Global Goal on Adaptation 3rd Workshop under the UAE–Belém work programme on indicators

Bonn, Germany

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Agenda

Day 1

10:00 - 11:00	Registration and coffee
11:00 - 12:00	**Opening** • Remarks by the SB Chairs • Short presentation by the secretariat on the experts' work in 2025 • Updates from experts: Water, Food, Health, Ecosystems, Infrastructure, Poverty and livelihoods, Cultural Heritage, Adaptation Cycle
	Session 1: Data readiness for indicators
12:00 - 13:00	**Discussions on data and methodology feasibility assessments (3/CMA.6, para 17a-b)** • Balancing potential trade-offs between short-term feasibility (using existing data) and long-term impact (developing new methodologies and data collection systems) • Possibility of integrating alternative data sources or proxy indicators to fill gaps in data collection • Should we prioritize selecting indicators already with data and established methodologies or should we include those indicators to drive future data collection and methodology development? • What are the potential trade-offs between short-term feasibility (using existing data) and long-term impact (developing new methodologies and data collection systems)? • How can we ensure that countries are not discouraged from reporting due to lack of data, but rather see it as an opportunity to build capacity?

	• How can we integrate alternative data sources or proxy indicators to fill gaps in data collection? (e.g., impact indicators to measure outcome indicators)
13:00 - 14:00	Lunch
	Session 2: Interlinkages across indicators
14:00 - 15:30	**Panel discussions with experts on interlinkages across indicators with examples, where relevant, and associated challenges:** **Presentation on interlinkages, presentation on disaggregated data, presentation on links between thematic and dimensional indicators** • cross-cutting indicators (social inclusion, Indigenous Peoples, human rights, gender equality, migrants, children and young people, and persons with disabilities); • compound indicators; • nested indicators; • indicators that are relevant to multiple targets **Guiding questions for discussions:** • How should cross-cutting indicators be included in the final list? • What are the key benefits of using compound and nested indicators? what gaps or challenges do they address? • What determines when an indicator should be structured as a compound indicator with sub-indicators, rather than as a standalone or multi-target indicator? • What challenges arise in aligning indicators across thematic and dimensional targets, and how can they be addressed?
15:30 - 15:45	Coffee break
15:45 - 17:30	Breakout group discussion
17:30 - 18:00	Reporting back and closing of day 1

Day 2

	Session 3: Global indicators and overall trends and identified gaps and new indicators
09:00 - 11:00	Discussion on • What are some examples of indicators for enabling factors for the implementation of adaptation action, including means of implementation, that have been successfully utilized in other processes, and how could similar indicators be made applicable to the GGA? • How do we ensure that global indicators reflect regional and national realities, while still providing a meaningful global assessment? • Analysing gaps and exploring the need for new indicators
11:00 - 11:15	Coffee break
11:15 - 12:30	Breakout group discussions
12:30 - 13:30	Lunch
13:30 - 15:00	Breakout group discussions
15:00 - 15:45	Reporting back from breakout groups
15:45 - 16:00	Coffee break
16:00 - 17:00	Plenary discussions The next steps and suggestions on how experts can overcome the challenges faced by them
	Session 4: Closing
17:00 - 17:30	Wrapping up and closing remarks by the SB Chair(s)

Key take aways

- **Progress and next steps in the UAE-Belem Work Programme:** A group of 78 experts was convened prior to CMA6 to begin technical work on refining the indicators in the database compiled by the Secretariat and the Adaptation Committee, filling gaps and developing new indicators as needed with the view of producing a consolidated list of

indicator options for Parties, including metadata where available, and a progress report to be published no later than four weeks prior to SB 62. SB60 and CMA6 provided the expert with guidance and criteria for consideration in the indicator refinement process. CMA6 also decided that the final outcome of the UAE Belem WP shall be a manageable set of no more than 100 indicators that are *globally applicable* (with a view to informing an analysis of relevant global trends), *constitute a menu that captures various contexts* of adaptation action (enabling Parties to choose which indicators they will report on in the light of their national circumstances) and are *designed to enable assessment of progress* towards achieving the different components of the targets (referred to in paragraphs 9–10 of decision 2/CMA.5). To facilitate the work of the experts and foster engagement with the negotiators, several workshops are scheduled for 2025. This one being the first, followed by another workshop in conjunction with SB62 in Bonn in June and the last one scheduled to take place prior to CMA7. This 3rd two-day workshop under the WP focused on three main areas: data, data readiness for indicators, interlinkages across indicators and global indicators and overall trends as well as identified gaps and new indicators.

- **Insights from the work of the expert groups**: The seven thematic and dimensional target groups follow a similar phased approach to produce a consolidated list of indicator options; starting by I) unpacking their target (i.e. identifying sub-components/themes), II) mapping indicators relevant to the target and adaptation ('12a and b analysis') to the identified sub-components/themes, III) identifying gaps/needs for indicator modification and the need to develop new indicators, and finally IV) refining and selecting/prioritizing indicators that can be submitted to the Secretariat. Experts flagged that some modifications to the indicators/further work between SB62 and COP30 might still be needed after submission of the list.

- **On data availability for indicators/ Balancing potential trade-offs between short-term feasibility (using existing data) and long-term impact (developing new methodologies and data collection systems) / pragmatism vs. ambition:** Most expert groups mentioned challenges related to data availability of indicators and the feasibility of significant refinement or development of new indicators given the short time window. There was a clear agreement that starting with indicators that already have data and established methodologies is critical for immediate progress. However, experts and negotiators also emphasized that problems in data availability or availability of methodologies should not be an exclusion criterion for indicators; on the contrary, it could drive future data collection and methodological development. It was highlighted that a balance between ambition, pragmatism, and meaningfulness is needed.
    - It was highlighted that it is important to build on indicators of other frameworks such as Sendai, SDG etc. to reduce reporting burden and avoid duplication (GGA

indicators to add value) but indicators need to be adaptation relevant and fit for purpose.
    - It was emphasized by the negotiators that there is no expectation for the experts to deliver 100 indicator list. They shall focus on the best possible indicators and not think about the number too much.
    - There seemed to be differences in understanding about the nature of the 100 indicators list with regards to them being all globally applicable (e.g., AGN, Japan, G77+China) or if the 100 include also context specific indicators / menu of options for countries to choose from (e.g., EU)
    - It was highlighted that in case of lacking data, proxy indicators and technologies such as AI or geospatial data could be considered.

- **Inclusion/role of cross-cutting indicators in the final indicator list**: It was highlighted that cross-cutting considerations (gender, age, marginalized groups) are relevant (e.g., stressed by EU, Brazil) and some emphasized that it should not be seen as optional (make it a requirement) but shouldn't distract from the main objective of measuring progress towards GGA achievement i.e. the inclusion of cross-cutting indicators needs to be done carefully to avoid overcomplicating the list or diluting the focus on the main adaptation targets (e.g., stressed by Arab Group).

- **Indicators for enabling factors incl. MOI**: Expert groups presented some insights into thematic group suggestions for MOI and enabling factor indicators that they have already identified. The importance of MOI was highlighted by developing countries and a clear distinction between MOI and enabling factors demanded. Developed countries underscored that indicators that go beyond MOI such as governance, institutional arrangements, leadership etc. need to be considered as well. Some participants stressed that MOI is part of reporting in BTRs and that duplication should be avoided. It was also highlighted that many MOI indicators already exist but that we are lacking a global unified indicator that everyone is using (WHO). It was also discussed if MOI indicators should be covered under each thematic target, or specific group with sub items for these different themes or in dimensional target 10 c (implementation).

- **Compound and nested indicators**: If an indicator can cover multiple dimensions of adaptation or multiple targets, then it may be more appropriate to structure it as a compound or nested indicator. These structures allow for more detailed reporting and provide a richer understanding of how adaptation actions are unfolding. However, if the indicator only addresses one specific adaptation aspect, it may be better suited as a standalone indicator.
    - The importance of harnessing interlinkages across targets was highlighted several times, i.e. one indicator that can speak to several targets (as seen by Sendai and SDG) and thus only needs to be reported once which also reduces reporting burden.

- **Analysing gaps and exploring the need for new indicators**: The process of analyzing gaps is ongoing and involves identifying areas where existing indicators do not fully capture adaptation progress. New indicators may be needed to address emerging issues.
- **ASOS requested a paper on definition of technical terms e.g., nested and compound indicators etc.**

Notes

Day 1

Co-facilitator:

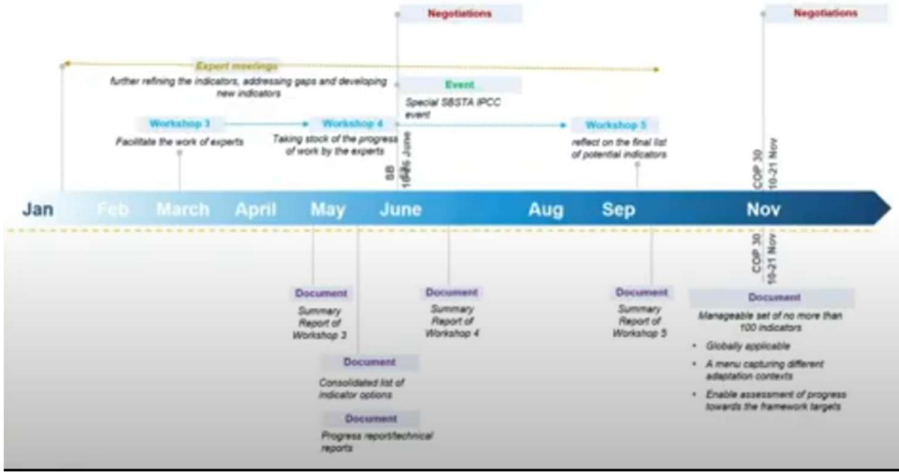
- We need to conclude the work on the UAE Belem WP on indicators this year
- Experts work is ongoing and their outputs will be published prior to SB 62
- After this workshop, we'll meet again in conjunction with SB 62 to consider those outputs, and then we'll have another workshop prior to CMA 7 to work towards the final outcome, which we will then adopt at COP 30
- this is the first of mandated workshops this year, the experts have been under their own authority and doing a lot of work. The secretary will give a presentation on that shortly
- minor change to the agenda was published overnight
- the mandate of this workshop is to facilitate the work of the experts
- We want to reiterate that it is our intention for this meeting, whilst discussions will, of course, be inclusive to all, we want the experts to have the opportunity to take the lead here, and to make sure that they are able to lead this workshop with a clear idea about how they will move forward and deliver the outputs that have asked of them ahead of SB 62
- This workshop will focus on three main areas, data, data readiness for indicators, interlinkages across indicators and global indicators and overall trends as well as identified gaps and new indicators.
- we're going to start with a short presentation by the Secretary of the experts group, and then we're going to open the floor for updates from experts.

