



December 2022 - January 2023

Your bi-monthly climate connection is here!

Climate change is the defining crisis of our time and it is happening even more quickly than we feared. Rising temperatures and a rising frequency of natural disasters are signs of a worsening global climate crisis. It is important that we comprehend the areas of impact, so we know to take precautions and push for serious climate action. The main driver of current climate change is the emission of greenhouse gases, most importantly carbon dioxide and methane. These are primarily released when fossil fuels are burnt.

One way to reduce greenhouse gas emissions is to make a switch to fair and inclusive renewable energy. The share of renewables in global electricity generation reached 28.7% in 2021, which is promising. While we continue improving on that, we also need to develop energy storage measures, which are going to be the quintessential part of the new power system. And as we plan for re-structuring our storage networks, have we counted the costs in terms of raw materials, to make just transition into renewable energy, more than just a dream?

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



Pop culture has changed vividly over the years, starting from the industrial revolution to the introduction of mass media, televised sports, boot-cut jeans, the Rolling Stones, and nightclubs to today's disruptor of social media. Before social media, pop culture trends were usually trailblazed by actors, musicians, athletes etc., either due to their own personal choices or by their association with brands. However, we now live in the digital age, and pop culture trends are now created and made 'viral' by 'influencers', particularly social media influencers. It is well established that individual and community behaviour can drive the climate crisis. So how are influencers, through seemingly innocuous videos, creating and leading community behaviour that can drive climate change?

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From the corners of the country



Photo: The Indian Express

In India, which is the world's third largest producer of renewable energy, nearly 40 per cent of installed electricity capacity comes from non-fossil fuel sources. As renewable power penetration increases with each passing day, the operational dynamics of the power system will also change drastically, requiring a change in the system architecture. Energy storage is going to be a quintessential part of the new power system architecture as it not only helps to balance out the variability in power generation but could also enable the consumption of a higher proportion of self-generated renewable power by consumers, thus reducing the need to feed excess electricity back into the grid. The storage solutions will also dispel the myth that renewable energy sources can't meet the baseload. With these things in mind India needs to urgently work on developing viable energy storage options.

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From around the world



The world is facing an energy transition process that revolutionises how energy is generated. The climate threat has made countries seek ways to guarantee energy supply without producing polluting emissions, thus laying the foundations for the deepest and most systematic energy transformation process to date. To fully transition to a green economy, we'll need vast amounts of metals like copper, silicon, aluminium, lithium, cobalt, rare earth, and silver. These metals and minerals are needed to generate, store, and distribute green energy. Without them, the reality is that technologies like solar panels, wind turbines, lithium-ion batteries, nuclear reactors, and electric vehicles are simply not possible. So, it is clear that to fully work our way off of fossil fuels, we will need to procure large amounts of the metals that make sustainable energy possible. Do we have enough materials for fair and inclusive transition?

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Global warnings



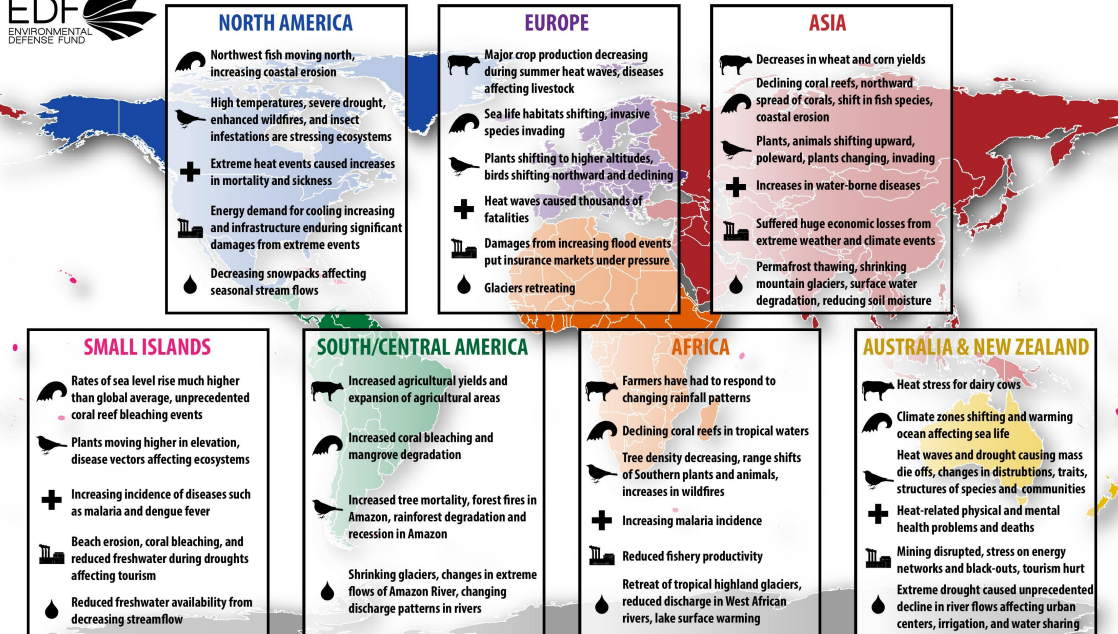
Photo: downtoearth.org

Human-induced climate change is the largest, most pervasive threat, both to the natural environment and societies, that the world has ever experienced. The main driver of current climate change is the emission of greenhouse gases, most importantly carbon dioxide and methane. These are primarily released when fossil fuels are burnt. According to a new study, temperatures in Greenland haven't been this warm in at least 1,000 years. We know now that global warming has reached even these remote Greenland ice sheets, and that no corner of the globe is immune from the devastating consequences of climate change. Business as usual is not good enough. As the infinite cost of climate change reaches irreversible highs, now is the time for bold collective action by governments, businesses, civil society, youth, and academia.

