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# Adaptation Gap Report 2020

Executive summary

# Executive summary – Adaptation Gap Report 2020

## Overall framing of the UNEP Adaptation Gap Report 2020

The year 2020 has been the year of COVID-19. The fallout of the pandemic is expected to significantly influence the ability of countries to plan for, finance and implement adaptation actions in response to current and future climate impacts, disproportionately affecting the most vulnerable countries and population groups. While it is too early to gauge the full extent to which COVID-19 will affect global adaptation processes, in the short term the acute need to manage the direct public health impacts of the virus and the subsequent economic fallout has seen adaptation fall down the political agenda at all levels of governance and resources earmarked for adaptation planning, finance and implementation have been reallocated to combat the pandemic. In the longer term, the socioeconomic consequences of the pandemic can be expected to have lasting implications for adaptation processes, as the economic downturn will put additional pressure on public finances and may change national and donor priorities regarding climate action. If implemented well, COVID-19 stimulus packages could lead to a more climate-resilient and low-emission recovery. However, analysis of the economic stimulus packages announced to date indicates that most of these are not taking advantage of this opportunity. The pandemic has already impacted the United Nations Framework Convention on Climate Change (UNFCCC) process, postponing COP 26 and delaying countries' revisions of their nationally determined contributions (NDCs) to raise the ambition for strong mitigation and adaptation action.

All the while, climate change impacts and extreme events persist, undeterred by the pandemic. The year 2020 has been one of the warmest years on record; over 50 million people globally have been recorded as directly affected by floods, droughts, or storms; and wildfires have raged with greater intensity in Australia, Brazil, Russia and the USA, among other countries. It is therefore more important than ever that countries make progress on adaptation. The fifth edition of the United Nations Environment Programme (UNEP) Adaptation Gap Report therefore provides an update on the current actions and emerging results of global adaptation planning, finance and implementation. All three elements are critical for tracking and assessing progress towards the global goal on adaptation. In addition to the latest literature, new analyses form the basis of the assessment. Considering the growing recognition of nature's contributions to humanity, this year's report focuses on nature-based solutions as key instruments for adaptation to the impacts of climate hazards.

To synthesize the key findings of the report, this executive summary is grouped in three parts: status and progress of global adaptation planning, finance and implementation; planning, finance and implementation of nature-based solutions for adaptation; and outlook on the global progress of adaptation.

## Status and progress of global adaptation planning, finance and implementation

**Climate adaptation is now widely embedded in policy and planning across the world, but levels of engagement and the quality of instruments are vastly different from country to country.** Adaptation action is critical to enable both public and private actors to prepare for and respond to the impacts of climate change. The Paris Agreement underscores the importance of national-level adaptation planning processes by committing all countries to report on progress made. The analysis shows that most countries (72 per cent) have adopted at least one national-level adaptation planning instrument (for example, a plan, strategy, policy or law), and some countries (9 per cent) that do not currently have such an instrument in place are in the process of developing one (figure ES.1). Most developing countries have begun formulating a national adaptation plan (NAP), which is a key mechanism to strengthen the focus on adaptation. Many countries have also developed, or are in the process of developing, sectoral and subnational plans. Progress in adaptation planning is expected to continue, not least because rising climate awareness is driving the emergence of an increasing number of subnational initiatives.

**Analysis of adaptation planning paints a mixed picture in terms of achieving stated objectives.** At the present time, we cannot assess the adequacy and effectiveness of adaptation planning as there is no consensus around definitions for and approaches to assessing these aspects. We can, however, examine important dimensions that influence these aspects, namely comprehensiveness, inclusiveness, implementability, integration and monitoring and evaluation (figure ES.2). Around half of countries' planning documents address risks comprehensively, include relevant stakeholders (including women) and have dedicated planning processes in place. Performance against criteria for integration across sectors ('horizontal') and across governance levels ('vertical') is mixed, showing fairly high horizontal but rather low vertical integration. Significantly fewer countries address the other criteria, suggesting a need for greater attention. The lack of consensus on appropriate assessment methodologies for adequate and effective planning also inhibits analysis of whether the progress made in these dimensions since 2000 is moving countries towards their adaptation objectives.

