



United Nations
Climate Change



NDC Global Outlook Report 2019

The Heat is On

Taking Stock of Global Climate Ambition



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United Nations Development Programme (UNDP)

UNDP partners with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in nearly 170 countries and territories, we offer global perspective and local insight to help empower lives and build resilient nations.

On climate change, UNDP has the largest portfolio in the UN system and works with over 140 countries around the world.

UN Climate Change

With 197 Parties, the United Nations Framework Convention on Climate Change (UNFCCC) has near universal membership and is the parent treaty of the 2015 Paris Climate Change Agreement. The main aim of the Paris Agreement is to keep a global average temperature rise this century well below 2 degrees Celsius and to drive efforts to limit the temperature increase even further to 1.5 degrees Celsius above pre-industrial levels.

The UNFCCC is also the parent treaty of the 1997 Kyoto Protocol. The ultimate objective of all agreements under the UNFCCC is to stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows ecosystems to adapt naturally and enables sustainable development.

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Abbreviations and acronyms

C	Celsius
CO₂	Carbon dioxide
GHG	Greenhouse gas
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
LTS	Long-term strategy
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
SDG	Sustainable Development Goals
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Climate Change
V20	Vulnerable Twenty Group of Ministers of Finance (of the Climate Vulnerable Forum)

Foreword

When the gavel sounded on 12 December 2015, ending the talks that ushered in the adoption of the Paris Agreement, people throughout the world rejoiced at the news that governments had finally come up with a solid plan to tackle climate change. The Agreement was a multilateral success, perhaps one of the greatest of the modern era.

Amid the celebrations, however, was the realization that the hard work had only just begun. While the Agreement provided a blueprint to address the climate change crisis, it was clear that the road to limiting global temperature rise to 1.5°Celsius (C) or below would require unprecedented efforts by both governments and businesses throughout the world.

The good news is that momentum has been building since the adoption of the Paris Agreement. Since then, more and more key actors are aligning their plans, policies and projections with the Agreement.

At the same time, the impacts of climate change have been growing; often with terrifying results, ranging from wildfires, droughts, flooding, and hurricanes to sea-level rise, ocean acidification to the melting of the permafrost.

The Paris Agreement also spurred scientific research, giving us far greater clarity

on the magnitude of the threats that we face. This includes a landmark 2018 report by the Intergovernmental Panel on Climate Change (IPCC) with an unequivocal message: a path exists to 1.5°C, but the window for achieving it is declining rapidly. Furthermore, we must reduce global greenhouse gas (GHG) emissions by 45 per cent by 2030 and achieve carbon neutrality by 2050.

The bottom line is that while momentum exists, we need much more climate ambition. There is simply no time to waste. Climate change is fast outpacing us and needs an urgent response by all segments of society.

Boosting Nationally Determined Contributions — or NDCs — by each nation is a key part of that work. The UN Development Programme (UNDP) and UN Climate Change (UNFCCC) have been working together since 2014 to support countries in developing these NDCs, beginning with the launch of a regional NDC dialogue series that just completed its 22nd event having engaged over 2,200 participants from over 150 developing countries. The report that follows, leveraging those relationships and history, is the most detailed review yet of momentum since the Paris Agreement and is designed to both inspire and inform the UN Climate Action Summit in New York on 23 September.

The task ahead is daunting - the last four years were the warmest on record and GHGs from human activities are still rising. **The choices we make on ambition in 2020, at the first five-year milestone of the Paris Agreement, will profoundly affect us and the planet we leave to future generations.** This report clearly demonstrates that the majority of countries are committed to combatting climate change and making progress – even in the most challenging of development contexts.

We have watched truly *transformational* ideas evolve in the Climate Summit's preparatory working groups and are hearing of country intentions to make bold statements on ambition at the Summit itself. We therefore choose to be optimistic that leaders and corporations will respond to the needs of our planet and, especially, the youth of today.

The race against climate change is one we can and must win. We encourage you to use the information in this report both as an indication of current trends and as incentive for encouraging significantly greater climate action by all segments of society. UNDP and UNFCCC stand ready to use our extensive and long-standing climate action expertise, combined with our global, regional and country presence to make this happen.



Ms. Patricia Espinosa
Executive Secretary
UN Climate Change



Mr. Achim Steiner
Administrator
UN Development Programme

Overall, this report finds many reasons for optimism, but much work remains. It's clear that *business as usual* simply isn't good enough anymore. We must do more – much more – in areas related to mitigation, adaptation, and the finance to support all of this work. And we must do it quickly.

Executive summary

The Paris Agreement faces its first major test in 2020 against the backdrop of a worrying growth in greenhouse gas (GHG) emissions since the adoption of the landmark agreement in 2015. Promising signs of ambition are emerging from all corners of the globe, but far more is needed to limit emissions and adapt to the worsening impacts of climate change.

Most governments are currently prioritizing one of two complementary approaches for addressing climate change in the lead-up to 2020. This is according to a joint analysis by UNDP and UNFCCC which took the world's pulse on ambition and provides the most comprehensive review to date of intentions for 2020. Some are revising climate plans previously submitted under the Paris Agreement that stretch until 2025 or 2030, while others are preparing longer-term strategies to decarbonize their economies.

Developing nations are currently the front-runners in preparations to revise plans for combatting the climate crisis over the next decade by 2020. At least 112 nations, representing 53 percent of global GHG emissions, have signaled this intent. Most global growth – in terms of population, economies and urbanisation – will take place in developing nations in coming decades, making it vital for policy makers to define cleaner pathways to limit GHGs.

More industrialized nations, meanwhile, are among the 53 countries currently working on Long-Term Strategies (LTS) to submit by the end of 2020 that describe the phasing out of GHGs from their economies by the second half of the century. These strategies include mapping out radical shifts away from fossil fuels to cleaner energies such as solar and wind

power – one step considered essential for delivering on the goals of the Paris Agreement.

Perhaps tellingly, more than 90 developing nations are also at various stages of preparing National Adaptation Plans (NAPs), which highlight climate risks and promote resilient development by identifying adaptation strategies and investments that are critical for safeguarding climate-vulnerable sectors and communities. Thirteen countries have already formally submitted NAPs.

Climate action plans known as “Nationally Determined Contributions” (NDCs) are the backbone of the Paris Agreement. Almost all parties - 184 out of 197 - have already submitted their first plans, which typically set goals to curb GHG emissions by 2025 or 2030 and may also include measures to make economies and populations more resilient to the impacts of climate change.

A key principle in the Paris Agreement is that nations will toughen their NDCs every five years to ratchet up the fight against global warming. A first opportunity to do so will be in 2020.

Of the 112 nations revising their climate plans, 75 are leading by example. Almost all of them are developing nations, including many of the most vulnerable to the impacts of climate change. They wish to “enhance” the ambition of their current plans – either by curbing GHG emissions, or making their societies more resilient to the worsening impacts of climate change, or both. Collectively, they represent 37 percent of global GHG emissions.

The remaining 37 nations, representing 16 percent of global GHG emissions, intend to “update” their existing plans with

new data, information and/or assumptions. Through this process, however, opportunities for bolder action might emerge – for example, renewable energy technology costs have fallen dramatically since 2015 and may now offer an opportunity for ambition.

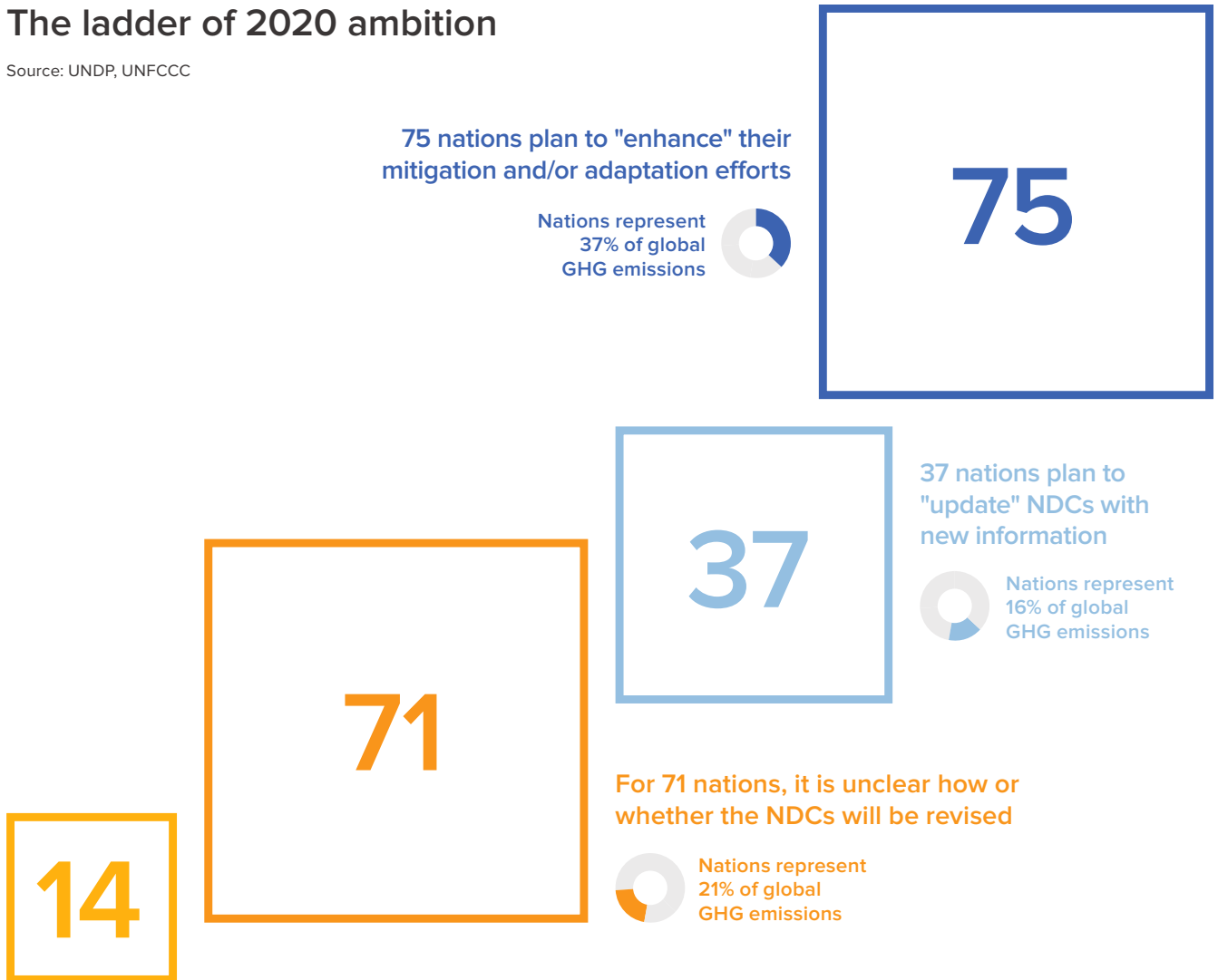
And there is ample opportunity for other countries to step up ambition in the weeks and months ahead because only 14 nations have indicated they do not intend to revise their current plans. It is also recognized that some nations had already set themselves very ambitious goals in 2015 and therefore may find it harder to do so again. Also, many developing nations want to do more but need finance to match their ambitions.

Significantly, the final outcome from 71 countries representing 21 percent of global GHG emissions – including most developed nations – is unclear. Forty-one of these countries are still deciding how they intend to approach their NDC revisions and 10 did not provide any information on their intentions. The remaining 20 countries intend to submit revised NDCs but are still seeking the means to do so. At a Group of 20 (G20) summit in Japan in June 2019, leaders agreed that “by 2020 we aim to communicate, update or maintain our NDCs, taking into account that further global efforts are needed.” This is important because the 2015 Paris Agreement says developed countries should “continue to take the lead with economy-wide, absolute emission reduction targets.”

