



Photo credit: DowntoEarth & CoP26

# INTERNATIONAL WEBINAR ON COP26 & CLIMATE FINANCE

Webinar Report  
December 11, 2021



## ACKNOWLEDGMENT

Although the Glasgow Climate Pact, adopted at the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26), reaffirms global commitments to take action this decade, one is left wondering if it is enough to limit global warming to 1.5°C over preindustrial levels. Reduction of emissions from coal, considered one of the most polluting of all fossil fuels, had been the target since the beginning of the summit. However, the demand for climate finance went on simultaneously. In this sense, this international webinar on COP26 & climate finance have been organized to understand the achievement, commitments of the nation parties in accordance to the rising concern of climate change and related risks, vulnerabilities.

At the outset, I would like to express our sincere thanks to the honourable Chief guest Prof. Dr. Anil Kumar Gupta, *NIDM, Government of India*. I also thank the imminent speakers, Er. Awdhesh Kumar, Asst. Professor(Civil Engg), Invertis University, India; Mr David Risik, Domain Expert, Australia and Md. Muzammel Haque Environmental Expert, Bangladesh for enriching technical sessions.

It gives me immense pleasure in acknowledging the cooperation and I extend my gratitude to Er. Awdhesh Kumar as programme's International Coordinator, Ms. Tanushree Verma, Head (Training and Research), Zone4solutions who immensely moderated the webinar and the supporting staff of Zone4Solutions and the audience as without them it would not have been possible to organize the webinar.



Mr. Nakul Kumar Tarun  
Director, Zone4Solutions

# ACRONYMS

<b>CCA</b>	Climate Change Adaptation
<b>CDRI</b>	Coalition for Disaster Resilient Infrastructure
<b>COP</b>	Conference of the Parties
<b>DDMP</b>	District Disaster Management Plan
<b>DRR</b>	Disaster Risk Reduction
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Greenhouse Gases
<b>IPCC</b>	The Intergovernmental Panel on Climate Change
<b>IRIS</b>	Infrastructure for the Resilient Island
<b>ISSB</b>	International Sustainability Standards Board
<b>NDC</b>	Nationally Determined Contributions
<b>NIDM</b>	National Institute of Disaster Management
<b>SDMP</b>	State Disaster Management Plan
<b>SIDS</b>	Small Island Developing States
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change

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# INTRODUCTION

Natural disasters have been increasing in frequency and magnitude over decades. Economic losses also have been increasing; however, loss of life and injury have been fairly less due to huge investment in early warning systems. It is also being observed that besides the increase in hydro-metrological disasters, climatological disasters are on increase over a decade. It refers to an increase in climate change-triggered hazards such as an increase in sea level, fire incidents, melting of glaciers, flash floods, and so on. Such hazards are to be addressed throughout human history. Disasters, whether natural or human-induced are common phenomena around the globe.

Climate change is a global phenomenon with local impacts. This is proportionally linked to overuse of fossil fuel-based industrialization, overexploitation of natural resources for anthropogenic activities and growing global consumers. While the impact of this phenomena can be seen globally but the actual burden falls disproportionately on the developing and poor nations. Causative factors such as lack of appropriate technology for judicious use of resources, lack of financial and technical support etc. makes the developing countries in particular, vulnerable to adverse consequences of climate changes. Not only this, the increased storm severity and extent, extended drought conditions, coastal erosion and floods due to sea-level rise, and intensifying flash floods are all consequences of this change affecting settlements throughout the world, particularly those with low physical and socioeconomic capacities.

According to the IPCC 5<sup>th</sup> Assessment Report described that temperature from the last decade (2011-20) exceed the most recent warmest multi-century period. As a result of human influence, the global mean surface temperature has risen almost 1.1°C since the start of the industrial era and many other changes have been observed in the atmosphere, ocean, cryosphere, and biosphere. Our chances of limiting global mean temperature rise to 1.5°C over pre-industrial levels (the more aggressive goal set by parties to the United Nations Framework Convention on Climate Change in the Paris Agreement) are now slim. The consequences of this global climate system warming are expected to be far-reaching:

- Hot extremes and maritime heatwaves are and will become more often and intense.
- In most monsoonal regions and at high latitudes in the northern hemisphere, heavy precipitation episodes are intensified, with further increases in precipitation.
- Droughts in agriculture and the environment are becoming more severe.
- The frequencies and severity of severe tropical cyclones will continue to rise.
- Arctic sea ice, snow cover, and permafrost loss will all accelerate.

In the Paris Agreement (COP21) and COP26, it was concluded that limiting human-induced warming to 1.5°C entails limiting cumulative carbon dioxide emissions quickly and reducing carbon dioxide emissions to net zero. Other greenhouse gas emissions must also be drastically reduced.

## 1.1. The Environment, Economy and Climate Change

The economy and environment work in synergy, they are closely linked. Economic activities (primary, manufacturing and service sectors) have various degree of impact on environment. Burning fossils, using oil and gases contributes to 'anthropogenic climate change' while the waste

degrades the environment (lands, rivers and sea). Though, natural disasters results in economic losses, but on the positive side environment provide raw materials for various economic activities and protects the communities. For instance, the mangrove forests in various region of world provide storm protection and support fisheries communities.

