

Key Issues to Watch at COP 28

November 9 , 2023
7:00 PM -8:30 PM EST



University Climate
Change Coalition

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Constituency



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Professor Saleemul
Huq OBE
(1952-2023)



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Moderator



**Anna McGinn, Policy Manager
Environmental and Energy Study
Institute**

Outline of webinar

Key Issues To Watch

- Global Stocktake
- Loss and Damage Finance
- New Collective Quantified Goal
- Global Goal on Adaptation
- General Negotiations Issues on International Carbon Markets Under Article 6
- Critical Issues Regarding Ocean-Based Carbon Dioxide Removal Strategies

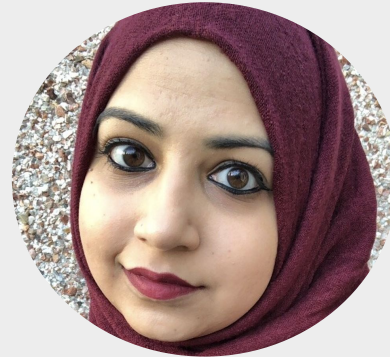
Panel Discussion

Questions & Answers

Speakers



**Tracy Bach, Co-Focal Point, RINGO
Professor of Law
Lecturer, Tuck School of Business at
Dartmouth**



**Zoha Shawoo, Scientist, Equitable
Transitions Program, Stockholm
Environment Institute**

Speakers



**Beth Martin, Co-Focal Point, RINGO
Teaching Professor, Washington
University in St. Louis**



**Danielle Falzon, Assistant Professor of
Sociology, Rutgers University**

Speakers



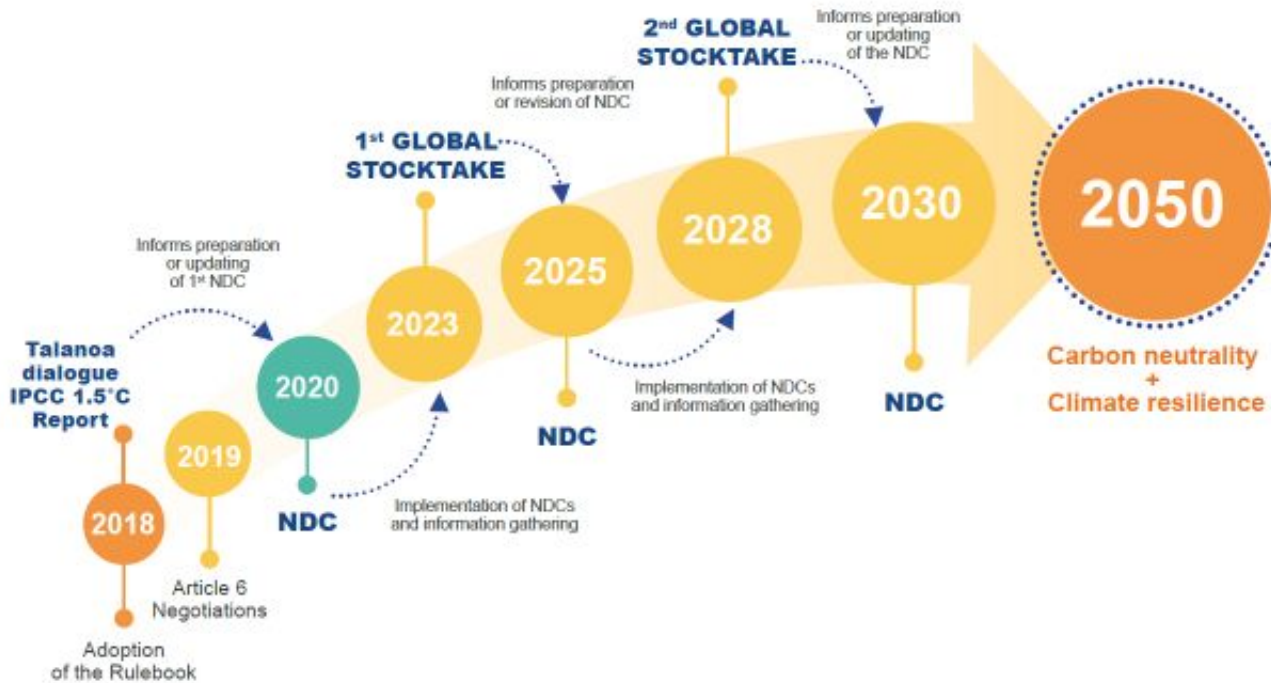
Axel Michaelowa, Senior Founding Partner, Perspectives Climate Research, University of Zurich



Miriah Kelly, Assistant Professor of Environmental Science, Southern Connecticut State University

Global Stocktake

GST and NDC Ambition Cycle



Source: World Resources Institute

- Per Article 14 of Paris Agreement (2015)
- As interpreted by dec19/CMA1 (2018)
- As put into practice by two co-facilitators, Parties, and non-party stakeholders (NPS) in three rounds of technical dialogue roundtables (TD 1.1 – 1.3) conducted at SB56, SB57/COP27, and SB58.
- With final output at COP28

Per PA Article 14

CMA 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
- undertake its first global stocktake in **2023** and **every five years** thereafter

The outcome of the GST shall:

inform Parties in **updating and enhancing**, in a nationally determined manner, their actions and support ... as well as in **enhancing international cooperation**