Figure ES.1 Status of adaptation planning worldwide

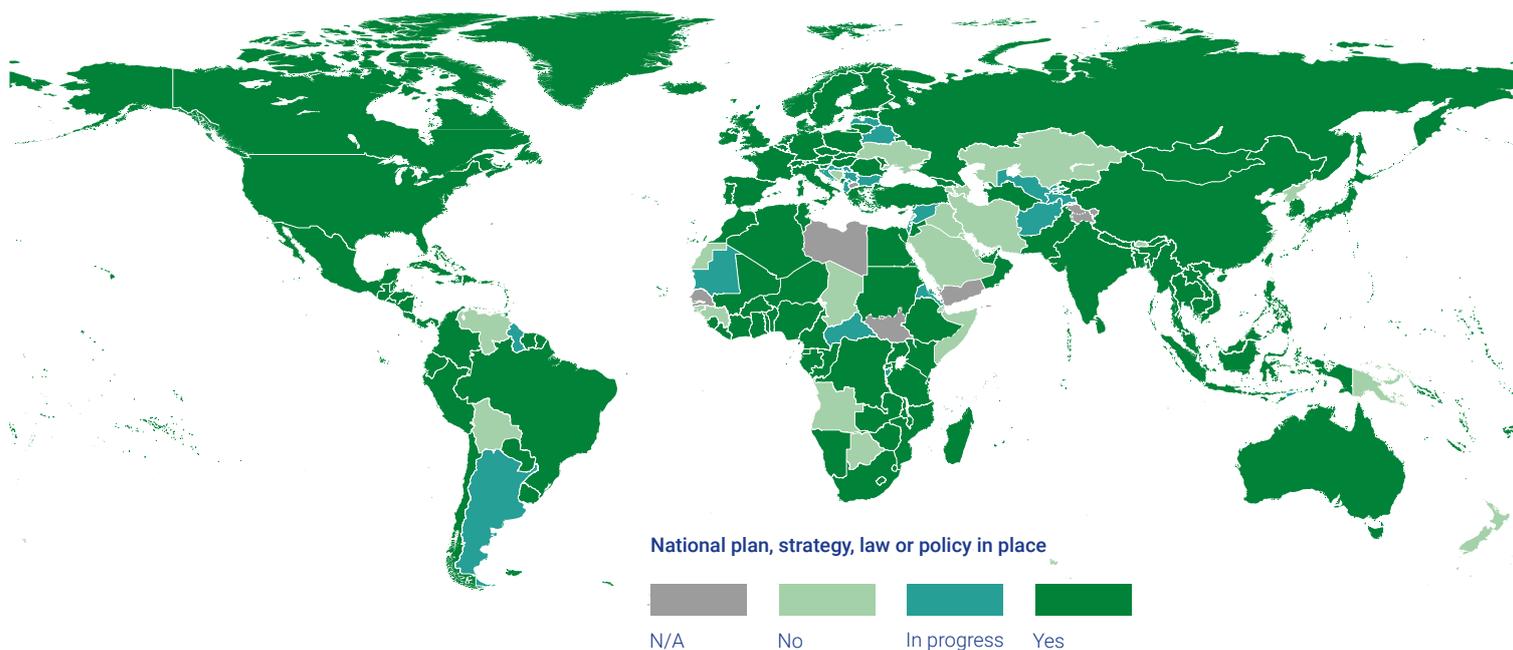
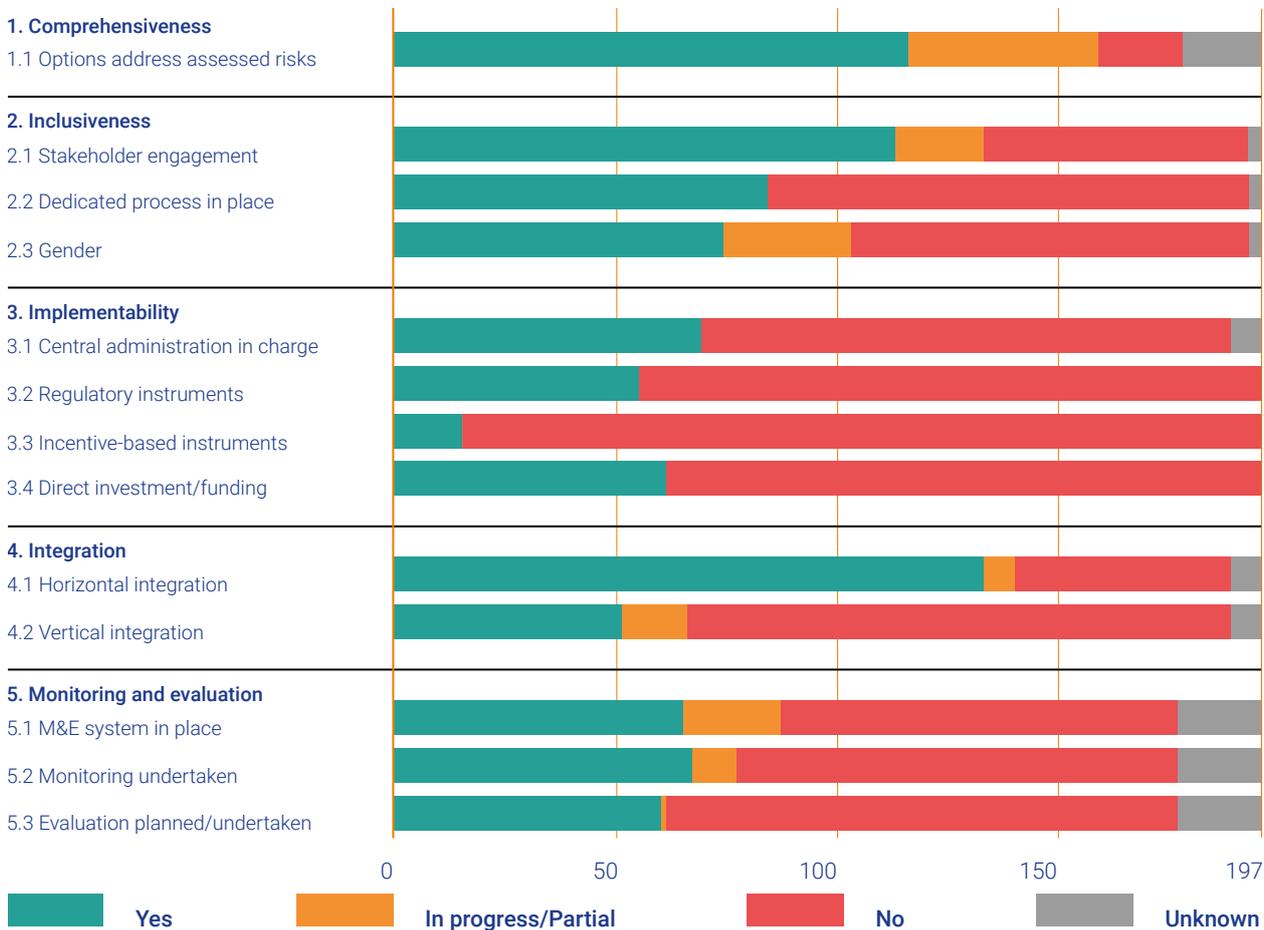