Secretariat (Mariam (Navi), leading Secretariat work on Adaptation Division):

Progress update on work prior to CMA 6

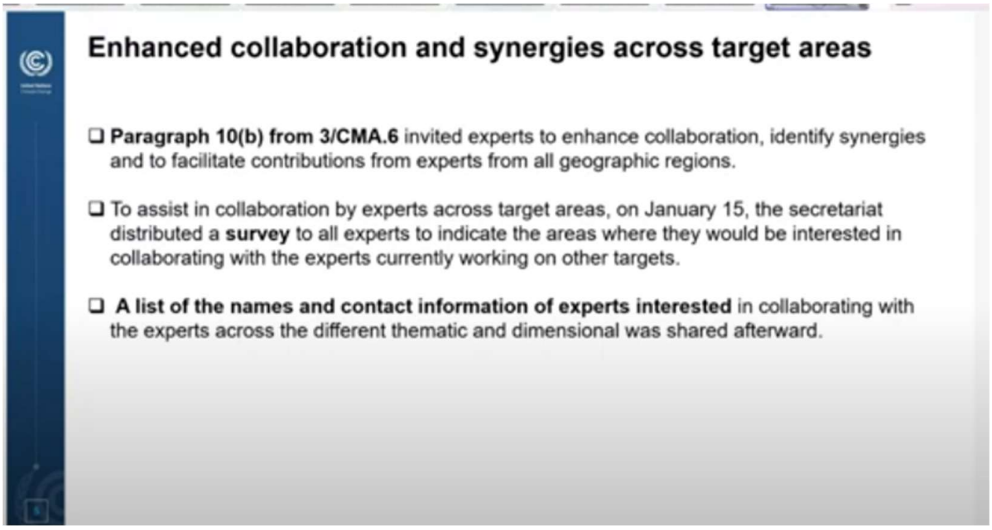
- 78 experts convened under the SB Chairs
- Compilation of 7,000 indicators (approx.)
- 2 mandates workshops
- New guidance from CMA 6 with additional criteria and considerations

Progress update on work since CMA 6



Common approaches

- Identifying themes/categories/topics within each target
- Mapping indicators to relevant themes identified
- Mapping indicators to other targets
- Identifying gaps and developing new indicators
- Evaluating and refining indicators based on criteria established at SB60 and CMA6 decision
- Prioritizing and scoring
- Compiling, documenting, and validating list of indicators



- Last year, prior to CMA6 78 experts were convened.
- 2 workshops in the first half of the year: this first workshop is to facilitate the work of the experts and the second one in conjunction with SB 62 to take stock of progress of work of the experts
- There have been virtual experts' meetings since January/February as well as coordinated meetings with all experts that the Secretariat facilitated
- Experts are focusing on refining the indicators, developing new indicators, addressing gaps aligned with the mandate
- Publish summary report of the workshop 3 weeks prior to the session, consolidated list of indicators 4 weeks prior to the session as well as progress report/technical report by the experts
- Second part of the year: one workshop with objective to reflect on the final list of potential indicators, prepare for CMA 7
- SBSTA IPCC event during the June session, IPCC colleagues will update us on their work
- There have been also other meetings, organized by some organizations that the experts had the opportunity to join e.g., IPCC scoping meeting, OECD meeting in Paris – encourage ongoing dialogue
- There have been quite some discussions on common approaches between experts: they identify themes, categories or topics between targets. They are aware of the criteria of SB60 and CMA6.
- The Secretariat distributed a survey and asked experts to say which other groups they want to collaborate with

Expert presentations

Water group

- We decomposed the water target into sub-components to make the identification of indicators more suitable for water target

    - I) reducing climate-induced water scarcity
    - II) enhancing climate resilience to water-related hazards
    - III) Climate resilient water supply
    - IV) Climate resilient sanitation
    - V) Access to safe and affordable portable water for all
- We mapped indicators according to 12 a (relevance of indicators to measuring progress towards one or more of the targets of the UAE Framework) and b (relevance of indicators to adaptation)
- 2 evaluators for each indicator: alignment with 12 a and b yes, no, maybe with intention to process with "yes" indicators
- Yes/maybe indicators can be considered as indicators that need modification / have potential
- After Baku decision on common approach, water group started on a parallel approach to this already started mapping
- **Water group prioritized indicators that are used in existing global frameworks (Sendai, SDGs etc.), identify gaps and needs for modifications and need for new indicators**
- Identified indicators, track them back to original mapping and have a validated process to have a consolidated list
- Steps: 1. Building on existing frameworks 2. Identify needs for modification and needs for new indicators
- Distinction between action, outcome and impact indicators
    - Action indicators, in some cases, can be considered as enablers of implementation, including means of implementation.
- **We have touched on the issue of global and contextual indicators, and we have approached them as being complimentary to each other.** So, we don't consider separately global indicators or contextual indicators. **We have them both in our mapping**, and that is because, as we understand the reporting process, or the synthesis report to global progress towards the target that not only countries will report, but other data sources will come in and create this synthesis. So, we consider both global and contextual indicators in this mapping.
- **Approach to indicator selection process: Relevance, Feasibility, Inclusivity**
    - Relevance: relevant to framework and to adaptation
    - Feasibility: we don't exclude indicators that are difficult to calculate, or we have problems in data availability.
    - Inclusivity: we allow for this application over time, space, population groups. And this is to refer to some issues on vulnerability and inequalities that may occur.
- Grouping of relevant indicators into input, process, output and outcome according to sub-component of the target → This is an analysis based on analysis from the evaluators, but also analysis from an algorithm to validate the process
- Mainly indicators from process, output, outcome (not so much input)

- Not so many indicators for climate resilient sanitation and access to safe and affordable portable water
- Create consolidated list in April 2025, what water group understands as consolidated list, we will identify gaps, i.e. where indicators needs to be modified from the existing indicators and areas that we will probably need new indicators.
- Considerations: we need more interactions with ecosystem and dimensional indicators, transboundary water bodies, engage with external stakeholders such as statistical bodies

Food

- Step by step approach for indicator review and development
- starting by unpacking the elements in the target 9b (food/agri target), and this is basically to identify what we need to measure, and then going into the database of the indicators that has been compiled by the Secretariat to see whether we have indicators that correspond to those elements (mapping). The third step, we identify and see whether we can recommend new additional indicators that are not included in the database of the secretariat (gap analysis) and lastly evaluate, refine and select indicators
- Sub-component: Food production, food supply and distribution, food access and nutrition, food security – in language of target we want to include "sustainable and regenerative production"
- Issues related to droughts are crucial to agricultural value chains
- 1116 indicators are relevant to target and adaptation (12a and b), most indicators for food production, most correspond to adaptive capacity
- **At the moment in the process of reducing number of indicators** by looking at one element e.g., increasing uptake of sustainable production including climate resilient crops etc. – we have a number of indicators in the database that speak to this element and the idea is that we only have one indicator that combines all variations into (captures the spirit of the many indicators)
- Consider also cross-cutting elements like gender and children, also plan to consolidate indicators into one

Health

- Health target as 3 components: I) resilience against cc related health impacts, II) promoting climate resilient health services and III) reducing climate related morbidity and mortality
- Similar approach to previous groups
- We look indicators across adaptation cycle and indicators for health related outcomes and impacts
- we've already done the first screening of a big list of indicators and what we're currently doing is identifying what are the priorities. So, what do we need to look at when we look at indicators that will tell us where we stand on this target

- validated the approach and getting input from other groups and other experts (e.,g WHO)
- Not yet started: prioritization of indicators: looking at reducing list of indicators to select the high priority ones, and then screening indicators, including on data readiness and methodological feasibility
- Data availability is a challenge
- in terms of measuring the achievement of resilience against climate change and health risks, we need to look at those risk factors that we want to modify: underlying vulnerability to climate related health issues and look at the morbidity, mortality and the impact of climate change on health and health systems.
- two other components: impacts on health systems and facilities and health outcomes related to climate change, which, for this target, has a huge problem of attribution.
- Synergies with other targets (water, food, cultural heritage, poverty etc.)
- 747 indicators to 53 long listed indicators so far
- Next steps: we need to compare with other target groups (cross cutting comparison), this is the biggest challenge that we are facing currently (many targets and a lot of overlap)
- Challenge for indicators on health outcomes
- Common challenges with indicators available so far: **indicators only applicable to small sub-set of countries, necessary data not available or cannot be easily collected**, indicators are not cost-effective (costly to collect data), challenges to validate data, indicators are not sensitive to adaptation progress, attribution: monitoring health impacts but not related to climate change or implemented adaptation interventions, **suitable indicators depend on local context and local hazards** (e.g., dengue fever is not relevant to all countries)
- Suggestion is to **develop a menu of indicators, countries to select given the hazards they face**
- Gaps: no indicators based on traditional, indigenous and local knowledge
- Big reporting gaps even on well-established SDG health indicators, even SDG indicators have data availability challenges
- Sendai framework provides very useful indicators
- Methodological challenges for health indicators are quite substantial but a lot of movement in health sector – improvements can be made quickly

Ecosystems

- Developing indicator list following common approaches, evaluating indicators that fit criteria of decision text, discuss interlinkages of indicators relevance to multiple thematic targets, assess relevance to input, output and outcome orientation, reflecting global indicators on overarching trends and common challenges, identify gaps
- 5 elements under ecosystem target: ecosystem level indicators (water, inland, mountain, marine, coastal), ecosystem services indicators (provision, regulating, cultural and recreational)

- The third element of our target is related to genetic diversity level indicators.
- Forth element: red list index
- Last element: response solution, support level indicators, incl. MOI
- We've been thinking a lot about sort of the diverse ways in which we know things, and thinking that through the added value that we can bring here is by really trying to elucidate why we're coming up with the list
- thinking about interlinkages and how to represent them
- For ecosystems, Global Biodiversity Framework is a good starting point

Infrastructure

- 3 key areas: I) resilience of infrastructure and human settlements, II) ensure basic and essential services, III) minimizing climate related impacts on infrastructure
- Started with over a 1000 indicators in database, reviewing existing indicators, ongoing engagement with key organizations such as UN Habitat, development of criteria for shortlisting indicators: indicator agreement weighting (number of experts who agree on the indicator)
- climate risk and consideration of climate risk components and how they are relating to our work

Poverty

- components: I) reducing adverse effects of cc on poverty eradication and livelihoods etc.
- 4 steps: **identify elements within target, map indicators to the elements in step 1, identify gaps and lastly evaluate the mapped indicators under criteria from SB60 and COP29**
- Unpack the sub-components of target and find alignment in definitions of crucial terms e.g., poverty drivers and poverty rate, social protection measures, what is livelihood?
- 318 indicators where classified as Yes/ maybe under 12a assessment
- Most indicators on aspects of livelihood (poverty (assets, activities, capabilities)
- **Next steps: complete clustering, identify gaps, prioritize and consider new indicators, prepare metadata file for prioritized indicators**
- Challenges: overall across clusters, several indicators are vague statements not framed as measurable metrics, inadequate definitions lead to inconsistent interpretations, relevance to adaptation, not easy to measure, harmonizing disaggregation (gender, age, disability, migration)

Culture

- Difficult to be in one meeting because of different time zones

- Sub-components: I) Protecting cultural heritage from impacts of climate risks, II) develop adaptive strategies, III) design climate resilient infrastructure guided by traditional knowledge, indigenous people and local knowledge
- Key elements of cultural elements: safeguarding cultural heritage for climate resilience, education, awareness and intergenerational dialogue, source for innovation and climate knowledge, equity and inclusion and dynamic conservation and adaptive reuse
- Cultural heritage indicators already exist in Sendai, SDG and UNESCO 2030 Adaptation and Resilience
- 280 indicators in database → 12 a and b analysis → refinement of indicators considering more factors and inputs from HACA and UNESCO → workshop with UNESCO in April → propose list before SB 62
- E.g., 100% of heritage sites have received place specific climate vulnerability and adaptation assessments
- Interlinkages with other themes – find solutions with other groups where indicators should be placed

Dimensional targets

- 45 members, big group, many time zones, yesterday first time to meet face to face and meet with other groups
- Different challenges than thematic groups because of size of the group and number of indicators (< 3000 indicators in database)
- 12 a and b analysis done
- Global indicators need to include MOI
- Narrowing down 1,100 indicators via criteria is not feasible
- Two-pronged approach: expert assessment (what information do we need to understand progress, what would ideal indicators look like) and clustering (clustering indicators from compilation according to component and themes), identify gaps, identify indicator options with a common template, draft progress report
- Nested indicators?
- Some commonalities with SDG indicators but not so many
- Next steps: application of clustering, identifying gaps, coordinating with thematic groups, clarify role of nested indicators, integration of cross-cutting considerations

Q&A

Luke, Australia: how to get to 100 indicators in the end? Are you concerned about the number of indicators given to you? Does that have implications for the level of generality? Because you simply don't have the number of indicators to get as specific as I'm sure you all want to be.

