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**Nationally determined contributions under the Paris  
Agreement**

**Synthesis report by the secretariat**

**Summary**

This report synthesizes information from the 64 new nationally determined contributions communicated by 64 Parties to the Paris Agreement and recorded in the registry of nationally determined contributions between 1 January 2024 and 30 September 2025.



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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
CH <sub>4</sub>	methane
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> eq	carbon dioxide equivalent
COP	Conference of the Parties
ETF	enhanced transparency framework under the Paris Agreement
GHG	greenhouse gas
GST	global stocktake
GWP-100*	global warming potential values over a 100-year time-horizon
HFC	hydrofluorocarbon
IEA	International Energy Agency
INDC	intended nationally determined contribution
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
LT-LEDS	long-term low-emission development strategy(ies)
LULUCF	land use, land-use change and forestry
MRV	measurement, reporting and verification
N <sub>2</sub> O	nitrous oxide
NAP	national adaptation plan
NDC	nationally determined contribution
NF <sub>3</sub>	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 <a href="#">1/CP.16</a> , para. 70)
SDG	Sustainable Development Goal
SF <sub>6</sub>	sulfur hexafluoride
SLCP*	short-lived climate pollutant
UNEP	United Nations Environment Programme

\* Used exclusively in figures.

## I. Executive summary

1. Ten years on from the adoption of the Paris Agreement, this 2025 NDC synthesis report provides new indications of real and increasing progress on action to address climate change through national efforts underpinned by global cooperation. In their NDCs, Parties are setting out new national climate targets, and plans to achieve them, that differ in pace and scale to any that have come before. According to their NDCs, Parties are bending their combined emission curve further downward, but still not quickly enough. The whole-of-economy, whole-of-society approaches evident in NDCs point to strong climate action as an increasingly core pillar of ensuring economic stability and growth, jobs, health, and energy security and affordability, among many other policy imperatives, in countries. However, it remains clear that major acceleration is still needed in terms of delivering faster and deeper emission reductions and ensuring that the vast benefits of strong climate action reach all countries and peoples. This report provides valuable new insights, albeit limited in scope, on the basis of the 64 new NDCs submitted by 64 Parties to the Paris Agreement and recorded in the NDC registry between 1 January 2024 and 30 September 2025, covering about 30 per cent of total global emissions in 2019. It is not possible to draw wide-ranging global-level conclusions or inferences from this limited data set. Nevertheless, the report highlights many key lessons, about progress being made and major challenges ahead, emerging from the NDCs synthesized:

- (a) The new NDCs show a progression in terms of quality, credibility and economic coverage, with 89 per cent of Parties communicating economy-wide targets (compared with 81 per cent in their previous NDCs);
- (b) The new NDCs include responses to the outcomes of the first GST, with 88 per cent of Parties indicating that their NDCs were informed by the outcomes of the GST and 80 per cent specifying how;
- (c) The emissions trajectories set out in the new NDCs are broadly consistent with a linear trajectory from the Parties' 2030 targets to their long-term net zero targets, showing that Parties are laying out clear stepping-stones towards net zero, although acceleration of action is still needed;
- (d) Collectively, the new NDCs show a reduction in projected emissions of 17 (11–24) per cent below the 2019 level;
- (e) All NDCs go beyond mitigation to include elements, *inter alia*, on adaptation, finance, technology transfer, capacity-building and addressing loss and damage, reflecting the comprehensive scope of the Paris Agreement;
- (f) Adaptation and resilience are featuring more prominently in NDCs, with 73 per cent of the new NDCs including an adaptation component;
- (g) Implementation of the new NDCs necessitates strong, ongoing international cooperation, and new and innovative approaches to unlock finance and support for developing country Parties at scale.

2. With regard to **GHG emission reductions**, the total GHG emission level resulting from the implementation of Parties' new NDCs is projected to be around 13.0 (12.0–13.9)<sup>1</sup> Gt CO<sub>2</sub> eq in 2035, which is 6 per cent below the projected 2030 level reported in those Parties' previous NDCs and 17 (11–24) per cent below the 2019 level. Full implementation of all new NDCs, including all conditional elements, is estimated to bring the total GHG emission level of the relevant group of Parties down to 12.3 (12.0–12.7) Gt CO<sub>2</sub> eq by 2035, which would be 19–24 per cent below the 2019 level. Implementation of their new NDCs will result in a peaking of GHG emissions for the group of Parties before 2030, with strong emission reductions thereafter until 2035. Most of the new NDCs are linked to the Parties' long-term decarbonization targets and development pathways, including the net zero targets

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<sup>1</sup> A triplet of emission levels indicates the best-estimate and the min-max projection range arising from ranges in NDC targets and uncertainties in the quantification. If not otherwise stated, the range spans both high and low quantifications of conditional and unconditional targets.

communicated in the NDCs or LT-LEDS, which involve reaching net zero emissions by between 2040 and 2060, with the majority for 2050. The aggregate emission level of the Parties projected for 2035 is approximately consistent with a linear trajectory from the estimated 2030 emission level to their aggregate targeted net zero emission level.

3. Nearly all Parties (98 per cent) communicated **domestic mitigation measures** in their new NDCs, with 80 per cent reporting measures for at least one of the six low-cost mitigation options with the highest mitigation potential (more than 2 Gt CO<sub>2</sub> eq/year) for up to 2035. Among such options, afforestation and reforestation, solar energy and reducing deforestation are identified as the options with the greater need for support. Quantitative targets relevant to at least one of the global efforts or mitigation options covered in recent CMA decisions were reported by 75 per cent of Parties, of which 47 per cent made direct references to specific efforts or options. In addition to the information in the NDCs, some Parties have announced domestic pledges and projects relevant to the above-mentioned global efforts, including in relation to tripling global renewable energy capacity by 2030, enhancing low-carbon hydrogen production and expanding CCUS capacity. The combined effects of these pledges and projects are projected to significantly exceed the aggregated targets based on the NDCs for the same global efforts, indicating that submitted NDCs do not cover all domestically announced pledges and projects. Some Parties may nationally determine that progress in these areas, along with other contributing factors such as enhanced international cooperation and support, contributes to potential for accelerated implementation and more ambition.

4. Parties **widely recognized and positively responded to the outcomes of the first GST<sup>2</sup> in their NDCs**. A total of 88 per cent of Parties indicated that their new NDCs were informed by the findings of and calls arising from the first GST, with 80 per cent of Parties providing information supporting that claim. In terms of considering the GST outcomes in their NDCs, Parties referenced enhanced ambition of mitigation (77 per cent), adaptation (38 per cent), means of implementation (33 per cent), loss and damage (14 per cent), response measures (13 per cent) and international cooperation (17 per cent), as well as cross-cutting elements such as just transition, stakeholder engagement and gender-responsiveness. Some Parties indicated how 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 adaptation efforts towards achieving the global goal on adaptation.

5. An increasing trend in NDCs mentioning **mitigation co-benefits resulting from adaptation action and/or economic diversification plans** can be observed. NDCs are also increasingly mentioning plans to address impacts arising from mitigation actions by embedding consideration of just transition in the NDCs, thus indicating growing recognition of the importance of just transition.

6. A total of 70 per cent of Parties considered **just transition** in preparing their new NDCs and the majority of those Parties 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 -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. Plans to monitor or track just transition as part of NDC implementation were explicitly indicated by 8 per cent of Parties.

7. The increase in 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. 89 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 64 per cent in the previous NDCs; with 17 per cent of Parties mentioning the general use of

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<sup>2</sup> See decision [1/CMA.5](#).

voluntary cooperation under Article 6, 72 per cent referring to the use of internationally transferred mitigation outcomes under Article 6, paragraphs 2 and 4, and 20 per cent expressing interest in non-market approaches under Article 6, paragraph 8. Following the completion of the negotiations on the implementation of Article 6 at COP 29, more Parties are beginning to define their approach to voluntary cooperation and establish the legal, regulatory and institutional frameworks needed to implement and benefit from Article 6.

8. Acknowledging the fundamental **role of forests in keeping 1.5 °C within reach**, Parties have integrated forest measures into economy-wide mitigation targets and mentioned forest-specific contributions and indicators in their new NDCs. Parties highlighted international collaboration and REDD+ results-based payments as key to mitigation in the forest sector, while noting synergies with achieving adaptation and biodiversity objectives. Developing country Parties referenced their national REDD+ strategies and safeguards, and ongoing implementation of REDD+ as central to their climate responses. More Parties than previously included in their NDCs a broader range of forest actions, covering reducing deforestation and forest degradation, afforestation and reforestation, sustainable forest management, policy frameworks and risk management measures addressing wildfire, pests and diseases, often with indicative costings and financing needs, and thus constituting coherent climate action packages. Persistent funding gaps remain, with Parties stressing that predictable domestic and international finance, including REDD+ results-based payments, is essential for turning ambition into durable outcomes, supported by inclusive governance and national systems.

9. Parties reported 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 – an increase of 39 per cent. Of the 48 per cent of Parties that reported finance-related needs for ocean-based action, 46 per cent have made conditional commitments, which were mostly identified by small island developing States to implement ocean-related climate measures. Ocean-based adaptation remains prominent, with measures 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.

10. A total of 73 per cent of Parties included an **adaptation** component in their new NDCs, focusing on the adaptation priority areas of food security and nutrition, water resources, health, terrestrial ecosystems, key economic sectors, disaster risk management, urban and rural areas, ocean ecosystems, coastal and low-lying regions, poverty and livelihoods, and education. Parties demonstrated progress across several areas of adaptation, including 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 94 per cent of Parties with an adaptation component in their new NDCs, compared with 68 per cent in their previous NDCs, referred to **loss and damage**, outlining observed and projected loss and damage in various key sectors and describing planned or implemented measures to avert, minimize or address loss and damage.

11. Parties reaffirmed in their 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 Paris Agreement's goals 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.

12. Information on **climate finance** was included in their new NDCs by 75 per cent of Parties, most often in terms of support needed for NDC implementation, with fewer referencing their role as finance providers. Costed needs were presented by 21 per cent more Parties in their new NDCs than previously, particularly for adaptation, reflecting their increased ambition, broader sectoral coverage and efforts to integrate climate finance into national budgeting and policy frameworks. Nearly 63 per cent of Parties referenced efforts to develop climate financing strategies or investment plans to support NDC implementation. Parties reporting financial needs provided cost estimates ranging from aggregate totals to sector-specific breakdowns, amounting to USD 1,970.8–1,975.0 billion overall. Mitigation finance needs, estimated at USD 1,339 billion, are concentrated in the energy, AFOLU, IPPU and waste sectors; while adaptation finance needs, estimated at USD 560.5–564.6 billion, are focused in agriculture, water, infrastructure, health, biodiversity and disaster risk management sectors. A total of 84 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 finance, multilateral climate funds, multilateral development banks and private sector investment. Parties also reported that they are exploring use of sovereign instruments such as green bonds and social and sustainability bond instruments as well as innovative finance such as maritime levies, de-risking instruments like credit guarantees, and green credit lines.

13. With regard to **technology development and transfer and innovation**, 97 per cent of Parties provided information, at varying levels of detail, on technology priorities and/or needs in their new NDCs, 45 per cent of which include both qualitative and quantitative aspects. Around 75 per cent 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 72 per cent in support of adaptation. The predominant share of these needs and priorities for mitigation are related to the energy, transport and AFOLU sectors, which were cited by a majority of Parties (more than 50 per cent). For adaptation, in addition to agrifood systems and the water sector, which were among the most frequently cited priorities in previous NDCs, a majority of Parties (more than 50 per cent) referred to technology measures related to climate monitoring and observations in their new NDCs, often combined with geospatial tools and digital solutions, including use of artificial intelligence. The share of Parties (73 per cent) that referred to measures related to technology innovation, research and demonstration for achieving their climate targets has more than doubled since their previous NDCs.

14. **Capacity-building and institutional strengthening** are increasingly being recognized as important for NDC implementation. Of the 84 per cent of Parties that referenced capacity-building in their new NDCs, 66 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 25 per cent of Parties highlighted capacity needs related to addressing loss and damage and accessing related funds, which were not reflected in their previous NDCs. Parties referred to institutional arrangements and stakeholder engagement as part of their capacity-building efforts.

15. A total of 97 per cent of Parties provided information in their new NDCs on the **legal and policy frameworks** that facilitate their NDC implementation. The nature of such frameworks varies across Parties and includes acts, laws and decrees as well as policies, strategies and plans. The adoption of comprehensive climate change acts, laws or decrees that establish the legal framework for NDC implementation was pointed to by 41 per cent of Parties. On the policy side, 39 per cent of Parties referred to their national climate change policies and 41 per cent to their national climate change strategies and plans as important instruments for supporting NDC implementation. Further, a total of 94 per cent of Parties reported on legal 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 77 per cent of Parties providing information on environmental legal and policy instruments containing climate-related components. Climate change considerations have also been incorporated within sustainable development frameworks: 47 per cent of Parties highlighted sustainable development legislation, agendas, strategies and plans as instruments that underpin the legal and policy frameworks that facilitate NDC implementation.

16. 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, 95 per cent of Parties reported engagement of non-Party stakeholders in NDC implementation, 20 per cent more than in their 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 positioned as a co-implementer and financier, contributing through innovation, partnerships and investment mobilization. Civil society and academia play vital roles in shaping inclusive policies, advancing climate justice and providing scientific expertise. Parties are collaborating with non-Party stakeholders through voluntary efforts, initiatives and coalitions to mobilize resources and scale up climate action, and reported in the NDCs that enhanced enabling environments, such as appropriate incentives, sectoral road maps and knowledge platforms, are supporting stakeholder contributions. This shift from broad consultation to multi-stakeholder implementation underscores an increasing whole-of-society and whole-of-economy approach to climate action, thus signalling an alignment with the outcomes of the first GST and reinforcing the importance of collaborative climate governance.

17. Parties provided clearer and more detailed information than previously on **ACE** in their new NDCs.<sup>3</sup> 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 the previous NDCs on general principles, past achievements, future commitments, and needs and gaps in relation to ACE.

18. **Gender** integration into NDCs is advancing, with Parties increasingly considering gender to promote inclusive and effective climate action. In their new NDCs, 89 per cent of Parties provided information related to gender and 80 per cent affirmed that they will take gender into account in implementing the NDCs. Of the Parties that referenced gender, 16 per cent had not included reference to gender in their previous NDCs and 35 per cent considered gender to a similar extent to previously. Of the Parties that referenced gender in their previous NDCs, 51 per cent elaborated more on the topic in their new NDCs.

19. A total of 72 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 66 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, Indigenous and local knowledge 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 actions involving Indigenous Peoples and local communities include 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 involving Indigenous Peoples and local communities include measures related to sustainable waste and forestry management, mangrove restoration, low-carbon maritime transport, solar-powered irrigation and clean cooking solutions.

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<sup>3</sup> 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). Decision [1/CMA.5](#), para. 176, 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.

20. It is the first time that a section on **children and youth** has featured in the NDC synthesis report. A total of 88 per cent of Parties in their new NDCs (compared with 61 per cent in their previous NDCs) included information, generally more clearly and in more detail than previously, reflecting a stronger commitment to meaningful inclusion, 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.

## II. Introduction

### A. Mandate and background

21. 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.<sup>4</sup> The communicated NDCs are to be recorded in the NDC registry, maintained by the secretariat.

22. 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.<sup>5</sup>

23. 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.<sup>6</sup>

24. CMA 1 adopted further guidance on the information necessary for clarity, transparency and understanding of NDC.<sup>7</sup> 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.<sup>8</sup>

25. 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.<sup>9</sup>

26. 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 (2025) 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 their NDCs with an end date of 2035, pursuant to paragraph 2 of decision [6/CMA.3](#).<sup>10</sup>

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<sup>4</sup> Article 4, paras. 2, 3 and 9, of the Paris Agreement.

<sup>5</sup> Article 4, para. 8, of the Paris Agreement.

<sup>6</sup> Decision [1/CP.21](#), para. 25.

<sup>7</sup> Decision [4/CMA.1](#), paras. 6–10. The information necessary for clarity, transparency and understanding is contained in annex I to that decision.

<sup>8</sup> Decision [4/CMA.1](#), paras. 7–8.

<sup>9</sup> Decision [1/CMA.3](#), para. 30.

<sup>10</sup> Decision [1/CMA.5](#), paras. 39 and 170.

## B. Scope and approach

27. This report synthesizes information from the 64 new NDCs, representing 64 Parties<sup>11</sup> to the Paris Agreement, recorded in the NDC registry<sup>12</sup> between 1 January 2024 and 30 September 2025.

28. 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,<sup>13</sup> which was supplemented by the synthesis of other information included in the NDCs but not covered by the guidance.

29. 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.

30. The approach to and methods for estimating projected emission levels resulting from NDC implementation are described in a separate technical document.<sup>14</sup>

## III. Overview of nationally determined contributions

31. The NDCs considered in this report cover about 30 per cent of total global emissions (excluding LULUCF) in 2019.

32. A total of 91 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](#).

33. 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, outcomes of the GST, just transition, Article 6 of the Paris Agreement, forests, 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.

34. 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 89 per cent of Parties communicated a time frame and/or period of implementation of until 2035, while 9 per cent of Parties specified periods of until 2030 and 2 per cent until 2041.

35. All 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).

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<sup>11</sup> Andorra, Angola, Australia, Bangladesh, Barbados, Belize, Bolivia (Plurinational State of), Botswana, Brazil, Cambodia, Canada, Chile, Colombia, Cuba, Ecuador, Eswatini, Ethiopia, Holy See, Iceland, Jamaica, Japan, Kenya, Lebanon, Lesotho, Liberia, Liechtenstein, Madagascar, Maldives, Marshall Islands, Mauritius, Micronesia (Federated States of), Monaco, Mongolia, Montenegro, Morocco, Namibia, Nepal, New Zealand, Nicaragua, Nigeria, Niue, Norway, Pakistan, Panama, Republic of Moldova, Russian Federation, Saint Lucia, Sao Tome and Principe, Serbia, Seychelles, Singapore, Solomon Islands, Somalia, Sri Lanka, Switzerland, Tonga, Tuvalu, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Vanuatu, Zambia and Zimbabwe. The list of the NDCs considered in this report follows the approach taken by the PAICC in relation to the communication of NDCs; see the report on the 15<sup>th</sup> meeting of the PAICC (PAICC/2025/M15/3), available at <https://unfccc.int/PAICC>.

<sup>12</sup> Available at <https://unfccc.int/NDCREG>.

<sup>13</sup> As per decision [1/CP.21](#), para. 25.

<sup>14</sup> Available at <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/2025-ndc-synthesis-report>.

36. In addition, 67 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 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 reduction; 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, oceans and blue carbon; reducing the risk of disasters; and reducing the impacts of loss and damage associated with climate change.

