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Matters relating to adaptation

Global goal on adaptation

Workshop under the United Arab Emirates–Belém work programme

Summary report by the secretariat

Summary

This report provides a summary of the workshop held from 3 to 4 October 2025 under the United Arab Emirates–Belém work programme on indicators for measuring progress achieved towards the targets referred to in paragraphs 9–10 of decision [2/CMA.5](#), at which the experts involved in the technical work under the work programme presented their final list of potential indicators. Representatives of Parties and observers reflected and shared views on the suitability, feasibility and consistency of the indicators, including on their global applicability and the availability of relevant data. Discussions also encompassed indicators for enabling factors, including means of implementation, and possible next steps.



Abbreviations and acronyms

BTR	biennial transparency report
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
ETF	enhanced transparency framework under the Paris Agreement
GGA	global goal on adaptation
MEL	monitoring, evaluation and learning
MOI	means of implementation
NAP	national adaptation plan
NDC	nationally determined contribution
SB	sessions of the subsidiary bodies
SBI	Subsidiary Body for Implementation
SDG	Sustainable Development Goal

I. Introduction

A. Background

1. CMA 5 adopted the United Arab Emirates Framework for Global Climate Resilience,¹ which includes seven thematic and four dimensional targets.² In addition, it launched the two-year United Arab Emirates–Belém work programme on indicators for measuring progress achieved towards the targets referred to in paragraphs 9–10 of decision [2/CMA.5](#).³

2. The Chairs of the subsidiary bodies convened 78 technical experts to assist in the technical work under the United Arab Emirates–Belém work programme.⁴ Following a year-long development and selection process, the experts' final list of potential indicators⁵ and technical report⁶ were published in September 2025. The list contains 100 potential indicators, covering the 11 targets under the United Arab Emirates Framework for Global Climate Resilience.

B. Mandate

3. SB 60 requested the Chairs of the subsidiary bodies to organize, with the support of the secretariat, a workshop for Parties, experts and observers under the United Arab Emirates–Belém work programme to reflect on the final list of potential indicators, to be held between SB 62 and 63.⁷ The workshop took place from 3 to 4 October 2025 in Bonn, with the option for virtual participation.⁸

II. Summary of proceedings

4. The workshop was moderated by the Chair of the SBI, who also provided opening remarks.

5. On the first day of the workshop, following a presentation from experts on the final list of indicators, Parties discussed the indicators, providing comments on both the list as a whole and specific indicators. On the following day, discussions on the dimensional target indicators continued, with participants focusing mainly on indicators for MOI and next steps.

A. Presentation and discussion on the final list of potential indicators

6. Three representatives of the experts presented an overview of the final list of potential indicators. The indicators were reduced from 490 in the consolidated list of indicator options published in May 2025⁹ to 100 in the final list of potential indicators. The experts emphasized the consistency and relevance to adaptation of the indicators, and highlighted the value of the expert peer review process and consistency checks, which were undertaken following the meeting of experts held in Nairobi in August 2025¹⁰ to enable the experts to initiate the peer review and consistency check process for verifying, standardizing and resolving redundancies in the indicators across the targets.

¹ Decision [2/CMA.5](#), para. 6.

² Set out in decision [2/CMA.5](#), paras. 9 and 10 respectively.

³ Decision [2/CMA.5](#), para. 39.

⁴ In response to requests at SB 60; see documents [FCCC/SBSTA/2024/7](#), para. 43, and [FCCC/SBI/2024/13](#), para. 81.

⁵ Available at <https://unfccc.int/documents/649629>.

⁶ Available at <https://unfccc.int/documents/649630>.

⁷ [FCCC/SBSTA/2024/7](#), para. 54, and [FCCC/SBI/2024/13](#), para. 92.

⁸ For the agenda, webcast recording and other information, see <https://unfccc.int/event/workshop-under-the-uae-belem-work-programme-on-indicators-0>.

⁹ Available at <https://unfccc.int/documents/647049>.

¹⁰ As mandated in documents [FCCC/SBSTA/2025/4](#), para. 53, and [FCCC/SBI/2025/11](#), para. 98. The summary report on the meeting is available at <https://unfccc.int/documents/649813>.

7. The experts emphasized that the indicators should be considered with their accompanying information and viewed as an interconnected set rather than individual indicators, reflecting the interlinkages among the targets. The experts clarified that some MOI indicators in the list include options for Parties' consideration, and the list does not include any differentiation between indicators, as it does not distinguish between 'headline' and sub-indicators.

8. The experts noted the number of indicators under each of the target areas and underscored that, while not all indicators apply to every country, the use of disaggregation and aggregation will enable a global assessment of progress towards the targets. They highlighted that, of the 100 indicators, 22 have available metadata, with about half of the total requiring metadata refinement, and the remaining indicators have limited or no metadata. The experts proposed next steps for operationalizing the indicators, including improving methodologies for data collection, developing technical guidance on reporting, and collaborating with custodian agencies and data producers on data accessibility.

B. Reflections on indicators

9. Following the presentation, the floor was opened for Parties to share views and ask questions, which are summarized, together with the experts' responses, in the annex, in table I.1.

10. Some Parties commented on specific indicators, while others provided broader inputs on the final list of potential indicators as a whole.¹¹ Several Parties noted that they had not yet completed a detailed review of all indicators but would do so before CMA 7. All Parties expressed appreciation for the experts' work and were prepared to engage in a discussion on the list. Some Parties noted a preference for keeping the list intact while providing clarity on its use and, moving forward, the process for its further development. Other Parties expressed the view that the list would need modification before finalization.

11. Several Parties observed that some indicators are highly context-specific, highlighting the need to structure the indicators into a minimal set of globally applicable indicators and a menu of context-specific options.

12. One group of Parties noted that the list offers limited added policy value because the indicators are not systematically mapped to the targets. Another group of Parties welcomed the experts' recommendations for operationalizing the indicators, emphasizing them as essential rather than optional.

13. One Party highlighted the importance of finding a balance between maximizing data robustness and minimizing reporting burden by focusing on indicators with available data and metadata. Others cautioned that doing so may narrow the scope of the list and hinder the capturing of progress in areas not yet well covered by existing reporting processes. One Party expressed its support for the list as a whole, but cautioned that, nationally, it would intend to use only a limited number of the indicators in its reporting.

14. It was noted that, while domestic data for some indicators already exist, many other indicators are unlikely to be operationalized owing to lack of data; however, this was viewed as an opportunity to develop adaptation actions that align with the targets and to focus national efforts on achieving the GGA.

15. One Party welcomed the detailed descriptions in the list but noted that some indicators remain ambiguously defined. Others noted that indicators that include terminology drawn from the Intergovernmental Panel on Climate Change and other scientific bodies may pose data collection challenges for developing countries. It was suggested that some terms (e.g. resilience) that may encompass mitigation aspects be removed.

16. Views differed on indicators related to mainstreaming adaptation in national policy and planning processes: some Parties underscored the importance of including indicators on domestic actions and budgets, as well as on private sector engagement in adaptation;

¹¹ Providing a view on an indicator does not imply agreement or disagreement with its inclusion in the list or proposed modifications.

however, others considered those indicators inconsistent with the agreed guidance and mandates.¹² Some Parties noted that Article 7, paragraph 1, of the Paris Agreement, which relates to the adaptation response in the context of the temperature goal, is not reflected in the current indicator list.

17. One group of Parties suggested that cross-cutting elements, if not included in the indicators themselves, could be reflected in the associated information or in the levels of disaggregation, to keep the indicators concise.

