UN environment programme

Come hell and high water

As fires and floods hit the poor hardest, it is time for the world to step up adaptation actions

Executive summary

Adaptation Gap Report 2024

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As climate impacts intensify, adaptation action continues to fall behind needs. The twenty-ninth Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 29) in Baku provides an important opportunity to alter this trajectory.

Ever more frequent and extreme climate impacts illustrate just how much is at stake as global average temperatures rapidly approach 1.5°C above pre-industrial levels, while mitigation action is woefully underachieving on the scale and ambition needed to keep within the long-term temperature goals of the Paris Agreement. As climate impacts rise with warming, both the costs of reducing risks through adaptation and the likelihood of the residual risks manifesting in the form of losses and damages increase. These climate impacts hit the poor and vulnerable hardest, including women and disadvantaged groups. Effective and adequate adaptation action incorporating elements of fairness and equity is thus more urgent than ever before. By strengthening the adaptation components in their third set of nationally determined contributions (NDCs), due in February 2025, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) can emphasize their adaptation priorities and the means needed to achieve them.

The *Adaptation Gap Report* (AGR) 2024 provides its annual assessment on progress in adaptation planning, implementation and finance. It shows that, while inching forward on adaptation planning, collectively developing countries are falling behind on implementation because of the enormous gap between adaptation finance needs and flows. This is especially relevant in the context of the New Collective Quantified Goal (NCQG) for climate finance, which is to be established during COP 29 in Baku. However, given the scale of the challenge, the NCQG can only be a part of the solution, and bridging the adaptation finance gap will also require innovative approaches and enabling factors to mobilize additional financial resources. In addition to finance, there is a need to strengthen capacity-building and technology transfer, and to enhance the effectiveness of adaptation actions. As the Azerbaijan Presidency has made *means of implementation* a central tenet of COP 29, this year's AGR also provides deeper insights into the status and trends of capacity-building and technology transfer, and how improving them can contribute to enhancing effective adaptation planning and implementation. Lastly, given the AGR's role in providing regular progress updates on metrics relevant to the global goal on adaptation, this year's report also reflects on what can already be said about progress towards several of the targets laid out in the United Arab Emirates Framework for Global Climate Resilience (UAE FGCR) that was agreed at COP 28 in Dubai.

To that end, this executive summary is structured around four headlines that cover main topics of the AGR 2024: 1) progress in adaptation planning, implementation and finance; 2) bridging the adaptation finance gap; 3) enhancing capacity-building and technology transfer to improve the effectiveness of adaptation actions; and 4) insights into aspects of the UAE FGCR.

1. Progress in adaptation planning, implementation and finance

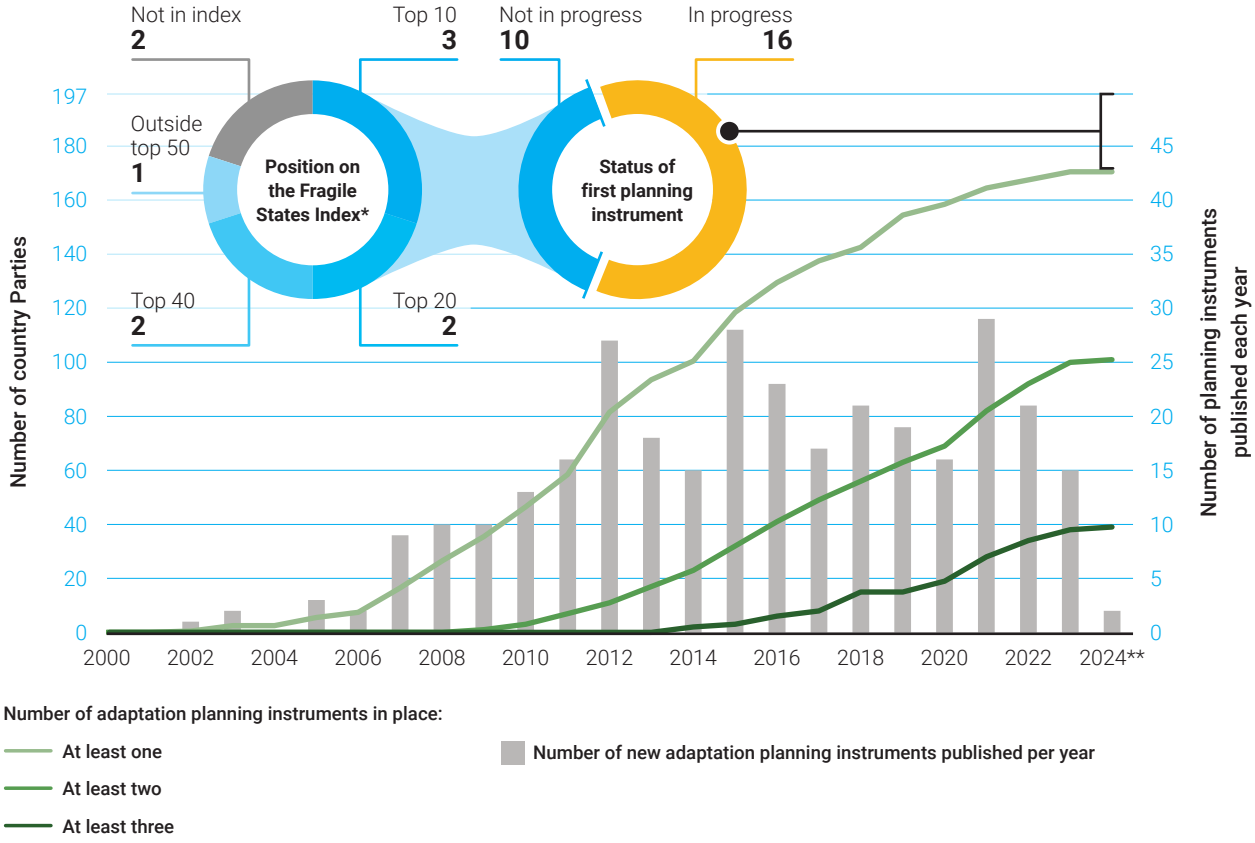
The quality of adaptation planning is improving, but reaching global coverage of national adaptation planning instruments will be difficult.