Kotum, Botwana (obo AGN): methodological issues: different but overlapping approaches used among groups – need to develop some common approach such that all the elements are considered such as MOI? I don’t see it reflected in the group presentations. I also don’t see MOI as part of the agenda to discuss in this workshop. Another issue is data availability: water

group made a good point that data availability is relevant but shouldn't be an exclusion criterion for indicators. Comment on health group: **we need globally applicable indicators**. Water group: engaging with other partners – we have experts selected for this task, engagement should be within the group of experts

Mexico: Mexico is committed to stepping up our participation (has not been so consistent in the past). Emphasis on individual indicators, did you discuss grouping indicators into indices to have a way to answering the question: are we able to adapt better to cc? we need clear high-level messaging for ministers/presidents – how can we answer the question: are we better adapting to cc? what is the source of information for data availability rating of countries presented earlier?

Julia, SDG reporting: we appreciate gap identification process mentioned by heritage group and transboundary water cooperation by water group. SGD indicator 6.5 incl. progress report focuses on cc mitigation and adaptation. Reiterate willingness of engagement on how to make the SDG indicator fit for UAE Belem WP.

Brazil (obo Group Sur): we see significant progress compared to last year. We need to ensure that best available science is used in this process. We don't want to avoid the elephant in the room – political engagement needed. We want to better understand from health group between para 10 and indicators for health.

Abdallah Abdulaziz (obo Arab group): we want to make sure that the role of the expert is to addressing the gaps, **this is not a compilation exercise, task is to deliver fit for purpose indicators, experts should have the freedom to go beyond the existing indicators**, some criteria should not prevent experts to select some indicators (e.g., data availability not a limitation). How are the experts addressing para 19 of CMA6 i.e. final outcome of UAE Belem WP is to track progress of GGA. How is this embedded in the process/methodologies. **We need a list of indicators that are fully focused on adaptation.**

SB Chair: answer one question on how interlinkages and cross-cutting issues will be addressed later today and tomorrow we have space to discuss this. But we encourage you to speak to individual groups to see how they address the issue.

Lina Yassin, LDC: adaptation cycle group mentioned that they decided to take a step back and ask what information do we need? Excel file is not complete, some countries did not have the chance to submit. We would like to know from groups if other groups are also considering not solely rely on the excel file

Dirk, EU: we are not here to micromanage the experts, we have time to reflect on the indicators later in the process. Build on existing frameworks and datasets, good to see that groups are narrowing down the list. Cross exchange between groups is relevant. Problems with attribution.

Turkey: to what extent has feasibility to reporting has been considered in this process? Need for indicators that increase inclusivity. Vulnerability of children – how can we include this aspect in indicator

Neha Rai, FAO: issue around attribution mentioned by health group: in the context of global indicators, we should focus on contribution instead of attribution, adaptation outcomes are often related to overlapping factors, advisable to look rather at contribution. Good to reflect on enabling factor indicators over the next two days

Irina Pominova, Russia: Is there a coordinating approach to develop new indicators? What is the current understanding of the groups on this subject?

Panama (obo AILAC): 3 important points: importance of experts to exchange between expert groups, ensure that exchanges are happening and explore common approaches – we would like to understand how the exchange is going? Can Secretariat help with that? 2. Globally applicable indicators 3. Enhance implementation and effectiveness of adaptation action – support level indicators are helpful.

China (obo LMDC): what is the criteria used by groups for data availability? Crucial element to refining existing indicators. We would like to know for each of the themes and process targets, what is the method used to measure the indicator? Data collection? Technologies needed? What kind of data need to be collected? Technologies are crucial for data availability? Reporting mechanisms need quantitative data. MOI should be clearly considered under all thematic group indicators. How to differentiation between countries?

Levina (online): In relation to inclusivity am very much concerned about ensuring the selection of indicators that can track the elements around youth activities on climate adaptation and how this is picked up in different spaces of climate adaptation?

Data availability session

Session 1: Data readiness for indicators

Discussions on data and methodology feasibility assessments (3/CMA.6, para 17a-b)

- ❑ Balancing potential trade-offs between short-term feasibility (using existing data) and long-term impact (developing new methodologies and data collection systems)
- ❑ Possibility of integrating alternative data sources or proxy indicators to fill gaps in data collection
- ❑ Should we prioritize selecting indicators already with data and established methodologies or should we include those indicators to drive future data collection and methodology development?
- ❑ What are the potential trade-offs between short-term feasibility (using existing data) and long-term impact (developing new methodologies and data collection systems)?
- ❑ How can we ensure that countries are not discouraged from reporting due to lack of data, but rather see it as an opportunity to build capacity?
- ❑ How can we integrate alternative data sources or proxy indicators to fill gaps in data collection? (e.g., impact indicators to measure outcome indicators)

- In yesterdays expert meeting there was a discussion on data readiness and feasibility
- Conclusion from yesterday is that we are looking at **a tradeoff between what exists but don't loose the vision of what we want to do.**
- Science is advancing
- **We need best fit indicators to measure the targets**
- 3 Tiers: I) methodologies and data is available, II) we have methodology but not enough countries with data, or III) neither methodologies nor data.
- We need to have methodologies existing, metadata, data standards
- Data collection = takes many years – we will not be assess progress by 2030.
- We have GST2 in 2028 and we want it to be better informed by data on adaptation than GST1.
- **Strike a balance between ambition, pragmatism and meaningfulness.**
- Start with what is existing and follow a step wise approach, identify gaps, use proxy indicators
- Umbrella indicators and sub-set indicators, nested indicators, compounded indicators (sub-indicators). Discussion related to number of indicators
- Data needs to be as inclusive as possible. Don't see this as optional but requirement

More questions:

UK: use of existing indicators with existing data / drive new data collection – encourage experts to use both, existing data, proxies but also driving ambition. In some cases information that there is no reporting is an important information in itself

Marshall Islands (obo AOSIS): Definition of "core" indicators?

Response from experts:

In terms of data gaps: capacity building can kickstart data collection, but it takes a lot of time for data maturity.

On what "core" means: what good indicators do we have, building on the existing indicators. Use them as basis? Is no data better than better sub-optimal indicators? Shall we go ahead with what we have? What can we start with and how can we fill gaps over time?

On technology and methodologies available for data collection: e.g., AI use may enhance access to existing data. Government decide which data can be used or authorize organization to report on behalf of the government.

Comment from Turkey, about how far is the feasibility of reporting itself a factor: whole point goes on, how what is the quantum of data do we want to start with? There is a lot which exists as of now, and with little tweaking, using modifications in the indicators or changing the metadata, one can right away start capturing the targets, is that something which we would want to go ahead, or we would want to really start with a very nuanced approach, from starting from the scratch and then building up the indicators.

Comment from Australia: it is not only about the number of indicators, 10 indicators per target because several indicators run across different targets – this may not be end approach. There could also be the possibility to combine indicators to speak to multiple targets. It is not just straight forward multiple targets by indicators. Interlinkages across indicators and targets is important to consider. **We need to consider, indicators with sub-indicators, compounded indicators or nested indicators where we are capturing multiple things to reach a common point**. Sendai has headline indicators and sub-indicators.

World Bank: done a similar exercise, process of collecting project level indicators and narrow them done to 20, we have a framework and use GGA as guidance, hopefully we can align. We have developed with MDBs a framework on common results, we want to be aligned with GGA framework. We do internal data collection, we have headline indicators of people at high risk globally. We would be happy to collaborate. We have the indicator of number of beneficiaries with improved resilience – also used by raise to resilience agenda – have you thought about these indicators?

Timo Leiter on comment from Mexico on index: Index means that we would combine a number of indicators and generate a single number out of it. Indices have a downside in that they disguise what caused the actual change in the index value. And therefore, the question is, are they actually useful. **So none of our groups, I think, is considering developing an index, and we are certainly not considering developing an overall global adaptation index**. That's meaningless and not really possible. Likewise, there is no global SDG index that has a single number on the global SDG progress. However, there are a number of existing indices that might fit to particular targets or sub components. Expert groups might suggest existing indices if they fit to particular aspects, but we don't envision developing any overarching index.

China: how do we ensure that countries that have more opportunities for capacity building to improve data readiness. National circumstances shall be considered in indicators. NDC capture adaptation component as well – NDC as crucial resource to capture national circumstances.

Saudi Arabia: Firstly, how can we balance short term feasibility with long term impact. How could that be achieved in the indicators process for adaptation progress during immediate needs versus future needs. The key question is **how to strike an appropriate balance between using available resources for immediate action while investing in the development of more advanced methodologies that will provide greater value and impact in the future**. Additionally, the data must not limit. The need to develop new indicators and refinement of existing ones, as we do not wish to see a list of indicators that already has existing data that doesn't really help these track progress on the GGA.

Lina Adil, GermanWatch, CAN: key considerations or gap, are qualitative indicators. Not only quantitative indicators are relevant. Proxy indicators can be helpful, but we also need to recognize their limitations.

Mariana (expert group): huge gap in data readiness assessment. Needs to happen but it is not currently in place. There will be need to develop new indicators but this will take a lot of time – probably not possible within in the time available. Core indicators + additional indicators that might need a bit more time

Paraguay: consider national circumstances, not the same capacities in all countries. We need flexibility in the indicators. **How can we ensure that countries are not discouraged through reporting, but rather see this as an opportunity to build capacity**? Think about ways to allow flexibility and customization, an option or a menu where each country, national circumstances and their context could identify indicators in addition to the ones that are crafted through the UAE Belem WP.

Morocco: we do not have the capacity, the capabilities and the tools to do so at local, national, regional levels, well that is an issue. Discussion about transparency in climate data, and also data ownership. **It is very important to have data governance mechanisms in place and build capacity as well around data governance mechanisms at the national level**. MOI indicators are very important for us.

Mexico: not only results i.e. indicator list, will be very valuable for countries but also guidance and lessons learned from the process are important. We need to have an answer on the question of progress on adaptation, one index might not be possible, but we somehow need to measure this.