1. Thematic target indicators

18. Several Parties highlighted the overlap between adaptation and loss and damage indicators and suggested modifying the latter to ensure their adaptation relevance. It was noted that several indicators that provide valuable information on the consequences of climate hazards do not demonstrate whether adaptation actions addressing those impacts reflect progress in increasing resilience or reducing vulnerability, as attribution of impacts remains methodologically difficult owing to the influence of non-climatic factors. Others observed that some indicators are phrased more as a statement rather than as a measurable activity or result.

19. Under the water target, one group of Parties noted a lack of indicators on the construction of water conservancy facilities. For the ecosystems and biodiversity target, one Party highlighted that, while mountain ecosystems are captured, indicators on hazards occurring in mountainous areas, such as landslides, are missing and could be added. Another group of Parties expressed the view that drought is not sufficiently reflected in the indicators.

20. Regarding the infrastructure and human settlements target, some Parties raised concerns about some indicators (e.g. 9e01) requiring detailed reporting on national political and policy processes and local-level actions, viewing them as prescriptive. In addition, one Party noted that transboundary elements are crucial to include in the indicators under this target.

21. Another Party emphasized that reporting on indicators would be voluntary; and what some Parties view as prescriptive, others may find useful.

22. Parties noted inconsistencies in the placement of finance and other MOI indicators under thematic targets, observing that such indicators are included only for some thematic targets. Some suggested moving them to the dimensional targets to ensure consistency, and a few suggested that some thematic indicators (e.g. 9e06) that contain MOI elements be modified or removed. Others requested clarification on the indicators related to enabling factors, noting that the concept of enabling factors was introduced within the UNFCCC process later than MOI; and there is confusion about how they differ from MOI and policy-related indicators.

23. One Party noted that vulnerability and adaptive capacity should be reflected in the indicators under the poverty and livelihoods target, possibly through a menu of optional indicators.

24. Regarding the cultural heritage target, a few Parties highlighted the importance of including indicators that reflect the intangible heritage of small island developing States and Indigenous Peoples.

25. Comments provided by Parties on specific indicators are summarized in table 1, noting that not all Parties provided views on all indicators. The comments may change as Parties continue reviewing the indicators prior to CMA 7. The absence of comments on some indicators does not imply that all Parties agree with them. Some Parties noted that while the list is not perfect and the indicators would need further development over time, they support adopting the list as a whole and so would not go line by line providing comments on all indicators.

¹² See decision [3/CMA.6](#), paras. 10 and 17, and documents [FCCC/SBSTA/2024/7](#), para. 41, and [FCCC/SBI/2024/13](#), para. 79.

Table 1

Party comments on the potential indicators under the thematic targets of the United Arab Emirates Framework for Global Climate Resilience

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
9(a) Water		
9a01	Change in water stress levels over time	It is unclear how the indicator measures progress in adaptation and implementation of adaptation measures Keep, as the indicator is globally applicable, but modify Keep, as the indicator, being an SDG indicator, benefits from data availability, but modify
9a02	Change in water-use efficiency over time	Keep as one indicator of a menu of options, with modification Keep Concerns were raised about deviation from the SDG indicator language and issues in disaggregation
9a03	Proportion of critical water and sanitation infrastructure systems that are built or retrofitted to withstand climate-related hazards	Modify, including by defining “retrofitted” and clarifying how the adequacy of retrofitting to withstand climate hazards would be measured
9a04	Proportion of total area of basins (river, lake or aquifer) and cryosphere (glacier, snow and ice) for which a climate adaptation plan is developed and implemented as part of an integrated water resources management approach	Keep as an optional indicator or one of a menu of options, as the context is not applicable to all countries Keep Modify to include transboundary aspects
9a05	Proportion of population using drinking water services that are safely managed and climate resilient	The indicator builds on the SDG indicator, but it is unclear what exactly would be reported The indicator is not currently being measured and “climate resilient” water supply needs to be better defined to enable data collection
9a06	Proportion of population using sanitation services that are safely managed and climate resilient	The indicator mirrors an SDG, with a climate resilience tag added
9a07	Proportion of Parties taking measures to improve and extend WASH services to populations disproportionately affected by climate change and to vulnerable groups	Keep with modification
9a08	Proportion of bodies of water with good ambient water quality	Keep as is Delete, unless the indicator is clarified, as it is not currently climate-specific
9a09	Percentage of people assisted with the planned relocation in a safe, voluntary, and dignified way among those displaced as a result of water related hazards and extreme events such as floods, droughts, tropical cyclones and storm surges, sea level rise and other water induced disasters	The indicator is difficult to define and to measure consistently across countries Modify, including by developing a methodology for measurement and clarifying key terms The indicator is overly complex

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
9a10	Number of Parties that integrate climate adaptation measures in their national plans for water resources management and water supply and sanitation plans	Keep Delete, as the indicator duplicates adaptation mainstreaming covered under target 10(b) and no metadata for the indicator are currently available
9(b) Food and agriculture		
9b01	Proportion of area under management for food and agricultural production utilising practices and technologies relevant to climate change adaptation	No comments
9b02	Proportion of food and agricultural value chain actors that have adopted practices and technologies relevant to climate change adaptation	Modify, as the indicator is too prescriptive and carries a large data burden
9b03	Number of institutional frameworks for knowledge transfer, research and development, and extension services supporting climate change adaptation in food and agriculture	No comments
9b04	Proportion of Parties that have integrated climate risks into national food security measures, programs, and policies	Keep, as the indicator refers to adaptation mainstreaming and is important The indicator is too vague and difficult to verify Delete, as the indicator duplicates adaptation mainstreaming covered under target 10(b)
9b05	Amount of climate adaptation finance disbursed to food and agriculture per year	Delete, as adding finance indicators per thematic target would increase the total number of indicators Delete, because of objections to the inclusion of indicators that assess national budgets Modify, as the indicator presents data-collection difficulties The indicator duplicates other finance indicators under dimensional targets
9b06	Proportion of area under management for food and agricultural production degraded due to climate-related drivers and events	The indicator conflates issues Modify, as the indicator presents challenges in collecting data
9b07	Reduction in food and agricultural yield associated with climate-related drivers and events	Modify, as systems for collecting relevant data are lacking; the suggested modification is proportion of improved crop varieties for agriculture addressing climate change Delete, as the indicator is more relevant to loss and damage Delete, as the indicator conflates issues
9b08	Prevalence of undernourishment associated with climate-related drivers and events	Delete, as the indicator is more relevant to loss and damage Delete, as the indicator is weakly linked to climate and presents challenges in providing evidence

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
9b09	Prevalence of moderate or severe food insecurity associated with climate-related drivers and events	Modify, as the indicator is an impact metric, more relevant to loss and damage, and presents attribution challenges Modify, as systems for collecting relevant data are currently lacking Delete, because climate-related drivers and events should not be measured under the same indicator
9b10	Direct agricultural losses associated with climate-related drivers and events	Delete, as the indicator is an impact metric and more relevant to loss and damage than to adaptation Delete, because of conceptual issues: climate-related drivers and events are quite different