37. All 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.

38. A total of 48 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 progression<sup>15</sup> beyond the current level of effort.

39. All 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, strengthening policy and legislative frameworks, and aligning targets with scientific recommendations and national circumstances. The enhanced emission reduction targets are aligned with the long-term objective of achieving net zero emissions by 2050. Building on existing policies, measures and investments, new commitments relating to adaptation and addressing loss and damage have been introduced, setting a pathway towards a resilient, net zero society by 2050.

40. Meanwhile, 33 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; 13 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 11 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.

41. Further, 41 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**

42. A total of 98 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

<sup>15</sup> 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 30 September 2025.

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 laws and governance mechanisms

### 1. Legal and policy frameworks

43. A total of 97 per cent of Parties provided information on the legal and policy frameworks that facilitate the implementation of their NDCs. Some 8 per cent of Parties reported that their national constitutions provide the overarching legal basis or guiding framework for national climate action; and 41 per cent pointed to the adoption of comprehensive climate change acts, laws or decrees that establish the legal framework for NDC implementation. In addition, 39 per cent of Parties referred to their national climate change policies and 41 per cent to their national climate change strategies and plans as important instruments for supporting NDC implementation.

44. Regarding mitigation measures, 17 per cent of Parties cited national acts or decrees specifically addressing mitigation and 19 per cent referred to their national climate change mitigation strategies, policies or plans. A total of 33 per cent of Parties highlighted their low greenhouse gas emission strategies or plans and how these policy instruments inform their NDCs, while 14 per cent reported having net zero emission legislation or strategies in place and 17 per cent provided information on laws or policies establishing mitigation mechanisms, such as national carbon markets, carbon budgets and carbon trading schemes.

45. With respect to adaptation measures, 41 per cent of Parties reported having national climate change adaptation plans, while 17 per cent indicated that such plans are under development. In addition, 20 per cent of Parties referred to national climate change adaptation programmes, strategies or policies and 16 per cent mentioned climate change adaptation strategies or plans specific to different sectors. Legal instruments addressing adaptation and climate change were reported by 5 per cent of Parties.

46. A total of 94 per cent of Parties reported on legal and policy instruments that contribute to the implementation of their NDCs 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).

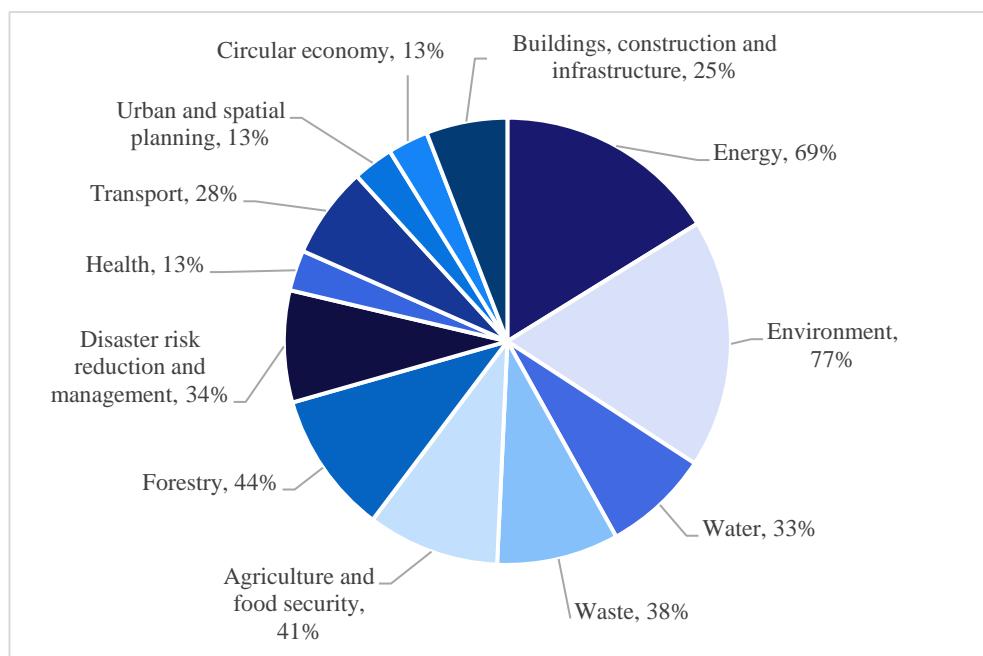
47. A total of 69 per cent of Parties referred to energy-related legal and policy frameworks that contribute to the implementation of their NDCs. These frameworks include both overarching instruments and specific laws and policies, for example on energy transition, renewable energy, energy efficiency and electrification. Information on environment-related legal and policy instruments with climate change components was provided by 77 per cent of Parties. These instruments include general environmental legislation as well as sector-specific frameworks primarily related to biodiversity, coastal zones, oceans and pollution.

48. Water-related legal and policy frameworks were reported by 33 per cent of Parties and waste-related legal and policy frameworks by 38 per cent of Parties as contributing to the implementation of their NDCs. In addition, 41 per cent of Parties reported on legal and policy frameworks related to agriculture and food security and 44 per cent on forestry-related legal and policy frameworks, of which 32 per cent specifically referred to national REDD+ strategies as instrumental in supporting NDC implementation. Legal and policy frameworks pertaining to disaster risk reduction and management were highlighted by 34 per cent of Parties as supporting NDC implementation.

49. A total of 13 per cent of Parties reported legislative and policy instruments addressing health, 28 per cent highlighted legislation, strategies and policies related to transport, including decarbonization, 13 per cent of Parties mentioned legal and policy frameworks related to urban and spatial planning, 13 per cent of Parties referred to circular economy instruments and 25 per cent of Parties reported legislation, policies and strategies related to buildings, construction and infrastructure. These were all noted as contributing to the broader legal and policy frameworks underpinning NDC implementation.

Figure 1

**Share of Parties that reported legal and policy instruments that contribute to the implementation of their nationally determined contributions by key sector**



50. Climate change considerations have been incorporated within sustainable development related frameworks. For instance, 47 per cent of Parties highlighted sustainable development legislation, agendas, strategies and plans as instruments for aligning national development priorities with climate change action, thereby supporting NDC implementation, and 22 per cent referred to economic and financial instruments as part of the legal and policy frameworks supporting NDC implementation.

## 2. Governance mechanisms

51. A total of 94 per cent of Parties provided information on their processes for coordinating the preparation or update of their NDCs. Of those Parties, 98 per cent identified the specific arrangements in place for NDC preparation, such as inter-institutional commissions, councils and committees, led by interministerial designated entities with coordination roles and including members from public entities, the private sector, non-governmental organizations and/or academia. As for NDC implementation specifically, 86 per cent of Parties reflected a strong reliance on national governance structures, including interministerial committees, local entities, councils and sectoral coordination bodies.

## 3. Stakeholder consultation mechanisms

52. A total of 95 per cent of Parties referred to formal arrangements in place for consulting stakeholders, including the general public, local communities, Indigenous Peoples, private entities, business and trade associations, civil society organizations, youth associations, women's associations, regional development partners, academia, and research communities. Of those Parties, 67 per cent indicated that they conducted such consultation and engagement processes in an inclusive and participatory manner, with such processes including the establishment of committees or councils; the use of legal instruments like national laws, decrees and acts; the deployment of digital platforms; government-led online stakeholder engagement with a structured submission process; multi-stakeholder consultations through co-creation workshops, bilateral meetings and public hearings; and mandated parliamentary consent or legislative hearings for NDC adoption.

## 4. Measurement, reporting and verification systems

53. A total of 92 per cent of Parties provided information on their domestic MRV systems, of which 34 per cent indicated that the systems are under development, planned for future

development or partially operational and 29 per cent reported that the systems are operational and being revamped or enhanced. Of these 92 per cent of Parties, 80 per cent directly linked the MRV systems to the processes for preparing or updating their national GHG inventories and BTRs or for meeting other reporting requirements under the ETF.

54. A total of 75 per cent of Parties provided information on the formal processes for tracking the progress of NDC implementation and achievement, including structured tracking mechanisms such as MRV systems or institutional arrangements as well as legal and policy frameworks. Of those Parties, 38 per cent referred to legal and policy frameworks in place or under development for supporting tracking efforts and 42 per cent reported that their existing tracking mechanisms are being enhanced. Additionally, among these 75 per cent of Parties, 40 per cent indicated plans to periodically review, update and revise their tracking mechanisms, which include national MRV frameworks, monitoring and evaluation systems, climate observatories and digital platforms for data collection and analysis.

## B. Gender

55. A total of 89 per cent of Parties provided information related to gender and 80 per cent affirmed that they will take gender into account in implementing their NDCs.

56. While 73 per cent of Parties referred to relevant policies and legislation, 83 per cent affirmed a general commitment to gender equality. Others also included information on how gender had been or was planned to be mainstreamed in NDC implementation; for instance, 66 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.

57. Overall, 61 per cent of Parties referred to their planned gender-responsive and 30 per cent to gender-sensitive climate action or generally elaborated on gender aspects in the context of specific sectors or areas, including just transition, agriculture, energy, health, water, LULUCF, disaster risk reduction, waste, industry, water, sanitation and hygiene, transport and education.

58. Meanwhile, 58 per cent of Parties highlighted the importance of providing capacity-building, finance and technology for gender-specific action and of these means of implementation being gender-responsive.

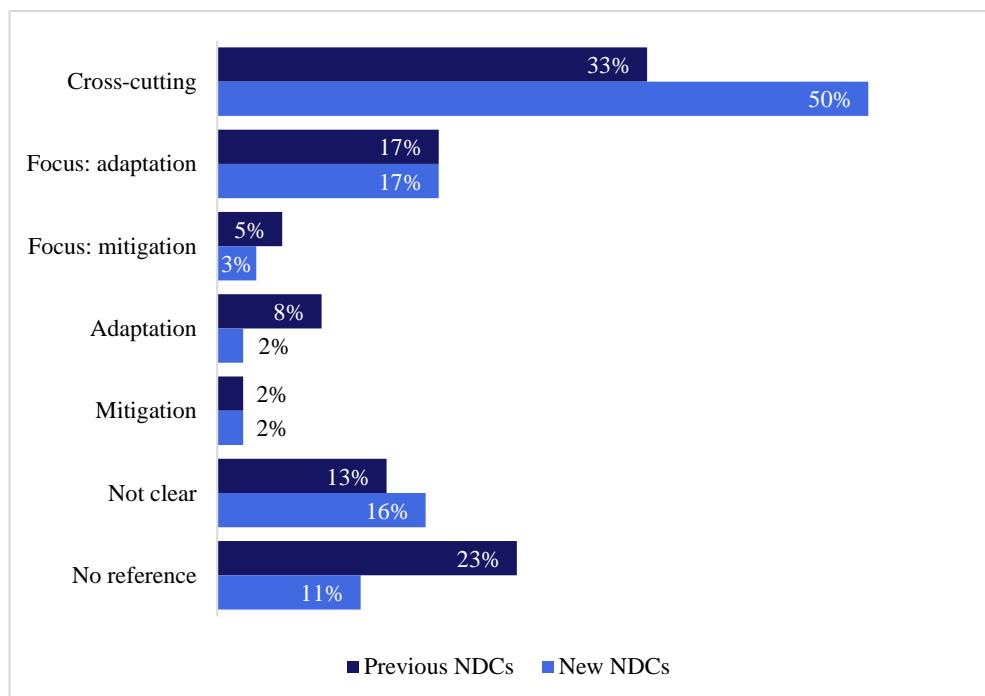
59. In addition, 44 per cent of Parties implicitly or explicitly considered gender as it intersects with other social factors; 72 per cent explicitly considered specific gender-differentiated needs and perspectives and gender-differentiated impacts of and contributions to climate change and climate action; 72 per cent framed women as being vulnerable; 53 per cent framed women as stakeholders or agents of change; and 13 per cent explicitly considered people of other genders.

60. 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 their previous NDCs and the share of Parties considering gender as a cross-cutting issue has also risen (see figure 2).

61. Of the Parties that considered gender, 42 per cent elaborated more on the topic in their new than in their previous NDCs, 16 per cent had previously not included any reference to gender in their NDCs and 40 per cent considered gender to a similar or decreased extent compared with previously.

62. A total of 13 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**  
**Reference to gender in nationally determined contributions**



### C. Children and youth

63. In total, 52 per cent of Parties referred to the disproportionate impacts of climate change on children and youth, with 27 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 30 per cent of Parties mentioning specific measures to strengthen the climate resilience and promote a just transition of children and youth, particularly through targeted action on health, education (see para. 72 below), food security, water, sanitation and hygiene, disaster risk reduction and social protection.

64. A total of 88 per cent of Parties (compared with 61 per cent in their 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.<sup>16</sup> Of those Parties, 79 per cent set out their vision and priorities for engaging and empowering children and youth to contribute to climate action, 77 per cent put forward specific measures to involve them in the implementation of climate policies and action (e.g. awareness-raising and capacity-building activities, support for youth-led initiatives and innovations, child- and youth-inclusive decision-making processes, and collection of age-disaggregated data in relation to climate change) and 57 per cent explicitly mentioned that they engaged children and youth in developing their NDCs.

### D. Indigenous Peoples and local communities

65. A total of 72 per cent of Parties reported an increased focus on the role of Indigenous Peoples and local communities in climate action (6 per cent more than in their previous NDCs), with 52 per cent including information on the involvement of Indigenous Peoples and local communities in national-level policymaking, including in NDC preparation,

<sup>16</sup> In decision [1/CMA.5](#), para. 178, CMA 5 encouraged Parties to implement climate policy and action that empowers youth and children, which was explicitly referred to by 3 per cent of Parties.

through consultations on sectoral proposals, risk assessments and application of traditional, Indigenous and local knowledge, compared with 30 per cent of Parties previously.

66. Overall, 41 per cent of Parties emphasized the vulnerabilities of Indigenous Peoples and local communities, particularly owing to their reliance on natural resources and risk of poverty, compared with 27 per cent previously. The benefits of applying traditional knowledge and knowledge of Indigenous Peoples and local communities in adaptation and mitigation efforts were highlighted by 44 per cent of Parties, compared with 31 per cent previously. Parties also stressed the importance of combining traditional and modern practices while ensuring the participation and leadership of Indigenous Peoples and local communities in climate efforts.

67. Meanwhile, 64 per cent of Parties provided examples of adaptation action design and implementation efforts by and for Indigenous Peoples and local communities, up from 53 per cent in their previous NDCs. The examples include developing community-based adaptation plans; formulating and implementing adaptation measures, particularly relating to terrestrial and ocean ecosystems, food security and nutrition, water resources and disaster risk management; and using quantified targets and indicators focused on Indigenous Peoples and local communities for monitoring and evaluating adaptation progress.

68. Further, 47 per cent of Parties described mitigation efforts undertaken by and for Indigenous Peoples and local communities, up from 23 per cent in their previous NDCs, 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.

69. In addition, 20 per cent of Parties outlined the need for increased financial resources, capacity-building and technology for Indigenous Peoples and local communities, compared with 16 per cent in their previous NDCs.

## **E. Action for Climate Empowerment<sup>17</sup>**

70. 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.

71. In total, 22 per cent of Parties 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 policies and action, developing and implementing national ACE strategies, and incorporating ACE and its elements into general and sectoral climate policies and plans.

72. A total of 78 per cent of Parties, up from 55 per cent in their 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 training and resources for teachers and educators. Compared with in their 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 their new NDCs.

73. A total of 84 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 64 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-

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<sup>17</sup> As footnote 3 above.

raising measures for specific sectors, most commonly energy, health, agriculture, fisheries, forestry and waste.

74. In addition, 80 per cent of Parties, up from 55 per cent in their previous NDCs, provided information on training measures, with an increasing emphasis on the skilling, reskilling and 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.

75. As regards public participation, 95 per cent of Parties (compared with 88 per cent in their 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.<sup>18</sup> A total of 61 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 capacities to respond to climate change.

76. Further, 66 per cent of Parties reported on public access to information, aimed at ensuring transparency of and accountability for climate policies and action, compared with 41 per cent in their 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. Also, 25 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**

77. A total of 98 per cent of Parties highlighted the engagement of non-Party stakeholders in NDC preparation and/or implementation, reflecting their importance therein, compared with 91 per cent of Parties in their previous NDCs. Similarly, 95 per cent of Parties reported engagement of non-Party stakeholders specifically in NDC implementation – 20 per cent more than in their 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 varied from general acknowledgements of their role in NDC design and delivery to comprehensive descriptions of their contributions to accelerating climate action.<sup>19</sup> In their new NDCs, Parties provided greater detail than previously on the roles and contributions of non-Party stakeholders in relation to climate action, generally engaging a broader range of actors. Parties are increasingly shifting from broad consultations with non-Party stakeholders towards more structured, multi-stakeholder implementation, with defined roles for subnational entities, the private sector as co-implementer and financier, and civil society as a catalyst for awareness and inclusivity.

78. Overall, 80 per cent of Parties referenced subnational entities, an increase of 19 per cent compared with their previous NDCs, with 63 per cent of Parties recognizing them as partners in planning, implementing and monitoring climate action, in some cases having their

<sup>18</sup> See para. 52 above for more information on stakeholder consultation mechanisms with regard to NDC development, including the relevant institutional arrangements.

<sup>19</sup> See paras. 51 and 52 above on governance mechanisms and stakeholder consultation mechanisms respectively, which include information on the involvement of non-Party stakeholders in NDC development.

roles defined through frameworks that enable them to undertake local planning activities and implementation. A total of 69 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. Further, 42 per cent of Parties emphasized the importance of capacity-building, financial and technical support for subnational entities in climate action, and mentioned providing such support. Climate action undertaken by subnational entities was reported across multiple sectors, including energy, transport, agriculture, water, ocean and coastal zones, waste management, buildings and urban planning, health, biodiversity, industry and tourism.

79. A total of 92 per cent of Parties referred to involving the private sector, including businesses and industry stakeholders, in NDC preparation and implementation, with 86 per cent of Parties (15 per cent more than in their 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 and implementing adaptation measures in areas such as water supply, agriculture, coastal protection and tourism. Further, 67 per cent of Parties highlighted enabling environments such as policies or incentives to guide businesses in NDC implementation, with 19 per cent of Parties specifically mentioning national or sectoral road maps and strategies for this purpose. In addition, 31 per cent of Parties reported using public-private partnerships as delivery models for operationalizing the aforementioned measures. Meanwhile, 11 per cent of Parties mentioned disclosure or reporting frameworks for aligning business practices with climate objectives. A total of 42 per cent of Parties underscored the private sector's role in innovation, including the development, transfer and deployment of low-carbon technology, with 22 per cent of Parties specifically noting micro-, small and medium-sized enterprises, start-ups and entrepreneurs as drivers of low-carbon development, innovation and green job creation. Further, 34 per cent of Parties referred to capacity-building of the private sector to enhance its ability to implement climate action, and capacity-building delivered by the private sector, including through public-private collaboration.

