



COP29
Baku
Azerbaijan
UN CLIMATE CHANGE CONFERENCE

SCIENCE AND POLICY PERSPECTIVES OF COP29

A.K.M. Saiful Islam

The UN Framework Convention on Climate Change (UNFCCC), drafted in 1992, was signed by the Conference of the Parties (COP). The objective of COP was to stabilize greenhouse gas concentrations at a level that would preclude dangerous anthropogenic (human-induced) interference with the climate system. Since then, nearly yearly meetings of the Parties, or nations, have occurred. The most attended climate COP in history, COP28, occurred in Dubai last year and brought together over 150 heads of state, 97,000 delegates, negotiators, business executives, and non-state players. The event's focus was the conclusion of the first-ever Global Stock Take (GST), a mid-term review of progress towards the 2015 Paris Agreement.

The 29th Conference of the Parties to the UN Framework Convention on Climate Change (COP29) will be held in Baku, Azerbaijan, from November 11-22, 2024. This COP will have a significant chance to speed up action to address the climate issue. This COP will bring together leaders from government, business, and civil society to develop tangible solutions to the defining issue of our time as global temperatures reach extreme weather events and impact record highs and people world-

wide. As many vulnerable developing and least developed nations need substantial financial support to dramatically cut greenhouse gas emissions and safeguard lives and livelihoods from the growing effects of climate change, finance will be a significant focus of COP29. Additionally, the conference will be a crucial opportunity for nations to showcase their updates. The significant highlights of expectations from the science and policy perspective from this COP29 are discussed below.

Limiting Global Warming to 1.5 C

Last year at COP28 in Dubai, the United Nations' "Roadmap to Mission 1.5°C," which aims to prevent global temperatures from rising more than 1.5°C beyond pre-industrial levels, was the focus of the first of three consecutive COP summits: The UAE (COP28), Azerbaijan (COP29), and Brazil (COP30). In 2023, the first "global stock-take" was carried out to meet the goals established by the Paris Agreement. The primary result of COP28, the "UAE Consensus" accord, outlined the appropriate course of action for each party. At last year's COP28, the first global assessment of global efforts to combat climate change under the Paris Agreement and maintain the 1.5°C global temperature limit

was concluded. This year, the EU has already called for efforts to keep the 1.5°C goal within reach. However, limiting warming to 1.5°C requires collective effort and further action from all countries, especially from major economies. This COP29 should focus on enhancing ambition and ensuring all parties commit to ambitious national plans and transparency, including finalizing the first enhanced transparency framework.

Technology Development and Transfer Framework

Strengthening the current technology development and transfer framework with additional requirements should be one of the leading climate governance issues for COP29. A technology framework should be established to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer to support the implementation of the Paris Agreement (PA). The "technology development and transfer" framework should be developed under Article 10 of PA: "Parties have a long-term perspective on the necessity of fully achieving technology development and transfer to strengthen resilience to climate change and reduce greenhouse gas emissions."



Bangladesh Power Development Board (BPDB)

An Organisation of Excellence

Vision

To deliver uninterrupted quality power to all.

Mission

To secure continuous growth of electricity for sustainable development and ensure customer satisfaction.

Objective

- To be engaged in implementing the development program of the government in the power sector.
- To adopt modern technology and ensure optimum utilization of the primary and alternative source of fuel for sustainable development of power generation projects.
- To purchase power as a Single Buyer from power producers.
- To provide reliable power supply to customers enabling socio economic development.
- To promote a work culture, team spirit and inventiveness to overcome challenges.
- To promote ideas, talent and value systems for employees.



Bangladesh Power Development Board

Ref: 10 BPDB/PR, Dated: 07/10/2024

As the overall working pace for reaching the PA goal of 1.5 degrees Celsius pre-industrial levels is inconsistent, further guidelines are needed for climate technology innovation from a policy and practice perspective.