While climate action has accelerated since Paris, it still falls far short of an unprecedented transformation needed to limit impacts of climate change. Already at record highs, GHG emissions are set to keep rising in the coming decade on

The ladder of 2020 ambition

Source: UNDP, UNFCCC



14 nations have no plans to revise NDCs



current trends. So far, temperatures are already up about 1.0°C from pre-industrial times and the last four years were the warmest on record – including July 2019, which was the hottest month of all. And there are ever starker signs of harm caused by climate change. Coral reefs are dying, Arctic sea ice is shrinking, and sea levels are rising, while droughts, floods, and hurricanes grow more severe.

The Climate Action Summit in New York City on 23 September, championed by UN Secretary-General António Guterres, therefore provides a key opportunity for nations to announce bold new plans to address climate change through mitigation and adaptation and build on the

gathering momentum. Guterres wants governments to halt the rise in emissions by 2020, and to come to the Summit with pledges consistent with reducing global GHG emissions by 45 percent by 2030 and then to net zero by 2050 to get on track for the 1.5°C Paris goal. He is urging countries to halt subsidies for fossil fuels, to build no coal-fired power plants after 2020, and to put a price on carbon emissions.

The existing NDCs set the world on track for a rise in emissions of about 10.7 percent above 2016 levels by 2030, according to UNFCCC analysis. That is starkly at odds with the UN Secretary-General's call for deep cuts. Among further worrying trends, the International Energy Agency (IEA) said that global energy-related carbon dioxide (CO₂) emissions grew 1.7 percent in 2018 from 2017, the highest rate of growth since 2013. The IEA also

found that renewable energies around the world only added as much net capacity in 2018 as they did in 2017, an unexpected stalling after two decades of growth.

The most critical factor limiting raised ambition in developing countries is access to or availability of finance, according to the joint UNDP/UNFCCC analysis. Political will and engaged citizens are also key. Global climate-related finance flows increased by 17 percent in the period 2015-2016, compared to 2013-2014, reaching \$681 billion in 2016. That is still well short of the needs for a cleaner and more sustainable future. And many developing nations say their NDCs are conditional on finance.

The Paris Agreement also invited countries, again by 2020, to describe long-term plans to increase resilience and achieve net-zero GHG emissions from their economies in coming decades. So far, 12 nations have shared the LTS formally with the UNFCCC, including major

“ I want to hear about how we are going to stop the increase in emissions by 2020, and dramatically reduce emissions to reach net-zero emissions by mid-century.

UN Secretary General António Guterres wants countries to come to the Climate Action Summit with concrete plans to combat climate change, which he calls “the defining issue of our time”.



Photo — Eric Bridiers

industrial emitters such as the US, Japan, Germany, the United Kingdom, France, Canada, and Mexico, as well as highly vulnerable developing countries such as Fiji and the Marshall Islands that seek to promote ambition.

One promising signal is that 97 more nations have indicated that they are also planning for carbon neutrality. Fifty-three countries, including many in the Group of 20, are currently preparing LTS, while 44 more have plans to do so. When coupled with the 12 that have already completed this task, these 109 nations cover 86 percent of global GHG emissions. About 19 of these nations, and othe 65 non-state actors that have registered 259 LTS-related actions on the UNFCCC's NAZCA site, are at the forefront on ambition because they are taking the bold step to pursue net-zero CO₂ emissions even earlier than 2050.

The joint analysis also revealed that governments increasingly recognise that climate is inseparable from wider societal goals to eradicate poverty and hunger and reduce inequality by 2030. Almost 90 countries plan to make stronger links with sustainable development in their revised climate plans, while at least 67 countries intend

to include considerations about gender equality and women's empowerment -- recognizing the vital roles that women can play in combating the impacts of climate change and helping to reduce GHG emissions.

In another essential step to help unlock ambition, developing country governments are making significant progress to strengthen systems and put in place the required NDC architecture needed for successful implementation. Progress includes mechanisms to improve coordination between ministries, improved regulatory and legal frameworks, mainstreaming of NDC target, and strengthened systems for monitoring and reporting of NDC progress. And around the world, climate policies, traditionally overseen by environment ministries, are getting higher priority. They are now overseen by the cabinet or the office of the prime minister or president in about one in three nations. The top challenges identified for NDC implementation were financing, reliable information and data, and better linkages between climate targets and existing policies, strategies, plans and budgets.

Since 2015, progress on climate action has also been widening across soci-

ety to involve the private sector, cities, regions, investors, civil society and other stakeholders in finding solutions to climate change. Lack of awareness about climate change and unreliable data were identified as the main bottlenecks for mobilizing society identified in developing countries. However, a growing youth climate movement that includes millions of children in protests, inspired by teen activists such as Greta Thunberg and Jamie Margolin, is now adding pressure for action in 2020 by demanding system change from world leaders and more accountability from carbon-intensive industries. This key constituency, known as "Generation Z", will bear the brunt of climate impacts. On current trends, someone born today risks spending their old age in a world that is 3°C warmer than pre-industrial times – twice the toughest ceiling of 1.5°C set by governments in 2015 in Paris.

For this reason, 2020 is emerging as a critical year for galvanising support from across all of society for bolder climate action so that greater ambition is locked in as quickly as possible. In order to reach net-zero CO₂ emissions by 2050, decisions need to be taken and enacted within the next two years.

1. Introduction

Climate test in 2020: the Paris Agreement and the “ratchet mechanism”

The Paris Agreement aims to avert dangerous climate change by rapidly phasing out GHG emissions by the second half of the century (to become “net zero”), while promoting sustainable development and poverty eradication. Carbon dioxide (CO₂) from burning fossil fuels is the dominant source of heat-trapping emissions.

The 197-member agreement, reached at climate talks in Paris in December 2015, seeks to limit the rise in the world’s average surface temperatures to “well below” 2°C above pre-industrial times this century, while “pursuing efforts” for 1.5°C. It also sets a target of eliminating global GHG emissions by the second half of the century or at least compensating any residual emissions through, for example, forest growth.

The NDCs are the backbone of the Paris Agreement. They describe each country’s self-determined plans for curbing GHG emissions, typically in five- or ten-year periods (i.e., currently until 2025 or 2030). Most also include plans to increase resilience to a world with more heatwaves, floods, droughts, wildfires and more powerful storms, or identify needs for adapting to such impacts.

So far, 184 nations have submitted their first NDCs and one, the Marshall Islands in

the Pacific, has prepared a second. However, existing NDC pledges, while a departure from business-as-usual scenarios, set the world on track for a further rise in GHG emissions in GHGs of about 10.7 percent by 2030, according to UNFCCC analysis. China, the United States, the European Union and India, account for just over half of the world’s total GHG emissions.

A key principle in the Paris Agreement is that no country should backslide on its stated targets. All countries are expected to submit increasingly ambitious NDCs every five years, often described as a “ratchet mechanism”. A first opportunity to do so will be in 2020.

Given increasing risks from current trajectories of temperature rise, the Paris Agreement also aimed to strengthen the global response on adaptation by defining a global goal that would increase the ability of all to be climate resilient and adapt to adverse impacts of climate change, while also reducing vulnerabilities. While adaptation has always been a priority for developing countries, medium- and long-term adaptation planning is increasingly seen as key for preparing for future climatic conditions.



MARSHALL ISLANDS

Raising Ambition to Combat Rising Seas

The Marshall Islands, comprising 29 low-lying coral atolls in the Pacific Ocean, was the first nation to issue a new NDC last year aimed at reducing vulnerability to storms and sea level rise while cutting the use of fossil fuels.

The government says the nation accounts for a miniscule 0.00001 percent of global emissions but wants to show leadership since it is so exposed to storms, “king tides” and rising sea levels. In 2015, damage caused by Typhoon Nangka cost the nation more than three percent of its GDP in a single night.

The Marshall Islands plans to increase coastal defences and revise building codes to ensure new buildings are elevated.

The country “is at the front of the front line in the battle against climate change, and its front line is its last line of defense,” it says in its 2050 low-carbon climate strategy.

The government also plans to generate more electricity from local, sustainable sources including wind, biofuels made from coconut oil and solar panels floating on lagoons in a shift from imported diesel for its 53,000 citizens.

The updated NDC adds a 2035 goal for cutting GHG emissions by at least 58 percent below 2010 levels, deeper than previous targets for cuts by 2025 and 2030.

