ROAD TO SHARM EL-SHEIKH: TOWARDS EQUITY AND CLIMATE JUSTICE

ACT4EARTH

COP27 COMPASS POLICY BRIEF

AUTHORS

Shailly Kedia, Nivedita Cholayil, Anuradha Mathur, Soham Banerjee, Shubhi Goel, Saheli Das

REVIEWER

R R Rashmi

ACKNOWLEDGMENTS

We thank Dr Prodipto Ghosh and Ms Suruchi Bhadwal for initial inputs that helped structure the brief. We thank Bloomberg Philanthropies [Star Partner], the Rockefeller Foundation [Premier Partner], German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) & International Climate Initiative (IKI) [Senior Partner], along with Tata Cleantech Capital Ltd [Associate Partner] for their support for the World Sustainable Development Summit/Act4Earth.

SUGGESTED CITATION

The Energy and Resources Institute (2022), *Road to Sharm el-Sheikh: Towards Equity and Climate Justice*, COP27 Compass, Act4Earth and World Sustainable Development Summit, New Delhi: The Energy and Resources Institute.

CONTENTS

ABSTRACT

Egypt will host the 27th Conference of the Parties of the UNFCCC (COP27) in Sharm El-Sheikh from 6th -18th November, 2022. The COP27 Presidency lays out the vision for inclusive, rules-based, ambitious, substantive outcomes, commensurate with the challenges based on science and guided by principles building on agreements, decisions, pledges, and commitments – from Rio 1992 to Glasgow 2021. Time is running out: the Sixth Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC) calls for immediate, rapid and large-scale reductions in greenhouse gas emissions. There is a need to address the developmental deficit in developing countries, while simultaneously taking measures to limit global warming, as agreed under the United Nations Framework Convention on Climate Change and the Paris Climate Change Agreement. Considering the importance of the issues to the Global South, this policy brief covers the four climate negotiations related to COP27 and beyond; these include, global goal on adaptation, loss and damage, climate finance, and global stocktake.

Keywords: COP27; global goal on adaptation; loss and damage; climate finance; global stocktake; climate negotiations

INTRODUCTION: ROAD TO SHARM EL-SHEIKH

In 2022, the world has witnessed major upheavals – starting with the weather extremes where countries across the globe saw devastating heat-waves and more recently, a third of Pakistan was submerged by floods. The conflict involving Russia and Ukraine led to a massive geopolitical crisis which caused uncertainty in supply and increase in commodity prices, threating energy and food security and even undoing many climate actions in the clean energy domain.

Against this backdrop, Egypt will host the 27th Conference (COP27) of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) in Sharm El-Sheikh from 6th-18th November, 2022; with a view to build on previous successes and pave the way for future ambition. Considering the host country, the upcoming COP is expected to be an African COP. According to its website, COP27 presidency will build on Glasgow's momentum and seek to further enhance the progress on mitigation, adaptation, finance, and loss and damage. The COP27 Presidency lays out the vision for inclusive, rule-based, ambitious, substantive outcomes, commensurate with the challenge based on science and guided by principles building on agreements, decisions, pledges, and commitments, from Rio 1992 to Glasgow 2021.

A principle-based approach rooted in equity, climate justice, and principles of the United Nations Framework Convention on Climate Change is needed at COP27. The paradigm of equity rooted in per capita emissions and historical responsibility is key. It is imperative that the progress made by the countries is assessed, considering the principles of equity well before the global stocktake, which is to take place at COP28 in 2023. Equity and climate justice need to be the touchstones for climate deliberations at COP27 and beyond.

Time is running out; the Sixth Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC) calls for **immediate, rapid, and large-scale reductions** in greenhouse gas emissions and strong actions to address the impacts of climate change. Key messages from the Sixth Assessment Report of the IPCC are listed in Box 1.

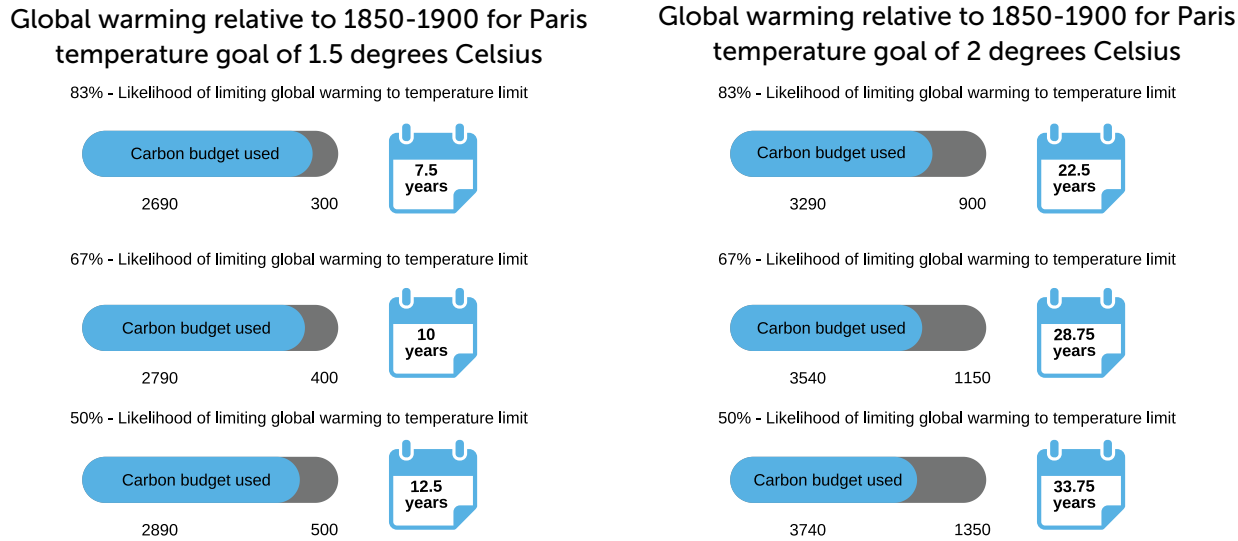
Box 1: Time is Running Out: Key Messages from the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

- Unless there are immediate, rapid, and large-scale reductions in greenhouse gas emissions, limiting warming to 1.5°C will be beyond reach [Working Group I - IPCC AR6].
- Global warming, reaching 1.5°C in the near-term, would cause unavoidable increases in multiple climate hazards and present multiple risks to ecosystems and humans (very high confidence) [Working Group II - IPCC AR6].
- Projected cumulative future CO_2 emissions over the lifetime of the existing and currently planned fossil fuel infrastructure, without additional abatement, exceed the total cumulative net CO_2 emissions in pathways that limit warming to 1.5°C (>50%) with no or limited overshoot (high confidence) [Working Group II - IPCC AR6].
- Global GHG emissions are projected to peak between 2020 and, at the latest, before 2025 in global modelled pathways that limit warming to 1.5°C (>50%) with no or limited overshoot and in those that limit warming to 2°C (>67%) and assume immediate action (high confidence) [Working Group II - IPCC AR6].

From the perspective of equity in terms of a fair share of carbon space, for limiting global warming to 1.5°C, a carbon budget of only 300 $GtCO_2$ is remaining (IPCC, 2021). This will run out before 2030, assuming a global annual emission of 40 $GtCO_2$. Figure 1 clearly shows that, at the present emission levels, the carbon budget left for limiting the temperature to 1.5°C will run out in 7.5–12.5 years. This is considering 83%, 67%, and 50% likelihood of achieving the temperature goal, as depicted in Figure 1. According to the Climate Action Trackers, the NDCs and updated targets announced at COP26, if fully implemented, would at most limit global warming to 2.4°C, which is well short of the Paris temperature goals (CAT 2022).

The highest per capita emitters among G20 countries include Saudi Arabia, Australia, and United States (Figure 2). United States has a per capita emissions of 16 tonnes which is more than thrice of the world average. India's per capita emissions are less than half the world average and the lowest among G20 countries.

