

## Synthesis of submissions on the UAE – Belém work programme on indicators

8 May 2024

### I. Background

1. The Paris Agreement, in its Article 7.1, established the global goal on adaptation (GGA) of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in Article 2 of the Agreement. Following the conclusion of the two-year Glasgow–Sharm el-Sheikh work programme, CMA 5 adopted the UAE Framework for Global Climate Resilience, including seven thematic and four dimensional targets. It also launched a two-year UAE–Belém work programme on indicators for measuring progress achieved towards the targets referred to in paragraphs 9–10 of decision 2/CMA.5 with a view to identifying and, as needed, developing indicators and potential quantified elements for those targets.

2. The United Arab Emirates Framework for Global Climate Resilience includes the following targets:

(a) Significantly reducing climate-induced water scarcity and enhancing climate resilience to water-related hazards towards a climate-resilient water supply, climate-resilient sanitation and towards access to safe and affordable potable water for all;

(b) Attaining climate-resilient food and agricultural production and supply and distribution of food, as well as increasing sustainable and regenerative production and equitable access to adequate food and nutrition for all;

(c) Attaining resilience against climate change related health impacts, promoting climate-resilient health services, and significantly reducing climate-related morbidity and mortality, particularly in the most vulnerable communities;

(d) Reducing climate impacts on ecosystems and biodiversity, and accelerating the use of ecosystem-based adaptation and nature-based solutions, including through their management, enhancement, restoration and conservation and the protection of terrestrial, inland water, mountain, marine and coastal ecosystems;

(e) Increasing the resilience of infrastructure and human settlements to climate change impacts to ensure basic and continuous essential services for all, and minimizing climate-related impacts on infrastructure and human settlements;

(f) Substantially reducing the adverse effects of climate change on poverty eradication and livelihoods, in particular by promoting the use of adaptive social protection measures for all;

(g) Protecting cultural heritage from the impacts of climate-related risks by developing adaptive strategies for preserving cultural practices and heritage sites and by designing climate-resilient infrastructure, guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems;

3. The framework also includes the following four targets as referred to in paragraph 10 of decision 2/CMA.5:

(a) Impact, vulnerability and risk assessment: by 2030 all Parties have conducted up-to-date assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities and have used the outcomes of these assessments to inform their formulation

of national adaptation plans, policy instruments, and planning processes and/or strategies, and by 2027 all Parties have established multi-hazard early warning systems, climate information services for risk reduction and systematic observation to support improved climate-related data, information and services;

(b) Planning: by 2030 all Parties have in place country-driven, gender-responsive, participatory and fully transparent national adaptation plans, policy instruments, and planning processes and/or strategies, covering, as appropriate, ecosystems, sectors, people and vulnerable communities, and have mainstreamed adaptation in all relevant strategies and plans;

(c) Implementation: by 2030 all Parties have progressed in implementing their national adaptation plans, policies and strategies and, as a result, have reduced the social and economic impacts of the key climate hazards identified in the assessments referred to in paragraph 10(a) above;

(d) Monitoring, evaluation and learning: by 2030 all Parties have designed, established and operationalized a system for monitoring, evaluation and learning for their national adaptation efforts and have built the required institutional capacity to fully implement the system.

4. Paragraph 41 of decision 2/CMA.5 invited Parties and observers to submit views on:

(a) Matters referred to the UAE – Belém work programme;

(b) Modalities of the work programme, including organization of work, timelines, inputs, outputs and the involvement of stakeholders.

5. As of 30 April 2024, 60 submissions had been received, 18 from Groups of Parties and Parties, and 42 from observer organizations. Submissions were received from: Honduras on behalf of the Alliance of Latin America and the Caribbean group of countries; European Union; Samoa on behalf of Alliance of Small Island States; Zambia on behalf of the African Group of Negotiators; Malawi on behalf of the Least Developed Countries Group; Saudi Arabia on behalf of the Arab Group; Brazil on behalf of Group SUR (Argentina, Brazil, Paraguay, Uruguay); Mexico on behalf of the Environmental Integrity Group; Japan; Türkiye; Australia; United States; United Kingdom; India; Iceland; Canada; United Nations Economic Commission for Europe Statistical Division (UNECE); United Nations Educational, Scientific and Cultural Organization (UNESCO); United Nations Children's Fund (UNICEF); United Nations Office for Disaster Risk Reduction (UNDRR); International Organization for Migration (IOM); United Nations Children's Fund (UNICEF) on behalf of UN Water Submission coordinated by UNICEF and Sanitation and Water for All (SWA); a joint submission from the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), the Food and Agriculture Organization of the United Nations (FAO), International Labour Organization (ILO), International Organization for Migration (IOM), Office of the United Nations High Commissioner for Human Rights (OHCHR), Office of the United Nations High Commissioner for Refugees (UNHCR), Sanitation and Water for All (SWA), United Nations Children's Fund (UNICEF), United Nations Development Programme (UNDP), United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Foundation, United Nations Office for the Coordination of Humanitarian Affairs (OCHA), United Nations University-Institute for Environment and Human Security (UNU-EHS), World Food Programme (WFP) and the World Health Organization (WHO); Food and Agriculture Organization of the United Nations (FAO); International Labour Organization (ILO); International Federation of Red Cross and Red Crescent Societies (IFRC); International Union for Conservation of Nature (IUCN); CGIAR System Organization on behalf of CGIAR and EAFF; Organisation for Economic Co-operation and Development (OECD); CDP Worldwide; International Institute for Sustainable Development (IISD); Practical Action on behalf of Practical Action and Accountable Adaptation; Corporación de Estudios y Desarrollo Norte Grande; Perspectives Climate Research (PCR); Care About Climate (CAC) on behalf of The Children and Youth Constituency of the UNFCCC

(YOUNGO); Regions4 Sustainable Development (RSD) on behalf of Local Governments and Municipal Authorities (LGMA) Constituency, European Committee of the Regions (CoR), Regions4 Sustainable Development; Trustees of the University of Pennsylvania; Woodwell Climate Research Center; International Council on Monuments and Sites (ICOMOS) on behalf of Heritage Adapts to Climate Alliance (HACA) by Preserving Legacies for the Climate Heritage Network; University of Saskatchewan on behalf of The Monitoring and Evaluating of Climate Communication and Education (MECCE) Project; The Nature Conservancy (TNC) on behalf of The Nature Conservancy (TNC), Conservation International (CI) and Fauna & Flora; Global Climate and Health Alliance, a project of the Social Good Fund (GCHA) on behalf of World Health Organization, Global Climate and Health Alliance, Wellcome Trust, Lancet Countdown and partners; Stockholm Environment Institute (SEI) on behalf of the Adaptation Without Borders global partnership; Climate Strategies (CS); Mercy For Animals (MFA) on behalf of AbibiNsroma Foundation ANF, African Coalition on Green Growth (ACGG), Aquatic Life Institute; Brighter Green, Centre for Climatology and Applied Research, EAT, Emmaus International, Global Youth Coalition, Humane Society International, Jomo Kenyatta University of Agriculture and Technology, Level4International, Mercy For Animals, ProVeg International, Ruya Foundation For Training And Development Yemen, Simon Fraser University, Southern Africa Climate Smart Agriculture Alliance (SACSAA), YOUNGO Animal Rights YOUNGO Food and Agriculture Working Group and Zimbabwe Climate Change Coalition; Basque Center for Climate Change (BC3); University of Melbourne (UM) on behalf of The University of Melbourne, Monash Business School and Australian National University; Power Shift Africa (PSA) on behalf of the Pan-African Coalition for Climate Adaptation and Resilience; Women's Environment and Development Organization (WEDO) on behalf of Women and Gender Constituency; Drugs for Neglected Diseases Initiative (DNDI); Center for Climate and Energy Solutions (C2ES); Center for Participatory Research and Development (CPRD) on behalf of Climate Justice Alliance- Bangladesh (CJA-B) and Network of WASH Networks (NofWN) in Bangladesh; Climate Action Network International (CAN); London School of Economics (LSE); Regenerate Africa; Risk-informed Early Action Partnership (REAP); and International Platform on Adaptation Metrics.

6. Paragraph 42 of 2/CMA.5 requested the secretariat to synthesize these submissions by May 2024 as input to the work programme.

7. In addition, a workshop was mandated to be organized as part of the work programme, and is scheduled to take place from 15 to 17 May 2024.

## II. Matters related to the UAE – Belém work programme

### A. General views on the work programme

8. Throughout submissions, Parties and observers provided some broader, substantive views in relation to the work programme.

9. Multiple submissions highlighted the **ongoing reporting processes** under the UNFCCC, including NAPs, NAPAs and ADComms, as well as the upcoming round of NDCs and Biennial Transparency Reports (BTRs), and how they can be utilized in relation to the UAE Framework and the work programme on indicators. One submission noted that Parties should not wait for the outcome of the UAE-Belém work programme to start implementing and reporting on the framework, but should already be integrating this into their national processes.

10. Multiple submissions highlighted that the feasibility and practicality of reporting on the indicators should be considered throughout the work programme, noting capacity limitations within National Statistical Offices (NSOs) or the availability of data or adequate baselines. It was highlighted that lessons should be learned from other frameworks and

indicator sets to avoid unintended consequences, and suggested a trial period up to the second Global Stocktake for the consideration of some of the questions above. For instance, some stressed a phased approach, advocating for pilot testing and refining indicators and noting/emphasizing that engaging NSOs and data custodians was deemed crucial for data readiness in this context. Some submissions also noted the importance of the involvement of international statistical bodies and NSOs throughout the work programme to ensure feasible indicator development and leveraging existing data collections, or that indicator development could be guided by impact pathways or theory of change approaches.

11. Numerous submissions made clear that the work programme should be **technical in nature rather than political**. Many highlighted an important role for technical experts, both those with specific experience in relation to the development of indicators, and those with relevant technical experience across the thematic target areas. Others noted that technical support should be provided throughout the work programme by and under the **constituted bodies and technical processes** under the UNFCCC, including the Adaptation Committee, Least Developed Expert Group, Standing Committee on Finance, Paris Committee on Capacity Building and the Nairobi Work Programme. Some submissions explicitly indicated that the work programme should not be treated like a negotiation, one of which also proposing that expert groups should lead on indicator development, with Parties only providing guidance during sessions of the Subsidiary Bodies. Furthermore, some highlighted the iterative nature of the process, emphasizing the need for periodic review and refinement based on emerging evidence and stakeholder feedback.

- Concerning modalities, multiple submissions proposed workshops, expert meetings or working groups, many of which also included substantive structures and areas of discussion. Suggested modalities for the work programme will be elaborated upon in more detail below.