9(c) Health

9c01	Change in the rate of mortality associated with heat exposure	Modify to include mention of adaptation measures and early warning systems; the suggested modification is change in heat-related mortality rates in populations covered by climate change adaptation measures or early warning systems
9c02	Change in the incidence of climate-sensitive infectious diseases (dengue, chikungunya, zika, tick-borne encephalitis (TBE), West Nile fever (WNF), malaria and diarrheal diseases)	Modify to track disease incidence in areas where adaptation measures have been implemented; the suggested modification is change in incidence of climate-sensitive infectious diseases in areas where adaptation measures have been implemented Delete, as the indicator presents challenges in reporting the climate-sensitivity of diseases
9c03	Change in the annual rate of reported heat-related occupational injuries and deaths	Delete, as the indicator measures heat exposure and related impacts rather than adaptation
9c04	Extent of implementation of Mental Health and Psychosocial Support (MHPSS) preparedness and response for climate change-sensitive events	Modify to allow for subnational disaggregation and to include reference to Indigenous Peoples, children and youth in the disaggregation Modify to clarify the indicator's relevance to adaptation; the suggested modification is number of national public health preparedness plans that integrate climate change adaptation measures for addressing climate-sensitive health risks Modify to simplify the indicator to measuring public information dissemination; the suggested modification is percentage of information that has been disseminated to the public for enhancing their knowledge about disease incidence related to climate change Delete, as such preparedness and response measures are outside the scope of the UNFCCC process
9c05	Number of destroyed or damaged health facilities and number of disruptions to health services associated with climate-related events	Modify, as it is unclear how the necessary data would be collected Delete, as the indicator is more relevant to loss and damage
9c06	Percentage of health facilities built or retrofitted to be climate resilient based on national, regional or global guidance	Modify to clarify the terminology used and the indicator's link to adaptation Delete or modify to remove the prescriptive elements of the indicator and ensure its context-specificity
9c07	Universal Health Coverage (UHC): Coverage of essential health services (SDG 3.8.1)	The indicator is a core SDG metric and not directly relevant for tracking adaptation progress

Indicator ID	Indicator name ^a	Comments
9c08	Level of operationalization of climate-informed health early warning systems for climate change-related health risks accessible to vulnerable groups	Move, as the indicator is better addressed in relation to early warning systems under target 10(a)
9c09	Level of implementation of climate change and health vulnerability and adaptation assessment	Delete, as the indicator can be covered by disaggregation under target 10(a)
9c10	Proportion of the ministry in charge of health's workforce that has received training on climate change and health in the last two years	Modify to focus more explicitly on the indicator's relevance to climate change adaptation Delete, as the indicator is not clear or well linked to adaptation
9(d) Ecosystems and biodiversity		
9d01	Proportion of population with secured access to provisioning services from ecosystems that support adaptive capacity	Delete, as the indicator is too complex and broad, and the reporting methodology is unclear Delete, as disaggregation is difficult, and the indicator would be difficult to apply in practice
9d02	Extent and capacity of regulating ecosystem services that reduce exposure and vulnerability to climate risks/impacts	Delete, as the indicator is complex and unclear in terms of measurement and reporting
9d03	Proportion of populations benefiting from nature- and biodiversity-based cultural services that enhance adaptive capacity	Delete, as the indicator is complex and would be difficult to report on, and disaggregation would also be difficult
9d04	Area under restoration for enhancing ecosystem resilience and services	Delete, as the indicator is framed around nature-based solutions, which may be impossible for developing countries to implement
9d05	Extent of ecosystems that contribute to climate resilience covered by protected areas and other effective area-based conservation measures	No comments
9d06	Ecosystem resilience under climate change (measured by the Bioclimatic Ecosystem Resilience Index, BERI)	Modify, with further discussion The Index was developed for a specific region and may not be globally applicable Delete, as the indicator is highly technical, lacks transparency and would be difficult to report on Delete, as the indicator is unlikely to be measurable because of capacity constraints
9d07	Threat status of ecosystems relevant for climate adaptation (Red List of Ecosystems)	Modify, as the indicator measures threat status rather than adaptation; the suggested modification is area of ecosystems managed or restored through adaptation measures aimed at enhancing resilience to climate-related risks
9d08	Threat status of species relevant for climate adaptation (Red list index)	Modify, as the indicator measures biodiversity loss rather than adaptation; the suggested modification is number of species protected or supported through adaptation measures aimed at enhancing ecosystem resilience
9d09	Extent of natural ecosystems relevant for climate adaptation	Modify; the suggested modification is area of natural ecosystems protected, restored or managed through

Indicator ID	Indicator name ^a	Comments
		adaptation measures aimed at maintaining or enhancing climate resilience
9d10	Number of Parties reporting on adaptive capacity, resilience, and vulnerability reduction outcomes from EbA and NbS action in their NAPs, NDCs or other policies or programs	Keep, as nature-based solutions and locally led adaptation are integral to paragraph 14 of decision 2/CMA.5 Modify to a qualitative approach to measurement; the suggested modification is change in adaptive capacity, resilience and vulnerability to climate impacts in local communities and ecosystems resulting from the implementation of ecosystem-based adaptation actions and nature-based solutions included in NAPs, NDCs or other policies or programmes Modify, because not all Parties consider NDCs as reporting instruments Modify or delete, as it refers to nature-based solutions, the applicability of the terminology is unclear, and it would be difficult to collect data for this indicator and there is limited national capacity to do so Preference noted for the term ecosystem-based adaptation under the Convention on Biological Diversity and the Intergovernmental Panel on Climate Change Delete, as NAPs and NDCs are planning instruments rather than tools for reporting on progress
9(e) Infrastructure and human settlements		
9e01	Proportion of informal settlement upgrading programmes that (i) include climate change adaptation and (ii) are locally led and co-designed	Keep, retaining references to locally led and community-based adaptation as they are integral to the United Arab Emirates Framework for Global Climate Resilience Modify by removing “locally led and co-designed” as these are not agreed terms under the Convention Delete, as the indicator’s formulation is policy-prescriptive and uses non-agreed terms
9e02	Number of Parties that incorporate transboundary climate risks and adaptation measures for connected infrastructure and settlement systems in their National Adaptation Plans or equivalent documents	Keep, as this indicator reflects the language relating to transboundary adaptation in paragraph 18 of decision 2/CMA.5 The transboundary element of the indicator could be part of a menu of options Move to target 10(b) and modify; the suggested modification (under target 10(b)) is number of Parties that incorporate transboundary climate risk and adaptation measures into their NAPs or equivalent documents, disaggregated by hazard and geography Delete, as the indicator is not applicable for all and data are lacking
9e03	Number of Parties that include coverage of (i) critical thresholds, (ii) tipping points, and (iii) adaptation limits in National Adaptation Plans and national risk assessments	Move to target 10(a) and broaden the scope of the indicator to cover climate-related risks in general The indicator has unclear links to infrastructure and uses unclear terminology
9e04	Number of planned relocation protocols for human settlements and infrastructural system to facilitate inclusive and adequately supported and managed local-scale relocation	Modify to focus on the implementation of protocols and include disaggregation by hazard, population, governance level and social group; the suggested modification is number of implemented relocation protocols to reduce climate risk through inclusive, adequately supported and well-managed local-level relocation of human settlements and infrastructure

