Организация Объединенных Наций FCCC/PA/CMA/2021/2

Рамочная конвенция об изменении климата

Distr.: General
26 February 2021
Russian
Original: English

Конференция Сторон, действующая в качестве совещания Сторон Парижского соглашения
Третья сессия
Глазго, 1–12 ноября 2021 года

Определяемые на национальном уровне вклады по смыслу Парижского соглашения

Обобщающий доклад секретариата

Резюме

В настоящем докладе обобщается информация, содержащаяся в 48 новых или обновленных определяемых на национальном уровне вкладах, представленных 75 Сторонами в соответствии с решением 1/CP.21 и зарегистрированных во временном реестре определяемых на национальном уровне вкладов по состоянию на 31 декабря 2020 года.

Содержание

Аббревиатуры и сокращения

Руководящие принципы МГЭИК 2006 года	*Руководящие принципы МГЭИК 2006 года для национальных кадастров парниковых газов*
РПВК	действия по расширению прав и возможностей для борьбы с изменением климата
ДО	Доклад об оценке Межправительственной группы экспертов по изменению климата
МЧР	механизм чистого развития
CH_4	метан
КСС	Конференция Сторон, действующая в качестве совещания Сторон Парижского соглашения
КС/СС	Конференция Сторон, действующая в качестве совещания Сторон Киотского протокола
CO_2	диоксид углерода
экв. CO_2	эквивалент диоксида углерода
КС	Конференция Сторон
COVID-19	коронавирусная инфекция 2019 года
ВВП	валовой внутренний продукт
ПГ	парниковый газ
ПГП	потенциал глобального потепления
ГФУ	гидрофторуглерод
ПОНУВ	предполагаемый определяемый на национальном уровне вклад
МГЭИК	Межправительственная группа экспертов по изменению климата
ППИП	промышленные процессы и использование продуктов
ДС СРНУВ	долгосрочная стратегия развития при низком уровне выбросов
ЗИЗЛХ	землепользование, изменения в землепользовании и лесное хозяйство
N_2O	закись азота
НПА	национальный план в области адаптации
ОНУВ	определяемый на национальном уровне вклад
NF_3	трифторид азота
СиМ*	стратегии и меры
ПФУ	перфторуглерод
СВОД-плюс	сокращение выбросов в результате обезлесения; сокращение выбросов в результате деградации лесов; сохранение накоплений углерода в лесах; неистощительное использование лесов; и увеличение накоплений углерода в лесах (решение 1/CP.16, п. 70)
ЦУР	цели в области устойчивого развития
SF_6	гексафторид серы
НКЗ*	нестойкий климатический загрязнитель
СД1.5	Специальный доклад Межправительственной группы экспертов о воздействии глобального потепления на 1,5 °C

* Используется исключительно в диаграммах.

I. Резюме

1. Настоящий доклад был подготовлен в ответ на адресованные секретариату просьбы КС 21 и КСС 2[1] подготовить обобщающий доклад о представленных Сторонами ОНУВ. С учетом переноса с 2020 года на 2021 год Конференции Организации Объединенных Наций по изменению климата, которая должна состояться в Глазго, и воздействия пандемии COVID-19 на подготовку ОНУВ секретариат проинформировал Стороны о том, что он опубликует обобщающий доклад по ОНУВ в два этапа: первоначальный вариант — до 28 февраля 2021 года и окончательный вариант — до КС 26.

2. В настоящем первоначальном варианте доклада обобщена информация, полученная из 48 ОНУВ, представляющих 75 Сторон, которые по состоянию на 31 декабря 2020 года были представлены в качестве новых или обновленных ОНУВ в соответствии с пунктами 23–24 решения 1/СР.21 или в качестве новых ОНУВ в том случае, если ОНУВ Стороны не был преобразован автоматически в соответствии с пунктом 22 этого решения. ОНУВ, рассмотренные для подготовки настоящего доклада, охватывают около 40 % Сторон Парижского соглашения и около 30 % глобальных выбросов ПГ в 2017 году.

3. В качестве основы для обобщения соответствующей информации, содержащейся в сообщенных ОНУВ, использовались руководящие указания КС и КСС[2] в отношении информации, необходимой для обеспечения ясности, транспарентности и понимания ОНУВ, которые были дополнены обобщением другой информации, включенной в ОНУВ, но не охваченной этими руководящими указаниями. Обобщенная информация приведена для всех представленных Сторон вместе взятых.

4. Почти все Стороны[3] предоставили информацию, необходимую для содействия ясности, прозрачности и пониманию их ОНУВ в соответствии с руководящими указаниями КС, причем многие из них уже применяют соответствующие дополнительные руководящие указания КСС[4].

5. Все Стороны представили информацию о целевых показателях предотвращения изменения климата, в частности на 2025 и/или 2030 годы. Целевые показатели предотвращения изменения климата варьируются от целевых показателей абсолютного сокращения выбросов в масштабах всей экономики до стратегий, планов и действий по развитию с низким уровнем выбросов. В своих новых или обновленных ОНУВ:

a) почти все Стороны представили четко определенные количественные целевые показатели предотвращения изменения климата, при этом некоторые Стороны включили стратегии, планы и действия в качестве компонентов своих ОНУВ, которые не могут быть оценены количественно;

b) многие Стороны укрепили свою приверженность сокращению или ограничению выбросов ПГ до 2025 и/или 2030 года, поставив перед собой более амбициозные цели в области решения проблем, связанных с изменением климата;

c) больше Сторон, чем ранее, сообщили целевые показатели абсолютного сокращения выбросов, причем некоторые из них перешли к целевым показателям в масштабах всей экономики, в результате чего большинство Сторон имеют ОНУВ, охватывающие все секторы экономики, определенные в Руководящих принципах МГЭИК 2006 года;

[1] Решение 1/CMA.2, п. 10

[2] Решение 1/СР.21, п. 27; и 4/CMA.1 и приложение I.

[3] В настоящем докладе для указания процентной доли Сторон, чьи ОНУВ содержат конкретную информацию, используются следующие термины: «несколько» — менее 10 %; «некоторые» — 10–40 %; «много» — 41–70 %; «большинство» — 71–90 %; и «почти все» — более 90 %.

[4] См. сноску 2 выше.

d) Стороны расширили охват секторов и ПГ: охвачено 99,2 % их общих выбросов ПГ по сравнению с 97,8 % для предыдущих ОНУВ; и все они охватывают выбросы CO_2, почти все — выбросы CH_4 и N_2O, большинство — выбросы ГФУ и многие — выбросы ПФУ, SF_6 и NF_3.

6. Почти все Стороны сообщили, их ОНУВ будут осуществляться до 2030 года, а некоторые другие сообщили, что они будут осуществлять свои ОНУВ до 2025 или 2050 года. Многие Стороны определили 1 января 2021 года в качестве даты начала осуществления ОНУВ; некоторые другие указали, что они начали осуществлять свои ОНУВ в 2020 году или раньше; и несколько Сторон начнут это делать в 2022 году.

7. Почти все Стороны обновили основу для определения своих целевых показателей, включая ориентиры и сценарии обычной хозяйственно-производственной деятельности. Хотя такие обновленные данные ведут к повышению качества ОНУВ, для некоторых Сторон они приводят к значительным изменениям в оценочных уровнях выбросов на 2025 и 2030 годы по причинам, не связанным с изменением целевых уровней.

8. Почти все Стороны представили информацию о добровольном сотрудничестве в соответствии со статьей 6 Парижского соглашения, при этом доля Сторон, заявивших, что они планируют или, возможно, будут использовать по крайней мере один вид добровольного сотрудничества, увеличилась по сравнению с их предыдущими ОНУВ более чем вдвое. В то же время гораздо большее число Сторон, чем ранее, установили качественные ограничения на использование ими добровольного сотрудничества для достижения своих целевых показателей предотвращения изменения климата.

9. Многие Стороны упомянули пандемию COVID-19, однако большинство из них не отразили в своих ОНУВ ее возможное воздействие. Долгосрочные последствия соответствующих изменений в национальных и глобальных выбросах ПГ будут зависеть от продолжительности пандемии, а также от характера и масштабов мер по восстановлению.

10. Согласно прогнозам, общие уровни выбросов ПГ в результате достижения целевых показателей, сообщенных в новых или обновленных ОНУВ, составят около 14,04 Гт экв. CO_2 в 2025 году и около 13,67 Гт экв. CO_2 в 2030 году[5], что примерно на 0,3 % (38 Мт экв. CO_2) меньше в 2025 году и примерно на 2,8 % (398 Мт экв. CO_2) меньше в 2030 году по сравнению с общими уровнями выбросов по предыдущим ОНУВ Сторон[6].

11. Общий объем выбросов ПГ Сторон, по оценкам, в среднем:

a) к 2025 году будет на 2,0 % выше уровня 1990 года (13,77 Гт экв. CO_2), на 2,2 % выше уровня 2010 года (13,74 Гт экв. CO_2) и на 0,5 % выше уровня 2017 года (13,97 Гт экв. CO_2);

b) к 2030 году будет на 0,7 % ниже, чем в 1990 году, на 0,5 % ниже, чем в 2010 году, и на 2,1 % ниже, чем в 2017 году.

12. С учетом осуществления лишь безусловных элементов ОНУВ оценки указывают на возможность достижения Сторонами пика выбросов до 2030 года. С учетом полного осуществления ОНУВ, включая условные элементы,

[5] По оценкам, общие выбросы ПГ варьировались от 13,69 до 14,39 Гт экв. CO_2 на 2025 год от 13,13 до 14,21 Гт экв. CO_2 на 2030 год. Эти диапазоны представляют собой минимальные и максимальные значения, вытекающие из представленных целевых показателей, и отражают результаты реализации безусловных и условных элементов ОНУВ.

[6] Если не указано иное, для настоящего доклада уровни выбросов ПГ исключают выбросы в секторе лесного хозяйства и в результате других видов землепользования или в секторе ЗИЗЛХ; и используются значения ПГП на 100-летний период из ДО4 (четвертый доклад об оценке). Для ОНУВ, включающих оценки выбросов ПГ с использованием других значений ПГП (например, из ДО2 или ДО4), было осуществлено преобразование. Дополнительную информацию, в том числе о методах и подходах оценки, см. в добавлении 3 к настоящему документу.

прогнозируемые уровни выбросов на 2030 год ниже нынешних уровней выбросов, что предполагает возможность достижения пика выбросов Сторон не позднее 2025 года или не позднее 2030 года. Реализация большинства условных элементов зависит от доступа к более значительным финансовым ресурсам, передачи технологий и технического сотрудничества, а также от поддержки в области наращивания потенциала; наличия рыночных механизмов; и поглотительной способности лесов и других экосистем.

13. Согласно СД1.5[7], для того чтобы соответствовать глобальным вариантам выбросов без превышения или с ограниченным превышением цели в 1,5 °C, к 2030 году глобальные чистые антропогенные выбросы CO_2 должны сократиться примерно на 45 % от уровня 2010 года, достигнув чистого нулевого показателя примерно к 2050 году. Для того чтобы удержать глобальное потепление в пределах 2 °C, выбросы CO_2 должны сократиться примерно на 25 % от уровня 2010 года к 2030 году и выйти на чистый нулевой уровень примерно к 2070 году. Значительное сокращение требуется и для выбросов, не содержащих CO_2. Таким образом, предполагаемые сокращения, упомянутые в пунктах 10–11 выше, совсем не соответствуют тому, что требуется, что свидетельствует о необходимости дальнейшего укрепления Сторонами своих обязательств по предотвращению изменения климата согласно Парижскому соглашению[8].

14. Для получения четкого представления о совокупном вкладе ОНУВ в достижение цели Конвенции, изложенной в ее статье 2, а также пункта 1 a) статьи 2 и пункта 1 статьи 4 Парижского соглашения окончательный вариант обобщающего доклада по ОНУВ будет включать сопоставление прогнозируемых общих уровней выбросов в результате осуществления всех НСРС с различными сценариями и показателями предотвращения изменения климата, оцененными МГЭИК, включая глобальные варианты выбросов для достижения целей 1,5 и 2 ºC. Представление такой информации в настоящем первоначальном докладе было невозможно из-за ограниченного числа ОНУВ, включенных в доклад.

15. Согласно новым или обновленным ОНУВ, выбросы ПГ на душу населения составляют, по оценкам, 6,52 т экв. CO_2 в 2025 году и 6,19 т экв. CO_2 в 2030 году, что на 4,7 % меньше в 2025 году и на 9,6 % меньше в 2030 году, чем в 2017 году.

16. Многие Стороны представили информацию о долгосрочных концепциях, стратегиях и целевых показателях предотвращения изменения климата на период до 2050 года и последующий период, ссылаясь на климатическую нейтральность, углеродную нейтральность, нейтральность в отношении выбросов ПГ или чистый нулевой уровень выбросов. С поправкой на неопределенность, присущую таким долгосрочным оценкам, эта информация показывает, что:

a) коллективный уровень выбросов ПГ в Сторонах в 2050 году может оказаться на 87–93 % ниже, чем в 2017 году;

b) их годовые выбросы на душу населения составят 0,5–1,0 т экв. CO_2 в 2050 году, что на 87–93 % ниже, чем в 2017 году, что позволяет предположить, что к 2050 году эти выбросы на душу населения будут находиться в диапазоне, соответствующем росту температуры на 2 ºC и 1,5 ºC при сценариях незначительного превышения, предусмотренных в СД1.5.

