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Nationally determined contributions under the Paris Agreement

Synthesis report by the secretariat

Summary

Between 1 January 2024 and 31 August 2026, 127 new nationally determined contributions (NDCs), representing 154 Parties to the Paris Agreement, were recorded in the NDC registry. Together, they cover about 71 per cent of total global greenhouse gas emissions (without land use, land-use change and forestry) in 2019. This synthesis report provides an updated picture, on the basis of those NDCs, of how countries are progressing in turning their commitments under the Paris Agreement into climate action and the major challenges that remain in this context, identifying both accelerators and barriers and gaps in relation to implementation. While the report shows that implementation of the Paris Agreement is delivering significant progress towards its goals, particularly in terms of mainstreaming climate in policymaking, it also shows that collective progress in lowering projected emissions remains substantially off track from the reductions required by the science to keep the goal of limiting temperature rise to 1.5 °C this century within reach and to keep temporary overshoot as short and shallow as possible. However, near-term NDC targets are being connected to longer-term decarbonization goals and development pathways, providing a clearer bridge between action this decade and the transformation needed by mid-century. The new NDCs show how climate action is being broadened, including through more comprehensive approaches, and more integrated into and deeply embedded across economies and societies. Further, they show improvement, compared with the previous NDCs, in the quality and depth of information provided, as well as broader thematic coverage (encompassing mitigation, adaptation, finance, technology development and transfer, capacity-building, loss and damage, response measures and just transition). Finally, there is clear recognition that climate change is not only a mitigation challenge. As temperature continues to rise, adaptation and resilience-building are becoming key elements of national climate plans, alongside efforts to avert, minimize and address loss and damage. Energy transition is another common theme, with electrification and the deployment of enabling technologies playing an increasingly important role in reducing emissions while strengthening energy security.



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Abbreviations and acronyms

2006 IPCC Guidelines	<i>2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>
ACE	Action for Climate Empowerment
AFOLU	agriculture, forestry and other land use
AR	Assessment Report of the Intergovernmental Panel on Climate Change
BTR	biennial transparency report
CCUS	carbon dioxide capture, use and storage
CDR	carbon dioxide removal
CH ₄	methane
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CO ₂	carbon dioxide
CO ₂ eq	carbon dioxide equivalent
COP	Conference of the Parties
ETF	enhanced transparency framework under the Paris Agreement
GDP	gross domestic product
GHG	greenhouse gas
GST	global stocktake
GWP	global warming potential
HFC	hydrofluorocarbon
IEA	International Energy Agency
INDC	intended nationally determined contribution
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
IRENA	International Renewable Energy Agency
LT-LEDS	long-term low-emission development strategy(ies)
LULUCF	land use, land-use change and forestry
MAGICC	Model for the Assessment of Greenhouse Gas Induced Climate Change
MRV	measurement, reporting and verification
N ₂ O	nitrous oxide
NA	not applicable
NAP	national adaptation plan
NDC	nationally determined contribution
NF ₃	nitrogen trifluoride
PFC	perfluorocarbon
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16 , para. 70)
SDG	Sustainable Development Goal
SF ₆	sulfur hexafluoride
SLCP*	short-lived climate pollutant
SSP	Shared Socioeconomic Pathway
UNEP	United Nations Environment Programme

* Used exclusively in figures.

I. Executive summary

1. Parties **widely recognized and positively responded to the outcomes of the first GST¹ in the new NDCs:**² 90 per cent of Parties indicated that their NDCs were informed by the findings of and calls arising from the first GST, with 82 per cent providing information supporting that claim. In terms of considering the GST outcomes in their NDCs, Parties referenced elements of mitigation (75 per cent), adaptation (31 per cent), means of implementation (54 per cent), loss and damage (7 per cent), response measures (25 per cent) and international cooperation (32 per cent), as well as cross-cutting elements such as just transition, stakeholder engagement and gender-responsiveness. Some Parties indicated how implementation of the targets, commitments and actions in their NDCs will contribute to global efforts in relation to tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvement by 2030; transitioning away from fossil fuels in energy systems; conserving, protecting and restoring nature and ecosystems; promoting sustainable lifestyles and sustainable patterns of consumption and production; and enhancing efforts towards achieving the global goal on adaptation.

2. With regard to **GHG emission reductions, the total global GHG emission level, including LULUCF, resulting from the implementation of Parties' new NDCs is projected to peak and decline by 2035, reaching on average 6 (ranging from 0 to 12) per cent below the 2019 level.** Full implementation of all conditional elements of new NDCs would mean lower emissions by 3.5 (ranging from 3.3 to 3.6) Gt CO₂ eq in 2035 compared with the implementation of only unconditional elements of the NDCs, resulting in peaking of global GHG emissions before 2030 and an average emission reduction of around 9 (ranging from 6 to 12) per cent below the 2019 level by 2035. Most of the new NDCs are linked to the Parties' long-term decarbonization targets and development pathways, including the net zero targets communicated in NDCs or LT-LEDS, which involve reaching net zero emissions by between 2040 and 2070, with the majority for 2050. Implementation of NDCs and these long-term targets implies best-estimate warming of 1.7–2.3 °C by the end of the century, well below the worst-case warming scenarios considered before the adoption of the Paris Agreement. However, returning warming to 1.5 °C would require substantial additional GHG emission reductions in the coming years.

3. **Adaptation is firmly embedded in the new NDCs, with most Parties reporting advancing adaptation planning and implementation while also addressing loss and damage.** A total of 86 per cent of Parties included an **adaptation component** in the new NDCs, focusing on the adaptation priority areas of food security and nutrition, water resources, terrestrial ecosystems, health, key economic sectors, disaster risk management, urban and rural areas, ocean ecosystems, coastal and low-lying areas, education, and poverty and livelihoods. Parties demonstrated progress across several areas of adaptation, including in strengthening adaptation-relevant research, data and monitoring to support evidence-based action; developing and implementing adaptation-related policy frameworks; formulating and advancing NAPs; aligning adaptation strategies with the United Arab Emirates Framework for Global Climate Resilience; defining time-bound adaptation targets and indicators for tracking progress; and identifying synergies between adaptation and mitigation efforts, and linkages between adaptation action and efforts towards achieving the SDGs. A total of 92 per cent of Parties with an adaptation component referred to **loss and damage** in the new NDCs, compared with 56 per cent in the previous NDCs, outlining observed and projected loss and damage in various key sectors and describing planned or implemented measures for averting, minimizing or addressing it.

4. **Cost-effective domestic mitigation measures featured prominently across the new NDCs, while aggregated targets for many global efforts and mitigation options remain below current implementation levels.** Almost all Parties (99 per cent) communicated domestic mitigation measures in the new NDCs, with 90 per cent reporting

¹ See decision [1/CMA.5](#).

² The 127 new NDCs, representing 154 Parties to the Paris Agreement, recorded in the NDC registry between 1 January 2024 and 31 August 2026.

measures for at least one of the six low-cost mitigation options with the highest mitigation potential (more than 2 Gt CO₂ eq/year) in 2035, such as solar energy and industrial electrification. Of the 99 per cent of Parties that reported mitigation measures relevant to at least one global effort or mitigation option covered in recent CMA decisions,³ such as tripling global renewable energy capacity by 2030, 82 per cent also reported quantitative targets relevant to at least one such effort or option. While aggregated targets for some efforts and options are comparable to, or exceed, current global implementation levels, many remain well below current levels (e.g. 3 TW of aggregated renewable power capacity targets by 2030, compared with 5.2 TW of global renewable power capacity in 2025).

5. **However, announced domestic pledges and projects indicate potential for greater ambition and implementation than reflected in the NDCs.** In addition to the information in the NDCs, some Parties have announced domestic pledges and projects relevant to the above-mentioned global efforts, including tripling global renewable energy capacity by 2030 and expanding nuclear and CCUS capacity. Collectively, the ambition reflected in these pledges and projects significantly exceeds the aggregated targets reflected in the NDCs for the same global efforts (e.g. by 2.5 times for renewable energy capacity by 2030), indicating that the submitted NDCs do not fully cover domestically announced pledges and projects. Some Parties may nationally determine that progress in these global efforts, together with enhanced international cooperation and support, contributes to the potential for accelerated implementation and enhanced ambition.

6. **Parties placed greater emphasis on measures for creating enabling conditions for renewable energy deployment, energy efficiency improvement and electrification in their NDCs.** Measures to support renewable energy deployment and reduce related barriers were reported more frequently, with 70 per cent of Parties reporting measures to improve electricity grids and 56 per cent reporting measures to expand energy storage, up from 51 and 33 per cent respectively in the previous NDCs. Similarly, measures to support energy efficiency improvement and electrification were reported more frequently, with 73 per cent of Parties reporting measures relating to on-site renewables production in buildings, 50 per cent including measures to expand or improve charging infrastructure for road transport and 40 per cent reporting measures to improve material efficiency in industry compared with 32, 32 and 14 per cent respectively in the previous NDCs.

7. **Accelerating reductions in CH₄ emissions can be particularly effective in limiting peak global warming in the near term, and Parties widely reported measures to reduce CH₄ emissions across key sectors.** A total of 92 per cent of Parties included CH₄ among the GHGs covered by their NDCs. Measures to reduce CH₄ emissions from energy supply, including limiting flaring and venting and implementing CH₄ leak detection and repair requirements, were communicated by 62 per cent of Parties. In addition, 77 per cent reported measures to reduce CH₄ and N₂O emissions from agriculture, while 89 per cent provided information on measures to reduce CH₄ emissions from waste.

8. **Against the backdrop of recent energy crises, 65 per cent of Parties highlighted the contribution of mitigation measures to energy security, particularly through renewable energy deployment and energy efficiency improvement.** Of those Parties, 29 per cent identified renewable energy generation as a key supply-side driver of energy security by replacing imported fuels with domestic energy sources and thereby lowering expenditure on fuel imports, reducing fuel price volatility and diversifying the electricity mix. In parallel, 16 per cent emphasized energy efficiency improvement as a key demand-side driver by reducing fuel import needs and peak electricity demand and thereby avoiding the need for additional electricity generation capacity and grid reinforcement, while also helping to alleviate energy poverty through lower energy expenditure.

9. **An increasing trend in NDCs mentioning mitigation co-benefits resulting from adaptation action and/or economic diversification plans continues to be observed.** NDCs also continue to increasingly mention plans to address impacts arising from mitigation actions by embedding consideration of just transition in NDCs and assessing the

³ Decisions [1/CMA.3](#), [1/CMA.4](#) and [1/CMA.5](#).

distributional impacts of mitigation actions among different groups of society, thus indicating growing recognition of the importance of just transition.

10. **A total of 82 per cent of Parties considered just transition in preparing their NDCs and the majority of them plan to integrate consideration of just transition into NDC implementation.** It is also evident that Parties considered just transition across all aspects of their NDCs, including mitigation, adaptation and means of implementation, and for a variety of sectors and stakeholders, which points to a whole-of-economy and whole-of-society approach to considering just transition. Some Parties contextualized just transition as helping to ensure that the shift to low-carbon, climate-resilient economies does not exacerbate existing or create new inequalities in societies, thus enabling climate action that is socially inclusive and economically empowering. Indicators for tracking just transition as part of NDC implementation were explicitly included or envisaged by 13 per cent of Parties, some of which proposed integrating them into their MRV systems. The share of Parties addressing just transition has continued to grow. Compared with the previous NDCs, more Parties included chapters on just transition in the new NDCs and described relevant institutional arrangements, implementation initiatives and means of tracking progress.

11. **The increase in the share of Parties indicating their intention to participate in voluntary cooperation under Article 6 of the Paris Agreement to contribute to reaching their climate targets continued in the new NDCs.** In total, 94 per cent of Parties indicated that they plan to or may use at least one of the scopes of voluntary cooperation under Article 6, in comparison with 78 per cent in the previous NDCs. Specifically, 81 per cent of Parties referred to the use of internationally transferred mitigation outcomes under Article 6, paragraphs 2 and 4; 21 per cent expressed interest in participating in non-market approaches under Article 6, paragraph 8; and 13 per cent mentioned general use of voluntary cooperation under Article 6 without specifying a particular scope. The new NDCs also show that Parties are increasingly translating their intention to participate in voluntary cooperation under Article 6 into more concrete approaches, including by identifying priority areas, sectors or activities, and setting quantitative limits or targets for cooperation, specifying criteria governing voluntary cooperation, and putting in place the legal, regulatory and institutional frameworks necessary for the implementation of voluntary cooperation under Article 6.

12. **Recognizing the important role of forests in achieving the goals of the Paris Agreement, Parties have strengthened integration of forest-related climate action in the new NDCs,** with 90 per cent of Parties including the LULUCF sector in economy-wide emission reduction targets and many defining separate LULUCF-specific targets. The outcomes of the first GST are informing the forest-related mitigation efforts of a number of Parties, including in the context of enhanced action to halt and reverse deforestation and forest degradation by 2030. More Parties than in the previous NDCs reported a broad range of forest-related climate action, including afforestation and reforestation, sustainable forest management, reducing deforestation and forest degradation, conservation and restoration of high-carbon wetlands, agroforestry and wildfire management. Developing country Parties highlighted the role of REDD+ implementation, encompassing REDD+ strategies, safeguards and results-based payments, in supporting forest-related mitigation efforts. In general, Parties emphasized the synergies between forest-related mitigation efforts and action towards achieving adaptation, biodiversity conservation and land restoration objectives, as well as co-benefits in terms of ecosystem resilience, sustainable livelihoods and green jobs. Parties outlined measures related to forest policy frameworks, forest monitoring systems, and relevant capacity-building and inclusive participation, with some identifying financing needs and highlighting the importance of international support in this regard.

13. **Parties continued to report a significant increase in ocean-based climate action compared with the previous NDCs,** with 78 per cent of Parties including in the new NDCs at least one explicit reference to the ocean. Of the 69 per cent of Parties that reported finance-related needs for ocean-based action, 54 per cent have made conditional commitments, mostly small island developing States, to implement ocean-related climate measures. Ocean-based adaptation remains prominent, with measures reported relating to coastal resilience-building through integrated coastal zone management, marine spatial planning, strengthening the resilience of coastal and marine tourism and responding to sea level rise, conservation and restoration of blue carbon ecosystems through nature-based solutions and marine

protected areas, and fisheries and aquaculture. Though fewer in number, reported ocean-based mitigation measures show increasing innovation and sectoral diversity, spanning renewable energy deployment, blue carbon sequestration, fisheries and aquaculture, and decarbonization of maritime transport.

14. Information on climate finance was included by 95 per cent of Parties in the new NDCs, most often in terms of Parties needing support for NDC implementation, with fewer Parties referencing their role as finance providers. Costed needs for NDC implementation were presented by 19 per cent more Parties for the first time in the new NDCs, while 13 per cent more Parties than previously provided information on climate finance needs for adaptation. Parties reported on broader sectoral coverage of their needs and efforts to integrate climate finance into national budgeting and policy frameworks. Nearly 66 per cent of Parties referenced efforts to develop climate financing strategies or investment plans to support NDC implementation. Parties reporting climate finance needs provided cost estimates ranging from aggregate totals to sector-specific breakdowns, amounting to USD 3,607–3,614 billion overall. Mitigation finance needs, estimated at USD 2,511 billion, are concentrated in the energy (including transport and power generation), AFOLU, IPPU and waste sectors; while adaptation finance needs, estimated at USD 893–898 billion, are focused on the agriculture, water, infrastructure, health, biodiversity, coastal zone, marine fisheries, tourism and disaster risk management sectors. The time frames for costed estimates in the NDCs range from 2021 to 2040, with most of the costed needs (72 per cent) covering the period from 2025 or 2026 to 2035. A total of 81 per cent of the Parties that reported costed needs identified a mix of international and domestic sources of finance needed, including public and private sources. Parties noted that international support is sought through bilateral channels, multilateral climate funds, multilateral development banks and private sector investment. Parties reported that they are exploring the use of sovereign instruments including public and private green and sustainability bonds, as well as innovative finance such as maritime levies, de-risking instruments like credit guarantees, and green credit lines.

15. With regard to technology development and transfer, and innovation, 98 per cent of Parties provided information, at varying levels of detail, on their technology priorities and/or needs for climate action in the new NDCs, around 50 per cent of which included both qualitative and quantitative aspects. Around 76 per cent of Parties mentioned specific information on technology-related measures, often from a sectoral perspective, while others mentioned technology more generally. A total of 92 per cent of Parties outlined technology priorities and/or needs in support of mitigation and 80 per cent in support of adaptation. The predominant share of the needs and priorities for mitigation are related to the energy sector, followed by the AFOLU and IPPU sectors, which were mentioned with a similar frequency, and the transport sector, all of which were cited by a majority of Parties. In addition to technology measures related to agrifood systems and the water sector, which were among the most frequently cited priorities for adaptation in the previous NDCs, a majority of Parties referred to technology measures related to ecosystems and climate monitoring and observations in the new NDCs, with the latter often combined with geospatial tools and digital solutions, including use of artificial intelligence. The share of Parties (71 per cent) referring to measures related to technology innovation, research and demonstration for achieving their climate targets has more than doubled since the previous NDCs.

16. Capacity-building and institutional strengthening are increasingly being recognized as important for NDC implementation. Of the 94 per cent of Parties that referenced capacity-building in the new NDCs, 74 per cent indicated that NDC implementation is contingent upon receiving capacity-building support. Needs were identified across adaptation, mitigation and cross-cutting areas, including transparency, technology deployment and access to climate finance. A total of 33 per cent of Parties highlighted capacity needs related to addressing loss and damage and accessing related funds, which were not reflected in the previous NDCs. Parties referred to institutional arrangements and stakeholder engagement as part of their capacity-building efforts.

17. Parties reaffirmed in the new NDCs their strong commitment to climate multilateralism under the Convention and the Paris Agreement, recognizing international cooperation as indispensable for strengthening climate action and achieving the goals of the Paris Agreement to avert the worst human and economic impacts

of global warming. International cooperation was emphasized as critical for mobilizing resources and bridging the gap between NDC ambition and implementation by 97 per cent of Parties. In addition to fulfilling commitments under the Convention and the Paris Agreement, such as NDCs, Parties described their engagement with international partners to promote effective and inclusive climate action through voluntary cooperation initiatives, regional collaboration and sectoral activities such as energy transition.

18. Parties have strengthened the legislative and policy foundations for implementing their NDCs. Overall, 98 per cent of Parties provided information on the legislative and policy frameworks that facilitate NDC implementation. The nature of such frameworks varies across Parties and includes acts, laws and decrees as well as policies, strategies, plans and programmes. The adoption of comprehensive climate change acts, laws or decrees that establish the legal framework for NDC implementation was pointed to by 45 per cent of Parties. On the policy side, 47 per cent of Parties referred to their national climate change policies and the same share referred to their national overarching climate change plans and strategies as important instruments for supporting NDC implementation. Further, 96 per cent of Parties reported on legislative and policy instruments that contribute to NDC implementation in key sectors such as energy, environment, water, waste, agriculture and food security, forestry, disaster risk reduction and management, health, urban and spatial planning, transport, and buildings, construction and infrastructure. Among these, the environment sector stands out, with 83 per cent of Parties providing information on environmental legal and policy instruments containing climate-related components. Climate change considerations have also been incorporated into sustainable development frameworks: 74 per cent of Parties highlighted sustainable development legislation, agendas, strategies and plans, including national development plans and green growth strategies, as instruments that underpin the legal and policy frameworks that facilitate NDC implementation. Regarding governance, 94 per cent of Parties identified entities or arrangements for coordinating NDC preparation, 93 per cent reported undertaking formal or structured stakeholder consultations in relation to their NDCs, and 91 per cent provided information on arrangements for facilitating NDC implementation.

19. Parties are increasingly embedding climate action within a whole-of-society and whole-of-economy approach, reflected in stronger engagement of non-Party stakeholders and participation in voluntary efforts, initiatives and coalitions. The new NDCs reflect a deepening and more structured engagement of non-Party stakeholders in climate action. An increasing number of Parties are involving subnational entities, the private sector and civil society in both the design and implementation of NDCs. Notably, 98 per cent of Parties reported engagement of non-Party stakeholders in NDC implementation, up from 70 per cent in the previous NDCs. Subnational entities are increasingly involved as partners in planning, implementing and monitoring climate action, helping to embed national goals into local plans for coherent implementation. The private sector is often positioned as a co-implementer and/or financier, contributing through innovation, partnership and mobilization of investment. Civil society and academia play vital roles in shaping inclusive policies and providing scientific expertise. Parties are collaborating with non-Party stakeholders through voluntary efforts, initiatives and coalitions to mobilize resources for and scale up climate action, and reported in their NDCs that enhanced enabling environments, such as through appropriate incentives, regulatory frameworks and sectoral road maps, are supporting stakeholder contributions. This evolution from broad stakeholder consultation to multi-stakeholder implementation underscores an increasing whole-of-society and whole-of-economy approach to climate action, thus signalling alignment with the outcomes of the first GST and reinforcing the importance of collaborative climate governance.

20. Gender integration into NDCs is advancing, with Parties increasingly considering gender in promoting inclusive and effective climate action. In the new NDCs, 92 per cent of Parties provided information related to gender and 79 per cent affirmed that they will take gender into account in implementing their NDCs. Of the Parties that referenced gender, 12 per cent had not referred to gender previously in their NDCs and 45 per cent considered gender to a similar extent to previously. Of the Parties that referenced gender in the previous NDCs, 29 per cent elaborated more on the topic in their new NDCs.

21. **The new NDCs show increased recognition of Indigenous Peoples and local communities as essential partners in climate action, highlighting their knowledge systems, participation and leadership.** A total of 62 per cent of Parties reported an increased focus on the vital role of **Indigenous Peoples and local communities** in climate adaptation and mitigation, compared with 55 per cent previously. Parties not only acknowledged the particular climate change vulnerabilities of Indigenous Peoples and local communities but also emphasized the importance of strengthening climate action through integration of traditional knowledge, knowledge of Indigenous Peoples and local knowledge systems and the increased participation of these groups in climate leadership. Parties highlighted the benefits of combining traditional and modern practices while ensuring the participation and leadership of Indigenous Peoples and local communities in climate efforts. Adaptation action involving Indigenous Peoples and local communities includes developing community-based adaptation plans; implementing measures related to terrestrial and ocean ecosystems, food security, water resources and disaster risk management; and using indicators to monitor adaptation progress. Mitigation action involving Indigenous Peoples and local communities includes measures related to sustainable waste and forestry management, mangrove restoration, low-carbon maritime transport, solar-powered irrigation and clean cooking solutions.

22. **Parties provided clearer and more detailed information than previously on ACE⁴ in the new NDCs.** All Parties provided information on using at least one ACE element to promote implementation of mitigation and adaptation activities, generally communicating more clearly, and in more detail, than in previous NDCs on general principles, past achievements, future commitments, and needs and gaps in relation to ACE.

23. In the new NDCs, 92 per cent of Parties (compared with 72 per cent previously) included information, generally more clearly and in more detail than previously, on how **children and youth** have been or will be considered in NDC development and implementation, reflecting a stronger commitment to meaningful inclusion, with enhanced recognition of the role of children and youth as agents of change.

II. Introduction

A. Mandate and background

24. In accordance with the Paris Agreement, each Party is to prepare, communicate and maintain, every five years, successive NDCs that it intends to achieve and each successive NDC will represent progression reflecting the Party's highest possible ambition and be informed by the outcomes of the GST.⁵ The communicated NDCs are to be recorded in the NDC registry,⁶ maintained by the secretariat.

25. Further, under the Paris Agreement, in communicating their NDCs, Parties are to provide the information necessary for clarity, transparency and understanding in accordance with decision [1/CP.21](#) and any relevant decisions of the CMA.⁷

26. COP 21 decided that Parties shall submit their NDCs to the secretariat at least 9–12 months in advance of the relevant CMA session with a view to facilitating the clarity, transparency and understanding of the NDCs, including through a synthesis report prepared by the secretariat.⁸

⁴ ACE denotes work under Article 12 of the Paris Agreement. Its objective is to empower all members of society to engage in climate action through education, training, public awareness, public participation, public access to information and international cooperation on these matters (the six ACE elements). In decision [1/CMA.5](#), para. 176, the CMA emphasized the importance of ACE for empowering all members of society to engage in climate action and for the consideration of the outcomes of the first GST.

⁵ Article 4, paras. 2, 3 and 9, of the Paris Agreement.

⁶ Available at <https://unfccc.int/NDCREG>.

⁷ Article 4, para. 8, of the Paris Agreement.

⁸ Decision [1/CP.21](#), para. 25.

27. CMA 1 adopted further guidance on the information necessary for clarity, transparency and understanding of NDCs.⁹ It emphasized that the guidance is without prejudice to the inclusion of components other than information on mitigation in an NDC and decided that, in communicating their second and subsequent NDCs, Parties shall provide the information necessary for clarity, transparency and understanding as applicable to their NDCs.¹⁰

28. CMA 3 requested the secretariat to annually update the NDC synthesis report and to make it available to the CMA at each of its sessions.¹¹

29. CMA 5, reaffirming the nationally determined nature of NDCs and Article 4, paragraph 4, of the Paris Agreement, encouraged Parties to come forward in their next NDCs with ambitious, economy-wide emission reduction targets, covering all GHGs, sectors and categories and aligned with limiting global warming to 1.5 °C, as informed by the latest science, in the light of different national circumstances. It also encouraged Parties to communicate in 2025 NDCs with an end date of 2035 pursuant to paragraph 2 of decision [6/CMA.3](#).¹²

B. Scope and approach

30. This report synthesizes information from the 127 new NDCs, representing 154 Parties^{13, 14} to the Paris Agreement, recorded in the NDC registry between 1 January 2024 and 31 August 2026.

31. The guidance on the information necessary for clarity, transparency and understanding of NDCs was used as a general framework for synthesizing the relevant information contained in the communicated NDCs,¹⁵ which was supplemented by the synthesis of other information included in the NDCs but not covered by the guidance.

32. This report covers information communicated by Parties in their new NDCs and the synthesized information is presented for all those Parties taken together. It also provides, where possible, a comparison between those Parties' previous and new NDCs.

⁹ Decision [4/CMA.1](#), paras. 6–10. The information necessary for clarity, transparency and understanding is contained in annex I to that decision.

¹⁰ Decision [4/CMA.1](#), paras. 7–8.

¹¹ Decision [1/CMA.3](#), para. 30.

¹² Decision [1/CMA.5](#), paras. 39 and 170.

¹³ Algeria, Andorra, Angola, Armenia, Australia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia (Plurinational State of), Botswana, Brazil, Brunei Darussalam, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Canada, Central African Republic, Chile, China, Colombia, Comoros, Congo, Costa Rica, Côte d'Ivoire, Cuba, Dominican Republic, Ecuador, El Salvador, Eritrea, Eswatini, Ethiopia, European Union (and its 27 member States), Fiji, Gabon, Gambia, Georgia, Guinea, Guyana, Holy See, Honduras, Iceland, India, Indonesia, Iraq, Jamaica, Japan, Kazakhstan, Kenya, Kyrgyzstan, Lebanon, Lesotho, Liberia, Liechtenstein, Madagascar, Malawi, Malaysia, Maldives, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia (Federated States of), Monaco, Mongolia, Montenegro, Morocco, Mozambique, Namibia, Naoero, Nepal, New Zealand, Nicaragua, Nigeria, Niue, Norway, Oman, Pakistan, Palau, Panama, Paraguay, Peru, Philippines, Qatar, Republic of Korea, Republic of Moldova, Russian Federation, Rwanda, Saint Lucia, Samoa, Sao Tome and Principe, Saudi Arabia, Serbia, Seychelles, Sierra Leone, Singapore, Solomon Islands, Somalia, South Africa, Sri Lanka, State of Palestine, Suriname, Switzerland, Thailand, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Türkiye, Tuvalu, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, Uruguay, Uzbekistan, Vanuatu, Venezuela (Bolivarian Republic of), Zambia and Zimbabwe. The list of NDCs considered in this report follows the approach taken by the Paris Agreement Implementation and Compliance Committee in relation to the communication of NDCs. Three NDCs received shortly after the cut-off date for the reporting period are included in this version of the NDC synthesis report to reflect as many recently submitted NDCs as possible.