80. A total of 75 per cent of Parties (20 per cent more than in their previous NDCs) referenced the mobilization of private finance, including the role of financial institutions such as investors, banks and insurers, for implementing NDCs. A total of 70 per cent of Parties reported efforts to mobilize private investment through financial mechanisms and instruments such as blended-finance schemes or green bonds, while citing the use of risk-sharing and risk-transfer mechanisms for addressing adaptation. Meanwhile, 64 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, green taxonomies and fiscal or regulatory incentives.<sup>20</sup> Private sector investment was most frequently referred to in relation to climate action in the areas of energy, infrastructure and urban development, agriculture, industry, water, ocean and coastal zones, and waste management, with increasing private sector investment also in adaptation and resilience-building.

81. A total of 94 per cent of Parties reported engaging civil society,<sup>21</sup> including academia, in NDC design and implementation for, among others, policy formulation, technical and scientific analysis, capacity-building and monitoring. A total of 63 per cent of Parties reported that civil society actors help to raise awareness of climate change and its impacts, promote inclusivity and support the implementation of mitigation, adaptation and loss and damage measures. Some 36 per cent of Parties recognized the role of civil society in advancing just transition and climate justice, while 22 per cent of Parties mentioned civil society actors as partners in mobilizing support for local climate action, including through resource mobilization, community-level project implementation, and efforts to improve access to capacity and funding opportunities. Meanwhile, 55 per cent of Parties highlighted the role of academic institutions in climate and sectoral modelling, data provision and training

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<sup>20</sup> See chap. VIII below for related information, including para. 185 below on carbon markets under Article 6 of the Paris Agreement often linked by Parties to the private sector and para. 188(c) below on difficulties in mobilizing private finance.

<sup>21</sup> See chap. IV.B–E above on gender, children and youth, Indigenous Peoples and local communities, and ACE for related information.

on climate change related technical skills, often through national knowledge hubs or partnerships with international networks. Further, 36 per cent of Parties described how academic institutions can help to bridge the gaps between government, science and society, ensuring that climate policies are informed by local realities and scientific evidence.

82. A total of 56 per cent of Parties reported participating in international voluntary efforts, initiatives and coalitions as means of scaling up and implementing climate action, mobilizing resources and advancing NDC implementation,<sup>22</sup> all of which involve non-Party stakeholders. Some 22 per cent of Parties described non-Party stakeholder participation in domestic initiatives focusing on forest protection and restoration, marine protection, decarbonization and emission management, among other areas. Further, 6 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.

83. A total of 25 per cent of Parties described the role of non-Party stakeholders in the context of the outcomes of the first GST, with 9 per cent of Parties highlighting partnerships with the private sector, research institutions and local communities for advancing measures related to renewable energy, zero- and low-emission technologies, and energy efficiency. Some 5 per cent of Parties mentioned deforestation reduction, forest restoration and biodiversity protection as priority areas for action, often involving agribusiness leaders, local governments and international partners in joint initiatives; while 11 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

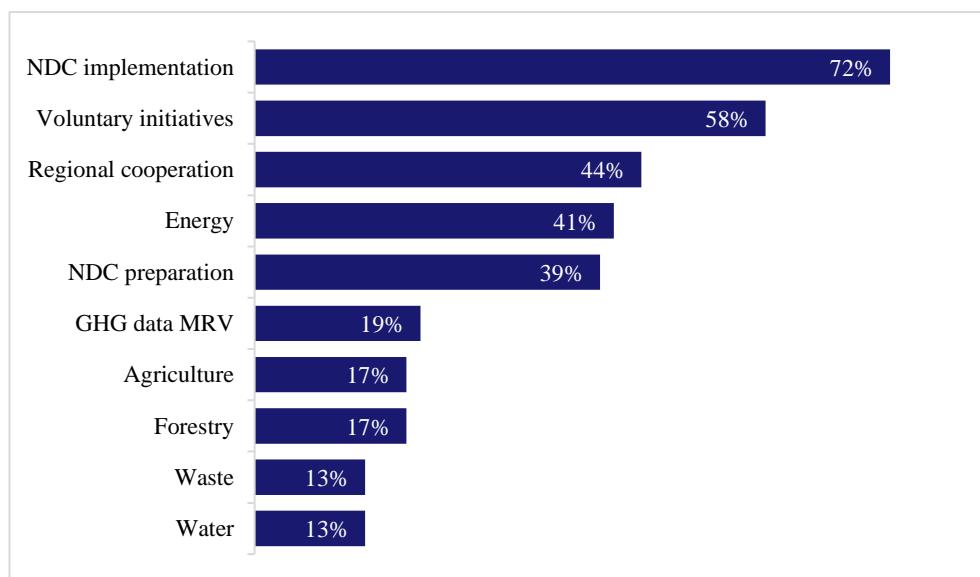
84. A total of 97 per cent of Parties expressed their intention to pursue international cooperation in strengthening their climate action with a view to achieving their NDCs and the goals of the Paris Agreement. They indicated the importance of international cooperation for mobilizing resources, exchanging 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; finance, technology development and transfer, and capacity-building support and voluntary cooperation under Article 6 of the Paris Agreement (see figure 3).<sup>23</sup>

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<sup>22</sup> See chap. IV.G, including para. 88 below for more information on international voluntary initiatives.

<sup>23</sup> See chap. VIII below for more information on finance, technology development and transfer, and capacity-building support and chap. IV.J on voluntary cooperation under Article 6 of the Paris Agreement below.

**Figure 3**  
**Shares of Parties referring to areas of international cooperation in their nationally determined contributions**



85. A total of 72 per cent of Parties highlighted that international cooperation is critical for fully implementing NDCs, particularly with regard to climate finance, technology development and transfer, and capacity-building support. They emphasized the importance of strengthening partnerships and support to bridge the gap between NDC ambition and implementation.

86. A total of 39 per cent of Parties reported the support received and provided for preparing NDCs, 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.

87. Overall, 52 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; climate-smart agriculture; REDD+; sustainable land and forest management; protecting marine and coastal ecosystems; sustainable water management; and developing climate-resilient infrastructure.

88. A total of 56 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.<sup>24</sup> These initiatives are aimed, for example, at reducing CH<sub>4</sub> emissions and other short-lived climate pollutants, accelerating energy transitions from fossil fuel use, promoting renewable energy, improving energy efficiency of cooling, enhancing collaboration between national and subnational governments on climate actions, 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.

<sup>24</sup> See chap. IV.F on broad non-Party stakeholder engagement and voluntary efforts to support climate action above for more information on voluntary initiatives in the context of non-Party stakeholder engagement.

89. A total of 66 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 German Agency for International Cooperation, the Food and Agriculture Organization of the United Nations, the Green Climate Fund, the Global Environment Facility, the NDC Partnership, the United Nations Children's Fund, the United Nations Development Programme, the United Nations Entity for Gender Equality and the Empowerment of Women, UNEP, UNFCCC regional collaboration centres and the World Bank, while bilateral cooperation was also 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 contributions<sup>25</sup>**

90. 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.<sup>26</sup>

91. A total of 88 per cent of Parties indicated that the preparation of their NDCs was informed by the outcomes of the first GST, with 80 per cent of Parties 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 action covered, including new sectoral targets and approaches, and taking into account cross-cutting issues, such as stakeholder engagement and just transition. Of the Parties that provided information, 27 per cent included detailed quantitative or qualitative information on how implementing 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.

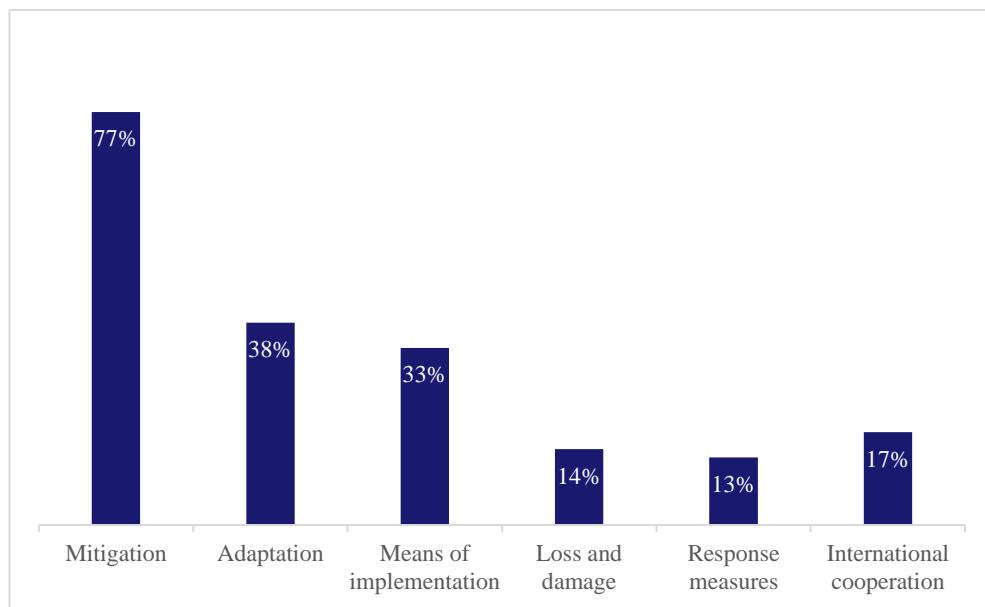
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<sup>25</sup> This subchapter covers information provided by Parties pursuant to para. 4(c) of annex I to decision [4/CMA.1](#). Other GST-related information provided in the NDCs is synthesized in other relevant subchapters.

<sup>26</sup> According to Article 14, para. 3, of the Paris Agreement.

Figure 4

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



92. A total of 66 per cent of Parties indicated that they developed NDC targets or enhanced ambition in the light of their respective national circumstances, informed by the outcomes of the first GST, including the best available science, with 44 per cent of Parties emphasizing their commitment to keeping the 1.5 °C temperature goal within reach, 23 per cent indicating that their NDC targets are aligned with a 1.5 °C pathway and 14 per cent highlighting that they have come forward with economy-wide emission reduction targets covering all GHGs, sectors and categories in response to the outcomes of the first GST. Moreover, 14 per cent of Parties reported that they aligned their NDCs with their LT-LEDS and 5 per cent indicated that they revisited or strengthened the 2030 targets in their NDCs.

93. A total of 77 per cent of Parties reported on mitigation ambition and action in response to the outcomes of the first GST. Of those Parties, 71 per cent outlined efforts to advance the energy transition, 40 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 CH<sub>4</sub> and other non-CO<sub>2</sub> emissions; 36 per cent set out nature- and ecosystem-based approaches, particularly to halt and reverse deforestation and forest degradation, 38 per cent of which also addressing marine and coastal conservation; and 18 per cent of Parties reported on strategies for promoting sustainable lifestyles and patterns of consumption and production, and circular economy approaches.

94. A total of 38 per cent of Parties reported on efforts to strengthen adaptation, with 13 per cent of Parties indicating that they are aligning national adaptation targets with the global goal on adaptation, recognizing the importance of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, as highlighted in the outcomes of the GST. The adaptation actions reported include strengthening early warning systems, improving agricultural resilience, designing and constructing climate-resilient infrastructure, developing climate-related health care plans, and preserving and restoring coastal ecosystems.

95. Some 33 per cent of Parties highlighted the importance of means of implementation for NDC formulation and implementation, particularly by estimating the extent of finance, technology transfer and capacity-building required; emphasizing the need to scale up means of implementation support for NDC implementation, particularly for developing countries; and highlighting efforts to invest in research into and the development of low-carbon technologies and provide financial support to and share knowledge and technical expertise with developing countries in this regard.

96. Overall, 14 per cent of Parties mentioned efforts to avert, minimize and address loss and damage associated with climate change impact, 22 per cent of which mentioned that their NDCs include targets relevant to addressing loss and damage. Parties emphasized the incorporation of considerations related to addressing loss and damage into adaptation priorities, and international cooperation and means of implementation support needed to take action in this regard.

97. Response measures were reported by 13 per cent of Parties and include assessing and analysing the impacts of response measures; identifying opportunities for climate policies and investments to promote economic diversification and socioeconomic development, particularly during the transition away from fossil fuels; and minimizing negative impacts of response measures and directing the benefits of clean energy, job creation and other investments towards communities and workers vulnerable in the energy transition and the transition to a net zero economy.

98. A total of 17 per cent of Parties referred to international cooperation in the context of responding to the outcomes of the 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.

## I. Just transition

99. A total of 70 per cent of Parties explicitly referred to just transition or used similar terms such as “fair transition” or just development pathways in their NDCs. Most of these Parties further elaborated on these concepts and/or specific areas of priority 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; sustainable development; decent, clean energy, sustainable, green jobs; the principle of common but differentiated responsibilities; promoting access to sustainable, clean and affordable electricity; circular economy; and protecting and empowering vulnerable groups. Of the Parties that explicitly referred to just transition or similar terms, 56 per cent included chapters or subchapters on just transition in their NDCs; while 16 per cent of Parties indicated that just transition principles were specifically integrated into the NDC preparation process.

100. A total of 28 per cent of Parties included direct references to just transition in the context of detailing how their NDC preparation was informed by the outcomes of the first GST. A total of 61 per cent of these 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](#).

101. Most of the 30 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 that have been used by Parties that did include explicit references to just transition to substantiate the reference. Examples include reference to economic and social resilience, protection of vulnerable groups, gender equality and responsiveness, human rights, sustainable development, social inclusion and participation, poverty eradication, managing distributional impacts of climate policies, fair and equitable approaches, and intergenerational equity.

102. 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), the workforce and informal workers, women, youth,

children, persons with disabilities, Indigenous Peoples, underrepresented and marginalized groups, companies, industries and enterprises.

103. The Parties that referenced just transition explicitly did so across chapters of their NDCs related to mitigation (16 per cent of Parties) and adaptation (8 per cent of Parties). Some 23 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 transfer and capacity-building, as well as broader references to international support and cooperation.

104. 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 multi-sector approach to just transitions, just transition principles for guiding implementation, implementing mitigation measures and related investments and awareness-raising needed, investments in renewable energy capacity, energy efficiency and sustainable heating, 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. 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 adaptation progress and outcomes, national adaptation guidelines and objectives, social protection, training initiatives and skills development programmes, just transition impact assessments, social dialogue and meaningful participation. References to just transition in the context of means of implementation were included, for example, in addressing financing and international support for just transition, capacity-building for integrating new technologies into economies and societies, support for transformation of the energy sector, poverty eradication, hunger and inequality, and scaling up new and additional grant-based, highly concessional finance and other non-debt instruments.

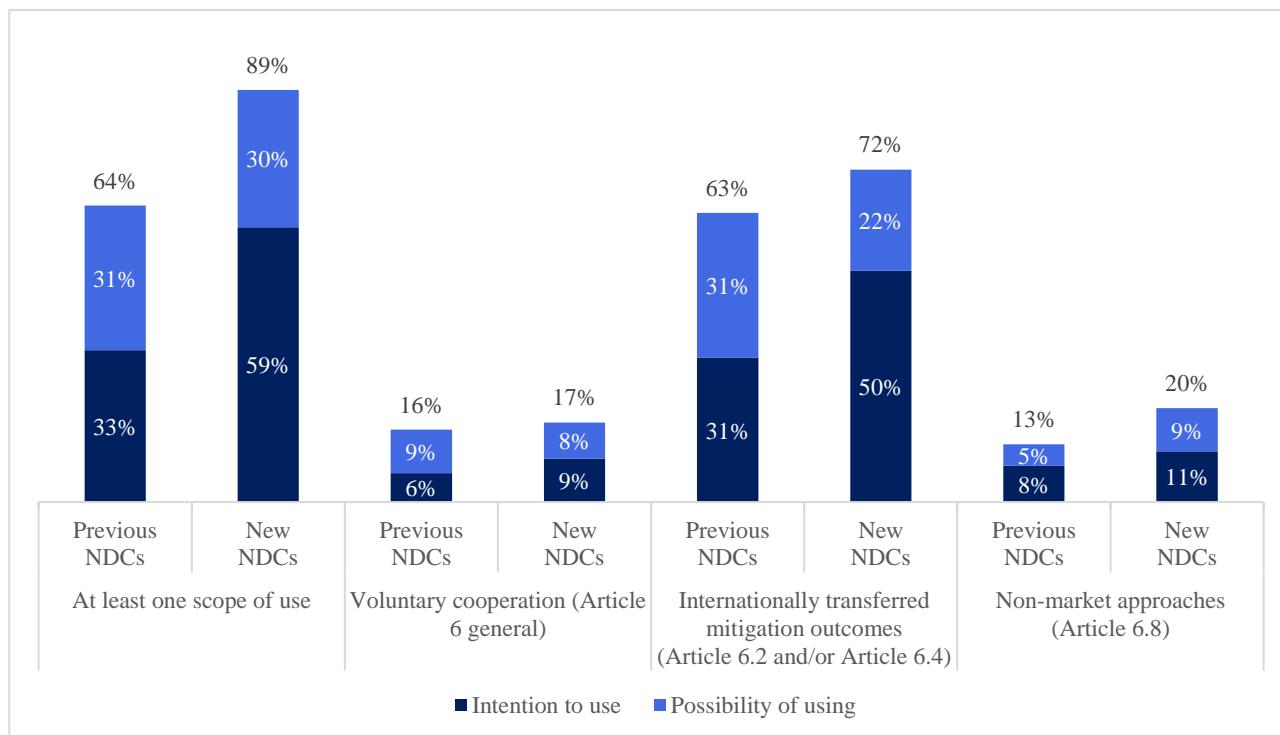
105. In referencing just transition, 55 per cent of Parties included details of initiatives related to implementing just transition pathways, ranging from broad statements such as an intention to integrate just transition principles into policies and measures guiding decarbonization, to more specific steps for integrating just transition considerations into targeted national policies, legislation, plans, frameworks and strategies (e.g. skills and jobs strategies; legislation promoting accountability for, transparency of and stakeholder engagement in climate action). Many of the specific initiatives related to implementation strategies in the context of adaptation, while some were focused on mitigation. Moreover, 5 per cent of Parties outlined details of just transition bodies to support integrating just transition considerations into NDC implementation, and 8 per cent of Parties indicated that NDC implementation plans may include indicators for tracking implementation of just transition principles and related issues.

## **J. Voluntary cooperation under Article 6 of the Paris Agreement**

106. A total of 89 per cent of Parties, in comparison with 64 per cent in their previous NDCs, 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: general use of voluntary cooperation under Article 6 of the Paris Agreement; use of internationally transferred mitigation outcomes under Article 6, including through cooperative approaches referred to in Article 6, paragraph 2, or under the mechanism established by Article 6, paragraph 4; and use of non-market approaches under Article 6, paragraph 8.