17. Большинство Сторон пояснили свой подход к подготовке и осуществлению ОНУВ. Некоторые из них увязали свои ОНУВ с приверженностью переходу к устойчивой и/или низкоуглеродной и устойчивой экономике, принимая во внимание социальные, экологические и экономические факторы, а также ЦУР. Многие указали, что они интегрировали свои цели, задачи и политику ОНУВ в национальные

[7] IPCC. 2018. *IPCC Special Report on the Impacts of Global Warming of 1.5 °C above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*. V Masson-Delmotte, P Zhai, H-O Pörtner, et al. (eds.). Geneva: World Meteorological Organization. Available at https://www.ipcc.ch/sr15/.

[8] Как предусмотрено в п. 11 статьи 4 Парижского соглашения.

законодательные, регулятивные и плановые процессы в качестве средства обеспечения осуществления.

18. Большинство Сторон особо отметили согласованность политики и синергизм между их мерами по предотвращению изменения климата[9] и приоритетами развития, которые включают ДС СРНУВ, ЦУР и в некоторых случаях «зеленое» восстановление после пандемии COVID-19.

19. Большинство Сторон упомянули об официальных механизмах, созданных для проведения консультаций с заинтересованными кругами. Почти все из них указали, что они проводят консультации и участвуют в них на инклюзивной и партисипативной основе, причем некоторые Стороны конкретно указывают на проведение консультаций с учетом гендерных аспектов.

20. Стороны все чаще считают[10], что учет гендерных аспектов позволит повысить амбициозность и эффективность их действий в области климата. Большинство Сторон касались гендерной проблематики в ОНУВ и соответствующей политики и законодательства, или подтверждали общую приверженность гендерному равенству. Из Сторон, которые упомянули гендерную проблематику в своих предыдущих ОНУВ, многие более подробно раскрыли эту тему в своих новых или обновленных ОНУВ. Некоторые из них включили информацию о том, каким образом гендерные аспекты уже учитываются или будут учитываться при осуществлении ОНУВ.

21. Почти все Стороны представили информацию об использовании одного или нескольких элементов РПВК для содействия осуществлению деятельности по предотвращению изменения климата и адаптации и более четко и подробно сообщили об общих принципах, прошлых достижениях, будущих обязательствах, а также потребностях и пробелах в отношении РПВК.

22. Некоторые Стороны рассказали о роли местных общин, а также о роли, положении и правах коренных народов в контексте их ОНУВ, подчеркнув при этом уязвимость коренных народов, обусловленную спецификой обстоятельств, в которых они находятся.

23. Многие Стороны включили адаптационный компонент в свои ОНУВ, некоторые из которых были представлены в качестве сообщений об адаптации. Они предоставили информацию об уязвимостях; мерах по адаптации, включая секторальные действия; планах действий в чрезвычайных ситуациях; и мониторинге и оценке адаптации.

24. По сравнению с предыдущими ОНУВ включение адаптационных компонентов свидетельствует о повышении внимания к адаптационному планированию, в частности к НПА, и включают более ограниченные по времени количественные целевые показатели в области адаптации, а также связанные с ними системы показателей. Усилия по адаптации увязываются с ЦУР, при этом были разработаны более конкретные режимы достижения синергизма и сопутствующих выгод между мерами по адаптации и мерами по предотвращению изменения климата.

25. Что касается приоритетов в области адаптации, то, согласно ОНУВ, Стороны продолжают уделять основное внимание продовольственной безопасности и производству; наземным и водно-болотным экосистемам; здоровью человека; запасам пресной воды; ключевым секторам экономики и услугам; управлению риском бедствий и раннему оповещению; человеческой среде обитания и городским районам; прибрежным районам и повышению уровня моря; океаническим экосистемам; и средствам к существованию и бедности.

[9] В настоящем докладе под (внутренними) мерами по предотвращению изменения климата понимаются конкретные программы и действия, которые способствуют предотвращению изменения климата, включая действия по адаптации и планы диверсификации экономики с параллельными преимуществами в области предотвращения изменения климата.

[10] Доля Сторон, которые упоминают гендерную проблематику и считают ее сквозным вопросом в новых или обновленных ОНУВ, значительно возросла по сравнению с их предыдущими ОНУВ.

26. Почти все Стороны представили информацию о внутренних мерах по предотвращению изменения климата в качестве ключевых инструментов для достижения целевых показателей по предотвращению изменения климата в конкретных приоритетных областях, таких как энергоснабжение, транспорт, строительство, промышленность, сельское хозяйство, ЗИЗЛХ и отходы.

27. Наиболее часто Стороны упоминали внутренние меры по предотвращению изменения климата для производства возобновляемой энергии, за которыми следовали меры по повышению энергоэффективности. Несколько Сторон сообщили количественные целевые показатели в отношении доли (от 13 до 100 %) возобновляемых источников энергии в структуре энергобаланса к 2030 году; и некоторые из этих целевых долей находятся в определенном МГЭИК диапазоне 47–65 % или выше[11].

28. Часто указывалось, что производство возобновляемой энергии и переход на низкоуглеродные виды топлива или виды топлива с нулевым содержанием углерода имеют большое значение для снижения углеродоемкости электроэнергии и других энергоносителей, в том числе за счет более активной электрификации энергоснабжения и конечного энергопотребления. Повышение энергоэффективности и переход на более эффективные виды транспорта часто упоминались в связи с сокращением энергопотребления. Во всех приоритетных областях предотвращения изменения климата Стороны увязывали меры с концепцией экономики замкнутого цикла (т. е. многократное использование ресурсов для снижения необходимости освоения новых ресурсов, в том числе ископаемого топлива), включая сокращение и рециркуляцию отходов. Введение углеродных тарифов было признано эффективным средством содействия переходу к декарбонизации путем тарификации выбросов ПГ.

29. Большинство Сторон определили внутренние меры по предотвращению изменения климата в секторе ЗИЗЛХ, причем некоторые Стороны, являющиеся развивающимися странами, указали на сокращение обезлесения в качестве приоритетной задачи с высоким потенциалом в области предотвращения изменения климата, в том числе путем осуществления деятельности в рамках СВОД-плюс.

30. Больше Сторон сообщили в своих новых или обновленных ОНУВ, по сравнению с предыдущими ОНУВ, о сопутствующих выгодах действий по предотвращению изменения климата и планах диверсификации экономики, включая информацию о конкретных проектах, мерах и видах деятельности с полученными в результате этого сопутствующими выгодами. Аналогичным образом, больше Сторон представили информацию о рассмотрении ими социальных и экономических последствий мер реагирования, в том числе для справедливого перехода и диверсификации экономики.

31. Действия по адаптации и планы диверсификации экономики с сопутствующими выгодами от предотвращения изменения климата включают в себя климатически оптимизированное сельское хозяйство, сокращение пищевых отходов, вертикальную организацию сельского хозяйства, адаптацию прибрежных экосистем, увеличение доли ВИЭ, повышение энергоэффективности, улавливание и хранение диоксида углерода, переход на новые виды топлива и реформу цен на топливо в транспортном секторе, а также переход на экономику замкнутого цикла в целях более эффективного удаления отходов.

32. Почти все Стороны упомянули некоторые или все средства осуществления в своих ОНУВ, хотя структура и глубина этой информации существенно различаются. Хотя некоторые Стороны включили специальный раздел, посвященный средствам осуществления, или отдельные разделы, посвященные финансированию, технологии и/или укреплению потенциала, многие из них упомянули или затронули аспекты средств осуществления в других разделах своих ОНУВ.

[11] Межквартильный диапазон глобальной доли возобновляемых источников энергии в производстве электроэнергии к 2030 году в смоделированных вариантах выбросов, которые ограничивают глобальное потепление до 1,5 ° C без превышения или с ограниченным превышением в СД1.5.

33. Некоторые Стороны представили количественные оценки потребностей в финансовой поддержке для осуществления ОНУВ: большинство из них представили обновленную информацию об оценках, представленных в их предыдущих ОНУВ, при этом несколько Сторон представили оценки впервые. Конкретные технологические потребности упоминались в основном в области сельского хозяйства, наблюдения за климатом и раннего оповещения, энергетики, промышленности, инфраструктуры и зданий, транспорта и водоснабжения. Были выявлены потребности в укреплении потенциала для формулирования политики, интеграции предотвращения изменения климата и адаптации в процессы секторального планирования, доступа к финансированию и предоставления информации, необходимой для обеспечения ясности, транспарентности и понимания ОНУВ.

34. Некоторые Стороны подчеркнули важность сотрудничества Юг–Юг, трехстороннего или регионального сотрудничества в качестве механизмов поддержки осуществления ОНУВ, в том числе в отношении конкретных аспектов финансовой помощи, укрепления потенциала и разработки и передачи технологии.

[English only]

II. Mandate

35. Under Article 4, paragraph 2, of the Paris Agreement, each Party is to prepare, communicate and maintain successive NDCs that it intends to achieve. The communicated NDCs are to be recorded in a public registry maintained by the secretariat.[12]

36. COP 21 invited Parties to communicate their first NDC no later than when the Party submits its respective instrument of ratification, acceptance or approval of or accession to the Paris Agreement. A Party is also considered to have satisfied this provision, unless the Party decides otherwise, if it had communicated an INDC prior to becoming a Party to the Paris Agreement.[13]

37. COP 21 requested Parties whose INDC pursuant to decision 1/CP.20 contains a time frame:

(a) Up to 2025: to communicate by 2020 a new NDC, and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Paris Agreement;

(b) Up to 2030: to communicate or update by 2020 their NDC, and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Paris Agreement.[14]

38. 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.[15]

39. Recalling that decision, CMA 2 requested the secretariat to make the synthesis report available to COP 26.[16]

[12] Until the modalities and procedures for the operation and use of the public registry have been finalized under the Subsidiary Body for Implementation, NDCs are being recorded in the interim NDC registry (available at https://www4.unfccc.int/sites/ndcstaging/Pages/Home.aspx).

[13] Decision 1/CP.21, para. 22.

[14] Decision 1/CP.21, paras. 23–24.

[15] Decision 1/CP.21, para. 25.

[16] Decision 1/CMA.2, para. 10.

III. Background, scope and approach

A. Background

40. Owing to the circumstances related to the COVID-19 pandemic, the Bureau of COP 25, CMP 15 and CMA 2, at its meeting on 28 May 2020, decided to postpone from November 2020 to November 2021 the Glasgow Conference, including COP 26.[17]

41. The pandemic has had an adverse impact on many Parties' NDC preparation process, leading to challenges in meeting the timelines stipulated in decision 1/CP.21.

42. In view of the postponement of the Glasgow Conference and the impact of the pandemic on the NDC preparation process, the secretariat notified Parties on 13 August 2020 that it was planning to publish two editions of the NDC synthesis report: an initial version by 28 February 2021 based on the NDCs recorded in the interim NDC registry as at 31 December 2020; and the final version containing all the latest information, to be made available to COP 26 in accordance with decision 1/CMA.2.

43. To facilitate preparation of the report, the secretariat requested Parties to communicate in advance, if possible, the anticipated date of submission of their new or updated NDCs pursuant to paragraphs 23–24 of decision 1/CP.21.[18] In response, a number of Parties informed the secretariat of their planned submission dates in 2020 or 2021.

B. Scope

44. This is the initial version of the NDC synthesis report being prepared for COP 26. It synthesizes information from 48 NDCs,[19] representing 75 Parties,[20] submitted as at 31 December 2020 as new or updated NDCs in response paragraphs 23–24 of decision 1/CP.21, or as new NDCs in case the Party's INDC was not converted automatically in accordance with paragraph 22 of that decision.

45. It should be noted that, as at 25 February 2021, there were 163 NDCs recorded in the interim registry. However, consideration of NDCs for this version of the report was limited to those referred to in paragraph 44 above on account of many Parties' ongoing revision of the content of their NDCs. The final version of the NDC synthesis report, to be made available to COP 26, will be prepared on the basis of this initial version but taking into consideration all the latest NDCs recorded in the interim registry.

46. Under Article 4, paragraph 8, of 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.

47. For first NDCs, including those communicated or updated by 2020, this information may cover, as appropriate, quantifiable information on the reference point (including, as appropriate, a base year); time frames and/or periods of implementation; scope and coverage; planning processes; assumptions and methodological approaches, including for estimating

[17] The notification is available at https://unfccc.int/sites/default/files/resource/message_to_parties_and_observers_dates_of_cop_26.pdf.

[18] The notification is available at https://unfccc.int/sites/default/files/resource/notification_on_ndc_synthesis_2020_ec_2020_306.pdf.

[19] From Andorra, Argentina, Australia, Bangladesh, Brazil, Brunei Darussalam, Cambodia, Chile, Colombia, Costa Rica, Cuba, Democratic People's Republic of Korea, Dominican Republic, Ecuador, Ethiopia, European Union and its 27 member States, Fiji, Grenada, Jamaica, Japan, Kenya, Maldives, Marshall Islands, Mexico, Monaco, Mongolia, Nepal, New Zealand, Nicaragua, Norway, Panama, Papua New Guinea, Peru, Republic of Korea, Republic of Moldova, Russian Federation, Rwanda, Senegal, Singapore, Suriname, Switzerland, Thailand, Tonga, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, Uruguay, Viet Nam and Zambia.

