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Source : www.thehindu.com Date : 2023-12-01

2023 SET TO BE HOTTEST YEAR EVER: UN

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

November 30, 2023 09:13 pm | Updated December 01, 2023 01:49 am IST - Geneva

Firefighters attempt to extinguish a wildfire on burned peatland and fields on September 23, 2023, in Ogan Ilir, South Sumatra, Indonesia. This year is set to be the hottest ever recorded, the UN said on November 30, demanding urgent action to rein in global warming and stem the havoc following in its wake. | Photo Credit: Getty Images

This year is set to be the hottest ever recorded, the UN said on November 30, demanding urgent action to rein in global warming and stem the havoc following in its wake.

The UN's World Meteorological Organization warned that 2023 had shattered a whole host of climate records, with extreme weather leaving "a trail of devastation and despair".

"It's a deafening cacophony of broken records," said WMO chief Petteri Taalas.

"Greenhouse gas levels are record high. Global temperatures are record high. Sea level rise is record high. Antarctic sea ice is record low."

The WMO published its provisional 2023 State of the Global Climate report as world leaders gathered in Dubai for the UN COP-28 climate conference, amid mounting pressure to curb planet-heating greenhouse gas pollution.

United Nations chief Antonio Guterres said the record heat findings "should send shivers down the spines of world leaders".

The stakes have never been higher, with scientists warning that the ability to limit warming to a manageable level is slipping through humanity's fingers.

The 2015 Paris climate accords aimed to limit global warming to well below two degrees Celsius above pre-industrial levels – and 1.5C if possible.

But in its report, the WMO said 2023 data to the end of October showed that this year was already around 1.4C above the pre-industrial baseline.

The agency is due to publish its final State of the Global Climate 2023 report in the first half of 2024.

But it said the difference between the first 10 months of this year and 2016 and 2020 – which

previously topped the charts as the warmest years on record – "is such that the final two months are very unlikely to affect the ranking".

The report also showed that the past nine years were the hottest years since modern records began.

"These are more than just statistics," Mr. Taalas said, warning that "we risk losing the race to save our glaciers and to rein in sea level rise".

"We cannot return to the climate of the 20th century, but we must act now to limit the risks of an increasingly inhospitable climate in this and the coming centuries."

The WMO warned that the warming El Nino weather phenomenon, which emerged mid-year, was "likely to further fuel the heat in 2024".

That is because the naturally-occurring climate pattern, typically associated with increased heat worldwide, usually increases global temperatures in the year after it develops.

The preliminary report also found that concentrations of the three main heat-trapping greenhouse gases – carbon dioxide, methane and nitrous oxide – reached record high levels in 2022, with preliminary data indicating that the levels continued to grow this year.

Carbon dioxide levels were 50% higher than the pre-industrial era, the agency said, meaning that "temperatures will continue to rise for many years to come", even if emissions are drastically cut.

The rate of sea level rise over the past decade was more than twice the rate of the first decade of satellite records (1993-2002), it said.

And the maximum level of Antarctic sea ice this year was the lowest on record.

It was a million square kilometres less than the previous record low at the end of the southern hemisphere winter, the WMO said— an area larger than France and Germany combined.

Meanwhile, glaciers in North America and Europe again suffered an extreme melt season, with Swiss glaciers losing 10 percent of their ice volume in the past two years alone, the report showed.

Dramatic socio-economic impacts accompany such climate records, experts say, including dwindling food security and mass displacement.

"This year we have seen communities around the world pounded by fires, floods and searing temperatures," Mr. Guterres said in a video message.

He called on the leaders gathered in Dubai to commit to dramatic measures to rein in climate change, including phasing out fossil fuels and tripling renewable energy capacity.

"We have the roadmap to limit the rise in global temperature to 1.5C and avoid the worst of climate chaos," he said.

"But we need leaders to fire the starting gun at COP28 on a race to keep the 1.5 degree limit alive."

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World / climate change

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Source : www.thehindu.com Date : 2023-12-02

PM MODI PITCHES FOR 2028 EDITION OF COP IN INDIA

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

December 01, 2023 04:34 pm | Updated December 02, 2023 02:41 am IST - Dubai

Prime Minister Narendra Modi speaks with COP28 president Sultan Ahmed Al Jaber at the High-Level Segment for Heads of States and Government session during the United Nations climate summit (COP28) in Dubai on December 1, 2023. | Photo Credit: AFP

Refraining from fresh commitments to contain global temperature rise, Prime Minister Narendra Modi in his address at COP-28, offered to host the 33rd edition of the annual summit due in 2028 in India. He said that developed countries ought to be “vacating the carbon space” before 2050 and made a pitch for the world’s countries to join India on its “Green Credit initiative” which was a “non-commercial” effort to create a carbon sink.