Attributions of Loss and Damage to Climate Change

Assigning anthropogenic climate change to extreme weather events and determining whether and to what degree specific events have increased in frequency or intensity are the goals of climate attribution science. Changes in the likelihood or frequency of such occurrences can be computed by developing various climate models. Additionally, so-called slow-onset events, like sea level rise, can be attributed to climate change through trend attribution. As a result, research can identify and quantify the effects of both individual occurrences and longer-term changes linked to climate change regarding monetary losses and damages.

However, attribution science cannot measure some losses, namely non-material losses like the loss of a person's life or cultural property. Impact attribution is a new discipline, and evaluations are a common way to communicate how climate change affects weather and climatic events in the real world. However, several significant issues still need to be resolved by the community to ensure that the subject continues to progress while maintaining scientific rigor and that stakeholders and related applications appropriately employ attribution findings.

Funding for Loss and Damage

A fund for developing nations experiencing loss and damage from climate impacts (the "FRLD") was operationalized by the United Arab Emirates, the hosts of COP28, to start the meeting with a rapid and comprehensive victory last year. However, only \$661 million has been committed thus far. Given the projected damage inflicted by many rapid onset events such as hurricanes, typhoons, and tropical cyclones observed last year, FRLD funding is far short of what is required. At the summit, the COP29 presidency pledged to continue to seek new pledges to the fund.



The loss and damage issues are expected to be discussed in the negotiations.

It is expected that COP29 will approve these short-term measures and continue the discussion on improving and fortifying loss and damage financing arrangements. Negotiators will also examine the Warsaw International Mechanism (WIM), which was established to address the consequences of climate change that go beyond ecological and human adaptation. Conference participants and civil society organizations, including the Least Developed Countries, will continue to engage and share their experiences responding to loss and damage. Increase financial support within the evolving framework of damage and loss governance, which will also be a focus of COP29.

Guiding Countries in Planning to Implement Adaptation

It is expected that COP29 will drive adaptation action by guiding countries from planning to implementing their adaptation plans. People worldwide are affected by climate change, and it is becoming increasingly clear that making adaptation investments now will save lives and reduce expenses later. A framework for the Global Goal of Adaptation was already adopted during COP28. Adaptation to the effects of climate change has gradually moved up the worldwide agenda as its effects intensify. Despite eight years of negotiations, little

progress has been made in defining the global goal for adaptation (GGA), which the Paris Agreement requires. Countries ultimately agreed to a broad framework for the objective at COP28. However, there are no clear, measurable goals in the framework by which advancement may be evaluated. Furthermore, it does not consider technology transfer or financing, making it unclear how adaptation measures may be put into practice. It was recommended that nations create National Adaptation Plans (NAPs) by 2025 and show progress in implementing them by 2030.

To speed up adaptation efforts, lower vulnerability, and boost resilience, countries will continue to evaluate their progress in creating and executing NAPs and provide suggestions. It is time to identify what is effective and requires urgent attention because developing nations have made significant strides in adaptation planning and execution. This year, the emphasis should be on giving nations more direction on how to draft and carry out their NAPs. Furthermore, COP29 may draw financial commitments for loss, damage, and adaptation, including donations to the Adaptation Fund. Finally, COP29 adaptation negotiators must ensure that the climate finance aim appropriately reflects adaptation. Additionally, the meeting in Baku will be a significant chance to further the UAE-Belium work program. This work program aims to provide a set of metrics for tracking ad-

vancement against the UAE Framework for Global Climate Resilience's goals. Nations and the gathered specialists

Establish a Just Transition Work Program

Parties decided to create a work program on just transition at COP27 to consider methods to accomplish the objectives of the Paris Agreement. The goals of the program were established and approved by the parties at COP28 a year later. Until 2026, the Just Transition Work Program's two-year roundtable discussions must be efficiently run to succeed. One of the historic agreements reached at COP28 was to "move away from fossil fuels in energy systems" for the first time in 28 years of negotiations. Parties need to stay focused on the main issue, which is how to phase out the use of fossil fuels in a timely, effective, and equitable manner. However, the COP28 accord was woefully inadequate in addressing the climate crisis. Making headway on new measures at COP29 will be challenging, and it will be crucial to avoid reversing previous pledges.