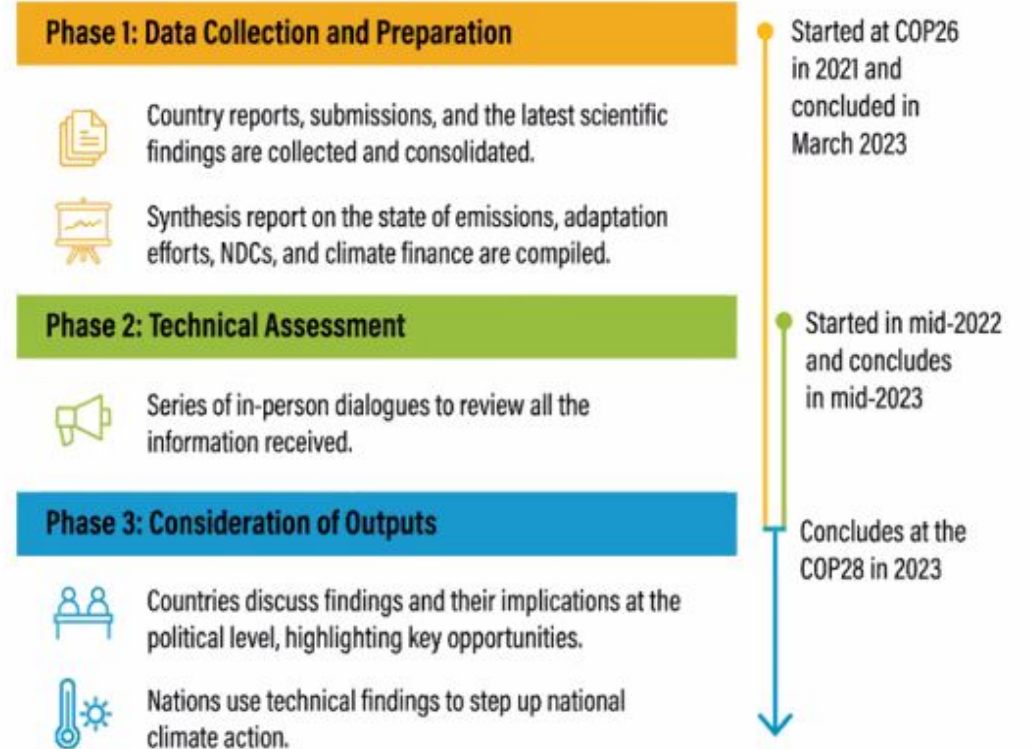
Interpreted by dec19/CMA1

- Established SBI/SBSTA **joint contact group** to assist conducting GST, with expert consideration of inputs in technical dialogue supporting JCG
- Technical dialogue on **thematic areas of mitigation, adaptation, and Mol**
- Conducted in “comprehensive, facilitative, effective and efficient manner” that **avoids duplication of work and considers relevant work** under UNFCCC, KP, and PA.
- Party-driven transparent process **with the participation of NPS.**

GST1 organized in 3 phases:

- **Information collection** and preparation
- **Technical assessment**, and
- **Consideration of outputs**
- Recognized overlap of 1 and 2

Unpacking the Global Stocktake



Source: WRI Authors
23 JAN 2023

Outputs phase: from SB58 to COP28

Outputs:

- Should summarize “opportunities and challenges for enhancing action and support in the light of equity and the best available science, as well as lessons learned and good practices”
- Should “have no individual Party focus” and include “non-policy prescriptive consideration of collective progress”
- Should “summarize key political messages ... for strengthening action and enhancing support”
- Be referenced in a [CMA] decision and/or a declaration.

Consideration of outputs consists of “high-level events where technical assessment findings presented, discussed, considered by Parties,” chaired by a high-level committee Parties invited to present NDCs “informed by the outcome of the global stocktake” at a UNSG special event.

Source: Dec19/CMA1



Status quo of political phase

- HE Barbara Creecy (South Africa) and HE Dan Jørgensen (Denmark) appointed to consult on critical elements of GST1 outcome – e.g. at pre-COP, ministerials, bilats, UNSG summit
- [12-14 Oct intersessional workshop](#) considered elements of draft dec text per [structured discussion](#)
- Co-chairs' proposal to break up into subgroups rejected; rather than drafting specific dec text, Parties exchanged in plenary setting w/ wide range of general v specifics, largely per submissions on the matter
- [Secretariat \(65-page\) synthesis report published 4 Oct](#) – analyzes submissions by 24 P groups (= 180 Ps) and 44 NPS using a 2-part structure:
 - Backward looking: *collective progress, gaps, challenges and barriers*
 - Forward looking: *opportunities and messages for further progress*
- Approx 60 findings and possible elements noted for mitigation and adaptation; in contrast on finance, 4 alternatives needed to synthesize views and 13/17 pages devoted to Mol
- [8 Sept GST1 TD](#) co-facilitator synthesis report: almost 20 pgs of findings (IPCC – key findings w/ supporting paragraphs) on mitigation, adaptation, and Mol

Where are we 21 days before COP28 opens?