Figure 5

**Shares of Parties indicating in their nationally determined contributions the intention to use or possibility of using specific scopes of voluntary cooperation under Article 6 of the Paris Agreement**



*Note:* The sums of the shares of Parties intending to use and possibly using voluntary cooperation for previous NDCs and internationally transferred mitigation outcomes for previous NDCs do not match the totals presented owing to rounding.

107. A total of 17 per cent of Parties mentioned the general use of voluntary cooperation under Article 6 of the Paris Agreement, compared with 16 per cent in their previous NDCs; 72 per cent referenced planned or possible use of internationally transferred mitigation outcomes, including through cooperative approaches referred to in Article 6, paragraph 2, or under the mechanism established by Article 6, paragraph 4, compared with 63 per cent previously; and 20 per cent referred to the planned or possible use of non-market approaches, compared with 13 per cent previously.

108. A total of 38 per cent of Parties, compared with 27 per cent in their previous NDCs, defined their approach to the use of voluntary cooperation: 5 per cent stated that they will use voluntary cooperation as a means of achieving conditional elements of their mitigation targets; 3 per cent have set quantitative goals for the extent of use of voluntary cooperation for achieving their mitigation targets; and 36 per cent highlighted the importance of their use of voluntary cooperation for achieving their mitigation targets in a manner consistent with guidance adopted by the CMA, such as applying robust accounting to avoid double counting, reporting in the BTRs, ensuring environmental integrity and promoting sustainable development.

109. Notably, 34 per cent of Parties indicated that they plan to develop, are developing or have already developed the legal and regulatory arrangements, policy frameworks or operational manuals, as well as 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

110. Reducing emissions from forests and land-use change and simultaneously enhancing removals from forests was mentioned in NDCs as a key mitigation option, with 84 per cent of Parties including the LULUCF sector in their economy-wide mitigation target. A total of 53 per cent of Parties defined a separate LULUCF-specific target, such as increasing carbon

sequestration in the LULUCF sector or increasing woodland and tree canopy cover by a certain percentage. Moreover, 14 per cent indicated that the outcomes of the first GST informed their increased ambition with regard to forests, with several mentioning the possibility of raising mitigation ambition further, subject to the availability of financial resources, capacity-building and technology transfer.

111. Compared with their previous NDCs, more Parties included in their new NDCs forest-related climate action expected to contribute to achieving the NDCs (see figure 6). A total of 69 per cent mentioned afforestation and reforestation through, for example, establishment and management of forest plantations, rehabilitation of native species and integrated ecosystem management, and 56 per cent reported sustainable forest management, such as strengthening forest-control systems, enhancing varieties of tree species and thinning encroacher bushes to promote biomass use. Parties emphasized that such action helps to both maintain and enhance forest carbon stocks and generates employment opportunities.

112. Globally, deforestation and forest degradation are the main sources of GHG emissions in the LULUCF sector. Of the Parties, 27 per cent described measures for reducing deforestation, with several selecting quantitative non-GHG indicators to determine a measure's success such as deforestation rate and area of natural forest burned, while 22 per cent outlined actions for reducing forest degradation. Further, 25 per cent of Parties reported on activities designed to address wildfires and pest or disease outbreaks, which have become significant drivers of deforestation and forest degradation.

113. In this context, 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 25 per cent of developing country Parties referring to national REDD+ strategies and action plans for planning and coordinating forest-related mitigation actions, 29 per cent of developing country Parties reporting implementing REDD+ activities as part of their mitigation measures and 13 per cent of developing country Parties emphasizing the importance of international collaboration and results-based payments in this regard.

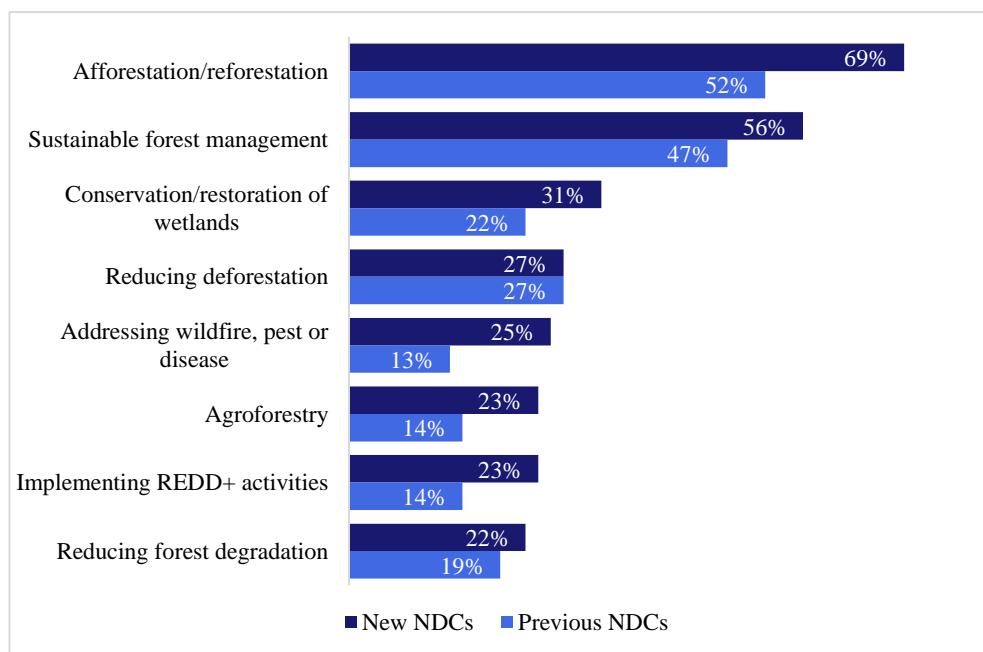
114. Further, 31 per cent of Parties reported conservation and/or restoration of high-carbon wetlands, particularly mangroves and peatland, recognizing their high carbon storage potential. In addition, 23 per cent referred to agroforestry as part of their mitigation or adaptation forest-related climate actions.

115. A total of 38 per cent of Parties outlined forest-related climate action across specific policy and institutional frameworks, such as developing national policy frameworks and land-use plans; adopting and implementing national action plans for forests, water and biodiversity; establishing a compensation payments mechanism for forest ecosystem services; strengthening forest governance in line with Warsaw framework for REDD+ and Article 6 mechanism of the Paris Agreement to facilitate access to climate finance; improving governance structures across the agriculture, forestry and natural resource sectors through updated legislation and institutional capacity-building; and promoting integrated and ecosystem-based resource management.

116. In total, 34 per cent of Parties identified the need for enhanced forest monitoring systems, citing requirements in this context for national forest inventories, traceability and control platforms for authorized timber production, peatland and mangrove maps, invasive species databases and early warning systems. In addition, 14 per cent of Parties noted the need for further research, including into native-species adaptability; forest fire management; carbon stock data by forest type and species; and methodologies more adjusted to national circumstances for estimating forest carbon stocks.

Figure 6

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



117. A total of 25 per cent of Parties reported forest-related capacity-building programmes, aimed at forest-dependent communities and key stakeholders, including government officials, the private sector and non-governmental organizations, designed to strengthen conservation efforts and create opportunities for green jobs that support just transition. In addition, 19 per cent of Parties highlighted the potential for empowering vulnerable groups such as women, Indigenous Peoples and local communities in forest management with a view to promoting gender equality and inclusive decision-making, enhancing community resilience and promoting equitable benefit-sharing.

118. A total of 45 per cent of Parties clearly identified co-benefits arising from forest-related mitigation and adaptation actions. Examples are biodiversity conservation; rehabilitation and conservation of degraded public and private land through afforestation, reforestation and protection to enhance nature- and ecosystem-based adaptation; enhancement of water and food security through forest restoration and integrated watershed management; green job opportunities; and integrated land-use planning compatible with sustainable management of natural resources and sustainable development.

119. Synergies among the Rio Conventions were highlighted: 39 per cent of Parties referenced linkages between forest-related climate actions and the Convention on Biological Diversity, while 22 per cent mentioned synergies with the United Nations Convention to Combat Diversification. These Parties emphasized the benefit of integrating use of instruments such as national biodiversity strategies and action plans and national action programmes with NDC implementation, including to enhance financial efficiency and maximize impact. A total of 22 per cent of Parties highlighted that forest-related climate action, such as afforestation and reforestation, sustainable forest management, forest fire prevention and REDD+, contributes directly to achieving the 2030 targets under the Kunming-Montreal Global Biodiversity Framework and/or the land degradation neutrality target. A total of 16 per cent of Parties noted that mainstreaming nature-based solutions and ecosystem-based adaptation across the Rio Conventions enhances the coherence and effectiveness of national responses, delivering simultaneous benefits for climate adaptation, biodiversity conservation and land restoration.

120. A total of 27 per cent of Parties quantified the costs of implementing their forest-related climate action, and 17 per cent identified a financial gap in this area and called for additional international funding and investments to bridge it.

## L. The Ocean

121. Parties reported a significant increase in ocean-based climate action in their new NDCs compared with in their previous NDCs, with an additional 39 per cent including an ocean-based reference in their new NDCs. Overall, 78 per cent of Parties included at least one explicit reference to the ocean, of which 82 per cent included ocean-based adaptation measures and 54 per cent ocean-based mitigation measures. For the ocean, a total of 192 adaptation measures and 55 mitigation measures were reported, along with 22 cross-cutting measures (see figure 7), highlighting the type and spread of sectoral mitigation and adaptation-based measures in NDCs.

122. Most ocean-based adaptation and mitigation actions were noted in the form of policies, programmes and initiatives, with 25 quantified targets identified (19 for adaptation and 6 for mitigation). These targets include measurable outcomes like hectares of restored mangroves, increase in ocean renewable energy capacity, and reduction in marine transport emissions.

123. Of the Parties with an ocean-related adaptation or mitigation component of their new NDC, 12 per cent reported progress in implementing ocean-based measures since their previous NDC. The measures where progress was reported include strengthening inshore community-based fishery enforcement capacity, enhancing marine scientific research, decarbonizing maritime transport, increasing mangrove sequestration, deploying marine technologies and strengthening marine conservation. A total of 16 per cent of Parties noted the need for robust data to track progress in implementing their ocean-related commitments, particularly for the ocean-based adaptation measures.

124. Overall, 62 ocean-based adaptation measures target coastal resilience through the development of integrated coastal zone management frameworks, climate-resilient coastal infrastructure planning, strengthening coastal and marine tourism resilience, shoreline restoration and marine spatial planning; 85 adaptation 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 and marine protected areas; and 45 adaptation measures pertain to the fisheries and aquaculture sectors, aimed at transitioning to climate-resilient fishing techniques, integrating early warning systems, promoting sustainable aquaculture, and protecting food security and coastal livelihoods through community-based management of fisheries.

125. Of the 42 per cent of Parties that reported on ocean-based mitigation measures, 19 per cent explicitly referenced paragraph 35 of decision [1/CMA.5](#) on preserving and restoring the ocean and coastal ecosystems and scaling up ocean-based mitigation action. Though fewer in number than adaptation measures, ocean-based mitigation measures show increasing innovation and sectoral diversity, spanning renewable energy deployment, carbon sequestration and decarbonization of maritime transport and shipping.

126. Overall, 8 mitigation measures relate to ocean-based renewable energy, including offshore wind, wave and tidal energy and thermal energy conversion; 22 mitigation measures focus on blue carbon sequestration through the protection and restoration of blue carbon ecosystems, with some exploring the use of marine CO<sub>2</sub> removal technologies; 19 mitigation measures target the decarbonization of maritime transport through low-emission fuels, energy-efficient shipping and greener port infrastructure; and 6 mitigation measures target the fisheries and aquaculture sectors. Of the Parties that included ocean-based mitigation measures, 30 per cent detailed projects, partnerships and methodologies for marine CO<sub>2</sub> removal.

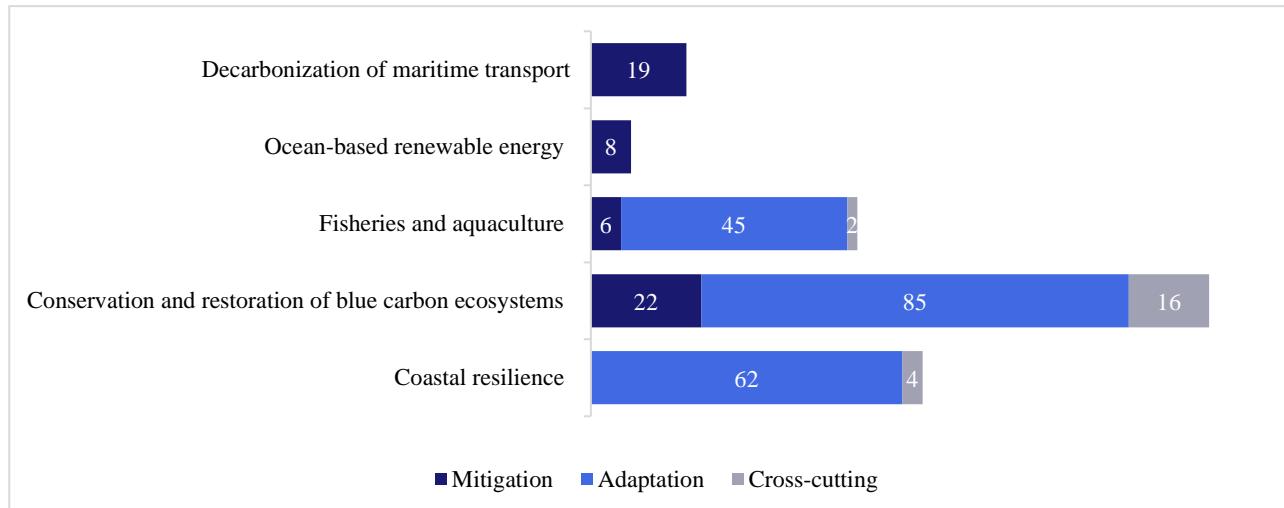
127. The 22 cross-cutting measures aimed at fostering mitigation and adaptation co-benefits include implementation of nature-based solutions in degraded coastal zones, blue economy initiatives for resilient marine ecosystems and integrated tourism planning.

128. Means of implementing ocean-based adaptation and mitigation measures were a key focus of reporting in the NDCs. Overall, 28 per cent of Parties referenced science-based needs, including, for example, ocean monitoring, and collection of and access to ocean data and research. Some 30 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 capacity of national institutions for marine management and planning. A total of 48 per cent of Parties reported finance-related needs, of which 46 per cent have made conditional commitments, which were identified particularly by small island developing States to implement ocean-related climate measures.

Figure 7

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



## V. Mitigation co-benefits resulting from adaptation action and/or economic diversification plans

129. A total of 63 per cent of Parties considered mitigation co-benefits resulting from their adaptation action and/or economic diversification plans. Of those Parties, 48 per cent considered social and economic consequences of response measures and included an economic diversification plan and/or a just transition or social pillar for designing climate policies. Some other Parties (17 per cent) considered positive and/or negative economic and social consequences of response measures without linking them to the mitigation co-benefits of their adaptation action and/or economic diversification plans.

130. Parties highlighted unequal impacts on different groups<sup>27</sup> of society or the workforce as consequences of response measures, with impacts on the workforce being the most frequently mentioned. A total of 59 per cent of Parties plan to address such impacts by considering just transition as part of their NDC implementation, such as through a green skills and job strategy, establishment of 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. Some 27 per cent of Parties paid special attention to addressing the impacts of response measures on vulnerable groups and communities in relation to poverty, job opportunities and inequality during the transition.

131. Of the 39 per cent of Parties that referenced economic diversification as part of their national development plans and climate policies to boost the country's resilience to climate change and response measures, 24 per cent linked such plans to specific sectors such as agriculture, construction, energy, LULUCF, hospitality, industry, real estate, transport and waste.

<sup>27</sup> Such as low-income groups, women, children and youth, Indigenous Peoples and people with disabilities.

## VI. Adaptation

### 1. Scope and coverage of adaptation components

132. A total of 73 per cent of Parties included a distinct adaptation component in their NDCs. 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;<sup>28</sup> monitoring and evaluation of adaptation; and synergies between adaptation and mitigation actions as well as between adaptation actions and environmental international policy frameworks.

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

- (a) Provide more 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 2 per cent);
- (b) Describe the status of the NAP process and demonstrate how the NAP was established as the main national instrument for adaptation (by 6 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 21 per cent);
- (d) Identify synergies and co-benefits between adaptation and mitigation actions (by 28 per cent) as well as linkages between adaptation and efforts towards achieving the SDGs (by 23 per cent).