[20] The European Union and its member States communicated one joint NDC in accordance with Article 4, paras. 16–18, of the Paris Agreement, which for this report has been counted as one NDC representing 28 Parties (the European Union and its 27 member States).

and accounting for anthropogenic GHG emissions and, as appropriate, removals; and how the Party considers that its NDC is fair and ambitious in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2.[21]

48. CMA 1 adopted further guidance on the information to facilitate clarity, transparency and understanding of NDCs. In communicating their second and subsequent NDCs, Parties shall provide the information necessary for clarity, transparency and understanding contained in annex I to decision 4/CMA.1 as applicable to their NDCs. In addition, CMA 1 strongly encouraged Parties to provide this information in relation to their first NDC, including when communicating or updating it by 2020.[22]

49. The guidance on the information necessary for clarity, transparency and understanding is without prejudice to the inclusion of components other than information on mitigation in an NDC.[23]

C. Approach

50. The guidance on the information necessary for clarity, transparency and understanding of NDCs was used as a framework for synthesizing the relevant information contained in the communicated NDCs,[24] which was supplemented by the synthesis of other information included in the NDCs but not covered by the guidance, such as on adaptation and support.

51. The synthesis covers only the information communicated by Parties in their new or updated NDCs and the synthesized information is presented for all those Parties taken together.

52. In this report, the following terms are used to indicate the percentage of Parties whose NDCs mention particular information: “a few” for less than 10 per cent; “some” for 10–40 per cent; “many” for 41–70 per cent; “most” for 71–90 per cent; and “almost all” for more than 90 per cent.

IV. Synthesis of information contained in new or updated nationally determined contributions

A. Overview

53. The 48 new or updated NDCs[25] considered for this report, representing 75 Parties, account for 39.5[26] per cent of the Parties to the Paris Agreement and 28.8[27] per cent of the global GHG emissions in 2017.

54. Almost all Parties provided the information necessary to facilitate clarity, transparency and understanding of their NDCs in accordance with the COP guidance, with many already applying the further CMA guidance (see paras. 46–48 above). A few others provided some of the ICTU elements.

55. Many Parties provided information on adaptation, with some identifying the adaptation component of their NDC as their adaptation communication, and a few provided information organized around the elements identified in the annex to decision 9/CMA.1.

[21] Decisions 1/CP.21, para. 27; and 4/CMA.1, para. 9.
[22] Decision 4/CMA.1, paras. 6–10 and annex I.
[23] Decision 4/CMA.1, para. 8.
[24] As per decision 1/CP.21, para. 25.
[25] The NDC of the European Union has been counted as reflecting the inclusion of particular information by its 27 member States.
[26] As at 25 February 2021, there were 190 Parties to the Paris Agreement.
[27] See addendum 3 to this document for additional information on the estimated GHG emission levels in this report and the method and approach to estimating them.

56. In addition, many Parties provided other information, such as on the means of implementation necessary for NDC implementation; domestic mitigation measures;[28] and economic diversification plans and response measures.

B. Scope and coverage

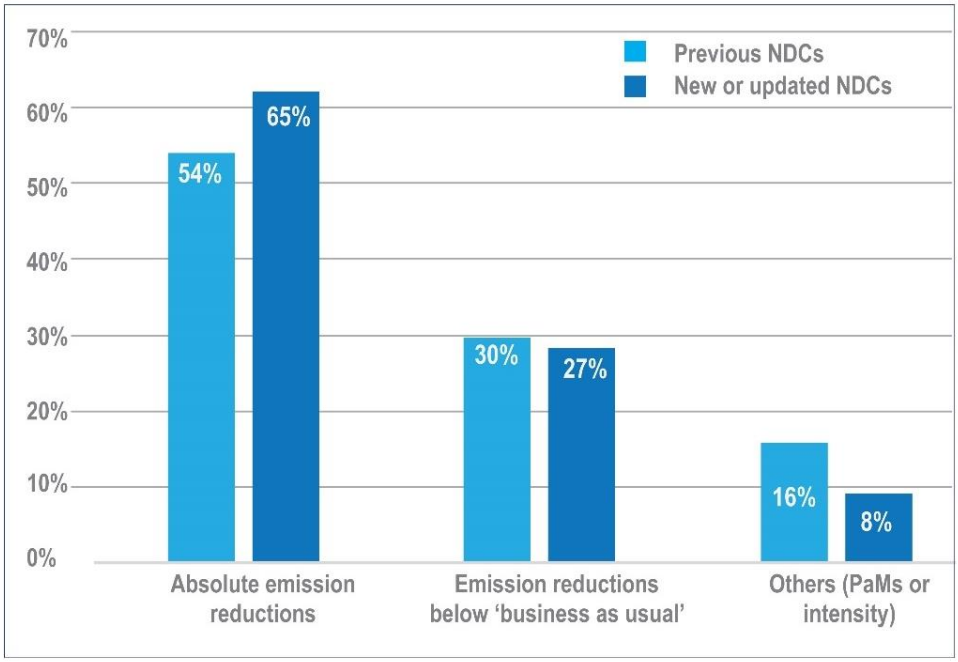
57. All the NDCs included information on mitigation targets (see figure 1), which range from economy-wide absolute emission reduction targets to strategies, plans and actions for low-emission development, to be implemented within a specified time frame or implementation period:

(a) Many Parties included absolute emission reduction targets expressed as an emission reduction from the level in a specified base year, ranging from 13 to 88 per cent. A few other Parties specified a year or time frame in which their emissions are expected to peak or reach a maximum level of absolute emissions (e.g. by 2030). In addition, some of these Parties expressed their target as a carbon budget in addition to the absolute target, establishing an overall limit on GHGs to be emitted over a specified period of time (e.g. between 2021 and 2030);

(b) Some Parties included relative targets for reducing emissions below the 'business as usual' level by a specified target year, either for the whole economy or for specific sectors, ranging from 11.5 to 53.5 per cent;

(c) A few Parties included strategies, plans and actions for low-emission development reflecting their particular national circumstances, or emission intensity targets for reducing specific GHG emissions per GDP unit relative to a base-year (e.g. 1990) level.

Figure 1
Types of mitigation target and share of Parties that communicated them in nationally determined contributions

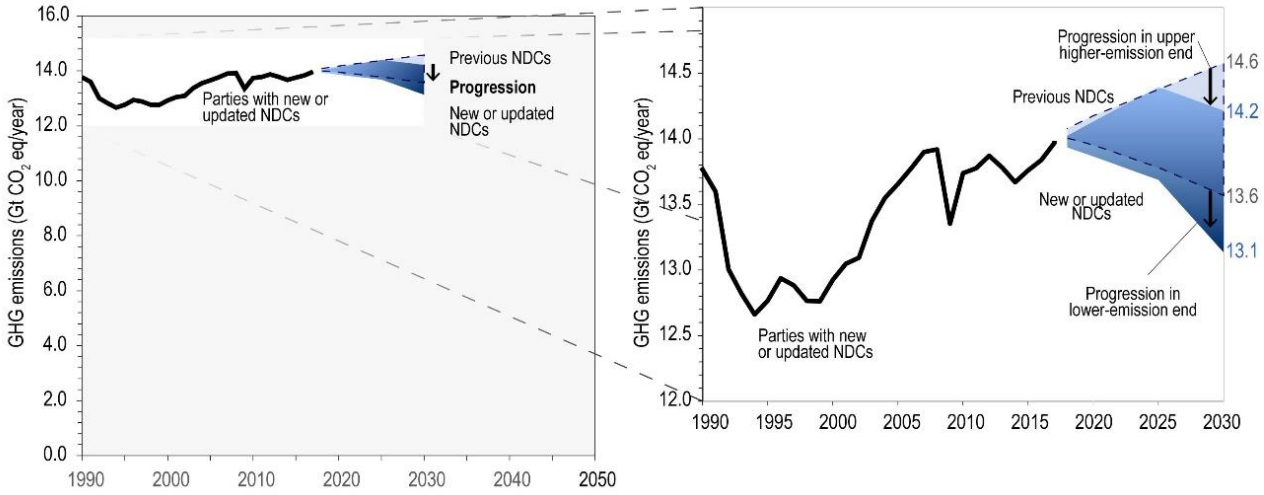


[28] In this report, (domestic) mitigation measures refers to specific policies and actions that contribute to mitigation, including adaptation actions and economic diversification plans with mitigation co-benefits.

58. Total GHG emission levels[29] resulting from implementation of the NDCs considered for this report are projected to be around 14.04 (13.69–14.39) Gt CO_2 eq in 2025 and around 13.67 (13.13–14.21) Gt CO_2 eq in 2030 (see figure 2).[30]

Figure 2

Projected range of greenhouse gas emission levels according to nationally determined contributions



Note: The projected ranges cover the higher-emission end for unconditional elements of NDCs to the lower-emission end when also taking conditional elements of NDCs into account.

59. Most Parties' NDCs are unconditional, at least in part, with some including more ambitious conditional elements. The implementation of the most conditional elements depends on access to enhanced financial resources, technology transfer and technical cooperation, and capacity-building support; availability of market-based mechanisms; and absorptive capacity of forests and other ecosystems.

60. The number of unconditional targets communicated has increased by around 5 per cent in the new or updated NDCs compared with the Parties' previous NDCs.

61. Total GHG emission levels resulting from implementation of the unconditional elements of the NDCs are estimated to be 14.27 (14.14–14.39) Gt CO_2 eq in 2025 and 14.04 (13.87–14.21) Gt CO_2 eq in 2030, which is 0.1 (0.1–0.3) per cent lower in 2025 and 2.6 (2.5–2.7) per cent lower in 2030 than according to the previous NDCs (see figure 2).

62. All Parties provided information on the scope and coverage of their NDCs, including sectors and gases covered.

63. Most Parties have economy-wide NDCs, covering all 2006 IPCC Guidelines sectors. All NDCs cover the energy sector and most cover waste, LULUCF, agriculture and IPPU.

64. A few Parties provided information on coverage of specific sectors of national importance, which are often a subset of one or more IPCC sectors, such as shipping and aviation, cooling or food production, while others mentioned specific carbon pools, oceans or blue carbon.

65. All NDCs cover CO_2 emissions, while almost all cover CH_4 and N_2O emissions, most cover HFC emissions and many cover PFC, SF_6 and NF_3 emissions. A few Parties included

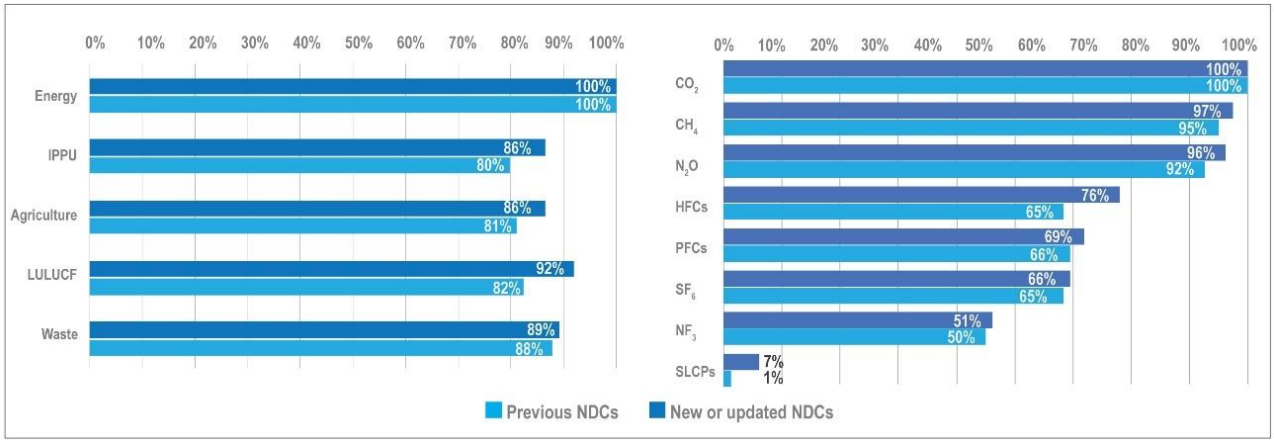
[29] Unless otherwise noted, for this report, GHG emission levels exclude emissions from forestry and other land use or LULUCF; and GWPs with a 100-year time-horizon from the AR4 have been used. For NDCs that include estimates of GHG emissions using other GWP values (e.g. from the AR2 or AR5), a conversion has been applied.

[30] The ranges in parentheses in this report represent the minimum and maximum values after aggregation owing to many Parties presenting conditional and unconditional elements of their NDCs and, in some cases, ranges of values for both. The mid-point value is the average of the minimum and maximum values.

additional gases or emissions, including short-lived climate pollutants, such as black carbon, sulfur dioxide and non-methane volatile organic compounds.

66. The coverage of sectors and GHGs has increased in the new or updated NDCs compared with the Parties' previous NDCs (see figure 3), covering 99.2 per cent (13.86 Mt CO_2 eq) of the Parties' total economy-wide emissions in 2017, up from 97.8 per cent (13.72 Mt CO_2 eq) previously. The number of Parties communicating economy-wide targets has also increased (by around 7 per cent).

Figure 3
Sectors and greenhouse gases covered in nationally determined contributions



67. Almost all 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. Many Parties stated that they already have economy-wide NDCs including all sectors and GHGs. Some Parties explained why certain sectors and/or gases had been excluded, such as owing to categories being negligible or insignificant, data unavailability or inaccuracy, or lack of technical capacity.