- Challenges to sources of inputs, notably to IPCC AR6 SYR
- Scope of backward look, e.g. explicit request for pre-2020 findings by KSA obo LMDC
- How much forward looking and in what forms? What is “too” prescriptive?
- Linkages with other negotiation strands, e.g.
 - MWP
 - GGA
 - NCQG
 - Article 2.1.c Dialogue
 - WP on Just Transition
- Discomfort expressed with discussing GST1 outside of UNFCCC processes, e.g. UNSG Climate Week meeting
- View NPS engagement with careful eye

Clarity still needed around output form:

- CMA dec
- Declaration(s)
- Technical annex



GST will be one of the crunch topics in Dubai



Loss and Damage Finance

COP27: a breakthrough decision after decades of advocacy

2. *Decide* to establish new funding arrangements for assisting developing countries that are particularly vulnerable to the adverse effects of climate change, in responding to loss and damage, including with a focus on addressing loss and damage by providing and assisting in mobilizing new and additional resources, and that these new arrangements complement and include sources, funds, processes and initiatives under and outside the Convention and the Paris Agreement;
3. *Also decide*, in the context of establishing the new funding arrangements referred to in paragraph 2 above, to establish a fund for responding to loss and damage whose mandate includes a focus on addressing loss and damage;



Transitional committee set up to discuss operationalization

Key points of contention:

- Where should the fund be hosted
- Who will pay into the fund, and who will be eligible to receive funding
- Scope of the fund: extent to which it will be narrowed down
- Governance: how civil society and affected communities will be involved in decision-making over use of funds
- Accessibility requirements: how to move away from GCF / AF model + relevance of trigger-based systems
- Instrument of funding: only grants based?
- Mechanisms for reaching most vulnerable communities on the ground: EDA vs national govt
- Relationship between the fund and the funding arrangements, and how the fund will relate to broader mosaic of solutions



Loss and damage negotiations at COP28

1. The Loss and Damage Fund
2. Global stocktake
3. New Collective Quantified Goal (NCQG)
4. Santiago network and the Warsaw International Mechanism

In 2023 we've seen climate destruction in real time, yet rich countries are poised to do little at Cop28

Saleemul Huq and Farhana Sultana

Countries deadlocked on 'loss and damage' fund as UN climate summit nears

By Valerie Volcovici

October 23, 2023 5:42 PM EDT · Updated 7 days ago



Western nations are on the cusp of usurping Loss and Damage Fund. This could derail COP28

Tensions soar over new fund for climate 'loss and damage' ahead of COP28

By Megan Rowling

October 23, 2023 8:04 AM EDT · Updated 11 days ago



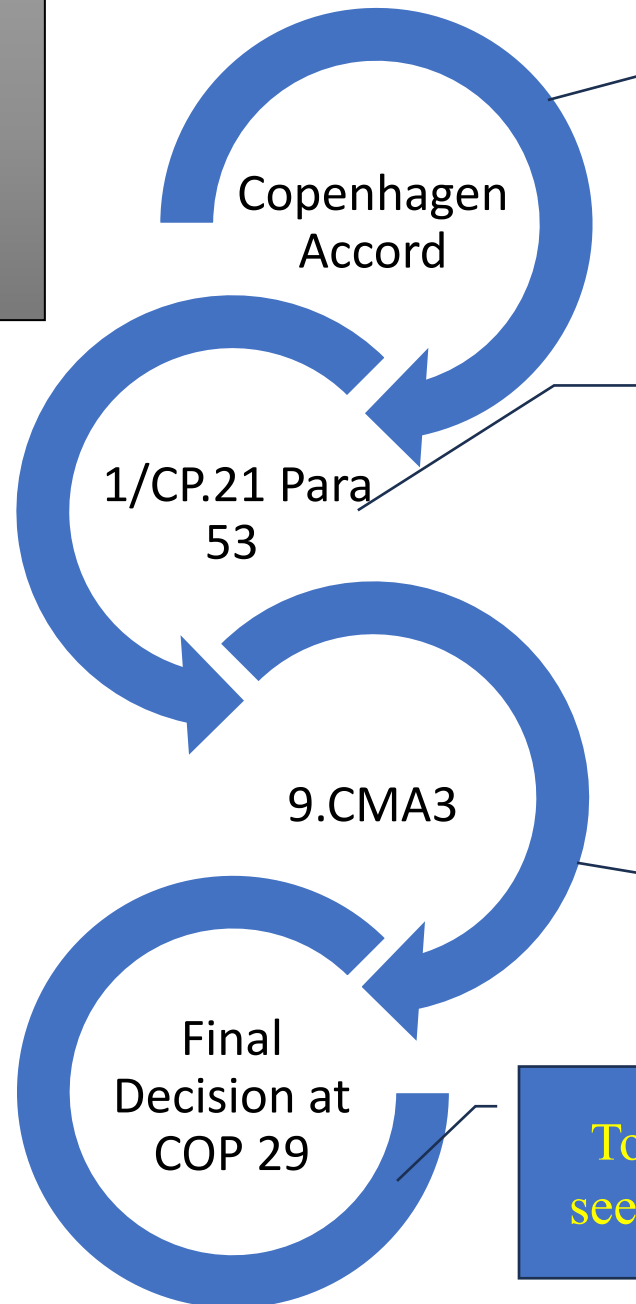
What COP28 should consider

1. Adopt alternative eligibility requirements
2. Adopt a flexible, grants-based approach
3. Ensure that finance reaches the local level
4. Adopt participatory and representative decision-making processes
5. Adopt comprehensive, full-spectrum approaches