### 2. Impacts, risks and vulnerabilities

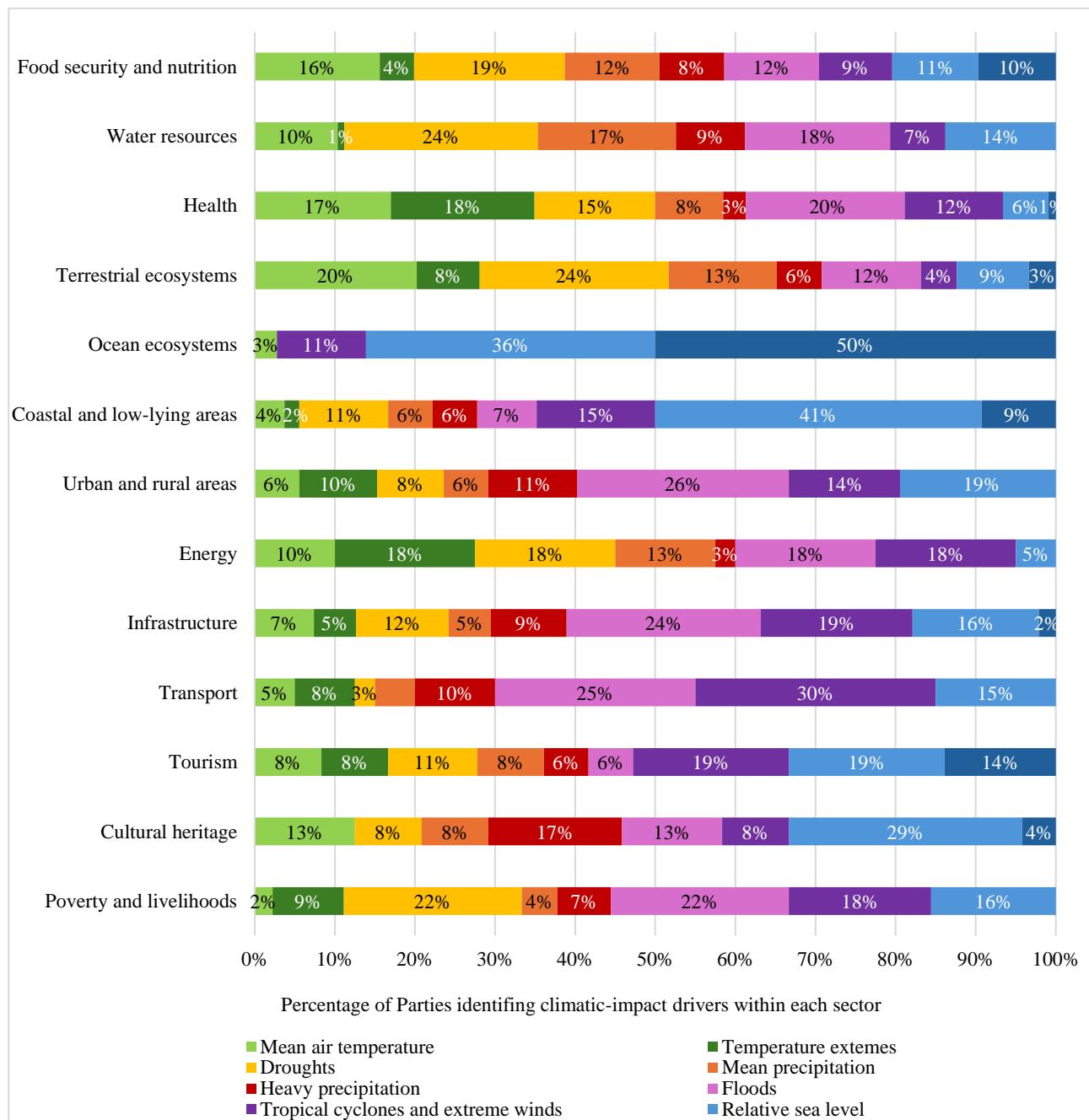
134. The adaptation components describe key climatic-impact drivers, referring in particular to temperature increase, precipitation changes, sea level rise, increases in frequency or intensity of drought, flooding, heatwaves, heavy rainfall, coastal erosion and flooding, saltwater intrusion, fires, extreme storms and tropical cyclones, as well as landslides and increases in ocean acidification, ocean temperature and thawing glacier, snow and permafrost. All 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), water resources, health, terrestrial ecosystems, key economic sectors (e.g. infrastructure, energy, transport, tourism and cultural heritage), urban and rural areas, and poverty and livelihoods. A total of 21 per cent of Parties identified the transboundary risks to which their water resources, terrestrial ecosystems, energy systems and coastal areas are exposed, such as flooding, drought, and thawing glacier and snow.

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<sup>28</sup> Contained in decision [1/CMA.5](#), paras. 9–10.

Figure 8

**Extent to which climatic-impact drivers affect various sectors, as reported in Parties' nationally determined contributions**



135. In total, 89 per cent of Parties, compared with 64 per cent in their previous NDCs, highlighted that children and youth, women, people with disabilities, the elderly, Indigenous Peoples and local communities, rural and urban populations, and low-income and displaced populations are particularly vulnerable to climate change. Specifically, 53 per cent of Parties emphasized the vulnerability of populations living in coastal areas, on islands, near rivers, in mountainous areas and in or near forests, while 91 per cent highlighted geographical location or characteristics, dependence on climate-sensitive sectors, economic challenges and poverty, reliance on natural resources, demographic challenges, the coronavirus disease 2019 pandemic, inequality, inadequate infrastructure, and political instability as factors affecting vulnerability to climate change impacts.

### **3. Enhancing adaptation-related research for policymaking**

136. All Parties that provided an adaptation component in their NDCs considered how to improve adaptation-relevant research, data, information and monitoring, and ensure that adaptation efforts are informed by science, for example through 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.

### **4. National adaptation plans and policy frameworks**

137. The share of Parties that described in their adaptation component the process for formulating and implementing their NAP and its status increased from 77 per cent for the previous NDCs to 83 per cent for the new NDCs. While 47 per cent of Parties reported in their new NDCs that they have developed a NAP, 36 per cent indicated their intention to do so, including a timeline for completion or update and/or implementation. In addition, 70 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.

138. In addition, all Parties with an adaptation component in their NDCs 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 adaptation-specific frameworks, 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.

### **5. Adaptation priorities**

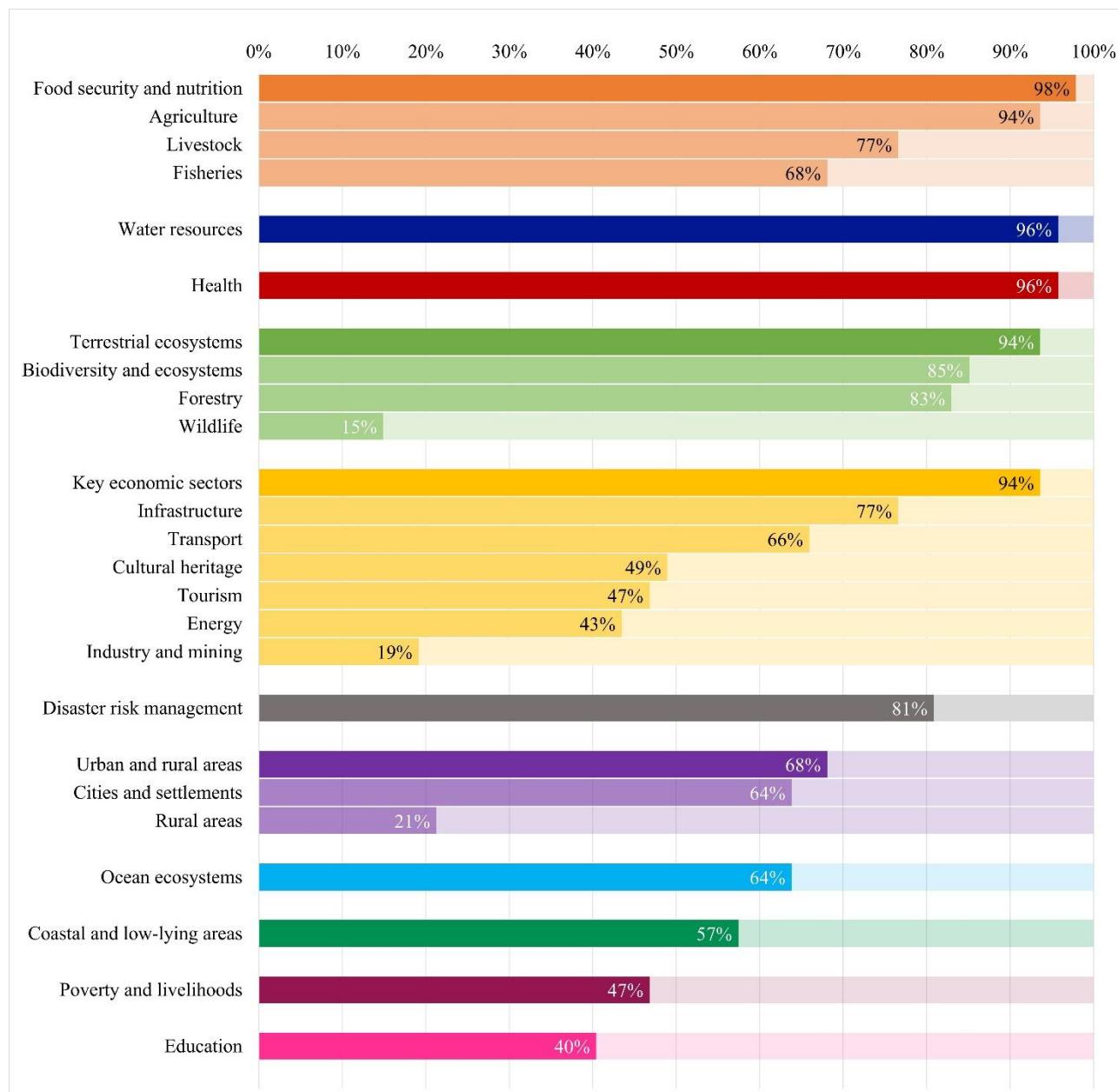
139. Parties provided a wide range of information on adaptation in various priority areas and sectors (see figure 9). The new NDCs illustrate a focus on food security and nutrition, water resources, health, terrestrial ecosystems, key economic sectors and disaster risk management, followed by urban and rural areas, ocean ecosystems, coastal and low-lying areas, poverty and livelihoods, and education (see additional information from adaptation components of NDCs<sup>29</sup>).

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<sup>29</sup> Available at <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/2025-ndc-synthesis-report>.

Figure 9

**Share of adaptation components of nationally determined contributions referring to specific adaptation priority areas and sectors**



140. A total of 40 per cent of Parties described how their adaptation strategies and policies, including the adaptation component of the NDCs, are guided by the provisions of the United Arab Emirates Framework for Global Climate Resilience. Of those Parties, 23 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.

141. In total, 53 per cent of Parties, compared with 36 per cent in their previous NDCs, referred to the importance of transformational adaptation, including measures related to agriculture, fisheries and livestock, policy and governance, terrestrial ecosystems, 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 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.

## **6. Monitoring and evaluation**

142. In the adaptation component, 45 per cent of Parties, compared with 36 per cent in their previous NDCs, described efforts undertaken previously or ongoing efforts to enhance monitoring and evaluation of adaptation. 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 climate transparency systems such as 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, 62 per cent of Parties identified and described their intention to apply time-bound quantified adaptation targets for monitoring the progress of adaptation measures, while 28 per cent reported developing the adaptation indicators that they intend to use for monitoring progress.

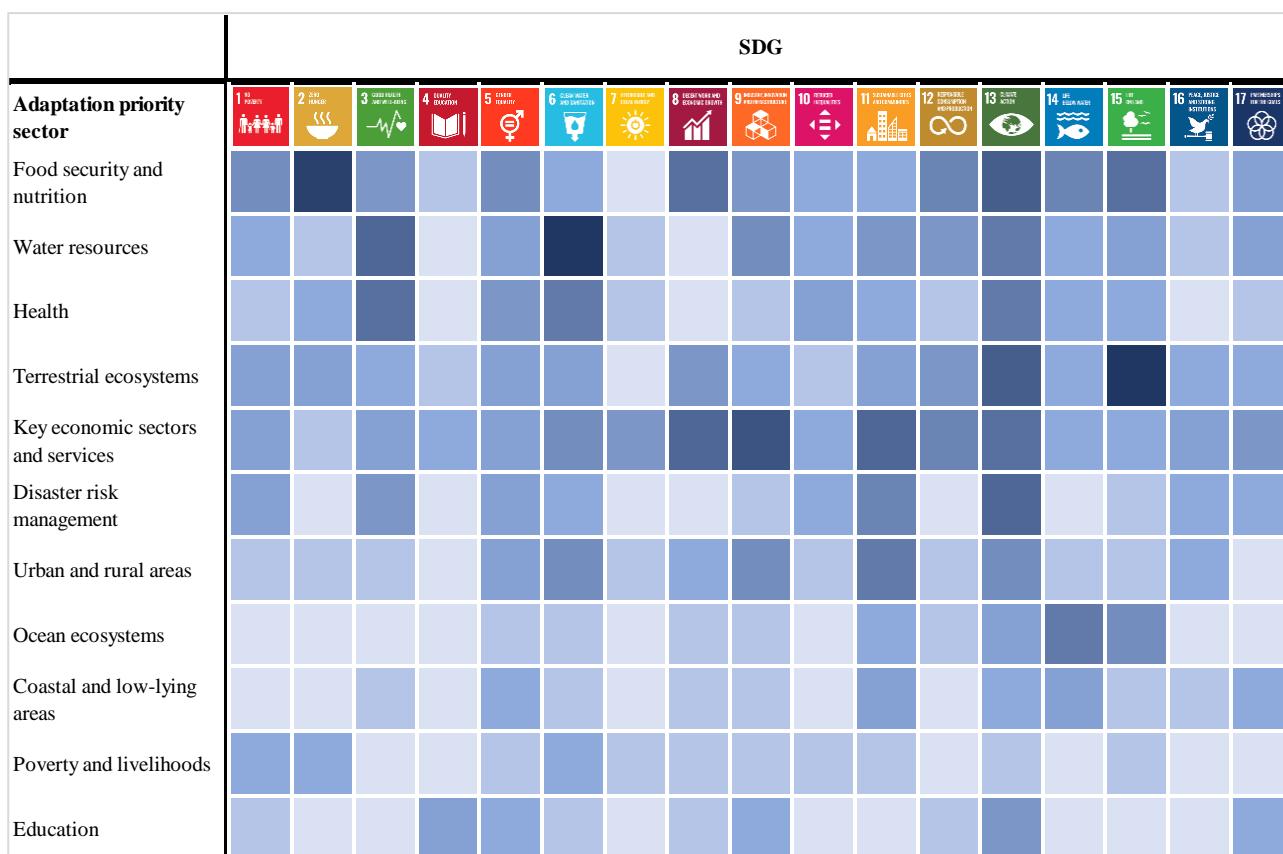
## **7. Synergies with mitigation and sustainable development**

143. The share of Parties that identified in their adaptation component synergies between adaptation and mitigation, particularly in the terrestrial and ocean ecosystems, food security and nutrition, water resources and health sectors, increased from 53 per cent in the previous NDCs to 81 per cent in the new NDCs (mitigation co-benefits of adaptation actions are covered in chap. V 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; and reducing respiratory diseases through reduced use of fossil fuels (pollution).

144. A total of 68 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 SDGs, as well as the role of sustainable development in successful adaptation. Further, 36 per cent of Parties 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 nationally determined contributions**



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

## 8. Loss and damage associated with climate change impacts

145. A total of 94 per cent of Parties with an adaptation component 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 68 per cent in their previous NDCs (see figure 11). They also considered the financial and capacity-building needs and commitments associated with addressing loss and damage.

146. Overall, 79 per cent of Parties, compared with 45 per cent in their previous NDCs, reported experiencing loss and damage, for example owing to the increasing frequency and intensity of extreme weather events such as drought, floods 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 gross domestic product relating to the sectors of food security and nutrition, infrastructure, ocean and terrestrial ecosystems, and water resources, 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, 55 per cent of Parties, up from 28 per cent in their previous NDCs, reported projected loss and damage, namely 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.

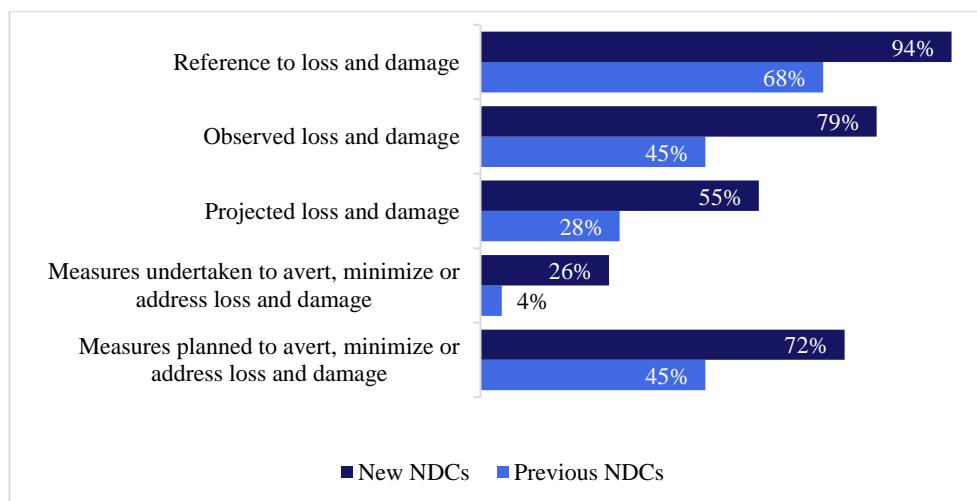
147. A total of 72 per cent of Parties, compared with 45 per cent in their previous NDCs, provided information on their planned actions to avert, minimize or address loss and damage, particularly in sectors related to disaster risk management, adaptation policy frameworks, food security and nutrition, 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 assessment of loss and damage needs, promoting research into 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 loss and damage.

148. Compared with 4 per cent in their previous NDCs, 26 per cent of Parties documented efforts undertaken to reduce loss and damage, which were 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, and providing temporary shelter and financial aid for disaster recovery.

Figure 11

**Overview of references to loss and damage in adaptation components of nationally determined contributions**



## VII. Mitigation

### A. Targets

149. All Parties provided information on mitigation targets, including absolute emission reduction targets,<sup>30</sup> emission peaking targets,<sup>31</sup> carbon budget targets,<sup>32</sup> relative targets for reducing emissions below ‘business as usual’ level by a specified year and emission intensity targets,<sup>33</sup> 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).<sup>34</sup>

<sup>30</sup> Targets expressed as an emission reduction from the level in a specified base year.

<sup>31</sup> Targets for a year or time frame in which emissions are expected to peak or reach a maximum level of absolute emissions.

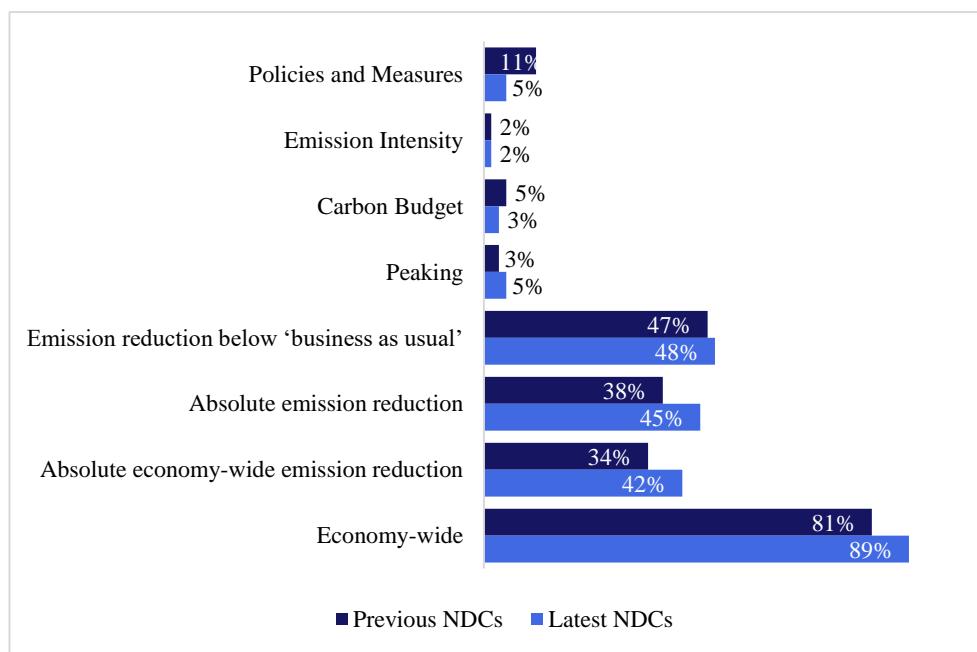
<sup>32</sup> Targets to limit overall GHGs to be emitted over a specified period of time (e.g. between 2021 and 2030).