A proposal to host the Conference of the Parties (COP) must be approved by other signatories to the United Nations Framework Convention on Climate Change (UNFCCC). Typically venues for future COP are only decided two years in advance. Were India to host the summit, it would be for the second time after 2002, when it hosted the 8th edition and the event used to be a relatively sombre affair with only small ministerial delegations in attendance.

“A small part of humanity has ruthlessly exploited nature. But the entire humanity is bearing the cost of it, especially the inhabitants of the Global South. The selfishness of a few will lead the world into darkness, not just for themselves but for the entire world,” he said at the high-level segment of the summit that saw leaders and heads of state from several countries make statements on their countries’ response to climate change.

Editorial | **Finding funds: On COP28 and the ‘loss and damage’ fund**

Though Mr. Modi described the Green Credit scheme as “non-commercial,” a notification by the Environment Ministry last October, outlining the scheme described it as an “innovative market-based mechanism designed to incentivise voluntary environmental actions across diverse sectors, by various stakeholders like individuals, communities, private sector industries, and companies”.

The global Green Credit scheme referenced on Friday expects to generate “credits” for plantations on waste or degraded lands and river-catchment areas, to rejuvenate and revive natural ecosystems.

Mr. Modi, who was part of at least three public engagements on his one-day visit, underlined India’s commitments made at Glasgow, in COP-26, of cutting the emissions intensity of India’s

GDP by 45% and increasing the share of non-fossil fuels to 50% by 2030, and achieving net zero by 2070.

He welcomed the approval of the Loss and Damage Fund by the COP-28 on Thursday, which has so far seen financial commitments worth at least $500 million, as “something that has raised the hopes of all”.

Welcoming the $30 billion Climate Investment Fund announced by COP host UAE on Friday, Mr. Modi said that countries must finalise a new target on climate finance. Called the New Collective Quantified Goal (NCQG), this refers to ongoing negotiations on a new climate finance commitment that developed countries must make to developing countries to accelerate the world’s transition away from fossil fuels. The initial goal set in 2009, was to transfer nearly $100 billion a year to developing countries via the Green Climate Fund (GCF). Only a small fraction of this tranche was actually realised. The $100 billion commitment is set to expire in 2025.

Mr. Modi reiterated that new financial targets should not mean developed countries forget their commitments to the GCF and the Adaptation Fund, set up in 2001, which has so far raised money worth $800 million to create infrastructure in developing countries that will protect them from climate shocks. Multilateral Development Banks should work to ensure that affordable finance is made available to developing countries and developed countries should “eliminate” their carbon footprint before 2050, he added.

“Mr. Modi demonstrated vision at COP-28 by outlining crucial mechanisms for global collaboration through the Green Credit Initiative... Now, the invitation has been sent out to the world for global cooperation on it. The re-emphasis on sustainable lifestyles, as in Glasgow, is a call for environmentally conscious living. The proposal to host the Conference in India in 2028 is an opportunity for the country to put the issues of the Global South and climate justice front and centre, as it did with its G-20 Presidency this year, but with a view to an action-oriented COP-33,” said Arunabha Ghosh, CEO, Council on Energy Environment and Water (CEEW).

Also read | PMModi follows ‘maximum global talk, minimum local walk’, says Congress

“The Green Credits scheme sounds positive in theory but more is to be seen. PM Modi’s offer to host the UNFCCC COP-33 in five years is a good diplomatic masterstroke given the mood of the climate discussions in Dubai,” said Arti Khosla, director, Climate Trends.