Indicator ID	Indicator name ^a	Comments
		Delete, as the relevance of the indicator to adaptation is unclear
9e05	Number of Parties with national adaptation plans that integrate (i) nature based solutions (NbS) and (ii) ecosystem based adaptation (EbA) measures (green/ blue infrastructure) to manage and reduce climate change impacts in human settlements and infrastructure systems, with (i) identified actions, (ii) targets, and (iii) resource allocations	Keep, as the indicator reflects paragraph 14 of decision 2/CMA.5 Modify to remove reference to resource allocations and national budgets Delete, as the indicator singles out nature-based solutions and ecosystem-based adaptation
9e06	Number of Parties that have established relevant standards or taxonomies designed to align public and private sector finance for Infrastructure & Human Settlement adaptation	Keep, as taxonomies provide useful data Delete or modify, as the indicator is policy-prescriptive, conflates different MOI concepts and does not align with the Paris Agreement
9e07	Number of Parties that have national adaptation plans, policy instruments and/or strategies which include a consideration of the impact of temperature goal overshoot on the effectiveness of adaptation in relation to basic infrastructure	Move to target 10(a) and modify to reframe how Parties consider the temperature goal of the Paris Agreement in adaptation planning; the suggested modification is number of Parties with NAPs, policies and/or strategies, as well as reporting mechanisms, that consider the impact of the temperature goal of the Paris Agreement, including its overshoot, on the effectiveness of adaptation Delete, as the indicator is covered under another dimensional target and would be difficult to measure
9(f) Poverty eradication and livelihoods		
9f01	Proportion of population living in multidimensional poverty in areas highly exposed to climate-related hazards	Modify to focus the indicator on vulnerability rather than exposure Delete, as the methodology for reporting would be challenging and should remain country-driven Delete, as measurement based on the international poverty line (see 9f02) is sufficient Delete, as the indicator focuses on impacts and hazards rather than adaptation
9f02	Proportion of population living below the international poverty line in areas highly exposed to climate-related hazards	Keep Modify to cover vulnerability rather than exposure Delete, as the methodology for reporting would be challenging and should remain country-driven Delete, as the indicator focuses on impacts and hazards rather than adaptation
9f03	Proportion of population living below the national poverty line in areas highly exposed to climate-related hazards	Some raised methodological concerns Modify to cover vulnerability rather than exposure Delete, as the indicator based on the international poverty line (see 9f02) is sufficient Delete, as the elements of this indicator can be captured under 9f01
9f04	Proportion of workers in climate-vulnerable economic sectors/activities (following ISIC classification)	The indicator captures exposure without direct relevance to adaptation

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
9f05	Proportion of enterprises adopting climate change adaptation measures	Keep, as private sector engagement in adaptation is crucial Delete, as countries often lack systems for monitoring private sector engagement in adaptation
9f06	Proportion of the adult population in climate-sensitive economic sectors with access to formal credit	Modify or delete, as the indicator is unclear and lacks a clear link to adaptation
9f07	Proportion of population covered by climate risk insurance	Keep, as considering insurance is important Delete, as the indicator is more relevant to loss and damage and insurance is difficult for vulnerable groups to access
9f08	Proportion of population vulnerable to climate change covered by social protection systems	Modify to clarify how the indicator captures vulnerability and adaptation
9f09	Level of social protection system preparedness/adaptiveness to respond to climate change impacts	Modify to remove “adaptiveness”

9(g) Cultural heritage

9g01	Percentage of at-risk cultural and natural heritage sites with adaptation measures implemented	Keep Modify to include disaggregation by type of adaptation measure, factors involved and hazard to cover 9g03 and 9g08 within this indicator, and delete those indicators along with the mention of non-listed sites Methodological issues were noted
9g02	Percentage of intangible cultural heritage elements with enhanced resilience to climate change impacts	Keep The indicator is problematic owing to a lack of methodologies for measuring the resilience of intangible heritage
9g03	Proportion of cultural heritage protected from climate impacts by (i) digitizing for preservation and recovery, (ii) storing movable heritage in climate-resilient facilities	Keep Modify to provide more clarity Methodological concerns were noted Delete, as the elements of this indicator can be captured under 9g01
9g04	Percentage of cultural heritage with emergency preparedness and response plans in place for climate change related hazards	Keep Merge the elements of this indicator under 9g05
9g05	Percentage of climate change adaptation plans, policies and strategies that incorporate the safeguarding and protection of cultural heritage	Keep Merge the elements of this indicator under 9g04, with modification; the suggested modification is percentage of cultural heritage sites for which climate change is addressed, both by integrating such sites into adaptation plans, policies and strategies and by developing emergency preparedness and response plans for climate-related hazards associated with such sites
9g06	Number of relevant climate change adaptation training programmes that integrate cultural heritage and/or guidance	Keep Modify to provide more clarity on data sources if this indicator is to be classified as an MOI indicator Methodological issues were noted

Indicator ID	Indicator name ^a	Comments
	from traditional, local or Indigenous knowledge	
9g07	Percentage of cultural heritage specific climate adaptation measures that engage with and are informed by local or Indigenous Peoples and their knowledge systems	Keep Unclear and methodologically difficult
9g08	Number of cultural heritage buildings and sites retrofitted with climate-resilient materials and/or technologies, including those guided by traditional, local, or Indigenous building practices	Keep Delete, and instead capture the elements of this indicator under 9g01 Concerns raised about the definition of “climate-resilient materials”

Note: The targets are abbreviated and referred to by their corresponding paragraph number in decision [2/CMA.5](#).

^a Names of indicators reproduced as in the final list of potential indicators.

2. Dimensional target indicators

26. Parties discussed the indicators under the dimensional targets, except for the indicators under target 10(c) on implementation, which were discussed separately (see chap. II.C below). Parties’ comments on specific indicators are summarized in table 2. Some Parties supported the current set of indicators for the MEL target; several other Parties suggested narrowing the list to one indicator capturing design and operation of MEL systems.

Table 2

Party comments on the potential indicators under three of the dimensional targets of the United Arab Emirates Framework for Global Climate Resilience

Indicator ID	Indicator name ^a	Comments
10(a) Impact, vulnerability and risk assessment		
10a01	Number of Parties that have established multi-hazard early warning systems	Keep, as this is an adaptation-relevant, data-ready indicator
10a02	Number of Parties that have accessible, understandable, usable, relevant and up to date climate risk information and comprehensive risk assessment	Keep Delete, as “climate risk information” is ambiguous
10a03	Number of Parties that have multi-hazard monitoring and impact-based forecasting systems, including monitoring stations	Keep, as this indicator is a clear adaptation progress metric
10a04	Number of people per 100,000 that are covered by early warning information through local governments or through national dissemination mechanisms	Keep, as this indicator is measurable and consistent with the SDGs
10a05	Number of National Meteorological and Hydrological Services that have adopted and sustained the use of Common Alerting Protocol	Keep Modify, as the focus is too narrow as the indicator stands; the suggested modification is number of countries with adopted national climate change and risk management strategies Delete, as elements of this indicator belong elsewhere, not under the GGA

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
10a06	Percentage of local governments in a country having a plan to act on early warnings	Keep
10a07	Percentage of population in a country exposed to or at risk from climate-related disasters protected through pre-emptive evacuation following early warning	Keep Delete, as the indicator is more relevant to disaster response and loss and damage
10a08	Number of Parties that have established climate information services for risk reduction and systematic observation to support improved climate-related data, information and services	Keep
10a09	Number of Parties that have used up-to-date climate risk information and comprehensive risk assessment to inform their formulation of national adaptation plans, policy instruments, and planning processes and/or strategies	Keep Modify to clarify meaning of “up-to-date” and to ensure broad disaggregation of the indicator beyond economic sectors It was emphasized that the integration of climate information into NAPs is critical in moving towards inclusive adaptation planning and implementation
10a10	Amount of finance for climate change adaptation for the design, development and operationalisation of climate information services and multi-hazard early warning systems	Keep Modify by adding “from developed to developing countries” after finance It was noted that ‘developed to developing’ language should not be included in this indicator as it is not globally applicable Modify to specify public intervention and distinguish between finance provided and received; the suggested modifications are (1) financial support provided and mobilized through public interventions by developed countries and other countries that provide support for the design, development and operationalization of climate information services and multi-hazard early warning systems and (2) financial support received and needed by developing countries for the design, development and operationalization of climate information services and multi-hazard early warning systems