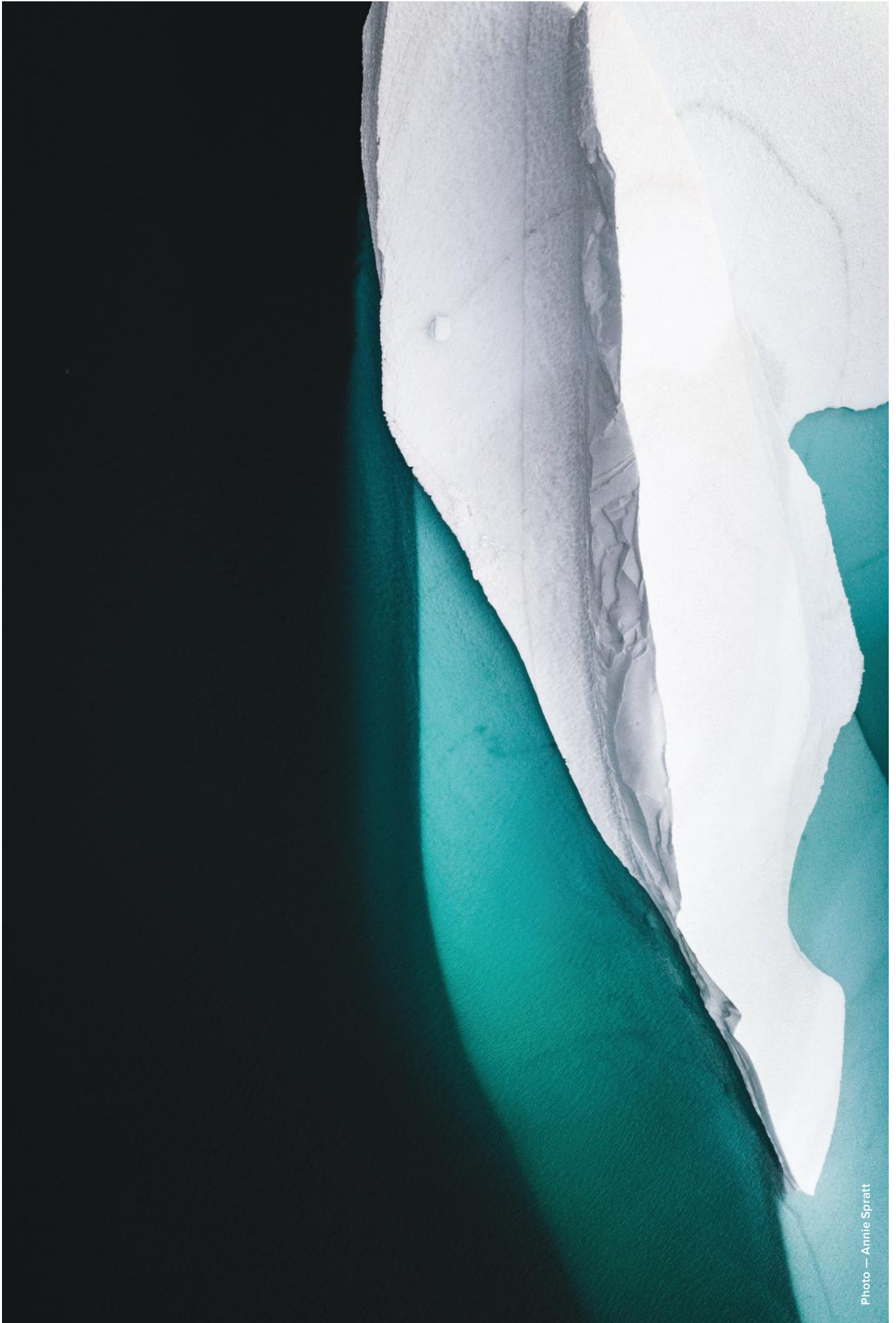


Photo — Annie Spratt

Greenhouse gas emissions rise after Paris pause

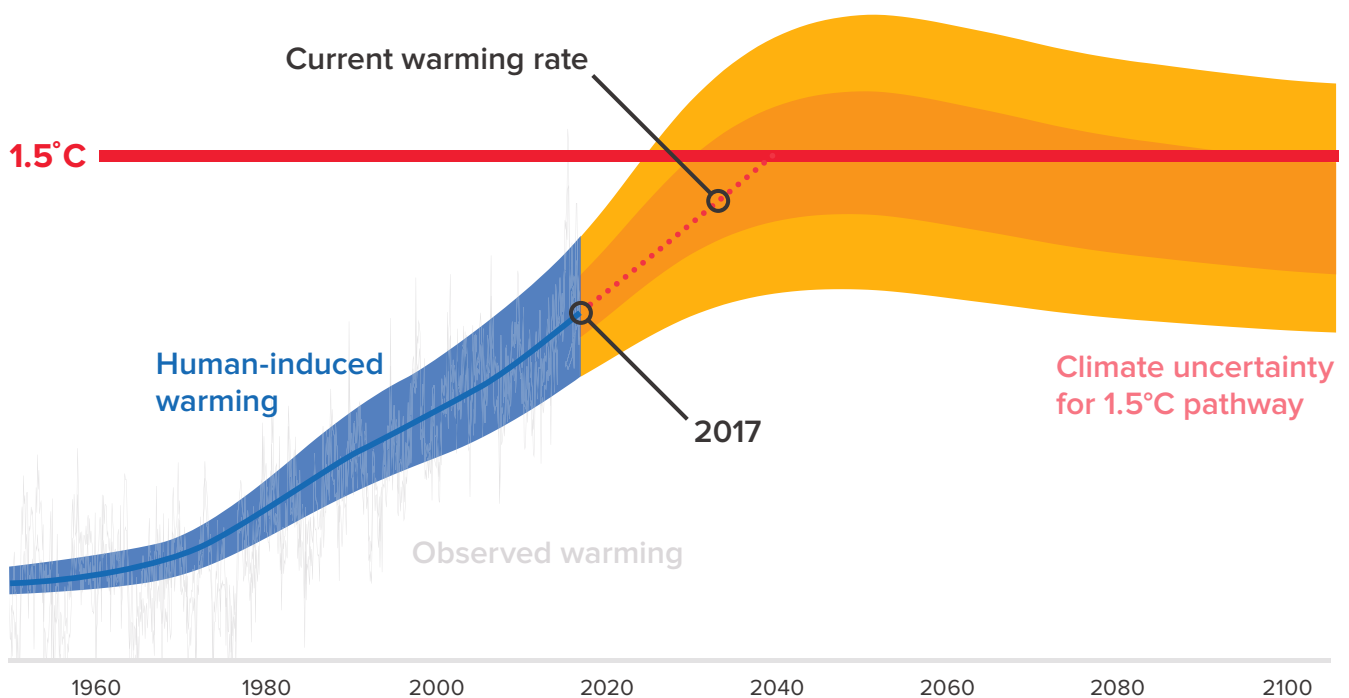
GHG emissions from human activities have risen to new record highs this century. Global GHG emissions totalled 50.8 billion tonnes in 2016, up 48 percent since 1990, according to UNFCCC analysis. Energy supply – everything from coal-fired power plants to oil refineries – is the biggest source of these GHGs, accounting for 34 percent of emissions worldwide in 2016, ahead of industry (22 percent) and transport (14 percent), UNFCCC data show. In recent years, technology prices for solar panels and wind energy have tumbled. In many parts of the world, renewables are now the lowest-cost source of new power generation. Yet global energy-related CO₂ emissions rose 1.7 percent in

2018, the strongest rise since 2013 amid higher energy demand, according to the IEA. The rise broke with a “Paris Pause” from 2014-16 that had raised hopes that a peak was approaching. And levels of heat-trapping CO₂ in the atmosphere rose to 415 parts per million in May 2019, higher than those observed in nature in at least 800,000 years.

Public pressure for tougher action is rising in many nations, especially among young people who will inherit a warmer planet. In many countries, all sectors of society are getting involved – regional governments, cities, investors, private companies, civil society and others – as they observe an already worsening

variety of impacts from climate change, such as soil erosion, more crop diseases, reduced water availability, hunger and malnutrition, heat-related illnesses, wildfires, shifting fish stocks, losses of habitat for wildlife and a melt of ice and snow that is raising sea levels.

The Paris Agreement’s goals require an emissions peak as soon as possible, followed by sharp reductions. Therefore, many see high ambition in 2020 as fundamental if the world is to get on track to 1.5°C. The UN Secretary-General has called upon countries and the private sector to take decisive actions to halt the rise in GHG emissions by 2020, followed by deep cuts.



Source: IPCC Special Report on Global Warming of 1.5°C: On current trends, warming will reach 1.5°C above pre-industrial times between 2030 and 2052 (red dotted line). Staying below 1.5°C in 2100 (red/pink projection) will require cuts in GHG emissions of 45 percent below 2010 levels by 2030 and to net zero by 2050.

2. Key findings

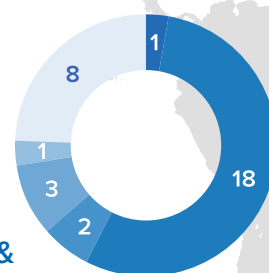
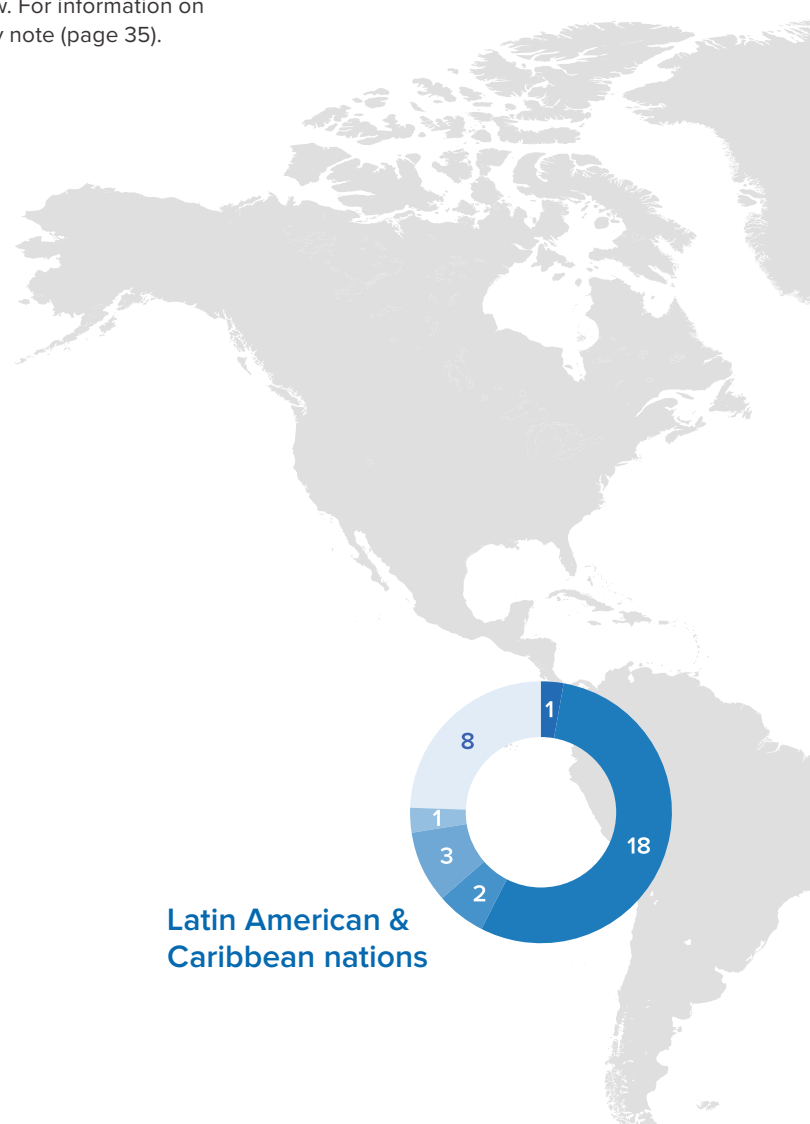
Encouraging signs of action to combat climate change surfaced from every part of the globe as part of the evidence gathering for this report. Data and inputs from 197 parties were synthesized to arrive at five key findings, outlined below. For information on UNDP and UNFCCC’s approach, please refer to the methodology note (page 35).



Vulnerable nations step up on ambition in 2020

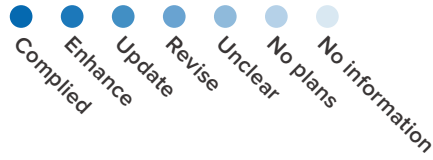
At least 112 nations, representing 53 percent of global GHG emissions and including many of the developing countries that are the most vulnerable to climate change, have indicated they intend to revise their plans for fighting global warming in 2020. Within this group, 75 countries, representing 37 percent of global GHG emissions, are leading the way with intentions to enhance ambition in their next NDCs –either by curbing GHG emissions, or including measures to make societies more resilient to the worsening impacts of climate change, or both. In fact, two countries have already complied with the deadline (the Marshall Islands and Ecuador).

The countries have highlighted a range of actions to rein in climate change, from adjustments to existing projects and programmes to sweeping plans and policies to phase out net GHG emissions by mid-century.

