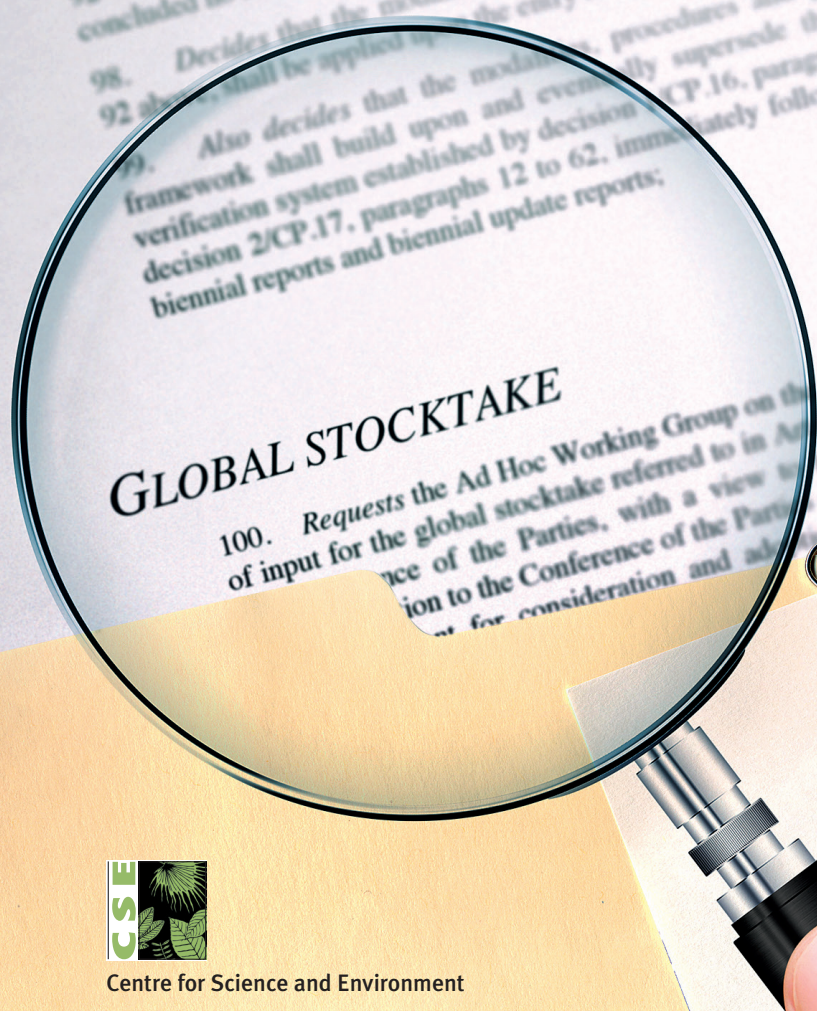


ADDRESSING

GLOBAL STOCKTAKE

UNDER THE PARIS AGREEMENT

(An equity-based approach)



Centre for Science and Environment

INTRODUCTION

Global Stocktake (GST) mentioned in Article 14 of the Paris Agreement, serves as a crucial review exercise to periodically assess collective progress toward the Agreement's long-term goals, enhance implementation of the Agreement and scale ambition. Global Stocktake gains further relevance as it is one of the few elements of the Paris Agreement that explicitly talks about taking equity into consideration. The first comprehensive Global Stocktake will be undertaken in 2023 and every five years thereafter. There would also be a Stocktake in 2018 in the form of Facilitative Dialogue. This document puts forth the design of the Global Stocktake in 2023 and highlights key policy recommendations. Structurally, the same approach could be used to conduct the Facilitative Dialogue as well.

OBJECTIVE AND SCOPE OF THE GLOBAL STOCKTAKE

The objective of the Global Stocktake laid out in Article 14 of the Paris Agreement is ***'to take stock of the implementation of the Paris Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals.'***¹ The 'purpose and long-term goals' as mentioned in the Agreement are to address climate change by limiting the increase in the global average temperature to well below 2°C above pre-industrial levels and to strive for 1.5°C above pre-industrial levels, increase climate resilience and switch over to low-carbon development.²

The language specifying the objective of GST also establishes, in the process, the overall yardstick of the long-term temperature goal against which the progress of collective climate actions and efforts is to be measured. In a separate section, Article 7 of the Paris Agreement, the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change is created. This is with the view to contribute to sustainable development and ensure adequate adaptation response ***in the context of temperature goal*** (emphasis added). Therefore the global goal on adaptation also contextualizes the overall objective of carrying out the required and appropriate efforts keeping in view the long-term temperature goal.

