March 2022

Submission of the Environmental Integrity Group (EIG) of Inputs to the Global Stocktake

The EIG underscores the importance of the Global Stocktake and its role in the Paris Agreement ambition cycle. The outcome of the Global Stocktake will inform countries on updating and enhancing, in a nationally determined manner, their climate policies and support, as well as on enhancing international cooperation for climate action. We are pleased to share suggestions as to how to ensure that the Global Stocktake contributes to the environmental effectiveness of the Paris Agreement.

The EIG equally stresses the importance of the best available science, in particular provided by the IPCC. Where scientific data is still lacking, efforts should be made to fulfill these gaps. The EIG urges that due consideration of Tipping Points in the global climate system be taken into account. The EIG asks the Chair of the SBSTA to consider convening a dialogue or pre-SB workshop on tipping points and climate change. From this we can build momentum that can lead to the development of a dedicated IPCC Special Report on Tipping Points.

Moreover, in performing its key function, the Global Stocktake should account for the substantial negative impacts that are already felt in the Cryosphere and in the world's Oceans. These negative impacts are spreading globally and becoming increasingly permanent on human timescales. As a global community, we should step up action to avoid adding additional pressure to the global climate system, through urgent mitigation action. Profound perturbations also call for significant action to prepare and adapt to these changes.

Ensuring the effectiveness of the Global Stocktake

The Global Stocktake should identify shortcomings in our implementation of the Paris Agreement, and help identify concrete opportunities for further action so as to enhance the environmental effectiveness of the Paris Agreement.

The Global Stocktake should focus on how the identified gaps can be plugged, instead of a precise assessment of how large the gaps are. The Global Stocktake should support implementation in addition to catalyzing more ambitious target-setting. Indeed, instead of a simple stocktaking exercise, the Global Stocktake should directly contribute to preparing for the next round of NDCs in 2025.

The formulation of new and enhanced NDCs is dependent on domestic processes. Therefore, the GST should ideally make it easier for domestic processes to produce ambitious NDCs: both by catalyzing momentum around the next submission of NDCs and ensuring early commitments by Parties to submit enhanced NDCs, as well as by facilitating the formulation of ambitious policies at domestic level. One suggestion would be to append one or more technical annexes to the output of the Technical Dialogue. Such technical annexes could list specific opportunities for climate action. Applying a sectoral or thematic lens is a good approach to guarantee that the results of the GST can easily be taken into account at domestic level. The GST can also shed light on those hard to abate sectors, such as aviation and shipping, were we need to mobilize to reduce emissions fast.

The Global Stocktake is required to assess collective progress "in the light of equity and the best available science", as per Article 14.1. The Global Stocktake can help facilitate discussions on equity, by providing a space for Parties to reflect on whether their targets are aligned with the 1.5°C objective. Finally, it is important that the Global Stocktake process be informed by the best available science. The EIG supports the publication of an IPCC Special Report on Tipping Points (see below).

The Global Stocktake process and its outcome should effectively link to or facilitate enhanced action by initiatives, stakeholders and processes in the wider landscape of global climate governance beyond the UNFCCC. In designing the Global Stocktake, we should provide a space for non-party stakeholders and

obervers to interact with Parties. We could hold events where observers namely have the opportunity to ask direct questions to Parties. We should also welcome written submissions by observers. We should make the most of existing platforms for stakeholder engagement, namely the Marrakech Partnership, Race to Zero Campaign, and the NAZCA Platform. Finally, it is crucial that we ensure a proper follow-up to all the initiatives that have been launched in the context of the recent COPs.

Tipping Points

Tipping points in the climate system are thresholds that can occur as a consequence of human-induced climate change. Following a tipping point, changes are abrupt, high-impact, large-scale and often irreversible. These changes may include the collapse of the West Antarctic Ice Sheet, the melting of the Greenland ice sheet, almost complete loss of mid-latitude glaciers such as the Alps, substantial losses of glaciers and related water resources in the Himalayas, the collapse of the Atlantic Ocean circulation, the dieback of the Amazon rainforest, the shifting of tropical rain belts, runaway permafrost thaw and resulting carbon emissions, or the collapse of monsoon systems around the world. Tipping points associated with weather patterns and extreme climate events have high regional socio-economic impacts on livelihoods, food security and health. These include agricultural shifts and farmland abandonment, vector-borne diseases and epidemics, insurance premiums above affordability threshold, or climate change related displacements.

Our current knowledge of tipping points is inconsistent, often incomplete, and therefore runs the double risk of being exaggerated or downplayed in the public. This situation is particularly difficult for policymakers. Fortunately, over the past two decades, focused in situ observations of ocean circulation, ice sheet margins, paleoclimate records and satellite remote sensing have provided crucial information that the climate system may be on the verge of a tipping point.

However, there is no comprehensive scientific overview and understanding, let alone a full assessment of the science of tipping points in the climate system. The current situation is one of growing but still scattered scientific information on large-scale singular events, tipping points and irreversibilities. This hinders an overview of the state of knowledge and limits decision-making in accordance with the objectives of the Paris Agreement.

In light of the importance of potential irreversible physical tipping points, we ask the Chair of the Subsidiary Body for Scientific and Technological Advice to consider convening at its fifty-fourth session (June 2022) a dialogue or pre-SB workshop on tipping points and climate change. This will allow strong consideration of mitigation and adaptation implications of this latest science both in the processes of the Second Periodic Review and the Global Stocktake, including their Structured Expert Dialogue and Technical Dialogue.

Cryosphere

We have seen and documented dramatic changes in the Cryosphere in EIG member countries, especially in our mountains. In their research in the Arctic, on Greenland and Antarctica as well as in the Himalayas and Andes, scientists of EIG member countries have shown that dramatic changes in the Cryosphere are increasing in size and speed.

These changes in the Cryosphere due to anthropogenic emissions have major impacts on the entire global climate system. Already at today's 1.1°C of warming, they have led to downstream changes in water availability, to the loss of permafrost at a large scale, and to sea level rise and the loss of coastal regions. Some long-term, even permanent global impacts due to changes in the Cryosphere are now unavoidable.

Even more damaging impacts, however, will occur in the future if there is an overshoot of the Paris temperature goals. The EIG notes with serious concern the findings from IPCC WGI AR6. In particular,

we note that with every additional increment of rising temperatures, weather extremes and global impacts from changes in the Cryosphere will further increase.

Maintaining the integrity of the Cryosphere, and its stabilizing role in the climate system, is essential to preserve the ecosystem services of (a) polar ice sheets to prevent extreme sea-level rise, (b) mountain glaciers to preserve water resources, and (c) permafrost as a carbon sink and stable infrastructure base. The Global Stocktake and its Technical Dialogue provide a crucial opportunity to assess future regional and global impacts from the Cryosphere; in particular regarding tipping points and slow onset, high impact events that will continue for many decades, centuries or millennia. The Technical Dialogue will allow assessing these changes in the light of current and necessary future collective efforts by Parties of the Paris Agreement. The Technical Dialogue shall in particular address the risk of these changes, and their regional and global impacts, if there is an overshoot of the Paris Agreement temperature goals. As a critical input to the Global Stocktake, we suggest due consideration of the 2018 IPCC Special Report on the Ocean and Cryosphere in a Changing Climate.

This highlights the urgency of enhancing ambition and action in relation to mitigation, adaptation and finance in this critical decade. The Global Stocktake must address the gaps between current efforts and science-based pathways that can prevent the crossing of additional, essentially permanent thresholds – and this especially in the Cryosphere – in the coming five-year period.