10(b) Planning

10b01	Number of Parties with adopted national adaptation plans, policy instruments, and planning processes and/or strategies	Keep, as the indicator is a central metric of adaptation progress Merge the elements of this indicator under 10b02 Modify to focus the indicator on measuring the impact and effectiveness of implementing such plans, policies, strategies and processes Modify to include explicit reference to children and youth as a level of disaggregation
10b02	Number of Parties that have adopted national legislation or other legislative frameworks on adaptation	Keep Merge the elements of this indicator under 10b01 Delete, as legislative frameworks vary from country to country
10b03	Number of Parties receiving or mobilizing international support for formulation of National	Keep without modification, as any changes will mean that the indicator is no longer globally applicable

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
	Adaptation Plans, policy instruments, and planning processes and/or strategies, including for capacity development	Modify to include explicit reference to the finance provided by developed to developing countries; the suggested modifications are (1) amount of international public finance for climate adaptation provided or mobilized by developed countries and received by developing countries for formulating national adaptation plans, policy instruments, and planning processes and/or strategies, including for capacity development, (2) financial support provided or mobilized through public interventions by developed countries for formulating national adaptation plans, policy instruments, and planning processes and/or strategies and (3) financial support received and needed by developed countries for formulating national adaptation plans, policy instruments, planning processes and/or strategies
10b04	Number of Parties that have in place gender-responsive adaptation plans, policy instruments, and planning processes and/or strategies	Keep, as this is a key indicator of inclusive planning Modify to include Indigenous Peoples' knowledge and local knowledge as a level of disaggregation
10b05	Proportion of National Adaptation Plans, policy instruments, and planning processes that have been informed by traditional knowledge, knowledge of Indigenous Peoples, and local knowledge systems	Keep, as the indicator emphasizes the importance of traditional knowledge and knowledge of Indigenous Peoples Merge the elements of this indicator on knowledge of Indigenous Peoples in the disaggregation under 10b04
10b06	Proportion of local governments that have integrated climate change adaptation into policies, legal frameworks, budgets, plans and processes	Keep, as the indicator is important for mainstreaming adaptation in national policy and planning processes Delete, because the indicator refers to national budgets The term "local" varies by country and may cause inconsistency in reporting
10b07	Number of Parties with a legal requirement for public investments to take into account climate risks, including in planning, implementation and maintenance	Keep Delete, as the indicator has a narrow focus on legal mandates and does not align with the Paris Agreement
10b08	Number of Parties that have systems in place for considering climate risks in public procurement	Keep Delete, as the indicator does not align with the Paris Agreement and reporting on it may vary considerably by the country's development level
10b09	Number of Parties where national budgets reflect adaptation allocations across sectors and ministries and where adaptation is integrated into national and sectoral plans (including development plans and budgets, where applicable)	Keep, as mainstreaming adaptation in national policy and planning processes is crucial for adaptation Delete, as tracking national budgets is not in line with the criteria set out in SB 62 conclusions ^b
10b10	Proportion of government budget allocated to climate adaptation and resilience	Keep, as mainstreaming adaptation in national policy and planning processes is crucial for adaptation Delete, as the indicator involves tracking national budgets

Indicator ID	Indicator name ^a	Comments
10(d) Monitoring, evaluation and learning		
10d01	Number of Parties that have designed a system for monitoring, evaluation and learning for their national adaptation efforts	Keep Modify to simplify the indicator and focus it on assistance provided to countries for designing MEL systems
10d02	Number of Parties that have operationalised a system for monitoring, evaluation and learning for their national adaptation efforts	Keep Caution should be exercised in assuming processes are uniform across Parties
10d03	Number of Parties that periodically publish adequately detailed MEL findings of the implementation of their national adaptation efforts	Keep Modify to ensure consistency with the provisions of the Convention
10d04	Level of integration of MEL system findings into relevant plans, policies, processes, legal frameworks and budgets	Keep Keep, as the indicator is important for mainstreaming adaptation in national policy and planning processes Modify to improve the indicator's inclusivity Delete, because the indicator refers to national budgets
10d05	Number of Parties with sufficient institutional capacity, including adequate financial resources, to fully operate the national adaptation MEL system	Keep Modify, as clarity is needed regarding measurement of institutional capacity Modify; the suggested modification is financial support provided or mobilized through public interventions by developed countries for designing, establishing and/or operationalizing a MEL system for national adaptation efforts Modify, as "sufficient institutional capacity" is a subjective measurement Delete, as this is difficult to measure, or may be better placed under MOI

Note: The targets are abbreviated and referred to by their corresponding paragraph number in decision [2/CMA.5](#).

^a Names of indicators reproduced as in the final list of potential indicators.

^b FCCC/SBSTA/2025/4, para. 51(h), and FCCC/SBI/2025/11, para. 96(h).

27. Experts reflected on the comments made by Parties; their clarifications on specific indicators are summarized in the annex, in table I.2.

3. Comments by observers

28. Following Parties' discussions, the floor was opened for observers to share views on the indicators, many of whom emphasized the importance of maintaining a robust, inclusive and scientifically grounded indicator set.

29. One observer urged Parties to retain a sufficient number of indicators under each thematic target and not to reject indicators on the basis of current data gaps, as scientific advances may enable those data gaps to be filled in the near future. Another observer underscored the importance of national MEL, and some observers highlighted the need to reflect the transboundary dimensions of adaptation in the indicators and for the indicators to build on existing frameworks for transboundary water management, referring to available United Nations data sources. One observer stressed the importance of clear custodianship, methodological development and centralized databases for indicator implementation, alongside the need to ensure that data are people-centred and grounded in human rights principles.

30. Another observer welcomed the inclusion of indicators related to gender-responsiveness and Indigenous Peoples' knowledge and emphasized the necessity of comprehensive data disaggregation across all targets to reflect social diversity. Several observers called for Parties to ensure that indicators address the specific vulnerabilities and capacities of children and youth, including in education-related indicators and by systematic age disaggregation of indicators. One observer stressed the need for stronger and clearer indicators on MOI, including finance, technology transfer and capacity-building, provided by developed to developing countries, in line with the Paris Agreement principles. The need to retain globally recognized biodiversity and ecosystem indicators and to strengthen the integration of ecosystem-based adaptation and nature-based solutions into NAPs was emphasized. Some observers noted the importance of defining clear next steps and processes for determining indicator metadata before CMA 7.

C. Indicators for enabling factors, including means of implementation

31. Throughout the workshop, Parties shared reflections on the indicators, including those on MOI under target 10(c) on implementation. Broader views are summarized below, while specific ones are presented in table 3.

32. Many Parties stressed the importance of MOI in achieving the targets under the United Arab Emirates Framework for Global Climate Resilience and the GGA, noting growing adaptation needs and challenges in accessing quality finance. They emphasized that MOI indicators should be based on financial support, as described under Article 9 of the Paris Agreement; consistent with reporting in BTRs; and aligned with the principles and provisions of the Convention, including the commitments of developed countries under the principle of common but differentiated responsibilities. Several Parties noted that current indicators in the list do not track developed to developing country finance flows and overemphasize domestic financing.

33. Other Parties emphasized that, given the universal applicability of the GGA, the indicators should apply to all countries, with disaggregation used to reflect national contexts. One Party stressed the importance of balancing MOI indicators with indicators for other enabling factors, and ensuring consistency of those indicators with Article 7 of the Paris Agreement.