As a result of the increased attention to and investment in adaptation planning over the past two decades, 171 countries (87 per cent) now have at least one national adaptation planning instrument (policy, strategy or plan) in place. Of these, 51 per cent have a second and 20 per cent have a third instrument (figure ES.1). However, although 16 of the 26 countries without a national planning instrument are in the process of developing one, there remain 10 countries that currently show no indication of developing such an instrument. Seven of these countries rank highly on the Fragile States Index, suggesting that they face internal fragility, conflict or geopolitical tensions. To close the gap and meet the UAE FGCR target on adaptation planning will require increasing quantities of support going to these fragile and conflict-afflicted countries. Further, as these countries are likely to be hindered by weak institutions, the support which is provided will need to include significant and sustained capacity- and institutional-strengthening.

In addition to coverage, the quality of the planning instruments is an important indicator for the likely effectiveness with which they can be implemented. An analysis of the national adaptation plans (NAPs) submitted to the UNFCCC secretariat reveals that the potential effectiveness of adaptation planning is mixed. Most countries identify a mix of priorities that address both specific, sectoral climate risks and enablers of adaptation action, while addressing issues of inclusivity and participation, including of historically disadvantaged groups, such as women, indigenous peoples and local communities. However, there are shortcomings in the robustness of the evidence base and gaps regarding

specific timeframes for and costs of adaptation priorities affecting their implementability. Thus, there is significant scope for improvement as countries introduce new or update existing national adaptation planning instruments. Finally, an analysis of alignment between NAPs and NDCs finds that most countries' NAPs and NDCs are only partially aligned (68 per cent), with a further 16 per cent showing no alignment. As countries update their NDCs, significant emphasis should be placed on ensuring alignment between these two instruments, so that they can mutually reinforce each other, lead to more strategic investments and avoid duplication of effort.

Figure ES.1 Publication of national policy instruments for adaptation over time

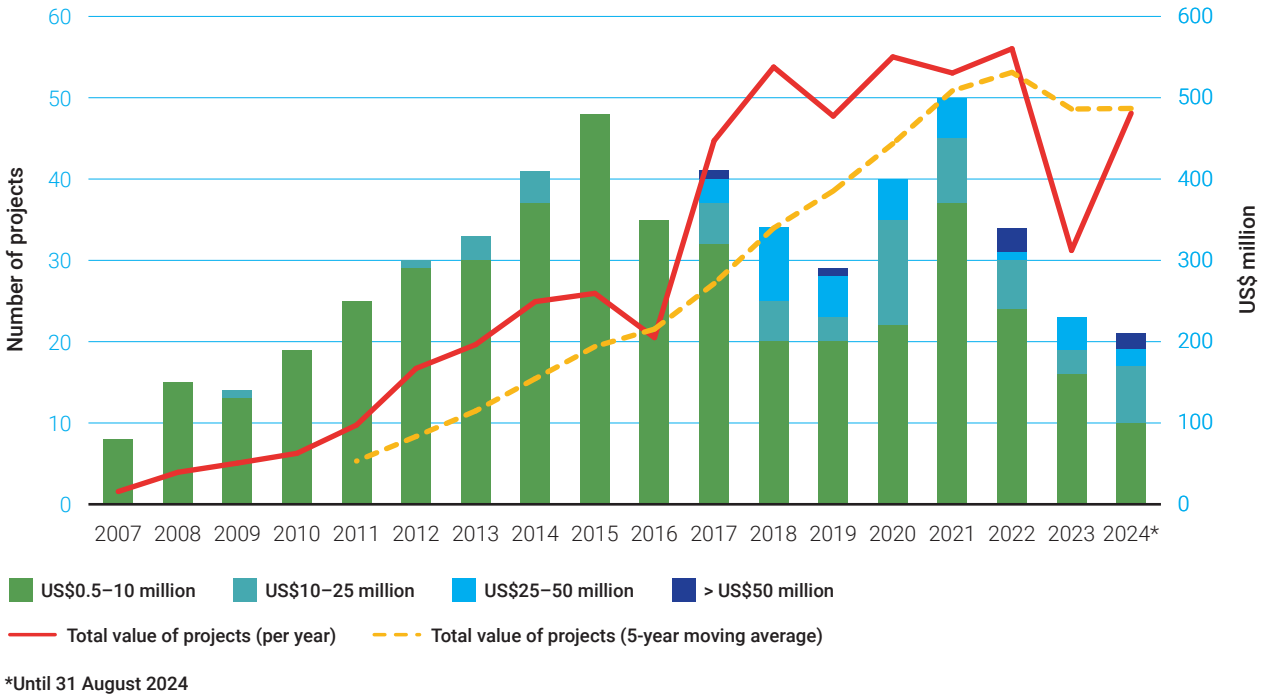


*Average position between 2020 and 2024 **Until 5 August 2024

Progress in adaptation implementation is slow and marred with problems. Countries need to ramp up their ambitions to prepare for increasing climate risks.