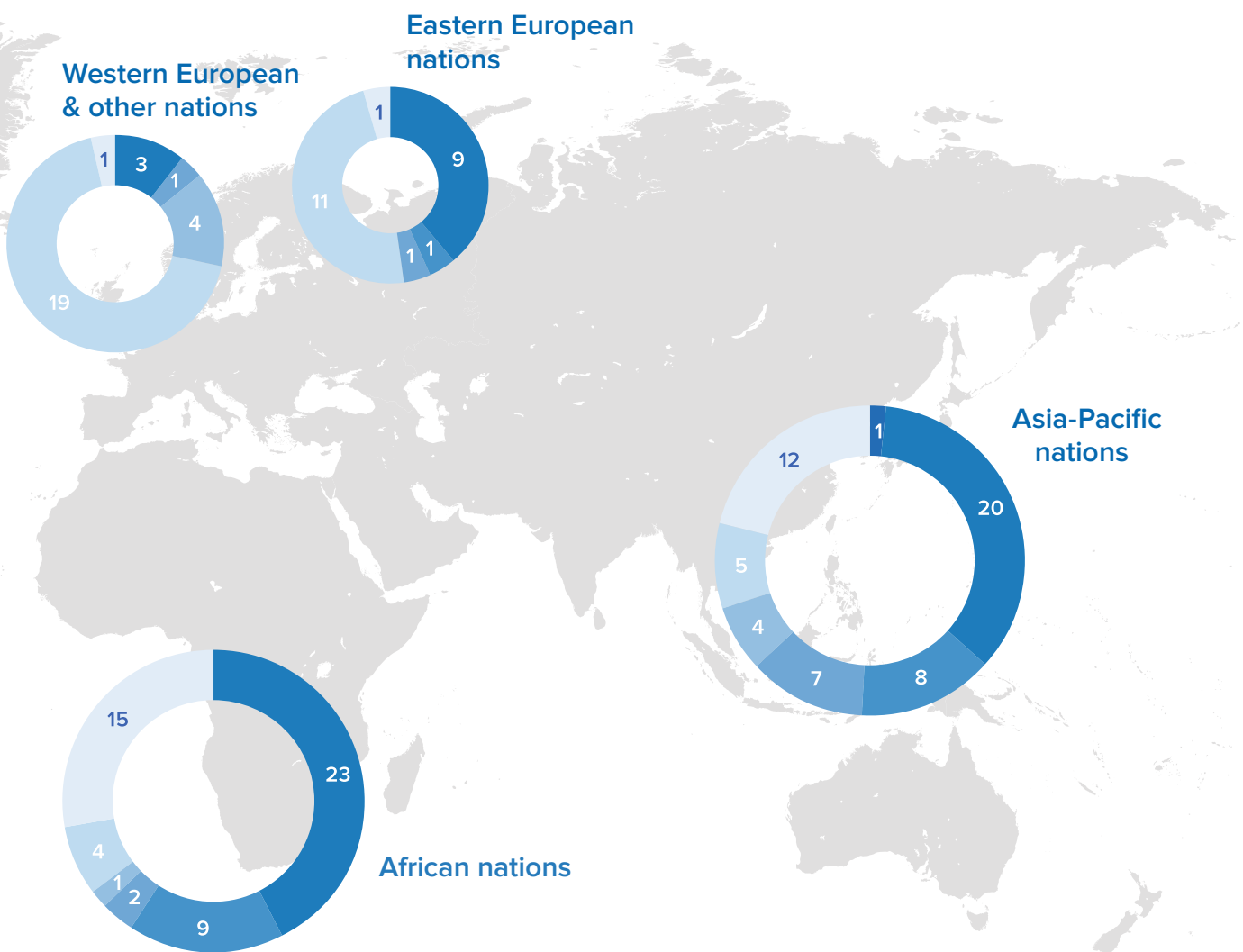


Latin American & Caribbean nations

Overview of national plans for NDC updates, by region and number of countries



Source: UNDP, UNFCCC



TREND

More than 40 least developed countries and small island developing states are among those at the forefront of action to reduce GHG emissions by indicating they will submit more ambitious NDCs. These nations, each accounting for less than 0.1 percent GHG emissions, are facing disruption to water and food supplies and rising sea levels, among others. Their objective is to lead by example and demonstrate that ambition can come even from the poor and most vulnerable.

The remaining 37 nations, representing 16 percent of global GHGs, intend to “update” their existing plans. An update may be to reflect latest scientific data or trends in emissions, or to include decisions from the last UN climate meeting in Poland in 2018 where the detailed rules of the Paris Agreement were agreed – such as how to improve transparency and understanding. Through this process, however, opportunities for bolder action might emerge – for example, renewable

energy technology costs have fallen dramatically since 2015 and may now be more feasible to scale up.

There is a high likelihood that more countries will step up as climate leaders in the weeks and months ahead. Just 14 nations have signaled they have no plans to submit revised climate plans. Significantly, 41 countries – including most developed nations – are still deciding on how they intend to approach their NDC

revisions, while another 20 have plans to revise NDCs and are seeking the means to do so. No information on intentions was provided by the remaining ten.

It is also recognized that some nations had already set themselves very ambitious goals in 2015 and therefore may find it harder to do so again. Also, many developing nations want to do more but need finance to match their ambitions.

MOROCCO

Chasing 1.5°C

Morocco has won international praise for its radical plans to help limit global warming to the toughest goal in the Paris Agreement of 1.5°Ct above pre-industrial times.

Among clean energy projects, the country has one of the world’s biggest solar power plants on the northern edge of the Sahara Desert and is connecting wind farms to the grid to cut dependence on fossil fuels. It is also taking strong steps to adapt to a warming climate - such as slowing desertification by planting olive groves and orchards of argan trees, whose oil is in high demand from the cosmetics and food industries.

In international rankings, Morocco was second, behind Sweden, in a Climate Change Performance Index of almost 60 nations in 2019 compiled by Germanwatch, New Climate Institute and Climate Action Network International.

“The country has significantly increased the share of renewables over the past five years and has increased new renewable energy capacity,” it said. “The country is well on track for achieving its target of 42 percent installed renewable energy capacities by 2020 and 52 percent by 2030.”

Morocco was also one of only two countries, with Gambia, to get the top rating of “1.5 degrees Paris Agreement compatible” for its NDC in an assessment of about 30 nations in the Climate Action Tracker, compiled by European researchers.



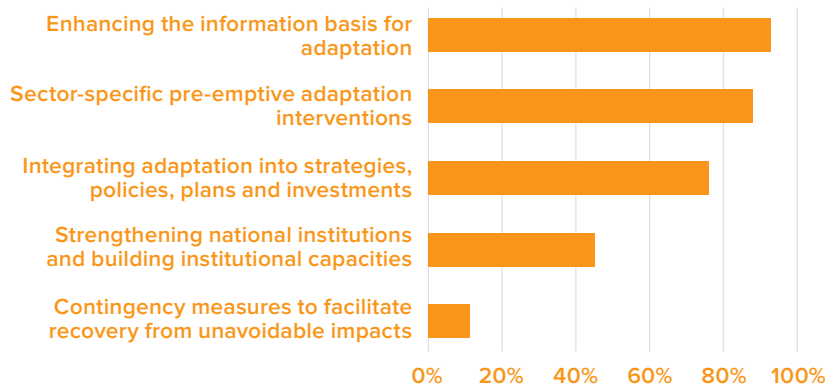
Adaptation playing a key role in NDC enhancement process



Of the 75 countries leading on NDC ambition, almost three-quarters have indicated their NDCs will include enhancements for adaptation. The likely sectors and types of adaptation measures to be included in enhanced NDCs in 2020 can be construed from existing adaptation reporting.

UNFCCC analysis of the adaptation components of intended NDCs (INDCs) and NDCs revealed that the sectors of greatest concern in terms of vulnerability are: water, agriculture, health, ecosystems and forestry, which were also notable for their interconnectedness. Meanwhile, analysis of INDCs, NDCs, NAPs, and 51 National Adaptation Programmes of Action (prepared by Least Developed Countries) identified five main types of adaptation measures.

Types of adaptation measures reflected in national plans and programmes



More than 90 developing nations are also at various stages in developing NAPs, which are a key tool to better understand the risks and options for adapting to climate change that threatens development goals. Fiji, for instance, is relocating villages from coasts that are vulnerable to erosion - starting with Vunidogoloa in 2013. Kenya aims to make agriculture, which

accounts for a quarter of its gross domestic product, more resilient to droughts and floods with measures such as rainwater harvesting or drought-tolerant crops. So far, 13 countries have completed NAPs: Brazil, Burkina Faso, Cameroon, Chile, Colombia, Ethiopia, Fiji, Kenya, Saint Lucia, Sri Lanka, State of Palestine, Sudan and Togo.



TREND

NAP and NDC processes are being aligned to enhance NDCs. Benefits can accrue from aligning NDC and NAP processes at any stage of NAP elaboration. A newly-launched NAP process can be used to review and validate the NDC adaptation priorities, while more advanced NAP technical studies can be used to improve the quality of adaptation information in the NDC. Some countries plan to use the NAP to enhance NDC adaptation goals and ambition.



EUROPEAN UNION

Europe's "Green Deal"

A "Green Deal for Europe" will be outlined in coming months as part of a long-term plan to make Europe the first climate neutral continent by 2050. The 28-nation European Union has a goal in its NDC of cutting GHG emissions by at least 40 percent below 1990 levels by 2030. The European Parliament and some EU member states want a much tougher goal, of 55 percent by 2030.

"I want Europe to become the first climate-neutral continent in the world by 2050," the President-elect of the European Commission, Ursula von der Leyen, said in a speech in July, expanding on Commission plans issued in 2018.

She plans a "Green Deal for Europe" in her first 100 days in office starting on 1 November and said it could unlock \$1 trillion in investment over the next decade.

The EU's GHG emissions were down 22 percent from 1990 levels in 2017 at 4.3 billion tonnes, even while the economy grew by 58% over the same period, out-performing a 2020 goal of a cut of 20 percent during the period. The pace of reductions has slowed in recent years and emissions rose 0.6 percent in 2017, driven up by industry and transport.



Photo — Daniel Sessler



Developed nations focus on longer-term carbon neutrality goals

Many developed economies are mapping out long-term plans to eliminate GHGs by 2050, even as they have yet to clarify plans for shorter-term NDC revisions. UN Secretary-General Guterres recently wrote to all governments asking them to outline how they plan to reach net zero emissions by 2050. Such “Long-Term Strategies” (LTS) provide in most cases a vision for a net-zero carbon society to guide policies and spur both innovation and investments in clean technologies to keep the planet safe. They are of special interest to young people and future generations who will be at risk living in an ever-hotter world with more extreme weather patterns.

For example, the United Kingdom set a legal goal in June 2019 of eradicating its net contribution to climate change by 2050, the first Group of Seven economy

to do so. New Zealand also aims for net zero by 2050. “Climate change is not just an environmental issue, it has social and economic implications too, and shifting to a low emission economy presents new opportunities for innovation,” the government says.

The LTS can also complement and provide key insights for NDCs, which primarily focus on policies and actions until 2025 or 2030. Conventional coal-fired power plants, for instance, can stay in operation for more than 40 years but a new one built today risks becoming obsolete before 2050 under most scenarios for limiting global warming to 1.5°C. The shorter-term NDCs can then be stepping stones to achieve these mid-century goals.

So far, 12 countries have submitted LTS to the UNFCCC since 2016 – Canada, Ger-

many, Mexico, the United States, Benin, France, Czech Republic, United Kingdom, Ukraine, Marshall Islands, Fiji and Japan.

A promising signal is that 97 more nations have indicated that they are also planning for carbon neutrality. Fifty-three countries, including many in the Group of 20, are currently preparing LTS, while 44 more have plans to do so. Coupled with the 12 nations that have already submitted, these countries represent 86 percent of global GHG emissions. Thirty-one countries indicated they did not have plans to prepare LTS, while information was not available for the remaining 58.

About 19 of these countries, and over 200 non-state actors, are at the forefront of ambition for pursuing plans for achieving net-zero CO₂ emissions by 2050 or earlier. These numbers are increasing.