34. Several Parties opposed the inclusion of indicators for tracking national budgets or private sector contributions, citing reporting burden and emphasizing focus of reporting on public financial support. Others noted that national investments are not global in nature and should not be considered by global indicators. Several Parties noted that including information through indicators on funding sources reflects national circumstances and that terms like 'access' and 'provision' should cover private, domestic and international sources. Some Parties stressed that public funding remains the main adaptation finance source, and thus indicators should focus on public sources, while others noted that private sector finance indicators would help to assess adaptation mainstreaming across sectors and policy areas. One Party cautioned that private sector engagement in adaptation finance remains limited and sector-driven.

35. Building on this, one Party cautioned against introducing concepts from Article 9 of the Paris Agreement under the United Arab Emirates Framework for Global Climate Resilience, reiterating its universal applicability. Other Parties highlighted the need to avoid bifurcation, noting existing finance tracking under the ETF and opportunities for non-traditional sources of funding under the new collective quantified goal on climate finance.

36. Some Parties reaffirmed the link between Articles 7 and 9–11 of the Paris Agreement and expressed concern about their exclusion from the list. Regarding bifurcation, one group of Parties recalled adaptation information to be reported under the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement¹³.

¹³ Decision [18/CMA.1](#).

37. Some Parties noted the limited number of MOI indicators and suggested developing indicators with more focus on implementation and more under the MEL target. Others observed that some indicators, when disaggregated to the level of source, reflect national budgets rather than being true MOI indicators.

38. Several Parties stressed that MOI indicators must align with the guidance provided at SB 62¹⁴ and thus include capacity-building and technology support. Some suggested removing indicators not relevant to the Paris Agreement.

39. One group of Parties noted the lack of distinction between resources provided and mobilized and uncertainty around disaggregation by channel or instrument. They called for a standardized system for monitoring and reporting on adaptation finance and baseline indicators for tracking progress.

40. One group of Parties highlighted linguistic inconsistencies among MOI indicators, the ETF and common tabular formats, urging coherence in this regard. Other Parties suggested including indicators on access to finance, such as project approvals and fund accessibility. One group of Parties proposed developing consistent MOI indicators for finance, technology transfer and capacity-building across all targets. Another group of Parties supported adding MOI indicators to targets on impact, vulnerability and risk assessment, planning and MEL, aligned with Article 9 of the Paris Agreement. This group also proposed removing the MOI columns¹⁵ from the list, given that all indicators have MOI dimensions.

Table 3

Party comments on the potential indicators under the dimensional target on implementation of the United Arab Emirates Framework for Global Climate Resilience

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
10(c) Implementation		
10c01	Degree of implementation of national adaptation plans, policies and strategies	Modify, as “degree” is vague Modify to add disaggregation by level of implementation for actions in NAPs
10c02	Number of deaths and missing persons associated with climate-related hazards, per 100,000 population	Delete, as the indicator is related to loss and damage
10c03	Number of people who experienced direct social and economic impacts associated with climate-related hazards per 100,000 people	Modify so that the indicator provides a qualitative narrative of state of play Modify to include children and youth affected by disruption to education and learning Delete, as the indicator is related to loss and damage
10c04	Direct economic loss associated with climate-related hazards as a proportion of gross domestic product	Keep, as the indicator places a focus on mainstreaming adaptation Modify to a qualitative indicator of how adaptation action helps contain economic losses, where possible Delete, as the indicator is relevant to loss and damage
10c05	Costs of adaptation actions identified in adopted national adaptation plans, policy instruments, and planning processes and/or strategies	Indicator reflects needs rather than finance and should be considered a capacity-building indicator
10c06 Option 1	Amount of international public finance for climate adaptation provided, mobilized, and received for the implementation of national adaptation plans, policy	Keep as the preferred option for 10c06 Issues in metadata were noted Clarification sought, as ‘quality of finance’ is referenced in the columns of the list for this indicator

¹⁴ See documents [FCCC/SBSTA/2025/4](#), paras. 50–51, and [FCCC/SBI/2025/11](#), paras. 95–96.

¹⁵ See <https://unfccc.int/documents/649629>, columns N–P.

<i>Indicator ID</i>	<i>Indicator name^a</i>	<i>Comments</i>
	instruments and planning processes and/or strategies per [time frame]	Delete, as the indicator does not follow the guidance provided in previous subsidiary body conclusions and CMA decisions, or align with Article 9, paragraph 1, of the Paris Agreement
10c06 Option 2	Amount of international public finance for climate adaptation provided, and received for the implementation of national adaptation plans, policy instruments and planning processes and/or strategies per [time frame]	Keep as the preferred option for 10c06 Delete, as the indicator does not follow the guidance provided in previous subsidiary body conclusions and CMA decisions, or align with Article 9, paragraph 1, of the Paris Agreement
10c06 Option 3	Amount of international public finance for climate adaptation provided or mobilized by developed countries and received by developing countries for the implementation of national adaptation plans, policy instruments and planning processes and/or strategies per [time frame]	Keep as the preferred option for 10c06 Delete, as the indicator is not acceptable
10c06 Option 4	Amount of international public finance for climate adaptation provided by developed countries and received by developing countries for the implementation of national adaptation plans, policy instruments and planning processes and/or strategies per [time frame]	Keep as the preferred option for 10c06 Modify to include an explicit reference to finance under Article 9 of the Paris Agreement; the suggested modifications are (1) financial support provided under Article 9 of the Paris Agreement through bilateral, regional and other channels and (2) financial support provided under Article 9 of the Paris Agreement through multilateral channels Delete, as the indicator is not acceptable
10c07	Annual adaptation finance expenditure	Keep Delete, because of the indicator's reference to national budgets
10c08 Option 1	Amount of private sector finance directed towards climate adaptation annually including private finance mobilized through public interventions	Keep, retaining the reference to private finance Modify, deleting the reference to private finance Clarification sought, as "quality of finance" is referenced in the columns of the list for this indicator Delete, as there should be no reference to private finance
10c08 Option 2	Percentage of total private climate finance dedicated to adaptation	Keep as the preferred option for 10c08 Delete, as the indicator is not acceptable
10c09 Option 1	Level of implementation of adaptation technology needs identified by developing countries, including needs expressed in Technology Needs Assessments (TNAs), NAPs, NDCs and other equivalent policy instruments, including their development and transfer from developed to developing countries	Keep as the preferred option for 10c09, specifying developing country needs and technology transfer Modify to delete the rationale provided with the indicator, as it refers to technology transfer from developing to developed countries, which does not align with the Paris Agreement
10c09 Option 2	Level of implementation of adaptation technology needs identified by Parties, including needs expressed in Technology	Keep as the preferred option for 10c09, as it is broader in scope than option 1

Indicator ID	Indicator name ^a	Comments
	Needs Assessments (TNAs), NAPs, NDCs and other equivalent policy instruments including their development and transfer	Modify to focus solely on the technology needs of developing countries, to align with Article 9, paragraph 1, of the Paris Agreement Modify, because “including” is unclear
10c10	Number of Parties with institutional arrangements for the provision of regular training on climate change adaptation at the national and local level for governments and non-government organisations including community-based organisations	Keep, as locally led adaptation is an important element of the United Arab Emirates Framework for Global Climate Resilience It was noted as problematic to include an indicator with local-level aspects Modify to include disaggregation by target group
10c11	Extent of capacity-building interventions enhancing the adaptive capacity of vulnerable communities/people	The term “enhancing the adaptive capacity” is unclear Keep, noting that more capacity-building indicators are also needed

Note: The targets are abbreviated and referred to by their corresponding paragraph number in decision [2/CMA.5](#).