¹⁴ The European Union and its 27 member States communicated one joint NDC in accordance with Article 4, paras. 16–18, of the Paris Agreement, which for this report has been counted as one NDC representing 28 Parties and reflecting the inclusion of specific information provided by all of them.

¹⁵ As per decision [1/CP.21](#), para. 25.

33. The approach to and methods for estimating projected emission levels resulting from NDC implementation are described in a separate technical document.¹⁶

III. Overview of nationally determined contributions

34. The NDCs considered in this report cover about 71 per cent of total global emissions (without LULUCF) in 2019.

35. A total of 92 per cent of Parties provided the information necessary for clarity, transparency and understanding of their NDCs in accordance with Article 4, paragraph 8, of the Paris Agreement and paragraph 27 of decision [1/CP.21](#).

36. Furthermore, all Parties provided other information, such as on policy frameworks, gender, children and youth, Indigenous Peoples and local communities, ACE, non-Party stakeholder engagement, international cooperation, the outcomes of the GST, just transition, Article 6 of the Paris Agreement, forests, the ocean, mitigation co-benefits, adaptation, domestic mitigation measures and means of implementation necessary for NDC implementation. The relevant information is synthesized in the chapters below.

37. All Parties communicated in their NDCs the time frame and/or period of implementation, which refers to a time in the future by or in which an objective is to be achieved. A total of 79 per cent of Parties communicated a time frame and/or period of implementation of until 2035, while 6 per cent of Parties specified periods of until 2030 and 1 per cent until 2041.

38. A total of 87 per cent of Parties prepared their NDCs taking into account their unique national circumstances, covering factors such as government structure, population (i.e. size and density), economic profile (e.g. export-oriented or reliant on international trade), climate conditions (e.g. vulnerabilities such as arid environments, water scarcity and heat) and geographical characteristics (e.g. landlocked, mountainous, coastal and archipelagic profiles).

39. In addition, 68 per cent of Parties highlighted contextual aspirations and priority areas in relation to NDC preparation and implementation, such as maximizing synergies between short- and long-term climate commitments and action towards the SDGs; facilitating adaptation and climate-resilient development; facilitating international cooperation among Parties and international organizations for the provision of financial, technological and capacity-building support; deploying low-emission technologies to drive emission reductions; safeguarding food security and human health and eradicating poverty; involving youth, local governments and communities, and Indigenous Peoples in a gender-responsive and human rights based approach; ensuring just transition of the workforce; promoting social and climate justice, circular economy and integrated resource management; ensuring the ecological integrity of ecosystems, the ocean and blue carbon; reducing the risk of disasters; reducing the impacts of loss and damage associated with climate change; and upholding equity in climate action taking into account national circumstances.

40. A total of 93 per cent of Parties explained how they consider their NDCs to be fair and ambitious in the light of their national circumstances. Frequently highlighted elements include Parties' efforts to reduce emissions despite considering their own responsibility for causing climate change to be limited owing to their low share in either current or historical global emissions, limited financial resources and technical capacity, the need to address other socioeconomic and sustainable development priorities such as poverty eradication, and the need to prioritize adaptation efforts because of high vulnerability to the adverse impacts of climate change.

¹⁶ Available at <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/2026-ndc-synthesis-report>. Unless otherwise specified, quantitative data in this report relate to the number of Parties covered by the submitted NDCs. For the joint NDC submitted by the European Union, certain assessments may apply only to a subset of the 27 individual Parties covered by the submission. Where the number of Parties concerned is not specified in the NDC, the submission is counted as covering all 28 Parties for the purpose of the quantitative analysis.

41. A total of 52 per cent of Parties framed fairness consideration in the context of their past, current and future share in global emissions and per capita emissions compared with global averages. Other aspects of fairness described by Parties include the decoupling of economic development from emission growth; climate justice; mitigation potential; cost of mitigation actions; and degree of progression¹⁷ beyond the current level of effort.

42. In total, 84 per cent of Parties included information on how their NDCs represent progression and their highest possible ambition. This progression is demonstrated by setting more ambitious and comprehensive targets; expanding sectoral and gas coverage; enhancing alignment of NDCs with long-term mitigation targets, including net zero emissions, most commonly by 2050; strengthening relevant policy and legislative frameworks; improving methodological approaches and data for developing baselines and mitigation scenarios; and aligning targets with scientific recommendations and national circumstances.

43. Meanwhile, 35 per cent of Parties provided information on ambition by linking their NDCs to their commitment to transition to a sustainable and/or low-carbon and resilient economy; 12 per cent expressed that they have incorporated their NDC goals and policies into national legislative, regulatory and planning processes as a means of ensuring implementation; and 10 per cent addressed ambition in the context of the inclusive design of their NDCs, considering various cross-cutting aspects, such as investment plans, gender-responsiveness, education and just transition.

44. Further, 49 per cent of Parties stated that their NDCs are in line with the long-term goals of the Paris Agreement or with the mitigation pathways towards limiting global warming to well below 2 or 1.5 °C above pre-industrial levels.

IV. Cross-cutting elements, including planning and implementation processes, in nationally determined contributions

45. A total of 92 per cent of Parties indicated that domestic institutional arrangements are a key element of coordinating, planning and implementing climate change policy and action at the national and international level. Most of them referred to specific arrangements in place for NDC preparation, such as inter-institutional commissions, councils and committees, led by a designated entity with a coordination role and including members from public entities, the private sector, non-governmental organizations and/or academia.

A. Policy frameworks, climate legislation and governance mechanisms

1. Legislative and policy frameworks

46. This section examines the legislative and policy frameworks reported by Parties as facilitating NDC implementation. Some 5 per cent of Parties reported that their national constitutions provide the foundation or guiding framework for national climate action, while 45 per cent pointed to the adoption of comprehensive climate change acts, laws or decrees that establish the legal framework for NDC implementation and 8 per cent indicated that such legal instruments are under development. In addition, 47 per cent of Parties referred to national climate change policies and the same share referred to overarching national climate change strategies and plans as important instruments supporting NDC implementation.

47. Regarding mitigation measures, 34 per cent of Parties cited national acts or decrees that specifically address mitigation, and 43 per cent of Parties referred to general national climate change mitigation strategies, policies or plans. More specifically, 42 per cent of Parties highlighted their LT-LEDS, while 7 per cent indicated that these are under development. Specific legislation or strategies pertaining to carbon neutrality and net zero

¹⁷ In this report, “progression” refers to the difference between the estimated emission levels associated with the implementation of Parties’ NDCs communicated to the secretariat by 31 December 2023 and those according to the NDCs recorded in the NDC registry between 1 January 2024 and 31 August 2026.

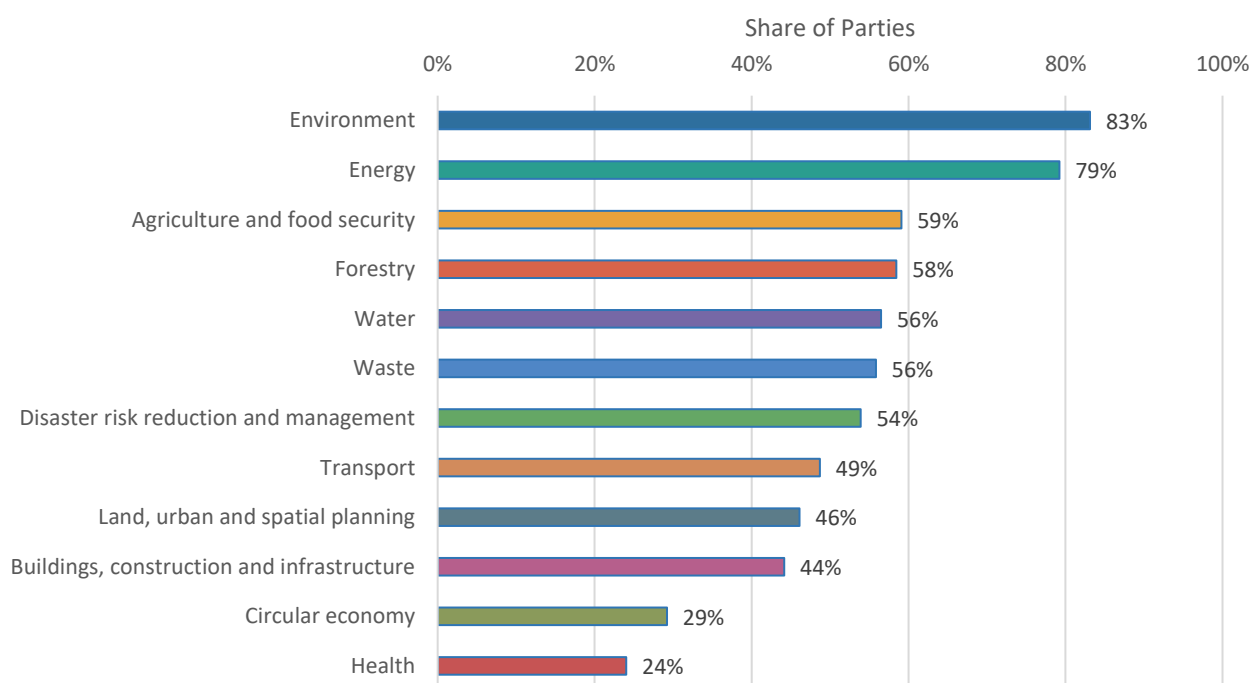
emissions were reported by 29 per cent of Parties, while 40 per cent provided information on laws or policies for establishing mitigation mechanisms, such as national carbon markets, carbon budgets or carbon and emissions trading systems and schemes.

48. With respect to adaptation measures, 36 per cent of Parties reported having national climate change adaptation plans in place, while 39 per cent indicated that such plans are under development. In addition, 36 per cent of Parties referred to national climate change adaptation programmes, strategies and frameworks, while 3 per cent reported national climate change adaptation policies. Further, 18 per cent of Parties mentioned sector-specific adaptation strategies, plans or programmes.

49. Overall, 96 per cent of Parties reported legislative and policy instruments that contribute to NDC implementation in key sectors such as energy, environment, water, waste, agriculture and food security, forestry, disaster risk reduction and management, health, urban and spatial planning, transport, and buildings, construction and infrastructure (see figure 1).

Figure 1

Shares of Parties that reported legislative and policy instruments that contribute to the implementation of their nationally determined contributions, by key sector



50. Energy-related legislative and policy frameworks that contribute to NDC implementation were reported by 79 per cent of Parties. Such frameworks include both overarching instruments and specific laws and policies, concerning, for example, energy transition, renewable energy, energy efficiency, electrification, and green or clean hydrogen. Information on environment-related¹⁸ legal and policy instruments with climate change components was provided by 83 per cent of Parties, including general environmental legislation as well as sector-specific frameworks primarily related to biodiversity, ecosystems, air quality and pollution.

51. Water-related¹⁹ legislative and policy frameworks were reported by 56 per cent of Parties, and waste-related²⁰ frameworks by the same share, as contributing to NDC

¹⁸ This category includes the general environment, biodiversity, ecosystems, the ocean, coastal or marine areas, pollution, air quality and natural resources, among others.

¹⁹ This category includes fresh water, water resources, water supply, sanitation, wastewater, irrigation, groundwater and river basins, among others.

²⁰ This category includes solid and municipal waste; hazardous, industrial, healthcare or medical, electronic, food, textile, packaging and plastic waste; wastewater waste to energy; and waste

implementation. In addition, 59 per cent of Parties reported legislative and policy frameworks related to agriculture and food security,²¹ and 58 per cent reported forestry-related²² frameworks, of which 16 per cent specifically referred to national REDD+ strategies as instrumental in supporting NDC implementation. Legislative and policy frameworks pertaining to disaster risk reduction and management were highlighted by 54 per cent of Parties as supporting NDC implementation.

52. A total of 24 per cent of Parties reported legislative and policy instruments that address health, including public health strategies, climate-related health risks and disease surveillance systems; 49 per cent of Parties highlighted legislation, strategies and policies related to transport, including those concerning decarbonization, vehicle standards, electric mobility and freight; and 46 per cent of Parties reported legal and policy frameworks related to land, urban and spatial planning, including land use, territorial planning and settlement planning instruments. In addition, circular economy instruments covering resource efficiency, sustainable production and consumption, and eco-design were reported by 29 per cent of Parties. Further, 44 per cent of Parties reported legislation, policies and strategies related to buildings, construction and infrastructure, including building codes and construction standards, housing and climate-resilient infrastructure. These were all noted as contributing to the broader legal and policy frameworks underpinning NDC implementation.

53. Climate change considerations have also been incorporated into wider sustainable development frameworks: 74 per cent of Parties highlighted sustainable development legislation, agendas, strategies and plans, including national development plans and green growth strategies, as instruments for aligning national development priorities with climate change action, thereby supporting NDC implementation. Furthermore, economic and financial instruments²³ forming part of the legislative and policy frameworks contributing to NDC implementation were reported by 60 per cent of Parties.

2. Governance mechanisms

54. With respect to NDC planning processes for coordinating the preparation or update of NDCs, 94 per cent of Parties identified the lead or designated coordinating entity and/or specific coordination arrangements in place for NDC coordination and preparation. Lead functions are commonly assigned to ministries responsible for the environment or climate change, dedicated climate authorities or other designated government bodies. Coordination arrangements include interministerial and inter-agency committees, commissions and councils, as well as steering and technical committees, task forces, thematic working groups and stakeholder platforms. A total of 51 per cent of Parties also referred to vertical coordination between national and subnational authorities, including regional, provincial, district and municipal bodies, while 77 per cent reported cross-sectoral arrangements bringing together relevant ministries and public agencies and, in some cases, representatives of the private sector, civil society, academia and other stakeholder groups.

3. Stakeholder consultation mechanisms

55. Formal or structured stakeholder consultations undertaken as part of the preparation or updating of NDCs were reported by 93 per cent of Parties. These consultations involved, as applicable, the general public, local communities, Indigenous Peoples, private entities, business and trade associations, civil society organizations, youth and women's associations, regional development partners, academia and research communities. Consultation formats included public hearings, stakeholder dialogues, bilateral and interministerial consultations,

prevention, collection, sorting, recycling, composting, treatment, recovery, incineration, disposal and landfill, among others.

²¹ This category includes agriculture, livestock, crops, soils, food systems, food security, and fisheries and aquaculture (where treated as food production), among others.

²² This category includes forests and forestry, sustainable forest management, forest conservation and restoration, afforestation and reforestation, and forest fire management, among others.

²³ This category includes public budget allocations and climate budget-tagging systems, climate funds, subsidies, taxes, incentives, bonds, insurance, lending, carbon revenues and other economic and financial instruments supporting NDC implementation or the mobilization of climate finance.

technical and sectoral workshops, surveys, and national or subnational meetings for validating draft NDCs, including proposed targets, measures and implementation priorities.

4. Arrangements for facilitating implementation of nationally determined contributions

56. Information on arrangements for facilitating NDC implementation and/or identifying relevant institutions and implementation instruments was provided by 91 per cent of Parties. Institutional arrangements commonly involved environment or climate ministries, specialized agencies and authorities, and interministerial committees, councils and other sectoral coordination bodies. Parties referred to a range of supporting instruments, including NDC implementation and investment plans; legal and regulatory frameworks; MRV systems for GHG emissions, mitigation and adaptation actions, NDC implementation progress and support received or needed; and transparency systems and registries for recording climate action, emission data, and carbon credits and their international transfers under Article 6 of the Paris Agreement. Other instruments mentioned in the NDCs include climate finance, budgeting and resource mobilization mechanisms. In some cases, the arrangements for facilitating NDC implementation involved subnational authorities and non-Party stakeholders.

B. Gender

57. A total of 92 per cent of Parties provided information related to gender in their NDCs and 79 per cent affirmed that they will take gender into account in implementing their NDCs.

58. While 75 per cent of Parties referred to relevant policies and legislation, 84 per cent affirmed a general commitment to gender equality. Some also included information on how gender has been or is planned to be mainstreamed in NDC implementation; for instance, 53 per cent of Parties reported the use of specific tools and methods, such as gender analyses, gender indicators, gender-disaggregated data and gender-responsive budgeting.

59. Overall, 61 per cent of Parties referred to their planned gender-responsive climate action and 29 per cent to gender-sensitive climate action. In addition, 62 per cent elaborated on gender aspects in the context of specific sectors or areas, including agriculture, just transition, energy, health, water, forestry, LULUCF, disaster risk reduction, waste, industry, water, sanitation and hygiene, transport and education.

60. Meanwhile, 53 per cent of Parties highlighted the importance of providing capacity-building, finance and technology for gender-specific climate action and of these means of implementation being gender-responsive.

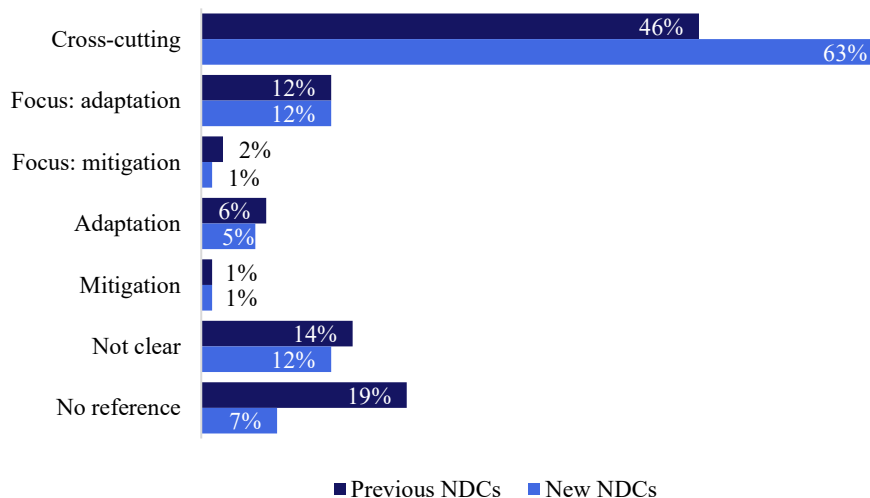
61. In addition, 26 per cent of Parties implicitly or explicitly considered gender as it intersects with other social factors in the context of climate change; 77 per cent explicitly considered specific gender-differentiated needs and perspectives and gender-differentiated impacts of and contributions to climate change and climate action; 72 per cent framed women as being vulnerable to climate impacts; 58 per cent framed women as stakeholders or agents of change; and 5 per cent explicitly considered people of other genders in the context of their NDCs.

62. Parties are increasingly considering gender in their NDCs and recognizing gender integration as a means of increasing the ambition and effectiveness of their climate action. A greater share of Parties referred to gender in the new NDCs compared with in the previous NDCs and the share of Parties considering gender as a cross-cutting issue across their NDCs has also risen (see figure 2).

63. Of the Parties that considered gender, 29 per cent elaborated more on the topic in their new than in their previous NDCs, 12 per cent had previously not included any reference to gender in their NDCs, 45 per cent considered gender to a similar extent compared with previously, while 4 per cent considered it to a lesser extent.

64. A total of 6 per cent of Parties considered the outcomes of the first GST as they relate to gender. For instance, three Parties presented information on the implementation of climate policy and action that is gender-responsive and fully respects human rights.

Figure 2

Shares of Parties that referred to gender in the previous and new nationally determined contributions**C. Children and youth**

65. In total, 63 per cent of Parties referred to the disproportionate impacts of climate change on children and youth, with 40 per cent highlighting the heightened vulnerabilities of girls in this context in particular. It was noted that children and youth face higher risks from the direct and indirect impacts of climate change as a result of their limited adaptive capacity as well as limited access to information, resources and decision-making processes, with 35 per cent of Parties mentioning specific measures for strengthening the climate resilience of and promoting a just transition for children and youth, particularly through targeted action in the areas of health, education (see para. 74 below), food security, water, sanitation and hygiene, disaster risk reduction and social protection.

66. A total of 92 per cent of Parties (compared with 72 per cent in the previous NDCs) included information, generally more clearly and in more detail than previously, on how children and youth have been or will be considered in NDC development and implementation, with enhanced recognition of the role of children and youth as agents of change. Of those Parties, 90 per cent set out their vision and priorities for engaging and empowering children and youth to contribute to climate action, 67 per cent put forward specific measures for involving them in the implementation of climate policies and action (e.g. awareness-raising and capacity-building activities, support for youth-led initiatives and innovations, inclusion of children and youth in decision-making processes, and collection of age-disaggregated data in relation to climate change) and 43 per cent explicitly mentioned that they engaged children and youth in developing their NDCs.

D. Indigenous Peoples and local communities

67. A total of 62 per cent of Parties reported an increased focus on the role of Indigenous Peoples and local communities in climate action (7 per cent more than in the previous NDCs), with 46 per cent including information on the involvement of Indigenous Peoples and local communities in national-level policymaking, including in NDC preparation, through consultations on sectoral proposals, risk assessments and application of traditional knowledge, knowledge of Indigenous Peoples and local knowledge systems, compared with 26 per cent of Parties previously.

68. Overall, 34 per cent of Parties emphasized the vulnerabilities of Indigenous Peoples and local communities to the impacts of climate change, particularly owing to their reliance on natural resources and risk of poverty, compared with 19 per cent previously. The benefits

of applying traditional knowledge, knowledge of Indigenous Peoples and local knowledge systems in adaptation and mitigation efforts were highlighted by 47 per cent of Parties, compared with 30 per cent previously. Parties stressed the importance of combining traditional and modern practices while ensuring the participation and leadership of Indigenous Peoples and local communities in climate efforts.

69. Meanwhile, 58 per cent of Parties provided examples of adaptation action design and implementation efforts by and for Indigenous Peoples and local communities, up from 43 per cent previously. The examples span several thematic areas covered by the targets under the global goal on adaptation, including ecosystems and biodiversity, food and agriculture, water and sanitation, and disaster risk management. They also reflect key dimensions of the iterative adaptation cycle: developing community-based adaptation plans; formulating and implementing adaptation measures; and using quantified targets and indicators focused on Indigenous Peoples and local communities for monitoring and evaluating adaptation progress.

70. Further, 37 per cent of Parties described mitigation efforts undertaken by and for Indigenous Peoples and local communities, up from 21 per cent previously, which include the development and implementation of sustainable waste management and forestry plans, mangrove afforestation strategies, low-carbon maritime transport plans, solar-powered irrigation efforts and clean cooking solutions.

71. In addition, 24 per cent of Parties outlined the need to increase financial resources, build capacity and develop technology for climate action relevant to Indigenous Peoples and local communities, compared with 16 per cent previously.

E. Action for Climate Empowerment²⁴

72. All Parties provided information on using at least one ACE element to promote implementation of mitigation and adaptation activities, generally communicating more clearly, and in more detail, than in previous NDCs on general principles, past achievements, future commitments, and needs and gaps in relation to ACE.

73. In total, 13 per cent of Parties explicitly referred to ACE as a necessary means of mobilizing and empowering society to deliver the mitigation and adaptation objectives outlined in their NDCs, including by upholding ACE as a guiding principle and cross-cutting priority for climate policy and action, developing and implementing national ACE strategies, and incorporating ACE and its elements into general and sectoral climate policies and plans.

74. A total of 84 per cent of Parties, up from 68 per cent in the previous NDCs, reported on climate change education measures aimed at equipping learners with the knowledge, skills, attitudes and values necessary to contribute to climate action. Measures include establishing laws and policies to ensure the provision of climate change education, updating curricula to ensure coverage of climate change topics at all levels of education, implementing climate-focused educational programmes and activities, making schools and educational institutions more low-carbon and climate-resilient, and providing relevant training and resources for teachers and educators. Compared with in the previous NDCs, Parties' focus on strengthening the resilience of the education system, thus minimizing education disruption in the face of climate-related shocks, was increased in the new NDCs.

75. A total of 88 per cent of Parties reported on efforts to raise public awareness of climate change with a view to fostering changes in behaviour and lifestyle and enhancing the effectiveness of climate policies and action, compared with 79 per cent, and generally in more detail than, in the previous NDCs. Measures include developing dedicated communication strategies and plans, identifying awareness-raising as a key pillar of climate policies, plans and strategies, conducting public awareness campaigns at all levels, and applying awareness-raising measures for specific sectors, most commonly energy, health, agriculture, fisheries, forestry and waste.

76. In addition, 89 per cent of Parties, up from 66 per cent in the previous NDCs, provided information on training measures, with an increasing emphasis on the skilling, reskilling and

²⁴ As footnote 4 above.

upskilling of the population in the context of achieving a just transition and promoting the uptake of green jobs. Measures to build the skills and capacity of diverse stakeholders for implementing climate mitigation and adaptation action include integrating climate change into training programmes for government officials and other stakeholders in both the public and the private sector, and using training as a sector-specific mitigation and adaptation measure, particularly in the agriculture, energy, fisheries, forestry, health and disaster risk reduction sectors.

77. As regards public participation, 96 per cent of Parties (compared with 90 per cent in the previous NDCs) indicated, generally more clearly and in more detail than previously, that this is key to applying a whole-of-society approach to effective, ambitious climate decision-making and action. In particular, Parties presented information on inclusive and participatory processes undertaken to involve diverse stakeholders, including the general public, in developing, implementing, monitoring and evaluating climate policies and plans.²⁵ A total of 52 per cent of Parties highlighted support provided for community-based and locally led climate action, thus enabling local communities and organizations to play key roles in planning and implementing climate action and enhancing their capacity to respond to climate change.

78. Further, 73 per cent of Parties reported on public access to information, aimed at ensuring transparency of and accountability for climate policy and action, compared with 36 per cent in the previous NDCs. Measures include upholding public access to information as a principle in and priority of climate decision-making and action in order to increase public awareness and the engagement of diverse stakeholders, and developing databases, websites and systems to facilitate open access to reliable, robust and up-to-date climate information and data. In addition, 42 per cent of Parties are using labelling to inform consumers about the sustainability of products and services.

F. Broad non-Party stakeholder engagement and voluntary efforts to support climate action

79. A total of 99 per cent of Parties highlighted the engagement of non-Party stakeholders in NDC preparation and/or implementation, reflecting their importance therein, compared with 94 per cent in the previous NDCs. Similarly, 98 per cent of Parties reported engagement of non-Party stakeholders specifically in NDC implementation (up from 70 per cent in the previous NDCs). Subnational entities, private sector stakeholders and civil society were frequently cited. Parties reported involving these stakeholders across mitigation, adaptation and means of implementation. The level of detail of the reporting varied from general acknowledgements of their role in NDC design and delivery to comprehensive descriptions of their contributions to accelerating climate action.²⁶ In the new NDCs, Parties generally provided more explicit information than previously on the roles and contributions of non-Party stakeholders in relation to climate action, which was often engaging a broader range of actors. The analysis suggests a growing emphasis on structured, multi-stakeholder implementation, with increasingly defined roles for subnational entities, the private sector often being portrayed as a co-implementer and/or financier, and civil society being a partner in supporting local climate action.

80. Overall, 90 per cent of Parties referenced subnational entities, up from 60 per cent in the previous NDCs, with 80 per cent of Parties recognizing them as partners in planning, implementing and monitoring climate action, in some cases having their roles defined through frameworks that enable them to undertake local planning activities and implementation. A total of 74 per cent of Parties mentioned consultative processes involving subnational entities in NDC and adaptation planning as well as embedding national climate targets into regional and local plans for coherent and multi-stakeholder implementation.

²⁵ See para. IV.A.4.5656 above for more information on stakeholder consultation mechanisms with regard to NDC development, including relevant institutional arrangements.

²⁶ See paras. IV.A.2.5454–55 above on governance mechanisms and stakeholder consultation mechanisms respectively, which include information on the involvement of non-Party stakeholders in NDC development.

Further, 45 per cent of Parties emphasized the importance of capacity-building, financial and technical support for subnational entities for engaging in climate action and mentioned providing such support. Climate action undertaken by subnational entities was reported across multiple sectors, including energy, transport, agriculture, forestry, water, the ocean and coastal zones, waste management, infrastructure and urban planning, disaster risk reduction and resilience, health, biodiversity and tourism.