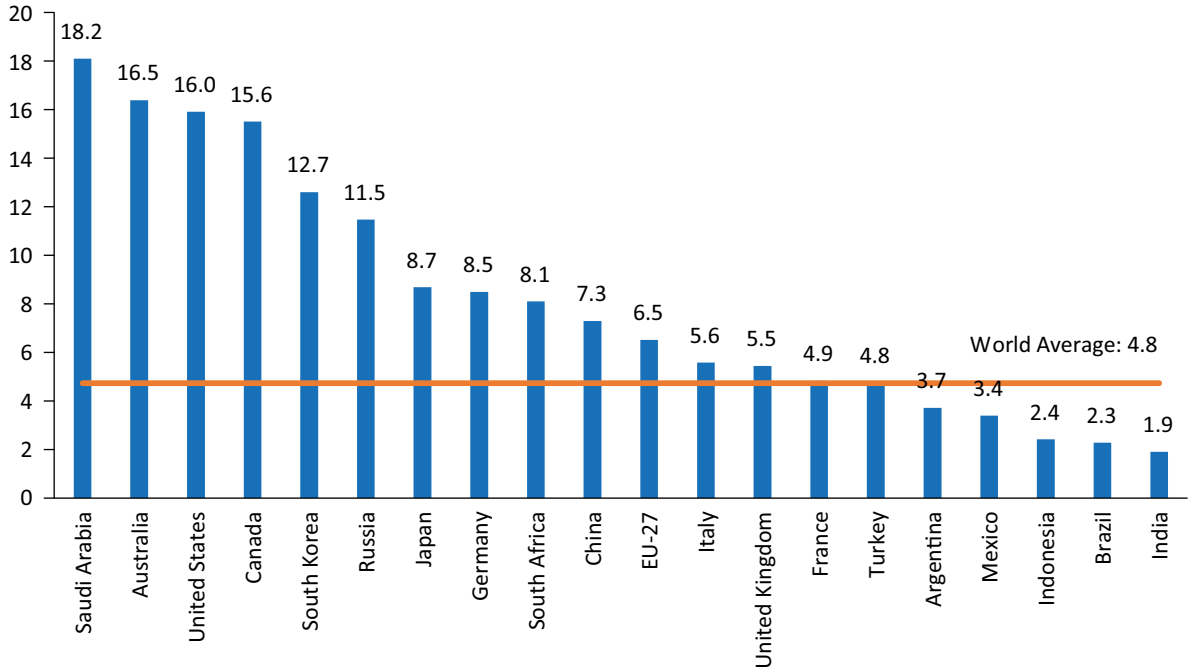
FIGURE 1: ESTIMATED REMAINING CARBON BUDGETS AND TIME FROM THE BEGINNING OF 2020 (GTCO2)



Note: The calculation for exhausting climate budget assumes global annual emissions of 40 $GtCO_2$

Source: Author calculation based on data from IPCC (2021

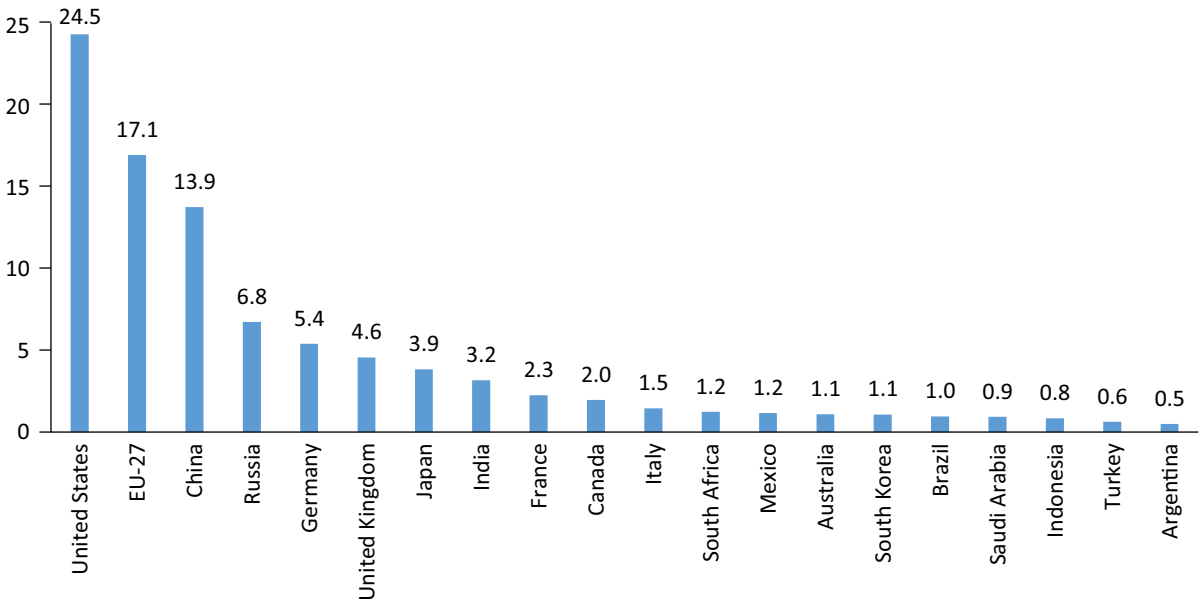
FIGURE 2: CUMULATIVE CO_2 EMISSIONS FOR G20 COUNTRIES AND EU-27 (PERCENTAGE SHARE OF WORLD), 1850–2019



Source: Based on Global Carbon Project (2021)

Figure 3 depicts cumulative CO_2 emissions for G20 countries and EU-27, in terms of percentage share of world. The total cumulative emissions at the world level are 1.7 trillion tonnes. In terms of cumulative emissions, with 417 Gt, United States accounts for the highest CO_2 emissions. The EU-27 countries rank second, followed by China and Russia.

FIGURE 3: CUMULATIVE CO2 EMISSIONS FOR G20 COUNTRIES AND EU-27 (% SHARE OF WORLD), 1850–2019



Source: Based on Global Carbon Project (2021)

The year 2022 marks 30 years since the adoption of the UNFCCC. The Convention set out the basic legal framework and principles for international climate change cooperation, with the aim of stabilizing atmospheric concentrations of greenhouse gases (GHGs) to avoid "dangerous anthropogenic interference with the climate system". Five years after the adoption of the UNFCCC, the Kyoto Protocol was adopted in December 1997, which mandated industrialized countries and countries in transition to achieve quantified emission reduction targets. The first commitment period took place from 2008 to 2012. The 2012 Doha Amendment established the second commitment period, from 2013 to 2020. At COP15 in Copenhagen in 2009, developed countries committed to a collective goal of mobilising USD 100 billion per year by 2020for climate action in developing countries – in the context of meaningful mitigation actions and transparency on implementation. This goal was formalised in the Cancun Agreements adopted at COP16. In December 2015, parties adopted the Paris Agreement. Unlike the Kyoto Protocol, Paris Agreement relies on a bottom up driven process, where countries submit nationally determined contributions (NDCs) and review the aggregate progress on mitigation, adaptation, and means of implementation every five years through a Global Stocktake (GST). The Paris Agreement also mandated aspects such as climate finance, long-term strategies and the global goal on adaptation.

COP26 was the first COP in the post-2020 climate regime, and the outcome of the COP was the Glasgow Climate Pact. At COP26, several new pledges were made in a bid to keep the Paris temperature goals alive. According to the Climate Action Tracker, even if fully implemented, all new and existing commitments would still lead to a temperature rise of 2.4°C. A new inclusion pertained to "phasing down" of unabated coal, instead of fossil fuels. The Glasgow Climate Pact established the Glasgow Dialogue on loss and damage. Decision CMA.3 mandated the establishment and launch of a comprehensive two-year Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation.

COP26 succeeded in terms of the **Paris rulebook**, **Enhanced Transparency Framework** and **Article 6** (cooperative approaches). The Glasgow Climate Pact also established the **Glasgow Dialogue** on loss and damage and invited the Subsidiary Body for Scientific and Technological Advice to hold an annual dialogue.

There is a need to address the developmental deficit in developing countries, while simultaneously taking measures to adapt to climate change, deal with loss and damage, as well as undertake measures to mitigate global warming. The COP27 Compass is a knowledge initiative by/of TERI that assimilates questions and thematic options that can advance climate action and ambition globally – from the perspective of the Global South. Considering the important issues to the Global South, this policy brief covers the four climate negotiations issues related to COP27 and beyond; these include – global goal on adaptation, climate finance, loss and damage and global stocktake. The approach of the study was based on review of primary and secondary literature, along with stakeholder validation.

Issues emanating from the COP27 discussions and from the policy briefs prepared under the COP27 Compass would culminate in a review at a plenary session at the World Sustainable Development Summit 2023; it would assess the efforts of international climate negotiations in securing a sustainable future and deliberate on future actions. It a sincere belief that this document will contribute to a meaningful discussion involving all societal stakeholders, including governments, intergovernmental bodies, civil society, research and academia, and also the youth – our future generation.