To conduct the process of GST, Parties are required to give inputs with regard to different components of their Nationally Determined Contributions (NDC).

On the critical question of the outcome of the Global Stocktake, the Agreement mentions that the outcome shall inform Parties in updating and enhancing climate actions and support; it will also enhance international cooperation, though in a nationally determined manner. Countries are required to review their climate targets on the basis of output from Global Stocktake, also taking into consideration the latest science, global policy advances and available technology.³ The process also ensures progressivity in the sense that parties go forward in their commitments and formulate new targets, more ambitious than their previous targets and commitments.⁴ GST thus provides for a strong review and ratchet mechanism meant to counterweigh the otherwise strong decentralized character of the climate regime.⁵

It is important to note that while the input information has to come primarily from individual Parties, the assessment of progress is collective. The outcome of the Stocktake also has a clear individual component with the enhancement

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and updating of actions and support by countries individually. The Agreement text elucidates the principles to conduct the Global Stocktake and mentions that such a process will be conducted ‘in light of equity and best available science.’⁶ The Global Stocktake process is comprehensive in nature and covers all the elements of climate change, i.e. mitigation, adaptation, and means of support and implementation (finance, technology transfer and capacity building).

The aim of the Facilitative Dialogue (FD) of 2018 is to assess collective progress towards long-term temperature goal of the Paris Agreement (unlike GST which talks of assessment of collective progress towards long-term goals of the Paris Agreement as its objective).⁷ Some Parties have interpreted this as assessment of progress of only mitigation efforts by Parties. The outcome of the Dialogue must inform the formation of future round of NDCs by Parties by 2020.

WHAT THE PARIS AGREEMENT DOES NOT TALK ABOUT

Global Stocktake is one of the few elements of the Paris Agreement that explicitly talks about taking equity into consideration. Equity can be operationalised in the Global Stocktake process using the carbon budget approach

- **Timelines:** The Agreement text makes no mention of the timelines regarding when exactly the process will start, whether there would be interim deadlines to follow, when Parties should communicate the information and when the process will be complete.
- **The entities:** There is no clarity on who would be the other actors involved in the process and how observers can be engaged in the process.
- **Form of stocktake:** The text does not elaborate on the form of the Global Stocktake, whether it would be a multi-pronged process, a technical or a diplomatic process or combination of both.
- **Equity:** The Agreement does not describe how to incorporate equity in GST.
- **Inputs to the stocktake:** Even though there is a non-exhaustive list of inputs for Global Stocktake, there could be more sources not mentioned in the text. The Agreement does not define who the contributors of inputs to the GST should be.
- **Indicators or parameters:** Inputs and information must be collected and assessed according to agreed indicators for each element of the GST, according to which gaps in the current state of efforts can be determined, which can then necessitate increase in ambition of Parties domestically.
- **Output of the Global Stocktake:** While the outcome of the GST is defined, which is to enhance ambition and facilitate cooperation, there is no reference in the Paris document as to what the form of the output of the stocktake process will be—whether it will be in the form of a political statement, political declaration, recommendations or decisions.
- **Raise of ambition:** The Agreement clearly mentions that the outcome must ‘update and enhance’ the Parties’ actions and support and enhance international cooperation for climate action but fails to provide a clear link on how it will be established.
- **Cross-cutting issues:** GST relies on the information and output of several other elements of the Paris Agreement, including the transparency framework, Paris Committee on Capacity Building, Facilitative Dialogue (2018) etc. The Agreement does not mention how different components will complement each other.
- **Loss and damage:** Loss and damage is now a separate pillar in the Paris Agreement; the Parties agreed on support to loss and damage activities at the Marrakech Climate Summit (2016). Though the scope of GST does not include loss and damage per se, whether loss and damage should come within the purview of the GST becomes a crucial question.
- **Facilitative Dialogue:** Paris Agreement does not define clearly the scope of the FD and other technical elements related to the mode of conduct of the process and the actors involved.