68. In addition to communicating information on mitigation targets or plans for the near to medium term, many 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. Most of the long-term goals refer to climate neutrality, carbon neutrality, GHG neutrality or net zero emissions by 2050, 2060 or mid-century. Compared with the previous NDCs, some 25 per cent more Parties referred to such long-term goals.[31, 32]

C. Time frames and/or periods of implementation

69. 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.

70. Almost all Parties communicated a period of implementation until 2030, while a few specified a period until 2025 and a few until 2050. Many Parties indicated 1 January 2021 as their starting date for NDC implementation; some started implementing their NDC in or before 2020; and a few Parties will start doing so in 2022.

71. All Parties communicated a target year, 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.

72. Most Parties communicated a single-year target for 2030, while a few indicated a single-year target for 2025. Some Parties communicated multiple target years, such as 2025,

[31] As at 25 February 2021, 29 Parties had communicated LT-LEDS, 24 of which have communicated an new or updated NDC; see https://unfccc.int/process/the-paris-agreement/long-term-strategies.

[32] See addendum 3 to this document for additional information on long-term goals.

2030 and/or 2050, including when target years were associated with the implementation of different policies and measures. A few Parties indicated having a multi-year target for NDC implementation.

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

73. Almost all Parties provided quantified mitigation targets, expressed as clear numerical targets, while a few included strategies, plans and actions as referred to in Article 4, paragraph 6, of the Paris Agreement or policies and measures as components of their NDCs for which there is no quantifiable information (see para. 57 above).

74. Almost all Parties also provided information on the reference year, base year, reference period or other starting point for measuring progress towards the target. Many of those Parties are measuring the achievement of their targets against a base-year level, with many selecting 1990 and others 2005, 2006, 2010, 2013 or 2017. Some have chosen to measure progress in terms of a deviation from a level in the target year, with most selecting 2030; and a few provided a reference period.

75. Almost all Parties further provided information on the reference indicator used to express their target. Many of those Parties chose as the reference indicator absolute GHG emissions, some the 'business as usual' GHG emission level, a few a GHG emission budget, and a few others emission intensity per GDP unit or sectoral 'business as usual' levels. Almost all Parties provided a quantified value for their reference indicator for either the base year, the target year or both, as appropriate.

76. Almost all Parties have updated the basis for defining their targets, including reference points and 'business as usual' scenarios. Although such updates lead to higher-quality NDCs, for some Parties they lead to significant changes in the estimated emission levels for 2025 and 2030, for reasons other than changes to target levels.

77. All 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.

78. Most Parties provided information on the sources of the emission data used for quantifying the reference point, most referring to national inventory reports, and some to biennial reports, biennial update reports and/or national communications. Some Parties also referred to national documents and statistics, such as sector activity reports; national development plans and/or strategies; 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.

79. Most Parties presented information on the circumstances in which they may update the values of their reference indicators, such as owing to significant changes in specific financial, economic, technological and/or political conditions, or to impacts due to extreme natural disasters; or depending on 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 the results of the ongoing negotiations on common metrics; or to reflect the actual situation during the implementation period.

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

1. Intergovernmental Panel on Climate Change methodologies and metrics

80. Almost all Parties communicated information on the IPCC methodologies and metrics they used for estimating emissions and removals. Most referred to the 2006 IPCC Guidelines and a few to the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*, while a few others mentioned that they used both sets of guidelines to cover different sectors.

81. Most Parties provided information on the metrics they used for estimating emissions and removals. Many of them used GWP values over a 100-year time-horizon from the AR5, while some used such values from the AR2 and some those from the AR4. A few Parties used GWP values as well as global temperature potential values from the AR5 for estimating their mitigation targets.

82. Most Parties also communicated information on the assumptions and methodological approaches used for accounting anthropogenic GHG emissions and, as appropriate, removals. Almost all of them referred to the 2006 IPCC Guidelines, while a few others referred to the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* or the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Some also mentioned 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*.

83. In addition, a few Parties also referred to the standard methods and procedures contained 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*.

2. Assumptions and methodological approaches

84. Some Parties expressed mitigation targets as a deviation from a ‘business as usual’ level, with many presenting quantitative baselines and mitigation scenarios and most providing updated information on the assumptions and approaches used to develop ‘business as usual’ scenarios, baselines or projections, such as baselines and projections being based on historical data and trends in emissions and economic parameters. Many of those Parties referred to key parameters and variables such as GDP and population and growth thereof, and cost–benefit analysis. They also provided sector-specific parameters, including energy consumption, energy demand and production, electricity grid capacity, urbanization rate, transportation network changes and vehicle numbers, forest growth rate, livestock trends, per capita waste generation, and energy and waste statistics per tourist.

85. Some 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. Some Parties mentioned using specific modelling tools for estimating their emissions or baselines, such as The Integrated Market Allocation-Energy Flow Optimization Model System, Long-range Energy Alternatives Planning, the Greenhouse Gas Abatement Cost *Model*, Green Economy Modelling, the PROSPECTS+ emissions scenario tool and the Ex-Ante Carbon-balance Tool.

3. Land use, land-use change and forestry

86. Many Parties intend to address emissions and subsequent removals due to natural disturbances on managed land if such events occur. Almost all of them mentioned that they will use a statistical approach to identifying natural disturbances following relevant IPCC guidance.

87. Many Parties stated that emissions and removals from harvested wood products will be accounted for as part of their NDCs: almost all indicated that they will use the production

approach, with a few selecting the stock change approach and a few others the atmospheric flow approach.

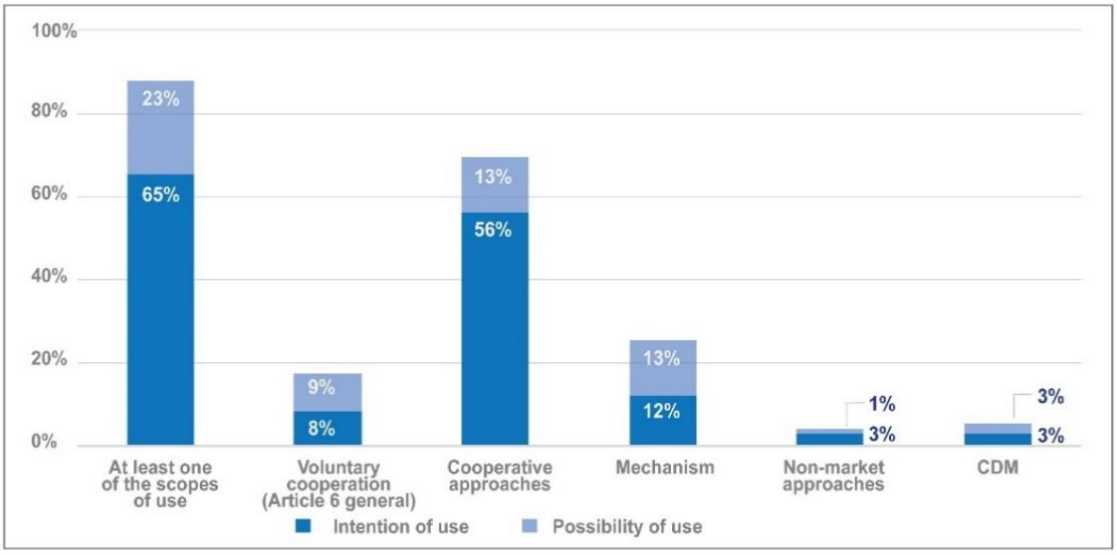
88. Many Parties mentioned that the effects of age-class structure in forests will be taken into account when estimating the mitigation contribution of forests by using a projected forward-looking forest reference level taking into account current management practices.

4. Voluntary cooperation under Article 6 of the Paris Agreement

89. Almost all Parties provided information relating to voluntary cooperation. Most of them, more than double compared with the previous NDCs, communicated that they plan to or will possibly use voluntary cooperation in at least one of its scopes in implementing their NDCs (see figure 4) by directly or indirectly referring to the scopes in their NDCs: general use of voluntary cooperation under Article 6; use of cooperative approaches under Article 6, paragraph 2; use of the mechanism under Article 6, paragraph 4; use of non-market approaches under Article 6, paragraph 8; and use of the CDM.[33]

90. Most Parties communicated planned or possible use of cooperative approaches, followed by planned or possible use of the mechanism. Some Parties indicated that they plan to or will possibly make general use of voluntary cooperation, a few referred to the CDM and a few to non-market approaches.

Figure 4
Share of Parties indicating in nationally determined contributions the intention to use or possibility of using specific scopes of voluntary cooperation



91. A few Parties communicated the use of voluntary cooperation as a condition for achieving their mitigation targets.

92. On the other hand, many Parties have set limits on their use of voluntary cooperation: a few have limited their use of voluntary cooperation to achieving their conditional mitigation targets only; a few have set quantitative limits on their use of voluntary cooperation for achieving their mitigation targets, such as achieving unconditional targets primarily through domestic efforts but partially through voluntary cooperation; and many, a sharp increase from the few indicated in the analysis of the Parties' previous NDCs, have set qualitative limits on their use of voluntary cooperation for achieving their mitigation targets, such as using units that adhere to standards and guidelines to ensure additionality, permanence or avoidance of double counting of emission reductions.

[33] Only direct references to use of the CDM were considered: an indirect reference to the CDM such as "international market-based mechanisms" was not considered a reference to the CDM.

F. Planning and implementation processes

93. Almost all Parties provided information on their NDC planning processes and most also referred to their implementation plans, communicating information on their institutional arrangements, stakeholder engagement processes and policy instruments, including legislation, strategies, plans and policies.

1. Domestic institutional arrangements

94. Most 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 and fostering public participation. Most referred to specific arrangements in place for NDC preparation, such as inter-institutional commissions, councils and committees, led by a designated entity with a coordination role and including members from public entities, the private sector, non-governmental organizations and/or academia. A few other Parties communicated that such arrangements are under development.

95. Most Parties referred to formal arrangements in place for consulting various 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. Almost all of those Parties indicated that they conducted such consultation and engagement processes in an inclusive and participatory manner. Some Parties specifically referenced gender-sensitive consultations, referring to specific guidelines for ensuring gender sensitivity, such as during public consultations, and highlighting the inclusion of national gender machineries, gender and women's groups, or non-governmental organizations in the process.

96. Most Parties mentioned specific policy instruments in place to facilitate NDC implementation in addition to institutional arrangements, and some others mentioned instruments being under development. Such policy instruments include energy and/or climate strategies, low-emission development strategies, NDC implementation road maps, NDC action plans, laws and regulations on climate change, sectoral national mitigation and adaptation plans and NDC investment plans.

97. Some Parties included information on their domestic measurement, reporting and verification systems, while many others indicated that such systems are under development. Those Parties acknowledged the important role of such systems in continuously monitoring and tracking the status and progress of their NDCs and mitigation efforts, and highlighted that the results will be reflected in national inventory reports and/or biennial transparency reports, ensuring national and international transparency. A few Parties also highlighted that the feedback from such systems will be used to guide the preparation of their subsequent NDCs.

2. Gender

98. Most Parties provided information related to gender in their NDCs and some affirmed that they will take gender into account in implementing them.[34]

99. Of the Parties that provided gender-related information, most referred to relevant policies and legislation or affirmed a general commitment to gender equality, while some included information on how gender had been or was planned to be mainstreamed in NDC implementation, and on specific tools and methods for this, such as gender-disaggregated data, gender analyses or assessments and gender-responsive budgeting, and a few included gender as a criterion for prioritizing activities.

100. Some Parties that referred to gender in their NDCs treated it as a cross-cutting issue to be addressed across adaptation and mitigation, with a few focusing on adaptation. A few

[34] For more information on gender under the UNFCCC, see https://unfccc.int/topics/gender/workstreams/chronology-of-gender-in-the-intergovernmental-process.

Parties considered gender exclusively in the context of adaptation. Some Parties mentioned taking gender into account in formulating and implementing their NAPs.

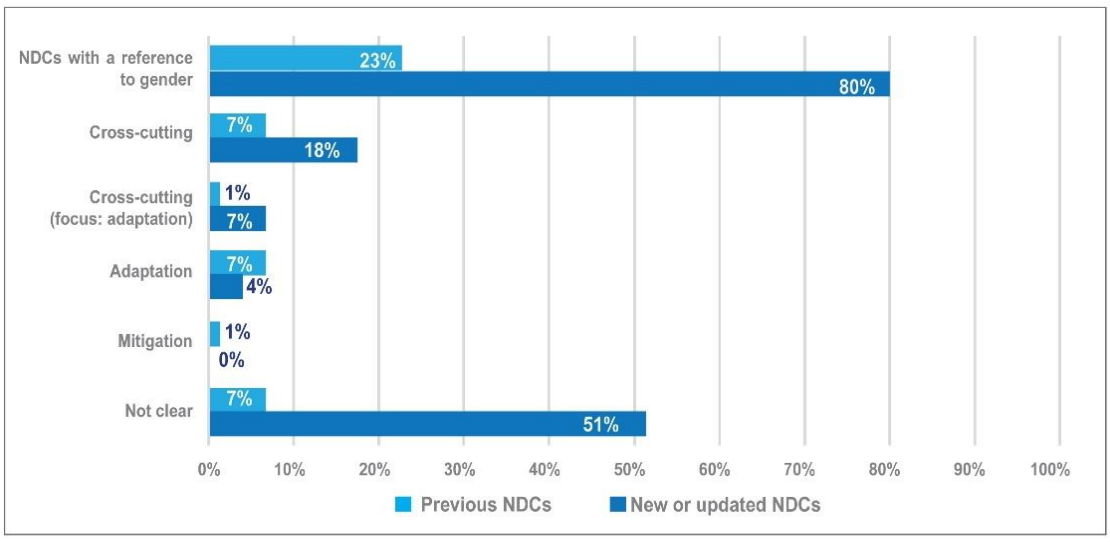
101. When Parties referred to their planned gender-sensitive or gender-responsive climate action or generally elaborated on gender aspects in the context of specific sectors, they did so most frequently in the context of energy, disaster, agriculture, health, education and water.