New Collective Quantified Goal

Evolution of the NCQG



Copenhagen Accord

1/CP.21 Para 53

9.CMA3

Final Decision at COP 29

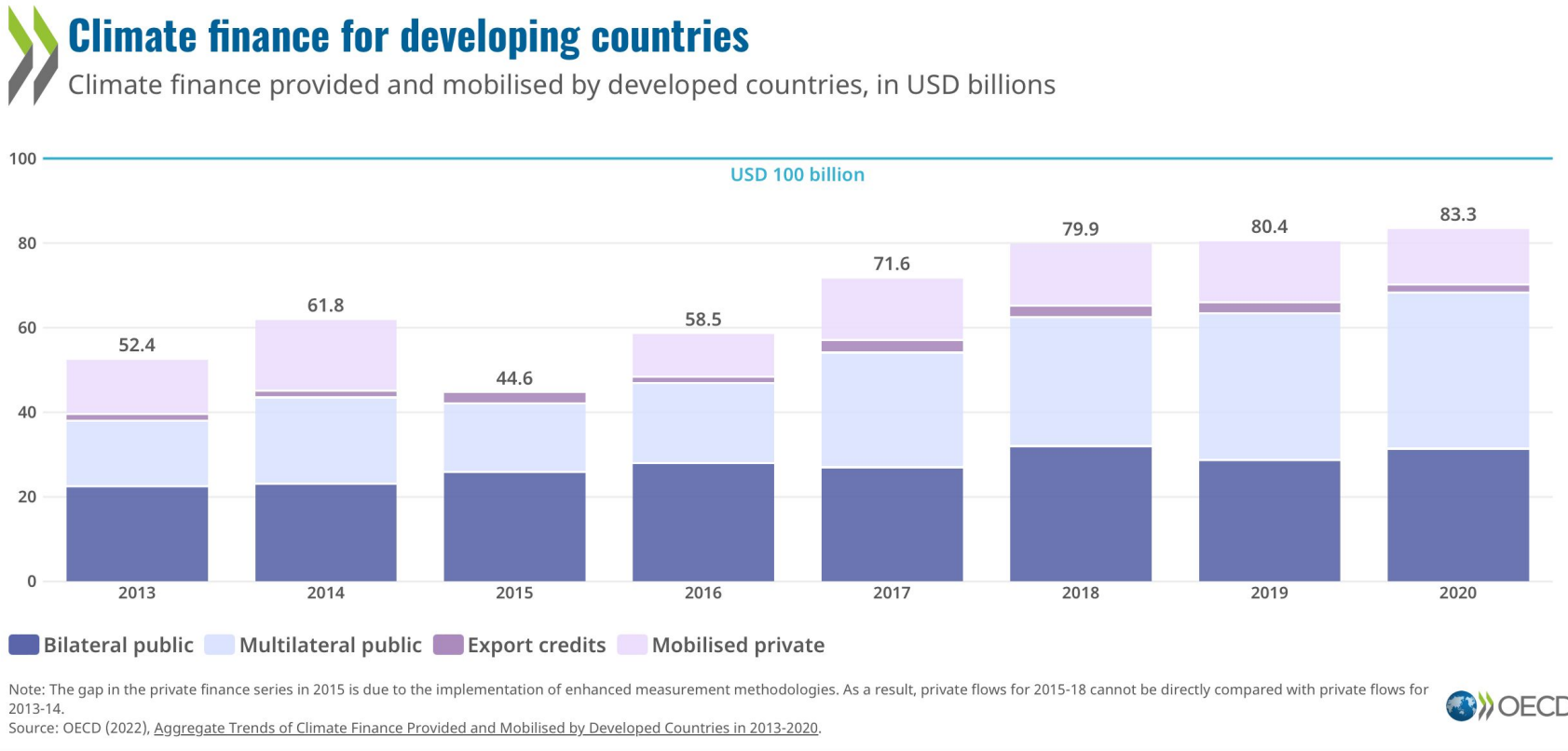
To be seen....

“In the context of meaningful mitigation actions and transparency on implementation, **developed countries commit to a goal of mobilizing jointly USD 100 billion dollars a year by 2020** to address the needs of developing countries.” – para 8 (2/CP.15)

“Also decides that, in accordance with Article 9, paragraph 3, of the Agreement, developed countries intend to continue their existing collective mobilization goal through 2025 in the context of meaningful mitigation actions and transparency on implementation; prior to 2025 the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement **shall set a new collective quantified goal from a floor of USD 100 billion per year, taking into account the needs and priorities of developing countries;**”

1. Decides to **initiate the deliberations** on setting a new collective quantified goal....
3. Decides to **establish an ad hoc work programme for 2022–2024** under the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.....
5. Decides to conduct **four technical expert dialogues** per year as part of the ad hoc work programme,...
22. Decides to **conclude** its deliberations by setting the new collective quantified goal in **2024**.

NCQG: Building on the 100 billion goal



Limitations

- Politically derived– not based on developing country needs or scientifically/factually determined
-
- Lack of clarity on what is considered “climate finance”
- No process for review or revision

NCQG Ad hoc Work Programme

- 5. Decides to conduct four technical expert dialogues per year as part of the ad hoc work programme,...
- 9/CMA.3

Technical Expert Dialogues (TED) 1 – 4

Landscape of Issues:

- Role and objectives in context of PA Article 2
- Lessons learned
- Role of the private sector
- Needs and priorities of developing countries
- Elements of NCQG – principles, scope, access, qualitative and quantitative elements, sources and transparency

NCQG Ad hoc Work Programme

TED5

- Temporal Goal and Structure, Qualitative and quantitative elements

TED6

- Quantity, mobilization and provision of financial sources

TED7

- Quality and transparency arrangements

TED8

- Stocktake
- Tuesday 28 November

NCQG at COP28

Events

- TED 8 - Tuesday 28 November
- 2023 High Level Ministerial Dialogue (Sunday 3 December)
- CMA Agenda Item 10 (e)
 - Consider annual report of co-chairs
 - Consider the summary of deliberations of High Level Ministerial

Thoughts:

- Significant number of issues identified for political consideration in TED 5 -7 summaries
- Significant number of issues identified for technical consideration in TED 5 -7 summaries
- Nothing is final until everything is final....but...a decision that narrows issues/ options, provides guidance, sets bounds could facilitate progress to a decision at COP 29



Global Goal on Adaptation

Paris Agreement Article 7.1

Parties hereby establish the **global goal on adaptation** of *enhancing adaptive capacity, strengthening resilience and reducing vulnerability* to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response *in the context of the temperature goal* referred to in Article 2.