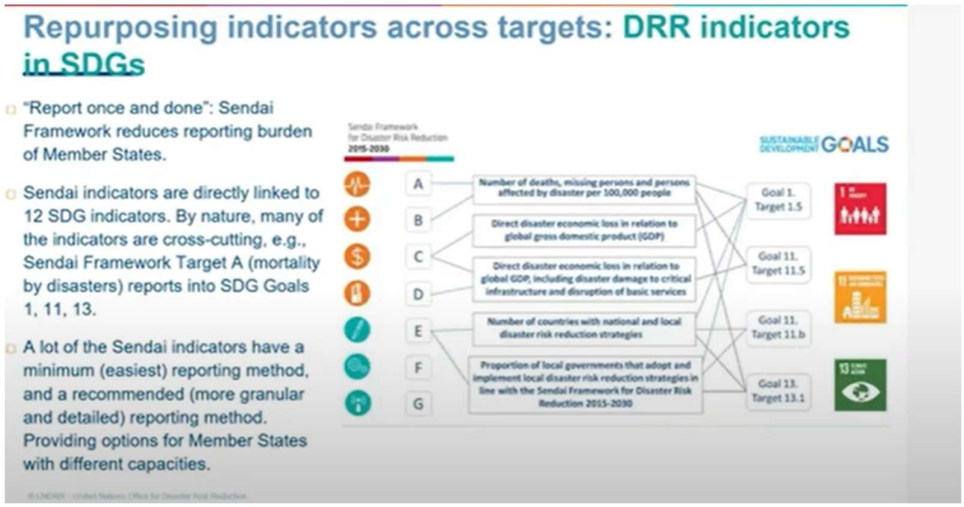
UNEP: how to assess progress towards adaptation. It's complex. Flexibility in the data sources, flexibility in tracking is needed. We heard a lot about indices and indicators. We need relative metrics, i.e. delta between baseline and where we are heading. **It takes a lot of time to assess the effects of adaptation actions on thematic targets. We have a huge signal to noise problem**. The only thing that we have that gives us near real time information is process indicators. So, what **we need to focus on, in terms of global goal, is the process indicators, the dimensional targets** that we're looking at in the adaptation cycle, and using the thematic target indicators to inform the outcomes of these actions over time.

Suriname: reporting of the adaptation action itself is voluntary. We really need to have some flexibility wrt the indicators.

Session on Interlinkages across indicators: Panel with presentations and afterwards Q&A

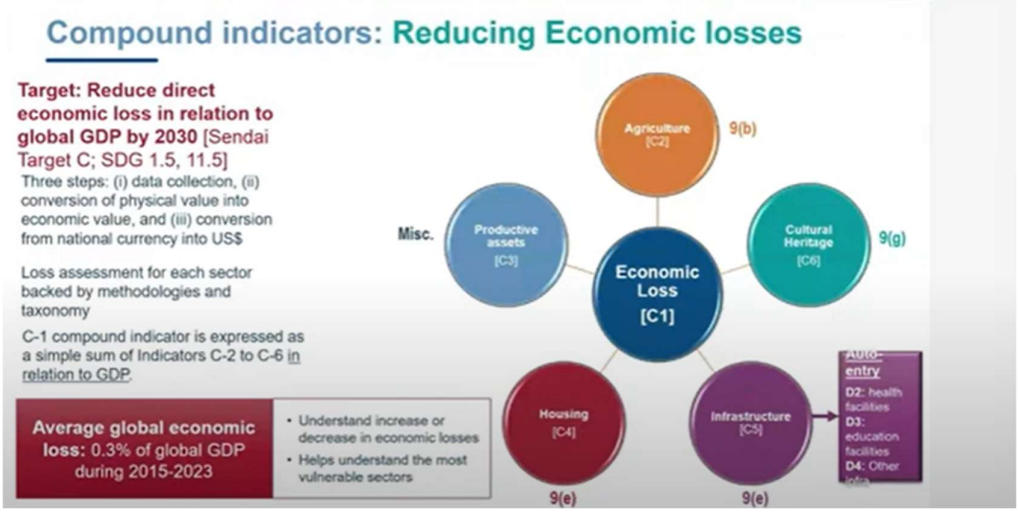
Animesh Kumar, Leaf of Office Bonn UNDRR (animesh.kumar@un.org)

- How can the interlinkages across the targets actually be harnessed to manage the number of indicators on the one side, but also ensuring that the interlinkages can actually inform, trigger and drive action in terms of the work.
- **An indicator can speak to several targets**, repurposing an indicator across targets, reduces reporting burden
- "Report once and done": Role of custodian organizations, they have authorization from member states to compile information and report on behalf of countries e.g., for SDGs and Sendai

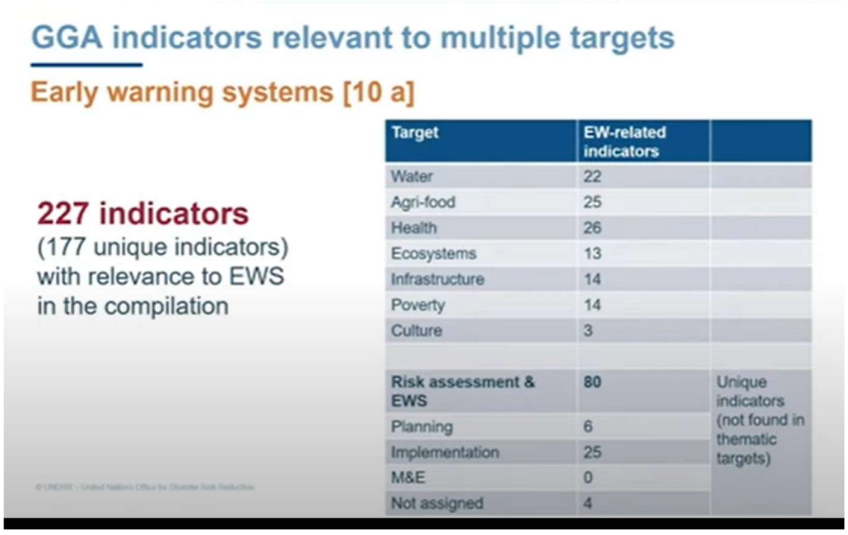


- Compound indicators, we may try to capture one specific indicator, but that indicator in itself may not be captured directly, but by sub-indicators to be able to reach that specific indicator.
- Example of economic losses, wherein we look across losses through a set of sub-indicators, i.e. so how much loss is being made in agriculture, cultural heritage, infrastructure losses, housing and other productive assets. Using the common denominators, **one can actually aggregate that whole information into a compound indicator to address what is the current level of global economic losses**. This then helps us, because it's aggregable, can actually have one common figure.
- For infrastructure losses, while reporting on infrastructure economic losses here, they're actually also reporting to the infrastructure damage. So, if they just insert information on infrastructure damage under target D, it also gets identified into losses in dollar value and gets reported to this target at the time. So, the countries, again, do

not have to report on in this case, d2, d3, d4, it also gets converted to dollar value for c5 as well. This is how we interlinkages have been made in the system method.



- Nested indicator: the straightforward question here could be to a country that whether you have early warning system yes or no, and a country can respond saying yes or no, but that doesn't give us the full information.
- Better responding to four different questions (four pillars): do they have the right risk knowledge? Do they have the right monitoring and forecasting capabilities? Do they have the preparedness mechanisms in place, and do they have the dissemination information systems in place? And for each of them, they have a set of checklists – 4 indicators for EWS.
- Allows us to capture global status. Can be converted into an index and give us a global score for countries that reported
- This is a good example of how an indicator can not only inform about progress but also be basis for driving action.

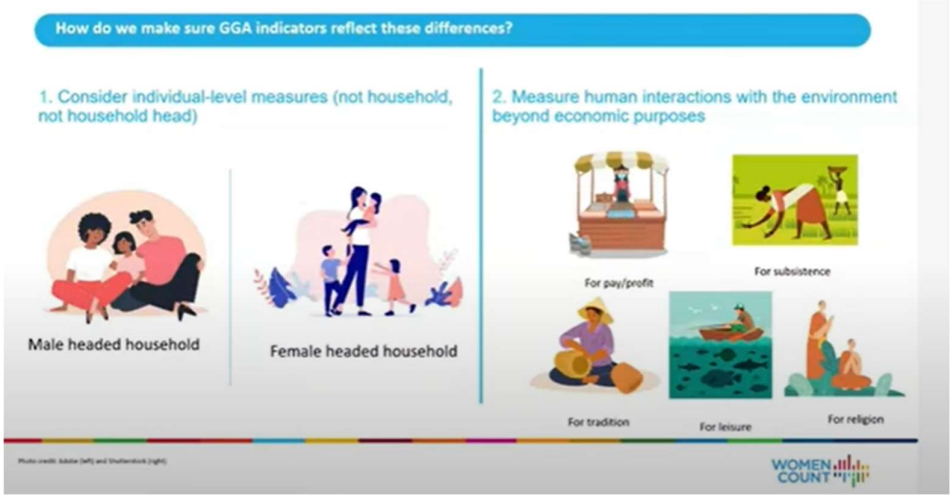


- Target 10 a contains EWS: capture all thematic elements in one place, so that countries do not have to report seven times across each of the thematic target, but they report only on 10 a – reduce reporting efforts – one person can report on 10 a instead of reporting 7 times for each theme.

Sarah, UN Women – Disaggregated environment data: utilizing individual level measures to track adaptation

- I want to talk briefly about disaggregated environment data in general, and climate data and the importance of utilizing individual level measures to track adaptation
- This speaks to the cross-cutting issues and to the **importance of really looking at the individual characteristics of different population groups to measure progress**.
- environment statistics have been around for a very long time but environment statistics traditionally at the macro level e.g., measuring fish stocks, CO2 emissions.
- Problem for adaptation – we need individual level / population level information = challenge
- Example: proportion of people who decrease food intake as a result of climate change. If you start disaggregating these data, not only by sex, but also by composition, i.e. households with two adults versus households one adults, households with children versus households without children, you see that actually that are the most likely to decrease food intake as a result of climate change are single mothers → single women that have children. This demonstrates the importance of really aggregating data at multiple levels.
- Another example: Cambodia - proportional population that are exposed to hazards in the past four months, but that encounter barriers to accessing medical care or hygiene products as a result. Looking at whether people live in displacement settings or not, meaning temporary evacuation, for instance, or whether they've moved, you actually say that the displaced face higher barriers to access medical health and medical care compared to the non-displaced population.
- Two things that we should consider in the process of selection of indicators.
    - **The first one, we need to consider individual level measures, not household level measures**, and then fully disaggregating the data by the sex of the household head is not a solution because most HH have two adults (male + female + children) would be considered male-headed hh. Solution = surveys that interview both males and females in the same household – individual level data
    - **Second, we need to consider indicators that measure human interactions beyond economic purposes** but there's also interactions for subsistence, for tradition, for religious purposes. Changes in the environment affect how people adapt, regardless of the purpose that they are taking this activity for.

- What data already exists: run new surveys, national survey that go to individual level, new questions could be added. Countries have already a lot of data that is not leveraged e.g., geospatial or remote sensing data, big data.
- For instance, in the context of disasters, if we want to see what's happening to violence against women, it's very difficult to actually ask these questions. As a proxy, we can look at what people are googling to know if you know the number of google searches around a certain topic is increasing or decreasing, it's not going to provide indication, but it's going to give us some signals about what might be happening.