Therefore, climate change that directly impact the environment indirectly impacts the all-level economy, the economic actions, the efficiency of the workforce and smooth functioning of the market, threatening to the sustainable future. Though, international forums such as Montreal Protocol (1987), UNFCCC (1992), Kyoto Protocol (2005), and Paris Agreement (2015) have come up with various strategies to build resilient societies and economies. Moreover, an important viewpoint that usually miss out from these strategies is that climate change poses threat to the stability of the financial system. In this sense, the climate risk poses physical risks arising from the natural disasters, emergencies, pandemics and transition risks that arises from the change in policies and technologies to mitigate these disasters, emergencies and pandemics. Additionally, the financial structures like banks faces risk of liability as the affected business and community seeks compensation for their economic losses.

## 1.2. COP26 and Climate Finance

Climate finance (in COP13) refers to the local national or multinational financing from different public or private sources to support the climate change adaptation and mitigation actions. Adaptation aid would directly benefit developing nations because it is largely a local delicacy. Mitigation is a worldwide public good that may also help to promote economic development. In developing countries, a lack of adaptation and mitigation will make achieving their goals more difficult, and it may even wipe out advances previously made. To achieve development goals, both adaptation and mitigation (climate finance targets) are required (targets of aid). Adaptation to climate change can lessen the adverse effects, and direct climate change mitigation actions will assist the poor, who would otherwise be more susceptible. Given the limited resources available, donors and their partners need to choose activities that will achieve development goals more efficiently and effectively.

Various international forums such as Kyoto Protocol and Paris Agreement discussed the relevance of the financial assistance and resources for the parties which are more vulnerable and have less financial capacities. It has been recognized that contribution by each party in combating climate change is essential, however due to few factors their capacity to prevent and cope up with the results varies immensely. Climate finance is essential for the sustenance of the adaptation and mitigation strategies with requires large scale investments to reduce the GHGs emissions or to adapt the adverse effects by increasing adaptative capacities of the community/state. It is also in the accordance with Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) a principle within the UNFCCC according to which the more advanced countries are to provide technical and financial support to the less advanced nations voluntarily. This also includes assistance with ensuring appropriate instruments and channels, highlighting the role of public capitals, supporting customized strategies while taking into account the needs and priorities of developing nation parties. On the other hand, this opens the window of opportunity for developing nation parties for social development and sustainable economic growth. New alliances with INGOs and private sector through public-private partnership will be essential to achieve the climate change related targets set in NDCs.

COP26, Glasgow also laid emphasis on importance of financial stability and capacity building to support the developing nation parties to strategize their transformative approach for climate change adaptation and mitigation which requires unprecedented financial resources mobilization from various national and international sources along with strengthening their own capacities. In this

sense, specific financial pledges were made to support the developing nation parties. It includes recommending Adaptation Fund (approx. USD 350 million) and to the Least Developed Countries Fund (LDCF) (approx. USD 600 million) that should be utilized for assisting the vulnerable people to strengthen resilience against impacts of climate change. Under the rules and modalities of Article 6.4 of the Paris Agreement to contribute to the mitigation to support sustainable development, specifically 5% share of proceeds will be levied which will be de delivered to Adaptation Fund to support the concrete adaptation planning. Additionally, the UNFCCC secretariat developed UN4NAPs, a UN-wide cooperation aiming at mobilising the UN system to support vulnerable countries in developing and executing National Adaptation Plans (NAPs). The programme relies on the UN Secretary-appeal General's for the whole UN system to push adaptation plans under the tagline "more, faster, better," with an emphasis on expanding help for vulnerable countries, such as LDCs and small island developing States.

The existing availability of climate financing for adaptation is well acknowledged and highly distressing, since it is insufficient to react to growing climate change impacts in developing nation parties. We need to considerably raise the scope of adaptation funding from all sources, including public and private sources, to respond to current and future climate risks. Governments, financial institutions, and the business community all need to get on board to provide sustainable support to all.

### 1.3. Indian Commitments

India faces a unique and complicated combination of issues when it comes to combating climate change and moving toward a net-zero future. It has pledged to reduce greenhouse gas (GHG) emissions by 33% to 35% by 2030, increase the share of non-fossil-based energy resources to 40% of installed electric power capacity by 2030, and build an extra carbon sink through increased forest and tree cover by 2030. In its attempts to decouple economic development from GHG emissions, India has achieved significant headway. India's emission intensity of GDP decreased by 24 percent between 2005 and 2016, according to the third Biennial Report submitted to the UNFCCC in February 2021, achieving its voluntary goal of reducing emission intensity of GDP by 20-25 percent from 2005 levels, well ahead of the target year of 2020.