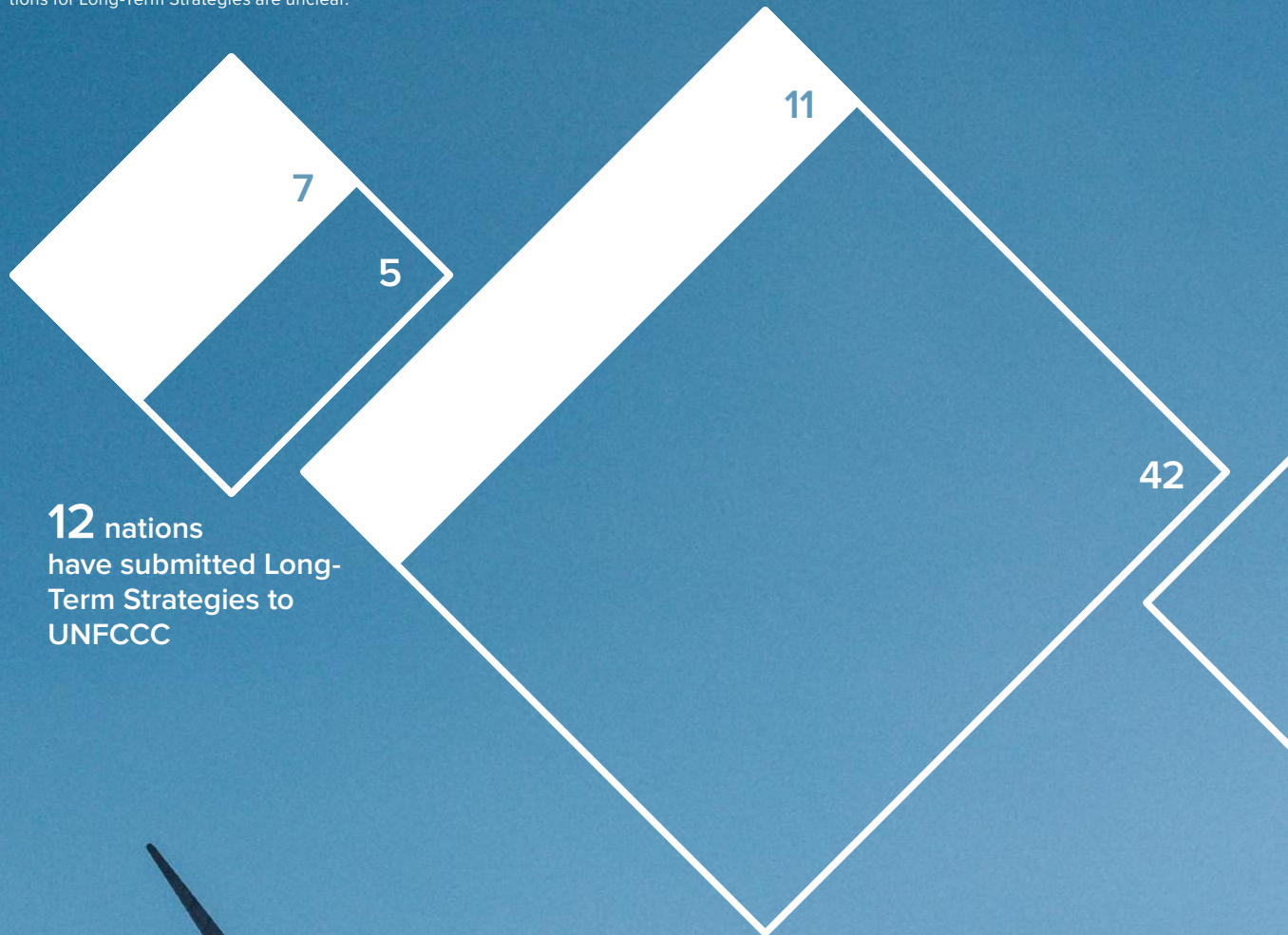
TREND

Countries see value in integrating LTS within long-term development planning. The survey found that 45% of LTS being prepared or planned comprised of integrating the LTS into long-term development strategies or visions. The other types of LTS in preparation were economy-wide (20%), sector-specific (19%) or other (16%).

Overview of country progress on long-term strategy development

- ◆ G20 countries
- ◇ Rest of World

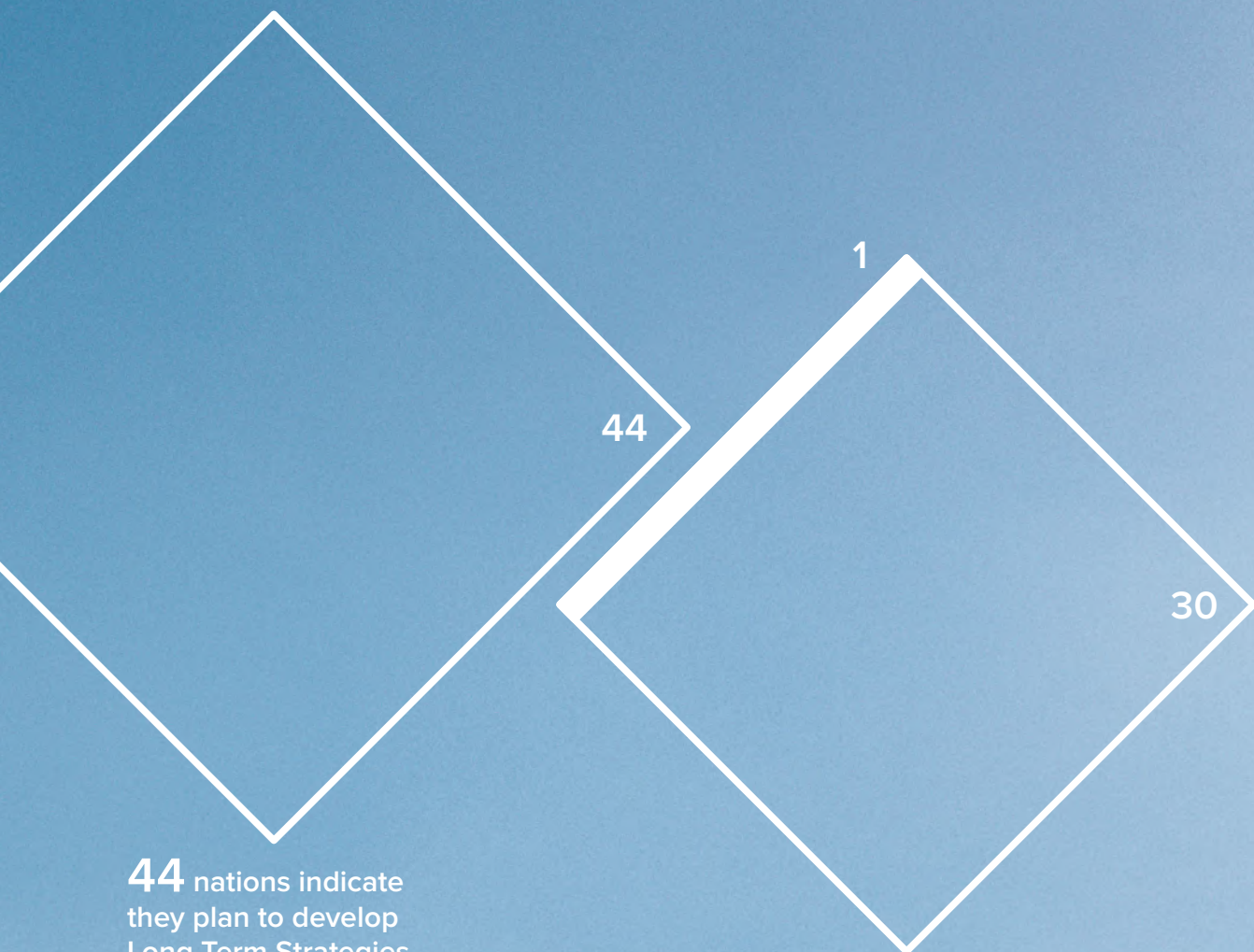
For 57 nations, including one in the G20, intentions for Long-Term Strategies are unclear.



12 nations have submitted Long-Term Strategies to UNFCCC

53 nations are developing Long-Term Strategies

Source: UNDP, UNFCCC



44 nations indicate they plan to develop Long Term Strategies

31 nations have no plans to develop Long-Term Strategies



3

Climate action inseparable from sustainable development

Governments increasingly recognize that action to address climate change is inseparable from delivering the Sustainable Development Goals (SDGs) to eradicate poverty and hunger and reduce inequality, according to the joint analysis. Climate change is already disrupting national economies and affecting lives, with a disproportionate impact on the poor, and prioritising adaptation to climate change is increasingly seen as critical for resilient sustainable development.

Integration of climate and development policies can help raise ambition and is vital to safeguard climate-vulnerable sectors such as water supplies, agriculture, and public health, as well as to articulate specific actions to empower and support women, youth and other constituencies that are vulnerable to climate change. A growing number of countries, including Nepal, Guyana and Lebanon, are breaking down silos and taking steps to treat the climate and development agendas as one.

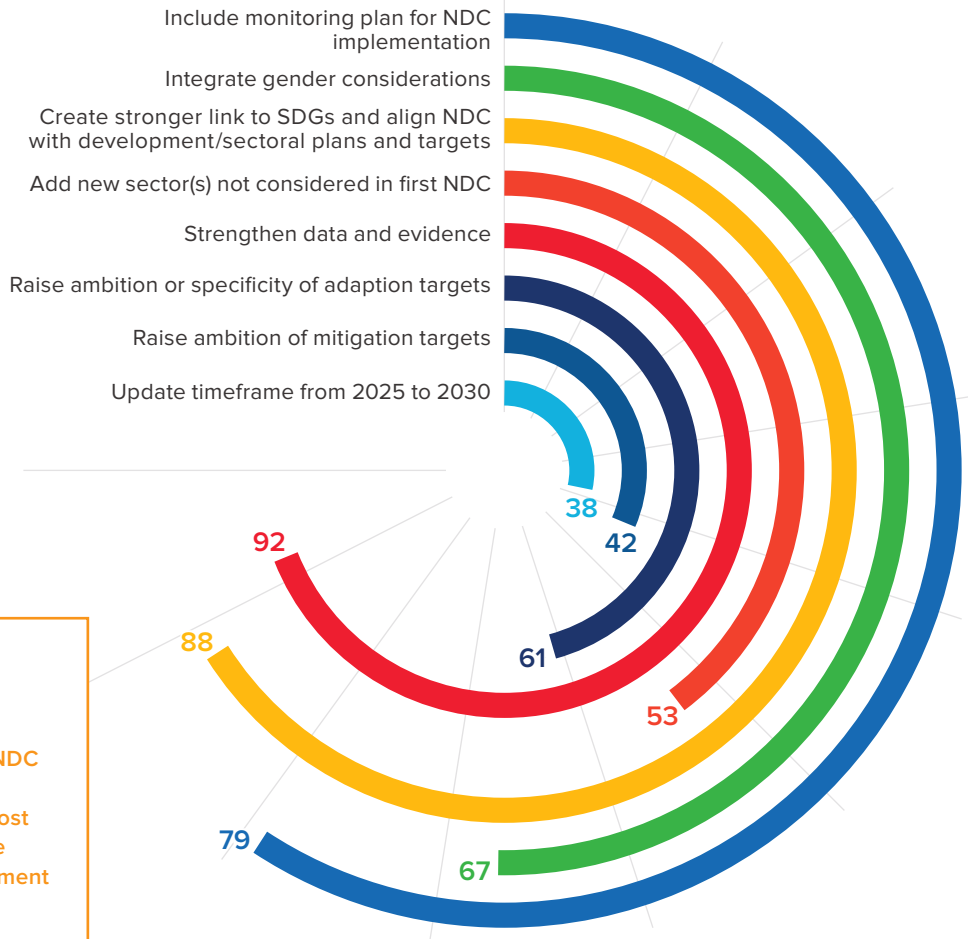
Creating stronger links with SDGs, as well as alignment with development and sectoral plans and targets, was the second most important reason for planned revisions to NDCs, cited by 88 governments. Only strengthening of underlying data and evidence (92 nations) ranked higher. And 67 nations intend to incorporate considerations about gender equality and women’s empowerment into their revised plans – recognizing the vital roles that women can play in combating the impacts of climate change and helping to reduce GHG emissions.

Tighter links with development goals can also reinforce action to eliminate poverty and hunger. Ghana’s current NDC, for instance, focuses on sustainable land use including food security, reinforcing infrastructure such as bridges or roads to resist flooding or landslides, and equitable social development.

 **Women in developing nations are on the front line of climate change** because they often have the brunt of fetching fuelwood and water, cooking, and running small farms. First-hand knowledge also makes them suitable as leaders. Integrating gender considerations into NDC planning was mentioned often by countries. Kenya has included a gender equality approach to climate technologies and innovation in the private sector, targeting women and youth to support them to commercialize clean technology businesses.

Main objectives for revising NDC

Source: UNDP 2019 NDC survey in 133 countries



 **TREND**

A key lesson learned from the INDC process is that participation is needed to create ownership. Most governments are including more extensive outreach and engagement plans for the NDC revision.