102. Some Parties highlighted the importance of providing finance, technology and capacity-building for gender-specific action and of these means of implementation being gender-responsive.

103. Some Parties implicitly or explicitly considered gender as it intersects with other social factors. Some Parties explicitly considered specific genders in the context of their differentiated needs and perspectives and the gender-differentiated impacts of and contributions to climate change and climate action.

104. 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. The share of Parties that referred to gender in the new or updated NDCs compared with their previous NDCs has increased significantly and the share of Parties considering gender as a cross-cutting issue has also risen (see figure 5). Many Parties referenced gender for the first time in their new or updated NDCs, some elaborated more on gender than in their previous NDCs, while a few considered gender to a similar or decreased extent.

Figure 5
Reference to gender in nationally determined contributions



3. Indigenous peoples and local communities

105. Some Parties described the role of indigenous peoples and local communities in the context of their NDCs, including the situation and consideration of the rights of indigenous peoples at the national level, such as legal and consultative arrangements for protecting their rights. They emphasized the particular vulnerabilities of indigenous peoples relating to their intrinsic relationship with forests and ecosystems and situations of poverty. The benefits of drawing on indigenous knowledge, in particular for adaptation, were highlighted, as was the importance of combining traditional and modern practices. Parties outlined how indigenous peoples were engaged in NDC preparation, including through consultations on sectoral proposals, risk assessment and analysis of indigenous knowledge. In addition, some of those Parties elaborated on how actions identified in the NDC aim to benefit indigenous peoples by, for example, enhancing access to finance and technology, building capacity for leadership and negotiations, generating payments for ecosystems services and providing development opportunities.

4. Action for Climate Empowerment[35]

106. Almost all Parties provided information on using one or more ACE elements to promote implementation of mitigation and adaptation activities. Some Parties indicated their intention to systematically address ACE by developing national ACE strategies, incorporating ACE into general climate policies and plans, upholding ACE as a guiding principle for climate action, and setting specific ACE-related targets.

107. Some Parties elaborated on climate education measures such as updating formal, informal and non-formal education curricula, establishing laws and policies to ensure provision of climate education, mainstreaming climate change in national education strategies and plans, and providing training and resources for teachers and educators. Some Parties included information on training measures, including integrating climate change into training programmes for civil servants and other stakeholders.[36] The need for training was also highlighted in the context of achieving just transition and accessing green jobs.

108. Many Parties provided information on measures for raising public awareness, such as developing communication strategies, disseminating knowledge through traditional and new media, and implementing awareness-raising campaigns for specific sectors, such as health, biodiversity and disaster risk management. Almost all Parties mentioned public participation, including information on institutional arrangements (see paras. 94–97 above). Some Parties included information on public access to information, providing details on developing regulations and systems to guarantee and facilitate access to climate information and data.

109. In the new or updated NDCs, Parties communicated more clearly and in more detail than previously on general principles, past achievements, future commitments, and needs and gaps in relation to ACE. More Parties are explicitly referring to ACE as a necessary means of mobilizing and empowering society to deliver the mitigation and adaptation objectives outlined in their NDCs.

5. Best practices and other contextual matters

110. Many Parties communicated best practices for NDC preparation, such as institutionalizing climate policy development within joint planning frameworks; strengthening stakeholder capacity to participate more substantively in NDC preparation and implementation; designing planning and reporting systems for transparency and public scrutiny; incorporating experience and lessons learned from INDC preparation and implementation efforts; conducting extensive stakeholder consultation and peer review to enhance their understanding of the NDC; conducting a preliminary assessment of pre-2020 efforts to identify gaps and needs and develop an NDC road map; mainstreaming NDC goals in existing strategies, plans and policies to obtain political support and benefit from existing arrangements; partnering with regional and international organizations to develop a robust NDC; and establishing a scientific and quantitative system for analysing and assessing progress of implementation.

111. On the basis of their national circumstances and development pathways, many Parties highlighted other contextual aspirations and priority areas, such as maximizing synergies between climate commitments and the SDGs; adaptation and climate-resilient development; collaboration and support by developed country Parties and international organizations; deploying low-emission technologies to drive emission reduction and support economic growth; safeguarding food security and eradicating poverty; involving youth, local governments and communities and/or indigenous groups in a gender-responsive manner; just transition of the workforce; social and climate justice; circular economy; oceans or blue carbon; disaster risk reduction; human health; energy production from renewable sources and/or energy efficiency; and reducing risks caused by loss and damage.

[35] 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 issues (the six ACE elements).

[36] Training as part of capacity-building efforts is addressed in paras. 0–0.

112. Although the first global stocktake will not be conducted until 2023, some Parties provided information specifically on how their NDC preparation was informed by activities or events relevant to the collective assessment of progress in addressing climate change, such as the United Nations Secretary-General's calls to strengthen climate action and ambition during the 2018 high-level event on climate change, the recommendations from the Talanoa Call for Action, and/or the best available science, such as the SR1.5.[37]

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

113. Some Parties considered mitigation co-benefits resulting from their adaptation action and/or economic diversification plans and a few mentioned that such co-benefits have been taken into account in their mitigation efforts. Most of these Parties 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 that foster a just and equitable transition, and managing changes arising in relevant sectors due to the implementation of climate policies. Some other Parties considered economic and social consequences of response measures without linking them to the mitigation co-benefits of their adaptation action and/or economic diversification plans. A few Parties presented their sectoral mitigation and adaptation plans as transition or diversification plans.

114. The Parties highlighted unequal impacts on different groups of society or the workforce as consequences of response measures, with impacts on the workforce[38] being the most frequently mentioned. Many plan to address such impacts by including the concept of just transition in their overall NDC implementation, such as a just transition mechanism and just transition funds; laws and strategies for protecting workers; a social mechanism for job creation, skills development and employment policies; and a consultation process for social protection. A few Parties paid special attention to addressing impacts of response measures on vulnerable groups and communities in relation to poverty and inequality.[39]

115. Some Parties considered economic diversification as part of their national development plans and climate policies to boost the country's resilience to climate change and response measures. A few others linked such plans to existing lowly diversified economy and the impact of response measures on sectors of high economic importance, such as extraction of fossil fuels. These Parties specifically mentioned economic diversification plans or actions focused on high-emitting sectors and sectors of economic importance. Such plans include increasing the share of energy generation using renewable sources; improving energy efficiency through regulatory measures, pricing signals and technology deployment in the fisheries, industry and buildings sectors; carbon dioxide capture and storage in the oil and gas industry; implementing fuel switch and fuel price reforms in the transport sector; moving to circular economy for better waste management; and adopting sustainable tourism practices to build the tourism sector.

116. Some Parties described how their adaptation action contributes to emission reduction, including their intention to consider mitigation co-benefits in NAP formulation. In terms of sectors, some described the potential co-benefits of various agricultural adaptation measures, including climate-smart agriculture, reducing food waste and vertical farming. Adaptation of coastal ecosystems was highlighted as another source of co-benefits, in particular planting mangroves and seagrass beds. Other sectors with potential co-benefits mentioned were forestry, natural resources and the environment, energy and waste.

[37] IPCC. 2018. *IPCC Special Report on the Impacts of Global Warming of 1.5 °C above Preindustrial Levels and Related Global Greenhouse Gas Emission Pathways in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*. V Masson-Delmotte, P Zhai, H-O Pörtner, et al. (eds.). Geneva: World Meteorological Organization. Available at https://www.ipcc.ch/sr15/.

[38] Impacts on the workforce include changes in number, scope and location of jobs, and skilling and reskilling requirements.

[39] Such as low-income groups, women, young people, indigenous peoples and people with disabilities.

117. Many Parties identified agriculture as a high priority for adaptation, either explicitly or as part of cross-sectoral adaptation efforts. They are also aiming to use mitigation opportunities in the sector. Some Parties highlighted the need to focus on activities that have positive effects on mitigation and adaptation while ensuring food security.

H. Fairness and ambition in the light of national circumstances

118. Almost all Parties explained, using different metrics, how they consider their NDCs to be fair and ambitious in the light of their national circumstances.[40]

119. They included qualitative and/or quantitative information on how their NDCs represent progression and highest possible ambition, such as through increased estimated level of emission reductions; earlier projected peaking of emissions; enhancing mitigation efforts; increasing unconditional elements; including long-term targets; introducing and/or enhancing policies; elaborating on adaptation action; integrating climate goals into national policy instruments; enhanced linkages with the SDGs; using more accurate data and moving to higher-tier estimation; establishing arrangements for monitoring and/or tracking progress of implementation; enhancing the stakeholder consultation process; developing sector-based action plans for implementation; and presenting additional information to facilitate clarity, transparency and understanding.

120. Some Parties framed fairness consideration within their past, current and future share in global and/or per capita emissions compared with global averages, or in relation to the trends in one or several metrics. A few Parties indicated that, despite COVID-19 and its impacts on their economies, they are committed to implementing their NDCs to address climate change.

121. Many Parties highlighted that they have enhanced their mitigation and/or adaptation contributions. In addition, many expressed that their NDCs are in line with the long-term goals of the Paris Agreement and/or with the mitigation pathways for limiting global warming to 2 or 1.5 °C above pre-industrial levels.

122. Some Parties provided information on ambition by linking their NDCs to their commitment to transition to a sustainable and/or low-carbon and resilient economy: some expressed that they have incorporated their NDC goals and policies into national legislative, regulatory and planning processes as a means of ensuring implementation; some 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.

123. The Parties' total emission levels resulting from implementation of their new or updated NDCs are estimated to be 38 Mt CO_2 eq lower (ranging from 94 Mt CO_2 eq lower to 18 Mt CO_2 eq higher) or on average 0.3 per cent lower (ranging from 0.7 per cent lower to 0.1 per cent higher) by 2025, and 398 (392–433) Mt CO_2 eq or 2.8 (2.5–3.2) per cent lower by 2030 than according to the Parties' previous NDCs.

[40] Metrics include capabilities; historic and current responsibility; climate justice; share in global emissions; level of per capita emissions; vulnerability to the adverse impacts of climate change; development and/or technological capacity; mitigation potential; cost of mitigation actions; degree of progression or progression beyond the current level of effort; and link to objectives of the Paris Agreement and its long-term global goals.

I. 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[41]

124. The information necessary to facilitate clarity, transparency and understanding of NDCs includes information on:[42]

(a) How the NDC contributes towards achieving the objective of the Convention as set out in its Article 2;

(b) How the NDC contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.

125. Almost all Parties communicated information on the contribution of their 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.

126. Many Parties indicated that their level of emissions in the future 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 below 2 or 1.5 °C.

127. In that context, Parties highlighted their national mitigation and/or adaptation efforts, NDC targets, LT-LEDS, development pathways for decoupling emissions from economic growth, and mobilization of domestic and international support.

128. The total GHG emission levels in 2025 of the Parties that submitted new or updated NDCs are on average projected to be 2.0 per cent higher than in 1990 (13.77 Gt CO_2 eq), 8.6 per cent higher than in 2000 (12.93 Gt CO_2 eq), 2.8 per cent higher than in 2005 (13.66 Gt CO_2 eq), 2.2 per cent higher than in 2010 (13.74 Gt CO_2 eq), 2.0 per cent higher than in 2015 (13.76 Gt CO_2 eq) and 0.5 per cent higher than in 2017 (13.97 Gt CO_2 eq).

129. For 2030, the Parties' total GHG emission levels are on average projected to be 0.7 per cent lower than in 1990, 5.8 per cent higher than in 2000, 0.1 per cent higher than in 2005, 0.5 per cent lower than in 2010, 0.6 per cent lower than in 2015 and 2.1 per cent lower than in 2017.

130. In 2030, the total GHG emission level resulting from implementation of the NDCs without taking into account conditional elements is projected to be, on average, slightly higher than in 2017, by 0.5 per cent (ranging from 0.7 per cent lower to 1.8 per cent higher); whereas the total GHG emission level resulting from implementation of the NDCs including conditional elements is projected to be, on average, 4.7 (3.5–6.0) per cent below the 2017 level.

131. The previous NDCs (without taking into account conditional elements) indicated a continuously increasing trend in emissions up to 2030, to 2.8 (1.6–3.9) per cent above the 2017 level; whereas the new or updated NDCs (without taking into account conditional elements) indicate the possibility, at the lower end of the emission range, of the Parties' emissions peaking before 2030, with their emissions in 2030 (13.87 Gt CO_2 eq) projected to be 1.9 per cent below the lower end of the projected 2025 target level (14.14 Gt CO_2 eq) and also just below the 2017 level (13.97 Gt CO_2 eq) (see figure 6).