At COP26, India committed to 450 GW of renewable electricity by 2030, its hydrogen mission, moving Indian railways to 'net-zero' emissions by 2030, neutralizing land degradation, and increasing forest cover-natural carbon sink. India also encouraged other nations to join three key multilateral initiatives, namely, International Solar Alliance (ISA), Coalition for Disaster Resilient Infrastructure (CDRI) and Leadership Group for Industry Transition (LeadIT) – to enhance the Paris Agreement mitigation and adaptation goals, and launched Green Grid Initiative (GGI) and Infrastructure for the Resilient Island States (IRIS) - through CDRI to support small island nations. Additionally, following are the five important obligations India made to fulfil by 2030, known as the "panchamrit":

The image shows four blue rectangular boxes arranged horizontally, each containing a commitment by India for the year 2030. The text in the boxes is white. The commitments are: 1. To have 500 GW of non-fossil energy capacity. 2. India's economy will have a carbon intensity of 45%. 3. To meet 50% of its energy needs using renewable energy. 4. To reduce its overall estimated carbon emissions by 1 billion tonnes.

# WEBINAR SUMMARY

## 2.1. Rationale of the Webinar

Climate Change is one of the major environmental threats the world is facing right now. The IPCC fifth Assessment report (2014) concluded that warming in the and the consequent changes are mainly caused by anthropogenic activities. This impacts freshwater availability, melting glaciers, sea level rising, food production, frequent flooding, an increase in extreme weather events, and incidences of water-borne diseases. It has been projected that due to increased GHGs emissions will cause further warming and long-lasting changes in the atmosphere. Such events destroy people's livelihoods, belongings; damage communication, infrastructure, and trade. Globally the number of disasters has doubled since the 1980s. A study by UNDP estimates that the average costs of the damage and losses, caused by disasters, are \$ 100 billion a year since the millennium. While a large share of their economic losses has been recorded in developed countries, 93% of the deaths they cause have occurred in developing countries.

Thus, adaptation to the changing impact of climate is a complementary action for minimizing the risk due to increased hazards for various disasters. Similarly, mitigation measures if implemented in advance as pre-event management planning can reduce the magnitude of impacts of global warming on natural resources in turn reducing adaptation needs. It has also been realized that Climate change is a dynamic process that is changing the face of Disaster Risk not only with the increased weather-related hazards but also through increasing the societal vulnerabilities. Climate change effects if not stringently managed may heighten the risk of ecological imbalances, which would have repercussions far beyond the local and national border. In fact, good environmental management, in general, should be one of the key components for addressing the underlying risk of disaster.

Recently Conference of Parties 26 on climate change was organized at Glasgow that welcomed the recommendations of the Intergovernmental Panel on Climate Change Sixth Assessment Report and the recent global and regional reports on the state of the climate from the World Meteorological Organization. It also expresses alarm and utmost concern that human activities have caused around 1.1 °C of global warming to date and those impacts are already being felt in every region and stressed upon the urgency of enhancing ambition and action in relation to mitigation, adaptation, and finance in this critical decade to address gaps between current efforts and pathways in pursuit of the ultimate objective of the Convention and its long-term global goal. It was agreed that countries will meet again next year to pledge further cuts to emissions of carbon dioxide to keep temperature rises within 1.5C. For the first time at a COP conference, there was an explicit plan to reduce the use of coal - which is responsible for 40% of annual carbon emissions.

India in its Intended Nationally Determined Contribution (INDC) declared a voluntary goal of reducing the emissions intensity of its GDP by 33 to 35 Percent by 2030 from 2005 levels as per UNCCC, COP 21, Paris Agreement, 2015. Climate action is a collaborative exercise requiring a conducive policy framework at national and state levels, creativity and leadership by Municipal Corporations, and technical support and capacity from non-state actors. Climate Change action plan adaptation and mitigation does not only imply CCA strategies but should also get included across all sectors like resilient infrastructure that supports in creating resilient cities and settlements. Various initiatives are taken up by many countries both in policy and practical action for DRR and CCA focus upon reducing the vulnerability of local communities thereby enhancing resilience for minimizing the adverse impact of Disaster Risk and Climate Change. Thus, a quantitative risk assessment is required to determine how much potential loss could be saved by risk-informed investment. to (1) avoid losses



when disasters strike; (2) unlocking development potential by stimulating economic activity thanks to reduced disaster-related investment risks; and (3) social, environmental, and economic co-benefits associated with investments. Hence all our investments should be risk-informed and these investments should be in sync with the nature, degree, kind, and maximum possible intensity and impact of the probable hazards.

To understand the need of climate finance in developing nations Zone4Solutions organized an international webinar on 'COP26 & Climate Finance' on December 11, 2021 at 10:30 a.m. IST. The webinar aimed to discuss the current impact of Climate Change especially the hydrometeorological, highlight the COP26 key points for climate financing etc which can be reflected in the following points:

- Climate change: Threat, Losses and Glim Future
- Highlights of COP26
- Climate finance Emerging and burning need
- Climate Change: Are we at a point of no return?
- Sustainable development and Way forward

## 2.2. Session Proceedings

### 2.2.1. Setting the Stage



Figure 1: Introduction Speech by Mr. Tarun

Objective 1(a): To highlight and spread the motive of the session theme

Objective 1(b): To introduce key speakers for the day.