12. In terms of **topics**, the most common suggestion was that discussions/workshops would be organized along thematic areas of the targets in paragraph 9 of 2/CMA.5, whereas others proposed workshops based on the dimensional targets, with the thematic areas cross cutting throughout. Other suggestions of topics to be discussed included means of implementation (MoI) and enhancing action and support in relation to the targets and indicators, composite indicators, linking to and informing the global stocktake, stimulating global knowledge exchange that offers opportunities for broader public engagement on adaptation and how MEL and experiences of other frameworks can be applied to the indicator process.

13. Some submissions noted that the work programme should follow a stepwise approach and that at various milestones certain specific advancements should be achieved towards a decision to be adopted at CMA 7. Many submissions also noted that lessons learned from the Glasgow-Sharm el-Sheikh work programme should be applied to this programme, both in terms of modalities and organization, but also in how to advance the substantive discussions in a positive manner.

14. Several submissions highlighted some overall views on the UAE Framework for global climate resilience, including: the framework should be inclusive of adaptation approaches; the framework should guide adaptation efforts towards the collective well-being of all people; the relevance of principles of the Convention and Paris Agreement; exercise flexibility regarding the areas pertinent to adaptation it can explore moving forward; the relevance of paragraphs 24, 29, 32 and 33 of decision 2/CMA.5; and that the framework can enhance synergies across the adaptation agenda under the UNFCCC. It was also suggested that following the adoption of the framework, youth focused training programmes and capacity building efforts be increased, and these voices be included in the decision-making process, as well as that the UAE-Belém work programme timelines/milestones be aligned with Global Stocktake, BTR and New Collective Quantified Goal on Climate Finance processes.

15. It was suggested that detailed examination of the framework's intended users and applications, as well as the initiation of a structured process to unpack the multidimensional

targets and establish criteria for assessing potential indicators, is needed alongside the indicator development process. One submission noted that unpacking the targets prior to the selection of indicators will lead to better outcomes, with one example being to understand which diseases' prevalence are most likely to increase with climate change, and then using this data provide a better picture of climate resilient health. Another suggestion was that should workshops be convened in 2024, a day or half-day should include presentations from technical experts working in the specific thematic area, covering existing indicators, assessing their respective strengths, and links with other thematic areas covered in paragraph 9 of decision 2/CMA.5.

16. Several submissions also expressed their expectations for the negotiations at SB 60:

(a) Parties may consider how to respond to the technical questions raised in paragraph 38, with particular attention to which constituted body or process is best placed to develop technical products on these topics.

(b) Negotiate and agree on a menu of SMART measures (Specific, Measurable, Assignable, Realistic, and Time-bound) for the work programme, including on the involvement of experts, and for each session, which can be taken forward immediately following the SBs.

(c) Parties should discuss the nature of deliverables and provide the mandates in relation to the modalities of the work programme.

## **B. Indicators for the targets in decision 2/CMA.5 paragraphs 9 and 10**

17. Nearly all submissions suggested that **existing indicators** should be utilized to measure progress towards the targets, with many providing examples of international frameworks, indicator sets and national reporting processes that can be applied to the targets under the framework. There were a range of views as to whether only existing indicators should be utilized and the end goal of the work programme be to define a 'menu of indicators', or whether the work programme should also include the development of new indicators where gaps are identified.

18. On the **process of identifying existing indicators**, there were differing proposals made in submissions. Many suggested that the first part of the work programme should be to compile or map a long list of relevant indicators used in other frameworks, including but not limited to the Sustainable Development Goals, Sendai Framework for Disaster Risk Reduction and the Kunming-Montreal Global Biodiversity Framework. A full list of indicators that were suggested in submissions is available in Annex1. Some suggested this be done by the SB Chairs with support of the UNFCCC secretariat, others proposed this be done by the Adaptation committee, while another proposed an approach where the Subsidiary Bodies collaborate with constituted bodies such as the Adaptation Committee and the Standing Committee on Finance.

19. Some suggested prioritizing a methodical and structured approach to indicator identification and selection, with some suggesting thematic expert groups for indicator development. Many submissions emphasized developing a standardized methodology and drawing on existing frameworks and organizations to reduce reporting burdens. The adoption of thematic approaches, coupled with concerted efforts to build consensus on definitions and standards, was highlighted by a few as vital to fostering cohesion and alignment within diverse stakeholder groups, nurturing a collaborative environment conducive to progress.

20. Many submissions noted the challenge of **measuring adaptation at a global level**, given its local context and countries' needs. Some submissions noted that as the UAE Framework and its targets are global in nature, it is important to have global level indicators; however, others highlighted that only having global level indicators is not feasible. Some noted that if there are to be global indicators, they should be applicable to all, with others noting that aggregation of information between the national and global levels is key in measuring progress towards the targets. It was proposed that a tiered approach be applied to

the indicator outcome, for example by existing data availability, by scale from local to global or between short, medium and long term. Several submissions also recognized the necessity for global and regional collaboration in developing standardized methodologies for measuring adaptation efforts, while others noted that the number of indicators for each thematic area should not be exhaustive.

21. It was proposed that **outcome orientated** indicators be considered as part of the work programme, similar to some of the indicators under the Sendai Framework. One suggestion in this regard was that as part of the ecosystem target, increased species abundance as a result of nature-based solutions can help to track climate adaptation. However, it was also noted that setting such indicators at a global level is methodologically challenging, given Parties' experiences of this at national level. One submission recommended the inclusion of indicators that can track ambitions (what are we trying to achieve?), inputs (what resources and support are currently employed in adaptation efforts?), activities (what actions are current undertaken and with what intent?), outcomes (what results have been realized?), and next steps and obstacles (how will we progress further?).

22. Many submissions discussed the issue of whether to use **quantitative or qualitative indicators**, or a combination of both, with most noting that a mixed approach is preferred. Some noted that quantitative indicators enable accurate assessment of progress at a global level, while others highlighted the practical challenges of measuring adaptation and that a quantitative-only indicator approach is not feasible. One submission highlighted that qualitative indicators are particularly suitable for capturing people's attitudes, experiences, and knowledge, as well as for providing insight into the behavioural enablers of and constraints to effective adaptation.

23. Some submissions highlighted that the **indicators must be adaptation specific** and clearly aligned to the eleven targets in decision 2/CMA.5, and should help to strengthen adaptation efforts towards their achievement. A number of submissions considered whether the indicators should link to the eleven targets specifically, or whether a mixed approach of measuring the thematic targets through the lens of the adaptation cycle targets could also be utilized.

24. In a similar vein, several UN agencies noted the thematic alignment in the proposed indicators and leveraging support from specialized agencies was underscored as key in enhancing thematic focus. As well as this, other submissions suggested that indicators should measure process, outcomes and cross-cutting issues, while also considering interdependency between the thematic areas.

25. Whether the indicators are to be at a local, national or global level, many submissions were clear that the **process for reporting** on them be nationally driven, similar to NAPs or NDCs. For example, if the work programme concludes with a long list of indicators, Parties would then decide what to report on based on their national circumstances. Data disaggregation by various demographics, e.g. age, gender, disability, and socioeconomic parameters were emphasized by multiple submissions to ensure inclusivity and address the needs of different population groups effectively.

26. It was proposed in numerous submissions that following the conclusion of the two-year work programme, the final outcome could include a mix of 'core' and 'voluntary' indicators. In addition, there were divergent views on whether an outcome would include indicators relating to MoI, namely finance, technology and capacity building. Some submissions are clear that the indicators should only be considered for the eleven thematic and dimensional targets and adaptive capacity indicators or finance indicators are not supported. However, others suggest that MoI to achieve the targets should at the very least be considered as part of the work programme and in the discussions, with many proposing that indicators on levels of MoI should be included and that these would enable the identification and filling of gaps, contributing to the achievement of the targets. In this context, some proposed indicators to strengthen adaptive capacity and recognized capacity-building efforts as essential to improving data collection, analysis, and reporting capabilities at national and local levels.

27. Throughout the submissions, many **additional considerations** in relation to the indicators were raised. This included the importance of reflecting the special circumstances of the Least Developed Countries and Small Island Developing States, that the outcome of the work programme should ensure there is no additional reporting burden on Parties that the best available science and in particular that of the Intergovernmental Panel on Climate Change be the basis for indicators. One submission did however note that ‘best available’ should not be restricted to Western science.

28. Many perspectives highlight the **importance of inclusivity** with regard to indicators, and it was suggested that they take into account indigenous peoples’ perspectives and integrate indigenous knowledge and leadership, as well as those of women, youth and children, minority and disadvantaged groups, promote locally-led adaptation, and contribute to the achievement of social justice and intergenerational equity. Numerous submissions also advocated for indicators that consider vulnerable populations such as migrants, displaced persons, people with mental or physical disability, people with poor wellbeing and marginalized communities. However, a number of submissions also noted that some of the terminology in paragraph 9 of 2/CMA.5 is yet to be fully defined under the UNFCCC or IPCC, e.g. cultural practices, and thus must be treated with caution.

29. Many stressed that indicators should be developed with an eye toward shaping the future of the framework which may succeed the Sustainable Development Goals, slated to end in 2030, considering the targets outlined in paragraph 9 of the decision indicate a longer time horizon (‘by 2030 and progressively beyond’) than the SDGs. Looking forward, one submission noted that adaptation approaches by their nature require anticipatory and pre-emptive action, and thus having a future orientated lens to the development of indicators for the UAE Framework is key to **achieving transformational outcomes**. It was suggested that when measuring transformative elements, a just transition lens, mindset shifts, changes to the scope of development trajectories, and the importance of highlighting transformation ‘small wins’ can all be considered.

30. One submission highlighted the inclusion of indicators that take into account the **transboundary** nature of climate risk by, for example, assessing progress on cooperation and resilience-building efforts between countries. It also suggested an experimental and innovative approach to the design of bespoke indicators on transboundary climate risks and opportunities, at both national- and system-level scales.

### C. Examples of relevant experience/lessons

31. As noted in section II, many submissions proposed a mapping or compilation of all existing indicators as a first step in the work programme. Throughout submissions, many examples of existing indicators that could be used to measure progress towards the targets in 2/CMA.5 paragraphs 9 and 10 were proposed. Most of these link to a specific target area and are part of an international framework already in use that countries report on, but it was also highlighted that a lot of relevant information is already being reported by Parties through NAPs, ADComms NDCs and other documents. A list of proposed indicators is included in Annex 1; the indicators under the Sustainable Development Goals, Sendai Frameworks and Kunming-Montreal Framework on Global Biodiversity were most commonly cited.

32. Numerous submissions considered existing indicator processes, and what lessons may be learned from their development, usage and reporting experiences, which may be useful as part of the UAE-Belém work programme.