Figure ES.2 Assessing the adequacy and effectiveness of adaptation planning worldwide

**Criteria for adequate and effective adaptation planning**

**Number of countries**



**Additional adaptation finance is critical to enhance adaptation planning and implementation and limit climate damages, particularly in developing countries.** While adaptation costs may be higher for developed countries in absolute terms, the burden is higher for developing countries relative to their gross domestic products, adding to their generally more constrained financial, technical and human capacities. Strong mitigation action would significantly reduce unavoidable damage costs, particularly in Africa and Asia, which will bear the brunt of future adaptation impacts. According to recent literature, a 2°C trajectory may be able to limit annual global growth depression to 1.0–1.6 per cent when compared with a 3°C trajectory with annual losses in the range of 1.5–2.2 per cent of global world product. At the same time, the benefits of investing in adaptation often outweigh the costs. The Global Commission on Adaptation estimated that a US\$1.8 trillion investment in the areas of early warning systems, climate-resilient infrastructure, improved dryland agriculture, global mangrove protection and resilient water resources could generate US\$7.1 trillions of avoided costs and non-monetary social and environmental benefits.

**Despite an increase in finance available for adaptation, the adaptation finance gap is not closing.** International public adaptation finance is slowly rising, however there is insufficient data to identify such a trend in domestic public or private finance flows. At the same time, annual adaptation costs in developing countries alone are currently estimated to be in the range of US\$70 billion, with the expectation of reaching US\$140–300 billion in 2030 and US\$280–500 billion in 2050. As adaptation finance and adaptation costs are difficult to compare, all that can be deduced using the available evidence is that, given the pace of climate change and impacts, the adaptation finance gap is not narrowing as a result of current efforts. Providers of development finance are not integrating adaptation well enough across their activities. While multilateral support for adaptation as a share of overall multilateral development finance has risen significantly, bilateral support as a share of overall bilateral development finance has only increased slowly between 2013 and 2017. Moreover, the ongoing COVID-19 pandemic is expected to further aggravate the finance gap by constraining public finances at both national and international levels.

**Significant scaling up and incentivizing for both public and private adaptation finance is required to narrow the gap.** Adaptation finance modalities of bilateral and multilateral support are evolving, such that grants are increasingly accompanied by a broader range of instruments, actors and approaches. For instance, as the biggest dedicated multilateral climate fund, the Green Climate Fund has allocated 40 per cent of its total portfolio to adaptation and is increasingly using its catalytic power to crowd-in investments from private investors. Another important development is the increasing momentum towards ensuring a sustainable financial system. There is growing recognition that material physical risks and the risks introduced as we shift to a climate-resilient economy impact company returns, asset values and ultimately financial stability. Bringing in new tools such as sustainability investment criteria, climate-related disclosure principles and mainstreaming of climate-related risks into investment decisions can help to monitor finance flows that contribute to adaptation, in addition to the potential to stimulate an increase in investments in climate resilience and to direct finance away from investments that increase vulnerability.

**Implementation of adaptation actions is growing worldwide but there is still very limited evidence of climate risk reduction.** The Global Adaptation Mapping Initiative identified almost 1,700 articles detailing adaptation actions worldwide, a third of which were in early stages of implementation and only 3 per cent of which were in the stage of risk reduction. However, there is clear evidence of a rise in implementation (figure ES.3). Since 2006, close to 400 adaptation projects financed by multilateral funds serving the Paris Agreement (the Adaptation Fund, the Green Climate Fund and the Global Environment Facility) have been undertaken in developing countries, half of which began after 2015. While earlier projects rarely exceeded US\$10 million, since 2017, 21 new projects have had a value of more than US\$25 million, suggesting that adaptation actions are becoming more comprehensive and potentially more transformative. However, despite the positive signs, there is, as yet, very limited evidence of climate risk reduction, tempering any conclusion on adaptation progress as a whole.