Parties failed to reach a consensus on improving the program's procedures or creating a more organized work plan during the 60th session of the UNFCCC Subsidiary Body for Implementation. Furthermore, there was no agreement on properly structuring international collaboration or engaging pertinent stakeholders through social discussion. The program's ability to expedite just transition initiatives may be jeopardized if COP29 results in no progress. Parties must reach a consensus on comprehensive and ambitious mechanisms at COP29 to move the Just Transition Work Program forward. Delivering the conversations and results required to scale and accelerate just transition pathways internationally requires a well-defined, organized work plan backed by active stakeholder participation and international cooperation. Plans for a just transition, phase-out routes, and information on reserves and extraction should all be included in the NDCs of nations that produce fossil fuels.

Urgency of Boosting Ambition

There is an urgent need for more ambition as the 2025 Nationally

Determined Contributions (NDCs) submission deadline draws near. The global stocktake (GST) findings, agreed upon at COP28 and offered a roadmap for the next phase of climate action, including the historic choices to double energy efficiency, quadruple renewables, and move away from fossil fuels, must be reflected in them. Parties have a crucial opportunity to propose their climate strategies at COP29. In addition, National Adaptation Plans (NAPs) should inform the adaptation component of NDCs. This enhances mitigation-adaptation synergies and increases awareness of adaptation. For comprehensive and coordinated action on climate and nature, NDCs should, when appropriate, also refer to nations' most recent National Biodiversity Strategies and Actions Plans (NBSAPs). Commitments to modify fossil fuel subsidies, such as creating national roadmaps with precise policy-specific timeframes for phase-out or reform, should also be included in NDCs. Countries should pledge to stop the spread of fossil fuels to meet the Paris Agreement's target of keeping global warming to 1.5C at the very least.

Challenge to Establish Linkages Among Climate, Nature, Land, and Cities

Three major international environmental conferences are being held this year, known as a "triple COP" year. The COP16 on biodiversity in Cali, Colombia, then the COP29 on climate change in Baku, and finally, the COP16 on desertification and soil degradation in Riyadh, Saudi Arabia. In these three COPs, world leaders have the chance to coordinate their activities across these interrelated challenges thanks to the convergence of the conference. To provide sustainable solutions that improve the health of the world as a whole, climate change, biodiversity loss, and land degradation must be addressed jointly. IPCC is also planning to publish a special report on Cities and Climate Change under its Seventh Cycle of Assessment (AR7). COP29 should emphasize the necessity of

supporting cities in addressing climate-related loss and damage and the significance of local leadership for ambitious climate action. Assuring improved access to climate finance to rebuild and develop urban resilience, supporting populations most affected by climate change, and addressing cities in NAPs, NDCs, and newly created mechanisms for access to loss and damage finance are all ways to empower local governments.

Global Collaboration on Climate Mitigation Initiative

A critical factor in promoting global collaboration on climate action through both market-based and non-market channels is Article 6 of the Paris Agreement. The initiatives started at the 2019 UN Climate Action Summit bring together different sectors to build sustainable infrastructure, use nature-based solutions, reduce emissions, address critical issues like gender equality and jobs, unlock finance, and promote adaptation and climate resilience. In addition to encouraging sustainable development, it seeks to increase the cost-effectiveness of climate mitigation initiatives by permitting nations to exchange emissions reductions.

At COP29, Article 6 is essential because it seeks to finalize global carbon market regulations, guaranteeing environmental integrity, transparency, additionality, and the avoidance of double counting. It is also necessary for this regulation to provide support for reliable global emissions trading and economically viable climate mitigation. The Parties must create robust governance frameworks, transparent procedures, and unambiguous safeguards for reviewing Article 6. Mechanisms under Article 6 should be created to consider the various goals and situations, including those of nations with abundant forests. We think acknowledging the needs and rights of Indigenous Peoples and Local Communities (IPLCs) and ensuring they have equitable access to the money made from Article 6 activities is a crucial part of this.