GLOBAL GOAL ON ADAPTATION

The Global Goal on Adaptation (GGA) was established after several developing countries pushed to boost adaptation action, due to the increasing climate change impacts on vulnerable countries and communities. Under the GGA, Parties of the UNFCCC hope to work out a metrics which will help evaluate adaptation action. This is a complex evaluation, as there are varied degrees of vulnerability faced by communities across the world and there is 'no one size fits all' solution for adaptation action. It is noted that adaptation is locally, regionally and nationally driven and will vary from country to country. Hence, developing a common metrics becomes complex. Since GGA's establishment in 2015, there has been slow progress to understand and implement the GGA – until 2021. The Glasgow–Sharm el-Sheikh Work Programme on the global goal on adaptation (GSS-WP) aims to 'enhance understanding of the GGA'; contribute to reviewing the overall progress made by the parties/ made in achieving the GGA; strengthen adaptation communication and increase adaptation finance.

From the inception of the United Nations Framework Convention on Climate Change (UN, 1992) – which came into force in 1994 – 'mitigation' formed the focus of the discussion, while adaptation took a backseat. The discussion on adaptation action began with Parties carrying out 'systemic climate observation' and 'impact assessment' based on global models. Though it led to developing long term visualisations, the findings were not in sync with or responsive to national and regional levels. Parties reported on their vulnerabilities and provided adaptation assessments as part of their national communications. The second-generation assessments offered a more detailed overview of their current climate vulnerabilities and the manner in which people were responding to its impacts. The assessment also took into account future scenarios and possible adaptation strategies, in response to changing socio-economic environment responses (Mohner, 2018).

Through the years, the UNFCCC has invited parties and non-party stakeholders to the negotiating table, to make commitments and take actions against the adverse effects of climate change. Among these, adaptation actions are more crucial than ever. With each passing year vulnerable communities and ecosystems are frequently hit by the effects of climate change. Ambitious and successful adaptation action has the ability to pave the way for a resilient and significant emissions reduction in all sectors and nations. (The Adaptation Committee , 2019). When the third assessment report of the IPCC was published in 2001, parties increasingly recognised that mitigation alone will not be enough. It led to a concerted effort to plan and implement adaptation measures.

Conference of Parties (COP) in 2001 saw the adoption of the work programme to support the Least Developed Countries (LDCs), which included the preparation and implementation of the National Adaptation Programme of Action, or NAPA (UNFCCC, 2001). It was recognized that the LDCs were in urgent need of adaptation action, as they were more vulnerable and severely affected by climate change. The work programme was set-up to respond to the unique demands and high-level vulnerability of the LDCs. These actions were aided by the Least Developed Countries Fund (LDCF). Furthermore, the COP also created the Special Climate Change Fund or SCCF, under the convention and the Adaptation Fund under the Kyoto Protocol.These funds were to assist countries with financial aid to execute pilot projects, where adequate information was available to carry out such projects.

At COP11 in Montreal, it was decided to form a 'five-year programme of work of the Subsidiary Body for Scientific and Technological Advice (SBSTA) on impacts, vulnerability and adaptation to climate change'; this was re-named to the **Nairobi Work Programme (NWP) on Impacts Vulnerability and Adaptation to Climate Change** at the following COP. The NWP further evolved into the adaptation knowledge portal (UNFCCC). The NWP was established as a knowledge centre on adaptation. It was designed to enable and stimulate the generation of knowledge, along with dissemination of information and knowledge to inform and support adaptation policies and practises, at the regional, national, and sub-national levels through a variety of modalities. (UNFCCC).

In the year 2007, the United Nations Secretary-General, Ban Ki-moon hosted a High-Level Event on Climate Change. At this event he emphasised the importance of developing a new international climate change deal at the upcoming COP (COP13) session, through an inclusive process. The fourth assessment report (AR4) of the IPCC, further supported the need for adaptation actions to cope with the adverse effects of the global warming, which is already unavoidable owing to prior emissions (IPCC, 2007). With the AR4 and the Secretary-General event, the **Bali Action Plan** was undertaken by the COP, which quintessentially talks about enhanced action on adaptation.

Following three years of negotiations, a notable milestone was the parties asserting that adaptation and mitigation must be treated at similar levels of priority and also stressed on the requirement of funding to be provided to developing countries that are exposed to vulnerabilities – with the background of the **Cancun Adaptation Framework (CAF)**, which was established in the year 2010. A push to develop national strategies gained momentum in Cancun 2010, when parties were asked to provide details of their activities, evaluations, and learning. In the consultations that followed, it was agreed to develop National Adaptation Plans (NAPs). These plans were meant to be attentive to medium and long-term goals of the LDCs and provide effective strategies for implementation. Developing countries were also invited to be a part of the NAP process. The NAP process expects parties to provide information for monitoring review and overall progress and response; thus, incorporate emerging science for adaptation progress. Furthermore, the Adaptation Committee (AC) was formed under the CAF (UNFCCC, 2010). Established at COP21 in 2015, the landmark **Paris Agreement** (UNFCCC, 2015) launched the 'Global Goal on Adaptation' (GGA) under its Article 7.1. The GGA seeks to increase adaptive capacity, boost resilience, and decrease vulnerabilities to climate change globally. The Agreement requires a periodical review of the effectiveness of adaptation together with its adequacy – as part of the global stocktake (GST) process, which is due to happen at COP28 in 2023. While keeping in mind the crux of the Paris Agreement, that is, to keep the global average temperature rise below 2 degrees Celsius, parties also sought to shape an adaptation metrics which would be universal for all.

The recently concluded COP26 in Glasgow saw some progress on adaptation actions. This resulted in the comprehensive two-year **Glasgow-Sharm el-Sheikh work programme on the Global Goal on Adaptation** (UNFCCC, 2021), to be carried out jointly by the SBSTA and SBI decision (7/CMA.3). The origin of GGA dates back to 2013, when the African Group proposed a global goal for adaptation (GGA) 'associating levels of climate impacts and costs to the temperature goal, and that the adaptation costs associated with the long-term goal shall constitute the GGA'. This is expected to have a high priority at the upcoming COP27 in Sharm el-Sheikh, Egypt. The two-year work programme consists of four workshops each year, which will culminate at the COP28.

It is noted that even after establishing the GGA, the progress on operationalizing the GGA had been slow, until COP26. As results of the efforts put in by AGN and backed by developing countries, **the Glasgow–Sharm el-Sheikh Work Programme on the global goal on adaptation** was launched at COP26/CMA3 (The Republic of Zambia on behalf of the African Group of Negotiators on Climate Change, 2022). The GSS-WP is an important milestone for adaptation action; this work programme will seek to pave the way forward to operationalize GGA.

The GGA aims to assess the work accomplished for collective climate adaptation; however, parties to the UNFCCC continue to dispute how to quantify adaptation action. Meeting of the parties in the Paris Agreement (CMA) gave the AC particular instructions to study methods for evaluating progress towards the GGA. The AC published its findings in 2021 through a technical paper (Adaptation Committee, 2021). In their working paper, Beuchamp and Motaroki highlight the key challenges faced by various sectors in the technical report by the AC. These were methodological, empirical, conceptual and political.

This development was presented in Glasgow, as part of a larger discussion about rebalancing adaptation and mitigation – so that developing nations will be better equipped to carry out realistic climate change adaptation measures (Pringle, Thomas, & Strachan, 2021).

The GSS-WP aims to bridge the gap in evaluating and reviewing the adaptations efforts by the parties. The eight objectives as mentioned in the work programme (UNFCCC, 2021) are listed as follows:

(a) Enable the full and sustained implementation of the Paris Agreement, towards achieving the global goal on adaptation – with a view to enhance adaptation action and support

(b) Enhance understanding of the global goal on adaptation; including understanding of the methodologies, indicators, data and metrics along with needs and support required for assessing progress towards it

(c) Contribute to reviewing the overall progress made in achieving the global goal on adaptation as part of the global stocktake – referred to in Article 7, paragraph 14, and Article 14 of the Paris Agreement – with a view to informing the first and subsequent global stocktakes

(d) Enhance national planning and implementation of adaptation actions through evaluating the process of formulating and implementing national adaptation plans and submitted through nationally determined contributions and adaptation communications

(e) Enable parties to better communicate their adaptation priorities, implementation and support needs, plans and actions, including through adaptation communications and nationally determined contributions

(f) Facilitate the establishment of robust, nationally appropriate systems for monitoring and evaluating adaptation actions

(g) Strengthen implementation of adaptation actions in climate-vulnerable developing countries

(h) Enhance understanding of how communication and reporting instruments established under the Convention and the Paris Agreement, related to adaptation, can complement each other in order to avoid duplication of efforts

The CMA in its decision (FCCC/PA/CMA/2021/10/Add.3) asked parties to offer their opinions on how to accomplish the GSS-WP objectives. As of 4 June 2022, a total of 21 submissions from groups of parties and individual parties have been made on how to achieve the objectives of the work programme (UNFCCC, 2022). Views expressed on the expected outcomes of the GSS-WP seem to have a common thread of thoughts. The majority of parties anticipate that the work programme will develop a shared understanding of the GGA: how to construct it and how to evaluate progress made toward realising it. A large number of parties also anticipate that the work programme will significantly improve adaptation action and support, particularly financial support, as well as raise mitigation ambition to prevent and lessen the need for adaptation in the future. Moreover, a number of parties view the GGA work programme as a crucial forum for the complete exchange of pertinent good practises, methodologies, tools, and experiences on planning, implementing, monitoring, and evaluating adaptation action and support at the national, regional, and international levels (UNFCCC, 2022).