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In a nutshell

Climate change is everywhere.



Note: Impacts and categories for each region do not include projected impacts in future. All observed impacts identified have been attributed in some capacity to climate change, specifically. (Source: IPCC AR5 WGII 2014)

impact categories



AGRICULTURE, LIVESTOCK, FISHERIES, FOOD PRODUCTION AND SECURITY, LAND-USE CHANGE, FORESTRY

COASTAL AND MARINE SYSTEMS, SEA LEVEL RISE, INUNDATION, SHORELINE CHANGE

ECOSYSTEMS AND BIODIVERSITY



HUMAN HEALTH

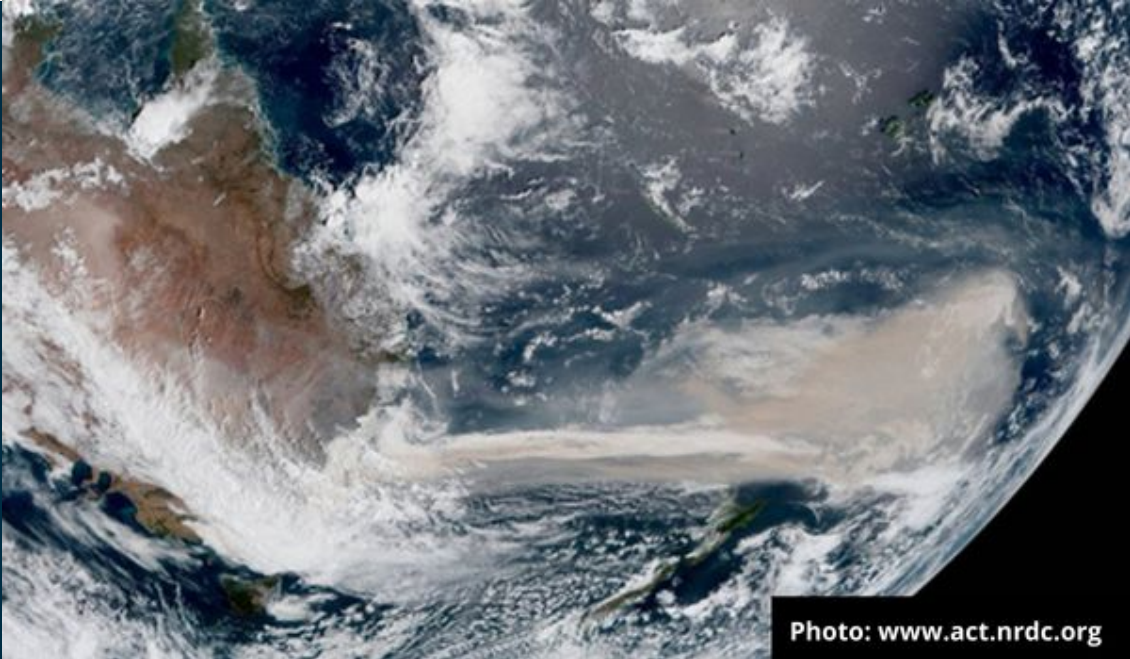
SETTLEMENTS, INDUSTRY, INFRASTRUCTURE, URBANIZATION, PRODUCTION SYSTEMS, ECONOMICS

WATER RESOURCES, AVAILABILITY, AND SECURITY

The impacts of climate change on different sectors of society are interrelated. Drought can harm food production and human health. Flooding can lead to disease spread and damage to ecosystems and infrastructure. Human health issues can increase mortality, impact food availability, and limit worker productivity. Climate change impacts are seen throughout every aspect of the world we live in. Climate change impacts are uneven across the country and the world. Even within a single community, climate change impacts can differ between neighbourhoods or individuals.

[Know more](#)

Make it happen!



As temperatures rise and natural disasters swell, there's no doubt that the climate change is worsening. We must tackle climate change now as we are running out of time. We have to find ways to drastically reduce emissions if we want to avoid climate catastrophe. This is a call to request world leaders for bold climate action that includes strengthening the Paris climate agreement, slashing the use of climate-busting fossil fuels, promoting economic justice, expanding investments in clean energy technologies, and acting immediately to solve the climate crisis

Know more

Nugget



Do you know that new estimates suggest that global carbon dioxide emissions from fossil fuels have hit a record high of 36.6 billion tonnes in the year 2022? Total global CO2 emissions have climbed by approximately 0.8% in the year 2022.

[Know more](#)



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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