Approaches to reviewing the overall progress made in achieving the global goal on adaptation

Technical paper

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2.2.	Challenges of assessing progress towards the global goal on adaptation	7

Glasgow Sharm el-Sheikh Work Programme (GlaSS)

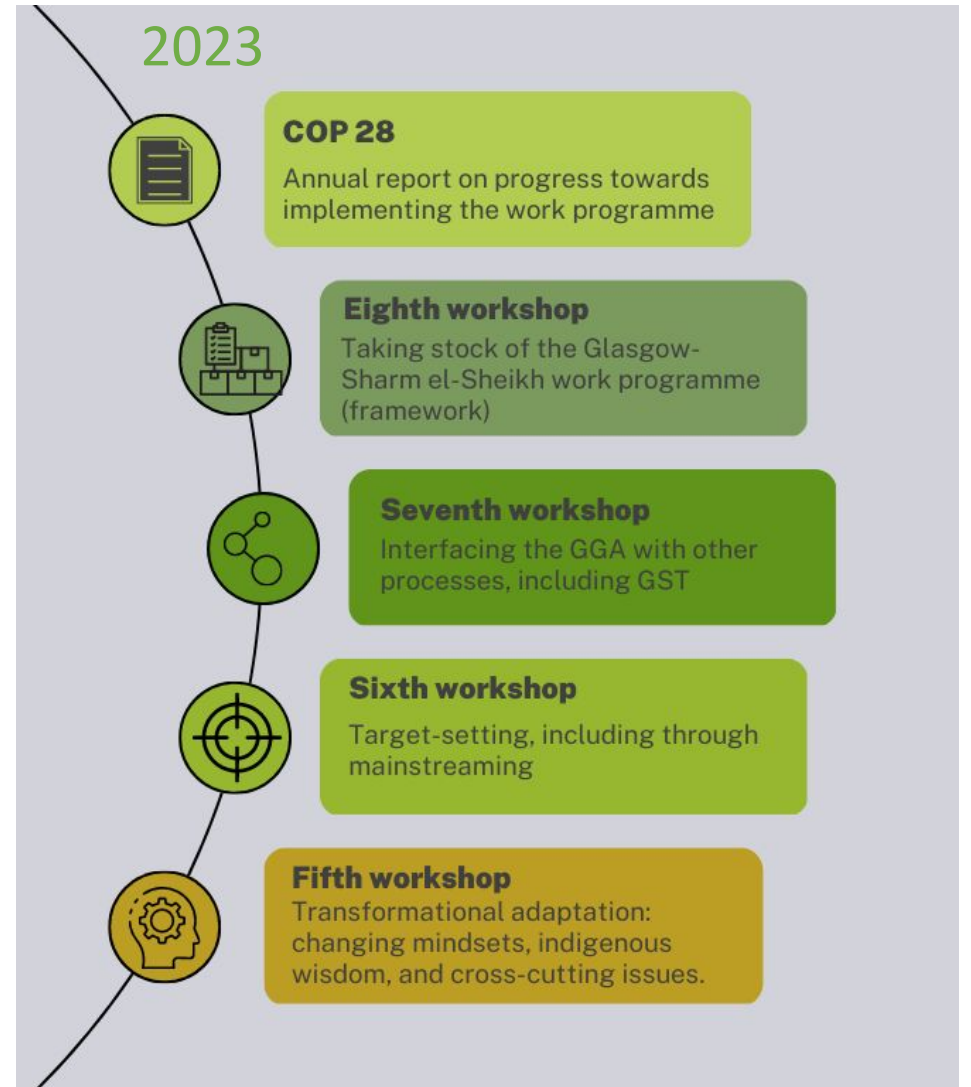
2022

First workshop: Enhancing understanding of the global goal on adaptation and reviewing progress towards it

Second workshop: Enhancing adaptation action and support

Third workshop: Methodologies, indicators, data and metrics, monitoring and evaluation

Fourth workshop: Communicating and reporting on adaptation priorities



8 Objectives

- (a) Enable the **full and sustained implementation of the Paris Agreement**, towards achieving the global goal on adaptation, with a view to enhancing adaptation action and support;
- (b) Enhance understanding of the global goal on adaptation, including of the **methodologies, indicators, data and metrics, needs and support** needed 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 the process to formulate and implement [national adaptation plans](#) and 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 vulnerable developing countries; and
- (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**.

Developing a framework

Decision -/CMA.4 (Nov 2022):

8. *Decides* to initiate the development of a framework for the global goal on adaptation to be undertaken through a structured approach under the Glasgow–Sharm el-Sheikh work programme in 2023, containing the elements referred to in paragraph 10 below, with a view to the framework being adopted at the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (November–December 2023);

Can consider elements such as:

- The stages of the adaptation policy cycle
- Themes (water, cities, poverty...)
- Cross-cutting considerations (country-driven, gender, human rights...)
- Sources of information (UNFCCC reporting, IPCC reports, etc)

Targets?