81. A total of 97 per cent of Parties referred to involving the private sector, including businesses and industry stakeholders, in NDC preparation and implementation, with 92 per cent of Parties (up from 62 per cent in the previous NDCs) emphasizing its role in climate action. This role was reported as including co-developing and delivering renewable energy and energy efficiency programmes, driving industrial and sectoral decarbonization efforts, supporting innovation and the deployment of low-carbon technologies, implementing adaptation measures in areas such as water supply, agriculture, coastal protection and tourism, and in some cases engaging micro, small and medium-sized enterprises, start-ups and entrepreneurs in low-carbon development and opportunities in the green economy. Further, 88 per cent of Parties highlighted enabling environments such as policies or incentives to guide businesses in NDC implementation, with 58 per cent of Parties specifically mentioning national or sectoral road maps and strategies relevant to business participation in NDC implementation. In addition, 40 per cent of Parties reported using public–private partnerships as delivery models for NDC implementation. Meanwhile, 49 per cent of Parties mentioned disclosure or reporting frameworks as mechanisms for enhancing transparency regarding private sector climate action. Further, 48 per cent of Parties referred to capacity-building of the private sector to enhance its ability to implement climate action, including through private sector initiatives and public–private collaboration.

82. A total of 85 per cent of Parties (up from 56 per cent in the previous NDCs) referenced the mobilization of private finance, including the role of financial actors and institutions such as investors, banks and insurers, for NDC implementation. A total of 75 per cent of Parties reported efforts to mobilize private investment through financial mechanisms and instruments such as blended-finance schemes or green bonds, while some cited the use of risk-sharing and risk-transfer mechanisms for addressing adaptation. Meanwhile, 81 per cent of Parties reported creating or strengthening enabling environments to crowd in private capital to finance climate action, including through national or sectoral investment plans, project pipelines, taxonomies and fiscal or regulatory incentives.²⁷ Private sector investment was most frequently referred to in relation to climate action in the areas of energy, infrastructure and urban development, agriculture, industry, transport, water, the ocean and coastal zones, and waste management, with increasing private sector investment also in adaptation and resilience-building.

83. A total of 97 per cent of Parties reported engaging civil society,²⁸ including academia, in NDC design and implementation, including through policy formulation, capacity-building and monitoring activities. A total of 34 per cent of Parties linked civil society engagement to just transition or climate justice, while 29 per cent of Parties mentioned civil society actors as partners in supporting local climate action, including through community-level project implementation, resource mobilization, grass-roots partnerships or efforts to build capacity of local actors. Some 20 per cent of Parties reported that civil society actors help to raise awareness of climate change and its impacts. Meanwhile, 73 per cent of Parties highlighted the role of academic institutions in climate research, evidence generation and technical capacity-building. Further, 41 per cent of Parties described how academic institutions can help to connect climate research with policymaking, ensuring that climate policies are informed by local realities and scientific evidence.

84. A total of 66 per cent of Parties reported participating in international voluntary efforts, initiatives and coalitions as means of scaling up and implementing climate action, mobilizing

²⁷ See chap. VIII.A below for related information, including para. 0210 below on carbon markets under Article 6 of the Paris Agreement often linked by Parties to the private sector and para. 213(d) below on difficulties in mobilizing private finance.

²⁸ See chap. IV.B–E above on gender, children and youth, Indigenous Peoples and local communities, and ACE for related information.

resources and advancing NDC implementation,²⁹ all of which involve non-Party stakeholders. A total of 69 per cent of Parties described non-Party stakeholder participation in domestic initiatives, projects or programmes focusing on areas including forest protection and restoration, biodiversity and ecosystem conservation, the clean energy transition, and waste management and circular economy. Further, 3 per cent of Parties referred to the Marrakech Partnership for Global Climate Action, under the leadership of the climate high-level champions, or to their products, tools and campaigns launched to scale up and strengthen voluntary efforts, initiatives and coalitions.

85. A total of 33 per cent of Parties described the role of non-Party stakeholders in the context of responding to the outcomes of the first GST, with 23 per cent of Parties highlighting partnerships with the private sector, research institutions and local communities for advancing measures related to the clean energy transition and industrial decarbonization. Some 22 per cent of Parties mentioned forest- and ocean-related action, as well as broader action concerning biodiversity and ecosystems, often involving agribusiness leaders, local governments and international partners in joint initiatives, while 26 per cent of Parties underscored the importance of engaging non-Party stakeholders for inclusive climate governance, responding to the outcome of the first GST emphasizing the need for whole-of-society engagement in climate action.

G. International cooperation

86. A total of 97 per cent of Parties expressed their intention to pursue international cooperation in strengthening their climate action with a view to achieving their NDCs and the goals of the Paris Agreement. They indicated the importance of international cooperation for mobilizing resources, exchanging views, information and good practices, and promoting an international system that enables cooperation and sustainable development. Various areas of international cooperation were described in the NDCs, including with regard to NDC preparation and implementation; sectoral mitigation and adaptation measures; voluntary initiatives for supporting climate action; regional cooperation; MRV of GHG emissions and removals; measures for addressing loss and damage; provision of finance, technology development and transfer, and capacity-building support; and voluntary cooperation under Article 6 of the Paris Agreement (see figure 3).³⁰

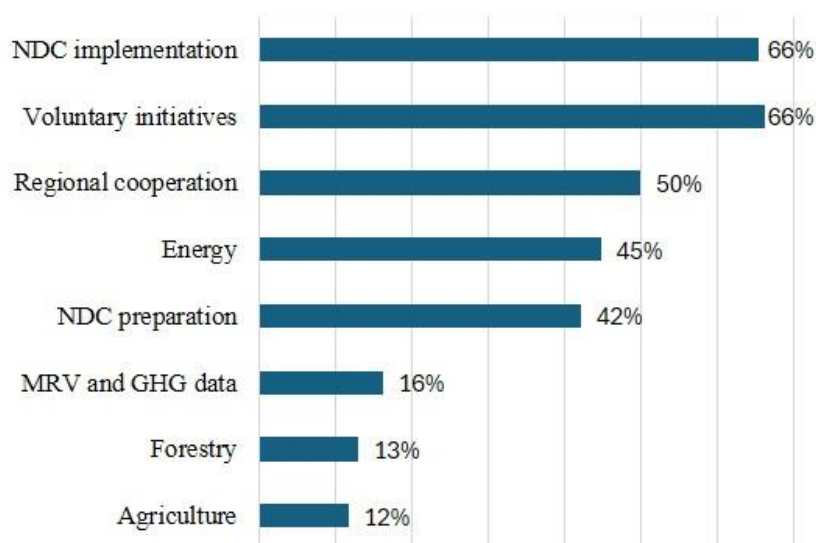
87. A total of 66 per cent of Parties highlighted that international cooperation, particularly with regard to provision of climate finance, technology development and transfer, and capacity-building support, is critical for full NDC implementation. They emphasized the importance of strengthening partnerships and provision of support to bridge the gap between NDC ambition and implementation.

88. A total of 42 per cent of Parties reported on support received and provided for NDC preparation, often involving extensive collaboration with international partners, including through technical assistance, capacity-building and financial contributions, enabling the conduct of stakeholder consultations and sectoral studies, the development of GHG inventories and the strengthening of MRV systems.

²⁹ See chap. IV.G, including para. 90, below for more information on international voluntary initiatives.

³⁰ See chap. VIII below for more information on finance, technology development and transfer, and capacity-building support and chap. IV.J below on voluntary cooperation under Article 6 of the Paris Agreement.

Figure 3

Shares of Parties that referred to areas of international cooperation in their nationally determined contributions

89. Overall, 54 per cent of Parties described engaging in international cooperation in key sectors such as energy, agriculture, forestry, health, water and waste management to accelerate sector-specific decarbonization, enhance climate resilience and address adaptation priorities. Such cooperation focuses on, for example, expanding renewable energy generation; improving energy efficiency; promoting the development and implementation of technologies such as low-carbon hydrogen, CCUS and ocean thermal energy; engaging in cross-border electricity trading; promoting climate-smart agriculture; implementing REDD+; encouraging sustainable land and forest management; protecting marine and coastal ecosystems; promoting sustainable water management; and developing climate-resilient infrastructure.

90. A total of 66 per cent of Parties reported participating in voluntary initiatives as a means of scaling up and implementing climate action, mobilizing resources and advancing NDC implementation.³¹ These initiatives are aimed, for example, at reducing CH₄ emissions and other short-lived climate pollutants; accelerating energy transitions away from fossil fuel use; promoting use of renewable energy; improving energy efficiency of cooling; enhancing collaboration between national and subnational governments on climate action; advancing regional cooperation on addressing climate change; and restoring forests and landscapes. Participation in these initiatives was reported as enabling Parties to share knowledge and coordinate action beyond national efforts, thereby complementing formal multilateral processes and creating additional momentum for achieving the goals of the Paris Agreement.

91. A total of 77 per cent of Parties reported on collaboration with international partners, including a number of United Nations agencies, multilateral development banks, bilateral donors, partner countries, development agencies, technical institutions and regional partners, in advancing their climate action and NDCs. The areas of collaboration include preparing NDCs, identifying priority measures, implementing mitigation and adaptation projects, including those at the sectoral level, and involving children, youth and women in climate action. Partners mentioned in several NDCs include the Food and Agriculture Organization of the United Nations, the German Agency for International Cooperation, the Global Environment Facility, the Green Climate Fund, the NDC Partnership, UNEP, UNFCCC regional collaboration centres, the United Nations Children's Fund, the United Nations Development Programme, the United Nations Entity for Gender Equality and the Empowerment of Women, and the World Bank, while bilateral cooperation was also

³¹ See chap. IV.F above on broad non-Party stakeholder engagement and voluntary efforts to support climate action for more information on voluntary initiatives in the context of non-Party stakeholder engagement.

highlighted. Coordinated support from United Nations agencies and joint efforts with other international partners strengthen Parties' capacity to prepare and implement NDCs, foster effective and inclusive climate action and contribute to collective progress towards the goals of the Paris Agreement.

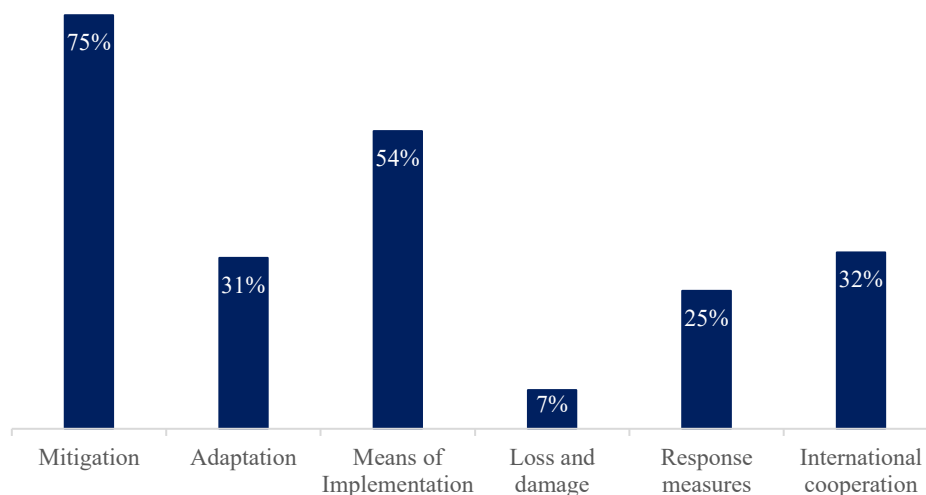
H. How the outcomes of the first global stocktake are informing nationally determined contributions³²

92. CMA 5 adopted decision [1/CMA.5](#) on the outcome of the first GST, which shall inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the relevant provisions of the Paris Agreement as well as in enhancing international cooperation for climate action.³³

93. A total of 90 per cent of Parties indicated that their NDC preparation was informed by the outcomes of the first GST, with 82 per cent providing information on how this was the case, covering the elements of mitigation, adaptation, means of implementation, response measures, loss and damage, and international cooperation (see figure 4). Reported approaches to considering the GST outcomes as part of NDC preparation include enhancing mitigation and adaptation ambition, aligning the NDC with the best available science, broadening the scope of climate action in NDCs, introducing new sectoral targets and policy measures, and taking into account cross-cutting issues, such as sustainable development, stakeholder engagement and just transition. Of the Parties that provided information, 39 per cent included detailed quantitative or qualitative information on how their domestic climate targets or measures will contribute to the global efforts called for or goals set out in the outcomes of the first GST.

Figure 4

Shares of Parties that referred to elements of the outcomes of the first global stocktake in their nationally determined contributions



94. A total of 44 per cent of Parties indicated that their NDC targets or enhanced ambition were informed by scientific findings reflected in the outcomes of the first GST, with references to, inter alia, the best available and latest science, IPCC reports and 1.5 °C pathways. A total of 45 per cent of Parties emphasized their commitment to keeping the 1.5 °C temperature goal within reach, while 35 per cent indicated that they aligned their NDC targets or actions with pathways to limiting warming to 1.5 °C. Some 31 per cent of Parties highlighted that they have come forward with economy-wide emission reduction targets

³² This subchapter covers information provided by Parties pursuant to para. 4(c) of annex I to decision [4/CMA.1](#). Other GST-related information provided in the NDCs is synthesized in other relevant subchapters.

³³ According to Article 14, para. 3, of the Paris Agreement.

covering all GHGs, sectors and categories, informed by the outcomes of the first GST. Moreover, 12 per cent of Parties reported that they aligned their NDCs with their LT-LEDS and 3 per cent indicated that they revisited or strengthened the 2030 targets in their NDCs in the light of the outcomes of the first GST.

95. A total of 75 per cent of Parties reported on mitigation ambition and action in response to the outcomes of the first GST. Of those Parties, 74 per cent outlined efforts to advance the energy transition, 58 per cent of which elaborated on their domestic targets and policies related to, inter alia, increasing renewable energy capacity and energy efficiency, accelerating the phase-down of unabated coal power, transitioning away from fossil fuel use in energy systems, accelerating the development of zero- and low-emission technologies, and reducing CH₄ and other non-CO₂ emissions; 52 per cent set out nature- and ecosystem-based approaches, particularly to halt and reverse deforestation and forest degradation; 36 per cent also addressed ocean, marine or coastal conservation; and 36 per cent reported on strategies for promoting sustainable lifestyles and patterns of consumption and production, and circular economy approaches.

96. A total of 31 per cent of Parties reported on efforts to strengthen adaptation, recognizing the importance of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, as highlighted in the outcomes of the first GST. Some 8 per cent of Parties indicated that they are aligning national adaptation targets with the global goal on adaptation. The adaptation actions reported include introducing adaptation targets and/or indicators into NDCs; enhancing national adaptation planning or frameworks; developing targeted adaptation strategies for vulnerable species, ecosystems and communities; strengthening early warning systems; improving agricultural resilience; designing and constructing climate-resilient infrastructure; developing climate-related healthcare plans; and preserving and restoring marine, forest or coastal ecosystems.

97. Some 54 per cent of Parties highlighted the importance of means of implementation for NDC formulation and implementation, including with references to the need to scale up the provision of means of implementation, particularly for developing countries; estimating the financial, technology development and transfer, and capacity-building support required; promoting and investing in research, development and deployment of zero- and low-emission technologies; mobilizing climate finance and unlocking investment for NDC implementation; incentivizing research and innovation to support the energy transition; and efforts and needs to enhance MRV mechanisms and capabilities to improve transparency.

98. Overall, 7 per cent of Parties mentioned efforts to avert, minimize and address loss and damage associated with climate change impacts, 18 per cent of which mentioned that their NDCs include targets relevant to addressing loss and damage. Parties emphasized the importance of incorporating considerations related to addressing loss and damage into adaptation priorities, enhancing actions related to resilience-building, developing an inventory of climate change impacts, and enhancing international cooperation and the provision of the means of implementation needed to take action in this regard.

99. Response measures were reported by 25 per cent of Parties and included assessing and analysing the impacts of response measures; minimizing negative and maximizing positive impacts of response measures; promoting economic diversification, including green industrialization, and socioeconomic development; pursuing the transition away from fossil fuels in a just, orderly and equitable manner; subsidizing vulnerable sectors; and directing the benefits of clean energy, job creation and other investments towards regions, communities and workers vulnerable in the energy transition and the transition to a net zero economy.

100. A total of 32 per cent of Parties referred to international cooperation in the context of responding to the outcomes of the first GST, expressing support for multilateral initiatives and forums on climate action, the sharing of experience through international dialogues, the promotion of a supportive and open international economic system that enables countries to better address climate change, and the mobilization of means of implementation through international cooperation.

101. In addition, some Parties referred to cross-cutting considerations reflected in the outcomes of the first GST in their NDCs, with 10 per cent highlighting the alignment of their

NDCs with sustainable development, action towards the SDGs or efforts to eradicate poverty, 33 per cent emphasizing the importance of stakeholder engagement and inclusivity in NDC preparation and climate action, and 35 per cent highlighting the need for just or fair transitions across a range of contexts, including the energy transition, broader socioeconomic transitions and global climate action.

I. Just transition

102. A total of 82 per cent of Parties explicitly referred to just transition or used similar terms such as “fair transition” or “just development pathways” in their NDCs, compared with 70 per cent previously. Most of these Parties further elaborated on these concepts and/or specific priority areas for addressing just transition: they mentioned, for example, ‘leaving no one behind’; social protection, inclusion, justice and equity; human rights, Indigenous People’s rights, rights of future generations and labour rights; education and participation; reskilling and upskilling, skills development and training; gender equality and -responsiveness; poverty reduction and eradication; health, including occupational safety and health; sustainable development; decent, sustainable, green and clean energy jobs; the principle of common but differentiated responsibilities; promoting access to sustainable, clean and affordable electricity; circular economy; social dialogue and the participation of workers’ and employers’ organizations in climate policy planning; economic diversification and reducing dependence on extractive industries; energy affordability and energy poverty; the protection of workers in the informal economy; and protecting and empowering vulnerable groups. Of the Parties that explicitly referred to just transition or similar terms, 53 per cent included chapters or subchapters on just transition in their NDCs, with 10 per cent including a chapter on just transition; while 52 per cent of Parties indicated that just transition principles were specifically integrated into the NDC preparation process.

103. A total of 27 per cent of Parties included direct references to just transition in the context of the outcomes of the first GST. Overall, 34 per cent of Parties referred specifically to transitioning away from fossil fuels in energy systems in a just, orderly and equitable manner, consistently with the language used in decision [1/CMA.5](#). Parties also referred to just transition within the international context: 14 per cent of Parties referred to the International Labour Organization guidelines for a just transition towards environmentally sustainable economies and societies for all,³⁴ while 5 per cent referred explicitly to the United Arab Emirates just transition work programme.

104. Most of the 18 per cent of Parties that did not explicitly refer to just transition or use a similar term in their NDCs mentioned concepts that are broadly associated with just transition and have been used by Parties that did include explicit references to just transition to substantiate the reference. Examples include references to economic and social resilience, protection of vulnerable groups, gender equality and -responsiveness, human rights, sustainable development, social inclusion and participation, poverty eradication, green job creation, climate justice, whole-of-government approaches, managing distributional impacts of climate policies, fair and equitable approaches, and intergenerational equity.

105. Parties highlighted a broad range of stakeholders alongside references to just transition and associated terms and concepts. In some instances, these references were in the context of aligning just transition pathways with recognition of the differentiated impacts of climate change on children, women, the elderly, persons with disabilities, young people and other social groups. In other cases, references to specific stakeholder groups were in the context of identifying target groups for NDC implementation, including vulnerable groups, communities (rural, local, outer island, and those with forest, mining, or fossil fuel based livelihoods), trade unions, farmers, fishers, pastoralists, the workforce and informal and seasonal workers, women, youth, children, persons with disabilities, Indigenous Peoples, migrants and internally displaced persons, underrepresented and marginalized groups, and micro, small and medium-sized companies, industries and enterprises. Some Parties went

³⁴ International Labour Organization. 2015. *Guidelines for a just transition towards environmentally sustainable economies and societies for all*. Geneva: International Labour Organization. Available at https://www.ilo.org/global/topics/green-jobs/publications/WCMS_432859/lang--en/index.htm.

further in identifying specific groups of workers likely to be affected by just transitions, such as charcoal producers, informal waste collectors, artisanal miners, refrigeration technicians and transport workers, and in some cases included quantified estimates of the number of jobs affected. A number of Parties also identified workers' and employers' organizations, academia and research institutions as stakeholders to be engaged in just transition planning and implementation, with some committing to establish formal social dialogue mechanisms for this purpose.

106. The Parties that referenced just transition explicitly did so across chapters of their NDCs related to mitigation (38 per cent of Parties) and adaptation (18 per cent of Parties). Some 30 per cent of Parties referred to just transition in the context of means of implementation, with references most commonly linked to finance but also included in the context of technology development and transfer, and capacity-building, as well as broader references to international support and cooperation. A number of Parties referred to just transition in the context of loss and damage, including assessing differentiated impacts of climate change on vulnerable groups.

107. The references to just transition in the mitigation chapter or subchapters of the NDCs address a range of issues, including developing energy transition plans, adopting a holistic multisectoral approach to just transitions, just transition principles for guiding implementation of NDCs, implementing mitigation measures, economic diversification, investments in renewable energy capacity, energy efficiency and sustainable heating, clean cooking, electrification of transport, reskilling workers in carbon-intensive sectors, transitioning away from fossil fuels, energy affordability, eliminating inefficient fossil fuel subsidies, and links between just transitions and limiting global warming to 1.5 °C.

108. References to just transition in the adaptation chapter or subchapters of the NDCs were included in the context of integrating just transition principles into the measurement of, and reporting on, adaptation progress and outcomes, national adaptation guidelines and objectives, social protection, including adaptive and shock-responsive social protection systems, livelihood diversification for resource-dependent communities, training initiatives and skills development programmes, just transition impact assessments, managing climate-induced displacement and human mobility, and social dialogue and meaningful participation of stakeholders, including vulnerable groups, in adaptation planning and decision-making.

109. References to just transition in the context of means of implementation were included, for example, in relation to financing and international support for just transition, capacity-building for integrating new technologies into economies and societies, support needed for transforming the energy sector, mobilizing resources for equitable, tailor-made solutions that are integrated into sustainable development and poverty eradication efforts, ensuring that climate finance proposals meet standards for promoting decent work and that investment plans channel resources to vulnerable communities, just energy transition partnerships, and scaling up new and additional grant-based, highly concessional finance and other non-debt instruments.

110. In referencing just transition, 59 per cent of Parties included details of initiatives related to implementing just transition pathways, ranging from broad statements such as an intention to integrate just transition principles into policies and measures guiding decarbonization, to more specific steps for integrating just transition considerations into targeted national policies, legislation, plans, frameworks and strategies (e.g. skills and jobs strategies; and legislation promoting accountability for, transparency of and stakeholder engagement in climate action). Many of the specific initiatives were related to implementation strategies in the context of both adaptation and mitigation, with a notable focus on workforce reskilling and the strengthening of social protection systems. Moreover, 39 per cent of Parties referred to existing or planned just transition bodies, frameworks or mechanisms for supporting the integration of just transition considerations into NDC implementation, and 13 per cent of Parties referred to existing or planned indicators for tracking implementation of just transition principles and related issues. Examples of such bodies, frameworks or mechanisms include existing or planned national just transition frameworks and strategies, some of which engage relevant line ministries, workers' and employers' organizations, civil society and academia; councils or commissions mandated to advise on just transition or coordinate national just transition policies; sectoral skills bodies

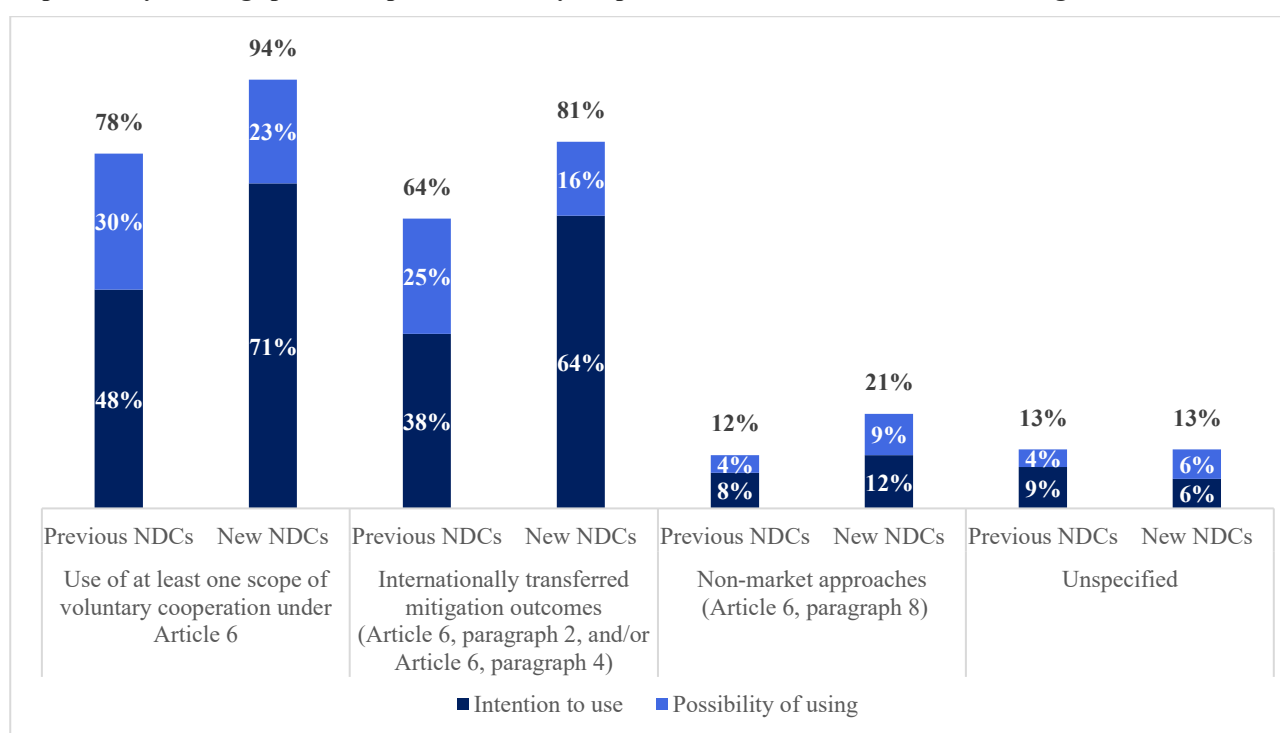
to be established to guide the transition of the workforce in specific sectors; national coordination and social dialogue mechanisms for just transition; and just transition funds or mechanisms to channel investment to the regions, sectors and workers most affected by the transition.

J. Voluntary cooperation under Article 6 of the Paris Agreement

111. A total of 94 per cent of Parties, in comparison with 78 per cent previously, communicated that they plan to or will possibly use at least one of the scopes of voluntary cooperation in implementing their NDCs (see figure 5) by directly or indirectly referring to the scopes in their NDCs: use of internationally transferred mitigation outcomes under Article 6 of the Paris Agreement, including through cooperative approaches referred to in Article 6, paragraph 2, or under the mechanism established by Article 6, paragraph 4; use of non-market approaches under Article 6, paragraph 8; and general use of voluntary cooperation under Article 6 without specifying a particular scope.

Figure 5

Shares of Parties that indicated in the previous and new nationally determined contributions the intention to use or possibility of using specific scopes of voluntary cooperation under Article 6 of the Paris Agreement



Note: Some of the sums of the shares of Parties for intention to use and possibility of using voluntary cooperation do not match the totals presented owing to rounding.

112. A total of 81 per cent of Parties referenced planned or possible use of internationally transferred mitigation outcomes, including through cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement or under the mechanism established by Article 6, paragraph 4, compared with 64 per cent previously; 21 per cent referred to the planned or possible use of non-market approaches, compared with 12 per cent previously; and 13 per cent mentioned the general use of voluntary cooperation under Article 6 of the Paris Agreement without specifying a particular scope, unchanged from 13 per cent previously.