4

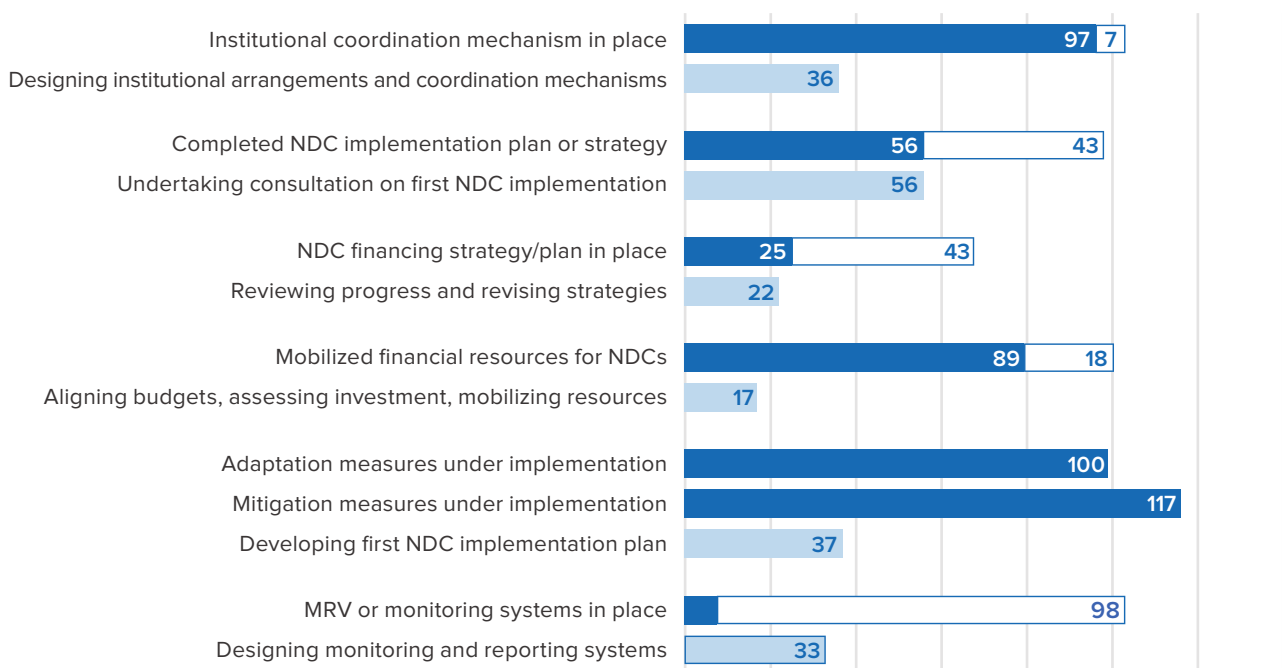
Critical NDC systems and architecture are moving into place – vital to action

Successful NDC implementation will require countries to put in place many key systems and building blocks. Developed countries already have many core components of the NDC architecture in place because of their more stringent reporting requirements under the 1992 Climate Convention. But the Paris Agreement reflects the first time that all nations are setting targets. While many developing nations have begun to make progress on more systematic processes such as biennial update reports, it will inevitably take time to create laws and policies, mainstream NDC targets, mandate institutional coordination, improve regulatory and legal frameworks, and establish financial mechanisms for climate priorities.

Developing countries have made significant progress over the 18 months in putting in place the key architectural components and systems needed to advance NDC implementation, which will be vital to encouraging bolder climate action.

NDC implementation progress from March 2018 to August 2019

- Done in 2018
- Done in 2019
- In preparation



Source: EOSG's 2018 NDC survey in 104 countries and UNDP's 2019 NDC survey in 133 countries



5 Widening progress across society since Paris – bottlenecks remain

Since 2015, the private sector, cities, regions, investors, civil society and other stakeholders have all become more involved in solutions to climate change. However, far more action is needed if we are to achieve the 1.5°C goal. Reported bottlenecks to NDC implementation include challenges of assessing the costs of different options and accessing finance, limited institutional capacity or lack of engagement by key ministries, limited access to reliable data, and lack of political will.

However, governments also highlighted a variety of ways in which these barriers are being overcome, such as strengthened policy and regulatory frameworks, more structured processes for engaging the private sector and citizens, and mainstreaming of NDC targets into plans, policies, and budgets.

Developing nations indicate that a lack of access to finance is the biggest single hurdle to raising ambition. Global total

climate related finance flows, ranging from private sector investments in solar or wind energy to investments in defences against river flooding, totaled \$681 billion in 2016, rising 17 percent in 2015-16 compared to 2013-14.

In 2009, developed nations pledged to mobilise \$100 billion in climate finance each year for developing countries by 2020, from both public and private sources. That level will be a floor in the future under the Paris Agreement, but is only a fraction of total investment needed.

Pathways limiting global warming to 1.5°C are projected to involve annual average investment needs of around \$2.4 trillion in the energy system alone between 2016 and 2035, representing about 2.5 percent of the world's Gross Domestic Product (GDP), the IPCC says. Most studies indicate that those costs will be dwarfed by benefits, ranging from more jobs in clean energy to less air pollution and more stable water and food supplies.

Top bottlenecks reported for NDC implementation, raising ambition, and mobilising society

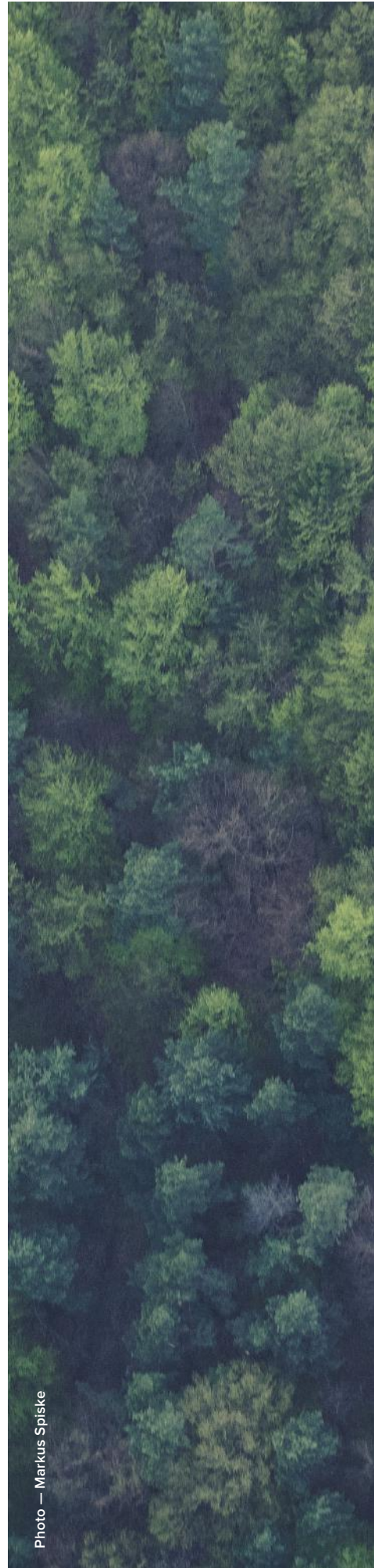


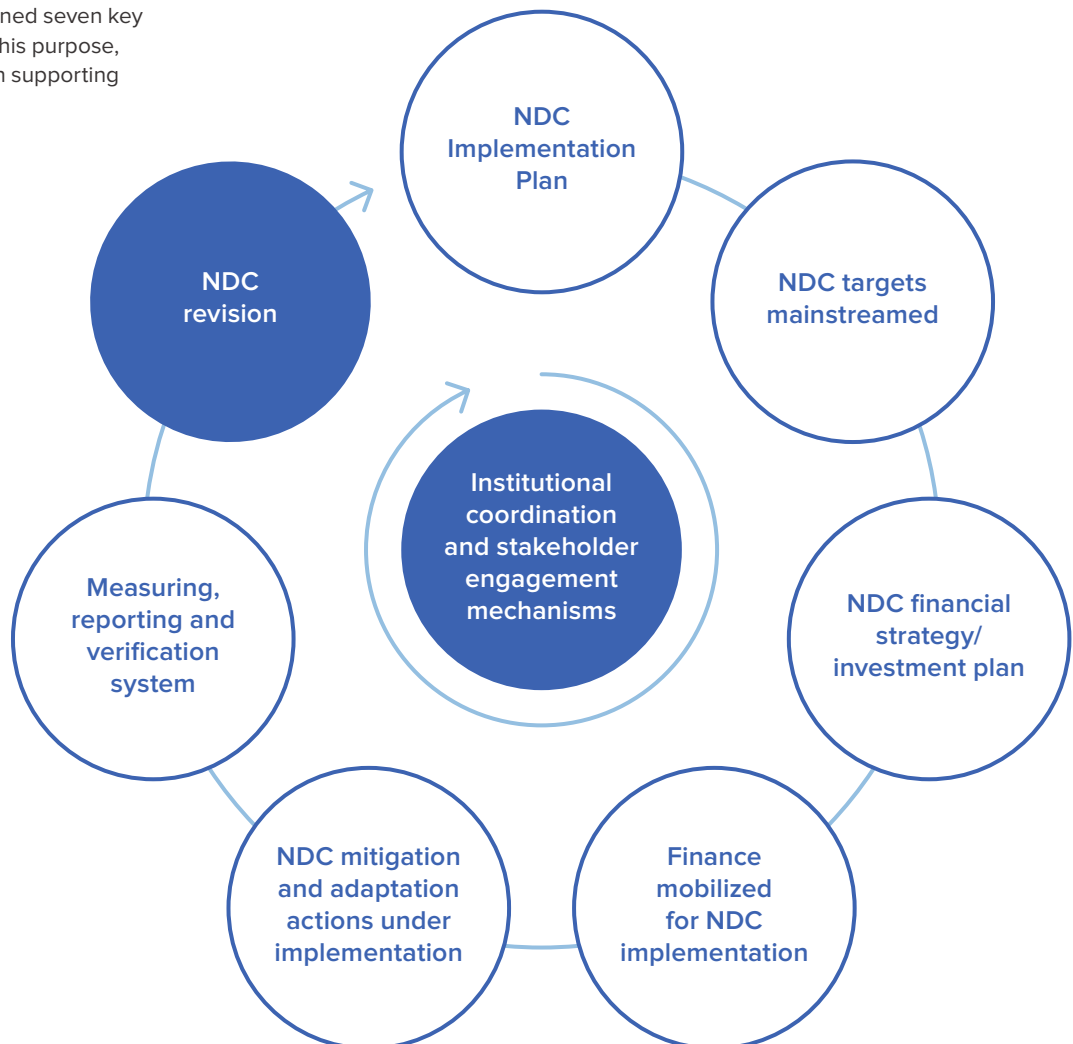
Photo — Markus Spiske



3. NDC implementation progress

Significant progress on NDC “building blocks”

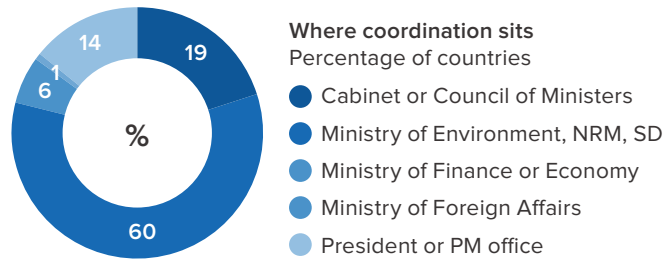
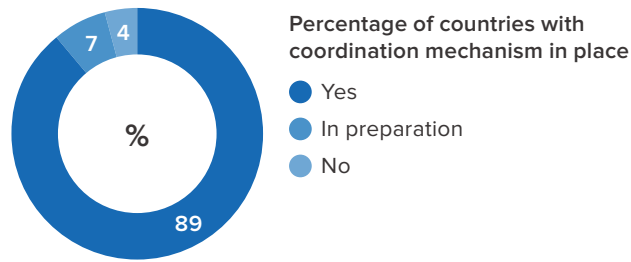
The five-year cycles of the NDC will require countries to have in place systems, processes and tools to support the phases of design/review, implementation, monitoring, and revisions, in an efficient and transparent manner. UNDP defined seven key elements as essential for this purpose, derived from experience in supporting countries on NDCs.



1. Institutional coordination and stakeholder engagement mechanisms

Establishment of a mechanism or designated entity to coordinate NDC planning, implementation and monitoring, helps to effectively implement NDCs, especially for coordination across sectors, institutions and various stakeholder groups.