**Figure ES.3** Number of primary adaptation projects (excluding readiness activities) from UNFCCC climate funds per start year and grant size



**Most projects target vulnerable populations, and many explicitly mention gender-related outputs.** Analysis of the adaptation projects that have started since 2015, supported by the three abovementioned multilateral funds, shows that more than half are being implemented in least developed countries (LDCs) and almost 15 per cent in small island developing States (SIDS). The majority focus on the most climate-sensitive sectors, i.e. agriculture and water, with drought, rainfall variability, flooding and coastal impacts among the most commonly addressed climate hazards. Engagement of the private sector remained low except for the tourism, agriculture and insurance industries. While national and local government actors are the primary recipients of support for adaptation actions, at least 25 per cent and possibly up to two-thirds of projects ultimately target the most vulnerable members of society. In addition, at least 20 per cent of projects explicitly mention gender-related outputs, and all new projects need to undertake a gender assessment. As a result, based on the latest figures, the Adaptation Fund, the Green Climate Fund and the Least Developed Countries Fund have together reached more than 20 million direct and indirect beneficiaries and trained more than 500,000 on climate resilience measures.

**Further scaling up of the levels of implementation is needed to avoid falling behind with managing climate risks, particularly in developing countries.** Close to 40 new adaptation projects using UNFCCC funds have been cleared to start and 80 are at an advanced stage of the approval process. However, adaptation projects often do not provide sufficient information on lasting outcomes, which raises concerns over effectiveness. Causal pathways that show how activities lead to results have often been found to lack clarity, highlighting the need to better elaborate how exactly adaptation is intended to occur. Therefore, despite progress made, continued high levels of global emissions imply that implementation at current rates may not be able to keep pace with increasing levels of risk. Together with other recent international reports, the 2018 Adaptation Gap Report showed that by enhancing adaptive capacity and resilience to climate impacts – for example, through capacity-building, empowerment, good governance and early warning systems – adaptation actions can markedly reduce vulnerability to climate hazards. At the same time, the report showed that most development indicators reflective of adaptive capacity are not catching up with developed countries and more people are exposed to climate hazards. Therefore, to avoid falling further behind and start catching up with developed countries, it is necessary to further increase implementation of adaptation actions.

### Planning, finance and implementation of nature-based solutions for adaptation

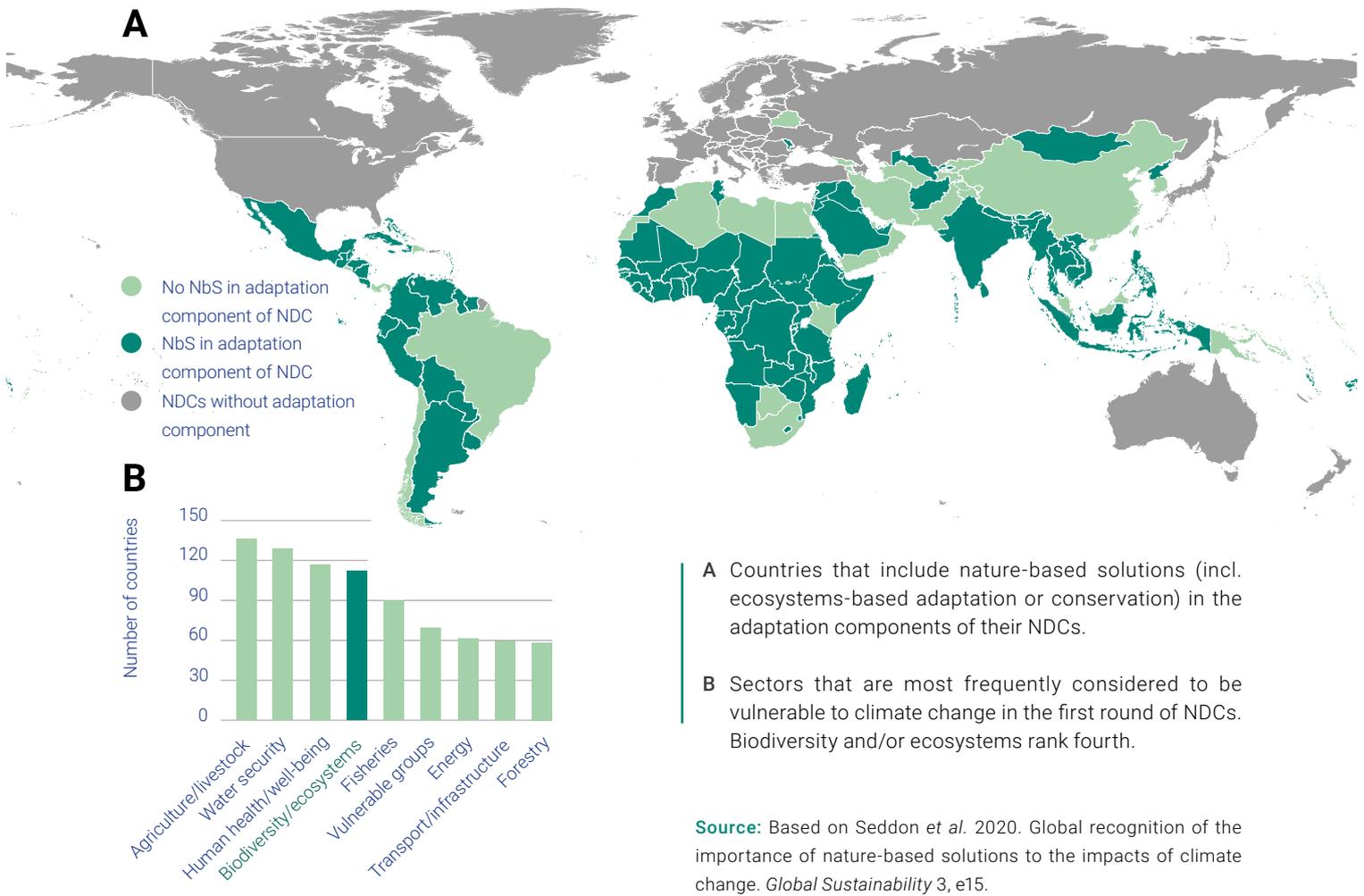
**There is increasing recognition, both nationally and internationally, that nature-based solutions (NbS) can make important contributions to climate change adaptation, but there are few tangible plans.** NbS for adaptation can be low-cost options that are potentially effective in reducing climate risks, while simultaneously bringing important additional benefits for the economy, environment, livelihoods and