The event commenced with an introductory speech was given by Mr. Nakul Kumar Tarun, Director, Zone4Solutions warmly welcoming the prominent speakers, honourable guests of the day, and the audience. He mentioned that COP26 was a crucial opportunity to achieve a pivotal transformation change in global climate change policy and actions. It was a way for party countries to analysis their progress and set future goals. He highlighted that COP26 came with a background that the hydrometeorological disasters, intensified by climate change are increasing along with new challenge of COVID-19 and urged the parties to emphasis on the urgent need of build back better. He also emphasized that the ultimate goal of all the key conventions i.e., Kyoto Protocol, Paris Agreement and COP26 Glasgow under UNFCCC was to stabilize/reduce the GHGs concentration in the atmosphere. He stated that there is an urgent need to understand the climate finance and how the developing countries can utilize the support to become climate resilient.

## 2.2.2. Key Note Address: Climate Change and Disaster Risk Reduction –Initiatives by Government of India

*Presenter- Prof. Dr. Anil Kumar Gupta*

National Institute of Disaster Management (NIDM), Government of India



Figure 2: Prof. Kumar addressing the audience

### Key Takeaways

- He mentioned that it is important to discuss various dimensions of climate change and its association with disasters. In conjunction with an increase in hydro-meteorological disasters, tech-based innovations have also resulted in more disaster reporting. Nevertheless, with these 'advanced' technologies, natural resource exploitation has also increased and we have monetized these resources for the sake of our improved standard of living leading to environmental degradation. This raises questions about our current and future developmental planning. For instance, the number of mouths to feed is increasing, however, the quality of food intake is diminishing resulting in a change in cultivation practices. To meet the demand new, alien practices are implemented resulting in the exploitation of ecosystem services.
- He also highlights that in recent years, the world has witnessed an economic slowdown which forces countries to modify their development strategies for a green economy. It is estimated that a 12% increase in Indian GDP is needed to achieve the SDGs by 2030. Ecological and economic slowdown are linked, as ecosystem productivity has declined due to environmental degradation, change in the earth-atmosphere energy balance, change in biodiversity; expedited by climate change.
- Looking from a disaster management lens, climate change is a known accelerator of hazards turning into disasters due to community vulnerability especially social vulnerabilities including livelihood, health, social inclusion, etc. This aggravates the impact on food security, local economy.
- He also mentioned the imbalance of rural-urban migration which is also another causative factor of engulfing biodiversity. Additionally, urban waste generation, waste treatment, transportation and energy are a few other issues of concern which has raised the concept of urban biodiversity protection, urban-based natural solutions, green energy and green infrastructure. Thus, the new models of city planning have to evolve on the principle of 'nothing is waste'.
- In order to consider all the aspects/influencers and impact of climate change resilience, enormous public-private investments are needed to customize site-specific climate-resilient strategies, including critical zones.
- Prof. Kumar urged to have localized climate-resilient strategies as climate change is observed to have a localized impact. We have a National and state-level Action Plan for Climate Change, which needs to be integrated into the district level processes and actions.

- Furthermore, He enlightened the audience that on the directives of the Supreme Court, all the Indian districts are developing an Environmental Action Plan which should include DRR cum CCA action points. Additionally, the SDMPs and DDMPs should mainstream CCA strategies; similarly, the District Health Action Plans and Gram Panchayat Plans should also consider DDMPs and Environmental Action Plans.

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*Mitigation, adaptation and disaster management plans and strategies co-benefit each other. Therefore, they should be developed in synergy.*

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### 2.2.3. Technical Session 1: Climate Financing Emerging and Burning Issues

*Presenter- Er. Awdhesh Kumar*

Asst. Professor(Civil Engg), Invertis University,(UP.)India



Figure 3: Er.Awdhesh addressing the audience

#### Key Takeaways

- Mr. Awdhesh introduced climate change as the global phenomenon of climate transformation characterized by changes in the atmosphere due to an unprecedented increase in GHG emissions. He also highlighted the history of climate change issues and timeline of the UNFCCC Conferences such as Earth Summit (1992), Kyoto Protocol (1997), COP13 Bali Road Map (2007), COP19 Warsaw (2013), COP21 Paris Agreement (2015) and COP26 Glasgow (2021).
- He emphasizes that climate change poses systemic risks to the financial sector by destabilizing the systems that govern the economy. This includes physical risks (associated with immediate infrastructural risk) and transition risk (market risks arising due to policy and technology changes to combat the current and near-future climate risks through the green economy). He also highlighted the fact that the conventions especially the Paris Agreement and Kyoto Protocol has paved the way for financial assistance to the developing country parties to strengthen their climate change adaptation and mitigation actions. He updated that COP26 provided a 'rulebook', marking a milestone in the year-long negotiations for the necessary practical guidance for the implementation of the Paris Agreement. Additionally, provided a platform to discuss the country level achievements and expectations for NDCs.
- Mr. Awdhesh discussed the important aspects of the Paris Rulebook such as carbon markets, emission pledges, climate finance, net-zero/carbon neutrality and 2030 targets shedding light on the key limitations for climate finance. It was pointed out that:
- There was a lack of clarity about climate change finance commitments from 2013-20
  - Finance was allocated to climate-vulnerable countries as loans, which led to an increase in debt.