Gender-inclusive Climate Action and Human Rights

Climate action is more sustainable and prosperous when it incorporates human rights and gender equality. There are chances to guarantee that social and gender disparities that increase susceptibility to climate change and restrict possibilities to engage in solutions are addressed across all COP29 negotiation items. The Lima Work Program on Gender and its accompanying Gender Action Plan (GAP) must be renewed to achieve this. COP29 negotiators must agree upon a comprehensive and ambitious framework for gender-responsive climate action. This framework will be the basis for an updated, higher-quality GAP and create connections with other negotiating streams.

A longer implementation timeline, specific goals and metrics, and greater delineation of roles and duties are all necessary for this new GAP. The COP29 decision must acknowledge that gender and social inequality are context-specific, structural, and intersectional. The Paris Agreement's success depends on

a renewed dedication to gender-responsive climate action. It will be essential to integrate human rights and gender equality into all negotiating topics using an intersectional perspective.

New Collective Quantified Goals (NCQG)

Building on the \$100 billion target set by developed nations in 2009, the New Collective Quantified Goal (NCQG) will establish a new financial framework and assist developing nations by filling climate finance gaps, providing them with funding to carry out climate adaptation and mitigation measures, and addressing loss and damage. Before the 2025 deadline that the Parties set for themselves in the Paris Agreement, there will be a significant emphasis on COP29 as nations attempt to finalize a more ambitious climate financing objective. Guidelines for inclusive and equitable climate finance that balances the demands of adaptation and mitigation should be discussed at COP29. Subgoals for loss and damage, adaptation, and mitigation should be included in the NCQG, and the final decision should have strong human rights and

gender standards. To mobilize private capital, the framework should incorporate novel financial structures, domestic governmental support measures, and international funding. To achieve net zero and improve climate resilience in poor nations, it should tackle the urgent need to redirect money flows away from fossil fuels and toward boosting private investments. Rebuilding confidence between donors and recipient nations and increasing ambition in the upcoming round of NDCs will require an open, responsible, and efficient monitoring system for the NCQG. This will promote the global shift to a low-carbon, climate-resilient economy. The provision of public, grant-based climate funding that considers developing nations' needs and priorities. The NCQG process should prioritize coordinating all financial flows with the objectives of the Paris Agreement.

EP

Dr. A.K.M. Saiful Islam

Professor Institute of Water and Flood management of Bangladesh University of Engineering and Technology (BUET).



KALTIMEX ENERGY

BANGLADESH (PVT.) LTD.



Singapore | Indonesia | Bangladesh | Philippines



POWERING BANGLADESH

TOTAL POWER SOLUTIONS

 <p>MWM Energy. Efficiency. Environment. <i>Gas Generator</i></p>	 <p>VIESMANN <i>Gas Fired Boiler</i></p>	 <p>HTT <i>Thermic Fluid Heater</i></p>
 <p>EAGLE Technology <i>Plastic Waste to Oil</i></p>	 <p>ENMAX Engineering <i>Exhaust Gas Boiler</i></p>	 <p>SOLARNEXT <i>Thermal Cooling Chiller</i></p>
 <p>OPRA TURBINES <i>Radial Gas Turbine</i></p>	 <p>Maxwatt Turbo Systems <i>Steam Turbine</i></p>	 <p>RENTAL GENERATOR <i>Diesel Generator</i></p>

Branches

Dhaka Chattogram Gazipur Habiganj Narayanganj Chandra Mawna Savar

Head Office
Green Orlando (8th Flr), Plot # KA 42-4,
Proga Sharani, Dhaka-1229, Bangladesh.
T: +88 02 8418491-92

ISO Certifications:
9001:2015 | 14001:2015 | 45001:2018
www.kal@mexbangla.com.bd

Emails:
sales@kal@mexbangla.com.bd
service@kal@mexbangla.com.bd
egb@kal@mexbangla.com.bd

Hotlines:
 **017 300 59 177**
017 141 10 993



ENERGY POWER

November 1, 2024 ■ 33