113. A total of 82 per cent of Parties, compared with 69 per cent previously, defined their approach to the use of voluntary cooperation: 74 per cent indicated that they will use voluntary cooperation in support of achieving their mitigation targets, including as a means of accessing support or complementing domestic mitigation measures; and 13 per cent identified priority areas, sectors or activities for voluntary cooperation.

114. Some 24 per cent of Parties have set, or indicated that they will establish, quantitative limits or targets on the use of voluntary cooperation for achieving their mitigation targets, or have specified criteria governing such use; and 60 per cent highlighted the importance of their use of voluntary cooperation for achieving their mitigation targets in a manner that is consistent with guidance adopted by the CMA, such as involving applying robust accounting to avoid double counting, reporting thereon in BTRs, ensuring environmental integrity and promoting sustainable development.

115. A total of 12 per cent of Parties expressed an intention to use non-market approaches, largely to complement use of market mechanisms, including to mobilize finance, technology development and transfer, and capacity-building in support of NDC implementation, while a further 9 per cent mentioned the possible use of such approaches.

116. Notably, 57 per cent of Parties, compared with 8 per cent previously, indicated that they plan to develop, are developing or have already developed the legal and regulatory arrangements, policy frameworks or operational manuals, and have established, for example, the institutional structures, approval and authorization processes and carbon registries necessary to facilitate the implementation of Article 6 of the Paris Agreement.

K. Forests

117. Reducing emissions from forests and land-use change and simultaneously enhancing removals from forests continued to be identified in NDCs as a key mitigation option, with 90 per cent of Parties including the LULUCF sector in their economy-wide emission reduction target. A total of 44 per cent of Parties defined a separate LULUCF-specific target, such as increasing carbon sequestration, expanding forest cover, reducing deforestation or enhancing ecosystem restoration. Moreover, 28 per cent indicated that the outcomes of the first GST informed their forest-related mitigation efforts, with several highlighting enhanced action to halt and reverse deforestation and forest degradation by 2030.

118. Compared with the previous NDCs, more Parties included in the new NDCs forest-related climate action expected to contribute to achieving the NDCs (see figure 6). A total of 80 per cent mentioned afforestation and reforestation through, for example, establishment and management of forest plantations, assisted natural regeneration, tree-planting initiatives and the use of native tree species, while 68 per cent mentioned sustainable forest management, including through improved forest conservation, protected area management, sustainable harvest practices and certification schemes. Parties emphasized that such action helps to both maintain and enhance forest carbon stocks and generate employment opportunities.

119. Globally, deforestation and forest degradation remain major sources of GHG emissions in the LULUCF sector. Some 45 per cent of Parties described measures for reducing deforestation, with several outlining actions to prevent illegal deforestation, promote deforestation-free production and strengthen forest protection, while 42 per cent outlined actions for reducing forest degradation. Further, 21 per cent of Parties reported on activities designed to prevent and manage pests, diseases and wildfires, including through integrated fire management, early warning systems and firebreaks, recognizing their role in reducing forest-related emissions and protecting forest ecosystems.

120. Many developing country Parties that submitted new NDCs referred to the important role of REDD+ activities in guiding mitigation actions in the forest sector, with 21 per cent of them referring to national REDD+ strategies and action plans for planning and coordinating forest-related mitigation actions, 41 per cent (30 per cent of all Parties) reporting on the implementation of REDD+ activities, including jurisdictional REDD+ programmes, implementation of safeguards and community-based forest management, as part of their forest-related mitigation efforts, and 17 per cent emphasizing the importance of international collaboration and results-based payments in supporting REDD+ implementation.³⁵

121. Further, 51 per cent of Parties reported on the conservation, restoration and sustainable management of high-carbon wetlands, particularly mangroves and peatland,

³⁵ Further information on REDD+ implementation is available at <https://redd.unfccc.int/>.

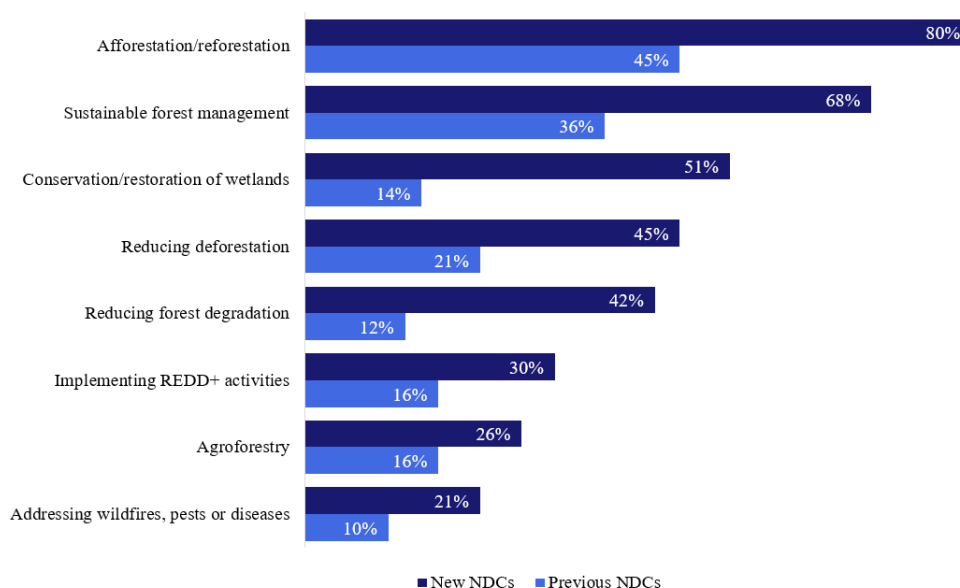
recognizing their high carbon storage potential. In addition, 26 per cent referred to agroforestry as part of their forest-related mitigation or adaptation action, including climate-smart agroforestry systems, community-based initiatives and silvopastoral practices.

122. A total of 29 per cent of Parties outlined policy and institutional measures for supporting forest-related climate action, including the development and implementation of forest policies, strategies and legislation; the establishment and strengthening of land-use and natural resource management frameworks; the introduction of payment mechanisms for forest ecosystem services and benefit-sharing arrangements; the strengthening of forest governance, including institutional arrangements related to the Warsaw Framework for REDD+ and its interface with Article 6 of the Paris Agreement; the introduction of certification schemes; and the promotion of integrated approaches to forest and ecosystem management.

123. In total, 45 per cent of Parties outlined measures for strengthening forest monitoring, including through national forest inventories, remote sensing and geospatial technologies, national forest monitoring systems, early warning systems and digital platforms for monitoring forests and land-use change. In addition, 14 per cent of Parties reported research-related activities, including in relation to climate-resilient and native tree species; forest fire and forest degradation management; carbon stock data by forest type and species; and methodologies better adapted to national circumstances for estimating forest carbon stocks.

Figure 6

Comparison of the shares of Parties that referred to forest-related climate action in the previous and new nationally determined contributions



124. A total of 21 per cent of Parties reported on forest-related capacity-building programmes aimed at forest-dependent communities and key stakeholders, including government officials, local communities, the private sector and non-governmental organizations, designed to strengthen technical capacities for sustainable forest management, monitoring and conservation while creating opportunities for sustainable livelihoods and green jobs that support just transition. In addition, 23 per cent of Parties highlighted the importance of empowering women, Indigenous Peoples and local communities, and youth through community-based forest management, equitable benefit-sharing and inclusive decision-making with a view to strengthening community resilience and supporting sustainable forest management.

125. A total of 53 per cent of Parties clearly identified co-benefits arising from forest-related mitigation and adaptation actions. Examples are biodiversity conservation; the restoration and sustainable management of forest ecosystems through afforestation, reforestation and other nature-based approaches; enhanced ecosystem resilience and adaptation to climate change; improved water and food security; sustainable livelihoods and

green job opportunities for local communities; and the promotion of sustainable forest products, ecosystem services and bioeconomy, contributing to sustainable development.

126. Synergies among the Rio Conventions were highlighted: 52 per cent of Parties referenced linkages between forest-related climate action and the Convention on Biological Diversity, while 21 per cent mentioned synergies of forest-related climate action with the United Nations Convention to Combat Desertification. These Parties emphasized the importance of strengthening policy coherence and promoting integrated implementation by aligning instruments such as national biodiversity strategies and action plans, and national action programmes with NDC implementation, thereby enhancing co-benefits across the three Rio Conventions. A total of 25 per cent of Parties highlighted that forest-related climate action, such as forest conservation and restoration, sustainable forest management, afforestation and reforestation, forest fire prevention and agroforestry, contributes directly to achieving the 2030 targets under the Kunming-Montreal Global Biodiversity Framework and/or Land Degradation Neutrality targets under the United Nations Convention to Combat Desertification. A total of 18 per cent of Parties noted that mainstreaming implementation of nature-based solutions or ecosystem-based adaptation across the Rio Conventions contributes to enhancing ecosystem resilience, safeguarding ecosystem services and supporting local livelihoods while delivering simultaneous benefits for climate adaptation, biodiversity conservation and land restoration.

127. A total of 29 per cent of Parties quantified the costs of implementing their forest-related climate action, with many providing sector- or measure-specific cost estimates. In addition, 18 per cent identified financing needs or gaps and emphasized the importance of enhanced international support, including finance, technology transfer and development, and capacity-building, to facilitate implementation.

L. The ocean

128. Parties continued to report a significant increase in ocean-based climate action in the new NDCs compared with the previous NDCs. Overall, 78 per cent of Parties included at least one explicit reference to the ocean, of which 87 per cent included ocean-based adaptation measures and 57 per cent ocean-based mitigation measures. For the ocean, a total of 629 adaptation measures and 142 mitigation measures were reported, along with 77 cross-cutting measures aimed at fostering mitigation and adaptation co-benefits (see figure 7), highlighting the range and distribution of sectoral mitigation- and adaptation-based measures in NDCs.

129. Most ocean-based adaptation and mitigation actions were noted in the form of policies, programmes and initiatives, with 108 quantified targets identified (86 for adaptation and 22 for mitigation). These targets include measurable outcomes such as the deployment of offshore wind and other ocean-based renewable energy capacity, reductions in marine transport emissions, enhanced carbon sequestration through blue carbon ecosystems, hectares of mangroves restored, areas of coastal zones brought under improved management, expansion of marine protected areas, and the share of communities covered by climate-resilient fisheries and aquaculture management.

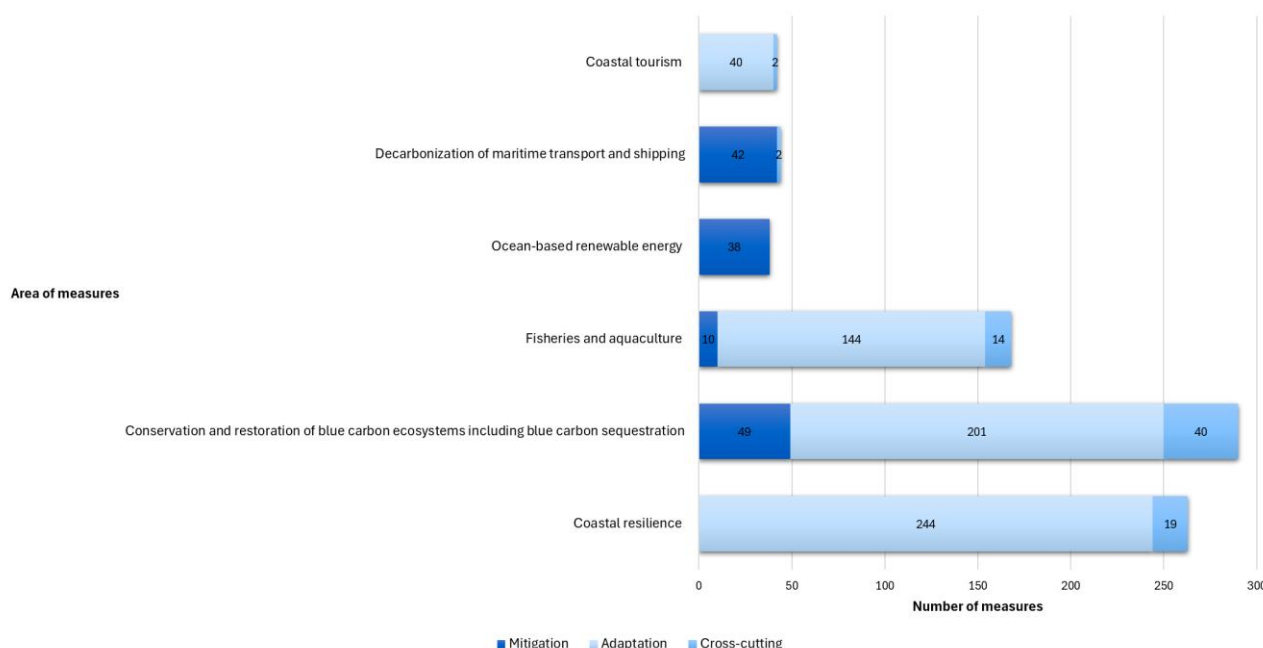
130. Of the Parties that included an ocean-related adaptation or mitigation component in their new NDC, 16 per cent reported on progress in implementing ocean-based measures since their previous NDC. However, quantitative reporting remains limited, with many Parties reporting progress qualitatively or without attributing outcomes specifically to ocean-related measures. Robust MRV systems and access to ocean data emerged as important enabling factors for tracking ocean-related NDC implementation.

131. Overall, of the reported measures, 284 ocean-based adaptation measures and 21 cross-cutting measures target coastal resilience through the development of integrated coastal zone management frameworks, climate-resilient coastal infrastructure planning, the strengthening of coastal and marine tourism resilience, shoreline restoration, sea level rise measures, measures to address marine pollution, and marine spatial planning; 201 adaptation measures and 34 cross-cutting measures support the conservation and restoration of blue carbon ecosystems in the form of nature-based solutions that include mangrove reforestation, coral

reef rehabilitation, seagrass restoration, marine biodiversity conservation and marine protected areas; and 144 adaptation measures and 14 cross-cutting measures pertain to the fisheries and aquaculture sectors aimed at transitioning to climate-resilient fishing techniques, developing early warning systems, promoting sustainable aquaculture, and protecting food security and coastal livelihoods through community-based management of fisheries.

Figure 7

Number of ocean-based adaptation, mitigation and cross-cutting measures reported in Parties' nationally determined contributions, by area of measure



132. Though fewer in number than adaptation measures, reported ocean-based mitigation measures show increasing innovation and sectoral diversity, spanning renewable energy deployment, carbon sequestration and decarbonization of maritime transport and shipping. Overall, 38 mitigation measures relate to ocean-based renewable energy, including offshore wind, wave and tidal energy and thermal energy conversion; 49 mitigation measures and 6 cross-cutting measures focus on blue carbon sequestration through the protection and restoration of blue carbon ecosystems, with some exploring the use of marine CO₂ removal technologies; 42 mitigation measures and 2 cross-cutting measures target the decarbonization of maritime transport through low-emission fuels, energy-efficient shipping and greener port infrastructure; and 10 mitigation measures target the fisheries and aquaculture sectors.

133. A total of 38 per cent of Parties explicitly reported on biodiversity–climate–ocean linkages in their NDCs, 34 per cent of which explicitly referenced a national biodiversity strategy and action plan or equivalent. Among those Parties, 46 per cent referenced the Kunming-Montreal Global Biodiversity Framework, most frequently target 2 (ecosystem restoration) and target 3 (area-based conservation), while 13 per cent referenced the need for coordination of ocean-based action across the Rio Conventions.

134. Means of implementation for ocean-based adaptation and mitigation measures were a key focus of reporting in the NDCs, with about 69 per cent of Parties reporting on finance-related needs for ocean-based action, of which approximately 54 per cent have made conditional commitments. All of these conditional commitments were identified by developing country Parties, with around 40 per cent identified by small island developing States. Overall, 55 per cent of Parties explicitly referenced needs for access to and deployment of ocean-based technologies. Key technology-related needs include conducting technology needs assessments, deploying ocean observation and monitoring systems, and strengthening MRV frameworks, with the most frequently mentioned priorities including addressing data gaps and improving access to projections of sea level rise, coastal and ocean observing systems, and blue carbon ecosystem data. A total of 28 per cent of Parties referenced science-based needs in this context, including ocean monitoring, and collection

of and access to ocean data and research. Some 54 per cent of Parties highlighted capacity-building needs, including for strengthening data collection for ocean observation and monitoring systems, using forecasting systems to assess sea level rise, deploying ocean-based technologies and strengthening the capacity of national institutions for marine management and planning.

V. Economic and social consequences of response measures and mitigation co-benefits resulting from adaptation action and/or economic diversification plans

135. A total of 74 per cent of Parties considered mitigation co-benefits resulting from adaptation actions and/or economic diversification plans in their NDCs. Of those Parties, 69 per cent included this information in their table on information to facilitate clarity, transparency and understanding. The sectors in which adaptation actions and/or economic diversification plans result in mitigation co-benefits include energy, agriculture, forestry, water, transport, waste, industry, buildings and tourism.

136. Of the Parties that reported on mitigation co-benefits resulting from adaptation actions and/or economic diversification plans in their NDCs, 75 per cent considered the social and economic consequences of response measures, including in relation to impacts on energy and food security, health outcomes, inequality and poverty, economic competitiveness, job creation and displacement, emergence of new industries and supply chains, and innovation. Of the Parties that did not report on such mitigation co-benefits, 48 per cent considered the social and economic consequences of response measures.

137. A total of 56 per cent of Parties have conducted or plan to conduct an assessment of the impacts of response measures. Some 13 per cent mentioned the development and/or application of methodologies and analytical tools for assessing such impacts, while 21 per cent mentioned using indicators related to gender, age, and sectoral and income-level dimensions to understand the distributional effects of response measures.

138. A total of 36 per cent of Parties acknowledged that the impacts of response measures are unevenly distributed across different groups of society³⁶ or the workforce, with impacts on the workforce, women and youth being the most frequently mentioned. A total of 80 per cent of Parties plan to address such impacts by incorporating just transition measures into NDC implementation, including green skills and job strategies, an authority to oversee just transition, social protection to safeguard those affected by the transition, an initiative to disburse funds to vulnerable communities, and consultations with specific groups of stakeholders.

139. A total of 69 per cent of Parties referenced economic diversification plans as part of their national development strategies and climate policies to boost the country's resilience to climate change and response measures. Such plans are linked to sectors including energy, tourism, transport, water and waste management, industry and AFOLU.

VI. Adaptation

A. Scope and coverage of adaptation components

140. A total of 86 per cent of Parties included a distinct adaptation component in their NDCs.³⁷ In particular, they provided information on adaptation strategies, policies and plans; risks and vulnerabilities; sectoral adaptation measures; alignment of adaptation priority sectors with the United Arab Emirates Framework for Global Climate Resilience and the targets under the global goal on adaptation;³⁸ monitoring and evaluation of adaptation; and

³⁶ Such as women, particularly in rural areas, youth, children, persons with disabilities, displaced people and Indigenous Peoples.

³⁷ In this chapter, "Parties" refers to those with NDCs containing an adaptation component.

³⁸ See decision [2/CMA.5](#), paras. 9–10.

synergies between adaptation and mitigation actions as well as between adaptation actions and environmental international policy frameworks.

141. The information provided illustrates how Parties have advanced adaptation since the previous NDCs. For example, there has been an increase in the share of NDCs that:

(a) Provide detailed information on institutional arrangements and legal frameworks for adaptation, describing in more detail efforts to integrate adaptation into national and subnational policies and strategies (by 23 per cent);

(b) Describe the status of the NAP process, demonstrate how the NAP was established as the main national instrument for adaptation and provide information on its implementation (by 1 per cent);

(c) Include time-bound quantified adaptation targets for monitoring the progress of adaptation measures and identify the adaptation indicators intended to be used for monitoring progress (by 20 per cent);

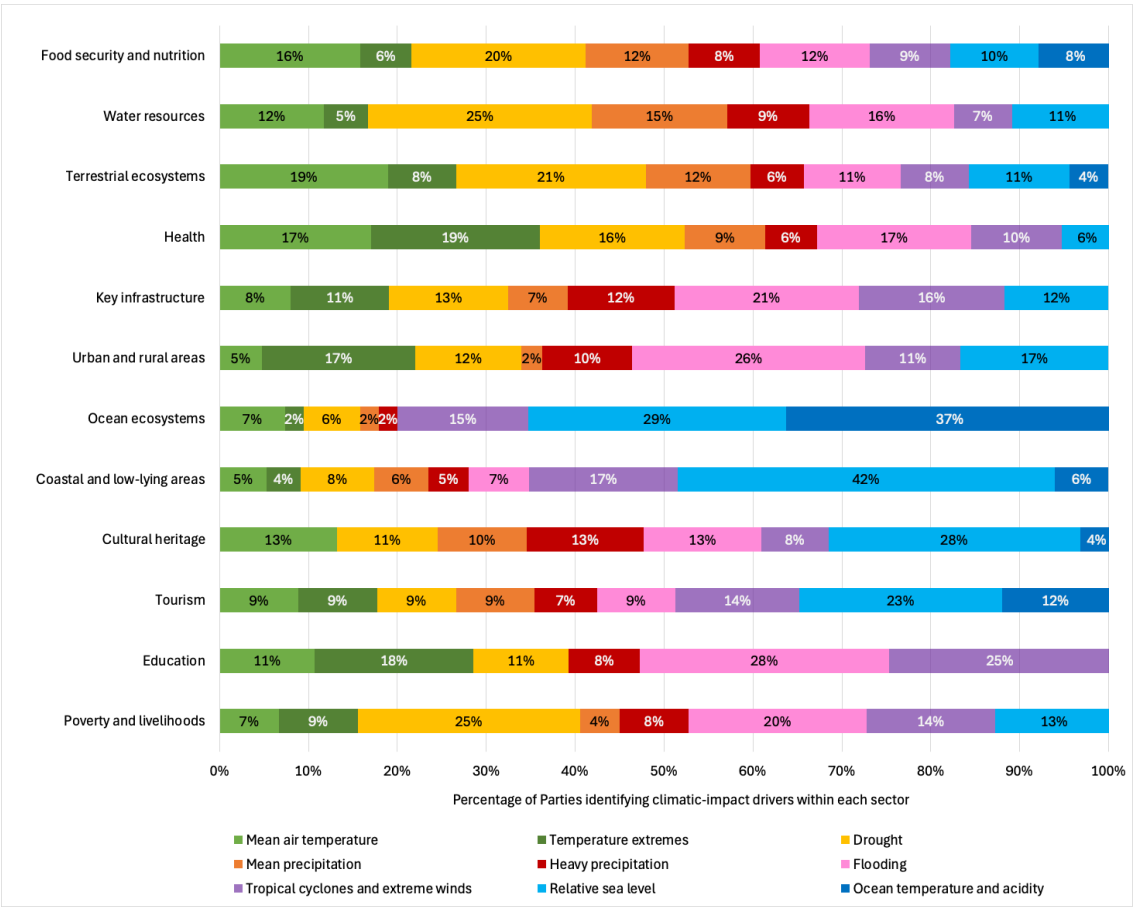
(d) Identify synergies and co-benefits between adaptation and mitigation actions (by 44 per cent) as well as linkages between adaptation and efforts towards achieving the SDGs (by 20 per cent).

B. Impacts, risks and vulnerabilities

142. The adaptation components describe key climatic-impact drivers, referring in particular to increases in the frequency or intensity of drought, flooding, heatwaves, heavy rainfall, temperature increase, precipitation changes, sea level rise, coastal erosion and associated flooding, fires, landslides, extreme storms and tropical cyclones, as well as increases in ocean acidification, ocean temperature, sand and dust storms, glacier retreat, snow decline and permafrost thaw. A total of 99 per cent of Parties described how these climatic-impact drivers affect various sectors (see figure 8). Of particular concern are food security and nutrition (covering the agriculture, livestock and fisheries sectors), terrestrial ecosystems, water resources and health. A total of 17 per cent of Parties identified the transboundary risks to which their water resources, terrestrial ecosystems, pastoral population, energy systems and coastal areas are exposed, such as flooding, drought, glacier retreat and snow decline.

143. In total, 89 per cent of Parties, compared with 53 per cent in the previous NDCs, highlighted that women, children and youth, people with disabilities, the elderly, Indigenous Peoples and local communities, rural and urban populations, and displaced and low-income populations are particularly vulnerable to climate change. Specifically, 33 per cent of Parties with an adaptation component emphasized the vulnerability of populations living in coastal areas, on islands, in mountainous areas, and in areas near forests or rivers, while 71 per cent highlighted dependence on climate-sensitive sectors, geographical location or characteristics, reliance on natural resources, economic challenges and poverty, demographic challenges, inadequate infrastructure, limited institutional capacity, inequality, the coronavirus disease 2019 pandemic, the extent of livelihood diversification, and political instability as factors affecting vulnerability to climate change impacts.

Figure 8
Extent to which climatic-impact drivers affect various sectors, as reported by Parties in the adaptation components of their nationally determined contributions



C. Enhancing adaptation-related research for policymaking

144. All Parties considered how to improve adaptation-relevant research, data, information and monitoring and ensure that adaptation efforts are informed by science, for example through the establishment of data-collection programmes, national databases on impacts, monitoring systems, observation networks, research centres, strengthened climate services, climate and risk modelling, multi-scale risk maps incorporating climate data and scenarios, and international research cooperation.

D. National adaptation plans and policy frameworks

145. A total of 62 per cent of Parties (1 per cent more than in the previous NDCs) described the process for formulating and implementing their NAP and its status. Some 33 per cent of Parties reported in their NDCs that they have developed a NAP, while a further 29 per cent indicated their intention to do so, including a timeline for completion, update and/or implementation. In addition, 48 per cent of Parties outlined links between their NAP and NDC, including how the NAP provided the basis for the adaptation component, how both build on the same vulnerability assessment, and how the NAP can provide a monitoring and evaluation framework for the NDC.

146. In addition, all Parties described policy frameworks relevant to adaptation, including information on how such frameworks provide a basis for adaptation efforts and how adaptation is integrated into and strengthened under other frameworks, such as national climate plans, national development plans, local government or community-level plans, sectoral plans relevant to adaptation priorities, disaster risk management strategies, regional and transboundary strategies, and UNFCCC frameworks (e.g. national adaptation

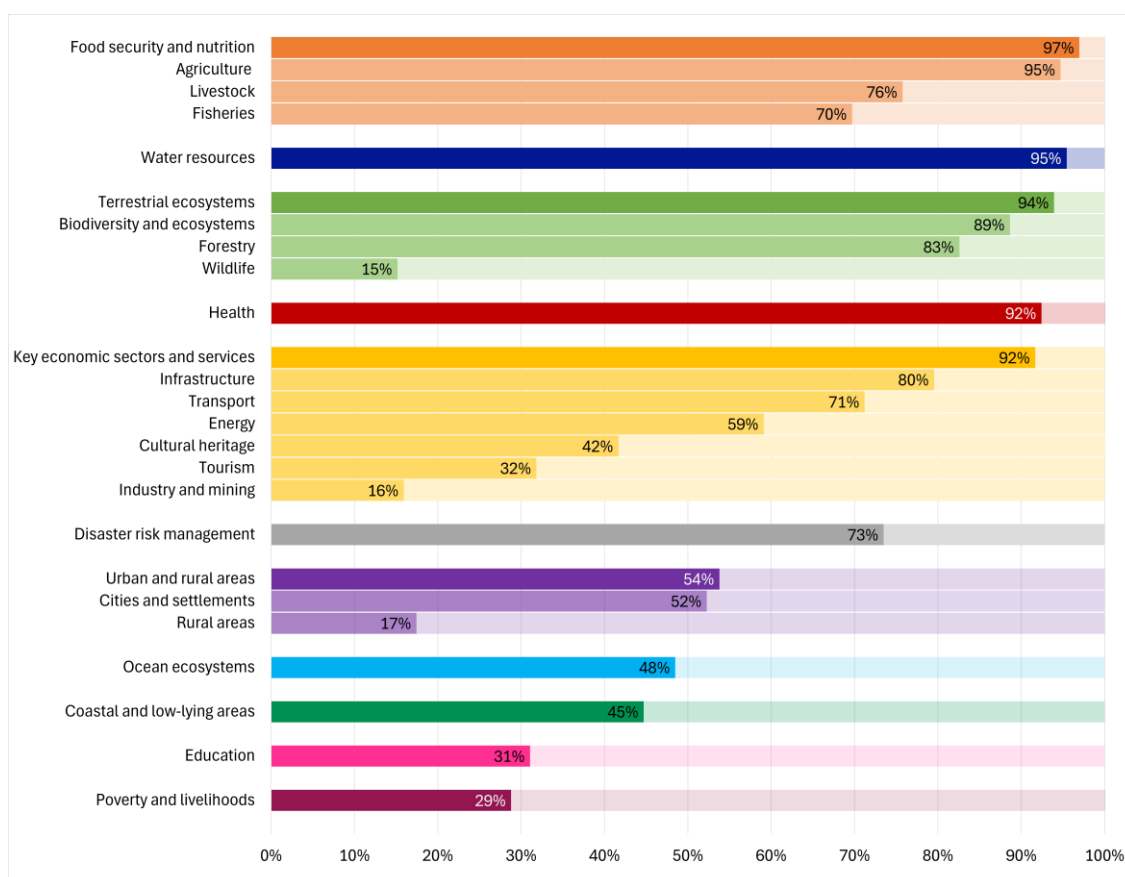
programmes of action and technology needs assessments). Some 9 per cent of Parties highlighted the inclusion of adaptation considerations in their national constitution.