132. If they are fully implemented (including conditional elements), the new or updated NDCs indicate the possibility of the Parties' emissions peaking before 2025, with the average estimate of emissions in 2025 (13.87 Gt CO_2 eq) being slightly lower than in 2017 (13.97 Gt CO_2 eq) (see figure 6).

133. According to the new or updated NDCs, per capita GHG emissions are estimated at 6.52 (6.36–6.68) t CO_2 eq in 2025 and 6.19 (5.94–6.43) t CO_2 eq in 2030, which is 4.7 (2.3–7.1) per cent lower in 2025 and 9.6 (6.0–13.2) per cent lower in 2030 than in 2017.

134. The COVID-19 pandemic was mentioned by many Parties in the new or updated NDCs, but most have not reflected the potential impacts of the pandemic in their NDCs. The

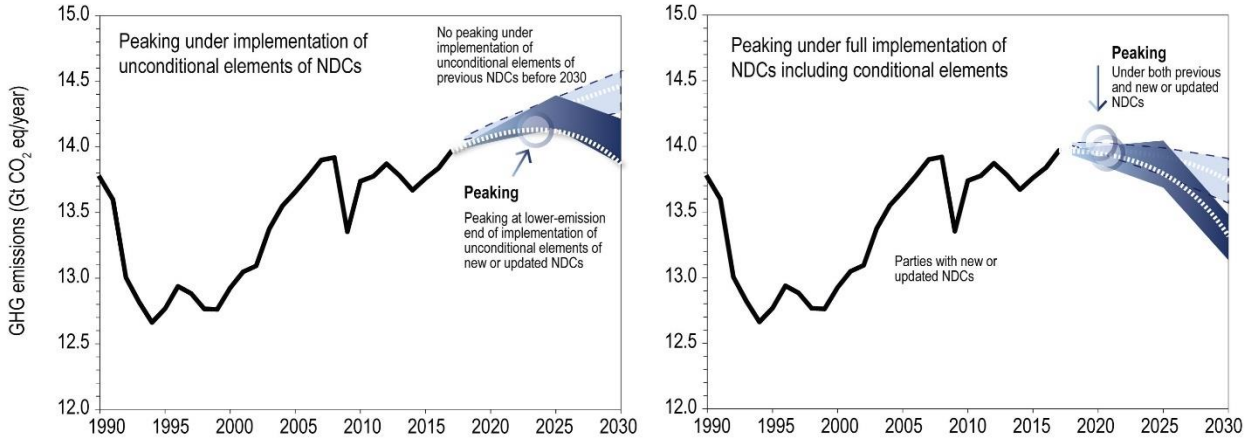
[41] See addendum 3 to this document for additional information, including on estimation methods and assumptions used.

[42] Decision 4/CMA.1, annex I, para. 7.

longer-term effects of the related changes in national and global GHG emissions will depend on the duration of the pandemic and the nature and scale of recovery measures.

Figure 6

Historical and projected total greenhouse gas emissions according to nationally determined contributions



135. According to the SR1.5, to be consistent with global emission pathways with no or limited overshoot of the 1.5 °C goal, net anthropogenic CO_2 emissions need to decline by about 45 per cent below the 2010 level by 2030 (40–60 per cent interquartile range), reaching net zero around 2050 (2045–2055 interquartile range); and for limiting global warming to below 2 °C, CO_2 emissions need to decline by about 25 per cent below the 2010 level by 2030 on most pathways (10–30 per cent interquartile range) and reach net zero around 2070 (2065–2080 interquartile range). Deep reductions are required for non-CO_2 emissions as well.[43]

136. With their GHG emissions in 2030 on average projected to be 0.5 per cent below the 2010 level (see para. 129 above), the scale of the total emission reduction expected to be achieved by the represented Parties (noting that this is only about 40 per cent of the Parties to the Paris Agreement) through implementation of the new or updated NDCs falls far short of the IPCC ranges referred to in paragraph 135 above.

137. In order to provide a clear picture of the combined contribution of 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, the final version of the NDC synthesis report will include a comparison of the projected total emissions resulting from implementation of all NDCs with different mitigation scenarios and indicators assessed by the IPCC, including global emission pathways towards the 1.5 and 2 ºC goals. It will also include a comparison between implied future emissions and remaining cumulative emissions towards the 1.5 and 2 ºC goals using (but not limited to) scenarios for global emission pathways. It was not possible to provide such information in this initial version of the report owing to the limited number of NDCs considered.

138. Many Parties provided information on their long-term mitigation visions, strategies and targets for up to and beyond 2050, many of which communicated LT-LEDS in response to Article 4, paragraph 19, of the Paris Agreement.[44]

139. On the basis of that information, the Parties' total GHG emissions in 2050 were estimated at 0.7–1.2 Gt CO_2 eq. Mindful of the inherent uncertainties surrounding such long-

[43] See, for example, figure SPM.3a in IPCC. 2018. Summary for Policymakers. *In*: V Masson-Delmotte, P Zhai, H-O Pörtner, et al. (eds.). *Global Warming of 1.5 °C: An IPCC Special Report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Geneva: World Meteorological Organization. Available at https://www.ipcc.ch/sr15/chapter/spm/.

[44] As at 25 February 2021, 29 Parties had communicated LT-LEDS, 24 of which have communicated a new or updated NDC; see https://unfccc.int/process/the-paris-agreement/long-term-strategies.

term estimates, this represents an emission reduction of 87–93 per cent below the 2017 level (estimated at 9.29 Gt CO_2 eq) by 2050.

J. Adaptation

140. Adaptation involves responding to climate change by assessing impacts, vulnerability and risk; planning and implementing adaptation; making contingency arrangements for when impacts occur; addressing losses; and monitoring and evaluating adaptation. Arrangements have been developed under the Convention to facilitate adaptation, in particular NAPs, institutions such as the Adaptation Committee and the Least Developed Countries Expert Group, partnership structures for closing knowledge gaps, and provisions to facilitate support for, and transparency of, adaptation. Under the Paris Agreement, Parties may include an adaptation component in their NDCs.

1. Scope

141. Many Parties included an adaptation component in their NDCs, some of which were designated as adaptation communications. They provided information on vulnerability and national circumstances; efforts to enhance research; adaptation measures, in particular NAPs and sectoral actions; contingency measures; and monitoring and evaluation of adaptation.

142. The information provided illustrates how Parties have advanced adaptation since their previous NDCs:

(a) They provided more detailed information and described more integrated national frameworks, in contrast to the multiple frameworks and individual projects described in their previous NDCs;

(b) More Parties described the status of their NAP process, illustrating how the NAP has been established as the main national instrument for adaptation;

(c) They included more quantitative time-bound targets,[45] in contrast to the qualitative and open-ended adaptation objectives provided previously; and some highlighted the indicator frameworks that they intend to use for monitoring progress;

(d) They included more detailed information on mitigation and sustainable development co-benefits of adaptation, as well as on other synergies between mitigation and adaptation;

(e) Some Parties identified the adaptation component as their adaptation communication, and a few provided information organized around the elements identified in the annex to decision 9/CMA.1;

(f) They described in more detail linkages of adaptation efforts with efforts under other international frameworks, such as the Sendai Framework for Disaster Risk Reduction 2015–2030, in particular describing how adaptation actions relate to specific SDGs.

2. Impacts, risk and vulnerability

143. Most of the adaptation components described key climatic changes, referring in particular to temperature increase, extreme temperatures, precipitation changes and sea level rise. These were identified as triggering various climate impacts, in particular extreme events (including rainfall events, storms and cyclones), flooding, drought, heatwaves, saltwater intrusion, ocean acidification, coral bleaching, erosion and landslides. Parties described how impacts affect vulnerable areas. Of particular concern are agriculture and other aspects of food security, water, biodiversity and ecosystems, health systems, infrastructure (in particular energy) and loss of territory, livelihoods and habitats. Parties highlighted groups and areas that are particularly vulnerable. As factors of vulnerability, they highlighted, for example, dependence on climate-sensitive sectors, status as a small island developing State, having complex and vulnerable ecosystems, location of population and infrastructure on coasts, and

[45] See addendum 1 to this document for more details on quantitative targets.

economic factors, in particular poverty. Vulnerability has also increased as a result of COVID-19.

3. Enhancing adaptation-related research for policymaking

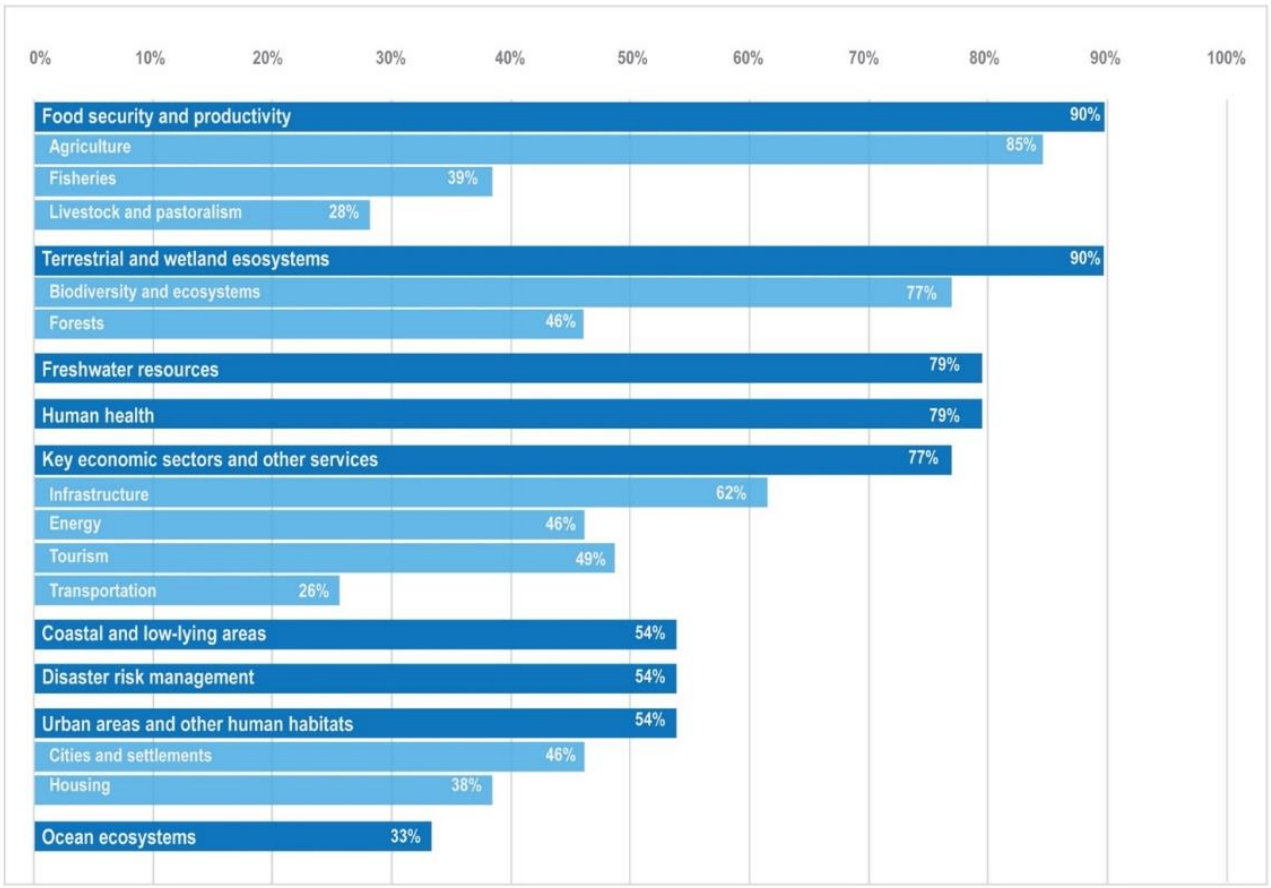
144. Many of the Parties that included an adaptation component considered how to enhance adaptation-relevant research and ensure that adaptation efforts are informed by science. Some of the adaptation components described efforts to enhance research through, for example, climate, ocean and coastal data collection programmes, flood or multi-hazard monitoring systems, observation networks, research centres, strengthened weather services, systems to monitor land use and ecosystems, risk maps with climate data and scenarios, sea level research programmes and international cooperation. To ensure that adaptation is guided by robust science and projections, some Parties are aiming to develop, for example, integrated climate information systems, platforms for accessing information, and forecasting tools and scenarios.

4. Pre-emptive adaptation

145. Many Parties that provided an adaptation component described the process for formulating and implementing their NAP and its status. Some indicated that they have developed a NAP, while others identified their intention to do so, including a timeline for completion or update. Some 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 and NDC can be aligned. Some Parties described the scope of their NAP, including in relation to enabling risk and vulnerability analysis; enhancing climate information; strengthening adaptive, institutional, policy and technical capacities; outlining and prioritizing adaptation needs, objectives, milestones and actions as well as costs of adaptation; providing a framework for planning, implementation and coordination; integrating adaptation across sectors; enhancing financing, engagement and gender-responsiveness; strengthening monitoring and evaluation; and enabling consideration of co-benefits between mitigation and adaptation.