Almost 90 percent of countries surveyed have a “coordination mechanism” in place to guide NDC implementation. Eighty percent of countries also have mechanisms in place to coordinate and engage other parts of society - beyond government, including the private sector, research institutions and civil society. Climate policies, traditionally overseen by environment ministries which often have limited power, are now getting higher priority. In a third of countries, these policies are now run by the office of the Prime Minister or President, or by the full cabinet or council of ministers. The survey showed that the involvement of other key Ministries including Planning and Finance is critical to gain traction and ensure the effective inclusion of NDC targets in national planning and budgeting.

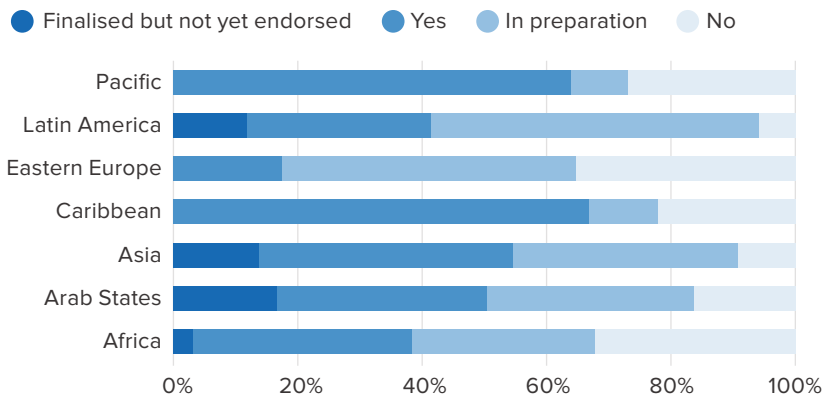


2. NDC Implementation Plan Prepared

NDC implementation plans or roadmaps describe the process for delivering the targets of the NDC. Most countries have used the process of developing these plans to negotiate with key sector actors and define and prioritise policies and measures to meet the targets and agree on roles and responsibilities.

Most countries (80 percent) are pursuing strategies to implement NDC priorities. Nearly half of those have already finalized a strategy.

NDC implementation strategy in place

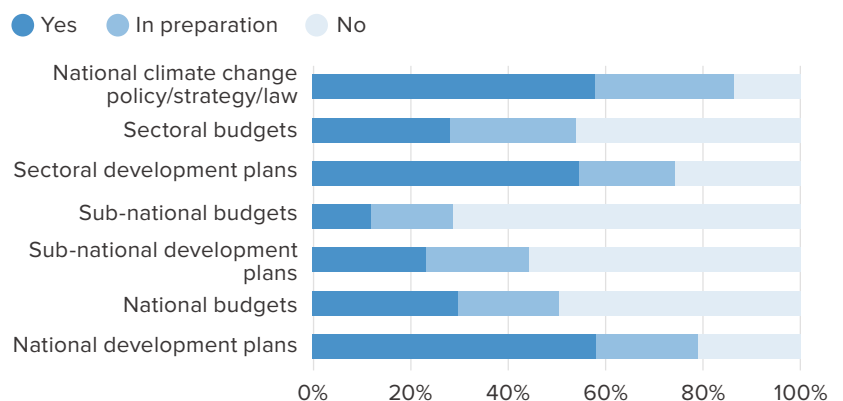


3. NDC targets mainstreamed

For developing countries, the Paris Agreement is the first time that most will have targets. Lengthy awareness-raising and negotiations with key sectors and stakeholders have been essential – even after the NDCs were validated. Almost all countries say they have or are in the process of “mainstreaming” their NDC targets, integrating them into national climate change policies, strategies, budgets and laws. So far, NDCs are mainstreamed mainly in the energy sector, followed by agriculture, water, forestry, and transport.

There is less progress on ensuring that NDCs are part of budgets, especially at regional levels, and in regional development planning. This suggests that governments have not yet considered how to fund a long-term shift to net-zero carbon and have not sufficiently engaged sub-national actors.

Mainstreaming of NDC target into



ETHIOPIA

Planting Trees for a Green Legacy

Ethiopia says it planted more than 350 million tree seedlings on 29 July 2019, in what the government reckons was a one-day world record in a broader campaign to promote sustainable development and slow down climate change.

Prime Minister Abiy Ahmed's office says the country's broad "Green Legacy" project seeks "to raise the public's awareness about Ethiopia's frightening environmental degradation". Children, government workers and many others took part in the mass nationwide planting.

Trees soak up carbon dioxide from the atmosphere as they grow, helping to reduce global warming while bringing other benefits such as protecting biodiversity. The important role of land use and forests is therefore recognized in many NDCs and is an opportunity for enhancing ambition. Ethiopia's forests shrank from 15.1 million hectares in 1990 to 12.5 million in 2015, the UN's Food and Agriculture Organization says. Ethiopia's NDC includes a goal of expanding forest cover by more than seven million hectares by 2030, a key nature-based solution captured in many NDCs.

The country has been among the most prominent on climate change among the least developed countries.

A Climate Action Tracker, compiled by European researchers, ranks Ethiopia among only a few countries whose policies are compatible with limiting global warming to 2°C. Ethiopia was also a founding member of the Vulnerable 20 (V20) group, which represents developing nations most at risk from climate change.

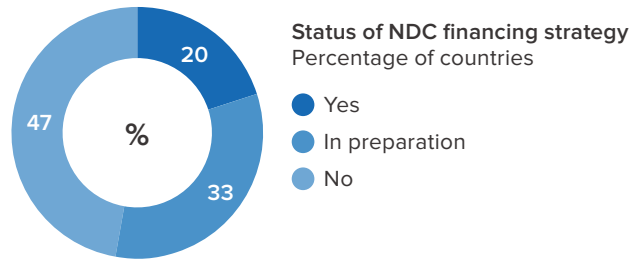


Photo — Clay Knight

4. NDC financial strategy/ investment plan

The financing strategy (plan or framework) describes how NDC targets and associated actions will be funded. This could include identification of sources of financing, strategies for accessing those sources, or definition of specific projects or pipeline for investment.

A majority of countries (53 percent) already have (20 percent) or are designing (33 percent) a financial strategy or investment plan to mobilise finance to implement their NDCs. Such strategies include identifying sources of finance - such as taxes on fossil fuels or foreign grants or loans - and to define a list of projects for investment. However, the remaining 47 percent have no such instruments in place.

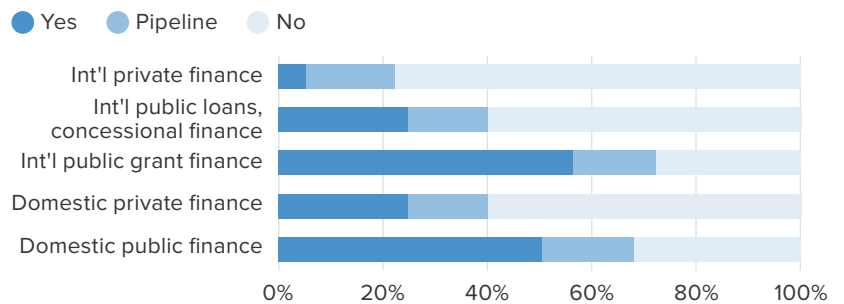


5. Finance mobilized for NDC implementation

Most countries surveyed had mobilized funds for NDC implementation, primarily international grant financing or domestic public funds. Fewer than 30 percent have mobilized funds from international loans or domestic private sources. And fewer than 10 percent have had access to international private finance.

Countries with a finance strategy have more often managed to mobilise domestic public funding for their NDCs. And countries with a finance strategy also clearly benefit in mobilization of international grants - of 16 nations with finance strategies in place, 14 have managed to secure international grants.

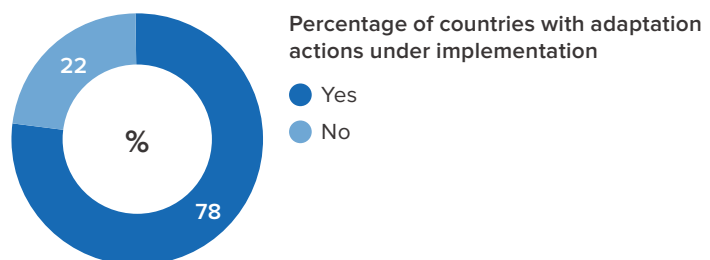
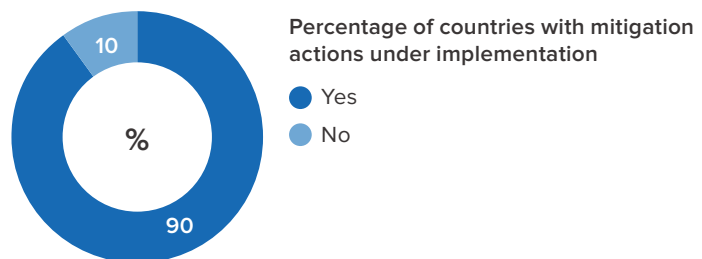
Percentage of countries that have already mobilized finance to support NDC implementation, specified by type of source



6. NDC mitigation and adaptation actions under implementation

Almost 90 percent of countries are already acting to curb GHG emissions, mainly focused on renewable energy. Also, most are acting to adapt their economies to the effects of climate change, mainly in agriculture or by managing forests and other ecosystems.

Having a finance strategy appears to boost action - all countries except one with a finance strategy have started actions to reduce emissions. There are some apparent mismatches - countries say the most vulnerable sectors are water, agriculture and public health yet only four percent of actions to cope with climate change go to the health sector.



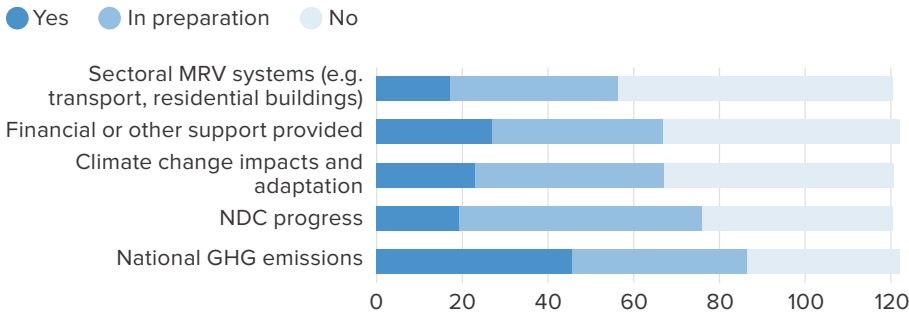
7. Measuring, reporting and verification (MRV) system

MRV systems monitor progress on NDCs, both in terms of GHG emissions trends, impacts and adaptation, financial or other type of support provided, or NDC progress as a whole. Systems might monitor economy-wide progress or by sector.

Almost all countries indicated they have a reporting system in place, or are preparing one, mainly for GHG emissions, which

have been mostly commonly reported by developing countries under the 1992 climate Convention.. Many countries are also setting up an MRV system specifically to track the progress of their NDCs. Under the Paris Agreement, countries are due to have a first “global stocktake” in 2023 to assess progress towards the goal of keeping temperatures low - assessing progress will be impossible without MRV systems.

Number of countries with MRV systems in place, by type



KAZAKHSTAN

The Winds of Change

The energy-rich Central Asian nation of Kazakhstan is switching to solar and wind power as part of its long-term vision to generate half of its electricity from alternative energies by 2050, cutting its dependence on fossil fuels.

Almost 90 percent of electricity currently comes from coal and natural gas; the remainder from hydropower.

A green economy plan adopted in 2013 set intermediate goals to raise the share of solar and wind in power generation – three percent by 2020 and 10 percent by 2030. By 2017, solar and wind had reached one percent penetration, the government said in its most recent report to the UN.

Kazakhstan’s NDC builds upon this ambitious national strategy for economic transformation that is centered on sustainable development, greater foreign investment, and a push for renewable energy. To enable its implementation, Kazakhstan was the first country in Central Asia to launch a National Emissions Trading System in 2013 to regulate domestic CO2 emissions and promote a low-carbon economy. The government has also adopted an advanced platform for measurement, reporting and verification of greenhouse gas emissions.