DESIGN OF THE GLOBAL STOCKTAKE

With only the preliminary discussions initiated, almost the entire GST regime is to be created and finer details regarding every aspect need to be worked out. We propose a design of the Global Stocktake process in this section, which talks about timelines, modalities and how to incorporate equity in the process. The model is well-suited to inform the Facilitative Dialogue also.

Timeline: The process of Global Stocktake must start two years before COP in 2023, i.e. 2021. While the domestic process of gathering sector-wise information and submitting it must be done in the first year, the technical phase should be completed in the second year, following which the outcomes of the GST process can be adopted as ‘Political Recommendations’ by the Parties at a high-level segment at the Twenty-ninth Conference of Parties (COP 29) to be held in 2023.

Modalities of Global Stocktake

The approach, methodology and assumptions for the GST could be built on the lines of the IPCC review process. The IPCC review process has wide participation from government and experts in multiple stages to ensure a comprehensive, objective and transparent assessment of progress. The GST process should be structured into a preparatory, technical and diplomatic phase.

1. Preparatory phase: As reiterated, Parties must start the process of collecting data and input from national sources well in advance based on their respective national circumstances and capabilities. Parties also need to be issued guidelines so that the inputs received from different Parties are easy to comprehend and comparable. Domestically, Monitoring Reporting and Verification (MRV) structures and mechanisms are crucial institutions for reporting climate actions and support.

Currently, most developing countries lack proper MRV structures to report and collect information. Quantifying adaptation efforts and support seems more difficult even as countries struggle with the process domestically. That adaptation is important is reflected in the fact that 83 per cent of the submitted climate action plans of countries in the form of Intended Nationally Determined Contributions (INDCs) (of 137 parties) have an adaptation component.⁸ There need, therefore, to be clear rules on reporting for action and support internationally. Related to the element of support, the definition of climate finance to include adaptation finance is also essential.

The Paris Agreement establishes a transparency framework for reporting of climate actions and reporting for support provided. This provision of Paris Agreement provides a useful opportunity to develop adequate structures and institutions to monitor, report and verify who is doing what in climate change and who is providing what to whom as they deal with climate change.⁹

The rules and guidelines of the framework are mandated to be created by 2018. The process of creation of MRV must start at the earliest with support from developed countries to establish sound and effective reporting mechanisms domestically. Parties must provide credible and latest inputs for GST by December 2022. Civil society must also contribute to providing inputs to the process of GST.

2. Technical phase: As reiterated, mitigation, adaptation, loss and damage, and means of support and implementation are fundamentally different components

Measuring, Reporting and Verification (MRV) structures and institutions are crucial for successful conduct of the Global Stocktake Process. Currently, most countries, especially the developing countries lack fair and effective MRV structures domestically

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of GST and therefore the form, structure and content of the inputs regarding the three components would be different. Therefore, the technical phase should comprise four different work streams, each convened by two facilitators or conveners, one each from developed and developing countries for each of the components (mitigation, adaptation, loss and damage, and means of support) which can have different modes of work. The technical phase should be conducted through 2023. Mid-session climate meetings and workshops could be conducted apart from the regular climate meetings to facilitate work within different work streams.

In this document, we have also proposed that loss and damage must be within the purview of GST too and provided possible inputs for it. In the technical process under GST, the inputs under each element must be assessed against respective indicators. The comprehensive and exhaustive list of indicators used in this document offers useful parameters against which information should be collected and measured in view of the long-term goals. In the ensuing discussions on GST, Parties need to agree on the list of broad indicators, given in *Figure 1: Design of Global Stocktake*, which would make their work more streamlined and channelized in collecting and submitting information for the GST process.

Work stream I—Mitigation

Under Work stream I, comprising mitigation, the broad indicators are meant to measure the decrease in carbon emissions and ways to switch over to a low-carbon growth scenario. Such ways link to adoption of renewable energy sources, energy-efficient ways, sustainable transport and waste management. Countries should also report their historical and current consumption and availability of carbon budget (See Box below). A complete list of indicators is given in *Figure 1: Design of Global Stocktake*, which can be used to assess and measure efforts related to mitigating climate change.

Work stream II—Adaptation

For components of adaptation under Work stream II, we propose the indicators broadly used for the outcomes as mentioned in the Paris Agreement, including:

- a) Increase of adaptive capacity of community/population;
- b) Specific sector-wise preemptive efforts for increasing adaptive capacity and resilience and;
- c) Reducing vulnerability to climate change.