<sup>33</sup> Targets for reducing specific GHG emissions per unit of gross domestic product relative to a base-year (e.g. 1990) level.

<sup>34</sup> Mitigation co-benefits are mostly communicated in combination with other targets.

Figure 12

**Types of mitigation target and share of Parties that communicated them in nationally determined contributions**



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

150. The share of Parties that came forward with absolute economy-wide emission reduction targets increased to 42 per cent in the new NDCs from 34 per cent in the previous NDCs, with 27 per cent of Parties communicating economy-wide absolute emission reduction targets covering all GHGs, sectors and categories of emissions and removals, compared with 23 per cent in their previous NDCs.

## 1. Time frames and/or periods of implementation

151. 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 11 per cent for 2030, while 14 per cent communicated multiple target years, including when target years were associated with the implementation of different policies and measures. Other Parties (17 per cent) indicated having a multi-year target for NDC implementation.

152. In addition to communicating information on mitigation targets or plans for the near to medium term, 70 per cent of Parties provided information on long-term mitigation visions, strategies or targets for up to and beyond 2050 that either have already been formulated or are under preparation as part of their LT-LEDS,<sup>35</sup> 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

153. A total of 89 per cent of Parties have economy-wide NDCs, with 84 per cent covering all sectors defined in the 2006 IPCC Guidelines (see figures 12 and 13), compared with 81 and 71 per cent respectively in their previous NDCs. In addition, 6 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.

<sup>35</sup> As at 30 September 2025, 79 LT-LEDS had been communicated, representing 86 Parties.

154. A total of 30 per cent of Parties covered all GHGs defined in the 2006 IPCC Guidelines (see figure 14), compared with 25 per cent in their previous NDCs. In addition to those GHGs, 17 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.

Figure 13

**Sectors covered by Parties that communicated them in nationally determined contributions**

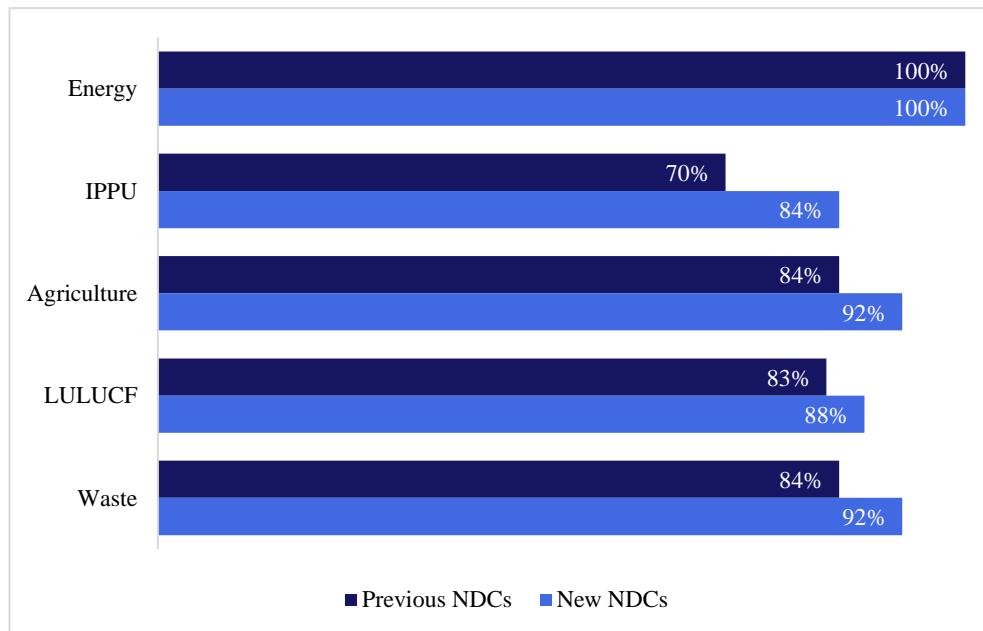
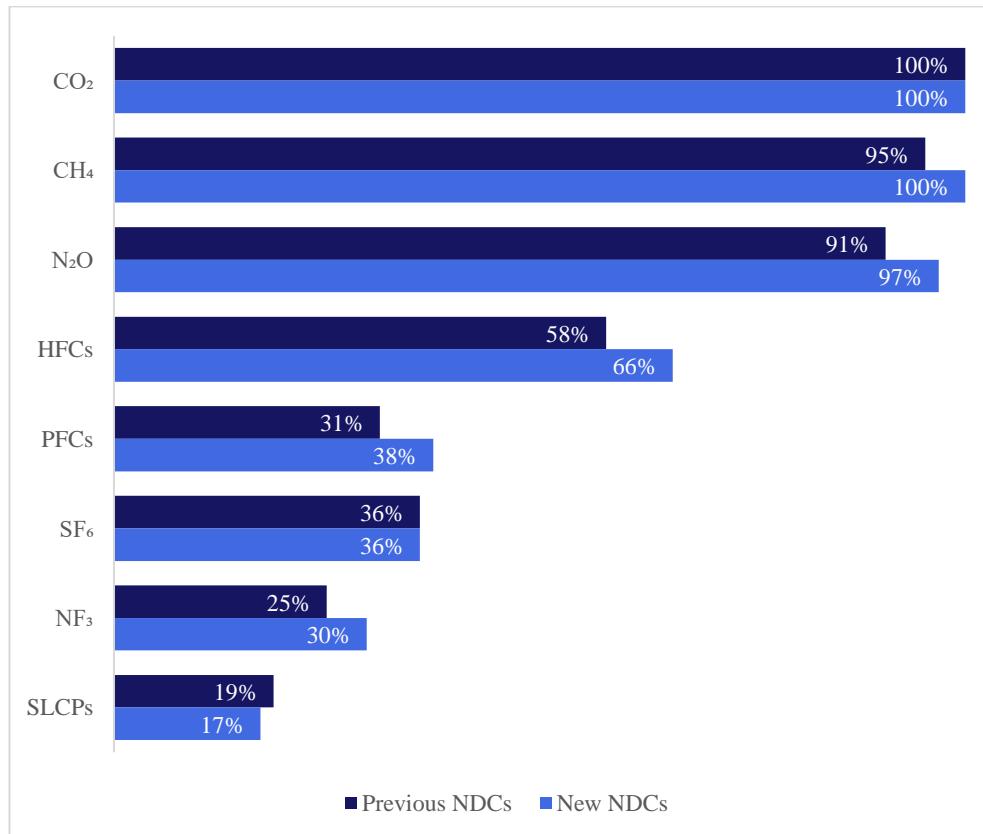


Figure 14

**Greenhouse gases covered by Parties that communicated them in nationally determined contributions**



155. A total of 94 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: 48 per cent stated that they already have economy-wide NDCs including all sectors and GHGs, while 41 per cent explained why certain sectors and/or gases had been 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

156. Total GHG emission levels resulting from the implementation of Parties' new NDCs are projected to be around 13.9 (13.3–14.6) Gt CO<sub>2</sub> eq in 2030 and around 13.0 (12.0–13.9) Gt CO<sub>2</sub> eq in 2035<sup>36</sup> for the Parties that submitted the NDCs (see figure 15).

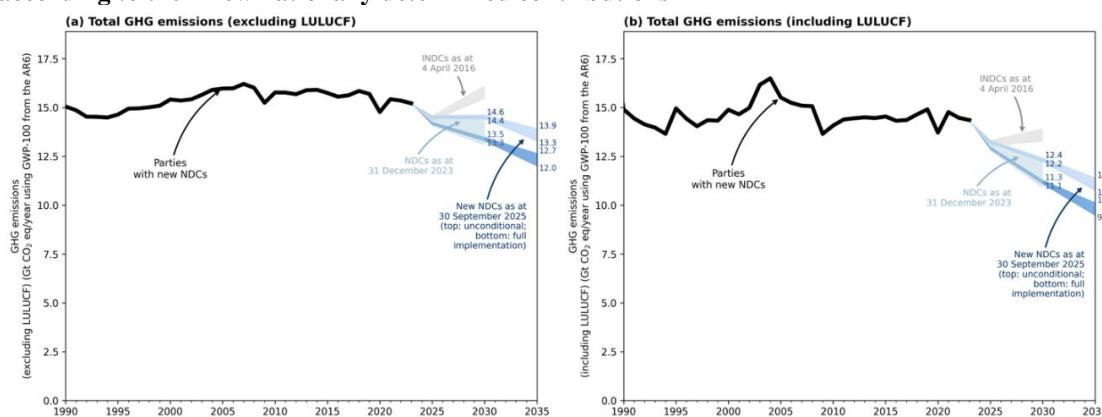
157. In comparison with the GHG emission levels reported in those Parties' previous NDCs, the new NDCs are estimated to result in emission levels for the Parties in 2035 that are 6 per cent (0.8 Gt CO<sub>2</sub> eq) below the 2030 level reported in the previous NDCs. When looking exclusively at the 2030 level, the projected emission levels do not change substantially between the new and previous NDCs as the new NDCs predominantly focus on 2035.

158. A total of 88 per cent of Parties included unconditional elements and 67 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. Compared with their previous NDCs, 5 per cent fewer Parties included unconditional elements in their new NDCs.

159. Total GHG emission levels resulting from the implementation of the unconditional elements of the new NDCs are estimated to be 14.5 (14.4–14.6) Gt CO<sub>2</sub> eq in 2030 and 13.6 (13.3–13.9) Gt CO<sub>2</sub> eq in 2035 for the relevant group of Parties. On the other hand, assuming full implementation of all new NDCs, including all conditional elements, those emission levels are estimated to be lower in 2030, at 13.4 (13.3–13.5) Gt CO<sub>2</sub> eq, and even lower in 2035, at 12.3 (12.0–12.7) Gt CO<sub>2</sub> eq (see figure 15).

Figure 15

**Projected range of greenhouse gas emission levels for the Parties that have submitted 2035 targets according to their new nationally determined contributions**



*Note:* NDC targets for 2030 as at December 2023 and September 2025 imply substantially lower emissions compared with the levels implied in the INDCs as at April 2016. For the Parties that submitted new NDCs, implementation of unconditional elements (top lighter blue band) implies a strong emission reduction by 2035 below

<sup>36</sup> This report includes GHG emission estimates with and without LULUCF emissions. If not otherwise stated, total GHG emissions are presented excluding LULUCF, and emissions are quantified for the 58 Parties that submitted new NDCs with targets for 2035. A triplet of emission levels indicates the best-estimate and the min-max projection range arising from ranges in NDC targets, and uncertainties in the quantification. If not otherwise stated, the full range spans both high and low quantifications of conditional and unconditional targets.

the 2030 level. If NDCs are fully implemented (including all conditional elements), an even stronger emission reduction is projected from today to 2035 (bottom darker blue band).

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

160. Overall, 98 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 16 per cent selecting 1990 and 64 per cent selecting a year between 2000 and 2020. Of the Parties that provided information on the starting point for measuring progress, 47 per cent are measuring achievement of their targets against a base-year level; 17 per cent have chosen to measure progress in terms of a deviation from a level in the target year, with most selecting 2030; and 36 per cent provided a reference period.

161. A total of 97 per cent of Parties provided information on the sources of the emission data used for quantifying the reference point, including national inventory reports, biennial reports, 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.

162. 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 or other non-GHG policy targets.

163. A total of 94 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 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.

**5. 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**

164. Of the 95 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, 87 per cent referred to the 2006 IPCC Guidelines, while 5 per cent referred to the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*.

165. Some 33 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, 39 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*.

166. With regard to metrics, 72 per cent of Parties provided information, all of which was based on global warming potential values over a 100-year time-horizon. Of these, 75 per cent used values from the AR5, 4 per cent values from the AR4 and 6 per cent values from the AR2.

**(b) Assumptions and methodological approaches**

167. A total of 48 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.

168. Furthermore, 13 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, 28 per cent of Parties mentioned using specific modelling tools for estimating their emissions or baselines.

169. In total, 83 per cent of Parties provided more detailed information than previously on the assumptions, methodological approaches and procedures used for developing their baselines or mitigation scenarios.

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

170. A total of 28 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, 6 per cent of Parties mentioned having developed country-specific approaches consistently with IPCC guidance.

171. Some 38 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 of them (6 per cent of all Parties) mentioning the use of an approach other than the production approach.

172. In addition, 25 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

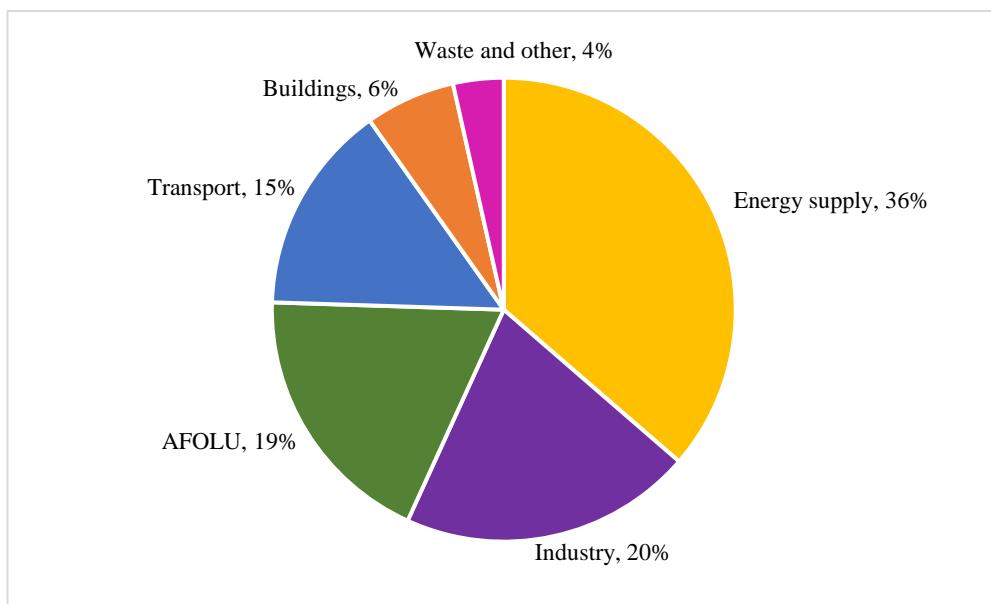
### 1. Domestic mitigation measures for priority areas

173. A total of 98 per cent of Parties (the same share as in their previous NDCs) 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, followed by transport and AFOLU. According to UNEP,<sup>37</sup> these three priority areas together accounted for about 70 per cent of global GHG emissions in 2023 (see figure 16).

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<sup>37</sup> Emissions shares of priority areas were estimated on the basis of data from UNEP. 2024. *Emissions Gap Report 2024: No more hot air ... please! With a massive gap between rhetoric and reality, countries draft new climate commitments*. Nairobi: UNEP. Available at <https://www.unep.org/resources/emissions-gap-report-2024>; and 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 16  
Estimated share in global greenhouse gas emissions of priority areas in 2023



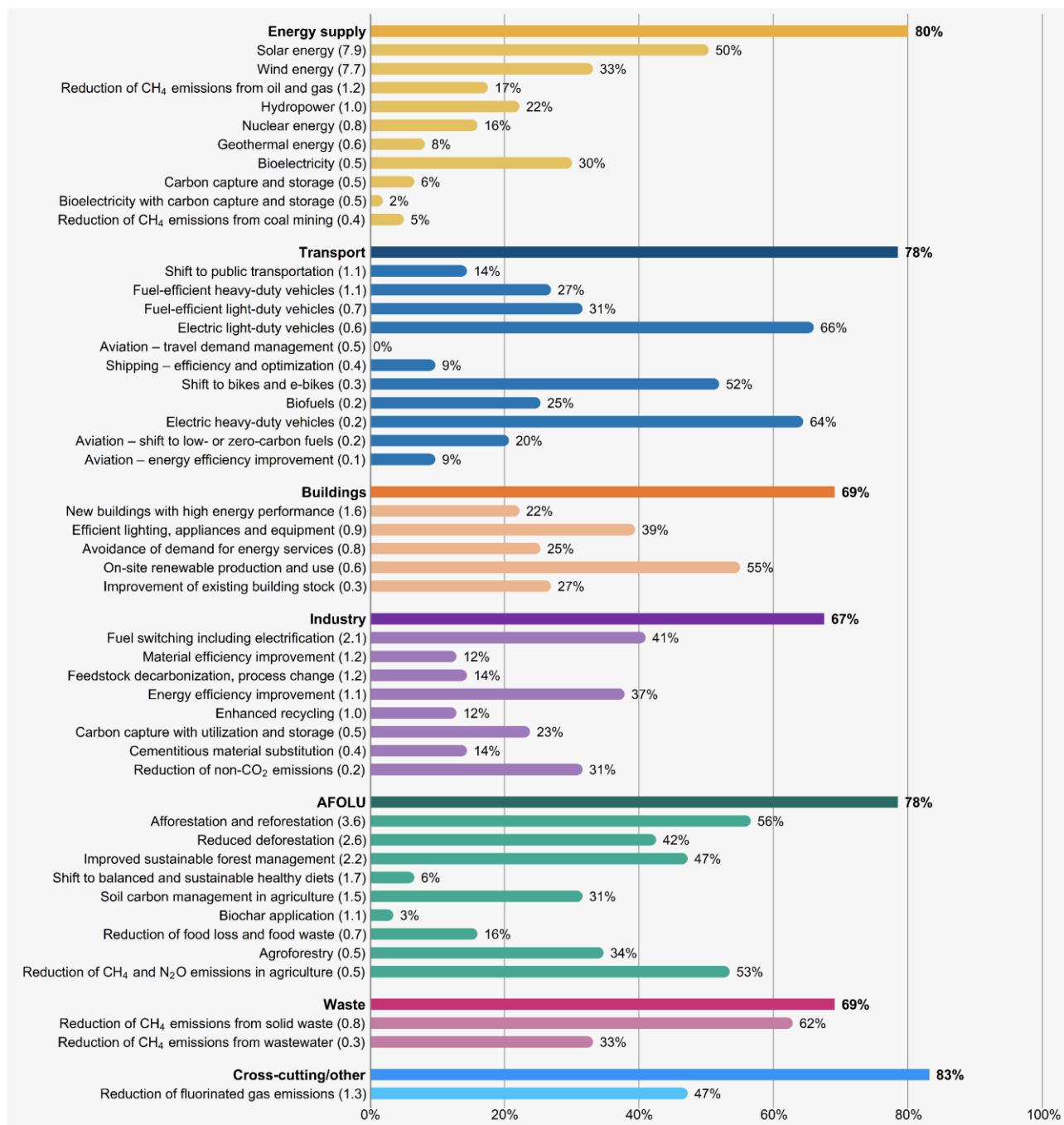
## 2. Feasible, effective and low-cost mitigation options in priority areas in 2035

174. According to the UNEP Bridging the gap report,<sup>38</sup> mitigation options costing USD 200/t CO<sub>2</sub> eq or less could, if fully implemented, reduce emissions sufficiently by 2035 to align with its 1.5 °C pathway with no or limited overshoot. These options have a projected net mitigation potential of 41 (36–46) Gt CO<sub>2</sub> eq/year, with about 90 per cent of this potential coming from options costing USD 100/t CO<sub>2</sub> eq or less. Many of these options have been assessed as technically viable. Parties reported measures for such options in their NDCs, as illustrated in figure 17.