The following points will be important for GGA:

» Global goal, but country driven and locally validated

An important outcome of COP27 could be that the global community commits to securing basic universal enablers of adaptation at all scales, for example, universal access to early warning systems. The global goal on adaptation must be a universal goal at the global aggregate level, but also needs bottom-up validation by vulnerable communities. The four main approaches to formulate an adaptation indicator are: based on some context-specific common domains; covering processes and outcomes; based on existing national systems and data; and based on additional expert assessment and/or composite indices. Finer nuances can also cover various types of ecosystems, such as oceans, mountain, deltaic and arid regions.

» Specific, measurable, achievable, realistic and timely (SMART) goals

GGA must be specific, measurable, achievable, realistic and timely (SMART). It is important to link GGA to means of implementation, along with consideration of being context-specific and based on both qualitative and quantitative methods. Some metrics that can be considered is listed in Table 1.

TABLE 1: SAMPLE ADAPTATION METRICS THAT COULD BE CONSIDERED FOR THE GLOBAL GOAL ON ADAPTATION

Indicator Type	Themes	Indicators
Input	Adaptation finance	Adaptation climate finance released and disbursed in percentage and absolute terms for climate information systems, infrastructure, community-based social platforms, indigenous practices, nature-based solutions, economic development, and adaptation R&D
Output Infrastructure for climate information		Number of infrastructures created
Outcome	Universal access to climate information through infrastructure for Early Alert System (EAS)	Percentage of population having access to climate information systems, such as early warning systems
Impact	Improvement in vulnerable households' well-being	Number of people per 100,000 climate hazard affected population, that has attained least zero mortality rate attributable to climate related hazards and extreme events

LOSS AND DAMAGE

Concerns over the potential losses and damages from climate change impacts predate the formation of the UNFCCC. In 1991, on behalf of the Alliance of Small Island States or AOSIS, Vanuatu submitted a proposal to the Intergovernmental Negotiating Committee (INC) for a Framework Convention on Climate Change. In this proposal, AOSIS called for two things: (a) to set up an international fund to support the measures of addressing the impacts of climate change, and (b) a separate International Insurance Pool to provide financial insurance against the consequences of sea level rise particularly (INC, 1991), which will be financed mandatorily by the developed countries. In a separate statement to the United Nations General Assembly, the country contended that this fund should be separate from any bilateral and multilateral financial flows already in existence (UNGA, 1991).

However, when the Convention was set up, neither of these asks were addressed; although a reference to insurance can be found in Article 4(8) of the Convention (UNFCCC, 1992). It was not until COP7 in Marrakesh that the issue of insurance came up again, when Decision 5/CP.7 pronounced "consider, at its eighth session, the implementation of insurance-related actions to meet the specific needs and concerns of developing country Parties, arising from the adverse effects of climate change" (UNFCCC, 2001). (UNFCCC, 2002)

While the concept of losses and damages arising from the negative impacts of climate change predated the Convention, the phrase 'loss and damage' first found a mention in the UNFCCC text at COP13 in Bali – in the Bali Action Plan (UNFCCC, 2007), shortly after the release of IPCC's Fourth Assessment Report. The report highlighted that mitigation efforts were insufficient to avoid the impacts of climate change and pointed towards "critical thresholds beyond which some systems may not be able to adapt to changing climate conditions, without radically altering their functional state and system integrity" (IPCC, 2007).

At COP14 in Poznan, AOSIS proposed a loss and damage mechanism consisting of three streams: (a) an insurance component to respond to the risks associated with extreme weather events, (b) a rehabilitation and compensation component to address slow onset impacts, (c) and a risk management component (AOSIS, 2008). However, at this point, a contention had arisen between developed and developing countries, with the former strongly opposing any mention of compensation and rehabilitation (Kreienkamp & Vanhala, 2017).

The momentum on loss and damage gathered in Bali continued through Cancun, where a two-year work programme was established under the Cancun Adaptation Framework: to consider approaches to address loss and damage in developing countries particularly vulnerable to the impacts of climate change (UNFCCC, 2010). The Subsidiary Body for Implementation continued to have a series of expert meetings to help assess and address loss and damage in developing countries – at the national, regional and international levels. At COP18 in Doha, negotiations on loss and damage focused on the role of Convention in "enhancing knowledge and understanding of comprehensive risk management approaches", "strengthening dialogue, coordination, coherence, and synergies among relevant stakeholders" and "enhancing action and support, including finance, technology and capacity-building". It also decided to establish, in the nineteenth session, an institutional mechanism on loss and damage. The final decision text, known as the '**Doha Gateway**', however, skipped any reference to a compensation (UNFCCC, 2012).

The urgency to take concrete steps towards enhancing knowledge and understanding of how risk management tools can be used to address loss and damage was felt after the Southeast Asian region suffered extensive losses caused by Typhoon Haiyan – the most powerful storm to make landfall in recorded history (Roberts & Huq, 2015). The COP19 at Warsaw established the **Warsaw international mechanism** (WIM) for loss and damage, under the Cancun Adaptation Framework, which "shall fulfil the role under the Convention of promoting the implementation of approaches to address loss and damage". It also established an Executive Committee to guide the implementation of functions of the WIM through an initial two-year work plan (UNFCCC, 2013).

While the momentum on defining the functions of the executive committee continued in Lima at COP20, a major milestone was reached during the signing of Paris Agreement at COP21. Article 8 recognized the importance of "averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage" (UNFCCC, 2015a). However, paragraph 51 of the addendum to the Agreement demonstrated the unwillingness of developed countries to mention any compensatory fund, in stating: parties agree that this "does not involve or provide a basis for any liability or compensation" (UNFCCC, 2015b).

At COP25 in 2019, the Santiago Network was launched under WIM, to step up technical assistance for the implementation of relevant approaches at the local, national and regional levels, in developing countries that are particularly vulnerable to the adverse effects of climate change (UNFCCC, 2019). The functions of the Santiago Network were further agreed upon in Glasgow at COP26 (UNFCCC, 2021). The functions were related to (a) the effective implementation of the functions of the Warsaw International Mechanism, (b) catalysing technical assistance of relevant organizations, bodies, networks and experts, (c) facilitating and catalysing collaboration, coordination, coherence and synergies among stakeholders, (d) facilitating the development and dissemination of knowledge and information on addressing loss and damage.

One of the driving points among the key proposals submitted by various groups of countries representing Global South is that all functions of the **Santiago Network for Loss and Damage (SNLD)** must be demand-driven and set in context to each country's circumstances. This mean that any assessment undertaken to evaluate loss and damage needs, gaps, and barriers must be nationally driven, so that "capacity can be built at the national level to develop policies and recommendations, and to anticipate loss and damage and submit requests for assistance – including rehabilitation and recovery", as noted by the Republic of Zambia, on behalf of the African Group of Negotiators (AGN, 2022). Any technical assistance to the Parties

related to loss and damage should be consistent with their "national climate policies, NDCs, and long-term sustainable development priorities" (LMDC, 2022). All modalities should be dynamic and flexible to facilitate technical assistance across a broad spectrum of areas. Additionally, it was also proposed that a wide variety of Organizations, Bodies, Networks and Experts (OBNEs) should be encouraged to participate in the Network; especially those in developing countries, who will assist Parties in providing technical assistance and communicate support needs in terms of financial and technical aspects (AOSIS, 2022).

Uganda, in its proposal, rightly underscores that any operationalization of SNLD should avoid duplication of efforts with respected already existing constituted bodies – such as the LEG, Adaptation Committee, and the Nairobi work Programme – to minimize redundancy, time and resource wastage and to enhance credibility (Republic of Uganda, 2022).

On loss and damage needs assessment, based on the proposal submitted by Senegal on behalf of the LDCs, a common needs assessment process should be put in place, which can be the communication vehicle for technical assistance needs and associated finance needs (LDC, 2022). Before this, there is a need to take stock of existing capacity and structures at the subnational, national and regional levels, along with undertaking a gaps assessment – as outlined by Chile in its proposal on behalf of the Independent Alliance of Latin America and the Caribbean (AILAC, 2022).