(a) The process to identify and develop indicators will be complex and challenging, especially given that, in comparison to other multilateral indicator processes (e.g. SDGs), two years is a relatively short time period.

(b) Under the Sendai Framework’s open ended working group, a crucial first step was to agree on terminologies when establishing data standards.

(c) The targets and subsequent indicators under the Sendai framework were developed to encompass both outcomes and outputs, incorporating lessons learned from implementing the Hyogo framework. As a result of this, and measures to support and enhance data quantity and quality, 159 member states are reporting under the Sendai framework.

(d) Although the Sendai framework's indicators are global, they comprise a mix of composite indicators and sub-indicators, to provide flexibility yet maximize inclusivity. These were developed with different reporting options for member states, with the understanding that pathways to achieve the goals would differ, but were nonetheless made aggregable through processes put in place to ensure that global progress could be measured.

(e) Under the SDGs and the Global Set, there are three tiers of indicators<sup>1</sup> which help to identify the relevance, data availability and methodological soundness and measurability of indicators.

(f) Breaking the overall indicator package down to have a mix of core and indicators, and then further sectoral or proxy indicators, can also be beneficial when measuring climate change related information, which could be applied to the UAE Framework targets. This could build upon the work of the UNECE task force, which considered 205 proposed SDG indicators that were related to climate change, but set a limit of 40 core indicators that should be disseminated to NSOs.

(g) Before being finalized, indicators under the Sendai Framework went through data readiness exercises twice to assess feasibility and determine capacity development requirements. Member states considered their data availability and identified gaps, and also examined their ability to establish baselines against the Sendai global targets.

(h) To fully measure and understand progress towards global goals and targets, robust statistical and methodological standards should be followed, linking with processes under the UN Statistical Commission.

(i) Despite survey results showing that 80 per cent of countries are interested in using indicators to assess adaptation progress, less than 40 per cent of these are doing so, with respondents citing inadequate technical, legal and financial resources as key challenges in this area.

33. Aside from the global frameworks mentioned, many other indicator sets or processes by UN or international organizations, NGOs and academia were also highlighted in submissions, which could be utilized as part of the work programme - for example, work under the World Bank or International Labour Organization. These suggestions are also included in Annex 2.

### **III. Views on modalities of the work programme**

#### **A. Organization of work**

34. Nearly all submissions discussed possible modalities for the UAE-Belém work programme, with a wide range of proposals. The two-year work programme is mandated to conclude in November/December 2025, and following the publication of this synthesis, a mandated workshop will take place from 15 to 17 May 2024.

35. Several submissions included views on creating a space (e.g. workshops, dialogues, expert meetings) for Parties and non-party stakeholders to advance the work, although a range of different ideas was discussed (Table 1).

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<sup>1</sup> Please see: <https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/>



36. Numerous submissions proposed a **series of workshops** be held over the two-year work programme, on top of the one mandated workshop taking place in May 2024. There were suggestions of a small number of workshops to be held in conjunction with negotiation sessions to minimize travel costs, but also suggestions of having up to five, six, seven and eight workshops, with a preference for these to take place intersessionally due to this modality facilitating better discussions. It was also noted in multiple submissions that the breakout group modality utilized in the seventh and eighth workshops of the Glasgow-Sharm el-Sheikh work programme enabled the most fruitful conversations and understanding of different ideas, and thus that these modalities should be utilized again to ensure that negotiation conditions are avoided.

37. Some other submissions did not propose workshops, but rather **other modalities** which would advance the work on indicators. Numerous submissions proposed two or three global dialogues, building upon a synthesis or mapping of existing indicators, which would facilitate engagement among experts (including the IPCC) and Parties, similar to other work programmes under the UNFCCC process, such as the mitigation work programme and work programme on just transitions. It was also proposed to bring together relevant expertise, but that these discussions should be technical, with clear outputs and objectives for each meeting, which could be framed around the target areas and existing work. Some submissions proposed holding the dialogues in conjunction with meetings of other bodies such as the Adaptation Committee or in conjunction with negotiation sessions, whereas others proposed standalone events which would take place intersessionally.

Table 1 Proposals on creating the space to advance discussions on indicators

<i>Inter-sessions</i>	<i>SB 60</i>	<i>Inter-sessions</i>	<i>SB 61</i>	<i>Inter-sessions</i>	<i>SB 62</i>	<i>Inter-sessions</i>	<i>SB 63</i>
1	1		1	1	1		1
	1				1		
	1						
					1	1	1
1		2		2		2	
1	3	2		2			
			1				
	1	1		1	1	1	
Up to 3 in 2024				Up to 3 in 2025			
3 global dialogues held in conjunction with existing meetings							
At least 2 workshops							
2 dialogues							
A series of regular mandated workshops: options to be devised at the Bhutan workshop							
Workshops in conjunction with the sessions (the number of which is not specified)							
Expert meetings in conjunction with other events							
UN/NGO co-organised workshops, together with any interested Party and the UNFCCC Secretariat on specific topics related to the WP							

38. As noted above, different submissions proposed different approaches **with regards to the workshop themes**, with some noting the thematic target areas should serve as their basis and others suggesting organizing the workshops around the dimensional targets. One submission noted that the final workshop held before CMA 7 should focus on an analysis of the outcomes associated with all indicators gathered and consider a way forward.

39. Many of the submissions that proposed workshops or expert meetings also suggested that these be **informed by submissions or technical inputs** from experts prior to such events taking place, based on the topic area, particularly due to the technical nature of indicator development. It was proposed that submissions be made by Parties and observers, and the

secretariat or adaptation committee synthesize these in a compilation or concept note, with suggestions of deadlines of four weeks and two weeks before the event respectively. Specifically, it was suggested to use data from the IPCC and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) including their special reports and assessments, as well as to review documents and reports from environmental conventions, especially the three Rio Conventions and the Bern III process. In addition, some recommended the creation of metadata sheets and implementation guidelines for indicators, with stakeholder involvement.

40. A number of submissions suggested that the modalities of work be led by the Adaptation Committee, with some suggestions including specific outputs, whereas others being more general with regards to modalities. One proposal was that the AC convene expert groups for the dimensional and thematic target areas (three groups in total) to compile relevant information and existing indicators, and based on their results, **feedback is received from Party and non-Party stakeholders.**

41. One submission proposed the establishment of (an) **ad-hoc expert group(s)** to lead the technical work on indicators and be guided by Parties through the setting of the terms of reference and deadlines. Experts would be nominated to the group(s), who would gather for formal meetings held back-to-back with workshops attended by Parties. The outcome of the ad-hoc group(s) would be a draft indicator package, including sources of data, stakeholders and information about global aggregation, which would then be adopted by Parties. This proposal is similar to the Sendai Framework's open-ended intergovernmental working group (OIEWG), which conducted formal and informal meetings, was supported by technical papers from the secretariat and was guided by member states. Another submission also proposed the use of expert groups as the best way to advance the indicator development; however, it did note that even the processes of nominating experts and the practicalities of such work brings many challenges, and that serious practical considerations must be taken into account when the modalities of the work programme are being decided.

42. One submission also proposed a dialogue on MoI specifically for adaptation be held under the work programme, in order to constructively exchange views, noting that this cross-cutting issue has links to the framework, NAPs, NCQG and other workstreams under the UNFCCC. It was also suggested by some that indicator development could take place offline between sessions, for example in 'sprints' or 'hackathons' as well as stakeholder engagement consultations, as a means to foster knowledge sharing and facilitate informed decision-making processes. It was noted that a process for coordination across the different thematic areas is needed to ensure complementarity, given interdependencies between various thematic areas.

43. Finally, regarding the events and proposals outlined above, many of the submissions noted that any workshops or events should be technical, interactive and inclusive, taking into account the equity representation of all regions. Some proposed that events be held in a hybrid format with advanced accessibility for those joining online, with others highlighting that in-person attendance at workshops or events should be balanced geographically and include both Parties and technical experts, and that producing high-quality outcomes should be the determining factor when deciding modalities. One submission suggested that the agenda and guiding questions for any workshop be shared at least three weeks in advance to facilitate substantive preparation by Parties and stakeholders in the workshops.

## **B. Inputs and outputs**

44. Many submissions suggested inputs to the work programme. These include:

(a) A compilation or mapping of existing indicators: as noted, many submissions considered this to be an important step in the work programme in 2024. Some suggested this be done by the SB Chairs, with support from the secretariat, others proposed this be done by the Adaptation committee, while another proposed an approach where the Subsidiary Bodies collaborate with constituted bodies such as the Adaptation Committee and the Standing

Committee on Finance. It was also suggested that updating the secretariat’s compilation and synthesis report from September 2022 would be sufficient for this stage of the work programme; on the other hand, it was also suggested that the AC develop reports prior to SB 61, based on inputs from various sources, including submissions from the stakeholder groups identified in paragraph 20 of 2/CMA.5;

(b) Criteria for indicators: some proposed that a first step would be to establish and define criteria for indicators, or to secure a mandate from SB 60 for a call for Parties, research institutions and international organizations to submit information and knowledge on indicators already in use in their countries or institutions, which would then inform the mapping of existing indicators. Some suggestions for criteria include: does not constitute a basis for comparison between Parties; global, but shows aggregated information; verifiable and allows data comparability; has a designated custodian or responsible party for its tracking; relevant; facilitates institutionalisation; scalable; participatory; relevant to adaptation and resilience building; valid; reliable; measurable; simple; evidence-based; draws on existing monitoring; guards against maladaptation; human rights-based and equity-centred; geographically representative, with relevance at international and national level; has cost of measurement; practically feasible, with the potential for strengthening over time, non-exhaustive;

(c) Submissions from Parties and observers;

(d) Intergovernmental Panel on Climate Change (IPCC) reports (for example, existing efforts to track health indicators are summarised by IPCC WGII in Chapter 7 of its AR6 report, specifically, section 7.1.6).

(e) Case studies relevant to the thematic targets and/or iterative adaptation cycle;

(f) A compilation of lessons learned from the Glasgow-Sharm el-Sheikh work programme by the secretariat for consideration by Parties when formulating the structure and modalities of the UAE-Belem work programme.

45. Proposed outputs for the work programme include:

(a) Summary reports of workshops;

(b) Draft CMA decision language forwarded to the Presidency before CMA 7; with some submissions considered at each session of the subsidiary bodies (SB 60, SB 61, SB 62 and SB 63) and CMA 6 and CMA 7 and along with **specific milestones** for each of these. For example:

(i) At SB 60, proposals include mandating the SB Chairs to prepare a workplan, and adopting terms of reference for an ad-hoc working group to undertake the technical work on indicators;

(ii) At SB 61, Parties to have established clear criteria for indicators for the targets, and to have scheduled a workshop to be held in conjunction to discuss the mapping of existing indicators;

(iii) At SB 62, Parties to have a draft proposal for indicators or a shortlist of validated indicators;

(iv) At SB 63, Parties to have a final compilation of indicators to be adopted at CMA 7.