E. Adaptation priorities

147. Parties provided a wide range of information on adaptation in various priority areas and sectors (see figure 9). The new NDCs illustrate a focus on food security and nutrition, water resources, terrestrial ecosystems, health, key economic sectors and services, and disaster risk management, followed by urban and rural areas, ocean ecosystems, coastal and low-lying areas, education, and poverty and livelihoods (see also the additional information on adaptation components of NDCs³⁹).

Figure 9

Shares of Parties that refer in the adaptation components of their nationally determined contributions to adaptation priority areas and sectors



148. A total of 39 per cent of Parties described how their adaptation strategies and policies, including the adaptation component of their NDCs, are guided by the provisions of the United Arab Emirates Framework for Global Climate Resilience. Of those Parties, 19 per cent described how the measures in sectors prioritized for adaptation planning align with or contribute to the achievement of the targets under the global goal on adaptation.

149. In total, 77 per cent of Parties, compared with 35 per cent in the previous NDCs, referred to the importance of transformational adaptation, including measures related to agriculture, fisheries and livestock, policy and governance, terrestrial ecosystems, disaster risk management, urban areas, infrastructure and energy. The aim of these measures is to promote technological innovation and policy or legal reform, build institutional capacity for transformational adaptation, create new financing mechanisms and influence the behavioural change needed for transformational adaptation. The importance of promoting the inclusion of children and youth in, as well as gender-inclusive approaches to, transformational

³⁹ Available at <https://unfccc.int/documents/661574>.

adaptation, and the need for a deeper understanding of fairness and just transition in transformational adaptation, particularly with regard to Indigenous Peoples and local communities, were also highlighted.

F. Monitoring and evaluation

150. The share of Parties describing previous or ongoing efforts to enhance monitoring and evaluation of adaptation increased from 33 per cent in the previous NDCs to 49 per cent in the new NDCs. Such efforts include reviewing and consolidating monitoring and evaluation frameworks and tools, tracking progress in implementing and achieving NDC targets, developing methods for evaluating the effectiveness of adaptation actions, strengthening the ability to implement the ETF, improving institutional arrangements for monitoring and evaluation, aligning adaptation indicators with the SDGs and other international frameworks, and improving inclusivity by collecting disaggregated data on gender, children and youth, Indigenous Peoples and local communities, people with disabilities and the elderly. Additionally, 53 per cent of Parties identified and described their intention to apply time-bound quantified adaptation targets for monitoring the progress of adaptation measures, while 24 per cent reported developing the adaptation indicators that they intend to use for monitoring progress.

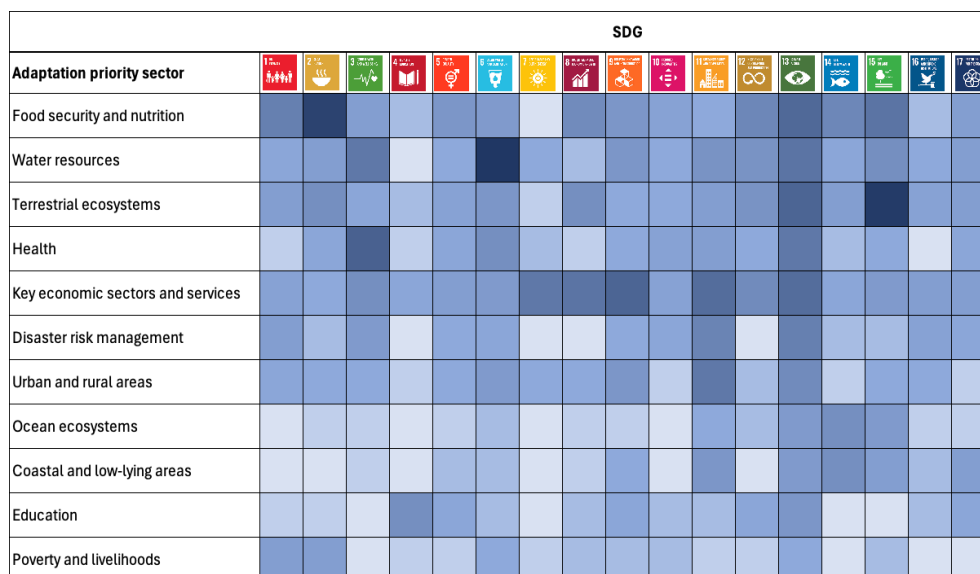
G. Synergies with mitigation and sustainable development

151. The share of Parties that identified synergies between adaptation and mitigation, particularly in the terrestrial and ocean ecosystems, food security and nutrition, water resources, infrastructure and health sectors, increased from 45 per cent in the previous NDCs to 89 per cent in the new NDCs (mitigation co-benefits of adaptation actions are covered in chap. IV.L.132 above). Examples of synergies include increasing the resilience of mangroves and seagrasses (nature-based solutions) to reduce coastal flooding and increase carbon sequestration; improving forest carbon stock through restoration, afforestation and conservation of native forest species; implementing climate-smart agriculture in order to diversify crops, foster soil conservation and increase carbon sequestration; improving water reservoirs and pumped storage schemes to ensure water security; developing resilient infrastructure using local materials and bioclimatic techniques to reduce vulnerability to climate-related hazards and energy consumption; and reducing respiratory diseases through reduced use of fossil fuels (pollution).

152. A total of 58 per cent of Parties described how adaptation actions relate to sustainable development frameworks, describing the overall linkages and synergies between their adaptation efforts and efforts towards the SDGs; and identifying the essential role of adaptation in the achievement of the SDGs, as well as the role of sustainable development in successful adaptation. Further, 29 per cent specified how adaptation in specific priority areas contributes to achieving individual SDGs. Figure 10 provides an overview of the specific synergies identified between sectoral adaptation efforts and efforts towards the SDGs.

Figure 10

Synergies between efforts in adaptation priority sectors and efforts towards the Sustainable Development Goals identified in the adaptation components of nationally determined contributions



Note: The shading reflects how frequently linkages were identified by Parties that included an adaptation component in their NDCs: the darker the shading, the more frequently linkages were identified.

H. Loss and damage associated with climate change impacts

153. A total of 92 per cent of Parties referred to loss and damage, outlining the associated risks and impacts in various key sectors and describing planned or implemented measures to address them, compared with 56 per cent in the previous NDCs (see figure 11). They also considered the financial and capacity-building needs and commitments associated with addressing loss and damage.

154. Overall, 58 per cent of Parties, compared with 32 per cent in the previous NDCs, reported experiencing loss and damage, for example owing to the increasing frequency and intensity of extreme weather events such as drought, flooding, landslides, heatwaves and tropical cyclones, as well as slow onset events such as rising sea levels, glacier retreat, and ocean warming and acidification. Both economic and non-economic loss and damage was reported. Economic loss and damage was typically expressed as annual monetary damage or loss in GDP relating to the sectors of food security and nutrition, infrastructure, ocean and terrestrial ecosystems, water resources, and urban and rural areas, while non-economic loss and damage was reported in relation to cultural heritage values (both tangible and intangible), loss of human life, and community displacement or climate-led migration. In addition, 64 per cent of Parties, up from 23 per cent in the previous NDCs, reported projected loss and damage, resulting from drought, increasing temperature, rising sea levels and ocean warming, in relation to food security and nutrition, coastal and low-lying areas, and ocean ecosystems.

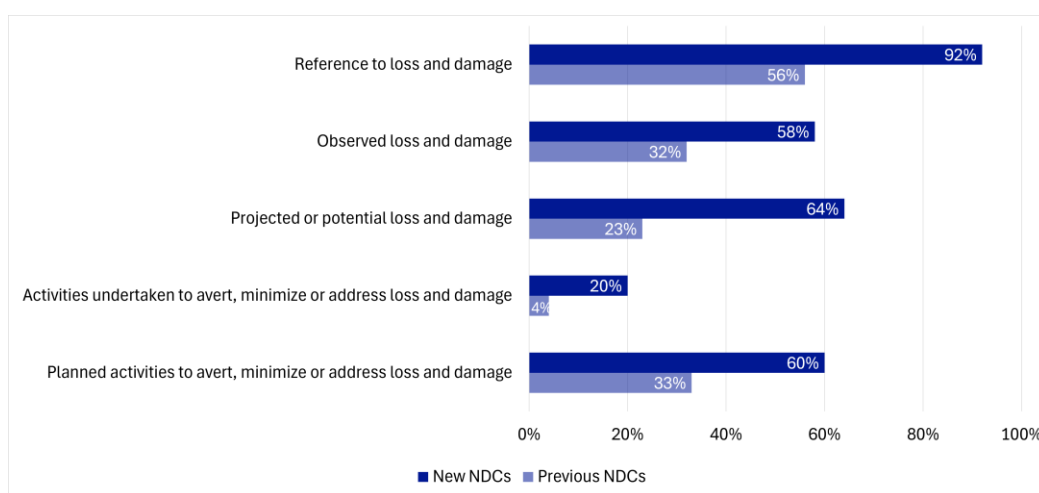
155. A total of 60 per cent of Parties, compared with 33 per cent in the previous NDCs, provided information on their planned activities to avert, minimize or address loss and damage, particularly in sectors related to disaster risk management, adaptation policy frameworks, food security and nutrition, terrestrial and ocean ecosystems, health, infrastructure and cultural heritage. Actions to avert loss and damage include introducing insurance schemes related to food security and nutrition, and developing multi-hazard early warning systems for coastal areas and the health sector, while actions to minimize loss and damage include providing community relocation or displacement assistance, constructing flood-resistant infrastructure and developing heat-resilient livestock breeds. Further, actions to address loss and damage include developing a national loss and damage related needs assessment, promoting research on economic and non-economic loss and damage,

implementing capacity-building programmes for adaptation planning at the sectoral level, and strengthening institutional frameworks and governance mechanisms designed to operationalize international funding mechanisms related to addressing loss and damage.

156. Compared with 4 per cent in the previous NDCs, 20 per cent of Parties documented activities undertaken to avert, minimize or address loss and damage, primarily in the form of improving institutional and technical capacities by, for example, formulating a national loss and damage framework, integrating loss and damage considerations into national monitoring and evaluation systems, developing a cultural heritage adaptation plan through community consultations, providing training on economic and non-economic loss and damage in key sectors, ensuring emergency water supplies during extended drought periods, providing temporary shelter and financial aid for disaster recovery, and strengthening the national multi-hazard early warning system.

Figure 11

Shares of Parties that referred to loss and damage in the adaptation components of the previous and new nationally determined contributions



VII. Mitigation

A. Mitigation targets

157. A total of 97 per cent of Parties provided information on mitigation targets, including absolute emission reduction targets,⁴⁰ emission peaking targets,⁴¹ carbon budget targets,⁴² relative targets for reducing emissions below the ‘business as usual’ level by a specified year and emission intensity targets,⁴³ strategies, policies, plans and actions for low-emission development, and mitigation co-benefits resulting from their adaptation actions and/or economic diversification plans (see figure 12 and chap. V above).⁴⁴

158. The share of Parties that came forward with absolute economy-wide emission reduction targets increased to 46 per cent in the new NDCs from 38 per cent in the previous NDCs, with 17 per cent of Parties communicating economy-wide absolute emission reduction targets covering all GHGs, sectors and categories of emissions and removals, compared with 29 per cent in the previous NDCs.

⁴⁰ Targets expressed as an emission reduction from the level in a specified base year.

⁴¹ Targets for a year or time frame in which emissions are expected to peak or reach a maximum level of absolute emissions.

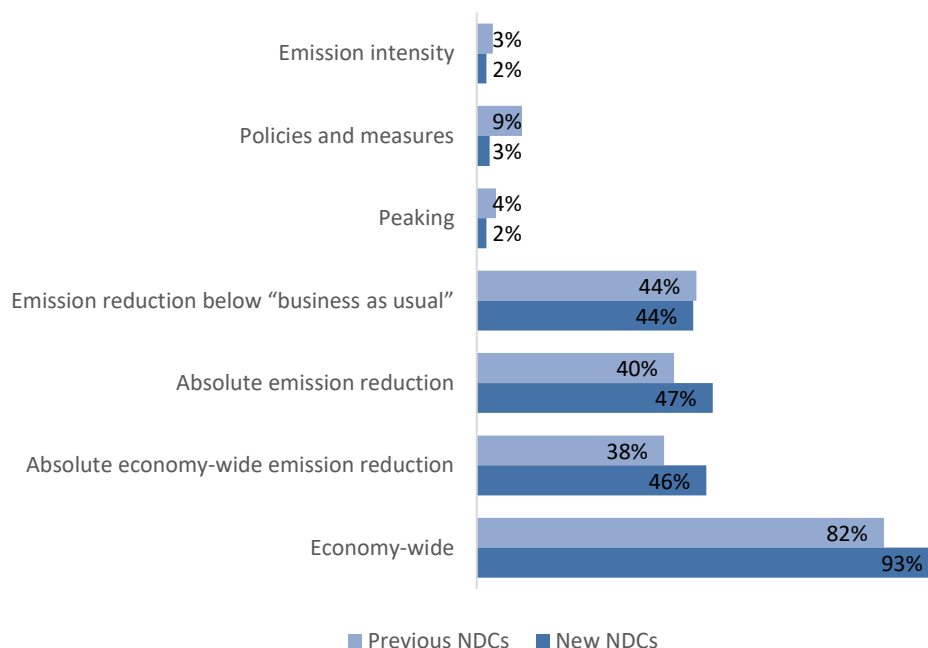
⁴² Targets to limit overall GHGs to be emitted over a specified period of time (e.g. between 2021 and 2030).

⁴³ Targets for reducing specific GHG emissions per unit of GDP relative to a base-year (e.g. 1990) level.

⁴⁴ Mitigation co-benefits are mostly communicated in combination with other targets.

Figure 12

Types of mitigation target and shares of Parties that communicated them in the previous and new nationally determined contributions



Note: Policies and measures refers to strategies, policies, plans and actions for low-emission development.

1. Time frames and/or periods of implementation

159. All Parties communicated a target year for their mitigation targets, expressing a single-year target, a multi-year target (i.e. for a period of consecutive years) or multiple target years (i.e. several non-consecutive target years) depending on the target. Of the Parties, 73 per cent communicated a single-year target for 2035 and 6 per cent for 2030, while 12 per cent communicated multiple target years, including when target years were associated with the implementation of different policies and measures. Other Parties (13 per cent) indicated having a multi-year target for NDC implementation.

160. In addition to communicating information on mitigation targets or plans for the near to medium term, 69 per cent of Parties provided information on long-term mitigation visions, strategies or targets for up until and beyond 2050 that either have already been formulated or are under preparation as part of their LT-LEDS,⁴⁵ often including net zero, carbon neutrality and GHG neutrality targets. They indicated that the mitigation targets in their NDCs are aligned with their LT-LEDS in line with paragraph 40 of decision [1/CMA.5](#).

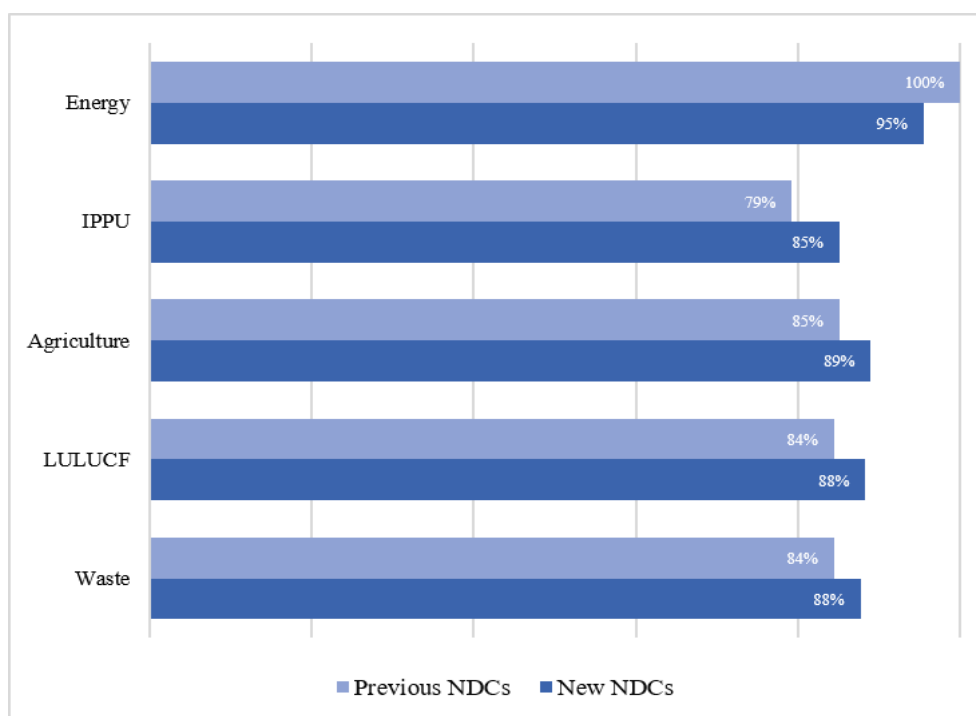
2. Scope and coverage

161. A total of 93 per cent of Parties have economy-wide NDCs, with 82 per cent covering all sectors defined in the 2006 IPCC Guidelines (see figures 12–13), compared with 81 and 76 per cent respectively in the previous NDCs. In addition, 5 per cent of Parties provided information on the coverage of sectors of national importance, which are often a subset of one or more IPCC sectors, such as shipping and aviation, cooling, food production, transport, mining and buildings, while others mentioned specific carbon pools, including the ocean and blue carbon.

⁴⁵ As at 31 August 2026, 80 LT-LEDS had been communicated, representing 87 Parties.

Figure 13

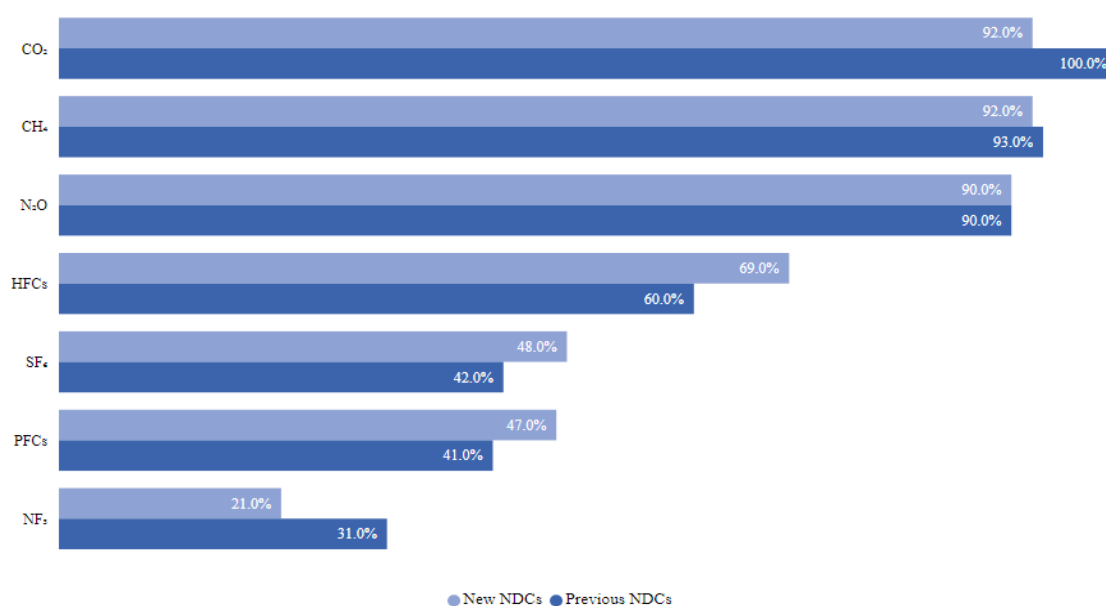
Sectors covered by Parties that communicated them in the previous and new nationally determined contributions



162. A total of 92 per cent of Parties covered CO₂ emissions, while 92 per cent covered CH₄, 90 per cent N₂O, 69 per cent HFCs, 47 per cent PFCs, 48 per cent SF₆ and 21 per cent NF₃. In addition to those GHGs, 8 per cent of Parties included additional gases and emissions, including emissions from short-lived climate pollutants such as black carbon, sulfur dioxide and non-methane volatile organic compounds (see figure 14).

Figure 14

Greenhouse gases covered by Parties that communicated them in the previous and new nationally determined contributions



163. A total of 87 per cent of Parties provided information on how they are striving to include all categories of anthropogenic emissions and removals in their NDCs over time, as

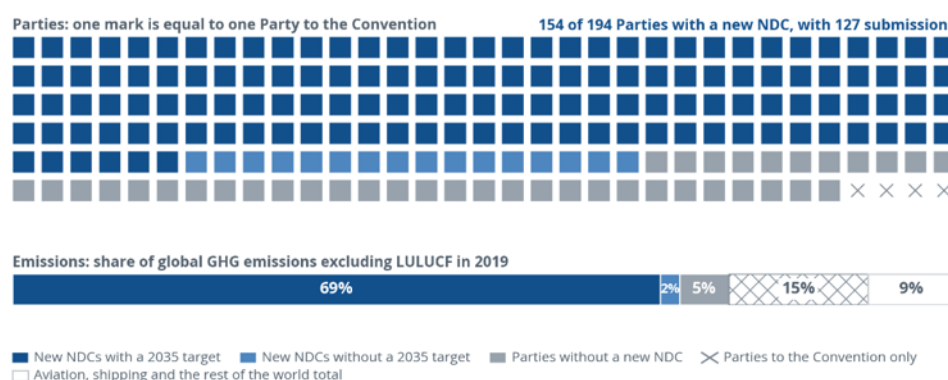
well as explanations for the exclusion of any categories: 66 per cent stated that they already have economy-wide NDCs including all sectors and GHGs, while 17 per cent explained why certain sectors and/or gases were excluded, such as owing to categories being negligible or insignificant, data unavailability or inaccuracy, and lack of technical capacity.

3. Greenhouse gas emission estimates taking into account implementation of the new nationally determined contributions

164. Total GHG emission levels resulting from the implementation of NDCs with quantified targets for 2035 are projected to be around 38.7 (37.7–39.6) Gt CO₂ eq in 2030 and around 39.1 (37.2–40.8) Gt CO₂ eq in 2035⁴⁶ for the Parties that submitted new NDCs (see figures 15–16). For comparison, the total GHG emission level of this group of Parties in 2019 is estimated at 36.4 Gt CO₂ eq.

Figure 15

Parties that submitted new nationally determined contributions and coverage of global emissions



165. In comparison with the GHG emission levels estimated for those Parties for 2030, implementation of the new NDCs is estimated to result in emission levels for the Parties in 2035 at around 1 per cent higher (ranging from 1 per cent lower to 3 per cent higher).

166. Compared with their GHG emission levels in 2019, the implementation of those Parties' new NDCs is estimated to result in emission increases of around 6 (4–9) per cent by 2030 and 7 (2–12) per cent by 2035 (see table 1).

Table 1

Projected emission changes for the Parties that submitted new nationally determined contributions with 2035 targets, relative to historical and estimated emission levels

Comparison year	1990	2000	2015	2019	2024	2030
Target emission level in 2030 (full range)	72 (67–76)	61 (57–65)	12 (9–14)	6 (4–9)	0 (–2–3)	NA
Target emission level in 2030 (full implementation of NDCs, including all conditional elements)	69 (67–70)	58 (57–59)	10 (9–11)	5 (4–5)	–1 (–2–1)	NA
Target emission level in 2035 (full range)	74 (65–81)	62 (55–70)	13 (7–18)	7 (2–12)	1 (–4–+6)	1 (–1–+3)
Target emission level in 2035 (full implementation of	69 (65–73)	59 (55–62)	10 (7–13)	5 (2–7)	–1 (–4–+1)	0 (–1–+2)

⁴⁶ This report includes GHG emission estimates with and without LULUCF. Unless otherwise stated, total GHG emissions are presented without LULUCF, and emissions are quantified for the 138 Parties that submitted new NDCs with targets for 2035 (see figure 15). A triplet of emission levels indicates the best estimate and the minimum–maximum projection range arising from ranges in NDC targets and uncertainties in the quantification. Unless otherwise stated, the full range spans both high and low quantifications of conditional and unconditional targets.

Comparison year	1990	2000	2015	2019	2024	2030
NDCs, including all conditional elements)						

Notes: (1) Percentage changes are relative to the year in each column; negative values indicate decreases; (2) total GHG emissions exclude LULUCF; (3) entries show the mean percentage with the minimum–maximum percentages in parentheses; (4) percentages relating to the full range span low and high ambition under both unconditional and full implementation of NDCs, including all conditional elements; (5) percentages relating to all conditional elements span low and high ambition under full implementation for the same group of Parties.

167. A total of 84 per cent of Parties included unconditional elements in their NDCs and 62 per cent included additional, more ambitious conditional elements, implementation of which depends mostly on access to enhanced financial resources, technology transfer, technical cooperation and capacity-building support; availability of market-based mechanisms; an international system that facilitates NDC implementation and sustainable development; and the absorptive capacity of forests and other ecosystems.

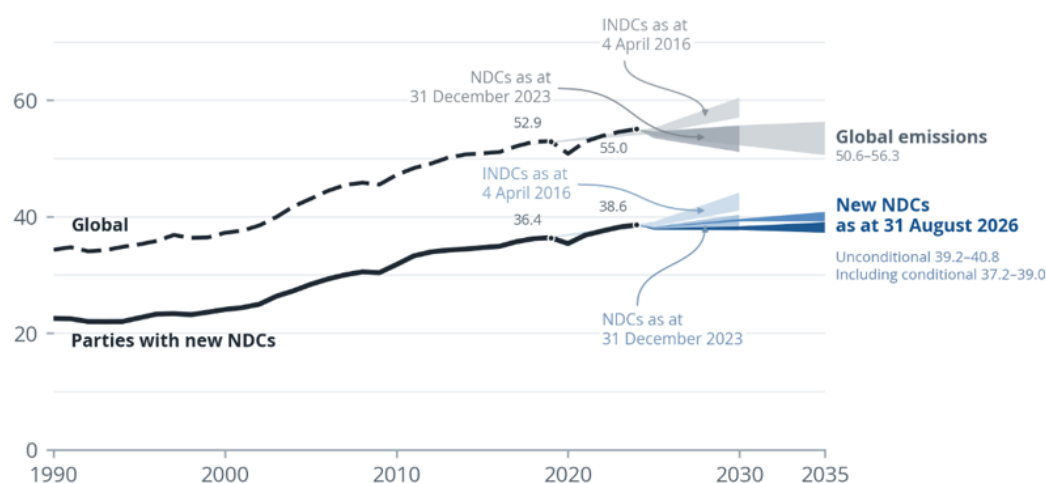
168. The emissions of this group of Parties are projected to be almost unchanged throughout 2030 and 2035. Total GHG emission levels resulting from the implementation of the unconditional elements of the new NDCs are estimated to be 39.4 (39.2–39.6) Gt CO₂ eq in 2030 and 40.0 (39.2–40.8) Gt CO₂ eq in 2035. Assuming full implementation of all new NDCs, including all conditional elements, those emission levels are estimated to be lower in 2030, at 38.0 (37.7–38.3) Gt CO₂ eq, and in 2035, at 38.1 (37.2–39.0) Gt CO₂ eq (see figure 16), lowering aggregate emissions in 2035 by a further 1.9 (1.8–2.0) Gt CO₂ eq.