While loss and damage financing has been a constant ask from the Global South, even before the UNFCCC was established, there has been no substantial progress in terms of setting up a separate financing facility or an insurance mechanism, as outlined in the original proposal in 1991. The Santiago Network requires dedicated and additional funding, including financing for carrying out the Loss and Damage Needs Assessments as well as for the provision of technical assistance. Until the establishment of such a facility, financing should be provided through the Financial Mechanism (FM) of the Convention and the Paris Agreement (AOSIS, 2022; LDC, 2022). As outlined by AILAC countries and Bangladesh in its proposals, the scope of a loss and damage financial facility would need to be broader than simply financing technical assistance through the SN – which should be just one of the beneficiaries of the proposed finance facility (AILAC, 2022; Republic of Bangladesh, 2022). It was also proposed that innovative sources of funding should be identified, such as, developing and/or expanding risk transfer and insurance facilities and solidarity funds; establishing distinct windows and instruments for loss and damage responses under multilateral funds like the GCF and GEF; and debt-for-climate swaps (AOSIS, 2022).

When it comes to the coordinating unit or the Secretariat, which will provide the administrative and infrastructural support to the SNLD, countries from the Global South – including the African Group of Negotiators, the AILAC countries, the Republic of Uganda, the Republic of Indonesia, Republic of Vanuatu and People's Republic of Bangladesh – are of the view that the Secretariat should be either hosted within UNFCCC or any other international organization, including an United Nations body (AGN, 2022; AILAC, 2022; Republic of Uganda, 2022; Republic of Indonesia, 2022; Republic of Vanuatu, 2022; People's Republic of Bangladesh, 2022).

However, the countries from Global North – including Canada, France on behalf of the European Union, and United States – are keen to support a coordinating unit placed outside and independent of the UNFCCC process (United States of America, 2022; European Union, 2022). Canada believes that "an organization external to the UNFCCC would have more capacity and relevant networks, and therefore, be best placed for hosting the secretariat" (Canada, 2022). In either case, the Network should not duplicate the ongoing work under the UNFCCC or the Paris Agreement, especially the technical work under the Warsaw International Mechanism, and should strive to give additional benefits to developing countries in catalysing technical assistance (Huang, Wenger, & Guilanpour, 2021).

The following recommendations for loss and damage become important:

» Loss and Damage Assessment

To fully and effectively operationalize the functions of the SNLD, the Network should urgently undertake assessments of loss and damage needs, gaps, and barriers that are owned and led by countries to ensure awareness clarity about the different risks and impacts that they may face. This will also enable capacity-building at a national level, in terms of developing policies and recommendations. This could also be a channel to communicate needs for technical assistance and/ or any associated financial aid.

» Role of organizations, bodies, networks and experts (OBNEs)

The Network should encourage the participation of relevant OBNEs to contribute to its mandate/functions. More OBNEs should come from the developing nations as well as those who are particularly vulnerable to the impacts of climate change. These OBNEs are to advise the coordinating body or the Secretariat of their interest in providing technical assistance through the SN and indicate the expertise available.

» Coordinate resources required for Santiago Network for Loss and Damage (SNLD)

To ensure the smooth functioning of the Network, its coordinating body or the Secretariat must play an active role in mobilizing and maintaining a steady and sustainable flow of resources, including financial, technical and human. These resources must be readily available and easily accessible by those who need it the most.

» Putting loss and damage finance on COP27 agenda

Loss and damage finance needs to be a dedicated agenda item, so that this issue is discussed at the highest levels.

CLIMATE FINANCE

The Standing Committee on Finance prepares the first needs determination report (NDR) of developing country Parties, related to implementing the Convention and the Paris Agreement last year in 2021 (UNFCCC 2021). The report analysed NDCs from 153 Parties (until 31st May 2021) and identified 4,274 needs – out of which only 1,782 needs (~42 %) were costed. The costed needs cumulatively amounted to USD 5.8–5.9 trillion considering the timeframe of 2030. For 89%of the costed needs, information was not provided on possible sources of finance. For the remaining 11%, USD 502 billion was identified as needs requiring international sources of finance and USD 112 billion from domestic finance. To come up with a realistic number to drive the discussions on both LTF and NCQG, the major gaps in terms of costing need to be addressed along with identifying the sources of finance. However, one aspect that is clear from the first NDR is that the floor of USD 100 billion of climate finance is extremely inadequate.

Even for the USD 100 billion commitment, according to OECD, the total climate finance provided and mobilised by developed countries amounted to USD 83.3 billion in 2020 (OECD 2022). Of this 82% came from public finance, 16% came from private finance and 2% came in the form of export credits. Out of USD 83.3 billion, USD 48.6 billion (58%) was for mitigation, USD 28.6 billion (34%) was for adaptation and USD 6.0 billion (7%) was for cross-cutting activities. 58% f the USD 83.3 billion, or USD 48.6 billion came from loans (concessional and non-concessional loans) and 21% or USD 17.9 billion came from grants. The issue of defining climate finance as well as accounting methods also needs to be resolved.

LONG-TERM FINANCE

Long-term finance (LTF) process is aimed at "progressing on the mobilization and scaling up of climate finance for resources originating from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources" (UNFCCC, 2022). Pre-2020 arrangements for LTF, for the period 2014 to 2020, were discussed and reported on primarily through three fora: one is biennial submissions by developed country Parties on their updated approaches and strategies for scaling up climate finance; two is annual in-session workshops; and third is biennial high-level ministerial dialogues on climate finance (UNFCCC, 2014). For the post-2020 period, the CMA – building on the existing channels – set out specific arrangements for discussing and reporting on the LTF through the biennial communications, dedicated online portal, compilation and synthesis of the biennial communications, biennial in-session workshops and biennial high-level ministerial dialogues.

In the discussion for LTF, the need for an enabling framework for adequate and relevant finance has been highlighted and also reiterated in Decision 6/CP.23 paragraph 6 (UNFCCC, 2018); where the need for Parties to "strengthen their domestic enabling environments and policy frameworks to facilitate the mobilization and effective deployment of climate finance" was noted.

The African Group (comprising 54 countries), supported by the Like-Minded Developing Countries (24, including India), has proposed at the ongoing COP26 in Glasgow that developed countries should deliver "at least" US $1.3 trillion per year (between 2025 and 2030) in climate finance, split equally between climate mitigation and adaptation (UNFCCC, 2022). However, with not much surprise, the developed nations participating in Glasgow pushed back to this notion of providing a stupendous amount of money. In 2009, developed nations agreed to provide developing nations with $100 billion in climate finance through the year 2020. This time frame was extended to 2025 as part of the Paris Agreement. However, industrialized countries have admitted that they will not be able to increase this amount until 2023, which is three years after the initial deadline in Glasgow, COP26.

The negotiators have argued that the figure of $1.3 trillion is not the focus of the long-term finance talks, whereas the decision is all about starting the discussion and attempting to choose when to end it. The goal is to depart from the $100 billion estimate, which was chosen without using any meaningful scientific justification. The African Group used the Global Environment Facility's co-financing ratio and the $100 billion target as a starting point to arrive at the $1.3 trillion estimate. When unveiling India's new climate pledges, Prime Minister Narendra Modi also requested $1 trillion from developed nations. However, there is still a substantial amount of ambiguity regarding quantified financial estimates in terms of long-term finance needed, especially for the developing countries to comply with the Paris Agreement targets.

The recommendations on LTF include the following:

» Restructuring organizations and governance

The integrated approach by government for climate finance is necessary to fast-track the climate funding. Also, organizations, institutions and government should adopt national strategies and go deeper for defining the roles and responsibilities in fighting climate change. For example, green budgeting can be an integral tool across government entities around the world, as it aligns national expenditures and revenues of climate goals.

» Need of financial institution capacity

In developing countries, there is a need of financial institutions for disbursing the finance (which is not available currently). This requires the support of international climate organizations for better coordination of long-term finance at national, regional, and local levels.