Across different data sources, information on the implementation of adaptation actions shows large annual fluctuations but they ultimately result in a slight upward trend over time (figure ES.2). Yet considering the pace of climate change, a boost in support of adaptation implementation is urgently needed. Greater focus on and support provided for adaptation in the next round of NDCs could give credence to strengthened country ambitions and actions. Next to the lack of acceleration in adaptation implementation, final evaluations of adaptation actions implemented with support from the financial mechanisms of the UNFCCC and the Paris Agreement show that approximately half are rated either not satisfactory in their results, or are unlikely to be sustainable without project funds in the longer term. Analysis of NAP implementation progress reports shows mixed results, and reveals a range of institutional, regulatory, financial and capacity-related barriers limiting progress. Countries often overcome initial difficulties and report significant progress regarding the extent of actions that are under implementation. However, data on the results and effectiveness of NAP implementation remains very limited. Of those countries that have assessed the adequacy of their adaptation response, all found it to be insufficient relative to the extent of climate risks.

Figure ES.2 Progress in adaptation projects supported by the financial mechanisms serving the UNFCCC and the Paris Agreement



*Until 31 August 2024

Note: Funding dropped by almost US$250 million in 2023 compared to 2022, but investment until August 2024 is already showing signs of recovery.

The adaptation finance gap remains extremely large, and bridging this gap is a priority for the NCQG for climate finance.

International public adaptation finance flows to developing countries increased from US$22 billion in 2021 to US$28 billion in 2022: the largest absolute and relative year-on-year increase since the Paris Agreement. This reflects progress towards the adaptation component of the Glasgow Climate Pact (figure ES.3), which urged developed country Parties to at least double their collective provision of climate finance for adaptation to developing country Parties from 2019 levels by 2025, though further significant increases are required to achieve this goal. However, even if this doubling is achieved, it would only reduce the adaptation finance gap by about 5 per cent. The adaptation finance gap is relevant in the context of the NCQG for climate finance, which is to be established before 2025. A comparison of adaptation finance needs (estimated at US$215–387 billion/year in the AGR 2023) against 2022 international public finance flows shows that a very large adaptation finance gap still exists. However, the assessment of the gap is constrained by insufficient data on finance flows from domestic public and private sector sources, both of which are important sources of adaptation finance. It is also noted that based on the latest year of available data, debt interest payments of developing countries (excluding China) were larger than estimated adaptation finance needs, potentially providing opportunities for debt reform to contribute to supporting adaptation action.

2. Bridging the adaptation finance gap

Meeting the climate challenge will require a scaling up of adaptation finance, but also a more strategic approach to investment.

The AGR 2024 is further reporting on the current finance gap and the types of adaptation that need financing – and not just the total level of finance. To do this, it has developed a typology of adaptation and financing challenges (figure ES.4). The figure shows that it is generally easier to finance no-regret, reactive and incremental adaptation (top left), and adaptation in market sectors (bottom left). Conversely, it is more challenging to finance anticipatory and transformational adaptation (top right), and adaptation in non-market sectors, especially for the most vulnerable (bottom right). This applies to all financing (including domestic public and international public financial institutions), but it is especially the case for private sector financing. However, to meet the scale of the climate change challenge, adaptation financing needs to shift from the historic focus on reactive, incremental and project-based financing (top left) towards more anticipatory, strategic and transformational adaptation (top centre and right). This requires more action in areas that are harder to finance and more complex to develop. Treating adaptation as if it is similar to mitigation, i.e. focusing on technical options, or concentrating on the easiest-to-finance areas only, will not deliver the scale or types of adaptation needed.

Figure ES.3 Comparison of adaptation financing needs, modelled costs and international public adaptation finance flows in developing countries