## C. Views on stakeholder involvement in the work programme

46. Many submissions highlighted that diverse range of stakeholders should be included in the work programme, ensuring adequate technical expertise, both in relation to adaptation and across the thematic areas, is incorporated, as well as those with expertise in using statistics, developing indicators and reporting under international frameworks, who may not be formally engaged in the UNFCCC process. Many submissions proposed UNFCCC

constituted bodies, UN and international organizations, non-governmental organizations or bodies working on the certain thematic areas that could be involved. A full list of suggested organizations or stakeholders is available in Annex 2. .

47. As noted in previous sections, many submissions suggested that constituted bodies should have an active role in the work programme, most prominently the Adaptation Committee and the Least Developed Countries' Expert Group, as well as the SCF and the PCCB. Several submissions also highlighted the potential contribution of work under the Nairobi Work Programme and the Lima Adaptation Knowledge Initiative (LAKI) given their relevant track record, such as existing work within taking place the NWP's thematic expert groups.

48. It was suggested that multi-stakeholder consultations would be beneficial to solicit inputs to the work programme and to provide feedback on the review of indicators, and that there is a need for a bottom-up, participatory process including non-Party stakeholders. Some stakeholder groups that many have suggested be involved in the work programme include financial actors, such as multilateral development banks or the UNFCCC financial entities, and the academic and research communities. Collaboration with a diverse array of stakeholders, including statistics experts and bodies, governments, international organizations, research institutions, civil society, local stakeholders and affected communities in ways that enable them to contribute meaningfully to indicator development was highlighted.

49. Submissions noted the importance of equitable geographical and gender representation when it comes to stakeholders involved in the work programme, to ensure the widest range of perspectives are heard, especially those from the global South. Others highlighted that through the work programme and the framework itself, international cooperation and coordination across bodies and processes can be enhanced as stakeholders are brought together on the adaptation space to advance progress towards the achievement of the targets.

50. Numerous submissions highlighted that other stakeholder groups and their perspectives be included in the work programme. These include indigenous peoples, women and gender stakeholders, youth and the most vulnerable. Similarly, others advocated for a rights-based, inclusive and participatory approach, particularly emphasizing the perspectives of children and young people in indicator development, and the involvement of affected persons such as migrants, displaced persons and marginalized communities.

## Annex 1

### Examples of proposed indicators for the targets under the UAE Framework for Global Climate Resilience

Please note, some submissions specifically suggested indicators to be included as an outcome of the work programme, some suggested initial indicators which would then be subject to expert analysis as per their relevance.

*Target 9a. Significantly reducing climate-induced water scarcity and enhancing climate resilience to water-related hazards towards a climate-resilient water supply, climate-resilient sanitation and towards access to safe and affordable potable water for all*

<i>Indicator</i>	<i>Source</i>
Change in water-use efficiency over time	DG Indicator 6.4.1
Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	SDG Indicator 6.4.2
Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All services)	GBF Target 11, complementary indicator
Proportion of bodies of water with good ambient water quality	SDG Indicator 6.3.2; GBF Target 11, component indicator
Change in the extent of water related ecosystems over time	SDG Indicator 6.6.1
Trends in the proportion of land under drought over the total land area	UNCCD Strategic Framework
Trends in the proportion of the population exposed to drought of the total population	UNCCD Strategic Framework
Trends in the degree of drought vulnerability (disaggregated)	UNCCD Strategic Framework
Degree of integrated water resources management.	SDG Indicator 6.5.1
Freshwater ecosystem services indicators of the Freshwater Health Index including, water supply reliability relative to demand, freshwater biomass for consumption, sediment, water quality, disease, and flood regulation	Vollmer D, Shaad K, Souter NJ, Farrell T, Dudgeon D, Sullivan CA, et al. (2018); Shaad K, Souter NJ, Vollmer D, Regan HM, Bezerra MO. (2022)
Number of people reached with climate resilient at least basic sanitation services (disaggregated by climate resilient, humanitarian/development, age group, disability status, urban/rural, sex)	UNICEF Strategic Plan
Number of people reached with climate resilient at least basic 2 water (disaggregated by climate resilient, humanitarian/development, age group, disability status, urban/rural, sex)	UNICEF Strategic Plan
Number of people reached with basic hygiene services (Disaggregated by climate	UNICEF Strategic Plan

resilient, humanitarian/development, age group, disability status, urban/rural, sex)	
Number of schools reached with climate resilient WASH services (Disaggregated by climate resilient status)	UNICEF Strategic Plan
Number of health-care facilities reached with climate resilient WASH services (Disaggregated by climate resilient status)	UNICEF Strategic Plan
Proportion of ecosystems and populations particularly vulnerable to drought, desertification, and water scarcity identified and under effective management. (disaggregated)	Indicator source unclear in submission
Populations with access to early warning systems for floods and droughts and other water-related hazards. (disaggregated)	Indicator source unclear in submission
Number of parties reporting on climate-induced water scarcity and water-related hazard trends and with updated disaster risk management plans under implementation	Indicator source unclear in submission
Frequency and intensity of drought and water scarcity	Indicator source unclear in submission
Proportion of domestic and industrial wastewater flows safely treated	SDG Indicator 6.3.1
Volume of water saved per year (compared to baseline)	Indicator source unclear in submission
Volume of water reused compared to baseline	Indicator source unclear in submission
Volume of treated wastewater recycled and reused (compared to baseline)	Indicator source unclear in submission
Number of countries that have developed and implemented regulatory measures for water demand management, water reuse, circularity (and other measures related to reducing water scarcity)	SDG Indicator 6.5.1
Number of countries that have developed and implemented water demand management strategies that factor in the human rights to safe drinking water and sanitation	Indicator source unclear in submission
Number of countries with enhanced communication and public awareness mechanisms for adequate water conservation, reuse and efficiency	SDG Indicator 6.5.1
Number of people benefited from interventions targeting water conservation, efficiency and reuse (compared to baseline)	Indicator source unclear in submission
Fresh groundwater abstracted	Indicator source unclear in submission

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Fresh surface water abstracted	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Freshwater abstracted	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Freshwater abstracted as proportion of renewable freshwater resources	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Inflow of surface and groundwaters from neighboring countries	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Internal flow	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Renewable freshwater resources	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Renewable freshwater resources per capita	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Wastewater generation and treatment	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Water resources	UNSD Global Set of Climate Change Statistics and Indicators, Inland Water Resources
Number of extreme events – floods and droughts	Indicator source unclear in submission
Percentage of land affected by drought or floods	Indicator source unclear in submission
Number of countries with prevention, response and financing strategies to climate induced water-related hazards	Indicator source unclear in submission
Number of countries with strategies on the use of green/grey infrastructure /use of nature-based solutions as climate adaptation option to address water-related hazards	Indicator source unclear in submission
Existence of plans and mechanisms for the integration of strategies on water-related hazards and infrastructure (grey-green) across national development plans to assess and reduce vulnerabilities across sectors	Indicator source unclear in submission
Improved water sources and improved sanitation facilities	Indicator from the Millenium Development Goal agenda
Basic service of water supply and sanitation facilities	SDG Indicator 1.4.1
Safely managed and accessible drinking water	SDG Indicator 6.1.1

Safely managed sanitation services: Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated offsite	SDG Indicator 6.2.1a
Basic service of hygiene	SDG Indicator 6.2.1b
Maintained/enhanced water availability (e.g. m <sup>3</sup> /capita and year) against baseline scenario and despite worsening climatic conditions	Linked to SDG Indicator 6.4.2
Proportion of transboundary basin area with an operational arrangement for water cooperation	SDG Indicator 6.5.1

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*Target 9b. Attaining climate-resilient food and agricultural production and supply and distribution of food, as well as increasing sustainable and regenerative production and equitable access to adequate food and nutrition for all*

<i>Indicator</i>	<i>Source</i>
Prevalence of undernourishment	SDG Indicator 2.1.1
Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	SDG Indicator 2.1.2
Proportion of agricultural area under productive and sustainable agriculture.	SDG Indicator 2.4.1
Proportion of agricultural area under productive and sustainable management	GBF Target 10, headline indicator 10.1
Proportion of fish stocks within biologically sustainable levels	GBF Target 5, headline indicator 5.1
Dietary diversity, disaggregated	FAO food balance sheets, National dietary guidelines tracker
Food security/Crop/Livestock/Genetic diversity/ Agrobiodiversity Index	FAO, WFP, GBIF
Landscape connectivity and complexity	ESA
Moderate or severe food insecurity in the population due to climate related impacts, based on the Food Insecurity Experience Scale (FIES)	SDG Indicator 2.1.2
Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	SDG Indicator 2.2.1
Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)	SDG Indicator 2.2.2
Prevalence of anaemia in women aged 15 to 49 years, by pregnancy status (percentage)	SDG Indicator 2.2.3



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Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size	SDG Indicator 2.3.1
Average income of small-scale food producers, by sex and indigenous status	SDG Indicator 2.3.2
Proportion of agricultural area under productive and sustainable agriculture.	SDG Indicator 2.4.1
Impact of Extreme Weather on Food Insecurity (Indicator measures the change in the share of the population reporting moderate or severe food insecurity due to change in heatwave days and drought months occurring during the growth season of four major crops (maize, rice, sorghum, and wheat), compared to 1981- 2010)	The Lancet Countdown
Percentage of children under 5 years of age with severe wasting and other forms of severe acute malnutrition who are admitted for treatment (Indicator could be adapted to represent “Number of children under 5 years who benefit from climate-resilient programs for the prevention of stunting, wasting, micronutrient deficiencies” from 2026 onwards)	UNICEF Strategic Plan
Percentage of children [...] who are fed a minimum diverse diet	UNICEF Strategic Plan
Number of countries with strategies and programs to improve diet diversity among children (Indicators could be adapted to add in a climate resilience rationale from 2026 onwards)	
Number of Mothers and Pregnant Women reached with Preventive Nutrition Services	UNICEF East Asia and Pacific
Number of children reached with climate-smart Preventive nutrition services (disaggregated by <5 years & 5-19 years)	UNICEF East Asia and Pacific
Number of children <5 yrs reached with climate-smart therapeutic nutrition services	UNICEF East Asia and Pacific
Surveillance/Info Systems include Indicators for Climate Smart Nutrition Services	UNICEF East Asia and Pacific
Agricultural self-sufficiency coefficient	Indicator source unclear in submission
Livestock self-sufficiency coefficient	Indicator source unclear in submission
Rural population experiencing food insecurity.	Indicator source unclear in submission
Participation of rural production units in the final value of agricultural products	Indicator source unclear in submission
Physical water productivity in irrigation units	Indicator source unclear in submission