» Transparency on delivering and usage of climate finance

In both developed and developing countries, there is a need of better transparency on the delivery and use of long-term climate finance. This will complement both countries and increase the accountability, to assess if developed countries are meeting their commitments and whether funds are being effectively used by developing countries

NEW COLLECTIVE QUANTIFIED GOAL

The delegates at the Climate conclave in Glasgow launched an ad-hoc work program, which will run until COP-29 in 2024, to initiate the proceedings of the **New Collective Quantified Goal (NCQG)**. A significant decision made in conjunction with the 2015 Paris Agreement calls for the establishment of a new collective quantifiable goal for climate finance before 2025. This new objective must consider the needs and objectives of developing nations and be built upon the pledge to invest $100 billion annually by 2020 (UNFCCC, 2022). The first technical expert dialogue took place in March 2022, in which it was decided that the first year of the program will be dedicated to bringing a transparency and inclusivity paradigm to the climate finance discourse and identify critical questions associated with it. There is an on-going discourse on how NCQG will support the objectives of the Paris Agreement. The solution to this discourse revolves around linking NCQG with various articles of the Paris Agreement. For example, NCQG needs to be linked with Article 2.1 of the Paris Agreement, which aims to make finance flows consistent to a pathway towards a climate resilient future. Clarifying these connections will make it easier to choose a method for monitoring progress toward the new objective, since the articles under the Paris Agreement contain qualifications for climate finance and would affect what counts and how it counts. For example, one prominent option can be connecting the NCQG to the enhanced transparency framework under Article 13 of the Paris Agreement, which specifies how parties must report on progress towards their mitigation, adaptation actions along with support received. A significant roadblock that lies ahead is the quantification value of climate finance, especially for the developing countries. It would be necessary for the Parties to conduct extensive study of reports, research and statistics to agree upon an output-based target. To elaborate, there is need for more

studies – like the UNFCCC report launched in 2021 that illustrates NDCs of 153 countries acknowledged an urgent need for climate finance for technology and capacity building, quoting an amount of 5.8-5.9 trillion US dollars.

Developing countries keep pushing to increase financing for adaptation, mainly to bridge the gap between mitigation and adaptation actions. While major global climate funds – including the Green Climate Fund – have started to bridge this gap, climate finance still remains disproportionately allocated towards mitigation actions. A latest report published by the Climate Policy Initiative showed that in the financial year 2019-20, only 7% funds were targeted for adaptation interventions, compared to 90% for mitigation in the developing nations. The NCQG's inclusion of support for loss and damage will be one of its most divisive topics. Due to more frequent and severe extreme weather, there has already been a significant loss of life and property damage. While obligations to help address, avoid, and limit loss and damage are still hazy, these climatic impacts have significant financial ramifications for the economy of developing countries. Additionally, COP27 will place a strong emphasis on converging sustainable development priorities, such as the elimination of poverty and climate obligations with the NCQG. When building the NCQG, parties will need to consider various factors – including making sure that decent work and high-quality jobs are created as well as assisting in just transitions in developing nations. Therefore, it is crucial to understand the priorities of the developing nations, considering their needs before setting up targets and guidelines. Furthermore, from a developing country's perspective, the NCQG should be segregated on priority-based targets, i.e., specific to mitigation, adaptation, loss and damage and just-transitions needs, and then deep dive into sectors like energy and nature-based solutions. Considering a holistic approach, it is also important that just transitions should consider both adaptation and mitigation actions. Moreover, there is a need to identify sub-goals and targets within the NCQG. Just like SDGs, NCQG should also have input indicators, output indicators and outcome indicators. Moreover, it is important to have indicators that facilitate access of climate finance by the most vulnerable communities and sectors.

The recommendations on NCQG include the following:

» To create an empowered ad-hoc technical committee under the UNFCCC

As discussed in Pre COP26, there is a need to create an ad-hoc technical committee under the UNFCCC. The Technical Committee's work would be concentrated on quantitative, qualitative, and transparent aspects, with guiding concepts like adequate and predictable climate finance and accountability of those giving and mobilizing financial resources as main topics. The committee could be empowered to also monitor the work of the co-chairs and subsidiary bodies in terms of regular meetings and other rules and regulations as identified in the decision text (9/CMA.3) of COP26.

» Mandate a technical process led by the Subsidiary Body for Implementation

The Subsidiary Body for Implementation (SBI) may be given a mandate by countries to carry out a technical procedure that will help guide discussions about NCQG. The rationale behind giving a mandate to the SBI is that it will align with its existing agenda: in terms of covering matters such as finance, transparency and capacity building.

» Establish a Work Program on the new collective quantified goal

A Work Program on the new collective quantifiable aim may also be established by the Parties, building on the long-term climate finance approach. Countries may carry out a specific Work Program, as was done during COP17 in Durban, under the supervision of the CMA and under the direction of co-facilitators chosen by the COP president. To inform the negotiations, this procedure could include seminars, discussions and other events with a wide range of stakeholders.

GLOBAL STOCKTAKE

The global stocktake (GST) mechanism was introduced in December 2015 at COP 21 under Article 14 of the Paris Agreement (PA). The GST would take stock of PA as the implementing tool for collective progress assessment that aims to achieve the purpose of the PA and its long-term goals.The key purpose of GST is to inform all the Parties, for updating and enhancing the NDCs (Global Stocktake, 2022).

The GST is introduced for achieving long-term goals of the Paris agreement by assessing world's collective progress. The provisions for the GST were finalized in Glasgow at COP26, after being agreed to as part of the Katowice Climate Package at COP24 in 2018. GST is considered as an essential part covered under article 14 of the Paris Agreement. m Article 14 focuses on "*The Conference of the Parties serving as the meeting of the Parties to this Agreement shall periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals*" (UNFCCC, 2016). The first formal stocktaking exercise will take place in 2023, followed by every 5 years thereafter. The three phases of global stocktake are mandated to do the (i) information collection and preparation; (ii) technical assessment; and (iii) consideration of outputs.

The principle of equity plays an important role for shaping the GST from Global South's perspective. In relation to the Convention and PA, the concept of equity should be considered for all climate actions while updating the GST for mitigation, adaptation and means of implementation. It is important to also consider the support from developed nations for finance, technology advancement and capacity building. The challenges arising due to climate change must also be pertinent with the concept of **Common but Differentiated Responsibilities and Respective Capabilities (CBDR&RC)**. This should be supported through the provision of means of implementation by developed country parties (Al-Zahrani, et al., 2019)

There are few issues that were noted with the implementation of GST towards the perspective of Global South. One of those is that the GST reporting frequency is too short as this not only includes collection of data, but also evaluating the impacts of activities undertaken on long-term towards climate action. Countries like India demanded 10-year period for reporting GST. The demand of the global north was considered and preferred which is not fair for the global south considering principle of equity and CBDR&RC (Sinha, 2015). Hence, the required support and collaboration from developed countries – for providing finance, technology, and capacity building for reporting GST every five years – should be considered and implemented properly. This needs special attention as historically this has not been done; for instance, the pledge from developed nations of providing 100 billion of dollars to developing nations was also not fulfilled (Ares, COP26: the international climate change conference, Glasgow, UK, 2021) and the targets of providing finance have been missed since 2012 (Ares & Loft, 2021). Hence, to resolve the issues and considering equity with GST reporting the actions of the global south, in terms of mitigation or adaptation, should not be considered by the same standard as developed nations , rather should be done progressively.

The recommendations for GST include:

» GST needs to be rooted in the principles of equity

Considering the principles of the convention, GST needs to be rooted in equity and the principles of CBDR-RC. The period of five years for evaluating the stocks might be short and needs to be reconsidered. Else, the proper description of how both developed and developing nations will calculate the stocks should be created, which could be used as a rulebook for all the nations. We need to consider either of these two aspects while reporting GST, otherwise future challenges might be created for the global south.

» Provisions of enabling conditions such as climate finance

The need of a provision for finance to be articulated in the GST should be dedicatedly represented. GST aims to have a provision and finance for climate actions; however, it is not clear how it will play out for finance. Hence, a significant data and research gap filling, fostering convergence towards new topics and better understanding for inclusion of finance in GST, is required and plays crucial role for the global south (Watson & Roberts, 2019).

» Positive international cooperation

The key objective of GST also includes collective performance, which involves collective actions to achieve data collection for adaptation and mitigation goals. The global south needs support from the global north for data collection, technical assessment; hence, bilateral and multilateral cooperation is one of the recommendations for the same (Milkoreit & Haapala, 2018).

PEOPLE-CENTRIC IMPERATIVES FROM A GLOBAL SOUTH PERSPECTIVE

A paradigm shift in the climate regime is needed. There is a need to re-define vulnerability and move away from a country-centric approach to a people-centric approach in climate negotiations. The global climate regime must benefit vulnerable people and not just vulnerable countries. The principles of equity and 'common but differentiated responsibilities and respective capabilities', or CBDR-RC, along with the principle of 'polluters pay' is key to inclusive, rules-based, ambitious, substantive outcomes and commensurate outcomes at COP27 and beyond.