END

Source : www.thehindu.com Date : 2023-12-02

FINDING FUNDS: THE HINDU EDITORIAL ON COP28 AND THE 'LOSS AND DAMAGE' FUND

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

December 02, 2023 12:20 am | Updated 07:41 am IST

A healthy loss and damage (L&D) fund, a three-decade-old demand, is a fundamental expression of climate justice. The L&D fund is a corpus of money and technologies that will be replenished by developed countries and used by the rest to respond to the more unavoidable effects of climate change. On the first day of the COP28 climate talks under way in the United Arab Emirates (UAE), representatives of the member-states agreed to operationalise the L&D fund. The announcement was dearly won: at the end of the COP27 talks in Egypt last year, member-states agreed to launch such a fund, thanks largely to the steadfast efforts of the G-77 bloc of countries plus China, led by Pakistan. Four meetings of the Transitional Committee (TC) were to follow to determine how its money would be disbursed. But the issues in the TC-4 meeting, which spilled over into an ad hoc TC-5 meeting as well, highlight how the newly operationalised fund, while signalling optimism at COP28 and a diplomatic victory for its Emirati president, has crucial issues.

First, it will be hosted by the World Bank for an interim period of four years and will be overseen by an independent secretariat. The Bank is expected to charge a significant overhead fee. Developing countries resisted this proposition at first before yielding at the TC-5 meeting, in exchange for some concessions. Second, while some countries have committed amounts to the fund — from $10 million by Japan to $100 million each by Germany and the UAE — whether they will be periodically replenished is not clear. The committed amounts are also insufficient, totalling $450 million (for now) against an actual demand of several billion dollars. This shortfall, though it is premature to deem it so, comes against the backdrop of developed countries missing their 2020 deadline to mobilise a promised $100 billion in climate finance and managing to deliver only $89.6 billion in 2021. Next, the contributions are voluntary even as every country has been invited to contribute. Finally, the World Bank will have to meet some conditions on managing the fund, including a degree of transparency it has not brooked so far, and submit a report to the Parties to the Paris Agreement. If its stewardship is determined to be unsuitable, the fund can 'exit' the World Bank. The L&D fund's contents need to be easily accessible to those who need it most, in timely fashion, sans pedantic bureaucratic hurdles, and in sufficient quantities. As things stand, there is little guarantee that any of these requirements will be met. While the L&D fund is finally online, a lot more needs to be done.

climate change / United Arab Emirates / summit / China / Pakistan / Japan / United Nations (climate change)

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UN FLAGS 127 MAJOR CLIMATE-WARMING METHANE PLUMES THIS YEAR

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 01, 2023 05:49 pm | Updated 05:49 pm IST

A handout screen grab from thermographic video footage shot with an infrared camera and made available to Reuters June 10, 2021 by Clean Air Task Force (CATF), shows what appears to be a plume of methane gas flowing from a vent stack at the SNAM underground storage facility in Minerbio, Italy. | Photo Credit: Reuters

A United Nations-led effort to use space satellites to detect methane leaks from fossil fuel infrastructure has alerted governments to 127 major methane plumes across four continents since its launch at the start of this year.

Methane is a potent greenhouse gas, with 80 times the warming power of carbon dioxide over a 20-year period. Such emissions from the burning of fossil fuels so far have driven about a third of global warming.

The U.N. Environment Programme's (UNEP) Methane Alert and Response System (MARS) was created to support a 2021 global pledge by more than 150 countries to cut methane emissions by 30% by 2030.

In a report published on Friday, UNEP said the system was fully operational and providing satellite data to companies and governments on leaky fossil fuel infrastructure found to be emitting several metric tons of methane per hour.

"Every kilogram of methane matters, but what we can see from our satellites is only the most outrageous of those emissions," said Manfredi Caltagirone, head of UNEP's International Methane Emissions Observatory.

Restricting leaks, as well as routine venting and flaring, from oil and gas wells and equipment is one of the fastest ways to curb methane emissions, which are often invisible to the naked eye and for the most part odorless.

While satellites picked up more than 127 major plumes in 2023, some appeared short-lived and therefore too hard to trace, he said. MARS also only works with national governments with whom they have an ongoing collaboration.

Super-emitting events such as these are responsible for between 8% and 12% of methane

emissions from the oil and gas industry.

One leak in Argentina was found in March 2023 to be emitting roughly 5.8 metric tons of methane every hour, the report said. That is equivalent to the emissions of about 100 passenger vehicles over a year in a single hour.

MARS sent a notification to the Argentinian government alerting them to the plume, which was then resolved.

It is so far unclear how many of the other 126 leaks were plugged, Caltagirone said.

Delegates at this year's U.N. COP28 climate summit that began Thursday in Dubai are seeking practical solutions to curbing methane.

This could include providing financial support for developing countries' efforts and national regulations over methane-emitting sectors such as oil and gas and agriculture.

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WHY IS COP28 SUMMIT FOCUSING ON HEALTH?