Reduction of water footprint in priority crops	Indicator source unclear in submission
Stabilization of the agricultural frontier	Indicator source unclear in submission
Sustainable practices in agricultural production	Indicator source unclear in submission
Food production diversity (the range of food types produced domestically)	Kummu et al., 2020
Food supply diversity (the range of food types available domestically from both independence from food imports and the share of each food type that is produced domestically rather than imported)	Kummu et al., 2020
Import connections (number of significant food import relationships)	Kummu et al., 2020
Sustainable watershed and inland fisheries index	GBF indicator t.4.1
Proportion of agricultural areas cultivated with crops that have the probability of attaining higher yields under projected regional climate conditions	Piloted in DRC
Population size of reindeer herds, caribou, and fish stocks	Indicator source unclear in submission
Equitable protections and subsistence priority provided to Indigenous herders, hunters, and fishers through policies and legal protections	Indicator source unclear in submission
Public consultations on land-use change between private actors, governments, and Indigenous communities	Indicator source unclear in submission
Remuneration, financial compensation or other equitable exchange for lands traditionally used for subsistence or economic development of Indigenous populations	Indicator source unclear in submission
Percentage of people with ownership of secure rights over agricultural land, by sex and age group	Adapted from SDG Indicator 5.a.1
Number of additional landowners with access to resilience solutions for agricultural use, by sex and age group	Adapted from CPI Labs
Average income of small-scale food producers, by sex, age group and Indigenous status	Adapted from SDG Indicator 2.3.2
Proportion of children < 5 years who are underweight for age – global malnutrition (%)	Joint child malnutrition estimates (UNICEF-WHO-WB)
Proportion of children < 5 years with chronic malnutrition (%)	Joint child malnutrition estimates (UNICEF-WHO-WB)
Proportion of youth < 18 years who are underweight for age - global malnutrition (%)	Joint child malnutrition estimates (UNICEF-WHO-WB)

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Proportion of youth < 18 years with chronic malnutrition (%)	Joint child malnutrition estimates (UNICEF-WHO-WB)
Direct agricultural revenue loss attributed to climate change related hazards (USD/year)	Adapted from Sendai Global Target C-2
Agricultural area (ha) where productive agriculture is impeded by climate change related hazards.	Indicator source unclear in submission
Proportion of agricultural area under early warning system with capacity to identify and monitor priority hazards	Adapted from SDG Indicator 2.4.1
Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/ or control	SDG Indicator 5.a.2
Direct agricultural losses attributed to disasters	Sendai Global Target C-2
Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry	GBF Target 10
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<i>Target 9c. Attaining resilience against climate change related health impacts, promoting climate-resilient health services, and significantly reducing climate-related morbidity and mortality, particularly in the most vulnerable communities</i>	
<i>Indicator</i>	<i>Source</i>
Mortality from ambient air pollution by sector SDG 5.a.2	Lancet Countdown indicator 3.2.1
Mortality from indoor air pollution	Lancet Countdown indicator 3.2.2
Malaria incidence per 1,000 population [because weather and climate affect the spread of vector-borne disease]	SDG Indicator 3.3.3
Mortality rate attributed to household and ambient air pollution	SDG Indicator 3.9.1
Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	SDG Indicator 3.9.2
Number of countries that have conducted climate and health risk assessments using WHO guidelines, with a focus on the most vulnerable populations (Pregnant women and children are uniquely vulnerable to climate hazards and should be centred in the assessments as adverse health outcomes in this population can resonate across all life stages ahead.)	WHO vulnerability and adaptation assessments (V&As), UNICEF's Children's Environmental Health assessments (example from Azerbaijan)
Number of countries with increased public financing to build the foundations of climate resilient and low carbon health system	Adapted from WHO operational framework
Number of countries who publicly report resource monitoring and expenditure	Indicator source unclear in submission

tracking specific to climate investments in national health accounts	
Coverage and climate-related disruption of essential health services (Climate related disruption pertains to estimated shortfall in services compared to expected volume)	Adapted from SDG Indicator 3.8.1
Percentage of population with access to a health facility within 2 hours	Indicator source unclear in submission
Percentage of deliveries attended by skilled health personnel	SDG Indicator 3.1.2
Countries operationalize effective public health measures to protect people from the range of climate risks to health, with an emphasis on vulnerable populations	Indicator source unclear in submission
Percentage of population exposed to key climate-related risk factors	Indicator source unclear in submission
Number of countries that have reduced their average PM2.5 concentration	OECD
Deaths/DALYs attributable to each climate related hazard	WHO
Number of deaths, missing persons and directly affected persons attributable to disasters per 100,000 population	SDG Indicator 13.1.1
Incidence of cases of climate-related diseases	Adapted from Environment Statistics, Global Set of Climate Change Statistics and Indicators.
Number of national education programmes that institutionalize climate and health curricula as part of climate education programmes (or school health programmes) promoting healthy lifestyles, healthy diets and healthy environments	Indicator source unclear in submission
Number of countries with a system in place for mental health and psychosocial support for emergency preparedness and/or disaster risk management	WHO ATLAS
Number of countries with after-action review process following humanitarian or emergency response	CERF
Number of countries that have national action plans that set targets for reducing hazards impacting health of vulnerable populations (important to include emphasis on vulnerable populations such as women and children)	Adapted from ATACH monitoring framework
Percentage of healthcare personnel with information and training to address climate change and health links, appropriate to their role and function	From WHO operational framework for building climate resilient health systems.
Number of children covered by climate and environmental health prevention in primary health care (e.g. awareness raising and	UNICEF Healthy Environment for Healthy Children

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training of HCWs, communication for behaviour change)	
Number of children covered by climate and environmental health treatment in primary health care (e.g. asthma and pneumonia equipment delivered to HCFs)	UNICEF Healthy Environment for Healthy Children
Number of health care facilities that have climate resilient operational capacities, reliability of energy, water, sanitation and hygiene services, and waste management practices	CEH
Number of countries that have established functional early warning notification system for the most climate-sensitive diseases and hazards	UNICEF health indicator
Number of countries with functional active surveillance systems surveillance system for the most climate-sensitive diseases and hazards	UNICEF health indicator
Number of countries that have updated national health emergency response operations plan (NHEROP) in the last 5 years for all hazards in place to respond to early warning notifications	UNICEF health indicator
Number of children covered by climate and environmental health risk monitoring system	UNICEF health indicator
People with mental health issues, anxiety and stress related to climate change (disaggregated)	NIH
Human-wildlife conflicts (# incidences, disaggregated)	Adapted indicator WWF
People (disaggregated) admitted in hospitals because of climate-induced impacts, e.g. extreme heat, vector borne diseases, water borne diseases. (disaggregated)	NIH
Productivity losses due to climate change impacts	Adapted indicator Climate ADAPT
Degrees of heat exposure reduction and associated health and well-being benefits associated with tree planting	Indicator source unclear in submission
Comparison of the BAU distributions with observational data e.g. on the presence of Aedes mosquitos or the occurrence of Dengue fever or other disease agents borne by Aedes	Woodwell Aedes mosquito distribution modelling framework
Reduced mortality and morbidity (number of disability-adjusted life years (DALY) saved) against baseline scenario and despite worsening climatic conditions.	Adapted WHO indicator
Improved or maintained access to health services (% people with access) against	Linked to Sendai Global Targets D-2

baseline scenario and despite worsening climatic conditions	
Percentage increase in climate-resilient infrastructure within health facilities	WHO
Number of health facilities equipped with climate-adaptive technologies	WHO
Number of Health National Adaptation Plans addressing mental health and sexual and reproductive health issues	Indicator source unclear in submission
Capacity of the health workforce to navigate, prevent, and handle climate-related health issues	Indicator source unclear in submission
Effectiveness of early warning systems for climate-related health threats	WHO
Number of successfully implemented disease surveillance programs focused on climate-sensitive diseases	Adapted WHO indicator
Increase in funding for climate change adaptation in health services	Indicator source unclear in submission
Percentage of the health budget allocated to climate-resilient health programs	Indicator source unclear in submission
Existence and effectiveness of inter-sectoral collaborations addressing climate change and health	Indicator source unclear in submission
Surveillance of climate-sensitive diseases	Adapted WHO indicator
Costs related to climate-sensitive diseases	NIH
Estimating the impact of adaptation measures against expansion of vector-borne diseases	Indicator source unclear in submission
International Health Regulations (IHR) capacity and health emergency preparedness	SDG Indicator 3.d.1
Number of deaths and missing persons attributed to disasters, per 100,000 population.	Linked to Sendai Global Targets A-1 (compound)
Number of directly affected people attributed to disasters, per 100,000 population.	Linked to Sendai Global Targets B-1 (compound)
Number of directly affected people attributed to disasters, per 100,000 population.	Linked to Sendai Global Targets D-7
Coverage of essential health services	SDG Indicator 3.8.1
Proportion of population with large household expenditures on health provide important baseline measures regarding the progress on the adaptation goal on health.	SDG Indicator 3.8.2
Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status), and ii) needed financial investments to strengthen social health protection to better support climate adaptation	SDG Indicator 8.8.1

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*Target 9d. Reducing climate impacts on ecosystems and biodiversity, and accelerating the use of ecosystem-based adaptation and nature-based solutions, including through their management, enhancement, restoration and conservation and the protection of terrestrial, inland water, mountain, marine and coastal ecosystems*