Under the first broad category, potential indicators are the Human Development Index (HDI); vulnerability index; number of food-secure households; adoption of National Adaptation Plans (NAPs); adoption of Nationally Appropriate Adaptation Actions (NAPA); availability and extent of local institutions in adaptation activities, which will determine the capability of a country to adapt; availability of human resources; gender participation in adaptation activities (in per cent); and employment generation in environmental sector (in per cent).

For ascertaining actions and efforts to increase resilience, reduce vulnerability and increase adaptive capacity, the sectors employed are agriculture, forestry, water supply, health and infrastructure development as are generally recognized under adaptation. For each of the sectors, indicators are listed to measure adaptation efforts in that specific sector. For instance, the broad indicators used to measure progress in adaptation activities in agriculture can be increase in crop yield, extent of crop-diversification techniques, coverage of stress-tolerant seed varieties, extent of micro-irrigation network, adoption and types of soil

management practices—including no-till practices and nitrogen/nutrient stewardship—extent of access to climate information services, protection of indigenous seeds, traditional knowledge of agriculture and extent of integrated pest- and disease-management practices (See Figure 1).

Some indicators used for the health and infrastructure development sectors are based on seven global targets under the Sendai Framework for Disaster Risk Reduction, including substantially increasing the availability of and access to multi-hazard early warning systems and disaster-risk information and assessments to people, substantially reducing global disaster mortality, and substantially including health and educational facilities.¹⁰ Adaptation still requires a lot of deliberations to establish domestic reporting and accounting structures of action and support.

Work stream III—Loss and damage

A major indicator for loss and damage would be the successful implementation of adaptation actions as more adaptation would imply less loss and damage. The Vulnerability Index would also help determine which countries are more prone to climate-related loss and damage. Other indicators for loss and damage under Work stream III include those related primarily to response in the face of climate-induced loss and damage after calculating estimated values of loss and damage in different temperature scenarios.

Work stream IV—Means of support

Under Work stream IV, indicators that can be adopted to assess means of support and implementation relate to access, distribution and kind of finance provided to different countries, number of technological solutions provided to developing countries to increase climate resilience and switching to low-emission pathways. The availability and capacity of institutions engaged in planning and designing the project for approval of funds is also used as an indicator (see Figure 1).

The output obtained within different work streams must be assessed towards progress on long-term goals of the Paris Agreement. Long term temperature goal of 2°C and the global goal on adaptation could be employed as the overall yardsticks for assessing mitigation and adaptation actions respectively.

Assuming parity in mitigation and adaptation as re-enforced by the Paris Agreement, the support provided to activities measured under indicators should be assessed against the goal of US \$50 billion in mitigation and adaptation. The Adaptation Gap Report 2016 though indicates that the costs of adaptation could range from \$140 billion to \$300 billion by 2030, and between \$280 billion and \$500 billion by 2050.¹¹ Parties need to agree on a figure for support for loss and damage even though discussions on this subject initiated at Marrakech.

The technical phase of the GST must result in four different synthesis reports within the four work streams: mitigation, adaptation, loss and damage and means of support. The four synthesis reports should culminate in one synthesis report for discussion at the political phase of the GST, as shown in Figure 1.

3. Political phase/outcome phase: The political phase should comprise a high-level segment where the final Synthesis Report of the technical phase, could be discussed by the Parties and adopted by the CMA as Political Recommendations. Even though GST assesses collective progress, the outcome

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Box: WHY REPORTING ON CARBON BUDGET IS CRUCIAL

Establishing a climate change benchmark of limiting the effect of greenhouse gases within 2 degree C, to prevent worst climate impacts, translates into finite amount of carbon budget that the world can apportion. The Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5) has estimated that the world can emit only about 2,900-3,300 billion tonnes (giga-tonnes or Gt) of CO₂ from all sources from the dawn of the industrial revolution till 2100. Till 2011, the world already emitted about 1,900 Gt of carbon dioxide.¹ This means, only 1,000-1400 Gt remains to be used between now and the future, 2012 and 2100, as depicted in the table below.