other values to a wide range of stakeholders, including women, the poor and marginalized groups. However, NbS effectiveness may be limited by higher levels of climate change, so strong mitigation action is important to ensure the future contribution to adaptation of protecting and restoring nature. More than half of countries, including over 90 per cent of LDCs, refer to protecting nature as an important motivation for adaptation planning and have added elements of NbS to the adaptation components of their NDCs (figure ES.4). However, most of these describe only broad goals and less than a third include measurable targets, which mainly highlight the aim to restore floodplains and mangroves as methods to reduce the impacts of flooding, droughts and sea level rise. A similar pattern is reflected in the national communications of Annex I countries, most of which explore the climate vulnerability of ecosystems and biodiversity – some highlight NbS to reduce climate risks, but few provide explicit plans for deploying these approaches to address specific climate hazards, which are usually related to flood control and urban heat reduction.

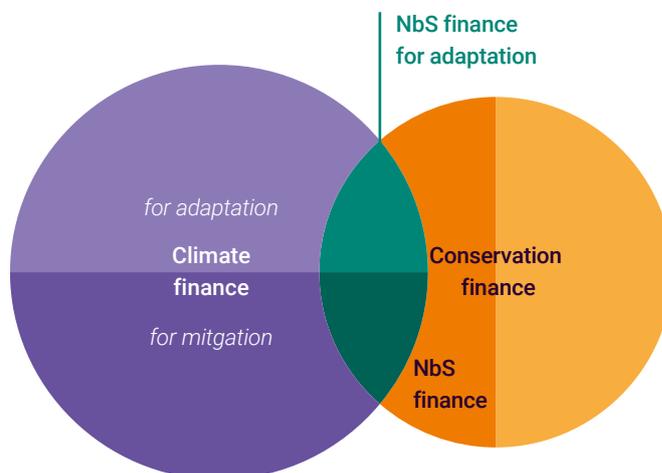
**NbS are often considered in fora not related to climate change planning and at levels other than national but require system-scale approaches to achieve the full potential of their benefits.** At least 50 per cent of the National Biodiversity Strategies and Action Plans, which countries develop under the United Nations Convention on Biological Diversity, specifically emphasize the potential and importance of NbS in addressing the vulnerability of species and ecosystems to climate change, as well as other anthropogenic pressures. NbS are also being considered in sectoral planning processes, contributing to resilience building in sectors ranging from infrastructure and energy to water, agriculture and urban planning. However, planning for NbS requires system-scale approaches to secure the provision of ecosystem services that contribute to adaptation. In many cases, this necessitates planning and coordination across national or jurisdictional boundaries, creating both a challenge and an opportunity for environmental policy frameworks and transboundary negotiations.

**Despite evidence of an increase in finance for NbS with adaptation benefits, funding levels remain low.** Analysis of investments by four major climate and development funds (the Global Environment Facility, the Green Climate Fund, the Adaptation Fund and the International Climate Initiative) suggests that support for green and hybrid adaptation solutions has risen considerably over the past two decades, with cumulative investment in projects with NbS components now standing at US\$94 billion, of which 13 per cent is directed towards NbS. Funding for NbS, however, makes up only a tiny fraction of total adaptation and conservation finance, despite many commitments by governments, the private sector, philanthropy and finance institutions for scaling up ambition and investments in NbS (figure ES.5). Many questions therefore remain regarding the adequacy and scope of NbS finance, not least because it continues to be difficult to track investment flows, as NbS are not recorded as a distinct funding category or investment option.