<i>Indicator</i>	<i>Source</i>
Number of people (disaggregated) using wild resources for adaptation (including firewood collection, hunting and fishing, gathering, medicinal use, craft making)	GBF Target 9, component indicator
Red List of Ecosystems	Kunming-Montreal Global Biodiversity Framework (GBF) indicator A.1.
Red List of Species	Kunming-Montreal Global Biodiversity Framework (GBF) indicator A.3.
The proportion of populations within species with an effective population size >500	Kunming-Montreal Global Biodiversity Framework (GBF) indicator A.4.
Services Provided by Ecosystems	Kunming-Montreal Global Biodiversity Framework (GBF) indicator B.1.
Biodiversity-related responses to climate change	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 20
Policy and/or incentives for green infrastructure as nature-based solutions	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 21
Number of countries using ecosystem-based approaches to managing marine areas	SDG Indicator 14.2.1
Coverage of protected areas in relation to marine area	SDG Indicator 14.5.1
Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries	SDG Indicator 14.7.1
Protected areas and OECMs effectively managed in climate adaptation and resilience priority areas (% , ha, km)	based on Kunming-Montreal Global Biodiversity Framework
Areas relevant for climate adaptation and resilience under restoration (% , ha, km)	Indicator source unclear in submission
Managed terrestrial, inland waters, coastal and marine areas under climate-resilient management practices (% , ha, km)	based on Kunming-Montreal Global Biodiversity Framework
People (disaggregated) admitted in hospitals because of climate-induced impacts, e.g. extreme heat, vector borne diseases, water borne diseases. (disaggregated)	Indicator source unclear in submission
Species lost due to climate change in an area (#)	Indicator source unclear in submission
Proportion of known terrestrial, freshwater and marine species assessed for climate vulnerability.	Indicator source unclear in submission
Level of carbon content in biomass and soils (potential proxy indicator for the degree to which nature-based solutions for adaptation and/or mitigation are being introduced)	Indicator source unclear in submission
Indicators reflecting the health of ecosystems components (e.g., soil quality)	Indicator source unclear in submission

and species' richness and abundance) and processes (e.g., water and nutrient cycling) could be used to assess the ability of ecosystems to sustain the other adaptation thematic targets

Number of other destroyed or damaged critical infrastructure units and facilities attributed to disasters. The decision regarding those elements of critical infrastructure to be included in the calculation will be left to the Member States and described in the accompanying metadata. Protective infrastructure and green infrastructure should be included where relevant. Indicator source unclear in submission

Proportion of land that is degraded over total land area. SDG Indicator 15.3.1

Number of hectares of land restored Indicator source unclear in submission

Develop sectors monitoring reports Indicator source unclear in submission

Green Jobs indicators specifically related to the use of EbA and NbS Indicator source unclear in submission

Jobs at risk from degraded ecosystems Indicator source unclear in submission

Proportion of land that is degraded over total land area SDG Indicator 15.3.1

Proportion of fish stocks within biologically sustainable levels SDG Indicator 14.4.1

Forest area as a proportion of total land area SDG Indicator 15.1.1

Mountain Green Cover Index SDG Indicator 15.4.2

Sustainable forest management SDG Indicator 15.2.1

Degree of implementation of international instruments for combatting illegal, unreported and unregulated fishing SDG Indicator 14.6.1

Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries SDG Indicator 14.b.1

Number of nature-based solutions for adaptation projects implemented Indicator source unclear in submission

Factors that point to the outcomes of nature-based projects, such as increased species abundance, decreased frequency and severity of flooding damage Indicator source unclear in submission

Information on particular properties of ecosystems to determine how much they are changing over time SDG Indicator 6.6.1

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***Target 9e. Increasing the resilience of infrastructure and human settlements to climate change impacts to ensure basic and continuous essential services for all, and minimizing climate-related impacts on infrastructure and human settlements***

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***Indicator*** ***Source***

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Proportion of the rural population who live within 2 km of an all-season road SDG Indicator 9.1.1



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Total official international support (official development assistance plus other official flows) to infrastructure	SDG Indicator 9a.1
Average share of the built-up area of cities that is green/blue space for public use for all	GBF Target 12.1, headline indicator
Proportion of urban population living in slums, informal settlements or inadequate housing.	SDG Indicator 11.1.1
Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities.	SDG Indicator 11.6.1
Proportion of cities with slum upgrading programmes	NUA Indicator 39
Number of cities having annual budget allocations addressing any of the five slum deprivations and inclusive public spaces in known slum areas	NUA Indicator 40
Proportion of municipal solid waste collected and managed in controlled facilities	NUA Indicator 18
Number and frequency of natural disasters (floods, storms, etc.) and their impact on infrastructure and human settlements	Indicator source unclear in submission
Number of school buildings updated to climate-informed design standards	UNICEF education indicator
Number of districts with new school building codes and construction standards that account for current and future climate risks	UNICEF education indicator
Number of open spaces/streets with greening and shaded areas	UNICEF East and Central Asia
Number of areas with identified cooling stations with airconditioned buildings	UNICEF East and Central Asia
Number of countries that adopted the school safety framework	Comprehensive School Safety Framework
Number of schools implementing school safety guidelines	Comprehensive School Safety Framework
Number of children and young people benefiting from access to a climate resilient protection system	UNICEF East Asia and Pacific
Number of children and women at risk of or experiencing violence, GBV, abuse, exploitation and family separation as a result of climate change (and/or their families) reached with climate resilient protection services, including community owned prevention and response mechanisms/initiatives	UNICEF East Asia and Pacific
Percentage of infrastructure meeting resilience standards against climate change	Indicator source unclear in submission

Percentage of urban areas with development plans that include measures for climate change mitigation and adaptation	Indicator source unclear in submission
Urban density	Indicator source unclear in submission
Percentage of green areas	Indicator source unclear in submission
Accessibility to public transportation	Indicator source unclear in submission
Percentage of trips made using public or non-motorized transportation	Indicator source unclear in submission
Communities protected by natural ecosystems, such as mangroves or forests (% , # of people, disaggregated)	Indicator source unclear in submission
Damages to infrastructure from climate related hazards (% , \$ , #)	Indicator source unclear in submission
People displaced (% , #, disaggregated)	Indicator source unclear in submission
Magnitude of national investment devoted to build climate-resilient infrastructure (% national GDP, amount – over time)	Indicator source unclear in submission
Changes in communities' livelihoods due to extreme weather events (% income, income levels, human development indexes, disaggregated)	Indicator source unclear in submission
% of infrastructural and spatial plans informed by weather and climate information	Indicator source unclear in submission
Reduced stormwater runoff during extreme rainfall and reduced local temperatures (degrees) resulting from green infrastructure/stormwater management	Indicator source unclear in submission
Critical asset maps that measure impacts on engineering design or surface modification	Indicator source unclear in submission
Flood mapping based on historic information on frequency and magnitude of floods	Indicator source unclear in submission
Progress in hazard mitigation planning for critical infrastructure	Indicator source unclear in submission
Inclusion of slow-onset processes in disaster response laws, policies, and programs	Indicator source unclear in submission
Historic and projected costs of critical infrastructure repair, maintenance and/or retrofitting	Indicator source unclear in submission
Reduction in direct economic losses due to climate-related impacts (USD/year) (also covers aspects of livelihoods)	Linked to Sendai Global Target C-1 and SDG Indicator 11.5.2
Improved or maintained access to essential services (energy, water) during and after climate-related hazards e.g., electricity grid resilience, energy generation, transmission/distribution and storage (MWh)	Linked to Sendai Global Targets D-1 and D-5 and SDG Indicator 11.5.3
Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	SDG Indicator 11.5.1

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(a) Damage to critical infrastructure and (b) number of disruptions to basic services, attributed to disasters.	SDG Indicator 11.5.3
Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030.	SDG Indicator 11.b.1
Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.	SDG Indicator 11.b.2
Development of indicators to measure progress made on implementing the Global Compact for Safe, Orderly and Regular Migration (GCM) in relation to climate change and disasters	Indicator source unclear in submission
Development of indicators to measure progress made on the Sendai Framework for Disaster Risk Reduction in relation to displacement	Indicator source unclear in submission
Number of countries with measures to integrate green and grey infrastructure into national policy and budgeting (compared to baseline)	Indicator source unclear in submission
Damage to critical infrastructure attributed to disasters	Sendai Global Target D-1; SDG 11.5.3
Number of other destroyed or damaged critical infrastructure units and facilities attributed to disasters	Sendai Global Target D-4
Number of disruptions to educational services attributed to disasters	Sendai Global Target D-6
Number of disruptions to health services attributed to disasters	Sendai Global Target D-7
Number of disruptions to basic services attributed to disasters	Sendai Global Target D-8
Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	SDG Indicator 11.b.1; SDG Indicator 13.1.2; Sendai Global Target E-1
Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	SDG Indicator 11.b.2; SDG Indicator 13.1.3; Sendai Global Target E-2

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*Target 9f. Substantially reducing the adverse effects of climate change on poverty eradication and livelihoods, in particular by promoting the use of adaptive social protection measures for all*

<i>Indicator</i>	<i>Source</i>
Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	SDG Indicator 1.5.1

Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)	SDG Indicator 1.5.2
Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	SDG Indicator 1.5.3
Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	SDG Indicator 1.5.4
Proportion of natural areas in the city	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 1
Connectivity measures or ecological networks to counter fragmentation	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 2
Habitat Restoration	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 7
Regulation of quantity of water	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 10
Climate regulation – benefits of trees and greenery	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 11
Health and wellbeing – proximity/accessibility to parks	CBD Technical Series #98: Handbook on the Singapore Index on Cities' Biodiversity. Indicator 13
Proportion of children living in multidimensional poverty in high climate risk exposure contexts	UNICEF child poverty indicator
Number of countries with high climate risk communities with data systems in place to measure and monitor children living in poverty and/or vulnerable to poverty	UNICEF child poverty indicator
Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and those living in areas impacted by climate risks/hazards.	Adapted from existing UNICEF Strategic Plan indicator
Number of countries with social protection systems that are informed by climate risks i.e., adaptive social protection systems.	Adapted from existing UNICEF Strategic Plan indicator
Number of women, men, boys and girls benefiting from adaptive social protection	Adapted from existing UNICEF Strategic Plan indicator
Number of women, men, boys and girls supported by scaling up of social protection systems to support adaptation strategies and/or to compensate for the losses and damages resulting from climate change	Adapted from existing UNICEF Strategic Plan indicator

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Number of countries with social protection systems, including cash transfer capacities, that are able to effectively and rapidly respond to humanitarian crises	Adapted from existing UNICEF Strategic Plan indicator
Number of young people engaged in climate-resilient projects or learning activities that prepare them for sustainable livelihoods, disaggregated by age, gender, and poverty	Adapted from existing UNICEF Strategic Plan indicator
Number of people with access to climate-resilient social protection systems	Adapted from existing UNICEF Strategic Plan indicator
Number of people covered with climate information and early warning systems	UNICEF East Asia and Pacific
Amount of leveraged climate resources for children from public sources	UNICEF East Asia and Pacific
Percentage of the population exposed to climate risks such as floods, droughts, and storms	Indicator source unclear in submission
Number of adaptation measures implemented (such as early warning systems, climate-resistant infrastructure, and relocation programs)	Indicator source unclear in submission
Percentage of employment in sectors vulnerable to climate change impacts	Indicator source unclear in submission
Income/poverty rates (\$, disaggregated)	Indicator source unclear in submission
Diversified income sources (% , \$ , #, disaggregated)	Indicator source unclear in submission
Income from climate resilient livelihoods or nature-based jobs	Indicator source unclear in submission
% of population with access to and are able to utilise social protection mechanisms that are informed by early warning systems for floods and droughts and other weather and climate-related hazards (disaggregated)	Indicator source unclear in submission
Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable.	SDG Indicator 1.3.1
Percentage of population that is food secure	Indicator source unclear in submission
Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women with newborns, work-injury victims and the poor and the vulnerable (i.e. functions)	SDG Indicator 1.3.1
Legal coverage by social protection function and sex	Indicator source unclear in submission