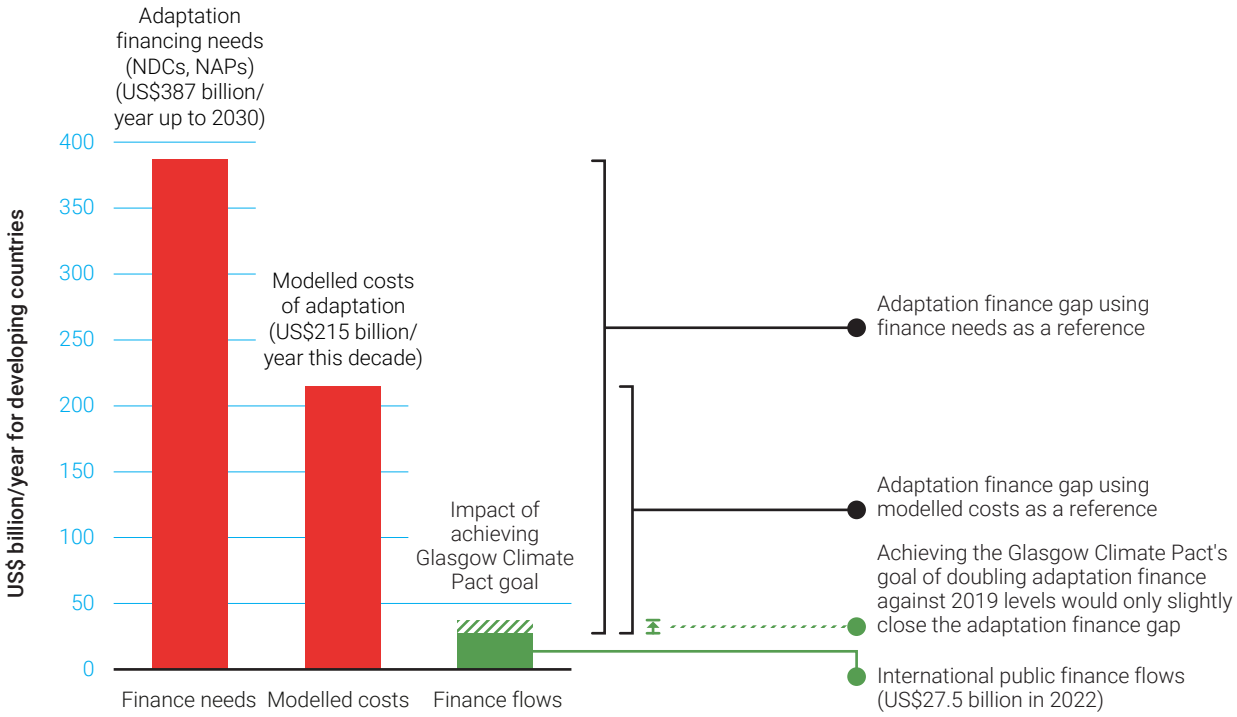
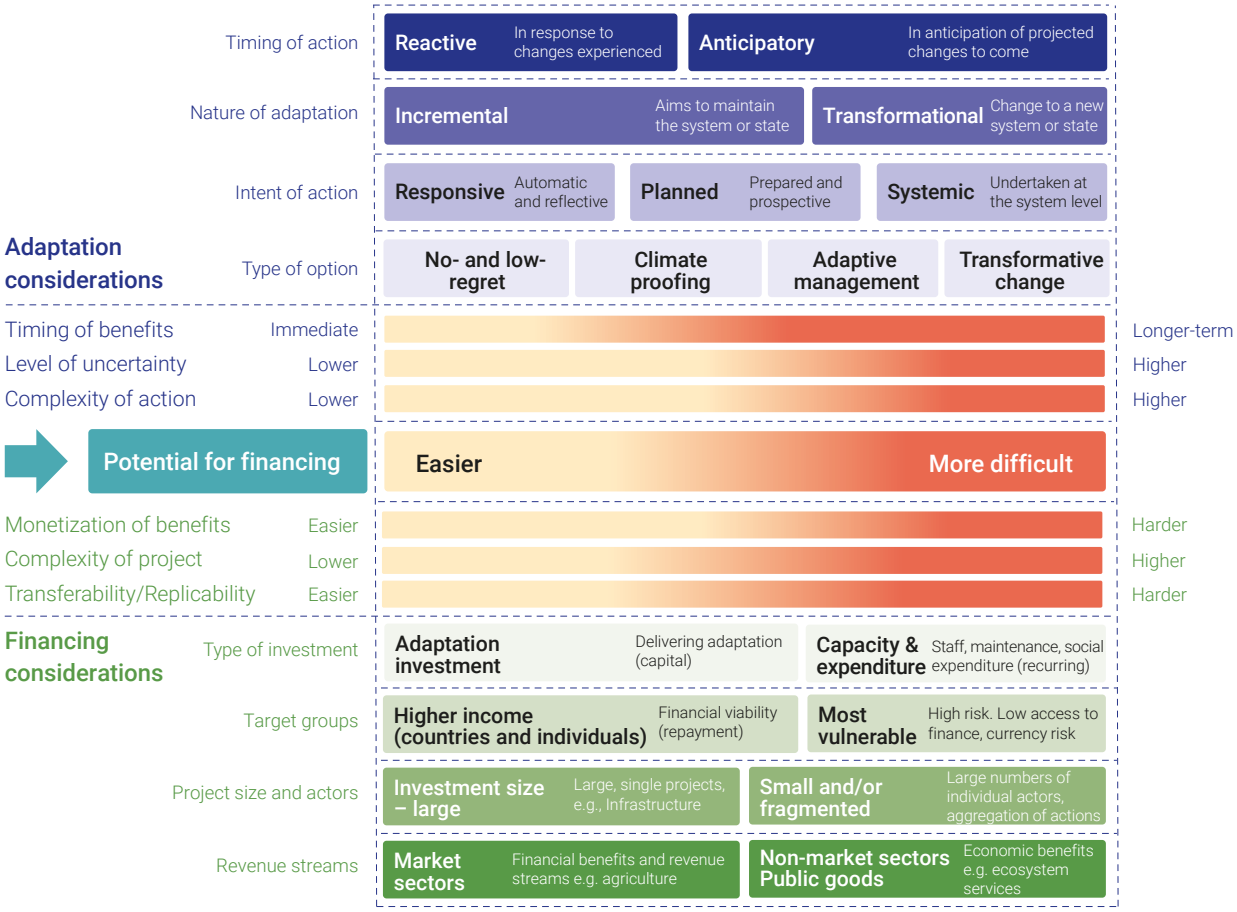


Figure ES.4 Adaptation types and ease of financing to better elucidate the opportunities for private sector engagement



Source: Modified by authors based on Watkiss (2024).

Only around one third of the adaptation finance gap is in areas typically financed by the private sector, but there is still a large opportunity for private sector investments.

Over two thirds of estimated costs/finance needs are in areas that are typically financed by the public sector through international or domestic sources, because they have public good characteristics or are in social or non-market sectors. This means that without more public finance (international and domestic) – or innovative approaches to financing – it will be difficult to deliver the majority of countries' adaptation priorities (as set out in NDCs and NAPs). At the same time, one third of modelled costs/finance needs are in areas that have potential for private financing, such as, for example, in market sectors including commercial agriculture, water and infrastructure. However, even in these cases, there is often a need for the public sector to use public finance to de-risk and unlock private investment. There will also be private sector investment in areas that are not well covered in the current adaptation gap estimates, including private sector infrastructure needs, as well as greater cooling needs and impacts on temperature-related labour productivity.