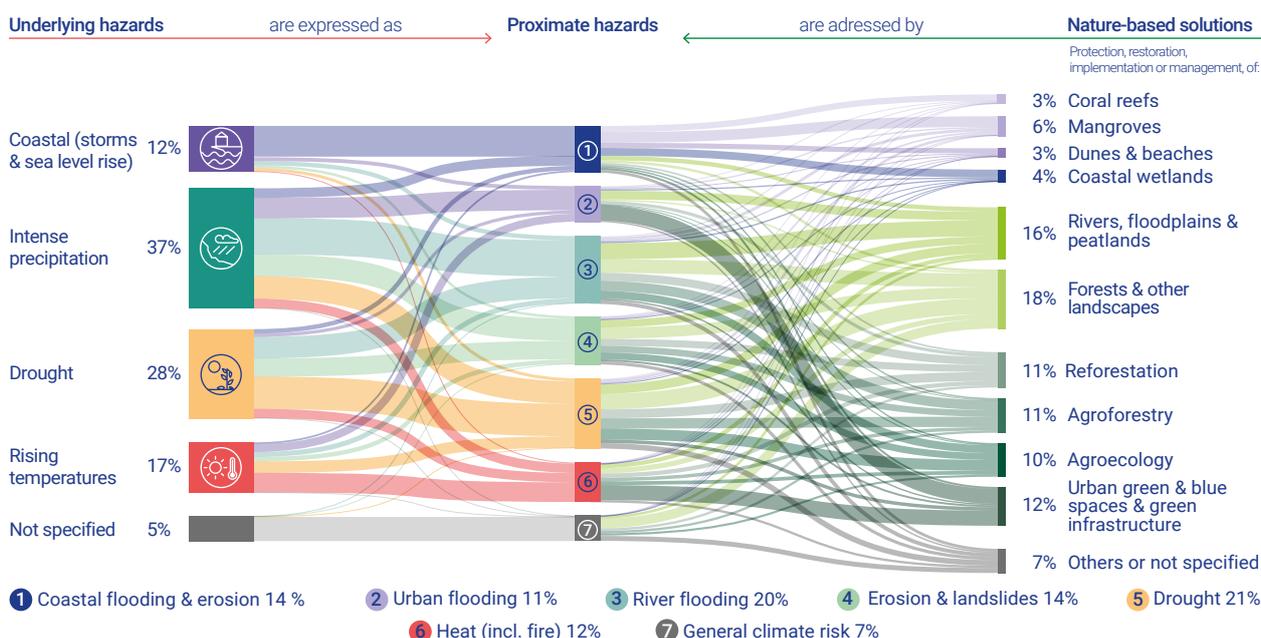
**Figure ES.4** Nature-based solutions in adaptation components of nationally determined contributions in developing countries



**Figure ES.5** Visualizing the relationship between nature-based solutions finance for adaptation, climate finance and conservation finance



**Figure ES.6** Sankey diagram connecting underlying hazards to their impacts on the ground (proximate hazards) and how different nature-based solutions are being used to address them



**Note:** The thickness of the ribbons is determined by the number of projects referring to each of the categories. Projects often mention multiple underlying and proximate hazards and can refer to several NbS to address them. (Example how to read the figure: temperature rise can lead to increased heat in urban areas that is effectively ameliorated with green and blue spaces as well as green infrastructure. Many other NbS are sometimes also used in the context of heat-related hazard). Percentage values presented in the figure are rounded to the nearest integer.

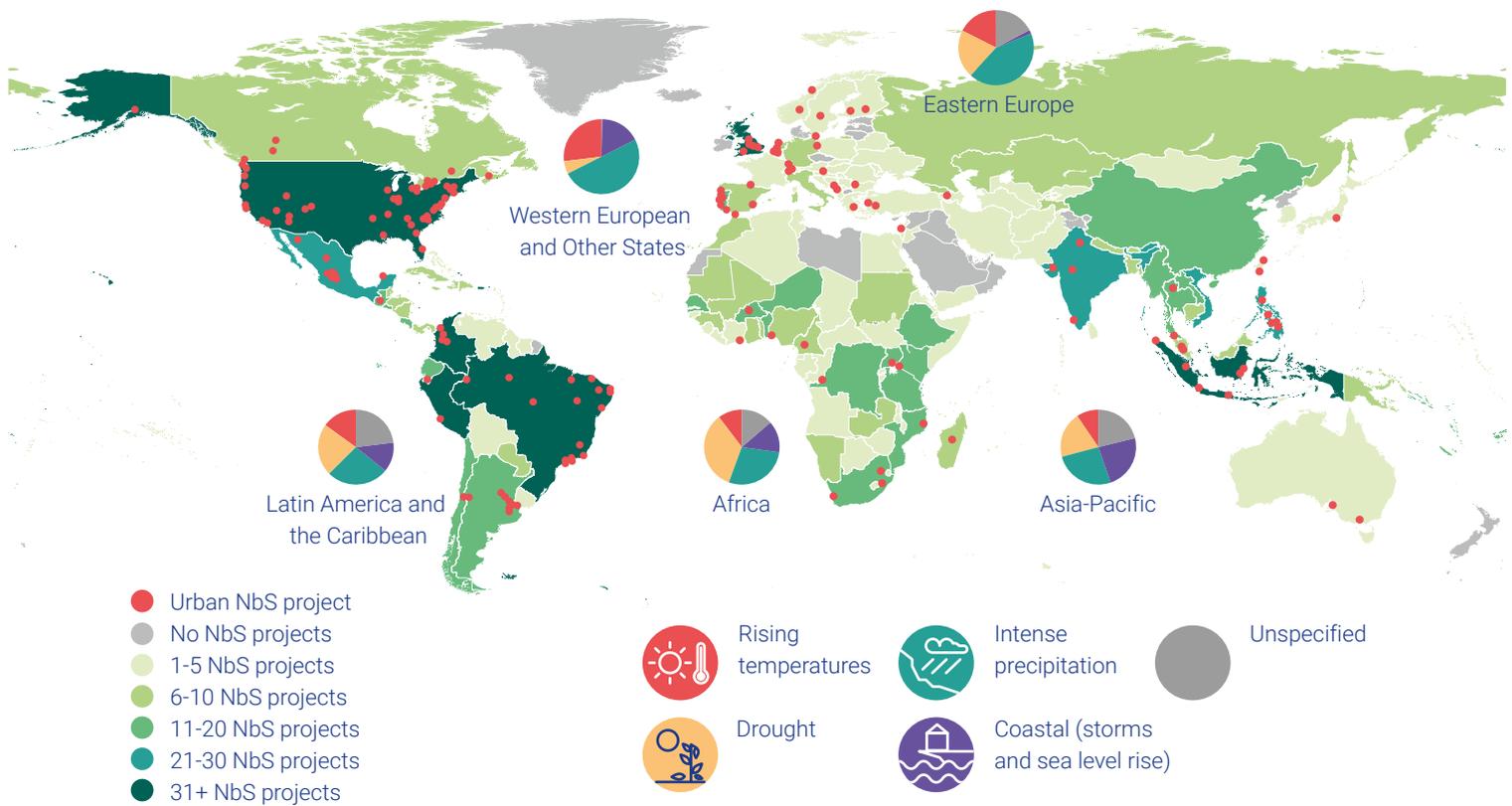
**Mobilizing additional funding, diversifying the investment portfolio and creating innovative new finance mechanisms for NbS are important to provide considerable opportunities but remain a challenge.** While examples of innovative finance mechanisms have emerged (for example, payments for ecosystem services, debt instruments, insurance products and performance-based payments), NbS continues to rely heavily on traditional government and philanthropic sources. The complexity of NbS, for example, high opportunity and transaction costs, the large number of stakeholders involved, as well as the long period typically needed to achieve the benefits, means that only a fraction of NbS can be financed and maintained as purely commercial ventures. Despite significant benefit to cost ratios over the longer term and multiple co-benefits that are typically not accounted for, investments are often not feasible for the private sector alone. The NbS finance base for adaptation could therefore be amplified, strengthened and diversified by deploying innovative mechanisms that combine public and private sources of funding. There is also an urgent need, at a structural level, to create the conditions and incentives that are required to enable, encourage and facilitate improved funding and investment flows.