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

December 03, 2023 04:01 am | Updated 04:01 am IST

123 governments endorsed the COP28 Declaration on Climate and Health on December 2, 2023. Photo: X/@DrTedros

The story so far: On December 3, for the first time in 28 years of climate change negotiations, the climate-health nexus will take centre stage at the United Nations Conference of Parties (COP28) summit in the UAE. Unabated greenhouse gas emissions are triggering extreme weather events, air pollution, food insecurity, water scarcity and population displacement, which in turn, are altering the trajectory of vector-borne diseases. And Africa, Asia, South and Central America, and small island states, which have contributed the least to climate change, are bearing the brunt. Addressing these issues, on December 2, 123 governments endorsed the COP28 Declaration on Climate and Health.

The 'groundbreaking Health Day at COP28', as COP28 president Sultan Ahmed Al Jaber put it, is expected to pose two questions: how public health can become resilient to climate change, and who will finance this transformation. India also highlighted the intricate link between climate change and public health during the health talks held under its G-20 presidency this year. In September, Dr. Al Jaber spoke in the backdrop of the New York Climate Week: "The connection between health and climate change is evident, yet it has not been a specific focus of the COP process — until now. This must change." Health is not a stranger to climate change talks. The United Nations Framework Convention on Climate Change (UNFCCC) recognises the health impacts of climate change. "Health events have been held at COP for several years, including at the WHO Health Pavilion, but this is the first time there has been an official 'Health Day'," says Jess Beagley, policy lead at the Global Climate and Health Alliance (GCHA). This is also the first time there will be a health inter-ministerial meeting, with ministers of health, environment, finance and other types of ministries joining in. While the Declaration text is final, the health ministers will be able to add supplementary comments during the meeting.

However, a "Health Day in itself doesn't necessarily mean that health will be reflected in the negotiations," said Dr. Jeni Miller, executive director of GCHA. "One of the things we need to see to determine whether this is truly a 'Health COP' is whether the focus on health carries on to negotiations," she said.

The COP28 UAE Declaration on Climate and Health includes dialogue on mitigating emissions, health sector adaptation to climate change, mainstreaming of health into climate policies and the sticky question of climate financing for health.

The Declaration, however, doesn't mention fossil fuels. It recognises the need for climate mitigation, "strengthening research on the linkages between environmental and climatic factors and antimicrobial resistance"; and "intensifying efforts for the early detection of zoonotic spill-overs" to prevent future pandemics. It does not mention pollution-related harms or identify 'fossil fuels' — coal, oil and gas — as a driver of health threats, or emphasise the need to end fossil fuel dependence. Fossil fuels are seen as the largest contributor to global climate change.

British epidemiologist Sir Andy Haines at the briefing said that a commitment to phasing out fossil fuels and transitioning to renewable energy would be an important health outcome. "If we move from fossil fuels to renewable energy, for instance, we reduce preventable deaths of air pollution as well as reduce the risk of dangerous climate change."

Most G-20 countries, including wealthy industrialised nations responsible for the majority of historic greenhouse gas emissions, have failed to centre health in their climate action, as per a 2023 analysis by the GCHA. Low-and middle-income countries like Burundi and Congo were found to be better at engaging with health concerns in their Nationally Determined Contributions (NDCs). "This is likely to reflect the undeniable links between health and environment — and disease and climate change — which cannot be ignored in these countries whose populations are enduring the most severe health impacts of climate change," Ms. Beagley explained. Changing weather patterns and rising temperatures are altering the life cycle of vector-borne diseases such as dengue and malaria, which disproportionately impact poorer, marginalised groups (the spread of dengue has increased in India over the last two decades, research shows).

Then there is the matter of finance. Health crises triggered by warming climate are expected to chart a financial toll of around $2-4 billion annually by 2030. Another estimate shows that 40% of climate-related poverty would be due to direct health impacts, as people's income, productivity and health costs would soar. Dr. Al Jaber had called on private financial institutions to plug this need and "contribute generously" to the Green Climate Fund. On December 2, the Green Climate Fund, the Asian Development Bank, the Global Fund and Rockefeller Foundation pledged a new $1 billion finance pledge for climate and health. "This $1 billion sum is a tremendous addition to current levels of climate and health finance," said Ms. Beagley. "It is also key that funding for climate and health be truly new and additional, and not pulled from other key areas...that are vital to protecting health, such as water and sanitation, food security, and humanitarian action." Developing countries had earlier asserted the need for grant-based international public finance that doesn't add to their debt burden. However, the Declaration endorses climate-health funding from "domestic budgets, multilateral development banks, multilateral climate funds...", along with philanthropies and private sector actors.