Enabling factors are key for unlocking adaptation finance, especially for the private sector.

Given the barriers to adaptation, there is a need for enabling factors to help unlock adaptation finance, for both public and private sectors. The AGR 2024 has reviewed and identified a number of the most important enabling factors for finance.

- First, a number of new approaches and financial instruments are emerging which seek to address some of the challenges to adaptation, by better defining adaptation outcomes or creating incentives for adaptation investment, including risk finance; insurance-linked instruments; performance-based climate resilience grants; resilience credits; debt for adaptation swaps; payments for ecosystem services; work for taxation; and resilience bonds.

- Second, for the public sector there are also a number of enabling factors that include the creation of funds and financing facilities; climate fiscal planning and climate budget tagging; mainstreaming in national development planning and medium-term expenditure frameworks; and adaptation investment planning. These could also be supported by various reforms being proposed for international finance institutions and multilateral development banks.

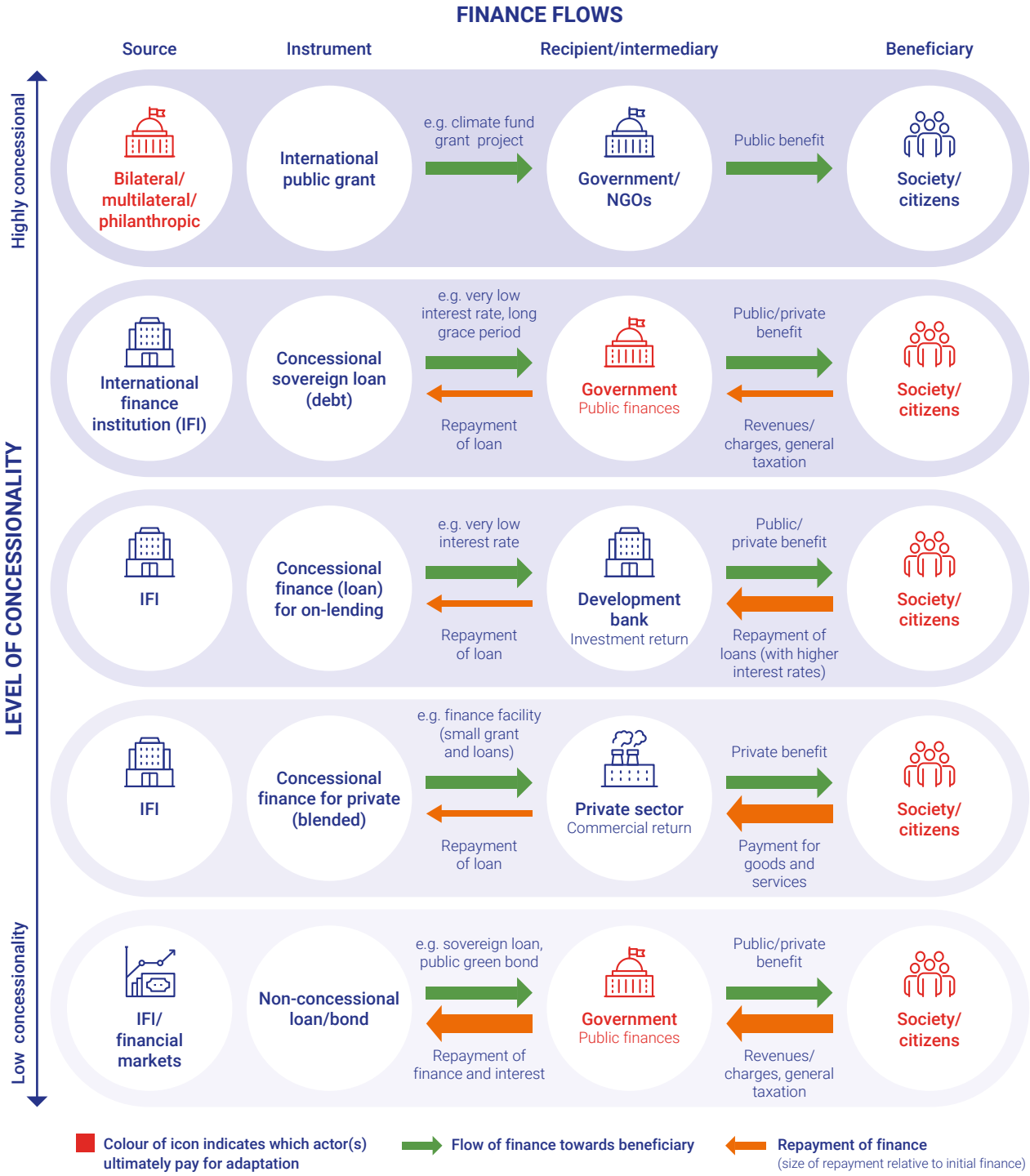
- Third, for the private sector, enabling factors include climate risk disclosure frameworks, transition planning and adaptation taxonomies. They also include new approaches and financial instruments that seek to de-risk private sector finance using public (blended) finance. These can be further supported by adaptation accelerators and platforms, which can catalyse new models and instruments, and help develop bankable projects.

However, all these enabling activities will require capacity to deliver, and also require financing. This also means that there are many demands on the available concessionary public finance, such as delivering more ambitious public adaptation, de-risking private investment, and supporting enablers. Critically, this means that there is a need to use the available international public concessionary finance much more strategically.

