

## Editorial

### Four New Reports Set Scene for Discussions on Climate Finance at COP27

A key Committee dealing with climate finance has published four new reports that will form an important basis for discussions by governments at the UN Climate Change Conference COP27 in Sharm el-Sheikh (6-18 November). The reports provide clarity on where the world stands in its efforts to mobilize the billions of dollars needed every year to green economies and build resilience to the inevitable impacts of climate change.

The reports published by the UNFCCC's Standing Committee on Finance (SCF) build upon the experiences of countries, multilateral development banks, Climate Funds, and the financial community at large.

They provide a comprehensive landscape of climate finance from the perspective of current climate finance flows, progress towards achieving the goal of mobilizing jointly USD 100 billion per year, definitions on climate finance, and efforts aimed at making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development (work related to Article 2, paragraph 1(c) of the Paris Agreement).

The reports show that while there has been an increase in the overall global climate finance flows, key targets to mobilize climate finance for developing countries have not been met.

At the same time governments and multilateral institutions have been working on methodologies, policies and approaches to improve the implementation of climate finance targets and scale up effectiveness of climate finance from all sources globally.

Here are the key findings of each report:

#### Fifth Biennial Assessment and Overview of Climate Finance Flows

This report shows that global climate finance flows were 12 per cent higher in 2019-2020 than the previous biennium, reaching an annual average of USD 803 billion. The increase was mainly driven by more investment in energy efficiency in buildings, investments in electric vehicles and measures to adapt to climate change, such as building new defences against flooding.

Climate finance from developed to developing countries increased between 6 per cent and 17 per cent in 2019-2020, either directly from developed to developing countries, or through climate funds and multilateral development banks.

The report identified that finance for mitigation (cutting greenhouse gas emissions) constitutes the largest share of climate-specific financial support, but the share of adaptation finance continues to increase and grew at a higher rate than mitigation finance. In addition, adaptation finance is predominantly delivered through grants, while public mitigation finance predominantly takes the form of loans.

Meanwhile, ways to track domestic public climate finance are improving in both developed and developing countries.

The report reiterates that a sole focus on positive climate finance flows will be insufficient to meet the overarching purpose and goals of the Paris Agreement, and that finance flows must integrate climate risks into decision-making and avoid increasing the likelihood of negative climate outcomes.

Report on progress towards achieving the goal of mobilizing jointly USD 100 billion per year to address the needs of developing countries in the context of meaningful mitigation actions and transparency of implementation

The technical report on progress towards mobilizing jointly USD 100 billion per year for consideration by governments at COP27 represents the first effort of its kind undertaken by the SCF and looked at progress across three dimensions of the goal: a) the finance flows for USD 100 billion, b) how the needs of developing countries are being addressed, and c) progress on the context of meaningful mitigation action and transparency of implementation.

The report confirmed the goal was not met in 2020. It also identified the role of international public climate finance as critical in the face of the current economic challenges in developing countries due to extreme weather, food and energy crises.

Race To Zero is a global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth.

It of course remains a pipe dream with rich nations not actually keep fulfil their commitments made in Paris. Let us all hope for the best for success of the Egypt meeting of COP 27 since the next one is likely to be in Delhi in March, 2023.

Have a happy reading!



November 4, 2022

(V. Subramanian)  
Editor-in-Chief

Snapshot 1



Capital of India chokes (November 4, 2022).

Snapshot 2



Rhino horns are shrinking due to the impact of hunting.

Snapshot 3



Smiling Sun.

# Contents

<i>Editorial</i>	i
❏ <i>Snapshot</i>	ii
Effect of Hydraulic Conductivity on Three Dimensional Contaminant Transport in Riverbank Filtration System	
<i>Shaymaa Mustafa and Mohamad Darwish</i>	1
Optimal Reactive Power Dispatch by Success History Based Adaptive Differential Evolution Salp Swarm Algorithm	
<i>Naveen Kumar and Ramesh Kumar</i>	11
Development, Current Status and Challenges of Multiple Use Water Systems in Nepal: A Review	
<i>Nani Raut, Smriti Gurung, Abda Khalid, Bed Mani Dahal, Kumud Raj Kafle and Anjal Prakash</i>	19
Monitoring of Pesticide Residues in Lebanese Vegetables and Agricultural Soils and Their Impact on Soil Microbiological Properties	
<i>Mohamad H. Omeiri, Rony S. Khnayzer and Hoda H. Yusef</i>	27
Adaptation Practices by the Farmers for Reduction of Salinisation Problem in the Paddy Fields of South-Eastern Coast of Bangladesh	
<i>Prabal Barua, Syed Hafizur Rahman and Saeid Eslamian</i>	37
Optimization of Two-Stage Operational Amplifier Using Firefly Algorithm Considering Environmental Constraints	
<i>Kumari Archana, Ram Kumar, Sourav Nath and Prabhat Kumar Srivastava</i>	45
Storm Surge Hazard Assessment Along the East Coast of India using Geospatial Techniques	
<i>Harshith Clifford Prince, R. Nirmala, R.S. Mahendra and P.L.N. Murty</i>	51
Assessment of Primary Parameters in Sawa Lake and Their Impact on Productivity	
<i>AlaaJabar Mahmoud, Ali Abdulhamza Al-Fanharawi and IbtehalAqeel Al-Taee</i>	59
Assessment of Temporal Variation in Hydrogeochemical Facies of River Water in the Central Himalayan Region	
<i>Kajal Sinha, Chandrashekhar Azad Vishwakarma, Jaya Dwivedi and Prashant Singh</i>	67
Optimisation of Defluoridation of Water by Zirconia Nanoparticles Using RSM	
<i>Poornima G. Hiremath, Prashanth G.K., Abdul Bais Kadli, Sheril Varghese and Vishnu V. Bhaskar</i>	75
Effect of Sodium Fluoride on Glycemic Index and Liver Functions in Rats	
<i>Sadiq Jaffer Ramadhan, Muna Hassan Youssef and Khalisa Khadim Khudair</i>	85
A Bibliographic Analysis of Adaptive Techniques for the Development of Environment-Friendly Renewable Energy Systems	
<i>Shashi Gandhar, Jyoti Ohri and Mukhtiar Singh</i>	93

Study the Effect of Some Citrus Peel Extracts Against Plant Pathogenic Fungi	
<i>Ahmed Mshari, Alaa M. Alrudainy and Najwa M.J.A. Abu-Mejdad</i>	103
Removal of Fluoride from Synthetic Wastewater Using Carbonised Saw Dust and Suspended and Immobilised Culture of <i>Pseudomonas oleovorans</i> Strain NITD 20 – A Comparative Study	
<i>Bhaskar Bishayee, Abhilasha Rai, Biswajit Ruj and Susmita Dutta</i>	111
Placement of Renewable Distributed Energy Resources in the Radial Distribution Network to Overcome the Losses and Air Pollution	
<i>Amandeep Gill, Himani Bali and Abhilasha Choudhary</i>	119
<i>Environment News Futures</i>	127