



**June - July 2023**

## **Your bi-monthly climate connection is here!**

The anticipated energy transition, a global transformation of energy systems away from fossil fuels to renewable and clean energy sources by 2050, is necessary to ward off the worst impacts of climate change. It will entail overhauling our energy resources, systems, economics, policies, and behaviour. One important element in energy transition is the role of energy storage systems. Storage technologies are essential to replace fossil fuel-based generations with 100 per cent renewable energy-based energy system sources. In this crucial landscape, it is important to understand the innovative role played by battery startups to lead the energy transition.

The 27th UN climate conference (COP27) reached a key milestone in launching a brand-new loss and damage (L&D) fund and was a critical moment for addressing climate justice issues. The L&D fund will allow vulnerable countries to tackle the climate impacts faced by them. Nonetheless, it is crucial to operationalize the fund and be fair and inclusive while setting up the fund and governing it.

This is our bi-monthly dispatch of updates and insights on renewable energy, energy transition, climate change, and the environment in general. We hope you enjoy reading it.

## Happenings from home



Photo: Pixabay

“Our village went underwater. Nothing of the house remains but that is still our official address in many documents.” This is the statement from Assam resident Seher Ali as his family lost their ancestral home in Charagaon due to a rise in water levels. Ali is one of the lakhs of people in India who have lost their homes and livelihoods to climate-related phenomena in the past few decades. In 2021 alone, nearly 50 lakh people were internally displaced in India due to climate change and disasters, as per the annual Global Trends Report by the United Nations High Commission for Refugees (UNHCR). The question that everyone should ask is, as climate change remakes the world, where do we live? Climate governance should become top of the agenda of governments globally due to the inevitability of climate change necessitating extensive systems to deal with it. Mala Balaji, CAG writes just how climate induced displacement has become the intense phenomenon that it has.

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## From the corners of the country



A need or problem encourages creative efforts to meet the need or solve the problem. In short, necessity is the mother of invention as rightly said by the ancient Greek philosopher Plato. To further avoid the worst impacts of climate change (which we are already facing now), the world needs to cut greenhouse gas (GHG) emissions in half by 2030 and reach net-zero emissions by 2050. To achieve this rapid deployment of renewable energy, it is critical to meet rising energy needs. And one of the most critical challenges to transitioning to renewable energy sources is its inherent intermittency. To address this challenge, energy storage, particularly in advanced batteries, emerges as a key enabler for the integration of renewables into our energy systems. So, what innovative role do battery startups in India play?

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## From around the world



Photo: Biosphoto via AFP/Claudius Thirlet

We often encounter terms such as eco-anxiety, floods, droughts, climate doom, and environmental existential dread, which can be overwhelming. While it is absolutely necessary to inform citizens about the threats of climate change, it is also essential to bring out positive stories from within the energy transition landscape. This story on women farmers in Cambodia is one such example of energy generated from renewables positively impacting their lives. By replacing polluting diesel-powered water pump across the fields with a solar-powered pump that delivers water directly into a sprinkler system, these women farmers were able to reduce the monthly electricity bill (per farm) by about 30,000 Cambodian riels (US\$7), a large sum for a subsistence farmer. At the same time, their health also improved since they no longer carry heavy equipment and tools.

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## Global warnings



















In the era of climate change, one thing that is constant is the occurrence of unpredictable weather. Extreme weather is becoming more frequent and more intense in many places. We have already moved from an era of 'global warming' to 'global boiling'. Scientists say this will only get worse as we continue to keep releasing planet-warming greenhouse gases. Apart from causing these weather changes, climate change is also undeniably amplifying the impacts of heatwaves, droughts, wildfires, and floods across the globe. Understanding these interconnected phenomena is crucial for developing effective strategies to mitigate their effects. Time is of the essence as the window for effective climate action is narrowing. Only through concerted actions that focus on systemic changes can we navigate the challenges of climate change and secure a resilient and prosperous future for our planet.