The question of who ultimately pays for adaptation is not being adequately addressed in the current discussion on adaptation financing.

Adaptation finance flows have very different profiles at subnational levels for the most vulnerable groups in society. These differences are relevant for the international negotiations around the NCQG and the finance flows from Annex I to developing countries. The AGR 2024 has explored this issue, diving deeper into the question of who pays for and who benefits from adaptation finance, using flow analysis from lender to intermediary recipient (government, bank, private sector) and on to the impacted groups in a hypothetical least developed country (LDC) (figure ES.5). Except for the grant model (top) where the international funder bears all the costs, all other models ultimately lead to the LDC bearing much of the costs of adaptation. Therefore, while additional funding helps close the adaptation finance gap, it is not in line with the principle of common but differentiated responsibilities and respective capabilities – an underlying principle of the UNFCCC – nor with the polluter pays principle. Finally, in this context, it is also important to note that adaptation finance needs to consider gender equality and social inclusion much more strongly to avoid perpetuating existing inequalities.

Figure ES.5 Who ultimately pays for adaptation in LDCs?



3. Enhancing capacity-building and technology transfer to improve the effectiveness of adaptation actions

Capacity-building and technology transfer are central to enhancing adaptation action in developing countries, but there is uncertainty regarding their effectiveness.

In addition to finance, capacity-building and technology transfer are critical to enhance effective adaptation action. However, despite references to capacity and technology needs being nearly ubiquitous in UNFCCC documents, such as NAPs and technology needs assessments, ongoing efforts are often uncoordinated, expensive and short-term, and there is insufficient data to assess their effectiveness. To better understand how these two means of implementation can be strengthened and deployed in a coordinated manner, it is essential to close important knowledge gaps. For instance, the questions of which capacities and technologies are relevant for whom, and how they are to be developed

and transferred, remain under-studied, leading to difficulties in well-grounded recommendations. Better integration, targeted support and greater South-South, North-South and triangular cooperation could go a long way to closing these knowledge gaps, and could be articulated in countries' revised NDCs and NAPs.

Developing countries express needs for more capacity and technology across all aspects of adaptation planning and implementation, with a focus on water, food and agriculture.

Greater capacities are needed for all aspects of adaptation planning and implementation, but there are differences across sectors. Food and agriculture are mentioned in nine out of ten NAPs, followed by capacity needs for sectors related to the environment, water and health. Capacity needs are articulated for sector-specific technologies, but also to enable better planning, implementation, monitoring and evaluation, as well as for a range of underlying enabling factors (figure ES.6). Similarly, by far the greatest technology needs are articulated for agriculture and water, whereas technologies for coastal zone protection, the third largest priority area, are relevant for a significantly smaller number of countries. Analysis of the total support provided to developing countries for technology-related adaptation efforts between 2018 and 2022 shows an increase from US$5.7 billion to 12.7 billion. Over the same period, the share of adaptation-related to total climate-related development finance for technology rose from 26 to 35 per cent. This suggests that there is an increasing focus of climate-related development finance to support adaptation through the introduction of new technologies. This is particularly evident for the agriculture sector, which is receiving on average 31 per cent of adaptation-related development finance per year – almost twice the amount committed to both transport and storage, as well as water and sanitation, which are the next biggest sectors. Hence, while much more funding is necessary to meet countries' needs, the technology needs assessments reveal that the available funding is at least largely going to the priority sectors.

Bridging the gap between capacity and technology needs and levels of action on the ground requires overcoming multifaceted challenges.

There are a number of factors that diminish the effectiveness of the support currently provided. Among the most prevalent are economic and financial constraints related to high upfront investment costs, difficulties in obtaining loans, and uncertainties surrounding the return on investments. These constraints are especially apparent for technologies that require significant capital investment, such as solar-powered irrigation systems where comparatively high installation and maintenance costs often hinder widespread adoption. In addition, legal and regulatory frameworks can pose major challenges, requiring more robust, streamlined and supportive domestic policies to foster the development and transfer of technologies and skills identified as important by developing countries. Moreover, in sectors such as agriculture and water where local conditions are critical, low technical capacity combined with a lack in infrastructure, information and awareness often result in poor adoption rates. Addressing these challenges requires additional funding, some of which could be covered by private sector investments. In addition, it is crucial to increase capacity in planning, implementation and the underlying enabling factors, which necessitates planning and coordinated efforts at the national and subnational levels to maximize the opportunities of making climate technologies and capacities more available for adaptation.