Thomas, Children and Youth

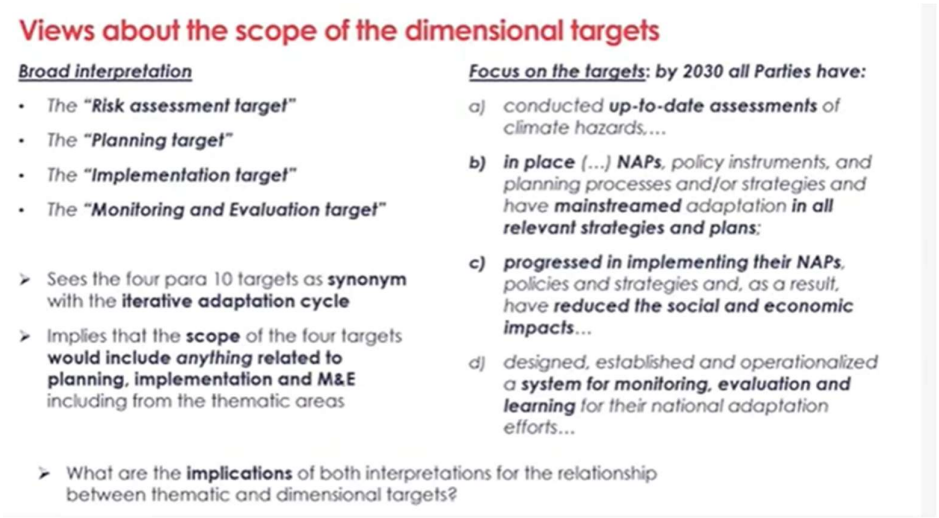
- **There are specific risks and specific vulnerabilities for individual groups that need to be taken into account** e.g., less able to cope with things like heat or being less able to stay hydrated or less able to adapt or move
- So there are indicators which you could consider child sensitive, and there are also indicators that you could be considering child specific
- The simplest way to approach this would be through some sort of disaggregation
- Can indicators capture different types of vulnerability that you find at different ages in the life cycle. Are they age appropriate?
- We have a long list of vulnerable groups who would expect to be involved in the process of risk assessment and vulnerability assessment and making sure that the voices of children and young people are heard in those discussions to ensure that they are responding to their specific needs = big challenge

Johanna, Indigenous people

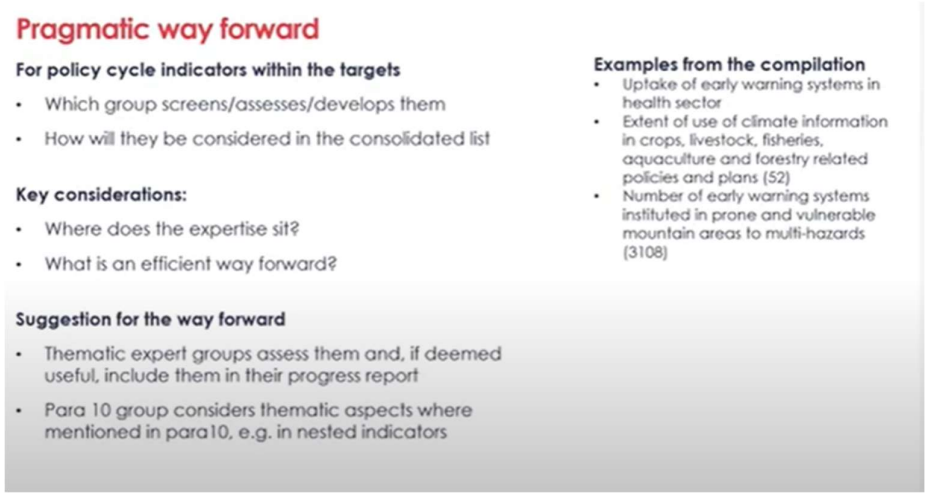
- Risk and vulnerability of cultural heritage, there are existing indicators e.g., from UNESCO
- We have looked at the inclusion of cultural heritage in climate policy and adaptation planning

- We could have an indicator on the percentage of heritage climate initiatives that are community led and or co-designed with indigenous or local communities
- Youth led cultural heritage adaptation programs and projects where youth plays a key role in decision making.

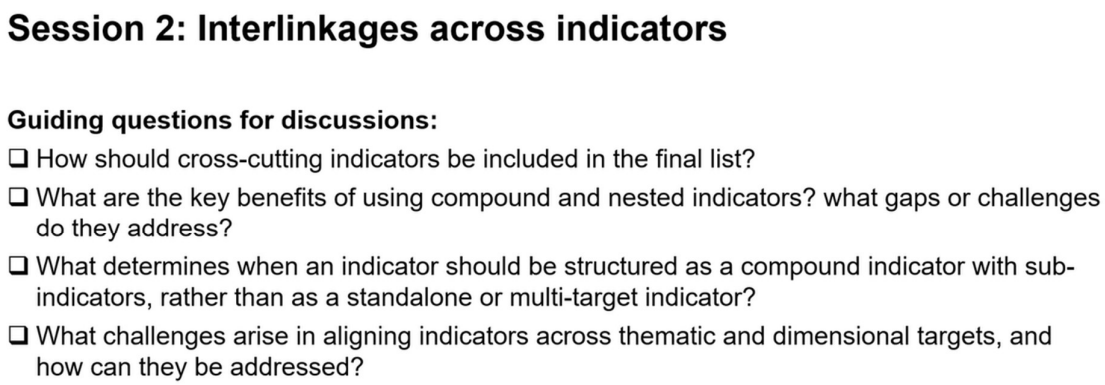
Timo Leiter, interlinkages between dimensional and thematic targets



- Unclear scope of work of Para 10 group
- One interpretation is that we have a planning/implementation and M&E target which would suggest that everything that is done, including all the thematic areas would be under paragraph 10. So, paragraph 10 would become synonymous to the iterative adaptation cycle. Would lead to matrix structure which was developed in Bhutan workshop
- The decision text does not say that paragraph 10 equates with the dimensions of the iterative adaptation cycle. It says ….in relation to the dimensions of the iterative adaptation cycle.
- We have 11 targets, thematic targets are worded in outcome-oriented way
- Suggestion: thematic groups shall work on policy cycle indicators within their themes, **Paragraph 10 does not have a monopoly on the policy cycle.**
- Expertise sits with thematic targets



Q&A



Sarah: So the way that we looked at gender, same as many of the SDG framework is a two-track approach. We had a standalone goal on gender issues, and then we integrated gender across all the other goals. At some point we need to take stock if the topic of disaggregation has been fully integrated across all the different targets

Thomas: It doesn't necessarily mean that all of the indicators should be somehow disaggregated for all of those groups. I think our job is to assess, firstly, where it's relevant to do that, and it will be relevant in many cases, but not all cases. We can highlight the fact that there's no plausible methodology and encourage people to think about developing one. In some other indicators frameworks, in the past, **there has been a general encouragement to disaggregate where possible or where relevant. → It's much more helpful to say, this is where it's most important. This is what is possible. Make it a requirement**.

Johanna: we are very focused on indigenous communities and young people. But I think we've been working with our indicator list and haven't been able to talk to other groups as much.

Animesh: cross-purposing of indicators, interconnectedness of indicators

Emilie Beauchamp, NAP network: we have been looking into specifying gender responsive indicators, especially under the four dimensions of the iterative adaptation cycle. We need to go beyond disaggregation. Globally, **we need to track, account and report on the quality and the extent of gender responsiveness of adaptation actions, to learn and improve on adaptation.** Without understanding the very differences in vulnerability and effects of adaptation on gender, we cannot start understanding if adaptation really reduces some of the root causes of climate vulnerability and of systemic inequalities. We suggest having a scoring approach e.g., using no, partial or yes to the evidence of gender integration across the 4 dimensions based on evidence already available in the country documents and processes. There is a **lack of gender responsiveness in MEL systems for adaptation locally, nationally and globally.**

Timo: For the consolidated list we consider the cross-cutting aspects. We have 5 weeks left, there are challenges to develop our proposals, **some modifications might still be needed after submission of the list.**

Animesh: We are currently working on determining whether an indicator should be a standalone indicator or should be a compound or nested indicators. Is indicator capturing more than one target? **If the indicator can be mapped only to one target, then it deserves to be a standalone indicator, if that indicator has sub components, than that can speak to multiple targets, then it could be a compound indicator, where in the sub components of that compound indicator then can be mapped to different other targets e.g., EWS indicator is a compound indicator.** Important to have evenness across targets

Bhutan: summarize that indicators need to keep human wellbeing as priority. **GGA indicators need to add value and not be repetitive to other framework indicators.** Regional and national context matters: we need to look at developing indicators where data is lacking at present.

China: Two questions: different vulnerable groups (women, youth, indigenous people) – vulnerable groups have different sensitivity to different themes e.g., women more sensitive to agriculture and food security because more weakness in their capability to cope with cc, less opportunities/more barrier for them. When we talk about cultural heritage: indigenous people have more knowledge on how to protect cultural heritage, more sensitive to them. How to measure sensitivities? It is difficult for policy makers to consider which vulnerable group has unique features to be considered for each theme. Is there any method or clear approach to calculate weights to consider different vulnerabilities according to their features? Second question: Are there any disaggregated numbers to see how many indicators for EWS refer to technologies or data analysis from currently used indicators?

World Bank: Comment to Timo's input: we have found countries make progress on the policy cycle but the problem is mainstreaming. Cross sectoral coordination and implementation is another challenge.

Saudi Arabia: Interlinkages are inherent when we're dealing with many interconnected themes, especially in the context of adaptation, moreover, the topic of feasibility, it shouldn't

be understood as the measuring of interlinkages of different thematic areas, but rather as identifying implementable and measurable indicators that can meaningfully assess and inform progress towards the GGA. At the same time, we caution against placing too much feasibility as a standalone criterion. This could unnecessarily overcomplicate the process. **If an indicator can effectively across multiple targets, such as per se, both water and ecosystems, it's certainly valuable and should be welcomed.** However, the overall focus should remain on making a practical set of indicators that serve the core purpose of tracking a in a clear and actionable and implementable way. And this also feeds into the topic of compound indicators and sub-indicators, etc. **For us to priority would definitely be to not overcomplicate the process**. Additionally, **we urge that cross-cutting considerations such as gender, age and other dimensions, including women, indigenous and local peoples, etc., should not be over emphasized at the current stage**. It should be addressed at the implementation level, through the disaggregation of data once indicators are in use. Indicators must be adaptation indicators.

EU: The **cross-cutting considerations are extremely important**, especially the gender aspects. There can be use of compound and nested indicators without overcomplicating things. The effectiveness of measures really depends also on including marginalized groups. **Important to link thematic and dimensional aspects.**

Brazil: we may find ourselves in the difficult situation to decide whether to have adaptation cycle indicators only related to paragraph 10 or spread across different themes, and considering the limitation 100 indicators, we should reflect on how we're going to approach that. Second, should we make use of compound or nested indicators, or should we go for standalone indicators? **Disaggregation is a key element of adaptation, but we also need to consider different circumstances**. Short term feasibility vs. long term impact: **How can we make sure that our indicators are relevant to the second GST.** How can innovative ways to collect and report data help us to alleviate reporting burden and provide more accurate information? And lastly, on disaggregation, we always emphasize that we do not want to leave no one behind in this process and disaggregation is part of SB conclusions and the Baku decision, so we as parties should collectively reflect on how to find ways to reach vulnerable groups, gender, race, age considerations.

Closing remarks

- Today has been a really rich day, very in depth. I think there's a huge amount of information that has been shared. Useful discussions. Tomorrow we will address indicators reflecting overarching trends and challenges, MOI etc.