**NbS are being used in a multitude of ways to manage climate risks by reducing exposure or vulnerability to climate hazards (figure ES.6).** NbS for adaptation are mainly used to address coastal hazards, intense precipitation, rising temperatures and drought. Coastal flooding and erosion are mainly reduced through restoration or protection of coral

reefs, seagrass meadows, coastal wetlands, mangrove forests and dunes and beach vegetation. Urban flooding is addressed through urban green and blue spaces, as well as upstream NbS. River flooding, as well as landslides and erosion, are mainly addressed by restoring or protecting floodplains and peatlands and by enhancing riparian vegetation. To smaller degrees, forest and landscape restoration or protection, reforestation, agroforestry and agroecological practices also contribute to managing surface runoff. Heat-related risks are frequently connected to urban environments and managed through green and blue spaces, as well as green infrastructure. Lastly, drought-related risks are most frequently addressed through integrated watershed and landscape management, as well as reforestation and climate-smart agricultural practices such as agroforestry and agroecology.

**Implementation of NbS targeting coastal hazards, intense precipitation, drought and rising temperatures has been growing worldwide for the past two decades, but evidence of the level of risk reduction remains sparse.** Prior to 2000, only a handful of initiatives could be considered to be actively using NbS for climate risk management. Since then, levels of implementation have risen markedly, and tracked initiatives are in the range of 70 new projects per year, most of which focus on rural environments in developing countries and primarily target coastal flooding and erosion, freshwater flooding and rising incidence of drought, as well as urban heat and wildfires (figure ES.7). Urban NbS have

**Figure ES.7** Global map of nature-based solution initiatives for adaptation, showing the number of investments per country, the geographic distribution of cities reporting on nature-based solution activities (red dots), and the regional distribution of hazards being addressed by nature-based solution initiatives (pie charts)



also seen a surge in implementation, the majority of which is taking place in developed countries, focusing on coastal and freshwater flooding and heat. Existing evidence suggests that successful implementation of NbS can deliver a multitude of social, environmental, economic and governance-related benefits in addition to reducing climate hazards, not least for indigenous peoples, local communities and women. To deliver their services – particularly ecosystem services – NbS require inclusive governance and institutions to manage public goods, frequently related to secure land tenure and access rights, as well as sufficiently long-term investments and planning stability. However, to date, evidence of risk reduction via NbS is scant because implementation at larger scales is still in its infancy.