- High-level targets vs. specific targets
- Existing indicators
- Organization of targets (policy cycle/sectors/themes)
- Outcome- vs. output-based
- Universal vs. country-specific

Table 1

New suggestions for Targets, additional to those outlined at workshop 7

<i>Overarching/ Dimension/ theme / structural element</i>	<i>Target</i>
Overarching target/priorities/ political message	Protect people, livelihoods and ecosystems by promoting an accelerated implementation of adaptation actions and by providing adequate, long-term, scaled-up, predictable, new and additional finance, technology and capacity building to developing countries to achieve the GGA established in article 7.1 of the Paris Agreement. Enhance the adaptive capacity and resilience of the global population, including the reduction of climate impacts by at least 50% by 2030, and by at least 90% by 2050 compared to the business-as-usual scenario and expected impacts identified by scientific reports.
Impact, vulnerability and risk assessment	By 2030 all countries have effectively conducted climate assessments for national adaptation planning, have in place multi-hazard early warning systems covering 100% of people and developing countries accessed adequate finance to develop such assessments and systems through the UNFCCC Financial Mechanism. Reduce the climate related impacts on people, the economy and biophysical environment (human, economic and non-economic impacts) by at least 50% in 2030, and by at least 90% in 2050.
Adaptation planning	By 2030 all countries have national adaptation strategies, plans or policy instruments in place, covering the diversity of ecosystems and sectors, adaptation has been mainstreamed into all relevant strategies and plans and developing countries have effectively accessed climate financing through the UNFCCC Financial Mechanism for the preparation of NAPs.

Expectations for COP 28

Potential outcomes:

- Framework
- Task force on indicators?
- Initiation of report on “transformational adaptation”?
- New standing agenda item under SBs

My view:

- COP28 will set a path forward
- Targets and indicators for adaptation will take time and may have drawbacks
- Systematically assessing adaptation outcomes are crucial

General Negotiations
Issues on International
Carbon Markets Under
Article 6

Official COP28 tasks regarding Art.6 negotiations:

Art. 6.2

- Tables and outlines for **reporting and review**
 - Agreed electronic format (AEF)
 - Sequencing and timing of the **submission of initial report**, its review and submission of AEF together with review
 - Identifying, notifying and correcting **inconsistencies in data** in central database (CARP)
 - Treatment of **confidential information**
 - International **registry**
 - **Authorisation and first transfer**
 - **Special circumstances of LDCs and SIDS**
- *Seemingly innocuous and very technical issues but crucial for **transparency** and **possibility of independent actors to check environmental integrity** of cooperative approaches given the **absence of international oversight***

Official COP28 tasks regarding Art.6 negotiations:

Art. 6.4

- Emission **avoidance** and **conservation enhancement** activities
 - Only **Philippines** push this, all others want to drop the topic
 - **Authorization**
 - Connection from **mechanism registry** to **international registry** and other registries
 - Moreover, CMA has to decide on two key documents developed by the **Article 6.4 Supervisory Body** to **operationalize the principles** agreed at COP26:
 - **Methodology** guidance
 - **Removals** guidance
- *Article 6.4 has **very stringent principles** that now need to be operationalized. This operationalization will decide whether Article 6.4 will become the “**guardrail**” for all international carbon markets (Article 6.2 and voluntary carbon markets) or whether it will be “**hollowed out**”*

Art. 6.4 Supervisory Body (A6.4SB) stalled on key issues

- **A6.4SB to propose guidance on methodology development and removals to the CMA**
 - **Inability to decide on methodology guidance** prior to COP27
 - Removals guidance proposed to COP27 but **sent back by Parties** to A6.4SB
- **Key aspects of methodology guidance remain contentious**
 - Fight on **baselines** and **additionality** between developing and industrialized countries – former want leniency, latter stringency, old fault lines from CDM continue
 - **Downward adjustment factors** and **baseline quantification** key bone of contention
 - To be determined “top down” or **freely chosen** by host countries
 - Latter would ***hollow out the principle of alignment with long term goal of Paris Agreement***
 - **Quantitative vs. fluffy qualitative approaches**
 - Risk of gaping loophole through “***transformational technologies***” being ***exempt*** from downward adjustment
- **Removals guidance getting highly contested**
 - UNFCCC paper wanting to **exclude engineered removals** drew heavy criticism from removals community, record number of comments (>400)
 - **Tonne-year accounting** excluded as permanence approach
- *Some movement on removals, **very limited movement on methodology** guidance, SB008 adjourned without outcome, SB009 emergency meeting scheduled this week*

Key contentious issues I

1. **Which registries should be involved in Article 6?**
 - International registry under 6.2 / mechanism registry under 6.4 broad or narrow?
 - Transaction registry (EU, LDCs, South Africa)
 - Accounting-only “pulling & viewing” registry (China, LMDC, Arab Group, US, Singapore)
 - Coexistence of both: Japan, EIG
 - *Essentially fight on whether **private carbon market programmes** should be the **only option for trading ITMOs** or whether **such trade can be done through international registry** – issue of high commercial relevance!*
 - ***Quality of private programmes varies significantly – additionality doubtful, often prone to conflict of interests,***
3. **For what authorization is to be done?**
 - “Master” or “system” authorization without authorization of specific ITMOs (US)
 - **Differentiation: cooperative approach, entities and ITMOs** (EU, AILAC, AGN, NZ, Japan, UK)
 - *US approach would allow governments to provide a **single “blanket” authorization** which would essentially eliminate the control function of government for specific transactions.*
4. **Can authorization be revoked?**
 - Yes (LMDC, ABU, AGN)
 - **Not after first transfer** (EU, EU, AILAC, Singapore, South Korea, NZ, Australia, India, Canada) – support solidifies in the more recent negotiation sessions
5. **Timing and content of authorization under Art. 6.4**
 - prior to issuance (EU, AILAC)
 - at issuance (Australia, Russia, NZ, EIG)
 - at any time (LMDC, AGN)
 - Minimum requirements for authorization (AILAC, LDC, UK)