It is crucial to see progress being made in framing the GGA and creating a work programme to advance it, because now the Global Stocktake is rapidly approaching. Especially when it comes to GST, metrics will be key to measure progress. The goal would also have to be specific, measurable, achievable, realistic and time bound. It is important to link GGA to means of implementation along with consideration of being context-

specific and based on both qualitative and quantitative methods. An important outcome of COP27 and COP28 could be that the global community commits to securing basic universal enablers of adaptation at all scales; for example, universal access to early warning systems. Metrics could include basic enablers – such as universal access to climate information – along with input indicators of climate finance, output indicators of policies and frameworks, as well as related to implementation and impact indicators (such as reduced vulnerabilities). Global goal but locally validated:the global goal on adaptation must be a universal goal at the global aggregate level, but also needs bottom-up validation by vulnerable communities.

Loss and damage finance needs to be a dedicated agenda item under the COP negotiations. More organizations, bodies, networks and experts (OBNEs) should come from the developing nations, as well as those who are particularly vulnerable to the impacts of climate change. To fully and effectively operationalize the functions of the Santiago Network for Loss and Damage, the Network should urgently undertake assessments of loss and damage needs, gaps, and barriers, that are owned and led by countries to ensure awareness clarity about the different risks and impacts that they may face. A people-centric approach is important to understand as to who loses and what damage do they suffer in areas such as, agriculture, access to basic services and human well-being.

The report prepared by the Standing Finance Committee under the UNFCCC estimated that developing nations would need USD 5.8-5.9 trillion every year till 2030, to achieve less than half of their climate goals under the Paris Agreement (UNFCCC, 2021). The New Collective Quantified Goal (NCQG), starting from 2025, is currently in the process of discussion; therefore, it must be based on the needs and requirements of the developing countries, especially considering the need to balance between adaptation climate finance and mitigation climate finance. NCQG also needs to be linked to the long-term strategies submitted by countries.

The 'polluter pays' principle is key for equitable climate finance. It is ironic that Global South is paying to solve the problems they did not cause. Of the USD 83.3 billion of climate finance, 58% or USD 48.6 billion

came from loans (concessional and non-concessional loans) and 21% or USD 17.9 billion came from grants (OECD, 2022). Climate finance needs to benefit vulnerable people, communities, and sectors and not just countries. There is a need for better transparency on the delivery and use of climate finance. Definitions and accounting practices when it comes to climate finance need to be decided on soon. It is also important to recognize the limitation of market-based instruments when it comes to adaptation finance – where the role of government-based facilitation involving public finance and climate finance is key. New instruments such as debt restructuring should be considered.

The principle of equity is key and must be recognized in each sphere of action especially the GST. Inclusion of adaptation and loss and damage in the stocktake process will be key. The provision for finance to be articulated in the GST needs to be dedicatedly represented. Climate finance should be the heart and soul of GST and must be reported at disaggregated levels of mitigation, adaptation, and loss & damage.

The current geopolitical crisis adds to the energy crisis and thus, highlights the need for stepping up financial support; particularly support in the form of grants or concessional finance for developing countries. The Global South needs to be certain in terms of clear and concrete requests for finance. Subsequent communications from countries should include costing of needs.

Developing countries should use the increasingly interesting space around the COP, which allows people to rally important issues on the table, which are not on the formal agenda. Developing countries can start using this space to talk about debt restructuring. There is a need to focus not only on the quantity of finance, but also its quality – whether it is grant finance, or concessional finance, or ordinary investment flows, which operate according to market forces. The proposal on the idea of linking up the question of debt restructuring with climate finance must be pursued by the Global South.

Sharm el-Sheikh is part of a much longer road. Inclusive climate transitions need to be at the heart of policymaking, so that in the realms of adaptation, mitigation, loss and damage and cross-cutting measures, there are sufficient safety nets ensuring no one is left behind. Policy initiatives need to be supplemented by people-centric mass movements: such as Lifestyle for Environment (LiFE) campaign of India. Individual, community and institutional led initiatives could trigger bottom-up and non-linear changes in the demand, supply and policy space at large-scales.

At some point, the global stocktake must introspect on the climate regime itself, in terms how of much has been achieved in the quest of pursuing objectives to address climate change. To address climate change issues, a well thought out institutional mechanism needs to be developed, with a scientific and economic backing to the process of international environmental governance. The Global Stocktake should focus on honest discussion about the required system change. Both finance and transparency are essential, along with paradigm shifts needed for systematic changes and large-scale transitions. The global stocktake assessments need to be inclusive and people centric.

*****

REFERENCES

Adaptation Committee. (2021). *Approaches to reviewing the overall progress made in achieving the global goal on adaptation.* Bonn: UNFCCC.

AGN. (2022). *Submission by the Republic of Zambia on behalf of the African Group of Negotiators (AGN) on the Institutional Arrangements for Operationalizing the Santiago Network on loss and damage.* United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202206011050---AGN%20Submission%20by%20the%20Republic%20of%20Zambia%20on%20SNLD.pdf

AILAC. (2022). *Submission by Chile on behalf of the AILAC Group of Countries.* United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202203141510---220309%20Submission%20AILAC%20-%20Views%20on%20several%20aspects%20of%20the%20Santiago%20Network%20vf.pdf

Al-Zahrani, et al. (2019). *Ensuring an Operational Equity-Based Global Stocktake Under The Paris Agreement.* South Centre.

AOSIS. (2008). *Proposal to the AWG-LCA: Multi-Window Mechanism to Address Loss and Damage from Climate Change Impacts.* Poznan: Alliance of Small Island States.

AOSIS. (2022). *Submission by Antigua and Barbuda on behalf of the Alliance of Small Island States on the Santiago Network for Loss and Damage.* United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202205310932---AOSIS%20-%20Submission%20-%20Santiago%20Network%20-%202022-05-31.pdf

Aragon, I. (2022). *Waking up: the vital long-term finance goal of the Paris Agreement.* London: International Institute for Environment and Development. Retrieved from https://www.iied.org/waking-vital-long-term-finance-goal-paris-agreement

Ares, E. (2021). *COP26: the international climate change conference, Glasgow, UK.* London: House of Commons Library. Retrieved from https://commonslibrary.parliament.uk/research-briefings/cbp-8868/

Ares, E., & Loft, P. (2021). *COP26: Delivering on $100 billion climate finance.* London: House of Commons Library. Retrieved from https://commonslibrary.parliament.uk/cop26-delivering-on-100-billion-climate-finance/

Beauchamp, E., & Motaroki, L. (2022). *Taking stock of the global goal on adaptation: from the Paris Agreement to the Glasgow–Sharm el Sheikh work programme.* London: IIED.

Canada. (2022). *Canada's submission on the Santiago Network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.* United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202203301256---Santiago%20Network%20Submission_Clean_March%2029.pdf

CAT (Climate Action Tracker). (2022). CAT Climate Target Update Tracker. URL: https://climateactiontracker.org/climate-target-update-tracker-2022/

Global Carbon Project. (2021). Supplemental data of Global Carbon Project 2021 (1.0) [Data set]. Global Carbon Project. https://doi.org/10.18160/gcp-2021. Avaiable through Our World in Data https://ourworldindata.org/grapher/share-of-cumulative-co2?tab=table

Global Stocktake. (2022, August 14). Retrieved from United Nations Framework Convention on Climate Change: https://unfccc.int/topics/global-stocktake/global-stocktake#:~:text=The%20global%20stocktake%20of%20the,term%20goals%20(Article%2014)

Gonzalez, L. (2021). *Where Do We Go from the $100 Billion Goal? Procedural Options to Enhance Climate Finance Ambition at COP26.* World Resources Institute. Retrieved from https://www.wri.org/insights/where-do-we-go-100-billion-goal-procedural-options-enhance-climate-finance-ambition-cop26

Huang, J., Wenger, C., & Guilanpour, K. (2021). *Loss and Damage: Issues for COP26.* Arlington, Virginia: Center for Climate and Energy Solutions.

INC. (1991). *Draft Annex relating to Article 23 (Insurance) for inclusion in the revised single text on elements relating to mechanisms submitted by the Co-Chairman of Working Group II.* Geneva: Intergovernmental Negotiation Committee.

IPCC (Intergovernmental Panel on Climate Change). (2021). 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

IPCC. (2007). Assessment of adaptation practices, options, constraints and capacity. In M. Parry, O. Canziani, J. Palutikof, P. v. Linden, & C. Hanson, *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment* (p. 733). Cambridge University Press.

IPCC. (2007). *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge, UK: Cambridge University Press.

Kreienkamp, J., & Vanhala, L. (2017). *Policy Brief on Climate Change Loss and Damage.* London: University College London Global Governance Institute.