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## In a nutshell

### The sources and impacts of short-lived climate pollutants

POLLUTANT	SOURCES	MAJOR IMPACTS	REGIONAL SCOPE
<b>BLACK CARBON</b>	 black coal  diesel exhaust  biomass for cookstoves	<ul style="list-style-type: none"> <li>• Causes respiratory disease</li> <li>• Prevents clouds from forming</li> <li>• Accelerates the melting of snow and ice</li> <li>• Affects the health of plants and ecosystems</li> <li>• Increases the risk of lung and heart disease</li> </ul>	 local regional
<b>METHANE</b>	 natural gas  livestock  landfills	<ul style="list-style-type: none"> <li>• Toxic to human and animals</li> <li>• Reduces annual crop yields</li> <li>• Increases the risk of respiratory and heart diseases</li> </ul>	 global
<b>TROPOSPHERIC OZONE</b>	 methane  carbon monoxide  nitrogen oxide  volatile organic compounds	<ul style="list-style-type: none"> <li>• Reduces plant growth, photosynthesis</li> <li>• Increases the risk of asthma and heart disease</li> </ul>	 local regional
<b>HYDROFLUORO-CARBONS</b>	 air conditioning  refrigeration	<ul style="list-style-type: none"> <li>• Can destroy stratospheric ozone</li> <li>• Contribute to radiative forcing</li> <li>• Can severely affect the heart function</li> </ul>	 global

Source: The Climate and Clean Air Coalition.

Notes: Black carbon and tropospheric ozone also have a small global impact; methane also has small local and regional impacts.

22.03.08



Efforts to address climate change should focus not only on substantially reducing carbon dioxide emissions but also on actions to reduce those climate pollutants that remain in the atmosphere for much shorter periods of time. Despite their short atmospheric lifetimes, short-lived climate pollutants (SLCPs) have a high global warming potential. SLCPs are the second largest contributor to human-caused climate warming after carbon dioxide, contributing up to 45 per cent of global warming to date, and targeted efforts to reduce SLCP emissions could slow the pace of global warming by 0.6 degrees C by 2050.

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## Make it happen!



As the impacts of climate change intensify, many developing countries have become financially overwhelmed. For years, they've been calling for the creation of a fund to address climate-related loss and damage in a timely and sustainable manner. At COP27 last year, rich governments finally heeded their request but what wasn't determined was how the fund would be financed and by when it would become operational. Governments must urgently mobilize new and additional funding that can adequately address the negative impacts of climate change. This is a call to request action from leaders to ensure the loss and damage fund is operational in time for the COP28 Summit in December.

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## Nugget



Did you know that the amount of operating and planned coal plants fell in 2022 both in developed and developing countries excluding China? Despite a global gas crunch and price shocks, coal power capacity retirements reached 26 gigawatts (GW) in 2022, and another 25 GW received an announced close-by date of 2030.

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## RESOURCES FROM CAG



# REPORT ON TAMIL NADU'S TRANSITION TO GREEN ENERGY



**CAG**

Citizen consumer and civic Action Group

Tamil Nadu has made significant strides in renewable energy, with a higher installed capacity than non-renewable energy. However, this progress is yet to be reflected in the state's electricity mix. This report explores Tamil Nadu's transition to green energy and assesses public perception of renewable energy sources.



We encourage everyone to take simple yet powerful steps towards sustainability by carrying their own cloth bags and water bottles. By reducing our reliance on single-use plastics, we can significantly reduce plastic pollution and protect our planet. #SustainableFuture



# CAG

**Citizen consumer and civic Action Group**

Climate Connection is an initiative of Citizen consumer and civic Action Group (CAG) to assist and inform local communities, grassroots NGOs, environment and consumer groups, village representatives and media representatives on how to embrace renewable energy, navigate energy transition, mitigate climate change, and protect the environment they live in. We create change by developing and disseminating information resources on air pollution, climate change, environment and policies surrounding these issues.



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Contact

No.103, First Floor, Eldams Road, Teynampet, Chennai - 600018.

Phone: 044 - 24354458 / 044 - 24350387

Email: [climateconnection@cag.org.in](mailto:climateconnection@cag.org.in)