Total public expenditure on social protection, by function, as % of GDP	Indicator source unclear in submission
Coverage and adequacy of social protection systems in the context of climate risks, including looking at specific groups such as migrant workers	Indicator source unclear in submission
Financial investments to strengthen social protection systems to better support adaptation to climate change	Indicator source unclear in submission
Volume of production per labor unit by classes of farming/pastoral/forestry enterprise type	SDG Indicator 2.3.1
Average income of small-scale food producers, by sex and Indigenous status	SDG Indicator 2.3.2
Number of people relocated using a community-informed and human rights-based approach in line with international guidelines	Indicator source unclear in submission
Number of people having used at least one migration pathway in the context of climate change (e.g. labor scheme, humanitarian visa, scholarship, family unification, refugee protection etc.)	Indicator source unclear in submission
Number of people having been upskilled for the green and/or blue economy	Indicator source unclear in submission
Number of households supported with alternative livelihoods	Indicator source unclear in submission

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*Target 9g. Protecting cultural heritage from the impacts of climate-related risks by developing adaptive strategies for preserving cultural practices and heritage sites and by designing climate-resilient infrastructure, guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems*

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<i>Indicator</i>	<i>Source</i>
Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)	SDG Indicator 11.4.1
Percentage of the population in traditional occupation	GBF Target 9, headline indicator
Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure)	SDG Indicator 1.4.2; GBF Target 3, component indicator
Number of children that receive or benefit from climate education, curriculum, skills (formal and/or informal) (Disaggregated by age group & gender)	UNICEF East Asia and Pacific
Schools with actions plans for heatwaves including clean water, warnings, stay inside	UNICEF East and Central Asia
Percentage of countries that have a resilient education system that can respond to humanitarian crises.	UNICEF Strategic Plan

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Percentage of countries that institutionalize holistic skills development to support learning, personal empowerment, environmental sustainability, active citizenship, social cohesion and/or employability and entrepreneurship	UNICEF Strategic Plan
Integration and application of traditional ecological knowledge in adaptation strategies and plans (% of plans)	Indicator source unclear in submission
Cultural traditions lost because of climate change impacts (#)	Indicator source unclear in submission
Ecosystems relevant for cultural heritage protected from climate change impacts (% , ha)	Adapted European Parliament indicator
Damages to or losses of ecosystems and infrastructure that are considered cultural heritage caused by climate-related hazards	Adapted European Parliament indicator
Traditional practices and ecological knowledge that are revitalized to adapt to climate change (# of practices; number of activities completed to strengthen and or revitalize)	Indicator source unclear in submission
Indicator for measuring inclusiveness of processes used to develop adaptive strategies for protecting cultural heritage, and measurement at different scales (global, regional, national, subnational/local)	Indicator source unclear in submission
Indicator for protecting cultural heritage by designing climate-resilient infrastructure guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems	Indicator source unclear in submission
Number of agreements adopted between governments and local Indigenous communities that designate authority and funding for Indigenous-led resource management	Indicator source unclear in submission
Restrictions removed and/or legal permissions established for traditional practices (such as cultural burning by Arctic Indigenous communities)	Indicator source unclear in submission
Explicit inclusion of sites of cultural significance, e.g., fish camps and burial grounds, within adaptation plans and disaster response frameworks.	Indicator source unclear in submission
Prevented loss in revenue (USD/year) due to preservation of cultural heritage that currently generates revenues from its use (e.g. tourism revenues)	Linked to Sendai Global Targets C-6
Indicator that measures the number of strategies developed (by Parties and non-Party stakeholders) [for preserving cultural practices and heritage sites] and the inclusion of such strategies in National Adaptation Plans (NAPs), Adaptation Communications, or other planning	Indicator source unclear in submission

Measures taken to foster climate change mitigation and adaptation and enhance resilience through sustainable safeguarding and management of tangible and intangible cultural heritage as well as natural heritage.	Indicator source unclear in submission
Indicator aimed at measuring the use of values-based strategies could support the development of adaptive pathways for novel futures that draw on and incorporate cultural heritage while also supporting locally-led adaptation.	Indicator source unclear in submission
Indicator to measure strategies to transmit the knowledge, skills, values and attitudes necessary for active action to combat climate change. The indicator should make explicit reference to the inherent cultural dimension of education.	Indicator source unclear in submission

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*Target 10a. Impact, vulnerability and risk assessment: by 2030 all Parties have conducted up-to-date assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities and have used the outcomes of these assessments to inform their formulation of national adaptation plans, policy instruments, and planning processes and/or strategies, and by 2027 all Parties have established multi-hazard early warning systems, climate information services for risk reduction and systematic observation to support improved climate-related data, information and services*

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<i>Indicator</i>	<i>Source</i>
Frequency and intensity of drought and water scarcity (also relevant for 9a)	Angola NDC
Accurate data on exposure to climate vulnerability on households and infrastructure and high-risk areas reported	Rwanda NDC
Number of national early warning systems for key sectors and risks	South Africa NAP
Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	SDG Indicator 13.1.2; Sendai Global Target E-1
Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	SDG Indicator 13.1.3; Sendai Global Target E-2
Number of countries that have multi-hazard early warning systems	Sendai Global Target G-1
Number of countries that have multi-hazard monitoring and forecasting systems	Sendai Global Target G-2
Number of people per 100,000 that are covered by early warning information through local governments or through national dissemination mechanisms.	Sendai Global Target G-3
Percentage of local governments having a plan to act on early warnings.	Sendai Global Target G-4
Number of countries that have accessible, understandable, usable and relevant disaster risk information and assessment available to the people at the national and local levels.	Sendai Global Target G-5
Percentage of population exposed to or at risk from disasters protected through pre-	Sendai Global Target G-6



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emptive evacuation following early warning.	
Does the country have a multi-hazard monitoring and forecasting system?	NUA indicator 52
The number of cities that have / percentage of urban population that is covered by multi-hazard early warning systems	NUA indicator 53
Percentage of national and sub-national climate risk and vulnerability assessments that include the perspectives of multiple stakeholders, including women, youth, Indigenous peoples, local communities, and the most vulnerable and traditionally marginalized people.	Indicator source unclear in submission
Number of countries that have at least one adaptation assessment tool that incorporates human mobility (migration, displacement and/or planned relocation)	Indicator source unclear in submission
Number of countries that have at least one early warning system which considers migrants, displaced persons and refugees	Indicator source unclear in submission
Number of people at risk of displacement	Indicator source unclear in submission
Number of people living in high-risk areas	Indicator source unclear in submission
Direct economic loss attributed to disasters in relation to global GDP	SDG Indicator 1.5.2
Number of water-sensitive risk assessments integrated into decision making, program prioritization, and project development of investment and resource management institutions	Indicator source unclear in submission
Number/percentage of countries that reported that at least one / half/ all of their transboundary basins have coordinated or joint alarm system for floods	Adapted from SDG Indicator 6.5.2
Number/percentage of countries that reported that at least one / half/ all of their transboundary basins have coordinated or joint alarm system for droughts	Adapted from SDG Indicator 6.5.2
Number/percentage of countries that reported that at least one / half/ all of their transboundary basins have a joint climate change adaptation strategy	Adapted from SDG Indicator 6.5.2
Number/percentage of countries that reported that at least one / half/ all of their transboundary basins have a joint disaster risk reduction strategy	Adapted from SDG Indicator 6.5.2
Number/percentage of countries that reported that at least one / half/ all of their transboundary basins have agreements/ arrangements include such topics as cooperation in addressing floods, droughts, climate change adaptation, data collection	Adapted from SDG Indicator 6.5.2

and exchange, common early warning and alarm procedures

Number/percentage of countries that reported to have regular exchange of climatological information and data and/or information on flows or water levels (including groundwater levels) with other riparian countries in at least one / half/ all of their transboundary basins

Adapted from SDG Indicator 6.5.2

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*Target 10b. Planning: by 2030 all Parties have in place country-driven, gender-responsive, participatory and fully transparent national adaptation plans, policy instruments, and planning processes and/or strategies, covering, as appropriate, ecosystems, sectors, people and vulnerable communities, and have mainstreamed adaptation in all relevant strategies and plans*

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<i>Indicator</i>	<i>Source</i>
National strategy for [...] effective agro-meteo services [...]	Benin NDC
Existence of interministerial/intersectional commissions working on adaptation	Angola NDC
Number of climate resilience management plans for vulnerable ecosystems	South Africa NAP
Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change	SDG Indicator 13.2.1
Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change.	SDG Indicator 13.b.1
Total official international support, (official development assistance plus other official flows) for actions towards national adaptation strategies, plans or policy instruments, provided by international cooperation, multilateral agencies, and bilateral flows	Sendai Global Targets F-1 – F-3
Total official international support (ODA plus other official flows) / Number of programmes and initiatives for the transfer and exchange of science, technology and innovation in adaptation for developing countries.	Sendai Global Targets F-4 & F-5
Total official international support (ODA plus other official flows) / Number of programmes and initiatives for the transfer and exchange of adaptation capacity-building in developing countries	Sendai Global Targets F6 & F-7
Number of countries' NAPs and/or adaptation components within NDCs that include nature-based solutions and target the most climate vulnerable and nature dependent people	Aligned to GBF indicators in target 8

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Percentage of local governments having a plan to act on climate adaptation – including early warnings by 2030	Link with Sendai Global Target G-4
Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies by 2030	Link with SDG Indicator 13.1.3
% of adaptation priorities and strategies under NDCs, long-term strategies, NAPs, and AdComs that integrate gender and social considerations	Indicator source unclear in submission
% (or degree of) participation of women [and other underrepresented groups] in consultations for the development of NDCs, long-term strategies, NAPs, and AdComs	Indicator source unclear in submission
Degree of integration of gender considerations in local and sub-national government adaptation plans, policies and strategies – including early warnings by 2030	Link with Sendai Global Target G-4
Proportion of population (disaggregated by gender and other social groups) per country that is covered by an adaptation plan, policy or strategy – including early warnings by 2030	Indicator source unclear in submission
Total support for national and sub-national adaptation planning by 2030, disaggregated by gender and other social groups.	Link with SDG Indicator 13.2.1
Proportion of seats held by women in (a) national parliaments and (b) local governments	SDG Indicator 5.5.1
Total official development assistance grants from all donors that focus on poverty reduction as a share of the recipient country's gross national income.	SDG Indicator 1.a.1
Proportion of total government spending on essential services (education, health and social protection).	SDG Indicator 1.a.2
Number of countries that have at least one adaptation planning tool that integrates human mobility (migration, displacement and/or planned relocation)	National Communications, NAPs, NDCs, AdComs, BTR, DRR strategy/policy/plan, LTS, development strategy/policy/plan, climate prosperity plan (CPP)
Proportion of [population/area] per country that is covered by an adaptation plan, policy or strategy by 2030	Indicator source unclear in submission