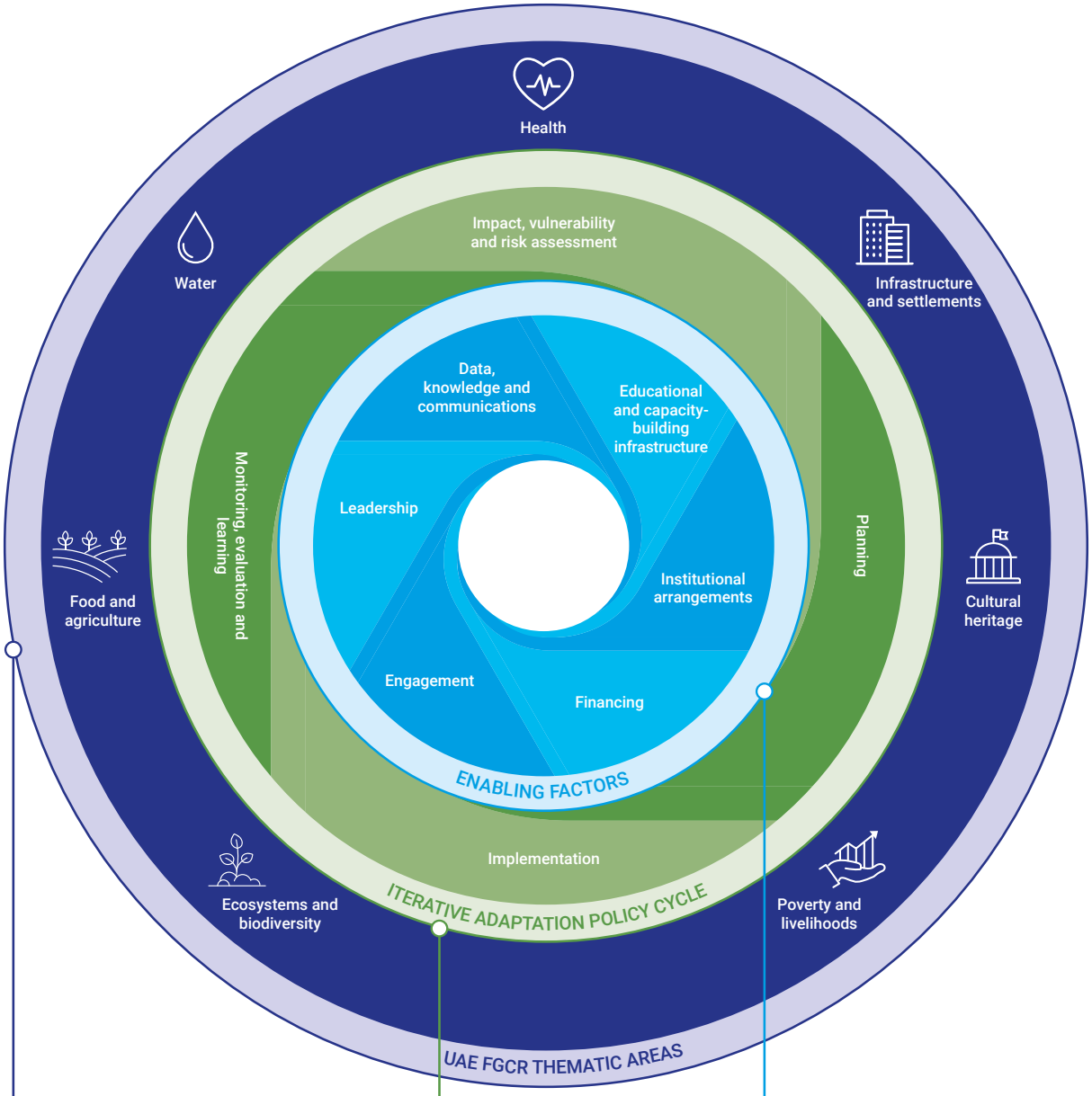
Better capacity-building and technology transfer could accelerate adaptation planning and implementation.

Based on its assessment, the AGR 2024 distills the following key recommendations to enhance the effectiveness of capacity-building and technology transfer:

- First, interventions to support capacity-building should start by identifying and mobilizing endogenous capacities that already exist; provide a balance of emphasis on "hard" (e.g. technologies) and "soft" (e.g. enabling conditions) capacities; and place gender equality and social inclusion considerations at their centre.
- Second, a far more robust evidence base to inform capacity-building interventions and technology transfer priorities is needed. This includes evidence derived from monitoring and evaluation on which approaches work, for whom, and when; on the actual costs of interventions; and on the current level of capacity-building and technology transfer needs.
- Third, capacity-building and technology transfer plans should support adaptation across sectors, scales and development priorities, and build capacity for transformational change. Current priorities are often too narrow, technical, and focused on responding to international commitments or immediate crises, limiting efforts towards deeper change.
- Fourth, the effectiveness of technology transfer relies on it being part of a broader development strategy, and strongly integrated with an associated assessment of capacity-building needs. Adaptation strategies should be developed based on a holistic understanding of the needs, rather than from the perspective of pushing a particular technology.

Considering these recommendations in efforts to enhance capacities and technology transfer would lead to more effective adaptation planning and implementation, particularly in combination with urgently needed additional adaptation finance.

Figure ES.6 Adaptation targets, processes and enabling factors



UAE FGCR THEMATIC AREAS

Health
- Risk assessment and monitoring
- Awareness and communications

Infrastructure and settlements
- Risk assessment and management
- Climate smart infrastructure

Cultural heritage
- Climate proofing
- Community engagement

Poverty and livelihoods
- Diversifying livelihoods
- Reskilling in vulnerable sectors

Ecosystems and biodiversity
- Risk assessment and monitoring
- Ecosystem-based approaches
- Community engagement

Food and agriculture
- Climate smart agriculture (techniques and technologies)
- Climate resilient food systems

Water
- Risk assessment and monitoring
- Community engagement
- Regulations

ITERATIVE ADAPTATION POLICY CYCLE

Impact, vulnerability and risk assessment
- Data collection and access
- Risk and vulnerability assessment

Planning
- Capacity assessments
- Cross-sectoral planning and budgeting

Implementation
- Use of adaptation technologies
- Community engagement

Monitoring, evaluation and learning
- Data collection and monitoring
- Institutional learning

ENABLING FACTORS

Data, knowledge and communications
- Communication and knowledge networks
- Data collection and access

Educational and capacity building infrastructure
- Integrating adaptation into education systems
- Training for public officials

Institutional arrangements
- Mainstreaming gender
- Regulations
- Climate literacy in government

Financing
- Proposal preparation
- Climate risk assessment

Engagement
- Gender-responsive outreach and communication
- Networks for dialogue and exchange

Leadership
- Strategic leadership
- Results-based management

Source: Adapted from NAP Global Network (2023) and UAE GFCR.