<sup>38</sup> See footnote 37 above.

Figure 17

**Share of Parties referring to domestic mitigation measures for specific priority areas and mitigation options with high mitigation potential costing USD 200/t CO<sub>2</sub> eq or less in 2035 in 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 CO<sub>2</sub> eq/year) of each option costing below USD 200/t CO<sub>2</sub> 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.

175. Table 1 summarizes the conditionality of these mitigation options with the highest mitigation potential, each exceeding more than 2 Gt CO<sub>2</sub> eq/year. It shows that domestic mitigation measures aimed at fully or partially conditional targets<sup>39</sup> were most frequently reported in NDCs in relation to afforestation and reforestation, solar energy and reducing

<sup>39</sup> Includes domestic mitigation measures aimed at achieving targets that are fully conditional and measures aimed at achieving both unconditional and conditional targets.

deforestation. A conditionality gap<sup>40</sup> can also be observed in relation to reducing deforestation (28 percentage points), afforestation and reforestation (27 percentage points) and solar energy (25 percentage points). These conditionality gaps, combined with the data in table 1, provide an indication of the challenges faced by Parties in relation to the high level of support required for the implementation of specific measures.

**Table 1  
Conditionality of mitigation options with the highest estimated mitigation potential costing USD 200/t CO<sub>2</sub> eq or less in 2035 according to the measures reported in nationally determined contributions**

Mitigation option	Share of Parties reporting measures (%)	Share of Parties reporting measures for fully or partially conditional targets (%)	Share of Parties reporting measures for fully unconditional targets (%)
Solar energy	50	39	14
Wind energy	33	27	8
Afforestation and reforestation	56	42	16
Reduced deforestation	42	36	8
Improved sustainable forest management	47	34	12
Fuel switching in industry, including electrification	41	22	20

*Notes:* (1) As notes (1) and (2) to figure 17; (2) see footnote 39 above for the definition of measures aimed at fully or partially conditional targets.

### 3. Global efforts and mitigation options covered in recent decisions

176. As shown in figure 16, energy-related emissions accounted for over three quarters of global emissions in 2023. A total of 75 per cent of Parties reported in their NDCs quantitative targets relevant to at least one of energy-related global efforts or mitigation options covered in decisions [1/CMA.3](#), [1/CMA.4](#) and [1/CMA.5](#)<sup>41</sup> (for further information, see the additional information on domestic mitigation measures<sup>42</sup>). These include, but are not limited to:<sup>43</sup>

- (a) Tripling renewable energy capacity globally by 2030: 44 per cent of Parties indicated quantitative targets for increasing the installed capacity for renewables-based electricity generation by 2030, amounting to 0.6 TW;
- (b) Doubling the global average annual rate of energy efficiency improvement by 2030: 5 per cent of Parties communicated targets for increasing the average annual rate of primary energy intensity improvement by 2030, equating to an aggregated average annual improvement rate through to 2030 of 2.3 per cent;

<sup>40</sup> The difference between the shares of Parties that communicated domestic mitigation measures in their NDCs aimed at fully or partially conditional targets and the share that referred to measures aimed at fully unconditional targets. It is calculated by subtracting the share of Parties referring to measures aimed at fully unconditional mitigation targets from the share referring to measures aimed at fully or partially conditional mitigation targets. For example, the conditionality gap for solar energy (25 percentage points) is derived from 39 per cent of Parties that included measures for solar energy aimed at fully or partially conditional mitigation targets and 14 per cent that communicated measures for solar energy aimed at fully unconditional mitigation targets.

<sup>41</sup> 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.

<sup>42</sup> Available at <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/2025-ndc-synthesis-report>.

<sup>43</sup> Taking into account contributions to the efforts and options covered in the three recent CMA decisions, including those with the 2030 timeline and focus on this critical decade, this chap. VII.B.3 considers measures and quantitative targets reported in both Parties' new and previous NDCs. A comprehensive estimate of the aggregated targets referred to in this paragraph will only be possible once all new NDCs have been submitted.

(c) Phasing down unabated coal power: 13 per cent of Parties reported quantitative targets for reducing coal power generation by 2030, amounting to a 33 TWh reduction. Additionally, 16 per cent communicated such targets for 2035, totalling a 776 TWh reduction;

(d) Transitioning away from fossil fuels in energy systems in a just, orderly and equitable manner: nearly half of Parties (47 per cent), accounting for 9 per cent of total global electricity generation from fossil fuels in 2023, indicated quantitative targets for reducing the share of unabated fossil fuels in electricity generation by 2030, while 73 per cent of Parties reported the need and/or measures for a just transition for communities and workers dependent on fossil fuels;

(e) Accelerating zero- and low-emission technologies: 3 per cent of Parties indicated quantitative targets for installed nuclear power capacity by 2035, amounting to 10 GW. Additionally, 8 per cent communicated quantitative targets for increasing annual carbon capture capacity by 2035, totalling 39 Mt CO<sub>2</sub>. Further, 3 per cent reported quantitative targets for increasing low-carbon hydrogen production by 2035, amounting to 1.5 Mt;

(f) Accelerating the substantial reduction of non-CO<sub>2</sub> emissions globally, in particular CH<sub>4</sub> emissions, by 2030: 3 per cent of Parties included quantitative targets for reducing CH<sub>4</sub> emissions from fossil fuel operations by 2030, amounting to a 2 Mt reduction.

177. In addition to the information in NDCs, some Parties have announced domestic pledges and projects<sup>44</sup> relevant to the above-mentioned global efforts, including tripling renewable energy capacity globally by 2030, enhancing low-carbon hydrogen production and expanding capture capacity for CCUS. The combined effects of these pledges and projects are projected to significantly exceed the aggregated targets based on the NDCs for the same global efforts, indicating that submitted NDCs do not cover all domestically announced pledges and projects. Some Parties may nationally determine that progress in these areas, along with other contributing factors such as enhanced international cooperation and support, contributes to potential for accelerated implementation and more ambition. For example, for the 64 Parties that have submitted new NDCs, it is estimated that total domestically announced commitments for renewable energy capacity by 2030 reach 2 TW,<sup>45</sup> representing more than 3.5 times the 0.6 TW aggregated target capacity according to the NDCs submitted by the 64 Parties (see para. 176(a) above).

178. Regarding CO<sub>2</sub> removal technologies other than CCUS referred to in paragraph 176(e) above, 9 per cent of Parties indicated measures for direct air carbon capture and storage and 3 per cent measures for bioenergy with carbon capture and storage. According to the Synthesis Report of the AR6,<sup>46</sup> 1.5 °C pathways with no or limited overshoot require cumulative net-negative emissions of 220 Gt CO<sub>2</sub> by 2100, increasing to 360 Gt CO<sub>2</sub> for 1.5 °C pathways with a high overshoot.<sup>47</sup> Deep GHG emission reductions by 2030 and 2040, including substantial reductions in CH<sub>4</sub> emissions, as referenced to in paragraph 176(f) above, could reduce peak warming levels, thereby reducing feasibility and sustainability concerns regarding the large-scale deployment of CO<sub>2</sub> removal technologies.

179. All Parties reported measures or quantitative targets relevant to global efforts or mitigation options referred to in decision [1/CMA.5](#). Informed by the outcomes of the first GST, 61 per cent of Parties made direct references to these efforts or options in their NDCs (see figure 18). The most frequently cited was tripling renewable energy capacity by 2030, followed by doubling the average annual rate of energy efficiency improvement by 2030 and transitioning away from fossil fuels in energy systems. Focusing specifically on quantitative targets relevant to the efforts or options, as referred to in paragraph 176 above, 75 per cent

<sup>44</sup> Existing domestic pledges and projects that were announced separately from the submitted NDCs, which may or may not have been included in the NDCs.

<sup>45</sup> Estimated on the basis of data from IEA. 2024. *COP28 Tripling Renewable Capacity Pledge: Tracking countries' ambitions and identifying policies to bridge the gap*. Paris: IEA. All rights reserved. Available at <https://www.iea.org/reports/cop28-tripling-renewable-capacity-pledge>.

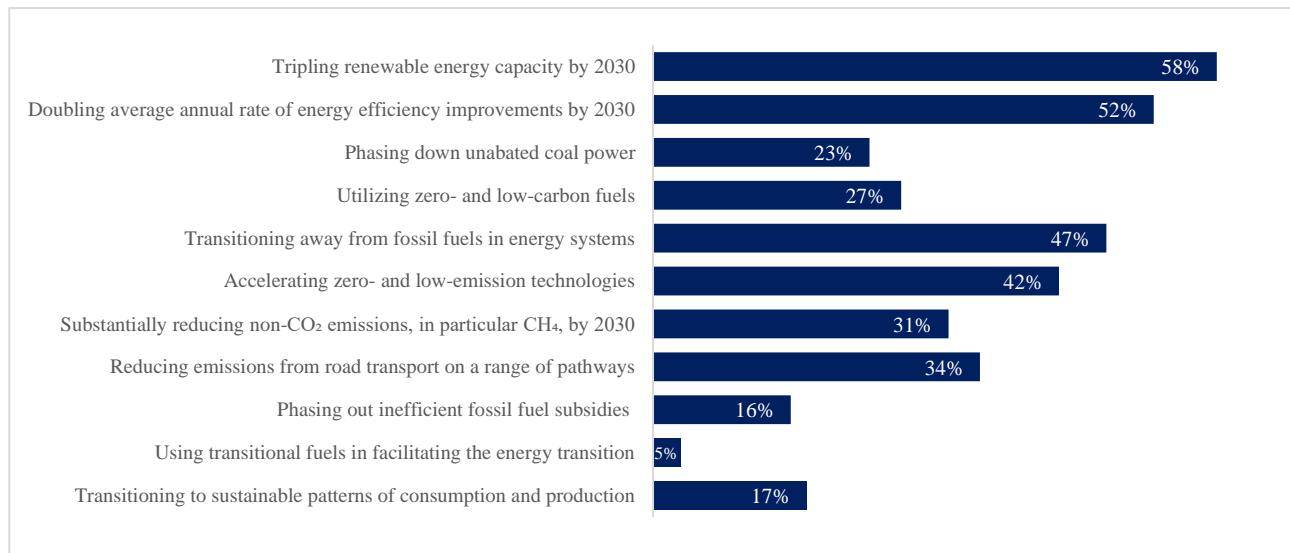
<sup>46</sup> IPCC. 2023. *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Core Writing Team, H Lee, and J Romero (eds.). Geneva: IPCC. Available at <https://www.ipcc.ch/report/ar6/syr/>.

<sup>47</sup> According to the Synthesis Report of the AR6, a high overshoot refers to temporarily exceeding the 1.5 °C global warming by 0.1–0.3 °C for up to several decades.

of Parties reported such targets in their NDCs. Of these, 47 per cent made direct references to the efforts or options, with tripling renewable energy capacity by 2030 being the most frequently cited, by 28 per cent of Parties.

Figure 18

**Shares of Parties that reported domestic mitigation measures or quantitative targets with direct references to the energy-related global efforts or mitigation options referred to in decision 1/CMA.5 in their nationally determined contributions**



*Notes:* (1) Direct references are to the relevant paragraphs of decision [1/CMA.5](#), including their paragraph numbers and substantive content; (2) if a Party communicated more than one measure for a global effort or mitigation option, it was counted as one Party communicating measures for that effort or option.

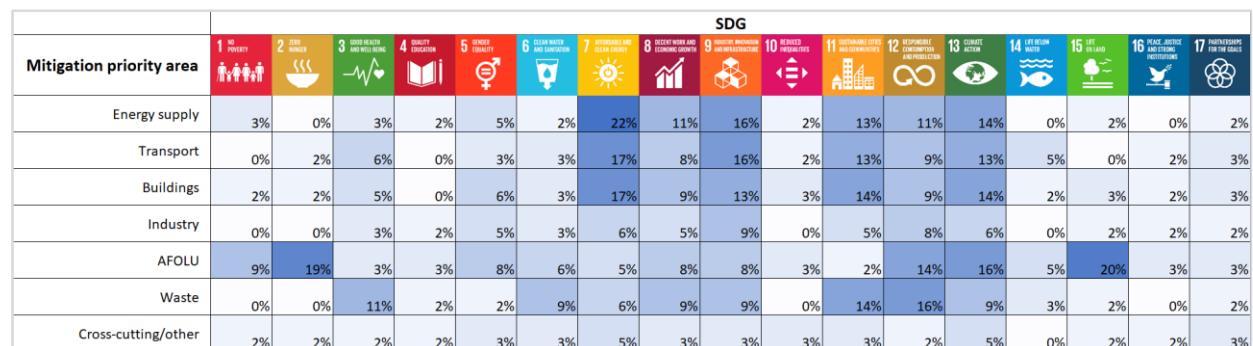
#### 4. Coherence and synergies with development priorities

180. A total of 87 per cent of Parties, a sharp increase from 16858 per cent in their previous NDCs, highlighted policy coherence and synergies between their mitigation measures and development priorities, including LT-LEDS and SDGs.

181. Nearly half of those Parties (41 per cent) identified domestic mitigation measures in the context of longer-term measures or targets set out in their LT-LEDS and/or other national long-term low-emission development strategies or laws. In addition, the same share of Parties (41 per cent) communicated one or more SDGs in relation to which there are synergies with their priority areas or mitigation measures (see figure 19), clarifying the alignment between their mitigation measures and efforts towards achieving the SDGs.

Figure 19

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



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

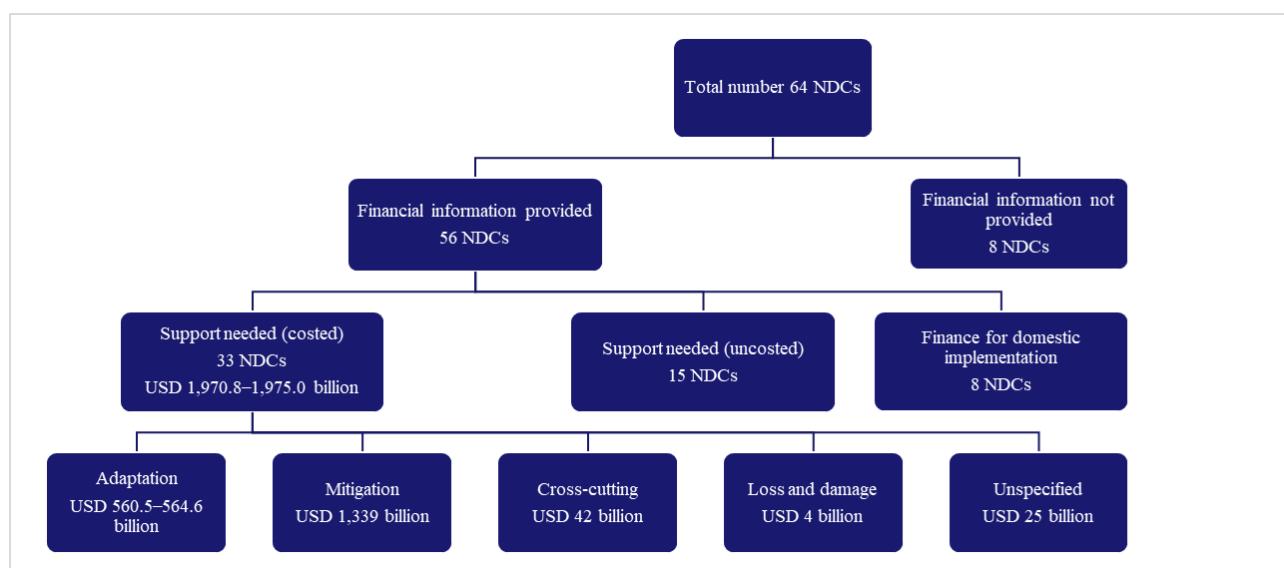
## VIII. Means of implementation

### 1. Finance

182. A total of 88 per cent of Parties provided information on the finance required to implement activities in line with their NDCs, with 75 per cent characterizing finance in terms of support needed (see figure 20). A total cost in the range of USD 1,970.8–1,975.0 billion in aggregate was reported as climate finance required for NDCs by 52 per cent of Parties, comprising USD 1,073.88–1074.00 billion identified as support needed from international sources, USD 214.4 billion identified to derive from domestic sources and USD 682.5–686.5 billion for which the source was not specified.

183. Of the Parties providing information on climate finance support needed, 29 per cent included such information throughout their NDCs, such as in thematic chapters on adaptation and mitigation, 42 per cent in a stand-alone section on climate finance and 31 per cent in a means of implementation section. Further, 63 per cent of Parties also referenced or indicated ongoing efforts to develop financing strategies or investment plans to support NDC implementation and 21 per cent did not provide any information on climate finance.

**Figure 20**  
**Climate finance information in nationally determined contributions**



184. 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 starting points for costed estimates in NDCs also varied, from as early as 2021 to as late as 2031.

185. A total of 90 per cent of the Parties that provided information on climate finance required stated the sources of finance expected to be used in implementing their NDCs, with 56 per cent referring to a mix of international and domestic sources, including both public and private sources, 31 per cent to international sources only and 2 per cent to domestic sources only, with the remaining 10 per cent not specifying this information. Some 46 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 green energy bonds,

sustainable sovereign bonds, multi-funder trust funds and debt-for-climate swaps. In addition, leveraging mechanisms under Article 6 of the Paris Agreement was mentioned by 53 per cent of Parties as an essential financial instrument for mobilizing financial resources or attracting investment to support NDC implementation.

186. Of the Parties reporting costed finance needs, 82 per cent identified needs for mitigation in the energy (including transport and power generation), AFOLU, IPPU and waste sectors. Some 76 per cent of the Parties reporting 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, 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 15 per cent of Parties included costed cross-cutting needs, while 12 per cent of Parties included needs related to addressing loss and damage in the adaptation component of their NDCs and 15 per cent of Parties reported needs related to addressing loss and damage in a separate chapter of their NDCs.

187. Overall, 47 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.

188. Some 77 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) Difficulties in mobilizing private finance owing to low profitability in vulnerable sectors, high perceived risks, limited investor appetite for adaptation and inadequate project preparation capacity;
- (d) 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 gross domestic product and competing development priorities continue to erode fiscal space, constraining public investment in climate action.