- Financial channelling processes require extensive time and expertise for approval, funds receiving and reporting even for short-term projects with stringent procurement and management policies.
- Lack of or very limited capacity for recipients to track the funding in current domestic systems due to fragmentations of finance.
- Some other issues such as lack of political and financial actions to the current situations, ineffectual functioning of financial processes at all levels, insufficient public financing and alternatives to private finance were other major concerns discussed in the session.
- The session introduced CDRI, an international coalition of domain experts, agencies, multilateral development banks, private sector for developing disaster resilience through ecological, social and economic infrastructure; IRIS, an initiative by CDRI to operationalize a systemic approach to resilient, sustainable and inclusive infrastructure for SIDS supported by various agencies such as UNDP, ADB, The WB, ARISE, EU and the Coalition for Climate Resilient Investment.

*Adaptation is more difficult for nations with climate vulnerability due to the vicious cycle of debt, where they have to pay more to borrow, making them more susceptible to change.*

### RULEBOOK POINTS UNDER DEBATE

- **Carbon Markets** – Developing countries, particularly India, China and Brazil, gained significantly from the carbon market under CDM of Kyoto Protocol.
- India registered 1,703 projects under CDM which is the second highest in the world.
- The ratification of the Paris Agreement would change the scenario of carbon markets.

- 1. **Targets for developing countries**
- 2. **CDM transition**
- 3. **Accounting rules**
- 4. **Share of Proceeds (SOP) to the Adaptation Fund**

are the major problems to be discussed regarding carbon markets.

- **Emission cut pledges**– In 2015, countries have agreed to cut GHG emissions to 2 degrees Celsius and ideally 1.5 degree Celsius.
- The deadline for countries to make steeper emission cut pledges is this year and major emitters like China and India have not yet come forward with strengthened NDCs.
- **Fossil Fuels** – The UN has called upon the OECD countries to phase out coal by 2030 but environment ministers from G20 economies have not agreed on a timeline.
- **Finance**– Developed countries pledged to raise \$100 billion per year till 2020 to assist developing countries in dealing with the effects of climate change but it has not yet been achieved.
- **Net zero** – The issue of net-zero or carbon neutrality was not mentioned in the Paris Agreement.
- More than 50 countries have pledged to carbon-neutrality by middle of the century. China has said it would achieve this status by 2060
- Several other developing countries including India have also been resisting such targets as developed countries are responsible for over 75% of accumulated atmospheric GHGs.

*IPCC AR6 emphasised that to keep temperature rise within 1.5°C, global emissions should be reduced by 45% from 2010 levels by 2030, on the way to net zero 2050.*

- **2030 targets**– The IPCC has called for 2030 emissions to be 45% less from 2010 levels for the 1.5°C goal.
- Several countries have not yet updated their NDC targets and the report calls for a significant increase in the level of

Figure 4: Presentation Slide about the Paris Rulebook

## 2.2.4. Technical Session 2: Highlights of COP 26

*Presenter- Mr David Risik*

Domain Expert, Australia



Figure 5: Mr. Rissik addressing the audience

### Key Takeaways

Mr. Rissik provides the highlights of COP 26 especially for SIDS in the following way:

- Climate change as a political issue: COP 26 demonstrated the incredible nation-level political interest in climate risk, associated challenges, achievements, current and future targets for decarbonization and adaptation. Despite this, there is an anonymous acknowledgement of the need to reduce the magnitude and cost of the impacts, especially for carbon neutrality and biodiversity (like coral reefs).
- Climate change as a financial issue: The government and private sector are taking climate change risks into account for economic sustainability while drafting their quarterly and annual plans and laws. At COP26, it was announced that ISSB will be established to provide standards and guidelines for a coherent global baseline of sustainability disclosures focused on the needs of investors and markets risks. Additionally, considerable recommendations have been made to TCFD as global standards for assessing and reporting climate risks to the market.
- Climate Change as a legal issue: Setting Australia as an example Mr. Rissik explained that it is important to have climate change concerns as the duty of care and diligence imposed upon the company directors to make them liable to climate change risks and to pretend that climate change will not intersect with the interests of their firms. He also introduced 'greenwashing' concerning those companies, government-owned corporations and governments making pledges towards net-zero or other climate resilience aspects without any robust planning, implementation strategy, budget for the same. Also, companies and states should have access to evidence-based disclosures that will help them prepare future action plans that incorporate climate change risks.
- Climate Change as technology and scientific accounting issue: Though new technologies and renewables are considered to be the heart of a transition to a low carbon economy, tremendous advancement needs to be made to integrate carbon capturing, green carbon etc which should be less expensive compared to the current technologies. This calls for large investments as the poor countries will suffer. Secondly, a considerable amount of research and investment needs to be made in future technologies, alternative minerals, their current and future GHG emissions across Scope 1,2,3. Third, it is important to set better standards of emission accounting to integrate the new technology, renewable energy and supply chain of the organization necessary for net-zero energy.
- Climate Change as a risk management issue: To address climate change at a regional level, a risk-based approach needs to be adopted to map the hazards and understand the likelihood of the climate risks to the assets, operations, workforce, organization over time.