4. Insights into aspects of the UAE FGCR

Countries are making progress towards the targets of the UAE FGCR, but increased efforts will be needed to reach them in time.

The UAE FGCR, agreed during COP 28 in Dubai, provides a framework to track progress towards the global goal on adaptation. Considering that the AGR annually reports on progress in adaptation planning and implementation, this year's report takes the opportunity to reflect on what can already be said about the new framework's thematic and dimensional targets, acknowledging that the indicators that will be used to assess progress are yet to be identified and agreed.

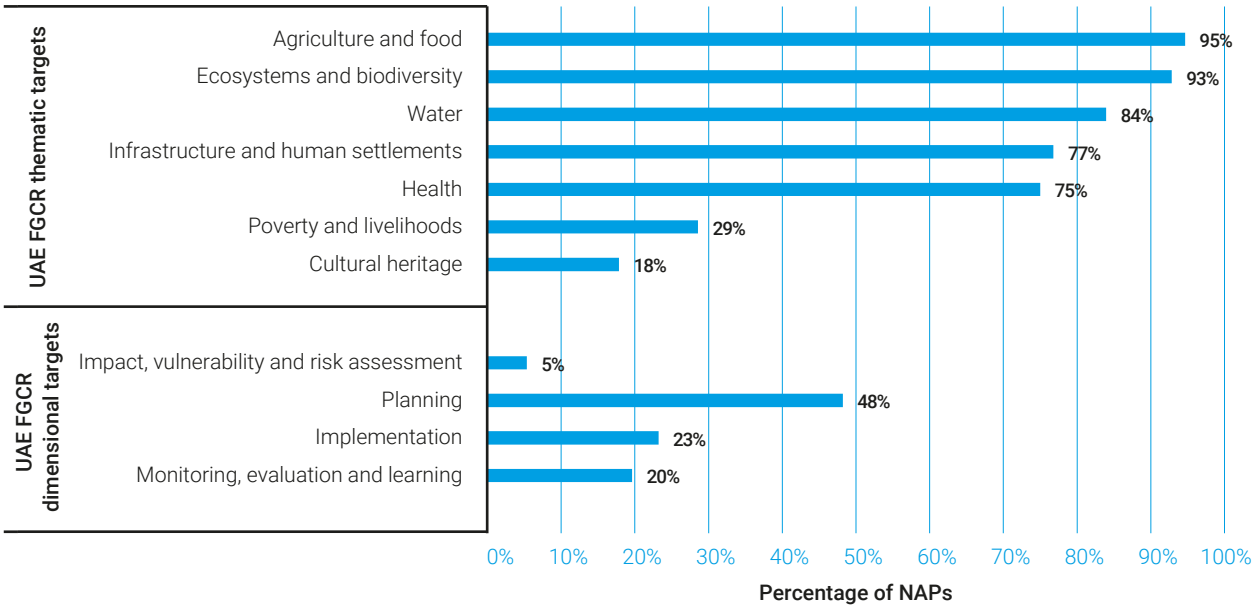
- First, almost all NAPs contain references to at least one of the framework's thematic targets, and about a third reference elements of the dimensional targets. With the exception of poverty eradication and protecting cultural heritage, thematic targets are well covered, whereas the dimensional targets are currently not receiving as much attention or are framed differently (figure ES.7). For instance, while implementation of adaptation actions is mentioned in less than a quarter of NAPs, it is widely described in the context of mainstreaming national and subnational sector development plans and processes, including budgeting. Similarly, while sectoral capacity needs largely map onto the thematic targets, underlying capacity needs are currently not always articulated according to the framework's dimensional targets (figure ES.6).

- Second, the NAP analysis further showed that information about future impacts, vulnerabilities and risks is uneven, frequently covering only a subset of sectors, if at all, and it is often presented in the context of data and knowledge gaps. Lacking capacity and technology to assess the complex nature of climate impacts reduces the ability for robust decision-making. Closing these gaps would therefore be important to support countries in achieving the framework's impact, vulnerability and risk assessment target by 2030. This is also relevant in the context of supporting countries with the establishment of multi-hazard early warning systems, climate information services for risk reduction and systematic observation to support improved climate-related data, information and services.

- Third, while nearly nine out of ten countries have at least one national adaptation planning instrument in place by now, the AGR shows that great efforts will be needed to reach global coverage by 2030, considering the current slow rate of progress towards closing this gap. Moreover, although there is evidence that many countries are in the process of implementing their adaptation priorities, it is too early to assess the rate at which this is occurring, not least because many countries lack monitoring, evaluation and learning frameworks. Lastly, considering that the quality of planning instruments and the levels of implementation are uneven in terms of data robustness, sector coverage, implementability and inclusiveness, it is still unclear whether countries are reducing the social and economic impacts of key climate hazards.

In conclusion, while it is difficult to assess progress towards any of the thematic targets in the absence of specific indicators and metrics, the adoption of clear timeframes for the achievement of the dimensional targets shows that efforts in impacts, vulnerability and risk assessments, planning, implementation, and monitoring, evaluation and learning need to be ramped up if these targets are to be met.

Figure ES.7 Percentage of NAPs with adaptation priorities addressing the thematic and dimensional targets of the UAE FGCR



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