Figure 16

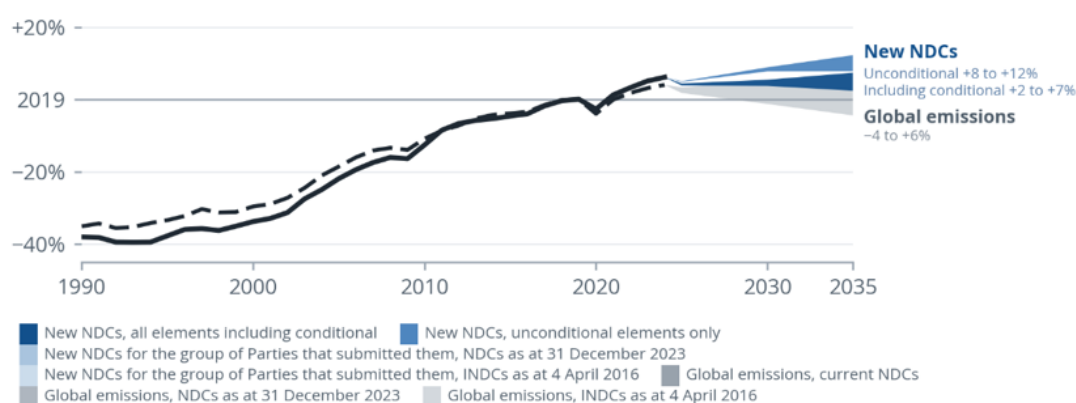
Projected range of greenhouse gas emission levels for the Parties that submitted new nationally determined contributions with 2035 targets compared with global emission levels

Total GHG emissions excluding LULUCF, Gt CO₂ eq/year (using GWP-100 from the AR6)

(a) Absolute



(b) Relative to 2019

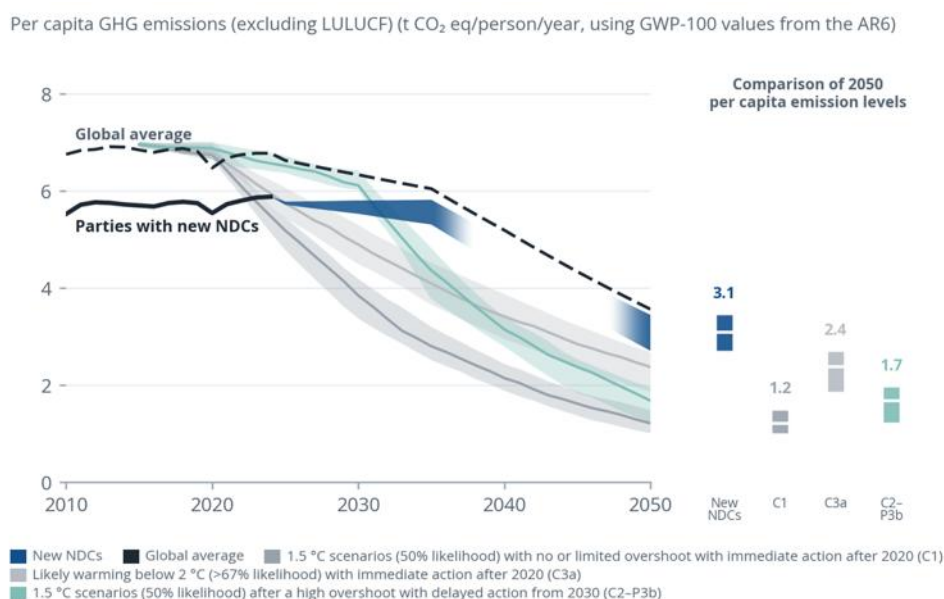


169. Parties with quantified NDC targets for 2035 are estimated to have had per capita emission levels in 2019 that are approximately 16 per cent lower (5.7 t CO₂ eq) than the global average (6.8 t CO₂ eq). The new NDCs indicate an almost stable trend in the per capita emissions of this group of Parties, from around 5.5 t CO₂ eq in 2010 to projected emissions of around 5.6 t CO₂ eq in 2035 (see figure 17). For Parties with new NDCs, the per capita emissions of this group of Parties are estimated to decline by 2 per cent from 2030 to 2035.

170. Mindful of the inherent uncertainty of long-term estimates, the long-term per capita emission levels of this group of Parties aligned with their LT-LEDS or long-term visions, strategies and targets communicated in the NDCs are estimated to be 3.1 (2.7–3.4) t CO₂ eq by 2050. Under scenarios assessed in the AR6 in which concerted global mitigation efforts started in 2020 and warming is likely limited to below 2 °C (with over 67 per cent likelihood), global average annual per capita emissions are estimated at 2.4 (1.9–2.7) t CO₂ eq in 2050; the long-term per capita emissions of these Parties are therefore estimated at a level that is not yet fully consistent with scenarios that likely limit warming to below 2 °C (category C3a). For scenarios of limiting warming to 1.5 °C (with over 50 per cent likelihood by 2100) and achieving net zero emissions this century, annual per capita emissions by 2050 are about 1.8 to 2.5 times lower, at 1.2 (1.0–1.5) t CO₂ eq for scenarios with no or limited overshoot and 1.7 (1.2–2.0) t CO₂ eq for scenarios in which such efforts are implemented as of 2030 (see figure 17).

Figure 17

Projected per capita emission levels of Parties that submitted new nationally determined contributions with 2035 targets in the context of scenarios that limit warming to 1.5 °C or below 2 °C



4. Alignment of Parties' 2035 targets in new nationally determined contributions with their long-term visions, strategies and targets in nationally determined contributions and long-term low-emission development strategies

171. A total of 96 Parties indicated that their new NDCs are aligned with their long-term visions, strategies and targets communicated in the NDCs and LT-LEDS, which include achieving net zero emissions between 2040 and 2070, with the majority by 2050, and maintaining their current net negative emissions.

172. The aggregate GHG emission levels in 2050 of the Parties with new NDCs are estimated at 23.0 (20.1–25.6) Gt CO₂ eq, or 37 (30–45) per cent lower in 2050 than in 2019.⁴⁷ The projected aggregate emission levels of this group of Parties from 2030 to 2035 remain

⁴⁷ For Parties without a long-term target, emissions after the last target year follow a reference 'current policy' scenario; for the warming projections, continuation of emissions at a constant level is assumed alongside it.

relatively constant; however, for most of those Parties, the projected aggregate emission levels in 2035 are broadly consistent with a linear trajectory from the 2030 estimated emission levels towards aggregate emission levels resulting from the implementation of their long-term visions, strategies and targets.

173. The alignment between Parties' 2035 mitigation targets and the long-term mitigation visions, strategies and targets communicated in their NDCs and LT-LEDS implies that an increasing number of NDCs are serving as a stepping stone towards net zero emissions and the long-term goal of the Paris Agreement of achieving a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of this century.

5. Quantifiable information on the reference point (including, as appropriate, a base year)

174. Overall, 94 per cent of Parties provided information on the reference year, base year, reference period or other starting point for measuring progress towards the target, with 30 per cent selecting 1990 and 44 per cent selecting a year between 2000 and 2020. Of the Parties that provided information on the starting point for measuring progress, 36 per cent are measuring achievement of their targets against a base-year level; 10 per cent have chosen to measure progress in terms of a deviation from a level in the target year, with most selecting 2035; and 53 per cent provided a reference period.

175. A total of 89 per cent of Parties provided information on the sources of the emission data used for quantifying the reference point, including national inventory reports, BTRs, biennial update reports and/or national communications. Other sources of information identified were national documents and statistics, such as sector activity reports; national development plans and/or strategies; sustainable development plans; economic development projections; national climate change plans; energy master plans; national statistics on economy, energy and/or trade; waste management strategies; national resource plans; energy road maps; national forest reports; and socioeconomic forecasts.

176. Most Parties that included strategies, plans and actions as referred to in Article 4, paragraph 6, of the Paris Agreement provided other information for clarification, including on expected levels of emission reduction or prevention, increased forest coverage, reduction of deforestation, energy efficiency targets, renewable energy share, development of the blue economy or other non-GHG policy targets.

177. A total of 87 per cent of Parties presented information on the circumstances under which they update the values of their reference indicators, such as owing to significant changes in specific financial, economic, technological, demographic and/or political conditions, or impacts of extreme natural disasters; owing to the scale of access to support and other means of implementation, expected improvements or modifications to activity data, variables or methodologies used in estimating national emissions, baselines or projections; or to reflect the actual situation during the implementation period.

6. Assumptions and methodological approaches, including for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals

(a) Intergovernmental Panel on Climate Change methodologies and metrics

178. Of the 93 per cent of Parties that communicated information on assumptions and approaches to be used in accounting for anthropogenic GHG emissions and, as appropriate, removals, corresponding to their NDCs, 97 per cent referred to the 2006 IPCC Guidelines, while 2 per cent referred to the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*.

179. Some 43 per cent also mentioned the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*, the *IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* and/or the *IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry*. In addition, 20 per cent of Parties referred to the methods and procedures outlined in the *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol* and the *2013*

Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands.

180. With regard to metrics, 75 per cent of Parties provided information, all of which was based on global warming potential values over a 100-year time-horizon. Of those Parties, 4 per cent used values from the AR6, 86 per cent values from the AR5, 2 per cent values from the AR4 and 4 per cent values from the AR2.

(b) Assumptions and methodological approaches

181. A total of 44 per cent of Parties expressed mitigation targets as a deviation from a ‘business as usual’ level, mainly providing information on quantitative baselines and mitigation scenarios such as baselines and projections based on historical data and trends in emissions and economic parameters.

182. Furthermore, 5 per cent of Parties communicated additional information on other approaches used for estimating sector- or activity-specific emissions or baselines, including using regional data sources for downscaling data or generating data at the national level, and calculation tools or approaches for estimating short-lived climate pollutants or precursor emissions. Meanwhile, 5 per cent of Parties mentioned using specific modelling tools for estimating their emissions or baselines.

183. In total, 87 per cent of Parties provided more detailed information on the assumptions, methodological approaches and procedures used for developing their baselines or mitigation scenarios.

(c) Land use, land-use change and forestry

184. A total of 30 per cent of Parties clarified how they intend to address emissions and subsequent removals due to natural disturbances on managed land if such events occur. Overall, 5 per cent of Parties described country-specific approaches developed with the aim of ensuring consistency with IPCC guidance.

185. Some 29 per cent of Parties stated that emissions and removals from harvested wood products will be accounted for as part of their NDCs, with only a few (5 per cent of all Parties) mentioning the use of an approach other than the production approach.

186. In addition, 19 per cent of Parties mentioned that the effects of age-class structure in forests will be taken into account when estimating the mitigation contribution of forests.

B. Domestic mitigation measures

1. Domestic mitigation measures for priority areas

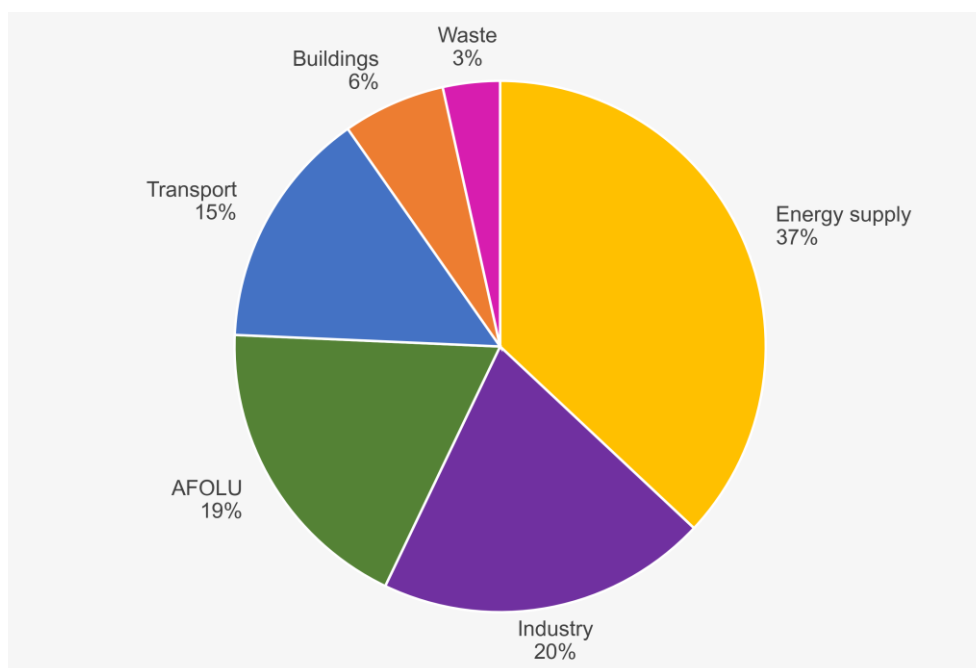
187. Under Article 4, paragraph 2, of the Paris Agreement, Parties shall pursue domestic mitigation measures with the aim of achieving the objectives of their NDCs. CMA 5 emphasized the urgent need for accelerated implementation of domestic mitigation measures.⁴⁸

188. A total of 99 per cent of Parties outlined in their new NDCs domestic mitigation measures as key instruments for achieving mitigation targets for their NDCs and/or specific priority areas, including energy supply, transport, buildings, industry, AFOLU and waste. Specifically, Parties communicated measures most frequently in the priority area of energy supply (96 per cent of Parties), followed by AFOLU (95 per cent of Parties) and transport (92 per cent of Parties). These three priority areas together are estimated to account for about 70 per cent of global GHG emissions in 2024 (see figure 18).⁴⁹

⁴⁸ Decision [1/CMA.5](#), para. 31. In this report, domestic mitigation measures refer to specific domestic policies and actions in NDCs that contribute to achieving mitigation objectives identified in NDCs, including adaptation actions and economic diversification plans with mitigation co-benefits.

⁴⁹ Shares of emissions across priority areas were estimated on the basis of data from UNEP. 2025. *Emissions Gap Report 2025: Off target – Continued collective inaction puts global temperature goal at risk – Appendices*. Nairobi: UNEP. Available at <https://wedocs.unep.org/items/6010ed5d-90eb->

Figure 18

Estimated share of global greenhouse gas emissions across priority areas in 2024

189. A total of 58 per cent of Parties communicated in their new NDCs domestic mitigation measures aimed at achieving fully unconditional mitigation targets, whereas 68 per cent included measures aimed at achieving fully or partially conditional mitigation targets.⁵⁰ Measures aimed at achieving fully or partially conditional mitigation targets were most frequently identified by Parties in relation to energy supply (66 per cent of Parties), followed by cross-cutting or other (62 per cent of Parties), transport (60 per cent of Parties), AFOLU (57 per cent of Parties) and waste (56 per cent of Parties). Compared with the previous NDCs, the share of Parties indicating measures aimed at achieving fully or partially conditional mitigation targets increased across all priority areas, with the largest increases observed in cross-cutting or other (by 18 percentage points), followed by AFOLU (by 16 percentage points) and industry and waste (by 10 percentage points respectively).

2. Feasible, effective and low-cost mitigation options in priority areas in 2035

190. CMA 7 reiterated the resolve of the CMA to pursue efforts to limit the temperature increase to 1.5 °C in order to limit both the magnitude and the duration of any temperature overshoot.⁵¹ According to the Synthesis Report of the AR6,⁵² transitioning towards net zero CO₂ emissions faster and reducing non-CO₂ emissions such as CH₄ more rapidly would limit peak warming levels and reduce the requirement for net negative CO₂ emissions, thereby reducing the feasibility and sustainability concerns, and social and environmental risks

[4994-8156-7e95c9fdd9cc](#).

⁵⁰ Domestic mitigation measures aimed at achieving fully or partially conditional mitigation targets include those targeting fully conditional targets and both unconditional and conditional targets. The sum of the shares of Parties reporting measures aimed at achieving fully unconditional, and fully or partially conditional mitigation targets exceeds 100 per cent. This exceedance arises because some Parties that communicated NDCs with both unconditional and conditional mitigation targets indicated multiple conditionalities of measures for a single mitigation option (i.e. measures for fully conditional, fully unconditional and/or both unconditional and conditional targets). Of the 154 Parties that submitted new NDCs, 59 communicated both unconditional and conditional mitigation targets.

⁵¹ Decision [1/CMA.7](#), para. 7.

⁵² IPCC. 2023. *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Core Writing Team, H Lee, and J Romero (eds.). Geneva: IPCC. Available at <https://www.ipcc.ch/report/ar6/syr/>. The report states that achieving and sustaining net negative global CO₂ emissions, with annual rates of CDR greater than residual CO₂ emissions, would gradually reduce the warming level.

associated with CDR deployment at large scales.⁵³ CMA 7 also acknowledged that significant global progress has been made over the last decade, including rapid advancements in and declining costs of technologies.⁵⁴ Between 2015 and 2025, the estimated global average costs of technologies fell, for example, by 67 per cent for solar power, 57 per cent for onshore wind power, 44 per cent for offshore wind power and 91 per cent for battery energy storage.⁵⁵

191. The UNEP *Bridging the gap* report⁵⁶ finds that mitigation options costing up to USD 200/t CO₂ eq could, if fully implemented, deliver a projected net mitigation potential of 41 (36–46) Gt CO₂ eq/year by 2035, with about 90 per cent of this potential coming from options costing up to USD 100/t CO₂ eq and about half of that coming from options costing below USD 20/t CO₂ eq. Many of these options have been assessed as technically viable. Parties reported measures for such options to support their 2035 targets in their new NDCs, as illustrated in figure 19.

⁵³ The contribution of Working Group III to the AR6 (IPCC. 2022. *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. PR Shukla, J Skea, R Slade, et al. (eds.). Cambridge and New York: Cambridge University Press. Available at <https://www.ipcc.ch/report/ar6/wg3/>) notes that afforestation or production of biomass crops for bioenergy with carbon capture and storage or biochar, when poorly implemented, can have adverse socioeconomic and environmental impacts, including on biodiversity, food and water security, and local livelihoods and on the rights of Indigenous Peoples, especially if implemented at large scales and where land tenure is insecure.

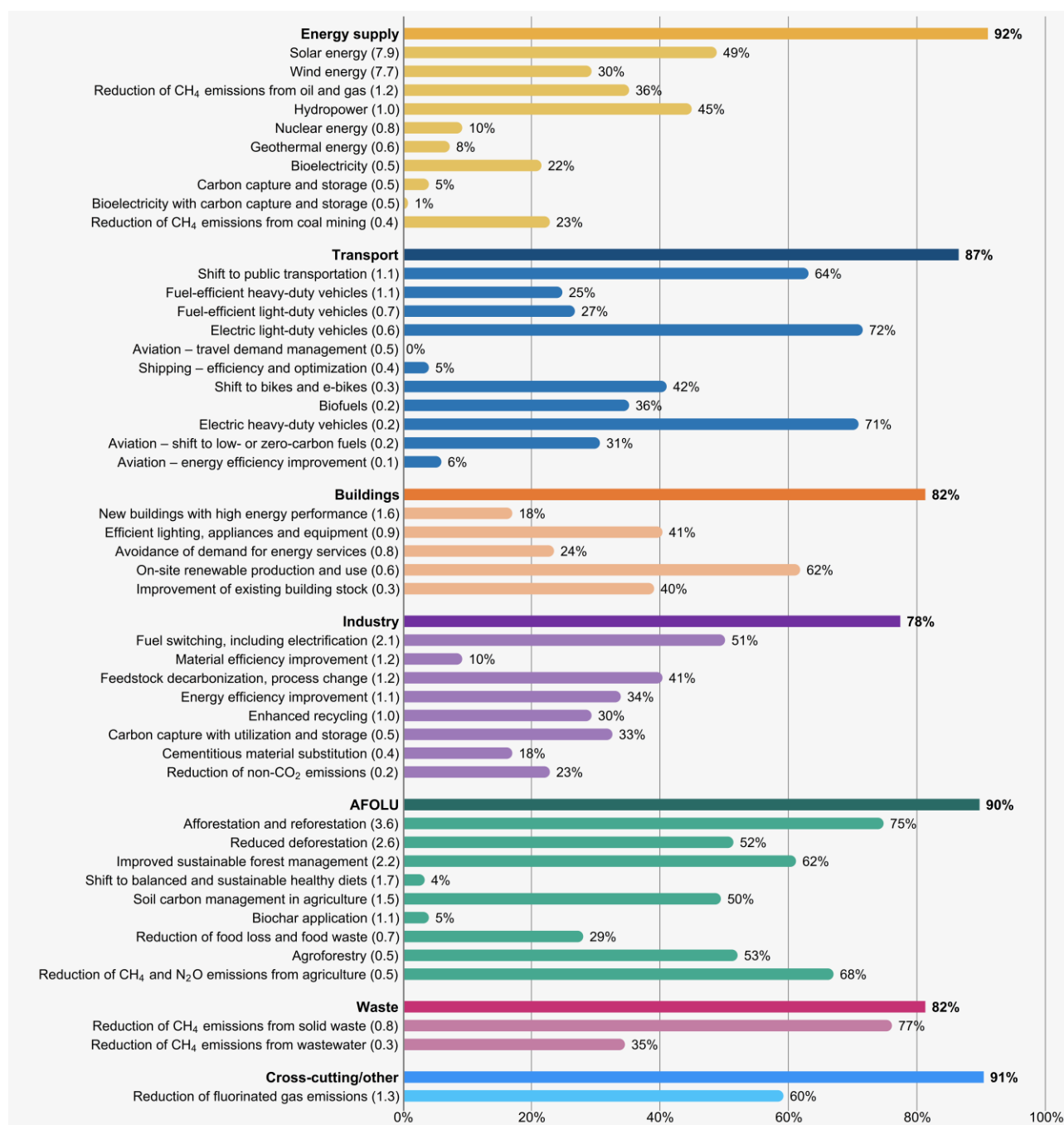
⁵⁴ Decision 1/CMA.7, para. 9.

⁵⁵ Estimated on the basis of data from IRENA. 2026. *Renewable Power Generation Costs in 2025*. Abu Dhabi: IRENA. Available at <https://www.irena.org/Publications/2026/Jul/Renewable-Power-Generation-Costs-in-2025>.

⁵⁶ UNEP Copenhagen Climate Centre and Common Futures. 2024. *Bridging the gap: Sectoral greenhouse gas mitigation potentials in 2035*. Copenhagen: UNEP Copenhagen Climate Centre. Available at <https://unepccc.org/publications/bridging-the-gap-sectoral-greenhouse-gas-mitigation-potentials-in-2035/>.

Figure 19

Shares of Parties that referred to domestic mitigation measures for priority areas and mitigation options with high mitigation potential costing up to USD 200/t CO₂ eq in 2035 in their nationally determined contributions



Notes: (1) The shares reflect measures included in the new NDCs that are aimed at achieving 2035 mitigation targets; (2) if a Party communicated more than one measure for a mitigation option (e.g. three different measures for solar energy), it was counted as one Party communicating measures for that option; (3) the estimated net mitigation potential (in Gt CO₂ eq/year) of each option costing below USD 200/t CO₂ eq in 2035 is presented in parentheses, for example “(7.9)” in the case of solar energy. These estimates are based on data from the UNEP *Bridging the gap* report and are associated with uncertainties.

192. Table 2 summarizes the conditionality of these mitigation options with the highest mitigation potential, each exceeding more than 2 Gt CO₂ eq/year. It shows that domestic mitigation measures aimed at achieving fully or partially conditional targets were most frequently reported in the new NDCs in relation to afforestation and reforestation, and solar energy. These high shares of Parties reporting measures for fully or partially conditional targets provide an indication of the challenges faced by Parties in relation to the high level of support needed for implementing measures for these mitigation options.

Table 2

Conditionality of mitigation options with the highest estimated mitigation potential costing up to USD 200/t CO₂ eq in 2035 according to the measures reported in nationally determined contributions

<i>Mitigation option</i>	<i>Share of Parties reporting measures (%)</i>	<i>Share of Parties reporting measures for fully or partially conditional targets (%)</i>	<i>Share of Parties reporting measures for fully unconditional targets (%)</i>
Solar energy	49	42	12
Wind energy	30	26	5
Afforestation and reforestation	75	48	32
Reduced deforestation	52	31	25
Improved sustainable forest management	62	36	29
Fuel switching in industry, including electrification	51	23	29

Notes: (1) As notes (1) and (2) to figure 19; (2) see footnote 50 above for the definition of measures aimed at achieving fully or partially conditional targets.

3. Domestic mitigation measures and quantitative targets relevant to global efforts and mitigation options covered in recent decisions

193. As shown in figure 18, energy-related emissions accounted for about three quarters of global emissions in 2024. A total of 99 per cent of Parties reported measures or quantitative targets relevant to at least one energy-related global effort or mitigation option covered in decisions [1/CMA.3](#), [1/CMA.4](#) and [1/CMA.5](#)⁵⁷ (for further details, see the additional information on domestic mitigation measures).⁵⁸ Of those Parties, 82 per cent reported quantitative targets relevant to at least one such effort or option.

194. Across the efforts and options individually, 3–34 per cent of Parties reported relevant quantitative targets, with the exception of the targets relevant to tripling renewable energy capacity globally by 2030, which was reported by 61 per cent of Parties. While aggregated targets for some efforts and options are broadly comparable to, or exceed, current global levels of implementation, many remain well below current levels, as estimated on the basis of data from IEA, IRENA and other sources, as outlined below:⁵⁹

(a) Tripling renewable energy capacity globally by 2030: global renewable power capacity reached a record 5.2 TW in 2025, representing a 16 per cent increase from 2024;⁶⁰ 61 per cent of Parties reported targets for increasing renewable power capacity by 2030, amounting in aggregate to a total target capacity of 3 TW by 2030;

(b) Doubling the global average annual rate of energy efficiency improvement by 2030: the global average annual improvement rate in primary energy intensity⁶¹ is estimated at 1.4 per cent in 2022–2025 and 1.8 per cent in 2025;⁶² 5 per cent of Parties communicated

⁵⁷ For non-energy-related global efforts or mitigation options, see chap. IV.K–L above related to the roles of forests and the ocean in NDC ambition and implementation.

⁵⁸ Available at <https://unfccc.int/documents/661571>.

⁵⁹ Taking into account contributions to the efforts and options covered in the three CMA decisions referred to in para. 193 above, including those with the 2030 timeline and focus on this critical decade, this section and chap. VII.B.4 below consider measures and quantitative targets reported in both Parties' new and previous NDCs. A more comprehensive estimate of the aggregated targets referred to in this paragraph will be possible once new NDCs have been submitted by all Parties. The 154 Parties covered by the analysis accounted for 90 per cent of total energy supply from fossil fuels for all Parties in 2024.

⁶⁰ Estimated on the basis of data from IRENA. 2026. *Renewable Energy Statistics 2026*. Abu Dhabi: IRENA. Available at <https://www.irena.org/Publications/2026/Jul/Renewable-Energy-Statistics-2026>.