### 2.2.5. Technical Session 3: Changing Climate and its impact on environment- case study of Bangladesh

Presenter- *Md. Muzammel Haque*

Environmental Expert, Bangladesh



Figure 7: Md. Haque addressing the audience

#### Key Takeaways

- According to the recent Global Climate Risk Index Report 2021, Bangladesh is the 7th most vulnerable country and the causative factors are its geographical location, high population density, high rates of poverty, reliance on many livelihood opportunities in climate-sensitive sectors related to biodiversity, forestry, agriculture and fisheries. Hence, climate change risks such as increased intensity and frequency of hydrometeorological disasters, sea levels rising etc will aggravate these vulnerabilities. This has significant implications such as:
  - Affecting food and water security.
  - Damaging the ecosystems and biodiversity especially the Sundarbans Mangroves.
  - Change in water temperature and water resources is affecting many communities based in these climatically sensitive regions.
  - Increased rainfall will enhance erosion and sedimentation.
  - Increased salinization is also affecting the low-lying areas (saline water penetrate 100m from BoB during dry season).
  - Frequent heavy rainfall and floods also result in increased water-borne diseases and other climate-specific diseases, skin diseases.
- He mentioned that many cities including the capital are listed as the most vulnerable cities in the world. The floods of 1988, 1998 and 2004 are the most damaging ones affecting the infrastructure of many cities.
- Extreme weather events have adversely affected the agriculture sector. In addition, water scarcity has also affected the production of major crops, particularly rice. According to the ITC report, the production of rice and wheat can be decreased to 8% and 32% respectively by 2050. Though, Bangladesh has 260 species of fishes all of which are endangered and susceptible to climate change risks. May species are already extinct due to changes in the tidal pattern and salinization. He also highlighted that the effects of climate change on the hydrology of the country will be entirely negative. The severity of water scarcity affects the domestic and industrial use of water in the country.
- The government has developed many policy papers, National Adaptation Programme of Action (NAPA) identifying that climate change will have severe effects on the riverine and coastal ecosystems of the country.
- In terms of flooding, the OECD report states that further changes in precipitation will have severe implications:
  - The timing of occurrence may change based on the seasonality of the hydrological cycle.

- Increased precipitation in the Ganges, Brahmaputra and Meghna basins will increase the magnitude, depth and spatial extent of the floods which will bring out changes in the LULC pattern in Bangladesh.
- The peak timing of major rivers may also change, changing the likelihood of synchronization of the flood peak of major rivers.
- The coastal area of Bangladesh is on the front line of climate change directly affected by storm surges, flooding and sea level rise. Most of Bangladesh's land is 10m above sea level (10% of the country below 1m) making it extremely vulnerable to increases in high tides (losing 50% of landmass) and up to 30 million population will become climate refugees. This will result in a decline in GDP to 27-57%.
- Md. Haque highlighted that though the EWS of the country has been improved with the help of many national and international organizations, the vulnerability to life and livelihood in the coastal areas still remains. 30 districts (damaged severe) and 11 districts (damaged very severely) during cyclone Sidr, 2007.
- Md. Haque mentioned that looking that these scenarios, the country have discussing to work on reducing carbon emissions in 3 sectors i.e., transportation, agriculture and industry.

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*It is important to understand the regional difference to create climate change strategies.*

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#### 2.2.6. Platform Open to All

<b>Question</b>	<b>Speaker</b>	<b>Discussion Points</b>
<i>How to integrate the DRR and CCA concepts and strategies in planning at the national and regional level in countries like India which has diverse issues of concern?</i>	Prof. Dr. Anil Kumar Gupta	<ul style="list-style-type: none"> <li>● There are many pilot studies for mainstreaming CCA in DRR in India, however, looking at the geographical scope of the strategies, it is essential to conduct HRVA for both the domains at the village level so that co-existing parameters can be incorporated. The findings, gaps should be reflected in the process of planning and implementation.</li> <li>● Secondly, district-level damage and loss databases should be updated (training model developed by NIDM) so that district officials can draw the projections according to the available baselines. The main aim is to simplify climate change knowledge and actions to make the community understand and utilize it.</li> <li>● Thirdly, there is a need for impact-based forecasting including pre-existing vulnerabilities/capacity to customize immediate and future action points.</li> <li>● Furthermore, the state and district departmental plans should be revised in the view of DRR and CCA strengthening the disaster-specific departmental strategy, including institutional capacity building, shared experiences and indigenous knowledge (for</li> </ul>



		instance, Gorakhpur DDMP, 20 case studies of Maharashtra).
<i>Low lying countries are paying the price of the development activities done by the developed countries in the last few decades.</i>	Mr David Risik	This issue has been raised in many forums. Though few developed countries have paid the compensation for the same and as emphasized in COP26 that now there is an urgent need for climate finance to these countries in order to develop climate-resilient structures and policies. Many investment development banks are also providing funds to risk-based infrastructure and capacity building projects in developing countries. However, more commitments are required for technical and financial assistance.
	Mr. Awdhesh Kumar	Though according to the CBDR-RC, it is essential to understand the burden laid on developing nation parties, however, according to the current situation, it is important to understand the responsibilities of each nation and work inclusively for enhanced climate resilience. He added that we will be answering to many forums in 2050 such as SDGs, SFDRR, therefore, the upcoming years will be crucial in every sense for DRR-cum-climate change strategies.