Day 2

Co-facilitator: Busy agenda. Just to give you an idea of the flow of the day, we're going to start with a session on indicators for enabling factors for implementation of adaptation action, including means of implementation. And we're going to start with some kind of icebreaker comments from the floor, and then we're going to go straight into breakout groups. So, first

thing we're going to do is invite speakers from any of the expert groups to reflect on the question, what some examples of indicators for enabling factors for the implementation of adaptation action, including means of implementation that have been successfully utilized in other processes and how could similar indicators be made applicable to the GGA?

Opening comments

Donovan, Infrastructure group

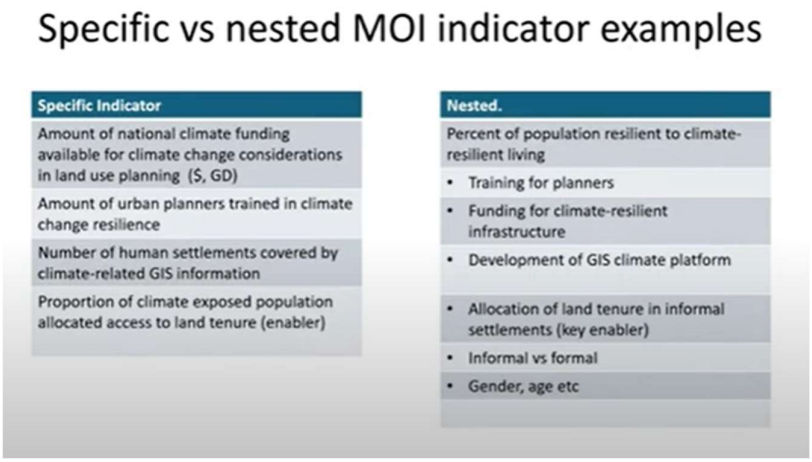
- Financial means for implementation: direct funding options.
- Debt – has pros and cons depending on how much debt there is in the capacity of payback.
- Green bonds/ climate bonds/
- Conditional transfers: we're seeing that in New Zealand emerging in the local government and city space, where lending is a given to cities and they get lending for adaptation actions, but they also get a discount on their lending if they commit to something else e.g., net zero, and then another discount if they share their data, which enables the local government Finance Authority to have good, high quality data to do financial disclosures.
- Technological MOI: digital twin cities (community risk dashboards for the community can see where they are and what risks they have), smart buildings, bio engineering
- Capacity building MOI: In Australia, there's lots and lots of city to city or local government or community to community learning = a community of practice, and we've seen actually have really good results.
- University to government partnerships, etc.
- **Enablers: planning laws, mainstreaming of cc into all local government mechanisms, land ownership, land rights**

I&HS Means of implementation

Some examples

Means of implementation	Example Tools/Systems
Financial	Direct funding, debt, green bonds, adaptation trust funds, conditional transfers, climate-related financial disclosures.
Technological	GIS, digital twin cities, community risk dashboards, mobile EWS, data systems, remote sensing, smart buildings, bioengineering
Capacity	Local training centres, city-to-city peer learning, university-government partnerships, workforce accreditation programs

Other enabling mechanisms	Example Tools/Systems
Governance	Planning laws, local government governance
Land	Land ownership, customary land rights, native title, customary practices



Amara, ecosystem

- SDG 15, target a: mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.
- SDG target 15 B, mobilize significant resources from all sources and at all levels finance sustainable forest management and provide adequate incentive developing countries to advance such management, including for additional restoration.

Johanna, cultural heritage

- SDG 11.4 : total per capita extension on the preservation, protection and conservation of all cultural and natural heritage by source of funding - So the public and private type of heritage and level of government
- HACA: existence of dedicated budget lines for heritage climate adaptation, national or local budgets
- Number of heritage professionals and community leaders trained in conducting a climate risk assessment and climate adaptation techniques
- Training policies on skills in the use of sustainable or natural construction materials that are supported by local and national authorities
- Indicators on annual funding?

Animesh, Sendai framework perspective

- No input indicators in Sendai
- 6. Target of Sendai framework is on int. cooperation and MOI, subdivided into multiple indicators. 8 on MOI for financing, capture both multilateral and bilateral financing
- few indicators on technology transfer and exchange and science, technology and innovation
- two indicators and capacity building, looking into funding for capacity building, the times the programs are there for capacity building and one specific indicator on statistical capacity building of countries as a key enabling factor to be able to report

- there are taxonomies and definitions and metadata which are all compiled and part of a guidance note for the entire monitoring framework
- collaboration with SDGs, in particular SDG 17
- collaboration with OECD board in terms of tracking development assistance through the OECD DAC methodology
- **For each of the indicators, through the computational methodology, there is a recommendation for what is the minimum reporting requirement and what is a desirable reporting requirement**
- **Caveats: least reported target in Sendai framework, only 104 countries have reported at any time on target F.**

Theresa, Food

- Pretty good examples, ranging from the volume of finance for adaptation or the value of public R&D funding program, so sort of combining two attributes of means of implementation.
- Community based climate change adaptation strategies implemented and aiming at enhancing local capacity
- Existence of public private partnerships or vulnerability assessments that are present

Japan

- CMA6 decided that the MOI is included in the enabling factor for the implementation of adaptation action.
- **We should also broadly consider other elements of enabling factors, such as institutional arrangements and leadership, not focus only on MOI**
- Some expert groups seem to take new approaches to narrowing down the indicators, but it's important that the final list of indicators is based on the criteria decided
- **UAE framework is for all countries, indicators should be global and relevant and applicable to all countries**
- Acknowledging a comment from yesterday on the need for guidance on the use of indicator set: we believe that AC and other relevant constituted bodies and processes could contribute to this request. E.g., the **adaptation committee can develop supplementary guidance**

Botswana

- **There are MOI indicators that already exist that we can borrow and enhance and make them adaptation relevant**.
- Our understanding of enablers and means of implementation, our view is those are two separate things.
- MOI is part of the convention, has its roots in the PA, we talk about this for years, not sure why we make it part of enablers

- We need process, outcome and output indicators – capture action and resources that are required to spur action
- MOI indicators need to be divided into three categories: finance, technology, CB
- On CB: number of staff from these institutions trained
- On tec: number of smart technologies adopted, implemented
- On finance: funds for flood protection or investment in coastal protection received from developed countries to developing countries
- You have sources that come from national budgets and this is important because we need to capture that, needs to be recognized
- **We already have a process in place, such as the BTR, where countries are already reporting on funds received and funds provided.**
- We need to include where these funds are coming from and in our view, funds from developed to developing countries needs to be highlighted as per the Article 9.1

Breakout groups

Global indicators and overall trends and identified gaps and new indicators

- What are some examples of indicators for enabling factors for the implementation of adaptation action, including means of implementation, that have been successfully utilized in other processes, and how could similar indicators be made applicable to the GGA?
- How do we ensure that global indicators reflect regional and national realities, while still providing a meaningful global assessment?
- Analysing gaps and exploring the need for new indicators

Irena, Russia: coordination between thematic and adaptation cycle indicators. Matrix form seemed comfortable to us, but we see some difficulties in scope as mentioned yesterday. Focus on NAPs. We hope all countries will have NAPs in place.

Marina, Health group: running a country survey, the latest one was in 2021, they ask whether the Minister of Health of low-income countries has access to international funds for the implementation of climate change and health adaptation efforts. They also ask about financial limitations to the implementation of early warning systems, surveillance, early response systems, and also, they have specific questions about training of ministers of health and personnel from the Minister of Health on climate change. We develop an indicator that monitors international funding allocated to climate change and health from high income

countries to low middle income countries. Technology transfer is big gap in health sector, mostly related to the capacity to monitor and to develop the methodologies and the data infrastructure to monitor adaptation progress. Global indicator that builds from national level data inputs, no country disaggregation possible.

Dirk, EU: **enabler indicators don't specifically indicate the achievement of the targets in itself, they provide the broader environment what is needed for everyone to be able to undertake successful adaptation**. Quite an important distinction. Recognize that factors such as leadership, institutional arrangements, policies, data, knowledge, skills and education, public participation and inclusive governance are also crucial to enabling implementation of adaptation action. **MOI but not limited to it**. Follow best available science.

Carlos, WHO: indicators related to enabling factors and means of implementation are being collected and can be collected. For example, the general program of work of the brochure has whole set of indicators, 10 of them that are linked to that could be linked to as enabling factors. **We are not short of indicators. What we may be short of is the response from countries**. We do have a lot of information, a lot of indicators circulating. **We don't have global, unified indicators that we can say, well, this is the indicator that everyone could or should be using**.

Henry, UNEP: speaking here is the chief executive editor of the Adaptation Gap Report series, enabling factors to understand better if adaptation action is taking place, are they likely to be effective in implementation? **Disaggregation according to comprehensiveness, inclusiveness in gender stakeholder engagement and disabilities, integration in society, elements help us understand better if implementation is going to be successful**. Important information missing, 30% not related to adaptation, need better tracking instruments, only international flows, little information on domestic and private flows. **On capacity building: numbers of trainings and people being capacitated = these indicators are poor**, we need more peer to peer and south to south learning and internships, trainings and webinars are great but do not have good impact, and technologies are important as well.

WHO: add another global framework which can support this endeavor of building on specifically for the health indicators, which is called the Alliance for Transformative Action on Climate and Health, an initiative co-lead by WHO. **Health is one of the sectors that are receiving one of the lowest percentages of financing when it comes to climate financing**. We have been trying to increase finance from GCF etc.

Christiana, Water group: there are many existing indicators that could be useful to describe enabling factors including MOI but it also depends how they are used in the policy cycle of each country. Indicators to be included in policy cycle indicator list? E.g., proportion of local administrative units that have established operational procedures for water and sanitation management. Another discussion that we had investments, because sector investments are very crucial, especially for flood protection and so on. It is very difficult to say how much the volume of these investments is good or bad. If the volume of an investment is good or bad, some, in some cases, high investments may lead to maladaptation. We have under the

European Environment Agency, what our member states report is on key type measures, specifically on governance or technology, on education, to actually define these enabling factors. It's extremely difficult, even on the European level to quantify this in their processes.

Jose, Sanitation Partnership, Tunisia: Target 10c – MOI is under target 10c. having MOI indicators for all thematic areas? Multiplies the number of indicators largely. UN water global analysis and assessment of sanitation and drinking water = 2024 country survey. It could be interesting to understand how much is coming from international funds and commitment made under the Paris Agreement for developed countries to finance the adaptation needs of developing countries. UN Water made two submissions last year, what I am saying is included in our submissions.

World Bank: challenges of separating, in many cases, the finance for development versus finance for adaptation. in the last 10 years, actually, there's huge progress from one in three people in high risk from one in five people. That's mostly because of the progress around poverty reduction, economic development, and in some cases, you know, provision of basic services. WB has developed governance indicators for countries (not specifically for climate), could be one of the proxies.

Abdullah, Arab Group: unique nature of means implementation under UNFCCC and the Paris Agreement. We have to take this uniqueness into perspective when we are developing the indicators that would actually respond to this unique nature. Existing indicators possibly do not include this unique aspect. Some refinement necessary. If you look at Article 9.1 where there is developed countries to provide support to developing finance to developing countries, something along the line of annual amount of adaptation finance provided by developed countries, disaggregated by thematic targets. **MOI and enabling factors should be discussed separately.**

Botswana, AGN: **MOI and enablers should be treated separately**. Balanced consideration between enablers and MOI. Mention if loans or grands: additional burden on countries because of debt. MOI would need to be considered across the different thematic targets. Example indicator: African experts in international processes such as IPCC. Look at something more tangible. BTRs: important tool, parties provide MOI information, continue using these processes to track progress on adaptation. Could be an important tool to be used in the tracking of these indicators. Can UNEP share information on tracking adaptation needs.