⁶¹ Global primary energy intensity, defined as the amount of energy used to produce a unit of GDP, declined by approximately 12 per cent from 4.2 GJ/USD 1,000 in 2015 to 3.7 GJ/USD 1,000 in 2025, meaning that the same level of GDP can now be produced using substantially less primary energy. However, the annual rate of improvement in primary energy intensity is estimated to have declined from 2.8 per cent in 2015 to approximately 1.8 per cent in 2025.

⁶² Estimated on the basis of data from IEA, IRENA, United Nations Statistics Division, World Bank and World Health Organization. 2026. *Tracking SDG 7: The Energy Progress Report 2026*. Washington,

targets for increasing the average annual improvement rate by 2030, equating to an aggregated average annual improvement rate through to 2030 of 2.4 per cent;

(c) Phasing down unabated coal power: global coal power generation reached 10,858 TWh in 2025, indicating a slight decrease of 0.3 per cent from 2024;⁶³ 6 per cent of Parties reported targets for reducing unabated coal power generation by 2035, amounting to a 136 TWh reduction, while 5 per cent included phase-out targets. For the period up until 2040, 9 per cent of Parties reported such reduction targets, corresponding to a 509 TWh reduction, while 8 per cent included phase-out targets;

(d) Transitioning away from fossil fuels in energy systems in a just, orderly and equitable manner: global fossil fuel fired power generation reached 18,422 TWh in 2025, indicating a slight decrease of 0.7 per cent from 2024;⁶⁴ 10 per cent of Parties reported targets for reducing fossil fuel fired power generation by 2035, corresponding to a 258 TWh reduction, while 6 per cent included phase-out targets. For the period up until 2040, 13 per cent of Parties communicated such reduction targets, corresponding to a 631 TWh reduction, with the same 6 per cent including phase-out targets. In addition, 81 per cent of Parties reported the need and/or measures for a just transition for workers and communities dependent on fossil fuels, such as providing targeted training in green skills to support workers in accessing sustainable employment, particularly in the growing clean energy sector;⁶⁵

(e) Accelerating zero- and low-emission technologies: global nuclear power capacity remained at a record 420 GW in 2025;⁶⁶ 4 per cent of Parties reported targets for increasing nuclear power capacity by 2035, amounting in aggregate to a total target capacity of 93 GW by 2035. Similarly, global annual carbon capture capacity reached a record 62 Mt CO₂ in 2025, indicating a 13 per cent increase from 2024;⁶⁷ 6 per cent of Parties communicated targets for increasing annual carbon capture capacity by 2035, amounting in aggregate to a total target annual capacity of 66 Mt CO₂ by 2035. Further, global low-carbon hydrogen production reached a record 0.9 Mt in 2025, representing a 20 per cent increase from 2024;⁶⁸ 3 per cent of Parties reported targets for increasing low-carbon hydrogen production by 2035, amounting in aggregate to a total target production of 3.9 Mt by 2035;

(f) Accelerating the substantial reduction of non-CO₂ emissions globally, in particular CH₄ emissions, by 2030: global CH₄ emissions reached a record 331 Mt CH₄ in 2024, representing a 0.6 per cent increase from 2023, while CH₄ emissions from energy supply reached a record 118 Mt CH₄ in 2024, remaining almost unchanged compared with 2023;⁶⁹ 92 per cent of Parties included CH₄ among the GHGs covered in their NDCs. Of those Parties, 8 per cent reported economy-wide targets for reducing CH₄ emissions by 2030. In addition, 5 per cent included targets for reducing CH₄ emissions from energy supply by 2030, corresponding to a 7 Mt CH₄ reduction below the 2024 level;

(g) Accelerating the reduction of emissions from road transport on a range of pathways, including through rapid deployment of zero- and low-emission vehicles: electric cars accounted for a record 25 per cent of global car sales in 2025,⁷⁰ up from 21 per cent in

D.C.: World Bank. Available at <https://www.iea.org/reports/tracking-sdg7-the-energy-progress-report-2026>; as modified by the secretariat.

⁶³ Estimated on the basis of data from IEA. 2026. *World Energy Balances*. Paris: IEA. All rights reserved. Available at <https://www.iea.org/data-and-statistics/data-product/world-energy-balances>; and IEA. 2026. *Global Energy Review 2026*. Paris: IEA. All rights reserved. Available at <https://www.iea.org/reports/global-energy-review-2026>.

⁶⁴ As footnote 63 above.

⁶⁵ For further analysis of elements related to just transition, see chaps. IV.I and IV.L.132 above.

⁶⁶ As footnote 63 above.

⁶⁷ Estimated on the basis of data from IEA. 2026. *CCUS Projects Database*. Paris: IEA. All rights reserved. Available at <https://www.iea.org/data-and-statistics/data-product/ccus-projects-database>.

⁶⁸ Estimated on the basis of data from IEA. 2026. *Hydrogen Tracker*, available at <https://www.iea.org/data-and-statistics/data-tools/hydrogen-tracker>.

⁶⁹ Estimated on the basis of data from Gütschow, J, Busch, D, Pflüger, M. 2025. *The PRIMAP-hist national historical emissions time series v2.7. (1750-2024)*. Zenodo. Available at <https://zenodo.org/records/17090760>; as modified by the secretariat.

⁷⁰ Estimated on the basis of data from IEA. 2026. *Global EV Outlook 2026*. Paris: IEA. All rights

2024; 34 per cent of Parties reported targets for increasing the share of sales of zero- and low-emission (primarily electric) cars by 2035. Of those Parties, 25 per cent targeted a share above 25 per cent and 20 per cent targeted a 100 per cent share.

195. More than half of the aggregated contributions to some global efforts and mitigation options referred to in paragraph 194 above are associated with quantitative targets that are fully or partially conditional. These include, but are not limited to, phasing down unabated coal power by 2035 (70 per cent of the 136 TWh reduction), increasing nuclear power capacity by 2035 (73 per cent of the 93 GW target capacity) and substantially reducing CH₄ emissions by 2030 (77 per cent of the 7 Mt reduction). This indicates a comparatively high need for support and cooperation to implement these efforts and options.

196. In addition to the information in their NDCs, some Parties have announced domestic pledges and projects⁷¹ relevant to the above-mentioned global efforts, including tripling renewable energy capacity globally by 2030, increasing nuclear power capacity and expanding capture capacity for CCUS. The combined effects of these pledges and projects significantly exceed the aggregated targets based on the NDCs for the same global efforts, indicating that the submitted NDCs do not cover all domestically announced pledges and projects. For example, for the 154 Parties that have submitted new NDCs, it is estimated that total domestically announced commitments for renewable energy capacity by 2030 will reach 7.5 TW,⁷² representing about 2.5 times the 3 TW total aggregated target capacity based on the NDCs submitted by the 154 Parties (see para. 194(a) above). Some Parties may nationally determine that progress in these global efforts, along with other contributing factors such as enhanced international cooperation and support, contributes to the potential for accelerated implementation and enhanced ambition.

197. Informed by the outcomes of the first GST, 64 per cent of Parties reported domestic mitigation measures and/or quantitative targets in the NDCs with direct references to their contributions to at least one energy-related global effort or mitigation option. The most frequently cited was tripling renewable energy capacity globally by 2030, followed by doubling the average annual rate of energy efficiency improvement by 2030 and transitioning away from fossil fuels in energy systems (see figure 20). Of those Parties, 52 per cent reported quantitative targets with direct references to their contributions to at least one such effort or option, with tripling renewable energy capacity globally by 2030 being the most frequently cited, followed by reducing emissions from road transport on a range of pathways. Across the efforts and options individually, quantitative targets were directly referenced considerably less frequently than domestic mitigation measures.

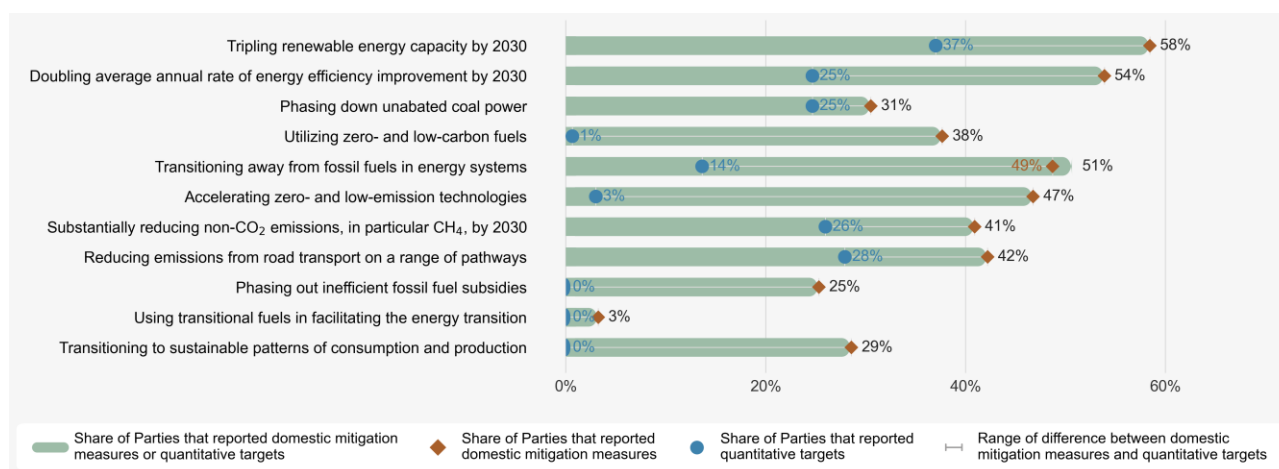
reserved. Available at <https://www.iea.org/reports/global-ev-outlook-2026>.

⁷¹ Existing domestic pledges and projects that were announced separately from the submitted NDCs, which may or may not have been included in the NDCs.

⁷² Estimated on the basis of data from IEA. 2025. *COP28 Tripling Renewable Capacity Pledge 2025: Update*. Paris: IEA. All rights reserved. Available at <https://www.iea.org/reports/cop28-tripling-renewable-capacity-pledge-2025-update>.

Figure 20

Shares of Parties that reported domestic mitigation measures or quantitative targets with direct references to energy-related global efforts or mitigation options in their nationally determined contributions



Notes: (1) Direct references are to the relevant paragraphs of decision [1/CMA.5](#) by paragraph number, substantive content or both; (2) if a Party communicated more than one measure or target for a given global effort or mitigation option, it is counted as one Party communicating measures or targets for that effort or option.

4. Domestic mitigation measures supporting the implementation of global efforts and mitigation options covered in recent decisions

198. As indicated in figure 19 and paragraph 194(a–b) above, renewable energy and energy efficiency improvements can contribute significantly to deep GHG emission reductions by 2030 and 2040 at lower costs. However, renewable energy deployment is increasingly constrained by the distances between energy sources and demand centres, widespread grid connection queues, rising curtailment, the time required to obtain approvals for renewable energy projects and the variability of renewable energy sources. According to the IEA *World Energy Outlook 2025* report, efforts to extend and modernize electricity grids, expand energy storage capacity and expedite permission processes play a critical role in enabling the tripling of global renewable capacity by 2030 while ensuring electricity security.⁷³ A total of 70 per cent of Parties reported measures for grid improvement and 56 per cent for energy storage in their NDCs, a sharp increase from 51 and 33 per cent respectively in the previous NDCs.

199. With regard to energy efficiency, the IEA *World Energy Outlook 2025* report identifies three main levers for doubling the rate of energy efficiency improvement by 2030: improving the technical efficiency of equipment and buildings; shifting to more efficient fuels through electrification and renewables; and avoiding energy demand through material efficiency improvements and modal shifts in transport. A total of 55 per cent of Parties indicated in their NDCs measures relating to efficient lighting, appliances and equipment, while 73 per cent reported measures relating to on-site renewable production in buildings, and 40 per cent measures to improve material efficiency in industry. These shares, particularly for improving material efficiency in industry, represent significant increases compared with the previous NDCs, where the corresponding shares were 44, 32 and 14 per cent respectively.

200. Regarding CO₂ removal technologies, 5 per cent of Parties reported in their NDCs measures for direct air carbon capture and storage and 2 per cent reported measures for bioenergy with carbon capture and storage, up from 2 and 1 per cent respectively in the previous NDCs. A total of 1 per cent of Parties communicated quantitative targets for increasing annual carbon removal capacity based on carbon capture and storage by 2035, amounting in aggregate to a total target annual capacity of 14 Mt CO₂ by 2035. The Synthesis Report of the AR6 indicates that the larger the overshoot, the more net negative CO₂

⁷³ IEA. 2025. *World Energy Outlook 2025*. Paris: IEA. All rights reserved. Available at <https://www.iea.org/reports/world-energy-outlook-2025>. It estimates that stationary battery capacity grew steeply by 87 per cent from 89 GW in 2023 to 166 GW in 2024.

emissions would be needed to return to 1.5°C by 2100, with 1.5 °C pathways with a high overshoot requiring cumulative net negative emissions of 360 Gt CO₂ by 2100.⁷⁴

201. The much shorter atmospheric lifetime of CH₄ and its significantly higher GWP compared with CO₂ mean that deep reductions in CH₄ emissions, as referred to in paragraph 194(f) above, can be particularly effective in contributing to limiting peak global warming in the near term.⁷⁵ As indicated in figure 19, reducing CH₄ emissions from energy supply, agriculture and waste is achievable at relatively low cost, with the measure also providing health co-benefits through reductions in premature deaths and respiratory diseases. Measures to reduce CH₄ emissions from energy supply, such as limiting flaring and venting and implementing CH₄ leak detection and repair requirements, were communicated by 62 per cent of Parties in their NDCs, more than double the 29 per cent in the previous NDCs. Similarly, 77 per cent of Parties reported in their NDCs measures to reduce CH₄ and N₂O emissions from agriculture, including improved herd and manure management and improved water management in rice production, nearly double the 40 per cent in the previous NDCs. Furthermore, measures to reduce CH₄ emissions from waste, such as waste-to-energy and composting, were reported by 89 per cent of Parties in their NDCs, 1.5 times the 56 per cent in the previous NDCs.

5. Coherence and synergies with development priorities

202. CMA 4 recognized that the unprecedented global energy crisis underlines the urgency to rapidly transform energy systems to be more secure, reliable and resilient, including by accelerating clean and just energy transitions to renewable energy during this critical decade of action.⁷⁶ CMA 5 noted the importance of aligning NDCs with LT-LEDS and encouraged Parties to align their next NDCs with LT-LEDS. It also noted that the global transition to low emissions and climate-resilient development provides opportunities and challenges for sustainable development and poverty eradication.⁷⁷ CMA 7 highlighted the economic and social benefits and opportunities of climate action, including improved energy access and security.⁷⁸

203. A total of 95 per cent of Parties highlighted policy coherence and synergies between their mitigation measures and broader development priorities, including LT-LEDS, the SDGs and specific development co-benefits.

204. Of the 48 per cent of Parties that submitted both new NDCs and LT-LEDS, 28 per cent (up from 23 per cent in the previous NDCs) identified domestic mitigation measures in the context of longer-term measures or targets set out in their LT-LEDS.

205. Similarly, 38 per cent of Parties (a notable increase from 23 per cent in the previous NDCs) clarified the alignment between their mitigation measures and efforts towards achieving the SDGs. Of those Parties, 26 per cent (a notable increase from 16 per cent in the previous NDCs) communicated one or more specific SDGs in relation to which there are synergies with their priority areas or mitigation measures (see figure 21). Most frequently,

⁷⁴ (1) According to the Synthesis Report of the AR6, a high overshoot refers to temporarily exceeding 1.5 °C global warming by 0.1–0.3 °C for up to several decades. Reducing the global temperature by 0.1 °C would require net negative emissions of 220 Gt CO₂ (best estimate, with a likely range of 160–370 Gt CO₂); (2) according to the UNEP report on limiting overshoot (UNEP, 2026. *Limiting Overshoot: Navigating exceedance of 1.5 °C and pathways towards return*. Nairobi: UNEP. Available at <https://doi.org/10.59117/20.500.11822/49857>), most scenarios that return warming to 1.5 °C after a peak rely on further upscaling of CDR beyond the level achieved at net-zero CO₂, with removals reaching between about 15 and 24 Gt CO₂ per annum in 2100 to achieve deeply net-negative CO₂ emissions. The report also projects that, even with optimistic upscaling of CDR, temperature reversal is unlikely to exceed a few tenths of a degree this century, and feasibility of such a reversal depends strongly on concurrent further reductions in residual CO₂ emissions.

⁷⁵ According to the Synthesis Report of the AR6, CH₄ emissions are the second largest contributor to global warming, responsible for about 0.5 (0.3–0.8) °C of the warming in 2010–2019 relative to the pre-industrial period. The atmospheric lifetime of CH₄ is estimated at about 12 years, and its GWP is estimated to be about 80 times that of CO₂ over a 20-year time frame.

⁷⁶ Decision [1/CMA.4](#), para. 13.

⁷⁷ Decision [1/CMA.5](#), paras. 9 and 40.

⁷⁸ Decision [1/CMA.7](#), para. 9.

energy supply measures were linked to achieving SDG 7 (affordable and clean energy), while AFOLU measures were linked to achieving SDG 15 (life on land) and SDG 2 (zero hunger).

Figure 21

Shares of Parties that referred to synergies between efforts in mitigation priority areas and efforts towards the Sustainable Development Goals in their nationally determined contributions

Mitigation priority area	SDG																
	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BEYOND WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
Energy supply	2%	1%	3%	1%	3%	1%	22%	7%	12%	0%	8%	8%	14%	1%	1%	1%	2%
Transport	0%	1%	6%	1%	3%	1%	14%	6%	12%	1%	13%	8%	12%	4%	1%	2%	3%
Buildings	2%	0%	5%	1%	3%	2%	17%	5%	11%	1%	12%	8%	14%	1%	3%	1%	2%
Industry	0%	0%	1%	1%	3%	1%	6%	5%	8%	0%	4%	8%	6%	1%	1%	1%	1%
AFOLU	7%	18%	3%	1%	5%	7%	4%	8%	5%	1%	1%	12%	16%	5%	20%	3%	3%
Waste	1%	2%	9%	1%	3%	11%	6%	6%	7%	1%	12%	13%	10%	1%	1%	0%	1%
Cross-cutting/other	3%	2%	3%	2%	1%	5%	6%	3%	4%	1%	5%	4%	8%	3%	3%	2%	2%

Note: The shading reflects how frequently synergies were identified by Parties: the darker the shading, the more frequently synergies were identified.

206. Reflecting recent global energy crises, 65 per cent of Parties highlighted the contribution of mitigation measures to energy security in the new NDCs, underscoring the growing role of clean energy technologies in enhancing energy security. Of those Parties, 29 per cent identified renewable energy generation as a key supply-side driver of energy security by replacing imported fuels used for electricity generation with domestic energy sources and thereby lowering expenditure on fuel imports and imported fuel subsidies, reducing fuel price volatility and diversifying the electricity mix. Meanwhile, 16 per cent identified energy efficiency improvement as a key demand-side driver by reducing fuel imports required to achieve the same level of output and limiting peak electricity demand while also avoiding the need for additional electricity generation capacity and grid reinforcement. Of those Parties, 5 per cent also noted the potential for energy efficiency improvement to alleviate energy poverty through lower energy expenditure.

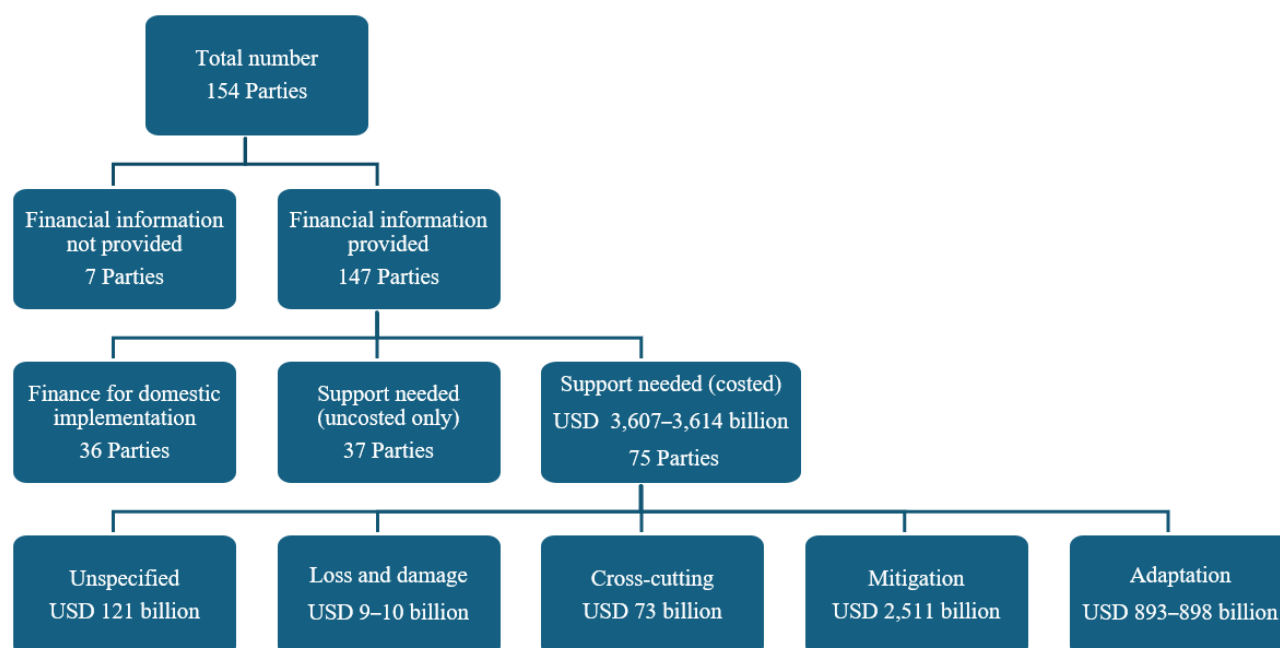
VIII. Means of implementation

A. Finance

207. A total of 95 per cent of Parties provided information on the finance required to implement activities in line with their NDCs, with 76 per cent characterizing finance in terms of support needed (see figure 22). A total cost in the range of USD 3,607–3,614 billion in aggregate was reported as climate finance required for NDCs by 49 per cent of Parties, comprising USD 1,155.6 billion identified as support needed from international sources, USD 376.6 billion identified to derive from domestic sources and USD 2,074–2,082 billion for which the source was not specified.

208. Of the Parties providing information on climate finance support needed, 23 per cent included such information throughout their NDCs, such as in thematic chapters on adaptation and mitigation, 32 per cent in a stand-alone section on climate finance, 39 per cent in a means of implementation section and 6 per cent in another form, for example by providing a general statement on climate finance needed. Further, 66 per cent of Parties also referenced or indicated ongoing efforts to develop financing strategies or investment plans to support NDC implementation and 34 per cent of Parties did not refer to financing strategies or investment plans. Of all the 154 NDCs analysed, 5 per cent did not provide any information on climate finance.

Figure 22

Climate finance information provided in nationally determined contributions

209. The level of detail of cost estimates varied across NDCs, with some Parties reporting total cost estimates at the aggregated level, some presenting cost estimates by sector or area and some differentiating between conditional support required and unconditional funds for implementing their NDCs. The time frames for costed estimates in NDCs also varied, starting from as early as 2021 and ending as late as 2040. The time frame for most of the costed needs (72 per cent) was from 2025 or 2026 to 2035.

210. A total of 95 per cent of the Parties that provided information on climate finance needs stated the sources of finance expected to be used in implementing their NDCs, with 78 per cent referring to a mix of international and domestic sources, including both public and private sources, 14 per cent to international sources only and 3 per cent to domestic sources only, with the remaining 5 per cent not specifying this information. Some 76 per cent of Parties differentiated their financial needs between conditional and unconditional support. Domestic sources are often used to address unconditional commitments outlined in the NDCs or for a specific area or sector being prioritized, and include national budget allocations, public sector investment programmes, loans received from international sources (which are to be repaid domestically) and revenues from domestic fiscal measures. Meanwhile, international sources, obtained from a variety of public, private and blended sources of finance, including bilateral and multilateral channels such as multilateral climate funds, multilateral development banks and the private sector, include public and private green and sustainability bonds, sustainable sovereign bonds, multi-funder trust funds and debt-for-climate swaps, as well as innovative finance such as maritime levies, de-risking instruments such as credit guarantees, and green credit lines. In addition, leveraging mechanisms under Article 6 of the Paris Agreement was mentioned by 59 per cent of Parties as a financial instrument for mobilizing financial resources or attracting investment to support NDC implementation.

211. Of the 75 Parties that reported costed finance needs, 84 per cent identified needs for mitigation in the energy (including transport and power generation), AFOLU, IPPU and waste sectors. Some 80 per cent of the Parties that reported costed finance needs identified adaptation needs primarily related to agriculture and food security, water resources, infrastructure, health and water, sanitation and hygiene, biodiversity and ecosystems, coastal zones, marine fisheries and aquaculture, tourism, and disaster and climate risk management. Some Parties highlighted that their NAPs are central to achieving their adaptation priorities and referenced specific adaptation needs. A total of 28 per cent of Parties included costed cross-cutting needs, while 13 per cent included needs related to addressing loss and damage

in the adaptation or cross-cutting component of their NDCs and 5 per cent reported needs related to addressing loss and damage in a separate chapter of their NDCs.

212. Overall, 66 per cent of Parties recognized the importance of considering gender and the perspectives of Indigenous Peoples and vulnerable groups in financing NDC implementation, including through gender-responsive budgeting, costed needs assessments, targeted financial incentives, institutional strategies and partnerships.

213. Some 64 per cent of Parties that reported needs in their NDCs reported finance-related challenges and limitations related to implementing their NDCs, including:

(a) Difficulties in identifying actual financial needs owing to cost estimates being preliminary in nature or underestimated, limited data availability and quality, insufficient institutional and technical capacity, fragmented planning frameworks, and persistent knowledge management and data availability gaps that impede comprehensive identification of financial needs;

(b) Limited and delayed access to finance owing to lengthy application procedures, co-financing requirements, lack of direct budgetary support, financing structures that are not fit for purpose, geopolitical restrictions, and insufficient and unpredictable global finance flows;

(c) Limited institutional and technical capacity, including for preparing funding proposals, limited MRV capacity and difficulty operationalizing indicators for tracking implementation, weak links between planning, budgeting and reporting, and underdeveloped legal and regulatory frameworks for climate finance;

(d) Difficulties in mobilizing private finance owing to low profitability in vulnerable sectors, high upfront capital costs against long payback periods, high perceived risks, limited investor appetite for adaptation and inadequate project preparation capacity;

(e) Debt burden and fiscal constraints arising from high debt levels, limited fiscal space and the diversion of resources from sustainable development to address needs perceived as more urgent. Parties noted that economic shocks, high ratios of debt to GDP and competing development priorities continue to erode fiscal space, constraining public investment in climate action.

214. Compared with in their previous NDCs, 17 per cent more Parties provided cost estimates for the first time in their new NDCs, while 12 per cent of Parties that provided quantitative information in their previous NDCs did not provide quantitative information in their new NDCs. Additionally, 13 per cent more Parties provided cost estimates for adaptation-related needs. Some Parties reported efforts to integrate climate change considerations into national budgeting processes, public financial management systems and the development of NDC implementation plans, climate finance policies and strategies.

B. Technology development and transfer, and innovation

215. A total of 98 per cent of Parties provided information on technology development and transfer, highlighting their priorities and/or needs, at varying degrees of granularity. About 50 per cent of those Parties included both qualitative and quantitative aspects related to technology needs and priorities, marking an increase in the share of Parties that included quantitative information since their previous NDCs.

216. About 76 per cent of Parties provided specific information on technology-related measures, mainly in the context of specific sectors, and some with a focus on specific technologies. Some 38 per cent of Parties referred to information on technology-related matters in other reports such as BTRs, NAPs and adaptation communications to complement the information provided in the NDCs. Overall, 34 Parties referred to technology needs assessments as a source of information for NDC formulation or an instrument for advancing NDC implementation.