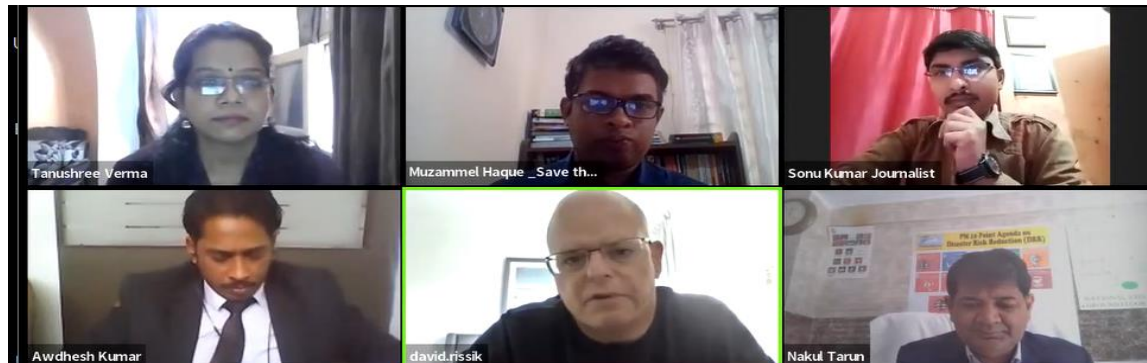
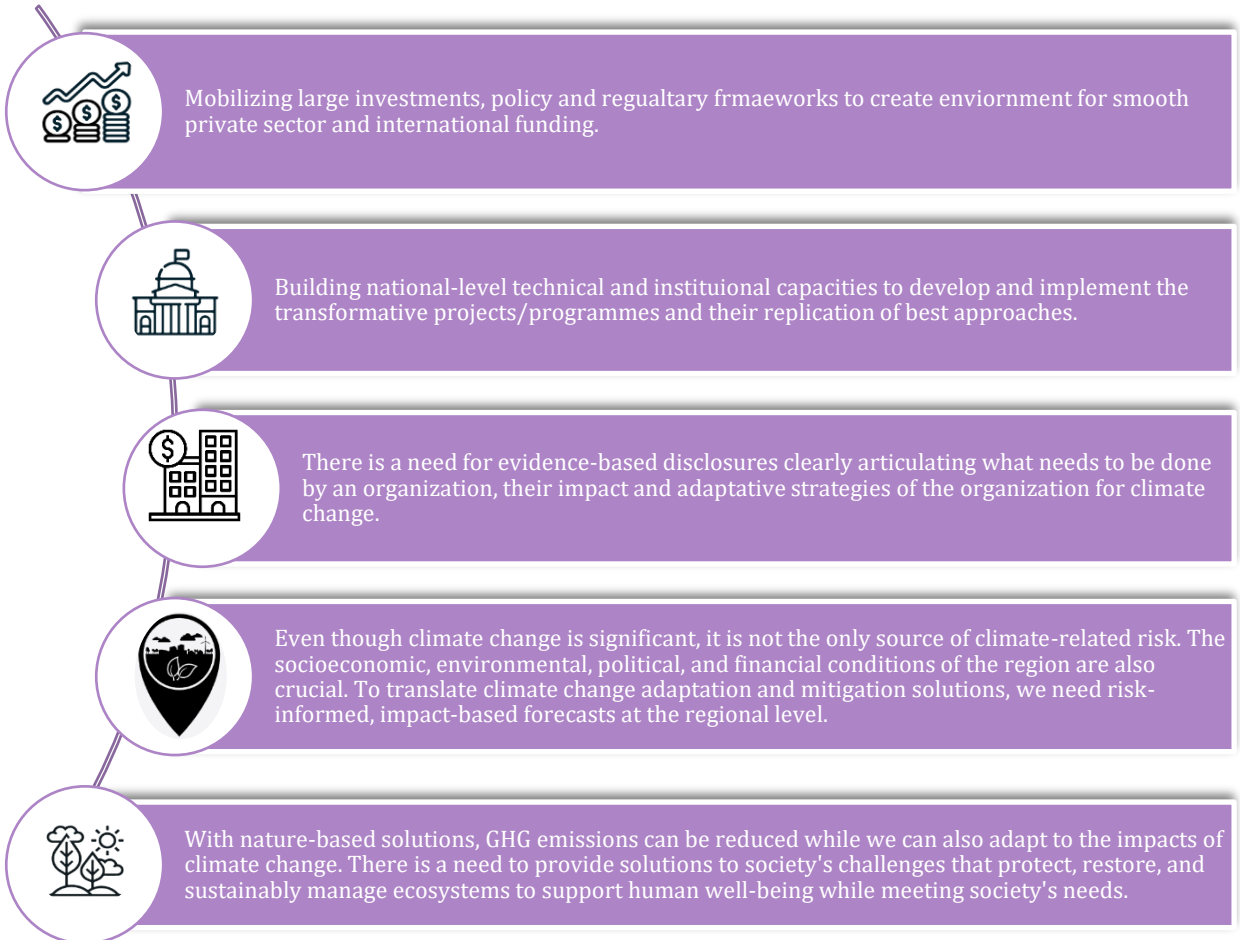


Figure 8: Technical Session Panel answering the questions

### 2.2.7. Conclusion and Vote of Thanks

Mr. Nakul Kumar Tarun, Director, Zone4Solutions, extended his gratitude to the organizers, guests, and audience for their valuable contribution highlighting that climate change is an agglomeration of hazards triggering to become a global disaster and the collaborative efforts of all the nations are needed to combat the resulting challenges. We are all sailing on one ship, who digs the hole does not matter now, inclusive actions can only save us all, delaying climate actions is no longer an option for the world. He thanked the presenters for their valuable perceptions and knowledge. The program was insightful.