^a Names of indicators reproduced as in the final list of potential indicators.

D. Next steps

41. The Chair of the SBI recalled that there is no mandate to publish a revised list of indicators before CMA 7, and that this summary report constitutes the only mandated output. Some Parties noted that, while the list may not be perfect, it is robust, and Parties should not be selective at this stage. Others suggested categorizing indicators on the basis of Parties’ reflections at the workshop. One Party proposed conducting a focused consultation before CMA 7, convened by the Chairs of the subsidiary bodies or the Presidency of the thirtieth session of the Conference of the Parties, to facilitate an informal exchange.

42. In terms of the process at SB 63 and CMA 7, one Party cautioned against tabling a new indicator set, noting the limited time available. Some Parties proposed clustering indicators, for example by data readiness, and reviewing the indicators on that basis. However, other Parties did not support this approach, noting the lack of an agreed methodology for the clustering and highlighting that clustering indicators on the basis of data availability would contradict the guidance provided at SB 62.¹⁶

43. Many Parties expressed views on what they considered an optimal outcome at CMA 7:

- (a) An indicator set covering all targets and subcomponents that is workable and credible;
- (b) An ambitious, balanced and complete list, not a partial list;
- (c) A core set of indicators with a further set to be subject to continued technical work;
- (d) A list that is usable right away;
- (e) A list that can evolve with data and methodological improvements;
- (f) A minimal globally applicable set of indicators for the assessment of global progress, supported by a flexible menu of optional indicators tailored to national circumstances;
- (g) Comprehensive and coherent MOI indicators that align with Article 9 of the Paris Agreement, including for finance, technology transfer and capacity-building;

¹⁶ See documents [FCCC/SBSTA/2025/4](#), para. 51, and [FCCC/SBI/2025/11](#), para. 96.

(h) Indicators that consider cross-cutting elements, including consideration of women and girls, Indigenous Peoples, people of African descent, children and persons with disabilities.

44. Several Parties emphasized that reporting on many of the indicators will require technical capacity-building, particularly for the least developed countries and small island developing States, and highlighted the need for CMA 7 to address this concern. One Party noted that Parties' national reporting capacity should be considered during implementation of the indicators, as many countries lack a national indicator system.

45. Regarding next steps after CMA 7, several Parties noted that any decision adopted at CMA 7 should include a provision on where responsibility for developing metadata for indicators lies. One Party noted that some future work relating to indicators could be done within the UNFCCC process, while other elements of work may be undertaken by other organizations. Finally, it was noted that, in addition to an outcome on the indicators, the direction for further work on implementing the United Arab Emirates Framework for Global Climate Resilience should be included in any decision adopted at CMA 7.

Annex

Experts' responses to Parties' questions and comments on the potential indicators for measuring progress achieved towards the targets referred to in paragraphs 9–10 of decision 2/CMA.5*

Table I.1

Questions to experts from Parties and responses by experts

<i>Questions and comments from Parties</i>	<i>Responses by experts</i>
Some indicators were noted as difficult to clearly attribute to climate adaptation, and clarification was requested. A concern about the adaptation relevance of indicator 9a08 on water quality was also raised.	Adaptation relevance of indicators was considered rather than adaptation attribution, to ensure that all indicators are relevant to adaptation. Indicator 9a08 on water quality was selected to track progress in managing water resources and due to its significance across multiple sectors: drinking water, health, agriculture, industry, and ecosystems.
Parties noted that the indicator list does not anchor adaptation progress to the Paris Agreement temperature goal.	The indicators primarily track adaptation progress to the present, creating a conceptual disconnect with future temperature scenarios. Such scenarios are incorporated, as in indicator 10a, which captures whether countries consider different temperature projections in risk assessments.
Did the experts aim to present a comprehensive set of indicators or identify a minimum set of key elements to track progress towards the GGA?	The indicators were developed to balance ambition, pragmatism, and meaningfulness, capturing all essential elements by breaking down targets into components. The expert group created a comprehensive list covering all GGA targets and components, acknowledging that gaps may remain and that the list should be treated as a living document for future updates.
Parties noted that many proposed indicators emphasize impacts or loss and damage, rather than directly capturing adaptation progress.	Indicators under 10a track climate hazards and impacts, while 10c measures the reduction of social and economic impacts from these hazards. Similarly, targets like 9a (resilience to water-related hazards), 9c (reduction of climate-related mortality and morbidity), and 9e (minimizing climate impacts on infrastructure and settlements) capture climate-related impacts. Without these indicators, Parties would not be able to assess whether such impacts are being effectively reduced. An expert stressed that there is no loss and damage indicator per se. Data on social and economic impacts overlaps with both adaptation and loss and damage needs, supporting cost-benefit analyses for adaptation investments. Removing such indicators would obscure outcome-level measurement of adaptation impacts.
One Party sought clarification on the transboundary indicator in infrastructure and whether that is considered in the water target.	Indicator 9a04 in water target captures transboundary aspects through its disaggregation, although the indicator title refers only to area basins. In addition, indicators 10a01 and 10a02 on early warning and risk information also address river basins and transboundary risks.
Which indicators are ready for operationalization? Which require further work, including addressing disaggregation challenges? What steps and responsibilities are needed to finalize the metadata?	22 indicators are ready for operationalization. The ready indicators are distributed across targets as follows: water (3), food (1), health (6), ecosystems (3), impact, vulnerability, and risk assessments (7), and implementation (2). Indicators under health and impact, vulnerability, and risk assessments are generally more advanced. Those lacking data are distributed across targets as follows: water (1), food (1), poverty (2), planning (2), implementation (1), and monitoring, evaluation, and

* Not formally edited.

<i>Questions and comments from Parties</i>	<i>Responses by experts</i>
	learning (1). Experts suggested using the filter function in Excel on the metadata column to filter the 22 indicators. Indicators ready for operationalization may not yet be fully ready at all disaggregation levels. Developing the metadata exceeds experts' mandate and capacity. Following the adoption of the indicator set in CMA 7, the decision text could guide completion of the readiness phase, including finalizing metadata, potentially by SB 64, and experts suggested that this work should be done by a technically sound small group.
Where "needs modification" is indicated in the metadata column, what specific changes are envisaged and what implications would these have for data compilation and analysis for Parties? An indicator from existing frameworks (e.g., 9a01) is marked as data available. However, the understanding is that some modification would still be required.	The indicator list includes columns for metadata availability and operationalization, specifying work needed to make indicator adaptation relevant. Modifying indicators from existing frameworks (e.g., SDGs) has implications for the definitions and data collection methods. Custodian agencies, already working with member states on related indicators, could be requested to support these modifications. Developing or modifying the required data for those indicators is feasible and achievable in the short term.
For indicator 10c06, what metadata modifications are expected given that the reference to SDG indicator 13.a.1, which tracks progress towards the \$100 billion commitment through 2025, is no longer applicable?	The reference to SDG indicator 13.a.1 was only intended to highlight an existing source for developing metadata and was not meant to prejudge or imply that the new collective quantified goal would not exist.
How did the expert group balance reporting burden and the feasibility of generating data when selecting indicators, especially those requiring resource-intensive measurements like household surveys?	Indicator selection prioritised measurability and alignment with targets, with some indicators requiring substantial effort while others are readily available. Consideration of reporting burden will be further addressed during the metadata development process, alongside political considerations.
What methodology was used to assess data readiness, and was a thorough assessment conducted? If not, would it be a good opportunity to undertake them after CMA 7?	Indicators are classified as data available (data reported by many countries), partially available (data exists but needs refinement), or not available (no data collected), with information in column K reflecting a general perception of coverage rather than a strict scientific analysis. A full data readiness assessment was not conducted due to capacity constraints, and practices from the existing SDG and Sendai Framework processes could be considered for further assessments.
What is the role of custodian agencies for the indicators, and how should these agencies be defined, and how can they be ensured to collect adequate information from all countries?	Custodian organizations are relevant for indicators derived from established frameworks, while new indicators would have custodians identified based on technical expertise. Engaging these organizations alongside national statistical offices and establishing a clear governance structure, including a centralised coordinating body, is essential for streamlined data collection and reporting.
How can reporting at the local level be facilitated and accelerated, given that some indicators are linked to the local level, but cities are not currently involved in the UNFCCC process?	Many indicators depend on local-level data submitted nationally for global aggregation, requiring strengthened national data governance and the role of national statistical offices, while reporting should minimise country burden by repurposing or refining local data.
How do experts ensure that indicators are relevant, applicable, and consistent	There are two types of indicators: national and global. The 100 global indicators are not meant to replace national ones, and countries continue using their own indicators in