189. Compared with in their previous NDCs, 21 per cent more Parties provided cost estimates for the first time in their new NDCs, while 10 per cent of Parties that had provided quantitative information in their previous NDC did not provide quantitative information in their new NDCs. Additionally, 18 per cent more Parties provided cost estimates for adaptation-related needs, reflecting a growing focus on integrating climate change considerations into national budgeting processes, public financial management systems and the development of NDC implementation plans, climate finance policies and strategies.

## **2. Technology development and transfer and innovation**

190. A total of 97 per cent of Parties provided information on technology development and transfer, highlighting their priorities and/or needs, at varying degrees of granularity. About 45 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 including quantitative information since their previous NDCs.

191. About 75 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 34 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, 27 per cent of Parties (a 13 per cent increase since their previous NDCs) referred to technology needs assessments as a source of information for NDC formulation or an instrument for advancing NDC implementation.

192. 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 88 per cent of Parties), followed by the transport and AFOLU sectors (cited by 65 and 55 per cent of Parties respectively). Compared with their previous NDCs, there is a notable increase (from 14 to 45 per cent) 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, in addition to priorities related to renewable energy and energy efficiency, around 23 per cent of Parties highlighted the current or potential role of CCUS technologies in achieving their mitigation targets, particularly in the energy and IPPU sectors.

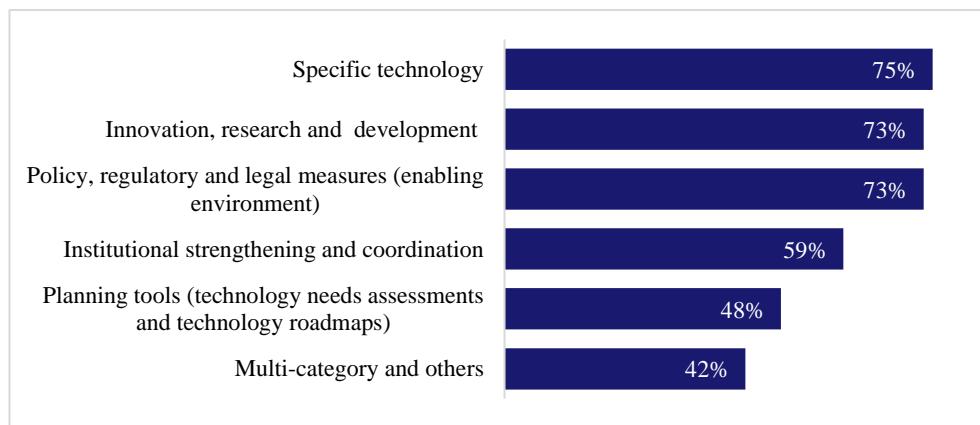
193. A total of 72 per cent of Parties elaborated on technology-related measures focused on adaptation. A majority of the Parties (more than 50 per cent) cited technology measures related to agrifood systems, climate monitoring and observations (increased from 22 to 55 per cent since previous NDCs) and 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 ocean).

194. Frequently cited cross-cutting and multi-sector technology measures include the application of digital solutions, including 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 20 per cent of Parties referenced technology aspects in the context of addressing loss and damage, including for assessing associated needs.

195. In articulating their needs and priorities related to technology development and transfer for achieving their NDCs, Parties included information on various types of technology (see figure 21). 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, namely those pertaining to research and innovation, institutional aspects, enabling environments and planning tools. In addition, some 30 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.

Figure 21

**Categories of technology needs and priorities communicated in nationally determined contributions**



196. 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, certification and rating systems, as well as regulatory and policy frameworks, accompanied by financial incentives, including with the aim of engaging the private sector in technology implementation and uptake. 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.

197. The focus on technology-related data and knowledge management systems was also underscored in the context of strengthening institutional and coordination capabilities. 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. In addition, Parties referred to government-led initiatives and programmes that are designed to promote enhanced and coordinated domestic action for technology development and deployment, including action by the private sector, citizens and youth.

198. When referring to measures related to technology innovation, research and demonstration (which 73 per cent of Parties did), 57 per cent of those Parties highlighted them as overarching priorities for advancing technology development and transfer for both mitigation and adaptation. When specified, such measures were most frequently highlighted in the context of the agriculture, forestry and energy sectors, followed by measures focused on ecosystems including ocean, and the water and waste sectors. In this regard, Parties underscored the importance of context-specific research and innovation and local technology testing, piloting and demonstration, including to foster the engagement of youth in technological innovation.

199. Parties communicated a widespread whole-of-society approach to technology implementation, with 92 per cent of Parties that included information on technology development and transfer referring to domestic implementation actors beyond the national Government for advancing technology development and transfer and 63 per cent of those Parties citing subnational governments, local authorities and local communities as key implementation actors. The private sector, farmers and worker communities, youth, women, Indigenous Peoples and members of academia were also frequently cited in this regard.

### **3. Capacity-building and institutional strengthening**

200. A total of 84 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, 14 per cent discussing it throughout their NDCs and 53 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.

201. A total of 66 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 66 per cent of Parties), mitigation (by 69 per cent of Parties) and cross-cutting objectives (by 47 per cent of Parties), including transparency, technology deployment and access to climate finance. Notably, 25 per cent of Parties identified specific capacity needs related to addressing loss and damage, marking a new development not reflected in their previous NDCs.

202. Parties articulated capacity gaps and needs across multiple cross-cutting priorities, including with regard to strengthening institutional coordination, enhancing the availability and sharing of climate data and information and improving collaboration between public, private and international stakeholders. Many Parties reported challenges in accessing climate finance, particularly in navigating financial mechanisms, 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 technologies and tools for sustainable resource management and reduced environmental impacts. 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 sector-level monitoring of emission reductions, improving institutional coordination across ministries and between national and local institutions, and establishing and enabling robust MRV systems. Several 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 losses and participating in the mechanisms under Article 6 of the Paris Agreement and in carbon markets.

203. Capacity needs were reported both across multiple sectors and within specific sectors. A total of 53 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 30 per cent of Parties highlighted needs in the energy sector, including related to strengthening energy resilience and building technical capacity for 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, enhancing the resilience of built environments, and raising public awareness of waste management practices and sustainable water management.

204. Parties described capacity-building activities aimed at enhancing public engagement and awareness-raising, technical training, education, research and innovation. Parties acknowledged the value of UNFCCC reporting processes, such as BTRs and NAPs, for their capacity development. Non-Party stakeholders, development agencies, United Nations agencies and financial mechanisms were emphasized as vital to implementing capacity-building efforts and achieving climate action objectives.

205. Consistently with their 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 reported frequently 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**

206. The information necessary to facilitate clarity, transparency and understanding of NDCs, which 91 per cent of Parties communicated, includes information on how the NDC contributes towards:<sup>48</sup>

- (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.

207. A total of 36 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 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.

208. Since this report considers 64 new NDCs, covering 30 per cent of global GHG emissions in 2019, it is not possible to provide a clear picture of the aggregated effect of all NDCs 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 on basis of the new NDCs, as was done in previous NDC synthesis reports.<sup>49</sup>

### **Aggregate emissions of Parties that submitted new nationally determined contributions**

209. Total GHG emission levels resulting from the implementation of the new NDCs are projected to be around 13.9 (13.3–14.6) Gt CO<sub>2</sub> eq in 2030 and around 13.0 (12.0–13.9) Gt CO<sub>2</sub> eq in 2035 for the relevant group of Parties. In comparison, total global GHG emissions (without LULUCF) are estimated to be around 54.1 (51.2–57.0) Gt CO<sub>2</sub> eq in 2030 (see figure 22).

210. Compared with their 2019 GHG emission levels, the implementation of Parties' new NDCs is estimated to result in a strong decline in their emissions of 11 (7–15) per cent by 2030 and an even stronger decline of 17 (11–24) per cent by 2035 (see table 2).

**Table 2  
Projected emission reductions by 2030 and 2035 compared with historical and estimated emission levels for the group of Parties that submitted a new NDC**

<i>Year of projected emission level</i>	<i>Years of comparison emission level</i>							
	1990	2000	2005	2010	2015	2019	2025	2030
2030	7 (3–12)	9 (5–14)	13 (8–17)	12 (7–16)	11 (7–16)	11 (7–15)	3 (0–6)	–
2035	14 (7–20)	16 (10–22)	19 (13–25)	18 (12–24)	18 (11–24)	17 (11–24)	10 (4–15)	7 (5–10)

*Notes:* (1) A positive number indicates a reduction below historical levels; (2) the range is the min-max range across high and low conditional and unconditional case.

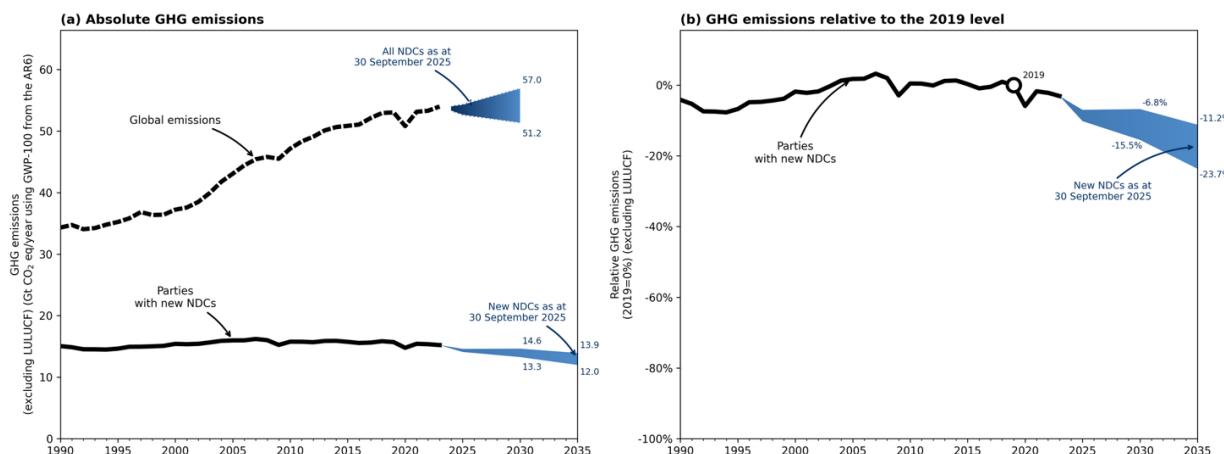
<sup>48</sup> See decision [4/CMA.1](#), annex I, para. 7.

<sup>49</sup> See <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/2024-ndc-synthesis-report>.

211. Implementation of their new NDCs, even considering only their unconditional elements, will result in a peaking of GHG emissions for the group of Parties before 2030, with strong emission reductions thereafter until 2035 (see figure 22). If all conditional elements of the new NDCs are fully implemented, the GHG emission reductions of the group of Parties for 2035 would change from 11–24 per cent (full range) to 19–24 per cent below the 2019 level. If none of the conditional elements are implemented, these Parties' 2035 GHG emissions are projected to be 11–15 per cent below the 2019 level.

Figure 22

### Global emissions and aggregate emissions of Parties that submitted new nationally determined contributions



212. The Synthesis Report of the AR6 indicates that, in order 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 and those to limiting warming to below 2 °C (with over 67 per cent likelihood), GHG emission reductions will have to be reduced by 60 (49–77) per cent by 2035 relative to the 2019 level and by 35 (22–55) per cent by 2035 relative to the 2019 level respectively. For 2040 and 2050, further emission reductions will be needed in order to limit warming to below 1.5 °C with no or limited overshoot, including achieving net zero CO<sub>2</sub> emissions by 2050 (a 99 per cent CO<sub>2</sub> emission reduction relative to the 2019 level).

213. With their GHG emissions in 2035 on average estimated to be 17 (11–24) per cent below their 2019 level (see para. 211 above), the scale of the total emission reduction expected to be achieved by the group of Parties (noting that this is only about 33 per cent of Parties to the Paris Agreement) through implementation of their new NDCs falls short of what is necessary according to the IPCC ranges referred to in paragraph 212 above.

214. On a per capita basis, the Parties with new NDCs are estimated to have approximately 11 per cent higher per capita emission levels in 2019 (at 7.6 t CO<sub>2</sub> eq) compared with the global average (6.8 t CO<sub>2</sub> eq). The new NDCs indicate a declining trend in the group of Parties' per capita emissions, from more than 8.5 t CO<sub>2</sub> eq in 2010 to about 5.3 t CO<sub>2</sub> eq projected for 2035 (see figure 23). Per capita emissions for this group of Parties are estimated to decline by 11 per cent from 2030 to 2035.<sup>50</sup>

215. A total of 70 per cent of Parties with new NDCs have both 2035 emission targets in their new NDCs and long-term visions, development pathways and targets communicated in their NDCs or LT-LEDS (see para. 152 above).<sup>51</sup> On the basis of that information, and assuming the full implementation of all NDCs and LT-LEDS, those Parties' total emissions in 2050 are estimated at 7.1 (6.2–7.9) Gt CO<sub>2</sub> eq.<sup>52</sup> The link between the NDCs and long-term visions, development pathways and targets or LT-LEDS is also reflected in the

<sup>50</sup> Per capita emission levels were calculated on the basis of the AR6 Working Group III scenario database (available at <https://data.ece.iiasa.ac.at/ar6/>) for the categories "C3a" and "C1a" respectively.

<sup>51</sup> See decision [1/CMA.5](#), para. 40.

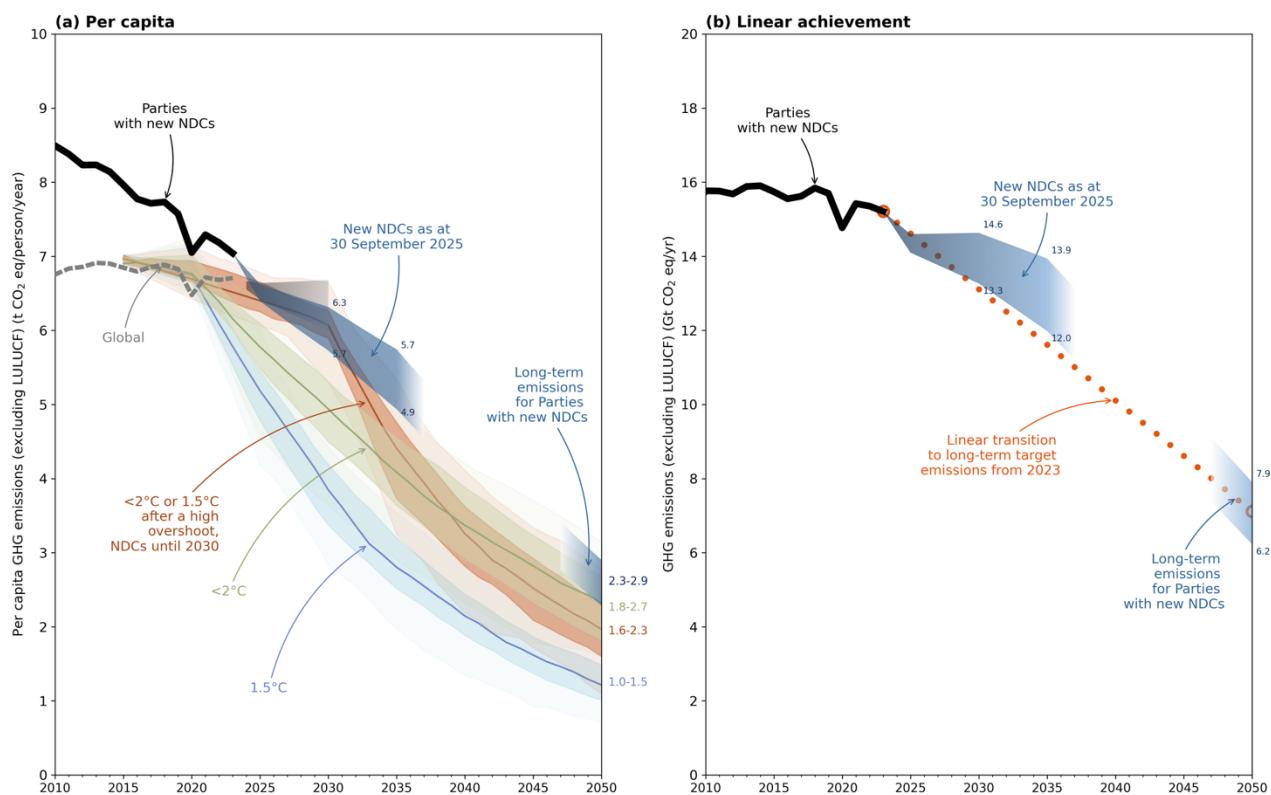
<sup>52</sup> Assuming constant emissions after 2035 for Parties without a long-term target.

aggregate emission levels of those Parties in 2035, which are approximately consistent with following a linear emissions trajectory from 2030 estimated emission levels towards aggregated emission levels resulting from the implementation of the long-term visions, development pathways and targets communicated in NDCs or LT-LEDS.

216. Mindful of the inherent uncertainty of such long-term estimates, and the need for full implementation of NDCs, the information indicates that the total GHG emission level of Parties with new NDCs could be around 55 (50–60) per cent lower in 2050 than in 2019, and their annual per capita emissions would be around 2.6 (2.3–2.9) t CO<sub>2</sub> eq by 2050. Under scenarios of limiting warming to likely below 2 °C (with over 67 per cent likelihood), global annual per capita emissions are estimated at 2.3 (1.8–2.7) t CO<sub>2</sub> eq in 2050; hence the estimated long-term per capita emissions of these Parties are estimated at a level consistent with 2 °C scenarios. However, for scenarios of limiting warming to 1.5 °C (with 50 per cent likelihood by 2100) with limited overshoot, annual per capita emissions are required to be at 1.2 (1.0–1.5) t CO<sub>2</sub> eq, which is two times lower than the projections based on new NDCs and LT-LEDS by 2050.

Figure 23

**Emission levels of Parties that have submitted new nationally determined contributions in the context of per capita emission levels of scenarios that limit warming to 1.5 °C or below 2 °C warming and in the context of the long-term targets of the Parties**



*Note:* Globally averaged per capita emissions under scenarios of limiting warming to 1.5 °C and below 2 °C (coloured bands) are shown in the context of global per capita emissions (dashed line) and NDC targets until 2030, as well as in comparison with per capita emission levels (solid line) of Parties that have submitted new NDCs (left panel); the scenarios are the C1 (“1.5 °C”), C3a (“2 °C”) and “NDC and delayed action (P3b)” C2 & C3 scenarios assessed by the contribution of Working Group III to AR6 (left panel); emissions of Parties that have submitted new NDCs are compared with a linear trajectory between their recent historical emissions (2023 level) and emission levels in line with their long-term visions, quantified for 2050 (red dashed line), showing a near-linear transition (right panel).