# RECOMMENDATIONS



# ANNEXURE

## Programme Flyer

International Webinar on

# COP 26 & Climate Finance

**DATE**  
11<sup>TH</sup> December, 2021

**TIME (IST)**  
10.30 AM-12.30 NOON

**Key Agenda**

- Climate change: Threat, Losses and Glim Future
- Highlights of COP26
- Climate finance Emerging and burning need
- Climate Change: Are we at a point of no return
- Sustainable development and way forward





**CHIEF GUEST**  
Shri Rajendra Singh,  
Member NDMA, Gol



**KEY NOTE SPEAKER**  
Dr. Anil Kumar Gupta  
Professor & Head,  
ECCDRM Division, NIDM, Gol



**GUEST OF HONOUR**  
Dr. Akhilesh Kumar  
Senior Advisor, DST, Gol



**CONVENER**  
Shri Nakul Kumar Tarun  
Director, Zone4solution



**INTERNATIONAL COORDINATOR**  
Er. Awdhesh Kumar  
Assistant Professor  
(Civil Engineering)  
Invertis University, (UP), India



**PANNELIST AUSTRALIA**  
Shri David Risk  
Domain Expert  
Australia Invitee



**PANNELIST INDIA**  
Shri Ashish Panda  
Central Secretariat Officer  
Gol



**PANNELIST MALAWI**  
Shri Mathews Malata Jr  
President-Association  
of Environmental Journalists  
in Malawi



**PANNELIST BANGLADESH**  
Md Muzammel Haque  
Climate change expert  
Bangladesh Invitee



**MODERATION**  
Ms. Tanushree Verma  
Head Training & Research  
Zone4solution



Meeting Id: 840 7475 3105  
Password: ZONE4S

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**\*e-CERTIFICATE WILL BE PROVIDED TO ALL ATTENDEES**

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## Programme Schedule



### International Webinar on COP 26 Climate Finance

**Date:** 11<sup>th</sup> December 2021

**Time:** 10.30 AM -12.30 PM, IST

**Registration Details:** Zoom Meeting

<https://us02web.zoom.us/j/84074753105?pwd=c2NyVHZTZm1tU0xrVENxdjdLVXdsQT09>

Meeting ID: 840 7475 3105

Passcode: ZONE4S

Time	Topic	Speaker
10:30-10:40	Welcome Address and Introduction	Mr. Nakul Kumar Tarun, Director, Zone4solution, India
10:40- 10:50	Inaugural address	Mr. Rajender Singh, Member NDMA (Chief Guest of the Programme) (in his absentia)
10:50-11:00	Climate change and Disaster Risk Reduction –Initiatives by Government of India for CCA and DRR	Dr. Anil Kumar Gupta, NIDM (Keynote Speaker), GOI
<b>Technical session</b>		
11:00-11:15	Climate change as global catastrophes	Dr Akhilesh Kumar, Senior Adviser DST, GOI (Guest of honor) (in his absentia)
11:15-11:30	Climate financing Emerging and burning issues	Er. Awdhesh Kumar, Asst. Professor, Invertis University, India
11:30-11:45	Highlights of COP 26	Mr David Risik, Domain Expert Australia
11:45-12:00	Climate Change threat loss and glim future	Mr. Ashish Kumar Panda, Central Secretariate services, GoI (Unable to attend)
12:00-12:15	Changing Climate and its impact on environment- case study of Bangladesh	Md. Muzammel Haque Environmental Expert from Bangladesh
12:15-12:25	Role of Media in CCA and DRR and media understanding of CoP 26	Mr. Methew Malata, Jr., CCA Media Expert, Malawi (Unable to attend)
12:25-12:30	Open house discussion and Vote of thanks	To be moderated by Ms. Tanushree Verma, Head (Training and Research), Z4S, India

YouTube link: <https://youtu.be/6SCZZCHqtkQ>

## REFERENCES

1. Suresh, K. (2021). Climate Change Challenge 26<sup>th</sup> Conference of Parties (COP26) climate summit is crucial but may be disappointing? *Global Journal of Ecology*, 6(1), 100-104.
2. Debnath, R., Sagar, A., & Babu, S. (2021). COP 26 Futures We Want-India Country Profile.
3. <https://www.bankofengland.co.uk/knowledgebank/climate-change-what-are-the-risks-to-financial-stability>.
4. <https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>.
5. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact/cop26-outcomes-finance-for-climate-adaptation>.