Figure 7

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



146. Parties provided a wide range of information on adaptation in various priority areas (see figure 7). The key efforts in those priority areas are described below.[46]

147. In most adaptation components, measures for adapting food production systems and ensuring food security were prioritized, encompassing adaptation efforts in the areas of agriculture, livestock and fisheries. Adaptation is being pursued via sectoral vulnerability analysis, planning and systems for agroclimatic information. As technical solutions, Parties are focusing on, for example, temperature- and drought-resistant crops, diversification, and sustainable and integrated land-use and cultivation methods. Some adaptation components highlighted measures for enhancing resilience, sustainability and productivity of livestock and pastoralism. The measures for enhancing sustainability of fisheries involve diversification, habitat protection and financial instruments.

148. Health was identified as an adaptation priority in most of the adaptation components, with relevant policy frameworks and plans described. The importance of building the capacity of health institutions and enhancing information and awareness was highlighted. Parties are focusing on enhanced impact and disease surveillance and monitoring and vulnerability mapping. Measures tend to focus on responding to climate-sensitive vector-borne diseases, respiratory impacts and heatwaves.

149. Most adaptation components described adaptation efforts to protect terrestrial ecosystems and forests, with Parties aiming in particular to increase protected areas and connectivity, enhance urban biodiversity and implement sustainable forest management and reforestation.

[46] See addendum 1 to this document for information on specific measures and quantitative targets in each priority area.

150. In most adaptation components, freshwater resources was identified as a priority area and measures for enhancing availability, efficiency and quality of water supplies were presented, including enhancing water infrastructure and water resource plans, strategies and systems. Parties are aiming to strengthen watersheds, efficiency of water use and irrigation. Integrated water resources management, protection and restoration of water-related ecosystems such as forests, wetlands and rivers, and supply diversification were highlighted measures.

151. Many adaptation components included measures for protecting coastal and low-lying areas, including river deltas, and addressing sea level rise and saltwater intrusion. A few identified preventing loss of land as a main adaptation objective, with efforts including assessing and monitoring impacts on and vulnerability of coasts and national plans for coastal protection, and defining standards for construction and flood protection.

152. Some adaptation components outlined efforts to adapt ocean ecosystems to promote sustainable development while safeguarding oceans. Measures are focused on investing in ocean and the 'blue' economy and protecting marine and coastal ecosystems, with a focus on coral reefs and mangrove restoration.

153. Most adaptation components described efforts to adapt key economic sectors and services, in particular energy, infrastructure, transportation and tourism. Efforts in the energy sector include impact analysis and planning, expanding clean energy and energy efficiency, and conservation (through standards, labels and awareness). Some Parties outlined adaptation plans for the mining sector, which include tools for ensuring operability of hydrocarbon facilities. Parties are aiming to ensure resilience of infrastructure through building codes and resilience standards, elevation and nature-based solutions. Transportation was a focus area in some adaptation components, with adaptation measures including enhancing risk evaluation, such as by using geographic information systems, and developing green road infrastructure. Tourism is to be addressed by, for example, mainstreaming climate risk in sectoral policies, financial instruments and insurance. In some adaptation components, the industrial sector was considered in adaptation planning.

154. Some adaptation components identified livelihoods and the safety of communities as an adaptation priority area, focusing on responding to human mobility needs, forced displacement and impacts on settlements. Solutions include temporary resettlement, migration opportunities and, as a last resort, relocation, while ensuring right to remain. Innovative livelihood strategies, social safeguards and economic diversification were identified as being helpful in responding to loss of livelihoods.

155. Human habitats, including urban areas, was identified as a priority area in many adaptation components. Efforts in this area are aimed at adapting and enhancing the resilience of both rural and urban settlements, with a focus on housing and associated infrastructure. Some efforts are focused on adaptation of cities and urban areas, including through planning, risk assessment and upgrading informal settlements.

156. Many adaptation components described measures for enhancing disaster risk management and early warning systems. Policy and institutional measures include enhancing risk assessment and monitoring, integrating disaster risk management into adaptation efforts, and establishing early warning systems, including a national multi-hazard early warning system, or systems for coastal areas, forestry and ecosystems, the water sector, rivers, drought and agriculture.

5. Contingency measures

157. Contingency measures for dealing with emergencies and impacts that occur regardless of adaptation efforts were highlighted in some adaptation components, such as strengthening resilience to impacts beyond the limits of adaptation through NAPs, search and rescue plans, emergency shelters, humanitarian assistance civil defence, evacuation procedures, emergency funding, food reserves and disaster insurance schemes. For the agriculture and livestock sectors, Parties referred to insurance and risk management mechanisms, as well as post-disaster relief. In the fisheries sector, measures include using financial instruments such as insurance against extreme events, and establishing a minimum income for fishers.

6. Monitoring and evaluation, and understanding progress

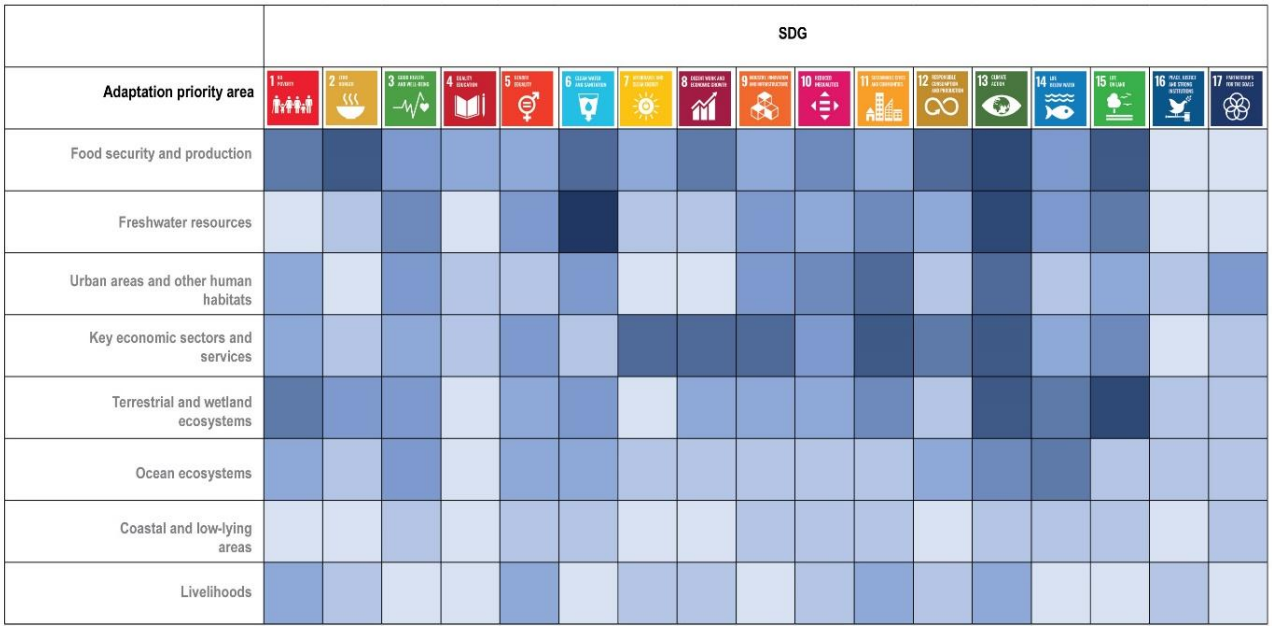
158. Many Parties described in their adaptation components their efforts to enhance monitoring and evaluation of adaptation, such as by focusing on tracking progress, reducing vulnerability, improving efficiency and effectiveness of actions, NAP implementation and support. Approaches included using systems for integrating climate and adaptation information, sectoral monitoring tools (e.g. in agriculture and tourism) and a platform for integrating tools for monitoring climate risk and low-emission development. Some of those Parties described their intention to apply global, national or sectoral indicators for monitoring progress of specific measures and/or sectoral performance towards targets linked to a specific baseline.

7. Synergies with mitigation and sustainable development

159. Some Parties elaborated on synergies between adaptation and mitigation (mitigation co-benefits of adaptation action are covered in chapter IV.G above). A few Parties identified how their mitigation action can generate adaptation co-benefits, highlighting the potential of actions in the energy sector, such as using renewable energy, fuel switching and increasing efficiency, and forest preservation, afforestation and reforestation.

160. Some Parties described how their adaptation actions relate to sustainable development, identifying in particular the essential role of adaptation efforts in ensuring if and how adaptation in specific priority areas contributes to specific SDGs. Figure 8 provides an overview of synergies identified between adaptation efforts and specific SDGs.

Figure 8
Synergies between efforts in adaptation priority areas and Sustainable Development Goals identified in nationally determined contributions



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

K. Domestic mitigation measures[47]

161. Under Article 4, paragraph 2, of the Paris Agreement, Parties shall pursue domestic mitigation measures with the aim of achieving the objectives of their NDCs.

162. Almost all Parties outlined such measures in their NDCs in specific priority areas of national importance, which are often a subset of one or more IPCC sectors, including energy

[47] See addendum 2 to this document for additional information on domestic mitigation measures.

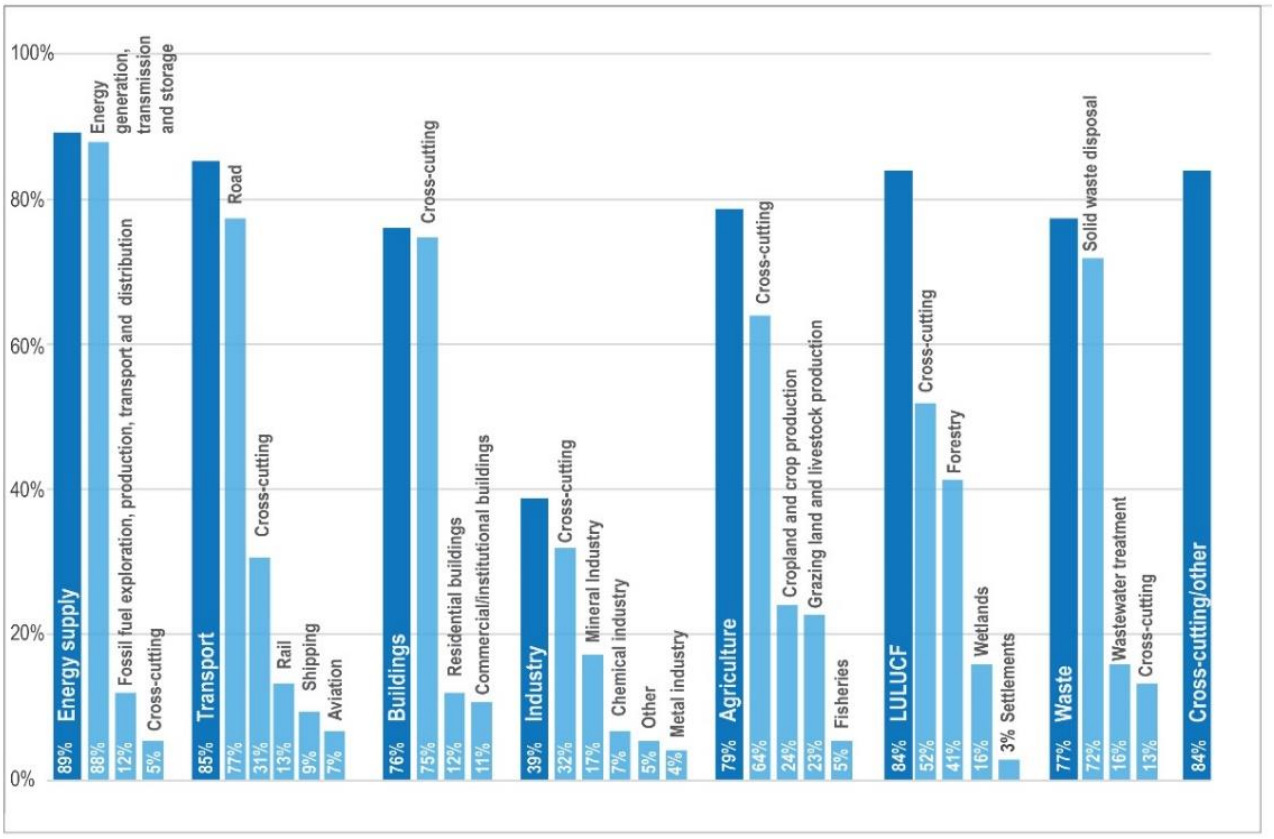
supply, transport, buildings, industry,[48] agriculture, LULUCF and waste. Most Parties identified measures in each of these priority areas, but only some indicated them in industry (see figure 9).

163. Most Parties communicated one or more quantitative mitigation targets specific to priority areas or sub-areas, which support and underpin their overall mitigation targets (see figure 9). Such quantitative mitigation targets were provided most frequently for LULUCF by many Parties, followed by energy supply and cross-cutting or other.

164. Each domestic mitigation measure contributes to achieving an unconditional or conditional mitigation target or both unconditional and conditional mitigation targets identified in the NDC: measures were included by many Parties for achieving their unconditional targets in their NDCs; by some for achieving their conditional targets; and by some others for achieving both their unconditional and conditional targets.

Figure 9

Share of Parties referring to specific priority areas and sub-areas for domestic mitigation measures in nationally determined contributions



Note: If a Party communicated more than one measure for a specific priority area or sub-area, it was counted as one Party communicating measures for that area.