<i>Questions and comments from Parties</i>	<i>Responses by experts</i>
across different national contexts, accounting for variations in capacities between developed and developing countries, potential reporting burdens, and the global applicability of indicators proposed by individual countries?	NAPs, NDCs, or national reports. Some global indicators, such as the “number of countries with a NAP,” rely on existing data from global portals and do not require additional national reporting. Indicators are nationally reported and globally aggregated, with disaggregation capturing national nuances while global standards ensure comparability. Although designed for global application, the pathways to achieve these indicators often occur at national, local, or other scales, with outcomes aggregated globally.
How do the capacity-building indicators under the MOI address the limited national data availability and the resource needs for data collection and reporting in developing countries?	The capacity-building indicators under 10c refer to support for implementing NAPs and actions, not for reporting. Addressing reporting capacity constraints for developing countries could be considered after the adoption of indicators as part of the CMA 7 decision
Why is there a distinction between provision and mobilization in MOI indicators, and why is there mention only of domestic resources that countries allocate?	The domestic finance indicator (10B.09) is linked to the mainstreaming component of target 10B, and mentioned that policies, legal frameworks, budgets, plans, and processes are part of mainstreaming. It measures the extent to which national budgets prioritise adaptation, focusing on domestic mainstreaming rather than on MOI.
Why is there an indicator on finance under the food target while having adaptation finance indicators under 10c?	While the 10c indicator tracks international finance received by developing countries, only a small share reaches food and agriculture, and even less reaches the local level. This indicator complements the 10c finance indicator by tracking finance reaching the local level for food and agriculture.
How can alignment with NAPs and national planning, monitoring, and evaluation processes be accelerated while ensuring consistency with global stocktake 2 reporting requirements?	The rollout of new NAP technical guidelines, with 67 countries having submitted NAPs and many more preparing them, provides an opportunity to strengthen alignment between NAPs and the indicators, enhancing coherence between national and global reporting. Parties can be encouraged to reflect the indicators in the BTR 2, due next year, using available or easily adaptable metadata, while continuing to develop those requiring more time, in line with the para. 32 of Decision 2/CMA.6 , which calls for updating BTRs according to the GGA framework.
What is the indicative timeline for advancing this work?	While it cannot be precisely quantified, finalising and consolidating metadata for each indicator will take some time. This exercise is important, as it provides insight into global-level readiness and serves as a basis for further data readiness assessments.
Would it be useful to conduct a pilot with a limited number of indicators, and the appropriate duration for such a pilot?	A pilot could be conducted using the 22 data-ready indicators. This would provide an initial analytical overview, identify gaps, and inform global stocktake 2, while guiding further capacity-building for countries.
How would some of the proposals by Parties, particularly those suggesting deletion of indicators, affect the overall balance of the list?	Each target was logically broken down into specific components, and indicators were developed or drawn from existing lists for each component. Deleting indicators could risk losing information on these components.

Table I.2

Experts' clarifications on the comments made by Parties on specific indicators

<i>Indicator id</i>	<i>Comments by experts</i>
9b05	Experts suggested explicitly including non-commercial/family farmers to ensure inclusivity.
9b09 and 9b10	It should read: with prevalence of moderate or severe food insecurity associated with climate related drivers and climate related events. Experts proposed clarifying that “events” refers to climate-related events causing food insecurity. They recommended retaining these indicators since assessing agricultural losses under climate risk is essential for vulnerability baselines and measuring adaptive response over time.
9d06, 9d07 and 9d08	Experts also highlighted that these indicators are very relevant indicators for ecosystems and biodiversity
9f01-9f03	Regarding the three indicators capturing different levels of poverty, the experts clarified that these were included to cover the poverty eradication component of the target. On keeping only one indicator on the international poverty line, it was mentioned that it will allow for comparison between countries using comparable poverty statistics, but these are close to zero for most developed countries and that is the reason to measure multiple levels of poverty. The multidimensional poverty indicator was included because, in addition to the monetary aspect, this indicator captures deprivation in multiple aspects such as education, health, housing, and access to basic services.
9f07	An expert clarified that deleting the climate risk insurance indicator would remove crucial information, as it is relevant to other targets like food and infrastructure as well.
9f09	Experts clarified that this is not a population-based indicator and is to be reported at the national level, and that was the reason for not providing disaggregation, but if needed, it can be disaggregated.
9g08	On ‘retrofitting’, an expert explained that cultural heritage infrastructure faces climate risks and can only be protected through climate-resilient retrofitting. The indicator aims to capture measures to safeguard both tangible and intangible heritage, acknowledging that indicators are new due to the lack of existing climate metrics in the heritage sector.
9g indicators	Cultural group experts noted that there's very little data currently available on cultural heritage. The United Nations Educational, Scientific and Cultural Organization Culture 2030 framework has one indicator on climate adaptation and resilience, and more than 20 countries and cities are reporting on that indicator. There are national-level data that countries are reporting under other conventions like the World Heritage Convention, Intangible Heritage Convention, etc
10a02	“up to date” has not been defined as it depends on the latest available statistics or the latest available science, as suited to the national context.
10a05	Regarding the ‘Common Alerting Protocol’, this is guided by many national legislations and mechanisms, around 100 of them that have been adopted as part of the World Meteorological Organization Congress methodology on the Common Alerting Protocol. This term has thus been used as it is seen as a critical element of early warning systems.
10b02	An expert explained the rationale behind this indicator, and a slight tweak was proposed to be more inclusive and ensure that the indicator measures frameworks <i>including</i> adaptation, rather than frameworks <i>on</i> adaptation
10b05	Developed based on stakeholder input, notably from the Women and Gender Constituency, to reflect whether national adaptation planning is gender-responsive, aligning with the target wording.
10c01	‘Degree of implementation’ was used to reflect the wording of the target, noting the difficulty in measuring implementation levels of adaptation plans due to inconsistent national reporting.
10d01 and 10d02	The formulation of these has been informed by the wording of the target, with the first indicator focusing on the development of a MEL system, and the second on the operationalization of MEL systems. As such, the first indicator would capture efforts of Parties in the development process of the MEL system, but have not yet reached the stage of the system being operational, whereas the second indicator measures whether it's in operation.

10d05	This was meant to be two separate indicators and is intended to capture the second component of the target regarding the institutional capacity required to fully implement the MEL system.
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