

The NDC breaks down the sectoral cost estimates for adaptation.

Agriculture, livestock, fisheries and food systems are estimated at US$ 400 million for crop production, US$ 1.2 billion for livestock, and US$ 300 million for promotion of marine aquaculture. Integrated water resource management is estimated at US$ 860 million. Agriculture and irrigation investments are estimated at US$ 360 million. Integrated public health resilience is estimated at US$ 800 million. Infrastructure and urban resilience US$ 1.4 billion.

Disaster risk reduction including early warning systems, emergency response and community-level risk management is estimated at US$ 210 million.

Just transition, including the promotion of green jobs and safety nets for vulnerable groups, gender equity and social inclusion, access to low-carbon, affordable technologies is estimated at US$ 200 million.

Loss and damage is estimated at US$ 200 million. This covers developing a national loss and damage strategy, setting up systems to track climate-related loss and damage and addressing slow-onset climate shocks and extreme events.

Other priorities include climate education, climate peace and security/displacements, priorities for people with disabilities, governance, knowledge management estimated at US$ 400 million.

This amounts to a total of US$ 6.33 billion for adaptation efforts in the NDC 3.0.

The NAP breaks this down in the short term and lists a need for US$ 2.4 billion for the period 2026-2030. In addition to sectors covered in the NDC, the NAP lists US$ 150 million for biodiversity conservation.

The NAP specifies that **70% of adaptation costs should be financed by external sources.**

➜ LOSS AND DAMAGE

The NAP estimates annual losses in the agriculture and water sectors exceed US$ 500 million and highlights how over 1 million people were displaced in 2022 due to drought and conflict. In 2023, floods affected 2.5 million people, displaced 1.2 million individuals and caused US$ 176 million in loss and damage. The 2017 draught is estimated to have inflicted economic losses of US$ 290 million, and factoring in reduced milk production and declining livestock populations, recent droughts are estimated to have caused losses of more than US$ 1.3 billion.

➜ USE OF CONCESSIONAL DEBT-FREE FINANCING

The NDC 3.0 highlights how Somalia lacks Direct Access Entities (DAEs) to the Green Climate Fund, which slows funding.

It does not specify where grants are most appropriate. However, it does identify priority mitigation and adaptation actions in sectors where the private sector can actively participate. These include **renewable energy, climate-resilient agriculture, waste management,** and **reforestation** and **land restoration**.

Somalia has applied for a US$ 10 million project with the Adaptation Fund, focusing on "Green and Resilient Ecosystems for Somali Livelihoods", which aims to scale-up the climate resilience of the ecosystems and livelihoods in Somalia by operationalizing the Great Green Wall initiative in the country.

7. ZAMBIA

Zambia is an LDC in Southern Africa characterized by high climate vulnerability and significant debt distress. In recent years, Zambia has faced mounting fiscal pressure as it became the first African nation to default on its sovereign debt during the COVID-19 pandemic.

➜ NEEDS

Zambia's NDC Implementation Framework for 2023-2030 estimates the total implementation cost at US$ 17.2 billion. Strengthening **climate resilience of agricultural production** and agriculture productivity is estimated at US$ 2.5 billion by 2030.

As part of **disaster risk management,** Zambia estimates that enhanced early warning systems with a focus on agriculture, livestock and fisheries will cost US$ 29.7 million by 2030.

The **forestry** sector is particularly important for Zambia, contributing 5.2% of GDP and providing formal and informal employment for 1.1 million people. To reduce vulnerability and strengthen resilience of livelihoods among forest communities US$ 301.5 million is required by 2030.

Enhanced **adaptive capacity** and strengthened resilience of infrastructure to climate shocks is estimated at US$ 831.6 million by 2030.

To promote **water security** of all Zambians via gender-responsive and climate-smart water infrastructure is estimated at US$ 464.2 million by 2030.

Increased resilience of the health sector to climate change is estimated at US$ 128.7 million by 2030.

➜ LOSS AND DAMAGE

In 2023-2024, Zambia experienced the driest agriculture season in more than forty years. The government estimates that US$ 941 million is required to respond to drought emergence.

➜ USE CASES FOR DEBT-FREE CONCESSIONAL FINANCE

Zambia's NDC 3.0 specifies that it will revise the NDC implementation framework to "broaden the scope for mobilizing highly concessional financing including grants and interest-free loans". The NDC implementation framework **does not specify breakdowns of types of finance** but states that "traditional sources identified include domestic revenue, grants, donations and concessional finance that will also form the primary source of financing adaptation and mitigation projects".

3. LIST OF **EXPERTS CONSULTED**

GSLTF EXPERT GROUP:

- **Professor Benito Muller,** Managing Director of Oxford Climate Policy, and Director of the European Capacity Building Initiative (ECBI).
- **Gina McCarthy,** Senior Advisor at Bloomberg Philanthropies and Managing Co-Chair of the America is All In coalition. Former White House National Climate Advisor and US EPA Administrator.
- **Marilou Uy,** Non-Resident Senior Fellow at the Global Economic Governance Initiative at the Boston University Global Development Policy Center.

OTHER EXPERTS:

- **Homi Kharas**, Senior Fellow at the Center for Sustainable Development at Brookings.
- **Bertrand Badré,** Managing Partner and Founder of Blue like an Orange Sustainable Capital. Former rapporteur of the French Government taskforce on international levies (2003 - 2004).

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