The Carbon Budget

Unit: GtCO ₂	≥ 33% probability of staying within 2°C	≥ 50% probability of staying within 2°C	≥ 66% probability of staying within 2°C
Total anthropogenic CO ₂ budget: 1861-1880 to 2100	5762	4441	3670
Total anthropogenic CO ₂ budget remaining after excluding Non-CO ₂ forcing: 1861-1880 to 2100	3303	3009	2899
Total anthropogenic CO ₂ emitted: 1861-1880 to 2100	1890	1890	1890
Total anthropogenic CO ₂ budget remaining 2012-2100	1413	1119	1009

Source: IPCC AR5

Owing to reckless growth patterns adopted, developed countries have already exhausted their carbon budget, or that there is very little budget for them to continue emitting. This means developing countries are left with extremely little carbon budget to grow and this is when developing countries need to grow their economies and develop their populations in terms of decent standards of living, expressed best through Human Development Index or HDI.

World Bank data shows that over 70 per cent of the world lies between 0.5 and 0.7 HDI (that is, at a low or medium level of HDI). Less than a quarter of the world lies above 0.8 HDI: this quarter accounts for about 45 per cent of total emissions. The bottom 40 per cent of the world accounts for just about 12 per cent of the world's total emissions.²

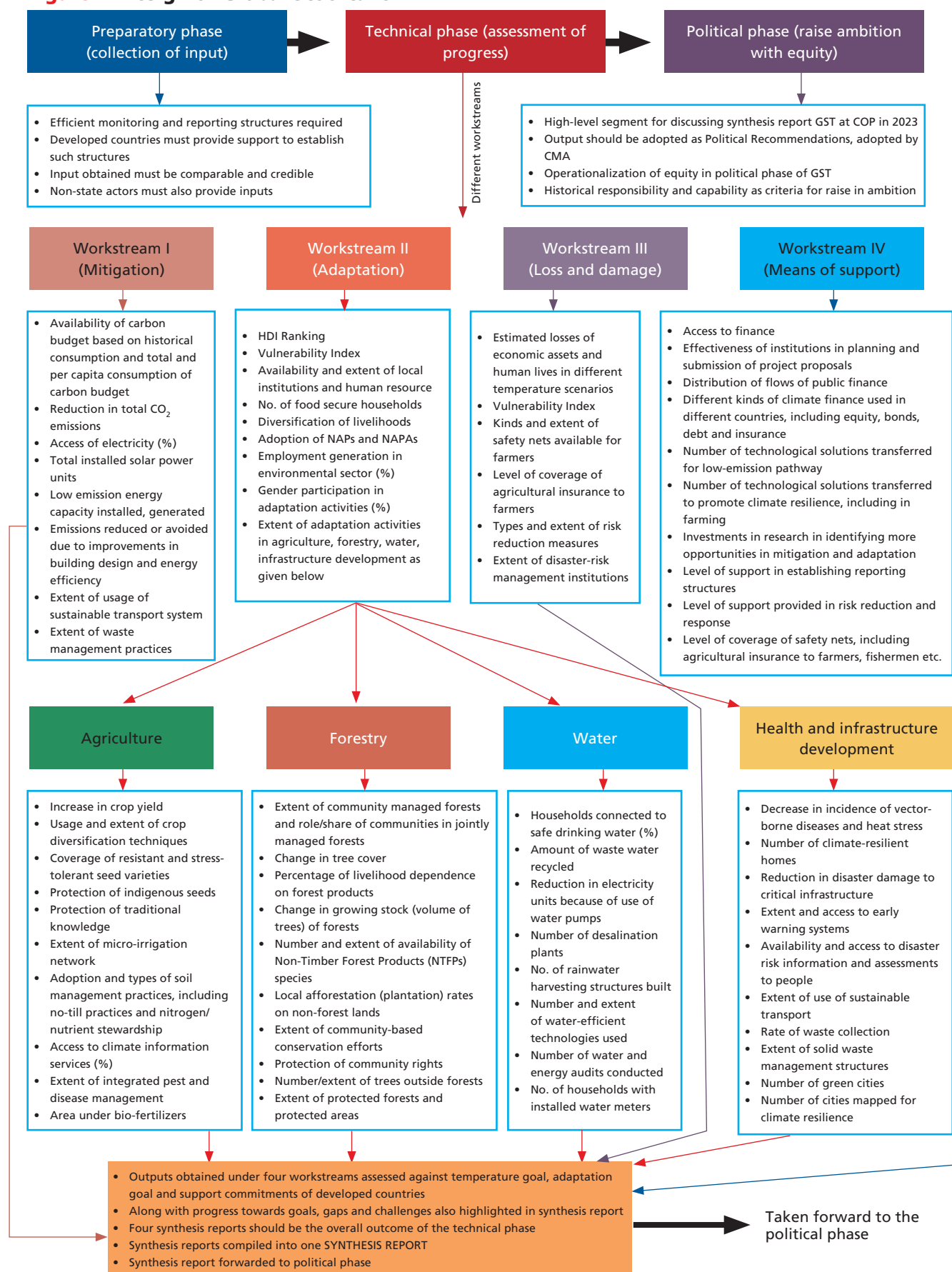
In view of the objective of Global Stocktake to report progress, we put forth that reporting on remaining carbon budget and how countries are using it should also form an important component of the Global Stocktake. This is because countries' development is central to the availability of carbon budget. Therefore, the technical process of Global Stocktake should also involve reporting of the following elements related to global carbon budget:

- Available carbon budget for countries, based on their historical consumption;
- Current amount of consumption of carbon budget;
- Per capita consumption of carbon budget.

is directed individually at Parties. In this phase, responsibility and capability must be used as parameters for Parties to raise their individual climate ambitions thus ensuring equity.

The political phase must be a platform for exchange of ideas and best practices of implementation of climate plans and targets. It should also be a collaborative platform for countries to develop their future course of climate action.

Facilitative Dialogue must also adopt similar approach as in Global Stocktake. Accordingly, it should comprise a preparatory phase, a technical phase to be carried out throughout 2018 ending in a high level political phase at the COP 24, with application of equity as in Global Stocktake. The outcome of Dialogue must help Parties enhance ambition for subsequent round of NDCs, to be submitted by 2020.

Figure 1: Design of Global Stocktake

KEY POLICY RECOMMENDATIONS FOR THE GLOBAL STOCKTAKE

- The Global Stocktake process must be conducted with the technicalities and modalities along the lines of the IPCC review process adopted. It must be an open and transparent multilateral process.
- The GST process should start two years ahead of Conference of Parties (COP) in 2023 and should have preparatory, technical and political phases.
- The creation of robust reporting structures for action and support at national levels is a prerequisite to effective GST, for which developed countries must provide support.
- Loss and damage must also be within the purview of the Global Stocktake process.
- Parties must submit clear and comparable inputs to Secretariat by December 2022.
- Civil society must also provide inputs to GST.
- Parties must submit information on total and per capita availability and consumption of carbon budget, based on historical consumption of carbon budget.
- Reports from Climate Change Agriculture and Food Security (CCAFS), Food and Agricultural Organization (FAO) and International Fund for Agricultural Development (IFAD) can be used as additional sources of input for adaptation.
- The technical phase should comprise four work streams for each of the four elements, namely mitigation, adaptation, loss and damage and means of support. Under each element, progress must be assessed against indicators. Each work stream must be headed by two conveners, one each from developed and developing countries.
- Parties must agree on broad indicators for each component of GST for making the process of collecting and submitting information streamlined and comparable.
- The temperature goal for mitigation and global goal on adaptation can be effective benchmarks for assessing overall progress of climate efforts and identifying loopholes.
- The output of the technical phase must be four synthesis reports which must also highlight gaps and challenges towards attainment of climate goals. The reports should be compiled into one synthesis report.
- The output in the form of one synthesis report must be discussed at the political phase of the GST at a high-level segment at COP in 2023. The output must be discussed and adopted as Political Recommendations by the CMA.
- Equity can be operationalized in GST by reporting on global carbon budget consumption (technical phase) and in increase in ambition of climate efforts of countries (political phase). In the second component, historical responsibility and capability must be used as indicators to implement equity.
- The political phase of GST must facilitate exchange of ideas, best practices of implementation of climate commitments and partnerships among countries.
- All relevant documentation and discussion pertaining to review mechanism should be publicly accessed.
- Facilitative Dialogue 2018: It should be conducted on the lines of Global Stocktake process, comprising preparatory, technical and political phases. Parties must submit their inputs against indicators for mitigation, adaptation, means of support and loss and damage. Equity must be implemented in the technical and political phases. The outcome of the Dialogue must raise ambition of countries and help in submitting enhanced climate ambition in the next round of NDCs by 2020.
- The learnings from the Structural Expert Review 2013-2015, Facilitative Dialogue of 2016 to assess pre-2020 actions and the Facilitative Dialogue of 2018 must feed into the Global Stocktake process.

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