Key contentious issues II

4. **Is the purpose of ITMO use fixed or flexible?**
 - Same faultlines as for revocation
 - If flexible, market actors can choose the **most attractive purpose**. Changes after issuance complicate accounting
6. **AEF**
 - **Definitional issues are surfacing again**
 - What is a cooperative approach – a single project/activity or the framework of cooperation (not looking at specific activities)
 - US, Umbrella group: rapid operationalization
 - **Developing countries want capacity building funding before further negotiations**
7. **Dealing with inconsistencies**
 - Inconsistencies are dealt with via an **automated process** - consistency check in A6 database (**LMDC, China**) vs: **process is needed (many groups)**
 - Non-responsiveness of Parties to raised inconsistencies to be addressed by **Compliance Committee** (EU, ABU), published in TER reports (AGN)
8. **Confidentiality**
 - All info public (AILAC), confidential information **provided to the reviewers and the Sec.** (EIG, Canada). Technical paper to be written by the Secretariat (LMDC)
9. **Initial report**
 - EU, AILAC, AGN: IR review to be completed or at least having started **before annual information is submitted**

Critical Issues Regarding Ocean-Based Carbon Dioxide Removal Strategies

What is Ocean-Based Carbon Dioxide Removal?

The “Blue Carbon” horizon

Spectrum (or network?) of natural “green” to tech “gray” options

Removal? Retention? Release?... Geo-engineering of the sea

Capture and storage processes for marine and terrestrial containments

Examples include:

- Electrochemical engineering approaches

- Nutrient fertilization

- Ocean alkalinity enhancement

- Artificial upwelling and downwelling

- Seaweed/ sea vegetables/ macroalgae cultivation

- Recovery of marine ecosystems (ie seagrass beds)

- Conservation of marine mammals

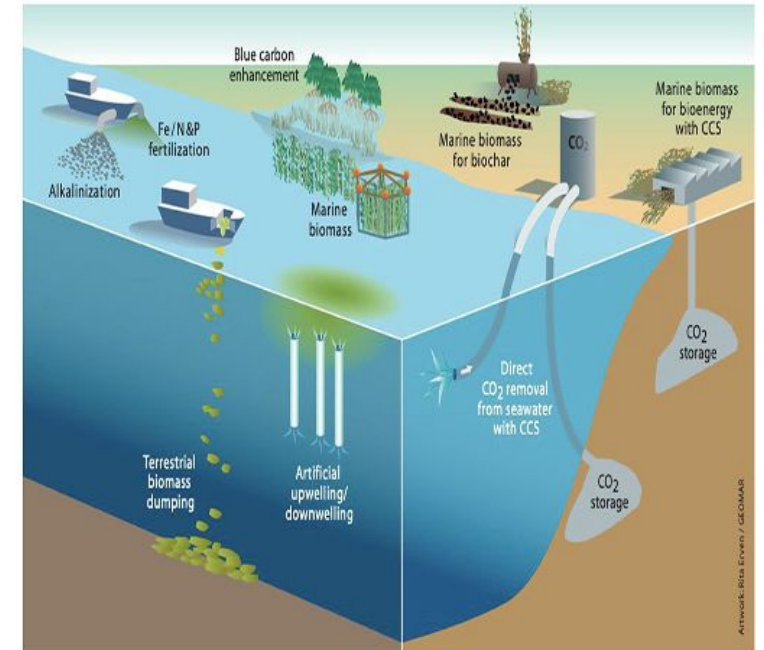


FIGURE 1. An overview of proposed marine carbon dioxide removal (mCDR) options, artwork © Rita Erven/GEOMAR.

IPCC AR6

Earth system: Ocean

CDR METHOD	Blue carbon management	Ocean alkalinity enhancement	Ocean fertilisation
IMPLEMENTATION OPTIONS	Rewetting; coastal revegetation (e.g. mangroves, seagrass, saltmarsh)	Adding alkaline materials such as carbonate or silicate rock	Iron fertilisation; nitrogen and phosphorus fertilisation; enhanced upwelling
STORAGE TIMESCALE	Decades to centuries (in vegetation, soils, sediments)	10,000+ years (in minerals)	Centuries to millennia (in marine sediment)
FINANCIAL COST (\$ per tonne of CO ₂)	Not enough data	\$40-\$260	\$50-\$500
TRADE-OFFS and RISKS	- If subsequently degraded or destroyed, these ecosystems are likely to release carbon back to the atmosphere. - Maximum benefits will require many years to be achieved	Potential for increased GHG emissions from mining, transport and deployment	- Ocean acidification and deoxygenation - Altered supply of ocean macronutrients - Fundamental changes to food webs and biodiversity

CDR considerations for policymakers

Depending on the scale and deployment scenario, CDR methods could bring about various co-benefits and adverse side effects, further emphasising the need for appropriate CDR governance and policies. For instance, afforestation and reforestation, soil carbon sequestration, and biochar have co-benefits for food security and/or biodiversity.

When governments design mitigation policies to achieve net-zero or net-negative emissions, these policies will need to include some kind of CDR.

In determining how to include CDR in mitigation portfolios, policymakers should consider costs, storage times, risks, and trade-offs of various CDR methods.

The choice of CDR methods and the scale and timing of their implementation depends on a variety of factors. These include emissions reduction ambition, sustainability, feasibility, political preferences, and social acceptability.