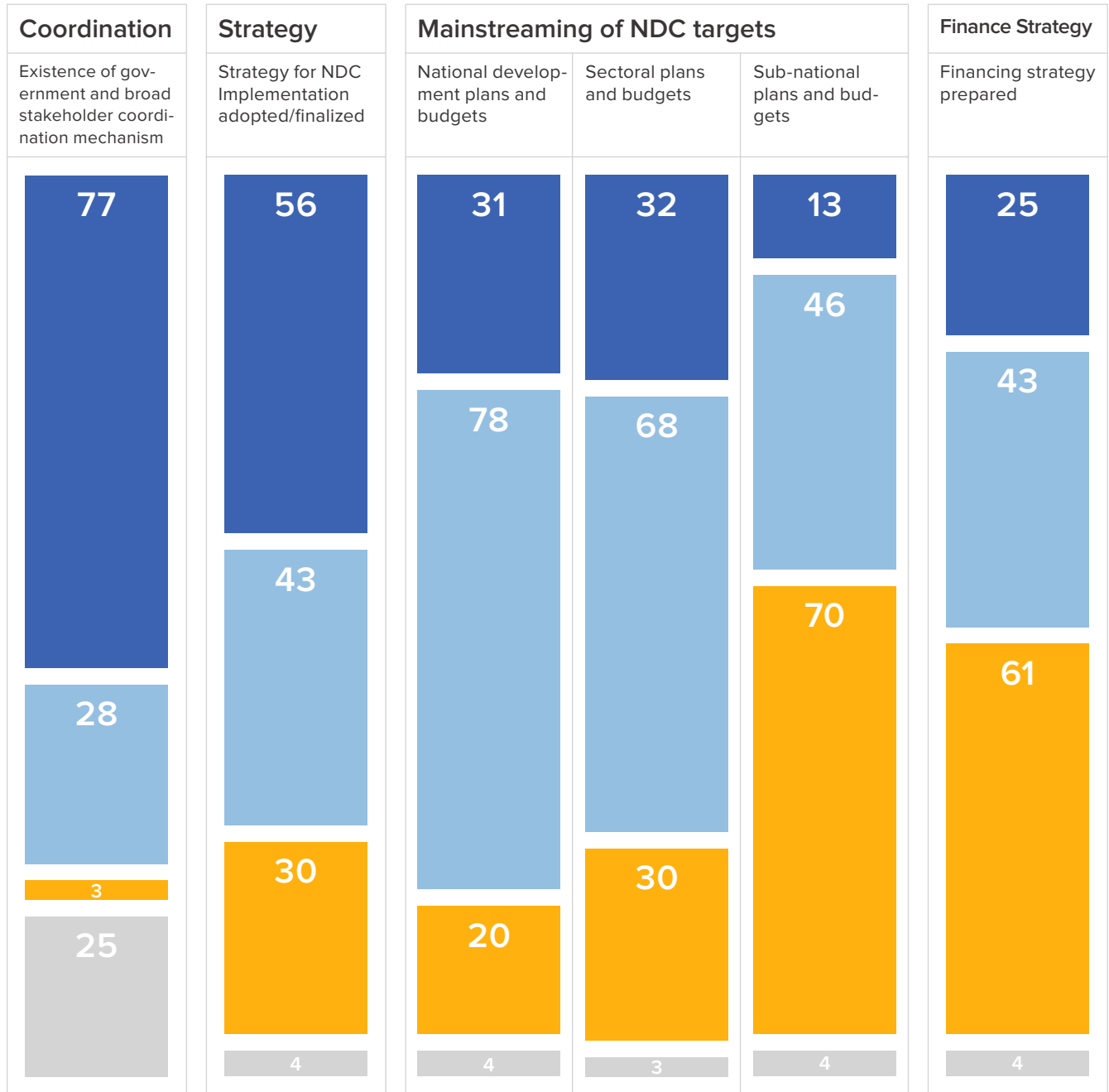
More recently, the government began incentives for energy efficiency. Kazakhstan is among the world’s top 10 countries with the highest energy consumption per unit of GDP.



Photo — United Nations Development Programme in Europe and CIS/flickr

2020 ready?

A global snapshot of how well-advanced countries are in establishing key systems and architecture for successful NDC implementation. Note: A country may be advanced on some building blocks but lagging on others.



Inter-ministerial coordination and stakeholder engagement mechanisms both in place

One mechanism in place

No mechanisms in place, or in preparation

No response

Note *

Yes
In preparation
No

No response

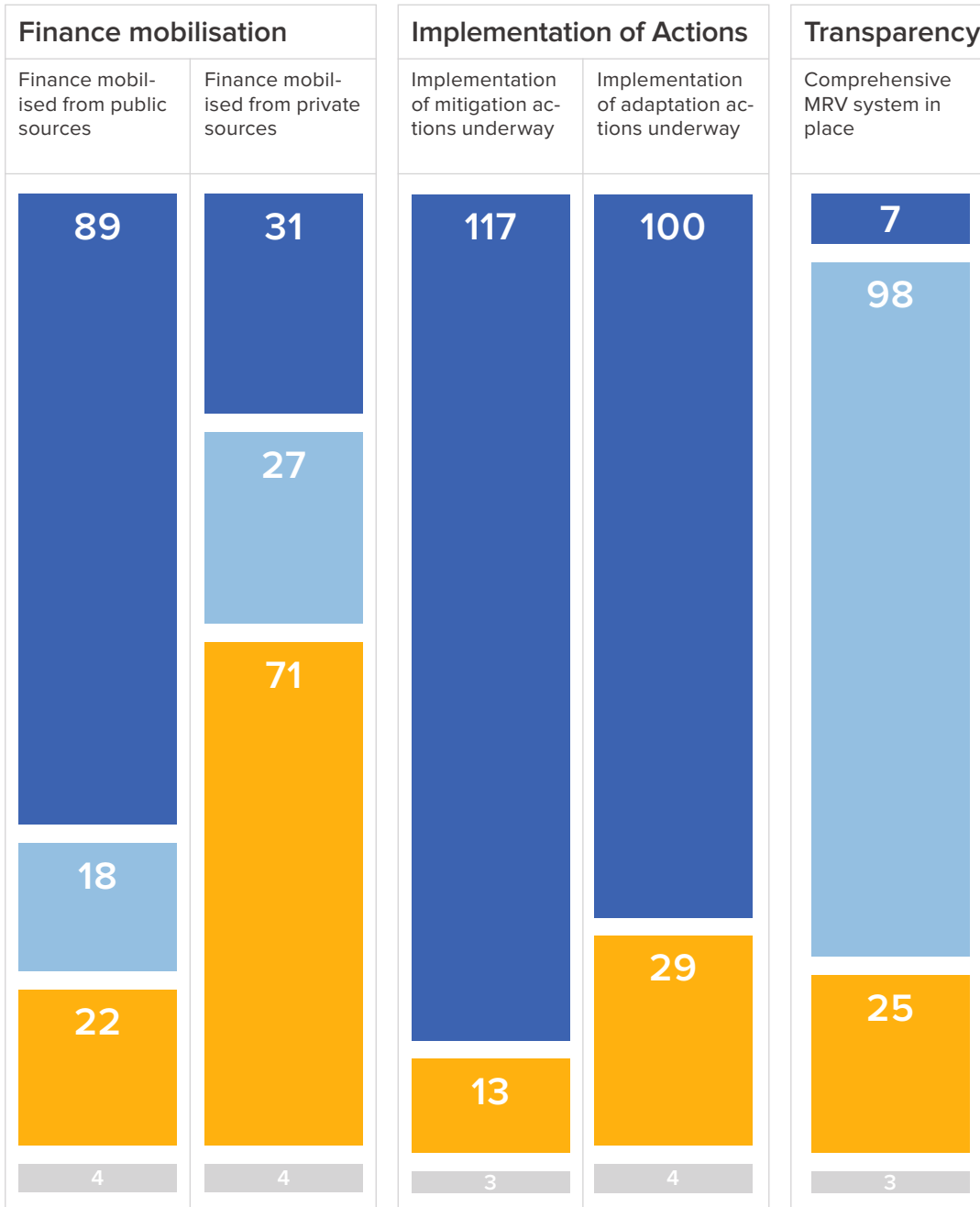
Mainstreamed in both plan and budget
Mainstreamed in either plan or budget
Not mainstreamed

No response

Yes
In preparation
No

No response

* 20 countries did not respond to the survey question on coordination mechanisms due to a technical issue.



Yes
 Pipeline
 No
 No response

Yes
 No
 No response

Covers MRV of GHG emissions, NDC progress & support
 Covers 1 or 2 categories
 No system in place
 No response

CHILE

Closing coal

Chile announced plans in June 2019 to close eight coal-fired power plants in the next five years and set a long-term goal to become carbon neutral by 2050. Chile, which will host this year's international climate negotiations in December on implementing the Paris Agreement, said the closures represent 19 percent of the nation's coal-fired installed generation capacity.

The government aims to shut down all remaining coal-fired power plants by 2040 and to achieve carbon neutrality by 2050, meaning that Chile's forests will soak up as much CO₂ as they grow as is emitted by human activities.

Chile's national power grid now has 28 coal-fired power plants, accounting for almost 40 percent of electricity generation and emitting 26 percent of the country's GHGs. Enel Chile, one of the companies most affected by the first wave of closures, said it would relocate workers but planned no layoffs. The company said it would focus even more on renewable energies including solar, wind and geothermal power.

Chile is one of few countries with an emissions tax, of \$5 per tonne of CO₂, applied to thermoelectric power plants above 25MW. The tax, along with abundant sunshine, helps solar energy generation and private engagement in NDC implementation.



Photo — Victoroddt/flickr



Methodology note and definition of terms

The purpose of this Report is to provide an overall snapshot of momentum with respect to the direction of overall climate ambition. The intention is not to provide individual analysis or comment on the work of any one nation.

Sources:

This report is based on UNFCCC analysis and outreach that gathered information from 197 Parties, including from 184 NDCs, 44 annual GHG inventory reports, 13 NAPs, 51 NAPAs, the biennial update reports of 46 Parties and the latest biennial reports and national communications, and on the results of a UNDP survey on NDC implementation and 2020 intentions that was conducted from May to August 2019. The survey was disseminated to 197 parties and 133 responses were received from government focal points on climate change. The survey was confidential.

Survey responses regarding 2020 intentions were verified and cross-referenced against similar tracking efforts of the UNFCCC. They were further validated against information compiled by the NDC Partnership and the government of the UK.

Definitions:

Four primary responses were identified in a review of country intentions for the communication of NDCs in 2020 and the following terms and definitions were applied for classification purposes:

- **Will enhance ambition:** Information indicates that the country is engaged in an exercise of identifying opportunities to enhance ambition of either mitigation targets, adaptation targets, or both, as self-defined by the country, or believes it has already communicated a more ambitious new or updated NDC;
- **Will update:** Information indicates that the country is engaged in an exercise of updating information in its NDC but there are no activities that imply they intend to enhance ambition on mitigation or adaptation. Updates could include, for example, revising underlying data and assumptions, incorporating latest trends of sectoral action, incorporating Katowice decisions, and others;
- **Unclear:** Information available does not allow a country's intentions to be clearly predicted, although the underlying reasons differ. In some cases, the country is willing to revise its NDC but either the process has not yet started and/or support does not appear to be currently available and so it is unclear if a revised NDC will be communicated. In other cases, information received is either conflicting or it indicates that the country is still undergoing a decision-making process. Finally, in select cases, no substantiated information was available;
- **Will not revise:** Information indicates that the country does not plan to update or communicate a new NDC.

In the case of Long-Term Strategies, two primary classifications were used for 2020 intentions:

- **Intends to communicate:** Refers to countries that have indicated an interest in communicating an LTS, but have not yet started the process either due to ongoing internal discussions or because they are seeking support;
- **Preparing to communicate:** Refers to countries in the process of defining LTS for submission.



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