LDC. (2022). *Submission by the Senegal on behalf of the Least Developed Countries (LDCs) group on the Santiago Network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.* United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202204220938---LDC%20Submission-SNLD.pdf

LMDC. (2022). *Submission by Ecuador on behalf of the Like-Minded Developing Countries (LMDC) on the institutional arrangements for the Santiago Network.* United Nations Framework Convention on Climate Change.

Milkoreit, M., & Haapala, K. (2018). *The global stocktake: design lessons for a new review.* Springer Nature.

Mohner, A. (2018). The evolution of adaptation metrics under UNFCCC and its Paris Agreement. In L. Christiansen, G. Martinez, & P. (. Naswa, *Adaptation metrics: Perspective on measuring, aggregating and comparing adaptation results* (pp. 15-27). Cophenhagen : UNEP DTU Partnership.

OECD. (2022). *Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020, Climate Finance and the USD 100 Billion Goal*. Paris: OECD Publishing.

Pringle, P., Thomas, A., & Strachan, E. (2021). *What next for the Global Goal on Adaptation?* Climate Analytics. Retrieved from https://climateanalytics.org/media/what_next_for_the_global_goal_on_adaptation_2.pdf

Republic of Kenya. (2022). *Kenya's submission on the Santiago Network for Loss and Damage.* United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202204041458---Kenya%20Submission%20on%20Santiago%20Framework%20for%20Loss%20and%20Damage.pdf

Republic of Uganda. (2022). *Uganda's Submission to UNFCCC on aspects of the Santiago Network on Loss and Damage.* United Nations Framework Convention on Climate Change. Retrieved from https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202204081601---UGANDA_S%20SUBMISSION%20TO%20UNFCCC%20ON%20LOSS%20%20DAMAGE.pdf

Roberts, E., & Huq, S. (2015). Coming full circle: the history of loss and damage. *International Journal of Global Warming*, 141-157.

Sinha, A. (2015). *What is Global Stocktake?* Indian Express. Retrieved from https://indianexpress.com/article/explained/what-is-global-stocktake/

The Adaptation Committee . (2019). *25 Years of Adaptation Under the UNFCCC.* Bonn: United Nations Framework on Convention on Climate Change .

The Republic of Zambia on behalf of the African Group of Negotiators on Climate Change. (2022). *Submission by The Republic of Zambia on behalf of the African Group of Negotiators on Climate Change (AGN) on Global Goal on Adaptation.* UNFCCC submission Portal.

UN. (1992). *United Nations Framework Convention on Climate Change.* Rio: United Nations .

UNFCCC. (1992). *UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE.* United Nations.

UNFCCC. (1996). Report of the conferance of Parties on its second session. *United Nations Framework Convention on Climate Change* (pp. 12-48). Geneva: UNFCCC.

UNFCCC. (2001). *Report of the Conference of the Parties on its Seventh Session.* Marrakesh: United Nations Framework Convention on Climate Change.

UNFCCC. (2001). *Report of the COP on its seventh session.* Marrakesh: United Nations Framework Convention on Climate Change.

UNFCCC. (2002). *Report of the Conference of the Parties on its Eighth Session.* New Delhi: United Nations Framework Convention on Climate Change.

UNFCCC. (2007). *Report of the Conference of the Parties on its thirteenth session.* Bali: United Nations Framework Convention on Climate Change.

UNFCCC. (2010). *CP/2010/7/Add.1: Report of the Conference of the Parties on its sixteenth session.* Cancun: United Nations Framework Convention on Climate Change.

UNFCCC. (2010). *Report of the Conference of the Parties on its sixteenth session.* Cancun: UNFCCC.

UNFCCC. (2012). *Report of the Conference of the Parties on its eighteenth session.* Doha: United Nations Framework Convention on Climate Change.

UNFCCC. (2013). *Report of the Conference of the Parties on its nineteenth session.* Warsaw: United Nations Framework Convention on Climate Change.

UNFCCC. (2014). *Report of the Conference of the Parties on its twentieth session.* Lima: United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/resource/docs/2014/cop20/eng/10a02.pdf#page=9

UNFCCC. (2015). *Paris Agreement* . Paris: United Nations.

UNFCCC. (2016). *Paris Agreement.* United Nations Framework Convention on Climate Change.

UNFCCC. (2018). *Climate Finance Decision Booklet.* United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/sites/default/files/resource/Climate%20Finance%20booklet%202018_5.pdf

UNFCCC. (2019). *Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its 2019 review.* SantiagoBonn: United Nations Framework Convention on Climate Change.

UNFCCC. (2021). *First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement*. Bonn: Standing Committee on Finance, United Nations Framework Convention on Climate Change.

UNFCCC. (2021). *Glasgow-Sharm el-Sheikh work programme on the global goal on adaptation.* GlasgowBonn: United Nations Framework Convention on Climate Change.

UNFCCC. (2021). *Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation* . Glasgow: UN.

UNFCCC. (2021). *PA/CMA/2021/L.22: Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts.* GlasgowBonn: United Nations Framework Convention on Climate Change.

UNFCCC. (2022). *Compilation and synthesis of submissions on the Glasgow–Sharm el-Sheikh work programme on the GGA.* United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/sites/default/files/resource/Compilation%20and%20synthesis_GGA_WP_submissions_5June2022.pdf

UNFCCC. (2022). *National Adaptation Plans (NAPs)*. Retrieved from UNFCCC: https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans

UNFCCC. (2022, August 14). *Introduction to Climate Finance*. Retrieved from United Nations Framework Convention on Climate Change: https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance

UNFCCC. (2022, August 14). *Long-Term Climate Finance (LTF)*. Retrieved from United Nations Framework Convention on Climate Change: https://unfccc.int/topics/climate-finance/workstreams/long-term-climate-finance-ltf#:~:text=The%20work%20programme%20on%20long,specifications%20in%20decision%205%2FCP.

UNFCCC. (2022, August 14). *New Collective Quantified Goal on Climate Finance*. Retrieved from United Nations Framework Convention on Climate Change: https://unfccc.int/NCQG

UNFCCC. (n.d.). *Adaptation Knowledge Portal.* Retrieved from UNFCCC: https://www4.unfccc.int/sites/nwpstaging/Pages/Home.aspx

UNFCCC. (n.d.). *Overview of the Nairobi work programme.* Retrieved from UNFCCC: https://unfccc.int/sites/default/files/resource/NWP_overview_FINAL_updated.pdf

UNGA. (1991). *Statement on comnibnents suhnitted by the delegation of Vanuatu on behalf of the States members of the Alliance of Small Island States to working Group I at the fourth meeting of the Intergovernmental Negotiating Committee.* Geneva: United Nations General Assembly.

UNGA. (2022). *Glasgow-Sharm el-Sheikh work programme on the Global Goal on Adaptation: Remarks by H.E. Mr. Abdulla Shahid, President of the 76th session of the United Nations General Assembly.* New York: United Nations General Assembly. Retrieved from https://www.un.org/pga/76/2022/05/16/glasgow-sharm-el-sheikh-work-programme-on-the-global-goal-on-adaptation/

Watson, C., & Roberts, L. (2019). Understanding finance in the Global Stocktake. *Part of the iGST Designing a Robust Stocktake Discussion Series*.

WRI. (n.d.). *Navigating the Paris Agreement Rulebook: Global Stocktake Deeper Dive.* World Resources Institute.

WORLD SUSTAINABLE DEVELOPMENT SUMMIT

The World Sustainable Development Summit (WSDS) is the annual flagship Track II initiative organized by The Energy and Resources Institute (TERI). Instituted in 2001, the Summit series has a legacy of over two decades for making 'sustainable development' a globally shared goal. The only independently convened international Summit on sustainable development and environment, based in the Global South, WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. Over the years, the Summit series has witnessed the participation of 54 Heads of State and Government, 103 Ministers, 13 Nobel Laureates, 1888 Business Leaders, 2745 Speakers, and 38,280 Delegates.

ACT4EARTH

Act4Earth initiative was launched at the valedictory session of WSDS 2022. Building on the discussions of WSDS, this initiative seeks to continuously engage with stakeholders through research and dialogue. Act4Earth initiative has two components: **COP Compass** and **SDG Charter**. The COP Compass will seek to inspire and mobilize leadership at all levels, for inclusive transitions through ambitious and informed policies and measures which will enable paradigm shifts – towards meeting the UNFCCC and Paris goals through mitigation, adaptation and means of implementation. The SDG Charter will seek to identify gaps and suggest ways for strengthening and mainstreaming sustainable development in policy agendas for enhanced environmental, social, and economic outcomes.

Contact

Centre for Sustainable Development Research and Leadership
The Energy and Resources Institute
6C, Darbari Seth Block, India Habitat Centre, Lodhi Road
New Delhi - 110 003 India
Email: wsds@teri.res.in