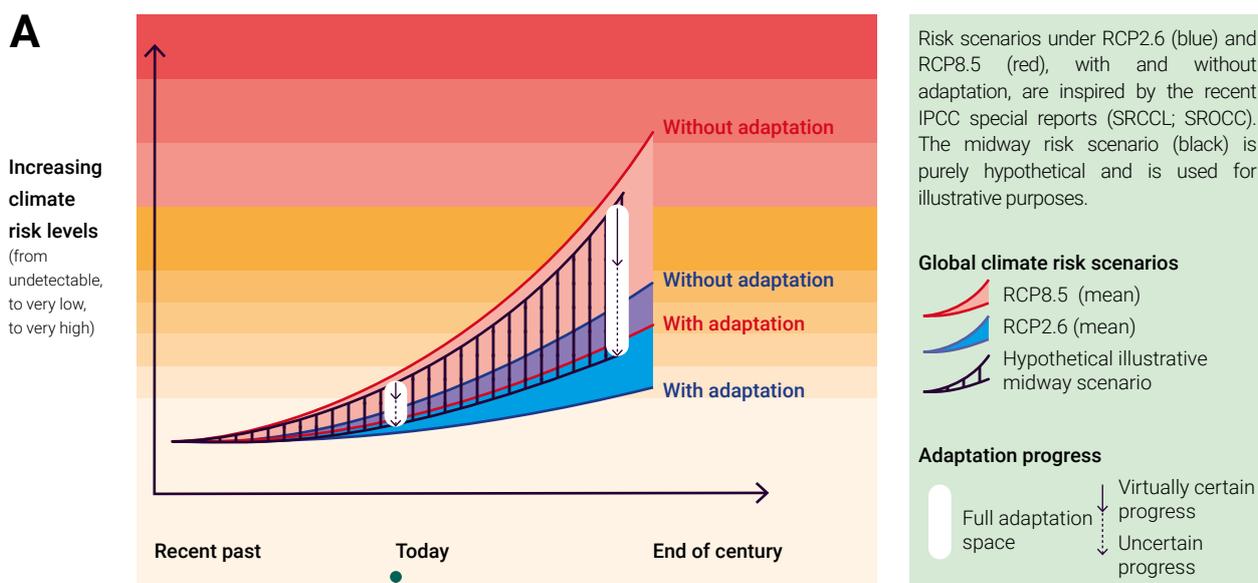
### Outlook on the global progress of adaptation

**Overall, there is robust evidence that progress has been made on greater engagement in national-level adaptation worldwide over the course of the last decade but further ambition is needed.** Climate adaptation is now fully part of climate policy action across the world with widespread adoption and continued development of national, subnational and sectoral adaptation planning instruments. However, the effectiveness and adequacy of planning, finance and implementation differ depending on national circumstances and climate risk profiles and will require

greater effort. Early signs of deeper transformation towards more climate-resilient and sustainable financial systems and investments are emerging but require stronger, long-term commitments and action.

**Despite encouraging trends, the scale of adaptation progress at the national level is insufficient and tracking progress remains a challenge.** There is a real risk that adaptation costs will increase faster than adaptation-oriented finance. There is inconclusive evidence to indicate whether national-level adaptation planning is being sufficiently mainstreamed into sectoral and subnational planning to address growing risks. Furthermore, monitoring and evaluation, which is widely recognized as being key to tracking and assessing progress in adaptation, is inadequate and in urgent need of further development and implementation. Lastly, national-level data only provide limited indications of current and future levels of risk reduction in connection with trends in adaptation planning, finance and implementation. These gaps urgently need to be narrowed as recent Intergovernmental Panel on Climate Change reports warn of increasing climate risk levels, even under emission scenarios curtailing end-of-century global warming to 1.5–2°C above pre-industrial temperatures (figure ES.8).

Figure ES.8 Conceptual visualization of progress in adaptation at the national level against different climate risk scenarios



**B**

**Evidence of adaptation progress**

- National-level adaptation plans, strategies, frameworks or laws are in place in most countries (either they have been adopted or are currently being developed – the maturity of adaptation planning instruments varies across countries)
- Both adaptation finance and the number of adaptation projects in developing countries (supported by multilateral and bilateral funds) are increasing
- Some movement towards creating actionable policies that lead to principal adaptation (better inclusion of specific types of adaptation measure)
- Financing modalities are quickly evolving (for example, diversifying the range of instruments, approaches and funding sources) and there are early signs of movement towards more climate-proof and sustainable financial systems and investments

**Progress is being made, but there is a lack of robust evidence across regions, sectors and hazards, for which data are scattered.**

**Identification of gaps**

- Adaptation finance is increasing at a lower rate than adaptation costs (in a context of increasing and accelerating climate change) and therefore the adaptation finance gap appears to be widening
- Limited development of monitoring and evaluation (“M&E”) mechanisms
- Limited evidence to indicate that adaptation planning at the national level is stimulating adaptation planning at the subnational level
- Limited information available about future trends in national-level adaptation (its nature, scale and the degree to which plans, strategies, frameworks or laws will be implemented)
- The extent to which gender dimensions are prioritised in national adaptation plans and policies is still not clear

**Progress is, nevertheless, estimated to not be occurring at the required scale (when assessed against present and future risk levels).**

**Elements that constrain the interpretation of findings**

- Adaptation goals at the global and national level need further clarification to help set precise targets
- Poor availability of shared databases documenting planning/implementation efforts in high-income countries, as well as information on private finance and on the effectiveness of policies and actions to reduce present and future risk levels under different global warming scenarios
- Uncertainty surrounding the long-term effects of the COVID-19 pandemic on future trends in adaptation planning, financing and implementation



United Nations Avenue, Gigiri  
P.O. Box 30552, 00100 Nairobi, Kenya  
Tel. +254 20 762 1234  
[unep-publications@un.org](mailto:unep-publications@un.org)  
[www.unep.org](http://www.unep.org)