217. In terms of technology priorities and needs, 92 per cent of Parties outlined measures in support of mitigation. A sectoral analysis of these measures shows that the predominant

share of these needs and priorities is related to the energy sector (cited by 93 per cent of those Parties), followed by the AFOLU and IPPU sectors (both cited by about 63 per cent of those Parties). Compared with their previous NDCs, there is a notable increase in the share of Parties referring to technology-related measures in the IPPU sector, including related to refrigeration and air conditioning. When referring to the outcomes of the first GST, 27 per cent of Parties referred to technology measures, including priorities related to renewable energy and energy efficiency, and CCUS technologies in achieving their mitigation targets.

218. A total of 80 per cent of Parties elaborated on technology-related measures focused on adaptation. Many Parties (around 50 per cent or more) cited technology measures related to agrifood systems, followed by ecosystems, climate monitoring and observations, and the water sector. Many of the adaptation-focused measures were formulated to address adaptation priorities in multiple sectors (e.g. early warning systems in the agriculture, water and health sectors) and/or designed to yield co-benefits for mitigation, biodiversity and/or sustainable development (e.g. nature-based solutions and ecosystem services of forests and the ocean).

219. Frequently cited cross-cutting and multisectoral technology measures include the application of digital solutions mentioned by 34 per cent of Parties, including the use of artificial intelligence; energy and material efficiency measures; measures for ‘climate proofing’ infrastructure; and the use of integrated spatial planning tools and climate observation technologies across various sectors to reduce GHG emissions and/or enhance climate resilience. Some 17 per cent of Parties referenced technology aspects in the context of addressing loss and damage, including for assessing associated needs.

220. In articulating their needs and priorities related to technology development and transfer for achieving their NDCs, Parties included information on various types of technology. There is broad consistency with their previous NDCs in terms of the order of frequently cited categories of technology needs and priorities, but with a notable increase in the share of Parties referring to measures other than a specific technology (92 per cent). The measures most frequently mentioned are related to innovation, research and development (71 per cent); policy, regulatory and legal measures (61 per cent); technology planning tools (53 per cent); and institutional strengthening (42 per cent). In addition, some 34 per cent of Parties underscored the interplay of technology development, implementation and uptake with capacity-building, skills development and the creation of decent work and quality jobs.

221. Identified measures concerning policy, regulatory and legal aspects in support of technology development and transfer are varied and include development of sectoral guidelines and standards (e.g. certification and rating systems), regulatory and policy frameworks (e.g. public procurement criteria), as well as measures to promote the engagement of the private sector (e.g. tax incentives and de-risking instruments). Parties referred to such measures as being instrumental to strengthening enabling environments for promoting the use of low-carbon and climate-resilient technologies, highlighting actions in the energy, transport, AFOLU and ecosystem sectors, among others. In this context, some Parties underscored the importance of robust monitoring and reporting mechanisms, often combined with geospatial tools and information systems, for ensuring transparency of actions and their policy and regulatory compliance, including in the context of cooperation under Article 6 of the Paris Agreement.

222. The focus on technology-related data and knowledge management systems was also underscored in the context of strengthening institutional and coordination capabilities, including to ensure coherence and alignment in the articulation of climate technology priorities. Parties emphasized the pivotal role of such systems, which are often powered by digital solutions and accompanied by related institutional arrangements, in enabling cooperation among institutions and at different levels of governance, including for sharing information, tracking action, improving reporting, and monitoring and evaluation, mobilizing support and fostering partnerships. Furthermore, Parties described plans to establish or strengthen dedicated national climate technology institutions to coordinate sectoral technology planning and implementation (e.g. between national institutions and international technology providers). In addition, Parties referred to government-led initiatives and programmes to promote enhanced and coordinated domestic action and convene public and

private actors for technology development and deployment (e.g. partnerships between industry, universities and research centres, and local communities).

223. When referring to measures related to technology innovation, research and demonstration (which 71 per cent of Parties did), 81 per cent of those Parties highlighted them in the context of specific sectors, most frequently the agriculture, forestry and energy sectors, followed by measures focused on the industry and water sectors. In this regard, Parties underscored the importance of context-specific research and innovation and local technology testing, piloting and demonstration, for example by establishing technology incubators and accelerators and joint research centres, including to foster the engagement of youth and traditional and local knowledge in technological innovation.

C. Capacity-building and institutional strengthening

224. A total of 94 per cent of Parties referenced capacity-building in varying detail, with 31 per cent of those Parties discussing it in sections on means of implementation or capacity-building, 21 per cent discussing it throughout their NDCs and 48 per cent providing only limited references or referring to external sources, such as adaptation communications, BTRs and NAPs, for more information on capacity-building support provided or needed. This broadly aligns with the Parties' previous NDCs and reflects a steady commitment towards building the capacity of developing countries. However, opportunities remain to further elevate national ambition on and adopt a more systematic approach to building capacity that could facilitate enhanced climate action.

225. A total of 74 per cent of Parties explicitly stated that the implementation of their NDCs is either fully or partially dependent on receiving capacity-building support. Parties continued to emphasize capacity-building as a critical enabler for achieving their climate goals. Capacity-building support needs were highlighted across adaptation (by 73 per cent of Parties), mitigation (by 71 per cent of Parties) and cross-cutting objectives (by 68 per cent of Parties), including in relation to data and information, monitoring and evaluation, transparency, technology deployment and access to climate finance. Notably, 33 per cent of Parties identified specific capacity needs related to addressing loss and damage, marking a new development not reflected in the previous NDCs.

226. Parties articulated capacity gaps and needs across multiple cross-cutting priorities, including with regard to strengthening institutional coordination and governance arrangements, enhancing the availability and sharing of climate data and information and improving collaboration between public, private and international stakeholders, as well as between national and subnational institutions. Many Parties reported challenges in accessing climate finance, particularly in navigating financial mechanisms, developing bankable projects, attracting private investment and improving financial planning, resource mobilization and utilization. Technology-related capacity needs were frequently mentioned, especially regarding the adoption of low-carbon and climate-resilient technologies, the use of digital tools and information systems, and tools for sustainable resource management and reduced environmental impacts.

227. Additionally, capacity gaps were identified in relation to meeting the reporting requirements under the ETF, such as with regard to securing the technical expertise needed for preparing GHG inventories and sector-level monitoring of emission reductions, improving institutional coordination across ministries and between national and local institutions, enhancing data management and quality assurance processes, and establishing and enabling robust MRV systems. Some Parties emphasized the need to build capacity for addressing loss and damage, such as with regard to accessing financial support, strengthening research and assessment of economic and non-economic loss, undertaking climate risk and vulnerability assessments, developing early warning systems and designing appropriate response measures. Several Parties identified capacity needs related to participating in the mechanisms under Article 6 of the Paris Agreement and in carbon markets.

228. Capacity needs were reported both across multiple sectors and within specific sectors. A total of 64 per cent of Parties cited capacity needs in the agriculture sector, such as in relation to improving climate modelling for emergency responses, promoting sustainable

farming practices and advancing climate-smart agriculture; and 53 per cent of Parties highlighted needs in the energy sector, including related to strengthening energy resilience, improving energy efficiency and building technical capacity for implementing renewable energy technologies. Other sector-specific needs relate to, inter alia, addressing climate change related diseases and impacts on human health, enhancing disaster risk reduction efforts, decarbonizing transport, buildings and critical infrastructure, enhancing the resilience of built environments, forestry, land use and ecosystem conservation and restoration, and raising public awareness of waste management practices and sustainable water management.

229. Parties described capacity-building activities aimed at enhancing public engagement and awareness-raising, technical training, MRV systems, education, research and innovation. Parties acknowledged the value of UNFCCC reporting processes, such as BTRs and NAPs, as important ways of developing their capacity to improve institutional learning and strengthen national transparency arrangements. Non-Party stakeholders, including academia, non-governmental organizations, Indigenous Peoples and local communities, development agencies, United Nations agencies and financial mechanisms, were emphasized as vital to implementing capacity-building efforts and achieving climate action objectives.

230. Consistently with the previous NDCs, Parties emphasized their capacity-building priorities for vulnerable groups, such as women, youth, and Indigenous Peoples and local communities, in relation to strengthening engagement in decision-making, increasing awareness and understanding of climate change and health-related and disaster risks, and expanding training and skills-building initiatives for green jobs. Capacity-building activities were frequently reported as having the aim of addressing capacity gaps for the stakeholders mentioned above as well as for government employees, educators, the private sector and those active in vulnerable sectors such as agriculture, fisheries, public health and tourism.

IX. Contribution towards achieving the objective of the Convention as set out in its Article 2, and towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement

231. The information necessary to facilitate clarity, transparency and understanding of NDCs, which 92 per cent of Parties communicated in the new NDCs, includes information on how the NDC contributes towards:⁷⁹

- (a) Achieving the objective of the Convention as set out in its Article 2;
- (b) Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.

232. A total of 62 per cent of Parties indicated that their level of future emissions is expected to fall within the scope of a global emission pathway that is consistent with the goal of keeping the global average temperature increase well below 2 °C or limited to 1.5 °C. In that context, Parties highlighted their national mitigation and/or adaptation efforts aligned with sustainable development objectives and national circumstances, economy-wide emission reduction targets, commitment to reach net zero by mid-century, development pathways for decoupling emissions from economic growth and advancing decarbonization, enhanced measures for reforestation and ecosystem conservation, and mobilization of domestic and international support.

A. Aggregate global emissions

233. Estimating global emissions on the basis of the submitted NDCs and assessing their contribution towards achieving the objective of the Convention as set out in its Article 2, and towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement is subject to uncertainty given that only about 71 per cent of global GHG emissions are covered by the new NDCs, representing 154 Parties, considered in this report (see figure 15).

⁷⁹ See decision [4/CMA.1](#), annex I, para. 7.

234. Without assuming any specific emission level in 2035 for any Party that has not submitted a new NDC, an illustrative aggregate global emission range for 2035 is explored in this report on the basis of either of the following:

- (a) The growth rates of estimated emissions based on ‘current policy’ scenarios after the last reference point for historical emissions or submitted NDCs;
- (b) A linear transition towards the aggregate emission level reflecting Parties’ long-term visions, strategies and targets (the long-term alignment case).⁸⁰

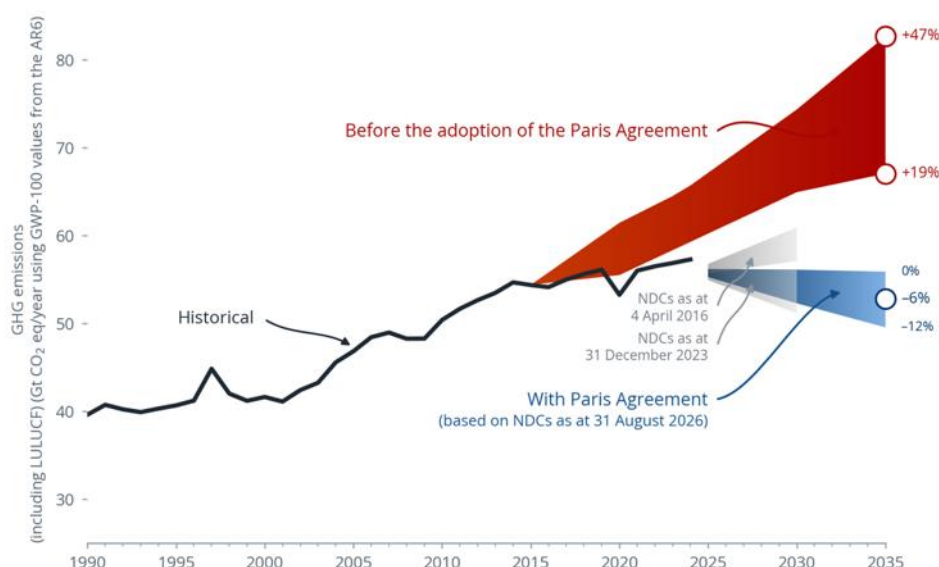
235. On the basis of the new NDCs and the methodology outlined above, global GHG emissions (with LULUCF) are projected to range between 49.6 and 55.9 Gt CO₂ eq in 2035 (see figure 23). When considering the full implementation of all elements reported in the NDCs, including conditional elements, the estimated range for 2035 is 49.6–52.6 Gt CO₂ eq. When considering the implementation of unconditional elements only, the estimated range is on average 3.5 Gt CO₂ eq higher, at 53.1–55.9 Gt CO₂ eq.

236. The projected global emission level in 2035 (with LULUCF) indicates a decrease of about 6 per cent compared with the 2019 level, ranging from a reduction of 12 per cent to 0 per cent (see figure 23), which is significantly lower than the ‘business as usual’ projections prior to the adoption of the Paris Agreement (shown as a range of scenarios from SSP4-6.0 to SSP3-7.0 and SSP5-8.5 in figure 23). When considering the full implementation of all elements of the NDCs, including conditional elements, the decrease is estimated at about 9 (6–12) per cent. When considering the implementation of unconditional elements only, the reduction is estimated at 3 (0–5) per cent. Global emissions (without LULUCF) in 2035 are projected to increase slightly by an average of 1 per cent compared with the 2019 level, ranging from 4 per cent below to 6 per cent above the 2019 level.

237. The projected range of GHG emissions for 2035 (with LULUCF) of **49.6–55.9 Gt CO₂ eq** is below the estimated emission level for 2024, indicating that global emissions are likely to have peaked by 2030 at the latest (see figure 23).

Figure 23

Projected global emission levels based on the new nationally determined contributions compared with ‘business as usual’ scenarios before the adoption of the Paris Agreement



⁸⁰ See <https://unfccc.int/documents/661573> for additional information on the approach to estimating emission levels, including on the estimation methods and assumptions used.

B. Projected emissions and warming in the light of the long-term goals of the Paris Agreement

238. According to the Synthesis Report of the AR6, global GHG emissions in 2030 implied by NDCs announced by October 2021 make it likely that warming will exceed 1.5 °C during the twenty-first century and make it harder to limit warming to below 2 °C. Given the limited change in projected emission levels in 2030 since that assessment, this finding still holds. To be in line with global modelled pathways to limiting warming to 1.5 °C (with over 50 per cent likelihood in 2100) with no or limited overshoot, concerted action to reduce global GHG emissions would need to have started after 2020 and global GHG emissions would need to be reduced by 60 (49–77) per cent by 2035 relative to the 2019 level; for pathways to limiting warming to below 2 °C (with over 67 per cent likelihood), emissions would need to be reduced by 37 (25–56) per cent by 2035 below the 2019 level.

239. The latest AR6 scenario data set contains no scenarios in which the goal of limiting warming to 1.5 °C with no or limited overshoot is reached if emission levels in 2030 remain in line with the emission estimates for 2030 and 2035 based on the new NDCs; global emission trends between 2019 to 2024 have not demonstrated that the necessary emission reductions have taken place. When comparing the estimated global emission levels for 2035 with the AR6 scenario categories,⁸¹ there is a substantial difference in emission levels relative to the 1.5 °C scenarios with no or limited overshoot (category C1) under which concerted global mitigation action started by 2020, ranging from approximately 23 Gt CO₂ eq in 2030 to 30 Gt CO₂ eq in 2035 (see figure 24). Relative to the scenarios that likely limit warming to below 2 °C with immediate action after 2020 (category C3a), the difference in emissions levels is approximately 14 Gt CO₂ eq in 2030 and 18 Gt CO₂ eq in 2035; relative to the scenarios that return warming to 1.5 °C after a high overshoot with delayed action (category C2–P3b), the difference is approximately 1 Gt CO₂ eq in 2030 and 15 Gt CO₂ eq in 2035; and relative to the scenarios that likely limit warming to below 2 °C with delayed action (category C3–P3b), the difference is approximately 2 Gt CO₂ eq in 2030 and 14 Gt CO₂ eq in 2035.

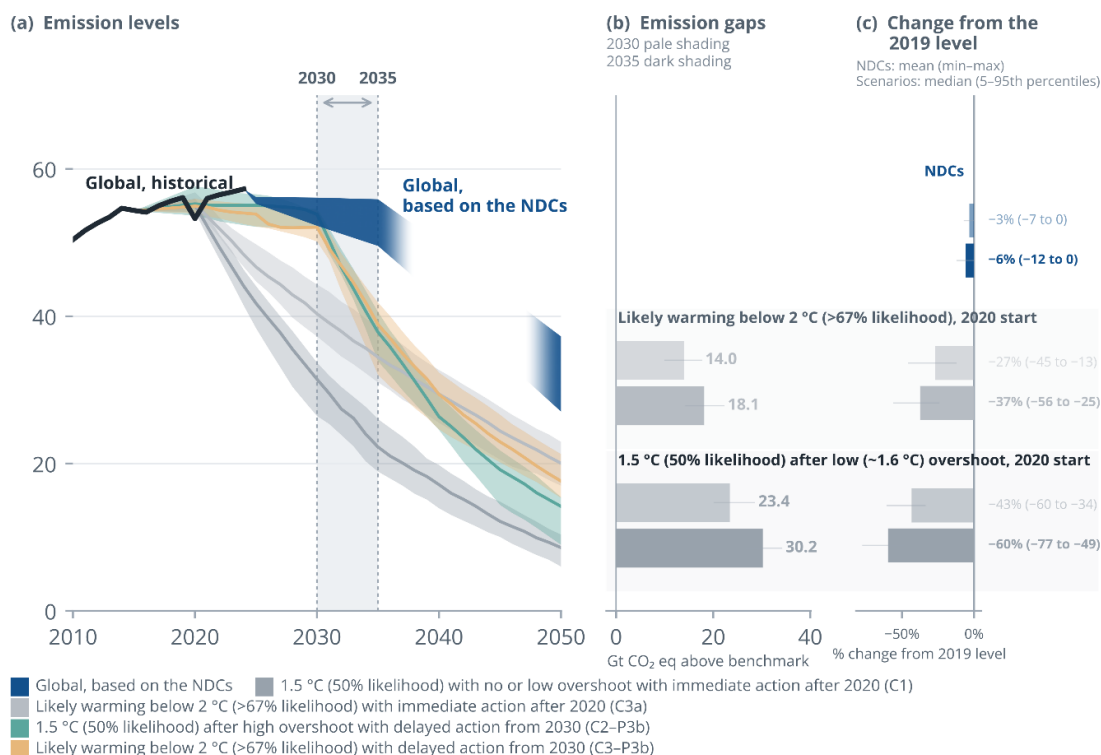
240. Taken together, the information implies the need for either a significant increase in the level of ambition of NDCs before 2030 and 2035, or a significant overachievement of the NDCs' emission targets, or a combination of both, in order to achieve cost-effective emission levels consistent with limiting warming to 1.5 °C (with over 50 per cent likelihood) after a high overshoot.

241. The AR6 'delayed' pathways assume emission levels that are approximately consistent with the emission estimates for 2030 reported in the new NDCs. Those pathways limit warming to below 2 °C or return warming to 1.5 °C after a high overshoot and show a very steep decline in emissions after 2030. This decline is at least as steep as a linear transition to the estimated long-term aggregate emission level in line with Parties' long-term visions, strategies and targets, and in many cases with reductions from 2030 to 2035 that are up to around twice as fast (see figure 24). The pathways on which the goal of limiting warming to 1.5 °C remains attainable after a high overshoot (category C2–P3b) indicate the need for a 31 (51–21) per cent emission reduction by 2035 below the 2019 level.

⁸¹ AR6 scenario categories C1, C3a, C2–P3b and C3–P3b respectively; see figure SPM.4 in IPCC. 2022. Summary for Policymakers. In: PR Shukla, J Skea, R Slade, et al. (eds.). *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press. Available at <https://www.ipcc.ch/report/ar6/wg3/>.

Figure 24
Projected range of global emission levels in 2035 in comparison with scenarios of limiting warming to 1.5 °C and 2 °C

Total GHG emissions including LULUCF, Gt CO₂ eq/year (GWP-100 values from the AR6)



242. The AR6 estimates that limiting peak warming to below 1.5 °C with a 50 per cent probability allows remaining cumulative CO₂ emissions of 500 Gt CO₂ from the beginning of 2020, on top of an estimated 2,390 ± 240 Gt CO₂ historical emissions since 1850.⁸² To stay below 2 °C warming with a 67 per cent probability, the remaining cumulative CO₂ emissions from 2020 are estimated at 1,150 Gt CO₂.

243. Using the AR6 methodologies and updates in recent scientific literature, the carbon budget for warming at or below 1.5 °C has been revised downward, with only 130 Gt CO₂ emissions remaining from the start of 2026 – approximately equivalent to three years of current global CO₂ emissions.⁸³ CO₂ emissions that exceed this 1.5 °C carbon budget would lead to higher warming and would need to be compensated by active CO₂ removal from the atmosphere to bring long-term temperatures back to 1.5 °C warming or below. To stay below 2 °C warming with at least a 67 per cent likelihood, the recent estimates imply a remaining carbon budget of 860 Gt CO₂ for 2026 onward (see figure 25).

244. The new and latest NDCs are estimated to result in cumulative CO₂ emissions from 2026 onward of 368 (352–383) Gt CO₂ by 2035. This implies that the cumulative carbon budget consistent with the 1.5 °C peak warming limit is projected to be exceeded before 2030 (see figure 25). To limit warming to below 2 °C, cumulative emissions by 2035 would need to remain below the best-estimate budget of 860 Gt CO₂.

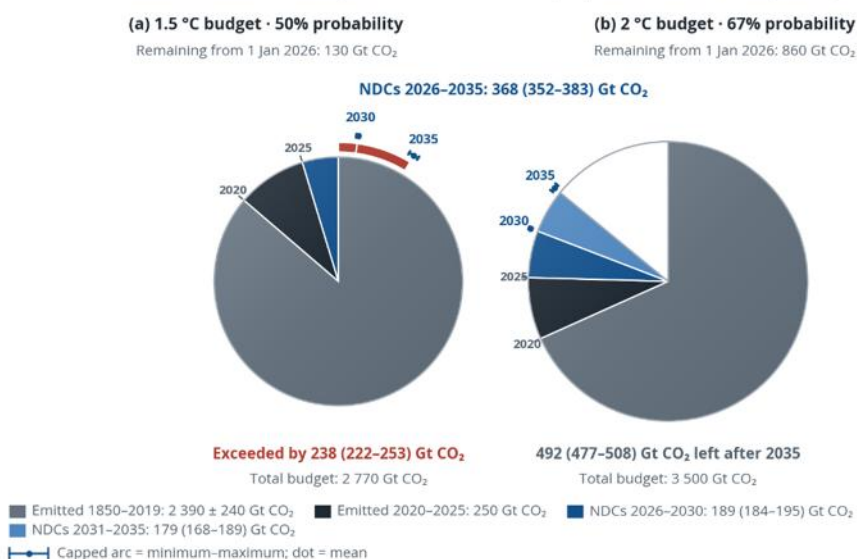
⁸² See table SPM.2 in IPCC. 2021. Climate Change 2021: The Physical Science Basis. In: V Masson-Delmotte, P Zhai, A Pirani, et al. (eds). *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press. Available at <https://www.ipcc.ch/report/ar6/wg1/>.

⁸³ For the recent estimates updated in line with the AR6 methodologies, see Forster PM, Walsh T, Smith C, et al. 2026. Indicators of Global Climate Change 2025: annual update of key indicators of the state of the climate system and human influence. *Earth System Science Data*. 18(6): pp.3889–3933. Available at <https://doi.org/10.5194/essd-18-3889-2026>.

Figure 25

Projected cumulative carbon dioxide emissions until 2035 in comparison with the remaining carbon budget

Each circle shows the total carbon budget from 1850; its area is proportional to that total (Gt CO₂)



245. NDCs communicated since the adoption of the Paris Agreement have generally become more ambitious and better aligned with Parties' LT-LEDS. This is reflected in the projected temperature rise consistent with their implementation, which has declined from median warming projections of 2.5–3.8 °C for 2100, as estimated on the basis of the INDCs as at 2016, to 1.9–3.0 °C on the basis of the NDCs as at 12 November 2025. On the basis of the status of NDCs as at 31 August 2026, warming by 2100 is projected to be 2.1–3.2 °C⁸⁴ (see figure 26).

246. Projected global mean temperatures for the end of the century are subject to significant uncertainty, depending partly on historical emissions and the 2030 and 2035 NDC emission levels, but also on emission levels in the decades beyond 2035 and on inherent climate system responses to cumulative CO₂ and other GHG emissions.⁸⁵

247. Before the adoption of the Paris Agreement, 'business as usual' scenarios (illustrated in figure 26 as SSP4-6.0, SSP3-7.0 and SSP5-8.5) indicated emission trajectories leading to substantially higher emissions. The comparable warming range in 2100 is 3.2–4.9 °C.⁸⁶

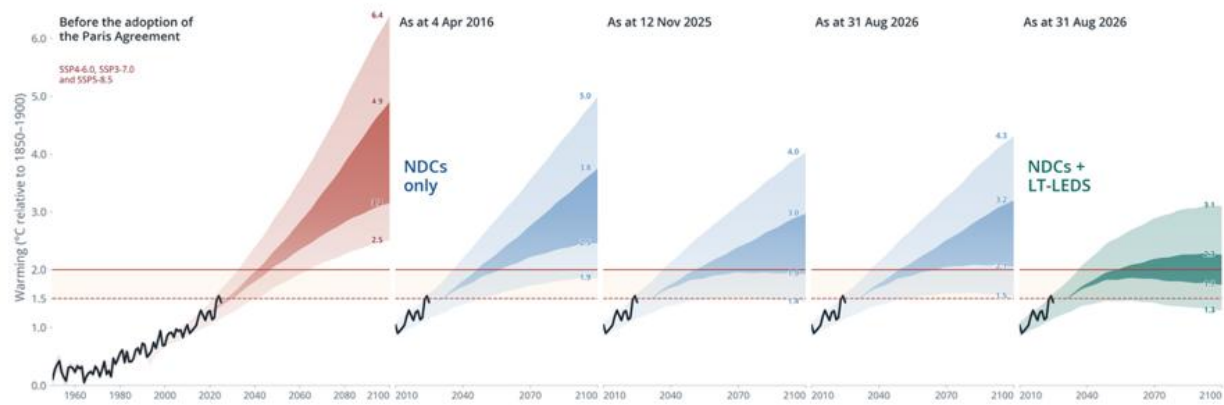
248. If Parties' long-term targets referred to in their NDCs and LT-LEDS are also taken into account, a more substantial decrease in estimated warming is projected, as LT-LEDS are projected to substantially constrain emissions over the course of the twenty-first century. Best estimates of projected warming for 2100 based on the new NDCs and latest LT-LEDS are 1.7–2.3 °C based on submissions as at 31 August 2026 (see figure 26).

⁸⁴ An AR6-calibrated reduced-complexity climate model (MAGICC) was used for these projections, equivalent to the version used for the AR6 Working Group III scenario. The NDC-only projections assume 'business as usual'/'current policy' or constant emission reference levels after the last target year until 2050, after which the AR6 scenario characteristics are followed. The projections based on NDCs and LT-LEDS also take into account any LT-LEDS or long-term visions communicated in NDCs (see <https://unfccc.int/documents/661573>).

⁸⁵ While the projected median warming is 2.1–3.2 °C for the new NDCs, the full range is 1.5–4.3 °C by 2100, spanning the 10th percentile for the scenario with the lowest lower-bound warming to the 90th percentile for the scenario with the highest upper-bound warming.

⁸⁶ The presented warming ranges might differ slightly from those presented in the contribution of Working Group I to the AR6 for the SSP scenarios, which refers to average warming in 2081–2100 and uses a different methodology for the SSP scenario warming projections. The warming assessment in this report is consistent with the one applied in the contribution of Working Group III to the AR6.

Figure 26
Projected warming and its progression over time based on Parties' nationally determined contributions and long-term low-emission development strategies



Notes: (1) The range of best-estimate median warming under different extrapolation assumptions is illustrated by the dark shaded areas, while the lighter shaded areas indicate climate response uncertainties (10th–90th percentile range); (2) both NDCs and, in particular, LT-LEDs have contributed to a marked decrease in projected warming over the period covered by successive editions of this report; (3) global mean temperature observations are shown as a solid black line.