Most CDR options based on storage in vegetation, soils, or sediments are easier and less expensive to implement, and have biodiversity or food security co-benefits, but these methods store carbon for less time and can be more vulnerable. In contrast, CDR based on storage in geological formations is less understood and more expensive, but the carbon is stored for much longer periods.

Effectively integrating CDR into mitigation portfolios can build on already existing rules, procedures and instruments for emissions abatement. To accelerate research and development and incentivise CDR deployment, a political commitment to formal integration into existing climate policy frameworks is required, including reliable measurement, reporting, and verification (MRV) of carbon flows

CDR is required to limit global warming to 1.5°C



CDR is required to limit warming to 1.5°C. Particularly, CDR is needed to counter-balance emissions from difficult-to-decarbonise sectors, such as industry, long-distance transportation, and agriculture.



Mitigation scenarios assume large volumes of future global CDR deployment compared to current volumes of deployment.



Future deployment of CDR will require rapid and sustained upscaling.

Role of CDR in mitigation



CDR is not a substitute for deep emissions reductions, but it is an important tool that should be deployed in tandem with other mitigation methods.



CDR can complement other mitigation strategies by further reducing net greenhouse gas emissions, especially in the near-term.



CDR can help achieve and sustain net negative greenhouse gas emissions (where more greenhouse gases are removed from the atmosphere than added to the atmosphere), especially in the long-term.

Why do we care so much about OB-CDR at COP28?



Who We Are ▾

What's our Impact

How We Can Work Together ▾

Knowledge Resources ▾

Home → Public Development Banks Pledge to Work Together for the Ocean

Indonesia launches blue carbon project under OxCarbon Standard

Updated at 09:51 on June 13, 2023 / Mark Tilly / Asia Pacific, Nature-based, Other APAC, Voluntary / No Comments

Indonesia launched its inaugural blue carbon conservation project in Northern Sumatra un

Ocean CDR Science

Sign The Letter

Field testing for ocean-based carbon re

Published 21:48 on September 22, 2023 / Last updated at 21:48 on September 22, 20

Proving marine CO₂ removal in the field is necessary to
support are needed for the development of research pr

Invest in the o

Wetland conservation most effective ocean-b

Published 13:40 on October 2, 2023 / Last updated at 13:40 on October 2, 2023 / Roy Manuell /

Wetland conservation has the highest potential impact for m
solutions, according to researchers at a British university, with
ensure the protection of such ecosystems.

A study by Imperial College Business School, London, in par
design studio Sketchin, fi
up to 144 MtCO₂e in Eur

Published 16:29 on Noveml
Voluntary

A major European
startup to launch
of CO₂, with an e
advances.

US govt announces \$36 mln for development of marine CO₂ removal methods

Published 20:48 on October 26, 2023 / Last updated at 21:18 on October 26, 2023 / Graham Gibson / Americas, US, Voluntary

The US Department of Energy (DOE) announced Thursday the allocation of \$36 million for 11 marine CO₂ removal (mCDR) projects across the country, as the agency expands its support for advancement of the nascent technology.

The new funding comes through the DOE's Sensing Exports of Anthropogenic Carbon through Ocean Observation (SEA-CO₂) programme and follows the September awarding of \$24 mln by President Joe Biden's administration for research on mCDR methods.

Key questions about Ocean-Based CDR Options

1

How effective are these different options in containing CO₂? And for how long? What are the preferred options from a research-informed perspective?

2

Are there environmental justice implications for communities and cultures? What are the social and cultural risks associated with each option??

3

What, if any, monitoring/evaluation can and should be in place to assess the impact of these technologies over time and space? What are the biophysical risks associated with each option???

4

What policy decisions are needed to protect global health and safety from the risks associated with growing interest, investment, and inquiry related to OB-CDR????

Research concerns

Options range in terms of **biophysical risks**

- Changes in albedo, turbidity, and light intensity
- Implications for alkalinity, temperature, and thermodynamic properties of the ocean

Options range in terms of **social and cultural risks**

- Impacts to food systems, coastal access, and conservation of historical areas and artifacts
- Changes in land use, fisheries abundance, and conflict likelihood

Drawing attention away from certain and known **mitigation options** that exist

- Financial shifts
- Perception shifts

Implications for **vulnerable communities**

- Agendas for development in already sensitive areas
- Long term sustainable development goals as a unified framework



Policy needs (TEC C.4.1 activity group on Ocean)

(a) Innovative climate adaptation approaches that integrate both technology and nature-based solutions offer the potential to be more robust, comprehensive and cost-effective than either type of solution alone;

(b) Despite the pressing adaptation needs of coastal and island communities, knowledge, capacity, and financing gaps and challenges prevent the widespread implementation and mainstreaming of integrated ocean-climate solutions. To overcome these challenges, there is a need to:

- (i) Co-produce localized solutions that combine scientific, local and Indigenous knowledge, engage diverse stakeholders, and distribute benefits equitably across and within communities;
- (ii) Collaborate on transdisciplinary research and encourage mutual learning through long-term monitoring and evaluation programmes;
- (iii) Address barriers to accessing financing, including perceptions of and risks associated with innovative and nature-based approaches;
- (iv) Foster enabling policy and regulatory frameworks in national climate strategies, local planning and regulations, and international standards;
- (v) Build cross-sectoral partnerships to exchange knowledge and ideas, develop innovative technologies, and bolster the business case for integrated adaptation solutions;



What to Watch at COP28

- TEC C.4.1 -- Technology Mechanism reports and discussion
- Article 6, Carbon markets and finance implications
- Mitigation Work Programme
- Party statements and negotiating terms
- Ocean Pavilion discussions

Moderated Discussion Q&A

Thank you.
See you at COP.