1. Sub-areas and mitigation options under priority areas

165. Of the sub-areas under priority areas communicated, energy generation, transmission and storage was most frequently identified by most Parties, followed by road transport and

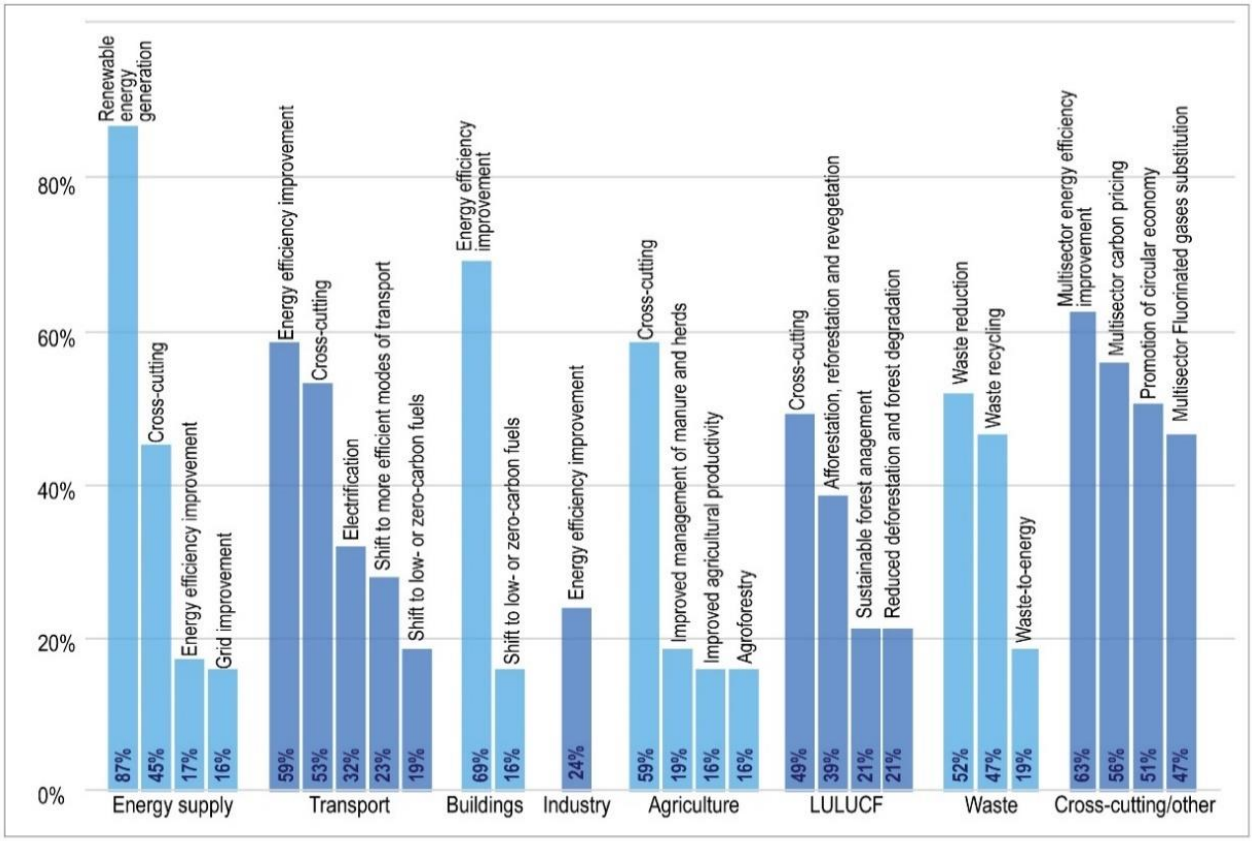
[48] This priority area covers measures targeting emissions from fuel use in industry, industrial process emissions and emissions from product use. For the scopes of the other priority areas, including cross-cutting or other, see addendum 2 to this document.

the cross-cutting sub-area[49] under buildings (see figure 9), which together cover the most frequently indicated mitigation options[50] (see figure 10).

166. Renewable energy generation was the most frequently indicated mitigation option, with the share of Parties indicating this option more than doubling since their previous NDCs, followed by improving energy efficiency of buildings and multisector energy efficiency improvement. A few Parties communicated quantitative targets for renewable energy share (ranging from 13 to 100 per cent) in the electricity mix by 2030; and some of those target shares fall within or above the IPCC range of 47–65 per cent.[51]

Figure 10

Share of Parties referring to the frequently indicated mitigation options in nationally determined contributions



Note: If a Party communicated more than one measure for one of the frequently indicated mitigation options, it was counted as one Party communicating measures for that option.

167. In the priority areas related to supply and end-use of energy such as energy supply, transport, buildings, industry and cross-cutting or other, renewable energy generation and shifting to low- or zero-carbon fuels were frequently or widely indicated as key mitigation options relevant to reducing the carbon intensity of electricity and other fuels; electrification was mentioned in relation to increasing the share of final energy supplied by electricity and

[49] The cross-cutting sub-area covers measures applicable to more than one sub-area under a priority area. For example, the cross-cutting sub-area under buildings covers measures applicable to both residential buildings and commercial or institutional buildings, and the cross-cutting sub-area of under energy supply covers measures applicable to both energy generation, transmission and storage, and fossil fuel exploration, production, transport and distribution.

[50] In this report, mitigation options refers to expected key mitigation effects or categories of domestic mitigation measures, which were identified on the basis of the analysis of the trend in the measures set out in the new or updated NDCs, and by referring to those identified in the previous NDC synthesis report and relevant IPCC reports, including the SR1.5.

[51] The interquartile range of global renewable energy share in electricity generation by 2030 in the modelled emission pathways that limit global warming to 1.5 °C with no or limited overshoot in the SR1.5.

switching fuel use from fossil fuels to electricity in end-use sectors such as transport and buildings, benefiting from electricity with reduced carbon intensity; and improving energy efficiency and shifting to more efficient modes of transport were often referenced in relation to reducing energy demand (see figure 10). More broadly across all priority areas, Parties indicated mitigation options related to circular economy (i.e. continual use of resources to reduce demand for exploiting new resources, including fossil fuels), including reducing and recycling waste and promoting circular economy. Measures related to carbon pricing were identified as efficiently supporting the move towards decarbonization by putting a price on GHG emissions.

168. Parties indicated waste reduction, waste-to-energy, improved management of manure and herds, and fluorinated gas substitution as key mitigation options relevant to reducing non-CO_2 emissions (see figure 10). In terms of key options relevant to enhancing carbon sequestration in soil or vegetation, afforestation, reforestation and revegetation was most frequently indicated, followed by sustainable forest management and reduced deforestation and forest degradation.

169. Some developing country Parties referred to reducing deforestation as a priority with high mitigation potential, including by implementing REDD+ activities. Many of those Parties highlighted the importance of socioeconomic and environmental non-carbon benefits resulting from these mitigation activities, including for adaptation.

2. Coherence and synergies with development priorities

170. Most Parties, more than double the share since their previous NDCs, highlighted policy coherence and synergies between their mitigation measures and development priorities. Many identified domestic mitigation measures in the context of the longer-term measures and policies set out in their LT-LEDS and/or other relevant national long-term low-emission development strategies or laws; for example, by identifying domestic mitigation measures for the NDC on the basis of programmes of actions set out in the national LT-LEDS.

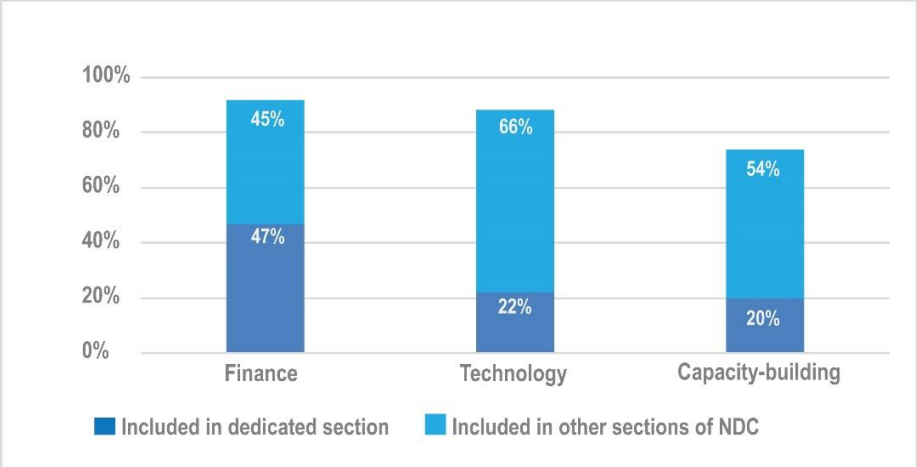
171. In addition, some Parties clarified the alignment between their mitigation measures and specific SDGs, highlighting not only the multiple co-benefits of their measures for sustainable development but also the cost-effectiveness of their measures in relation to sustainable development under their fiscal constraints, including those due to the COVID-19 pandemic. For example, Parties identified one or several of the SDGs to which their mitigation measures contribute; and considered contribution to achieving SDGs as a criterion for identifying such measures to be included in the NDC.

172. Further, many Parties highlighted synergies between their mitigation measures and green recovery from the impacts of the COVID-19 pandemic, such as implementing a “Green New Deal” for accelerating implementation of the measures identified in the updated NDC.

L. Means of implementation

173. Almost all Parties provided information on some or all means of implementation in their NDCs, although the structure and depth of that information varied significantly. While some Parties included a dedicated section on means of implementation or separate sections on finance, technology and/or capacity-building, many mentioned or referred to aspects of means of implementation in other sections of their NDCs, as highlighted in figure 11.

Figure 11
Information on means of implementation in nationally determined contributions



174. Some Parties provided information on specific climate finance, technology and capacity-building projects, including, for some, detailed information on financial and technical requirements, implementing entities and time frames.

175. Some Parties highlighted South–South, triangular or regional cooperation as support mechanisms for NDC implementation, including for specific aspects of financial assistance, capacity-building and technology development and transfer.

1. Finance

176. Almost all Parties provided information on finance as a means of NDC implementation, with many mentioning finance in relation to domestic implementation and many others characterizing finance in terms of international support needed. A few mentioned finance in the context of providing financial support for other countries' NDC implementation. Many Parties provided qualitative information on how finance will be used as a means of implementation either in general or through specific actions for financing mitigation or adaptation support, such as earmarking public expenditure, establishing climate funds or supporting financial systems. Some also included quantitative information on financial investment or expenditure to support their NDCs, such as on financing specific technology development funds, economy-wide budgetary programmes or specific projects and needs for financial support.

177. Some Parties provided quantitative estimates of financial support needs, of which most provided updated estimates and some provided estimates for the first time in their new or updated NDCs. Most estimates were expressed as total amounts over the time frame of the NDC. Some Parties differentiated quantitative estimates for conditional actions reliant on international support from those for unconditional actions that may be financed from domestic sources. Some of those Parties provided estimates for conditional actions only and some others did not specify which actions the estimates were for.

178. Some Parties provided information on financial support needs across mitigation and adaptation themes or sectors, and a few provided total estimates. Mitigation finance is needed across renewable energy, energy efficiency, transport and forestry. Some Parties provided estimates of adaptation finance support needed for activities related to water, agriculture, coastal protection and resilience. A few Parties referred to access to and mobilization and use of financial resources in the context of cooperative approaches under Article 6 of the Paris Agreement.

2. Technology development and transfer

179. With regard to information on technology development and transfer for NDC implementation, many Parties covered qualitative aspects and some also quantitative aspects.

180. Most of those Parties referred to technology development and transfer in the context of actions that inherently address both adaptation and mitigation or focus on mitigation. Some Parties also made reference to climate technology for adaptation.

181. Information provided by Parties on climate technology related matters was mainly on technology needs; specific technologies to be deployed; technology innovation, research and development; policy, regulatory and legal aspects; and support to be provided to other Parties for technology development and transfer.

182. Specific technology needs mentioned by Parties were mainly in the areas of agriculture, climate observation and early warning, energy, industry, infrastructure and buildings, transport and water. In terms of specific technologies that Parties intend to use for achieving their adaptation and mitigation targets, the most frequently identified were energy-efficient appliances and processes, renewable energy technologies, low- or zero-emission vehicles and hydrogen technologies. As regards technology innovation, research and development, some Parties included information on promoting institutions, mechanisms, tools and business models that foster progress in this area. Actions on policy, regulatory and legal aspects commonly referred to by Parties include developing or updating policies to promote technology innovation, improving energy efficiency and accelerating adoption and transfer of climate technologies through private investment. A few Parties included specific information on their intended provision of support to developing country Parties for development and diffusion of climate technologies, for example in the areas of renewable energy and energy efficiency.

3. Capacity-building

183. Many Parties identified capacity-building as a prerequisite for NDC implementation. Some provided a specific section containing information on capacity-building needs. Capacity-building needs for formulating policy, integrating mitigation and adaptation into sectoral planning processes, accessing finance and providing the necessary information for clarity, transparency and understanding of NDCs were identified.

184. With regard to capacity-building needs in thematic areas, some Parties provided information on cross-cutting capacity-building needs, whereas some others expressed capacity-building needs for adaptation and a few others for mitigation. Also, a few Parties indicated capacity-building needs for addressing loss and damage. Some Parties identified their efforts or needs in relation to sectoral capacity-building. The largest proportion of identified capacity-building needs were multisectoral, followed by needs relating to buildings and infrastructure, forestry and energy.

185. Some Parties emphasized the need to strengthen national ownership of capacity-building efforts to ensure sustainability and retention of capacity.