China: MOI should be core element of the discussions. Adaptation cycle targets and their MOI needs.

UNEP: roughly 30 billion US dollars flows in international public finance vs. 200 to 400 billion per year needed. We need more grant funding. We need to make sure that when we capture finance flows, it becomes also clear how much of that goes into capacity building and technology transfer. **A really strong metric to capture capacity building is the amount in which adaptation is integrated into university and higher education curricula**. This is something we can track fairly easily, and it gives a good indication of how higher education is leading to

building capacity. To the question on adaptation needs in the gap report, we use the NAPs, in particular, to some degree, also the NDCs, to assess adaptation needs based on estimates of the costs for adaptation provided by the countries. The information is only as good as the assessments of climate risks and vulnerabilities that we have and also the ability of developing countries to do them. **The information that countries have with regard to their climate risks, is fundamental, and that needs to be improved for us to have better assessments of adaptation finance needs**. We actually expect adaptation finance needs to increase quite considerably, as the NAPs and NDC from also the BTRs are getting better and better. Low and needs estimates at the moment are potentially too low as a result of poor information. On the question of how we want to treat this i.e. part of the thematic targets, or parts of the dimensional targets when it comes to the means of implementation. **My preference would be to have sub-indicators, indicators that look at adaptation, finance, capacity and technology transfer in a more integrated way of the thematic areas.**

Veronica: LDCs have limited resources and capacities to navigate multiple reporting obligations. GGA as an opportunity to make linkages and align the three conventions. Global biodiversity framework, target 8 and 11 are directly linked to climate adaptation and resilience.

Arab Group: south to south cooperation and peer to peer learning as well as capacity building at the national level are crucial but not a substitute for developed countries providing support to developing countries. When it comes to increasing harmonization or coherence among the UN Convention, I think it's very important to also respect their distinct mandates. So, we ensure that there is a dialogue at the same time, ensure that each different convention is fulfilling its own distinct mandate, with its own principles, with its own provisions.

Gambia: I'll give the national adaptation plans as an example, in many national adaptation planning process, governance is critical to effective implementation of adaptation plans, and that includes institutional arrangements, inter-agency coordination, stakeholder engagement, local governance engagement of the planning process, but also the implementation process. Policies, plans and programs could be helpful in enhancing effective governance.

Health Group: **100 indicators cannot tell the whole story**. Indicators to capture the quality of adaptation. We currently have indicators on the extent to which health professionals are being trained for climate change. **Being trained by attending one lecture on climate change does not give you capacity. Being trained by having one course does not give you capacity**.

Para 10 expert group: MOI indicators along each thematic area might give an idea of specific needs in those thematic areas. Not all countries make costing sector by sector, could increase assessment burden. We need balance.

?: Emphasizing the importance of capacity building. We have seen some trainings which focused on project and program development, monitoring, evaluation, the learning systems and also financial restructuring for adaptation projects and the programs really brought a significant impact. Finance is important but CB is really important.

Plenary – Reporting back

Room 1 (Bruna): We exchanged ideas on some examples, also some of the challenges related to having indicators on these elements. **We discussed a little bit of the structure of the indicators themselves, whether they would be across the thematic targets or within a specific group with sub items for these different elements that encompass means of implementation and the enabling factors**. We also mentioned some of the difficulties and insights on reporting instruments, mainly the BTRs, that might be a tool to enhance reporting from countries related to the indicators. It was really good to see interactions between negotiators and experts, each of whom were presenting their views, worries and challenges related to all of this process.

Room 3 (Luke, Australia): We discussed mental models for categorizing or setting out different types of indicators. Indicators that can be input based, or outcome impact based. **MOI is one of the key enablers among others and highlighting the role of institutional arrangements and policy mainstreaming, among other things**. Looking at the indicators that drive successful action and talking about things like inclusiveness. A comment around expanding finance as one part of MOI to broader financial flows and not just grant based counting of developed to developing countries: the purpose of that would be to include the broader societal move towards climate resilient financing, including innovative sources of financing. Looking at finance through the entire system. **There was a point around capturing MOI in 10 c on implementation and not across themes.** There was one point around the questions around why it seemed that MOI was one of the more underreported indicators in the Sendai framework. We talked about insurance, ocean indicators, quality of risk assessment and need to sort of measure that.

Room 2 (Lina): There are a lot of indicators, especially in the compilation that was received on MOI, but the experts want to prioritize indicators. There was a mention on how when talking about MOI and talking about enablers, we're looking at not just the ability to achieve a target, but also the resources made available. We talked about how to enable countries to report and work together. Need to zoom out.

Animesh: sharing the reasons why the MOI target under Sendai is the least reported: tradeoff between pragmatism and ambition. I'm now getting more on the pragmatism side and the challenges that we have faced when we did the data readiness exercise in 2015. **The reasons have a lot to do with the institutional factors that are associated with monitoring international cooperation and financial flows.** One is donor country versus recipient country, which bilateral versus multilateral financial flows**. Capturing all that information in a structured way has proven to be challenging**. Institutional factors within donor countries as well as recipient countries. The second issue we observed was the methodological issues of adaptation. Integrating adaptation more and more into developmental processes: question of tagging and tracking, if you don't tag, we don't know how much of the money goes to what objective. We also have seen challenges in terms of adaptation sensitive or risk sensitive budgetary processes, and in particular context of earmarking resources for technology transfer

and capacity, because that's often not well coordinated within countries. Enhancing the data maturity and capacity in countries should be considered as part of enablers.

Morocco: I would like to reflect on the example on finance indicators that we have heard this morning. Some relate to debt, green bonds, conditioned finance, and other examples. It is important that we are able to have indicators on the amount of funding that is non-debt generating and highly concessional. Such an indicator is important as the quality of adaptation finance is essential from our perspective. We hear a lot of examples around smart climate technologies that some say that fit for purpose technologies for developing countries are not necessarily smart: needs to be meaningful and fit for purpose.

Aditi: IPCC report was quoted as saying that it lists a whole lot of enabling conditions and means of implementation and while this is true. There is one paragraph on adaptation barriers, and while it acknowledges that there are a whole lot of enabling conditions or at the other side of it, barriers, but finance came out through that and has very high confidence as key barrier to adaptation.

Burkina Faso: I'm serving as a co-chair of the Paris committee on capacity building. Participating in a workshop/ webinar and then you are considered to be an expert who has been capacitated in climate action. Data protection: how are we making sure that data that is collected won't be used for other purposes? Global south experts need to have a balanced representation in the IPCC. We have a basket of experts.

Saudi Arabia: Means of implementation are a fundamental component of the Convention and the Paris Agreement, it serves as a critical mechanism for ensuring effective action on adaptation. The successful adaptation efforts of developing countries are dependent on financial and capacity building support provided by developed countries. Without these essential means of implementation, the ability of developing nations to implement and sustain meaningful adaptation strategies will be constrained, hindering progress towards achieving the global adaptation goals. Therefore**, it's imperative that we develop indicators on measuring this means of implementation received**. Furthermore, we just would like to address some of the points regarding the confusion surrounding the distinction between indicators and implementation and those for enabling factors. We must clarify that these are not the same thing. **Means of implementation require specific, dedicated indicators to track progress and ensure accountability and providing the necessary resources and support. Enabling factors, while they are important, serve a different purpose**. Clear differentiation between these two categories is essential for accurately assessing progress and ensuring that adaptation efforts are appropriately supported and resourced.

Sandy: I work almost exclusively on indicators. They're always slightly disappointing. They're always very limiting what you can measure through a number. So, one thing that is very important is to understand that when we develop indicators, what we will be trying to do is to develop indicators that can be actionable, that can tell us where more action is needed, that can help guide whether we're being successful in adaptation or not but **it won't capture the**

full complexity of how adaptation is being implemented, developed, or how successful is being. The indicators that we have already identified, sometimes have been developed for different purposes. So, we will have to tweak them. We will have to refine them. We might have to develop new indicators. **And that is a very, very substantial challenge in a very short, limited time**. The devil lies in the details i.e. how those indicators are constructed and how they're defined. For example, **the quality of capacity building. It is not the same to give a course than to actually have capacity.** We have to ensure that the indicators can capture much of this complexity so that they can be useful to parties and to the convention as a whole. And that will come with a huge amount of work in terms of the metadata that needs to be developed.

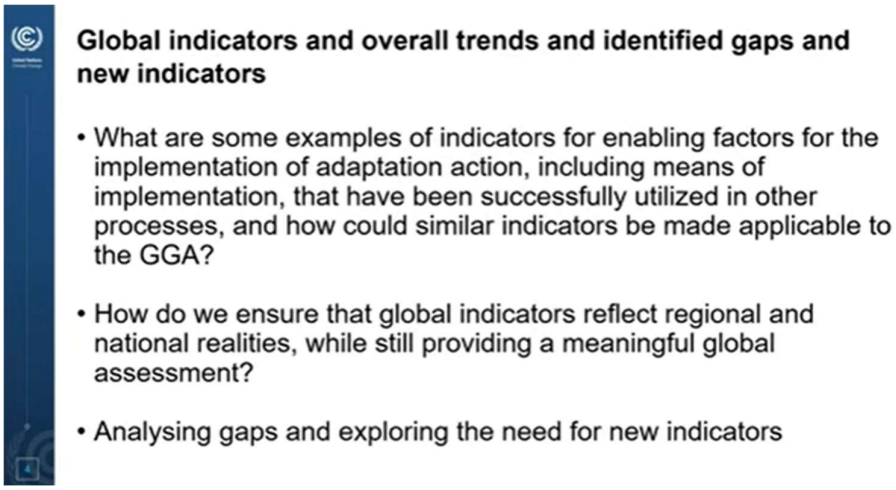
Rini: I just want to specifically point to the issue of capacity building indicators. There are different views of capacity-building indicators and if it is about the ability to act on information of a training received.

Rohini: from a water sanitation point of view. We don't have clarity on what climate resilience is. By allowing the thematic areas to continue moving forward practically and developing indicators that are thematically unpacking and helping us measure progress on this, we will then automatically facilitate capacity building, technology transfer and financing flows.

CAN, GermanWatch: NCQG decision is quite important. Big disconnect to what we discuss here and what was agreed in Baku. **In our discussions we are not reflecting on the Baku to Belem Road map to 1.3 trillion**. Predictability and accessibility of finance. Who accesses this finance and doesn't? Debt is a big challenge, too many loans. We need to track these different considerations.

Lina: The first thing we discussed is that it relates directly to data, because you need to aggregate in order to be able to tell the global level. We talk about the needs for commitment to improving data and data collection, and the need for countries to report to them, but that doesn't mean we can't have a uniform approach. So we need to agree on what is a uniform approach in order to make sure the data is being collected. Language issues: translating the reports to six UN languages? When you don't have data, we should allow for explanation why there is no data and what capacity is needed to fill this gap. Experts asked if we want to just have 100 indicators or what do we need beyond that for this framework to be implementable at the national level.

Breakout groups



EU: how to provide a global picture while also being true to the context specificity. **Generic level indicators and context specific indicators**. Input to GST. **Build on existing indicators and consider modification**. Few indicators would need to be developed but aware of the challenge to do this in the short time available.