*Target 10c. Implementation: by 2030 all Parties have progressed in implementing their national adaptation plans, policies and strategies and, as a result, have reduced the social and economic impacts of the key climate hazards identified in the assessments referred to in paragraph 10(a) above*

<i>Indicator</i>	<i>Source</i>
Number of hectares of degraded land restored (also relevant for 9d)	Burkina Faso NDC
Average yield of main crops	Madagascar NAP

Percentage increase in yield per hectare	Ethiopia NAP
Percentage of the population that is food secure (also relevant for 9f)	Ethiopia NAP
Magnitude Index [impact of climate resilience interventions]	Race to Resilience Framework
Percentage of the population or areas most vulnerable to climate change in each country that have reduced climate vulnerability and enhanced long-term resilience and adaptive capacity (x billion people and xx% of ecosystems for each thematic targets, disaggregated)	Indicator source unclear in submission
Total climate regulation services provided by ecosystem type	New indicator suggested via submissions, using the UN System of Environmental Economic Accounts, as aligned with GBF indicators
Percentage of prearranged finance for disasters	Centre for Disaster Protection
Diversity of actors funding early action	REAP - Finance for Early Action
Percentage of finance for disasters that arrives ahead of the peak of crises	REAP - Finance for Early Action
Number of countries that are implementing at least one GEF, GCF, AF-funded project, plan, programme or adaptation action linked to human mobility (migration, displacement and/or planned relocation)	Indicator source unclear in submission
Percentage of climate adaptation finance invested in projects	Indicator source unclear in submission
Country Hydromet Diagnosis conducted	Early Warnings for All Initiative (EW4All)
Assessment for End-to-End Flood Forecasting	Early Warnings for All Initiative (EW4All)
Coverage of centres providing advisories and guidance for severe weather, tropical cyclones, and flash-floods	Early Warnings for All Initiative (EW4All)

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*Target 10d. Monitoring, evaluation and learning: by 2030 all Parties have designed, established and operationalized a system for monitoring, evaluation and learning for their national adaptation efforts and have built the required institutional capacity to fully implement the system*

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<i>Indicator</i>	<i>Source</i>
Each ministry has a budget line for climate change [for M&E]	Madagascar NAP
Sector monitoring reports developed (also relevant for 9d)	Cameroon NAP
Number of institutional frameworks established for information management and dissemination	Democratic Republic of Congo NAP
Integration of climate change in national curriculum policy	Monitoring and Evaluating Climate Communication and Education (MECCE) Project
Integration of climate change in grade 9 science and social science curriculum	MECCE
Students' self-declared knowledge on climate change	MECCE

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Extent of climate change focus in peer reviewed publications	MECCE
Integration of climate change in technical/vocational training policy	MECCE
Completion of online UN courses about climate change	MECCE
Perceived impact of climate change on future generations	MECCE
Perception of climate change as a serious threat	MECCE
Availability of information on climate change impacts	MECCE
Public perception of frequency of exposure to climate change information	MECCE
Extent that NGOs engage and inform the public about climate change	MECCE
Extent of climate activities organized by libraries & library associations	MECCE
Adult willingness to participate in climate action	MECCE
Inclusion index of climate communication and education in national government activities	MECCE
Resilience Increase Index (magnitude, depth, and confidence of adaptation actions on resilience)	Race to Resilience Framework
Depth Index [effectiveness of climate resilience interventions]	Race to Resilience Framework
Confidence Index [reliability and accuracy of data used in resilience assessment]	Race to Resilience Framework
Number of countries that have designed and implemented an M&E system for adaptation with specific targets, including nature	Indicator source unclear in submission
Number of countries with M&E systems that include participatory methods with climate vulnerable and nature dependent people.	Indicator source unclear in submission
Greening 50 % of the world's schools by 2030	Indicator source unclear in submission
Greening 90% of country curriculum by 2030	Indicator source unclear in submission
Number of teachers trained for greening education increased by 2030.	Indicator source unclear in submission
Aggregate measure of wellbeing	Indicator source unclear in submission
Number of countries that have adjusted at least one adaptation project, plan, programme or adaptation action in line with lessons learned in the context of human mobility (migration, displacement and/or planned relocation) or from migrants, displaced persons and refugees	Indicator source unclear in submission

Number of current climate impacts and vulnerability assessments and adaptation strategies and plans (covering also floods and droughts) developed at transboundary basin level or on the regional level	Indicator source unclear in submission
Number of current transboundary and regional organisations which work on climate change adaptation (incl. floods and droughts)	Indicator source unclear in submission
Number of transboundary river basin and flood management plans which integrate climate change adaptation	Indicator source unclear in submission
Number of transboundary basin and regional adaptation projects	Indicator source unclear in submission

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## General indicators

As well as the above-mentioned specific indicators, a wide range of indicator sets, data sources and organizations with general work in measuring adaptation were referenced throughout submissions:

### General indicator source

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UNSD Global Set of Climate Change Statistics and Indicators;  
 UNECE Set of Core Climate Change-Related Indicators and Statistics Using SESA;  
 IAEG-SDGs -SDG Indicators;  
 Sendai Framework for Disaster Risk Reduction Indicators;  
 Kunming Montreal Global Biodiversity Framework;  
 Grantham Institute's Climate Change Laws of the World database;  
 Common indicators European Commission;  
 World Development Indicators World Bank;  
 ECLACSTAT;  
 ILOSTAT;  
 FAOSTAT;  
 IMF Data;  
 CES Recommendations on Climate Change-Related Statistics;  
 ESCAP Disaster-related Statistics Framework;  
 Framework for the Development of Environment Statistics;  
 System of Environmental-Economic Accounting;  
 OECD Agri-environmental indicators  
 World Database on Protected Areas (WDPA);  
 World Database on Other Effective Area-based Conservation Measures (WD-OECM);  
 Green List of Protected and Conserved Areas;  
 IUCN Red List of Threatened Species;  
 IUCN Red List of Ecosystems;  
 IUCN Global Ecosystem Typology;  
 Global Crisis Databank;  
 Early Warnings for All Dashboard;  
 IPCC WGII;

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Multi-hazard early warning system custom indicators & methodologies for computation

Coalition for Disaster Resilient Infrastructure (CDRI) Global Infrastructure Risk Model and Resilience Index composite indicator

Local indicators of quality CCE/ACE

Climate adaptation: Measuring performance, defining targets and ensuring sustainability (Annex 2)

The 2022 report of the Lancet Countdown on health and climate change: health at the mercy of fossil fuels - The Lancet

## Annex 2

### **Organizations and stakeholders suggested to contribute to the work programme**

#### **UNFCCC Workstreams and Constituted Bodies**

Adaptation Committee  
Consultative Group of Experts  
Facilitative Working Group of the Local Communities and Indigenous Peoples  
Glasgow Leaders' Declaration on Forest and Land Use  
High level Champions Race to Resilience;  
Least Developed Countries Expert Group  
Lima Adaptation Knowledge Initiative  
Marrakech Partnership; Sharm el-Sheikh joint work on implementation of  
Nairobi Work Programme  
Paris Committee on Capacity-building  
Standing Committee on Finance  
Technology Executive Committee  
UAE Just Transition work programme  
UN4NAPs  
United Nations Framework Convention on Climate Change (UNFCCC)  
Warsaw International Mechanism Executive Committee on loss and damage

#### **UN Organizations**

Convention on Biological Diversity  
Early Warnings for All Initiative  
Food and Agriculture Organization  
Intergovernmental Panel on Climate Change  
International Labour Office  
International Organization for Migration  
Office for the Coordination of Humanitarian Affairs  
Office of the United Nations High Commissioner for Human Rights  
Office of the United Nations High Commissioner for Refugees  
The United Nations Watercourses Convention  
UN Environment Programme  
United Nations Children's Fund  
United Nations Development Programme  
United Nations Economic Commission for Europe  
United Nations Educational, Scientific and Cultural Organization  
United Nations Office for Disaster Risk Reduction  
UN-Water  
World Food Program  
World Health Organization  
World Meteorological Organization

#### **Intergovernmental Organizations**

European Environment Agency  
Global Covenant of Mayors for Climate & Energy



Organisation for Economic Co-operation and Development

**Non-Governmental Organizations**

World Resources Institute

Climate Action Network

Conservation International

International Water Management Institute

National Geographic Society

The International Council on Monuments and Sites

The International Union for Conservation of Nature

Women and Gender Constituency

**Others**

Feed the Future initiative

Adaptation Fund

Africa Food Systems Transformation Initiative

Alliance for Global Water Adaptation

Alliance for Transformative Action on Climate and Health

ANU Institute for Climate, Energy and Disaster Solutions

Business Leaders' Open Call to Accelerate Action on Water

C40 Coalition of Mayors

Center for Climate and Resilience Research CR2

CEO Water Mandate

Climate Heritage Network

Climate Risk Early Warning Systems (CREWS) Initiative

Department for International Development UK

Drugs for Neglected Diseases Initiative

Enhancing Nature-based Solutions for an Accelerated Climate Transformation

Extreme Heat Resilience Alliance

FAIRR Initiative

Food and Agriculture for Sustainable Transformation Initiative

Forest and Climate Leader's Partnership

German Agency for International Cooperation

Global Climate Observing System Secretariat

Global Environment Facility

Global Mangrove Alliance

Global Programme of Research on Climate Change Vulnerability, Impacts and

Global Shield against Climate Risks

Green Climate Fund

Heritage for Climate Action Friends of Ecosystem-based Adaptation

High Ambition Coalition for Nature and People

ICCROM Net Zero

ICOMOS Climate Action Working Group

InsuResilience Global Partnership

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem

Lancet Countdown

Monash Business School Green Lab

NAP Global Network

Pacific Institute

Perry World House, University of Pennsylvania

Sanitation and Water for All  
Systematic Observations Financing Facility  
The Heritage Adapts to Climate Alliance  
The Melbourne Climate Futures  
The Nature Conservancy  
Tropical Forest Alliance