UNEP: on the question of how global indicators could reflect regional and/or regional realities. I would suggest that **they are flexible in the sense that they capture national and regional specificities, something like choosing indicators from a menu of options** instead of having a fixed set of indicators that all countries have to report on.

UNICEF: **identify a small number of indicators that are truly global and relevant to be monitored in all countries**. **Then there would be many more indicators that could be potentially monitored at the regional and national level to capture context specificality**. There is a question mark that the experts have about how far our process can elaborate on those additional regional and national level indicators. Data gaps, huge problem. Problem of aggregation.

Botswana: **having flexible indicators goes again the very spirit of this global process**. How do we measure global progress if everyone submits something different or we don't have common elements. **We need a menu of indicators to capture context specificity. We need a set of global indicators**. We heard from other processes such as SDGs etc. that it is possible. Access to water is relevant to all. I don't agree with this comment made by UNEP.

Christina, International Organization for Migration: all presented frameworks do not account for the impacts of climate change on human mobility. UAE Belem WP is an opportunity to fill this gap.

UN Women: selecting new indicators versus using existing indicators. We, as experts, want to select the very best indicators to match the targets. But I think it's also important to understand why we're looking for existing indicators, and the reason is that **in order to work with an indicator, you have to identify the indicator, develop the methodology, develop the**

data collection tools, methodology needs to be endorsed by the UN statistical commission, and then the NSOs would start to receive capacity building, etc, to produce the data. So this whole process can easily take one year. So that's why we're looking at existing measures first, where at least the methodology exists, and ideally it has already been endorsed by the Commission. My second point was about local versus global indicators: obviously, every country will only report in the indicators for which they have data. That means that, unavoidably, some countries will not be able to report on some indicators. It's important to have indicators that are relevant to the local context, but that can be aggregated at a global level.

UNDRR: disasters affect countries in a vast different ways, we really try to accommodate, or be as flexible as possible, to allow countries to report on their national instances and their national disaster impact while still being able to maintain a global consistency for global monitoring and reporting into the SDG database. We also allow the disaggregation to be customizable and aggregable.

Jamie Williams obo CAN: adaptation action should be based, where appropriate, on traditional knowledge, indigenous people's knowledge, local knowledge systems and locally led and community-based adaptation. So, we urge that experts consider the way these ultra local and community-based factors can be included in indicators regarding the thematic targets and especially the dimensions of the adaptation cycle. These indicators could measure the extent of local community engagement in adaptation projects, with a particular focus on women and girls access to information on climate impacts and proposed adaptation efforts, the incorporation of indigenous and local knowledge, the effectiveness environment of environmental co governance etc.

Lucy, food group: with regard to the first question on how to ensure that the global indicators also reflect the regional and national realities: One approach that I see we are already applying, and generally addresses this question, is making sure that the indicators we are developing and what will be designated as global indicators are actually built on already country and context specific indicators that we see in the database. This means, **we are not only using those indicators to collate and build global indicators but we are also establishing pathways for aggregation, because it means when countries then report on this context specific indicators, then this can be aggregated to assess collective progress at the global level**. Points to the value of the mapping of existing indicators that was already done because we already see that many of the indicators in the database actually came from NAPs and NDCs and that means we are already building on national circumstances. After this WP, we need to continuously strengthen national MEL systems. On second question re analyzing gaps: we start from the point what do we need to measure, what information is needed and that is the starting point for looking at what indicators we need. **Meaning we are trying to strike a balance between understanding what we need to measure and potentially new indicators that we need to develop but also seeing the extent to which those elements are covered in the database**. New indicators probably just an improvement of the indicators that we already

have in the database because some are stated more like statements, but we try to capture the essence of these statements in developing new indicators. Wrt to concern that building too much on national systems might put the GGA assessment at risk given low data availability and quality – can be seen more as an opportunity to strengthen MEL systems. One could say xxx is a global trend that we see but it is based on 50% of countries that have actually provided data on this indicator. **Over time improving data availability**.

Jose: we could measure how many people have access to climate resilient water systems but realities are different. Global indicator on this with menu of options? We need to continue elaborating in breaking down the concepts i..e what is a climate resilient system for countries. Climate resilient means something different for each water supply system and unpacking this will be essential to be able to have a global indication of where we stand.

Rohini: global indicator but doesn't cover all countries e.g., ecosystem indicator. There are global indicators but there is no data available, we see this in BTR. We need implementation by 2030. **Balance with indicators that have information with few new indicators that might need new information we might be in a better position to report back to the GST**.

Karina, ecosystem group: when you think about regional versus global realities, and this is specifically for the aggregation from regional to global scale. Question on consistency in the methodologies.

Veronica: we need core definitions. How will the platform where all those indicators will be uploaded to will look like? Peer to peer learning.

China: dynamic relationship between regional and global scale. Establishment of adaptation target database as source for national and regional available data sources. Include information on actions and MOI. Analyze changes in global climate risks and analysis of effectiveness of adaptation measures across different themes and identify future needs.

Mexico: what's being attempted here is very complex. The response needs to be systemic and needs to be very integral.

Saudi Arabia: final list to be adopted by parties shall be 100 indicators but there could be technical report with more information.

Reporting back

Bruna: difficulties in finding balance between global and national realities, having new methodologies or using what is already there, new data vs. existing data. We are setting the right tone for the discussions we need to have in Bonn.

Lina: **the 100 indicators may not capture regional and national contexts**. Transboundary adaptation should not be overlooked. Global indicators with local nuances. **Not every target will have its own set of indicators, there will be overlaps**. Indicators are not working in isolation. What is expected from this 100 number: **100 shall we globally applicable indicators**

and menu of indicators will be an extra. Experts expressed that they don't want to be the ones that decide on the 100, they want this to be up to Parties. Experts to give recommendations.

Luke: tension between the global and then the regional and national specifics. Global assessment, and the second national assessment. Sendai gives global picture but disaggregatable. There was one point around aggregations can only become possible when enough sort of respondents within the global community actually provide information on it. Disaggregation by vulnerable groups. **Global set of indicators and menu of options**. Interplay between levels of indicators was interesting. Yes/No binary option with sub-indicators that allow you to communicate the quality of what you are doing.

Next steps

Co-facilitator:

- The mandate is quite clear, and that is that the experts will deliver a refined list of indicators and a progress report for publishing by the Secretariat four weeks before SB 62.
- At SB 62 there will be a workshop in conjunction with the session. We don't yet have the dates for that, but I'll come back to that a little bit later.
- We'll have time during SB 62 to discuss the consolidated list and the progress report and to move the work ahead as far as possible. Negotiators need to decide on the process between SB62 and COP30.
- Don't worry too much about the number of indicators, rather focus on the best possible list of indicators

Experts:

- We have simplified template for progress report
- We will make sure to have a refined list of indicators but it may not be possible for all groups to coordinate on interlinkages
- Progress reports will elude on metadata and data readiness
- We need common understanding on what an indicator actually is.
- So the way that the experts have been approaching this is that one indicator is quantitative number that could be a summary of qualitative assessments at the country level, and that is reported as a number
- What about the nested and compounded indicators, do they count as one indicator? We want to make sure that when we are having composite indicators that are made of several sub indicators relevant to different countries, that we propose that as a single indicator.

Botswana:

- **Provide us with indicators for global progress on adaptation**.
- This is a technical process and there is also a political process.

Timo Leiter:

- Some indicators will be more elaborate than others
- The list will need more work after submission
- **I want to point negotiators to the fact that they might be a slight contradiction in the text, because the current wording globally applicable and menu that captures various contexts both refer to the manageable list of 100. So currently, the text does not suggest a separate list.**

Animesh:

- We will look into the three components of MOI across all the targets and ensure that this is included in the compilation of indicators.
- **We need to also start talking about what happens after Belem i.e. operationalization of the indicators**

Sri-Lanka obo G77+China:

- Appreciation for the workshop and experts
- **Expectations will be globally applicable and consider additional indicators that capture various contexts of adaptation action and support**
- MOI remains at the heart of the process, we need clear indicators on that
- **MOI must not be diluted by enabling categories**
- Indicators must include process, output and outcome-oriented indicators
- Established timeline for submission from the experts must be respected to allow for meaningful engagement of Parties

Marshall Islands obo AOSIS:

- Appreciation for the workshop and experts
- **Request a one pager of definitions of technical terms on indicators e.g, nested indicators etc.**
- MOI and MOI indicators are crucial
- **We want this framework to give a global picture of the state of adaptation**
- Cross-cutting issues need to be included in indicator package

- Indicator package with fit for purpose indicators with the plan for further indicators and their methodologies to be developed over the next few years
- Indicator work is not expected to end in Belem, there is more work to be done
- Important that we have not only process indicators but outcome oriented indicators
- Data sources for indicators shall be listed
- Explanation why proposed indicators have been chosen

UK:

- **We are looking at global indicators, but these need to be contextually relevant, and we will need indicators, relevant to individual countries**
- Not discard all indicators where some data are not yet available, lack of data can help with directing support to build capacity to where it is most needed
- We would welcome further discussion with experts, talk us through consolidated list once we have it

Botswana:

- Align with G77+China
- We would also welcome further conversation with experts
- MOI is crucial
- **MOI indicators are not limited to target 10 c**
- Our expectation is that the experts will develop the most appropriate indicators for measuring progress on the GGA and must not be limited to the number of 100

Morocco:

- Align with G77+China and Botswana
- Linkages with Loss and Damage
- Finance is essential to meet the objectives of the GGA

Sudan obo LDCs:

- Align with G77+China
- Indicator work must continue until Belem
- SB 62 will be a key opportunity to provide any final guidance and agree on the approach parties will take to successfully conclude this work program
- **We are not expecting a list of 100 indicators from the experts**
- **Recommendation on which indicators are best suited to measure progress globally across each target, as well as what the menu of options could and should entail**

- **this work on indicators was not simply come up with existing indicators and recycle existing indicator. Do not discard the development of indicators. We encourage pragmatism, but we also want ambition**.
- One point that we want to encourage and urge you to consider is to make sure that the expert group work remains inclusive.

Saudi-Arabia obo Arab Group:

- Align with G77+China
- Respect decision text: globally applicable…
- we also expect the indicators to maintain a balanced approach, adhering to the criteria established in previous decisions, including the additional elements from the Baku decision
- focus on identification of gaps and development of new indicators where it's necessary
- MOI is crucial

Japan:

- Finance flows shall be discussed under finance agenda items
- **We already report on MOI under BTR, don't duplicate process under GGA**
- Focus on implementation of adaptation action

Australia:

- Focus on indicators for assessing progress towards the targets
- **Indicators applicable to all**
- We encourage the establishment of global indicators supplemented by regional process or thematic indicators that can identify trends.

China obo LMDCs:

- Align with G77+China
- **Don't limit experts to 100 indicators**
- Opportunities to explore more relevant indicators
- Balanced response on actions and MOI in all thematic and dimensional targets
- Data sources for indicators should be based on the national official data
- Willing to have more conversations with experts

Co-facilitator:

- Presentations are online
- Report of the workshop is due to be published 6 weeks ahead of SB62
- Consolidated list and progress report will be due 4 weeks ahead of SB62
- Workshop in conjunction with SB62, we will get back to you with dates
- SB62 workshop as opportunity for further engagement between experts and Parties
- We heard the wish of meeting to walk through consolidated list
- What conclusions do we want to have out of SB62?
- What is the shape of the decision text shall look like?