In India, particulate air pollution is said to be the "greatest threat to human health", and heat-related deaths may kill an additional 10 lakh people annually by 2090, according to data. India scored 2/15 points in the 2023 GCHA scorecard that assessed India's inclusion of clean air in its national climate commitments. India's NDCs thus far have focused on reducing emissions intensity, transitioning to non-fossil fuel sources and creating additional carbon sinks. Experts, including Amref Health Africa CEO Dr. Githinji Gitahi, emphasised that health has to be woven across streams at the COP negotiations — which includes discussions on clean water, clean air and sustainable cities.

"Stakes are really high — we need to see progress on one of the root causes of climate change... we will be looking at [a fossil fuel phase-out] as one of the metrics of whether this has been a 'Health COP' or not," said Dr. Miller. Other metrics include a just transition to renewable energy, commitment to reducing emissions, and grant-based climate financing.

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Source : www.thehindu.com Date : 2023-12-03

COP28 CLIMATE MEET

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

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December 02, 2023 11:50 pm | Updated December 03, 2023 08:26 am IST - DUBAI

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U.S. Vice-President Kamala Harris speaks during the Tripling Renewable Energy and Doubling Energy Efficiency by 2030 session at the COP28 United Nations climate summit in Dubai on December 2, 2023. | Photo Credit: AFP

As many as 118 countries signed on to a pledge to triple installed renewable energy capacity by 2030 during the ongoing COP28 climate summit in Dubai on December 2 and India is among those countries whose name is not on the list. The other conspicuous absence is that of China, the country that has the world's largest installed renewable energy capacity.

Explained | Why is COP28 summit focusing on health?

Though the plan to substantially increase renewable energy capacity and energy efficiency and firm it up into a declaration at COP-28 was first floated by European Commission President Ursula von der Leyen this April, it was first mentioned as a concrete proposal in the New Delhi G20 declaration in September.

The Global Renewables and Energy Efficiency Pledge, as of now, has committed to tripling worldwide installed renewable energy generation capacity to at least 11,000 gigawatts (GW) and to double the global average annual rate of energy efficiency improvements to more than 4 percent by 2030.

A person in the know said that some of the language in the text was "problematic". Officials in the Indian delegation did not respond to requests for comment by *The Hindu* on the reasons for India not signing onto the pledge. India as part of its nationally determined contributions (NDCs) has already committed to installing 500 GW of electricity from non-fossil fuel sources by 2030.

As of March 2023, Power Minister R.K. Singh stated that India already has close to 170 GW of installed capacity. Tripling this actually overshoots the 500 GW commitment but there is as yet global disagreement on whether large dams — India considers them as renewable energy sources — are indeed renewable sources.

Notably, the pledge that countries have committed to has little legal sanctity and is yet to be included in the main negotiating texts that is being worked upon before a final COP-28 agreement is ironed out by December 12.

.The United States and Brazil have the second and third-largest installed renewable energy

capacity followed by India. Both the U.S. and Brazil have signed the pledge.

The G-20 text in September does not mention energy efficiency goals and says that signatory countries will “pursue and encourage efforts to triple renewable capacity...”

Some experts expressed disappointment that India had not signed on despite being visibly associated with the commitment.

“It’s disheartening that India has not signed onto the global pledge to triple renewable and double energy efficiency by 2030. These were landmark decisions that were championed by the Indian G20 presidency and agreed to by G20 leaders in September 2023. Reaching net-zero commitments made by countries means that fossil fuels, including coal, need to be phased down and out,” said Madhura Joshi, Senior Associate, India Energy Transition Lead, E3G.

Editorial | Finding funds: On COP28 and the ‘loss and damage’ fund

“The good news is that India already has ambitious targets on renewable — 450 GW by 2030, and a thriving energy efficiency programme spanning sectors. The hope is that India will champion tripling renewables and doubling energy efficiency by 2030 at COP-28 in the main text. India is a global renewables leader and its support will provide a boost for the global renewables sector,” she said.

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Source : www.thehindu.com Date : 2023-12-03

GLOBAL STOCKTAKE SHOULD ACCOUNT FOR FAILURES OF DEVELOPED NATIONS: BASIC NATIONS AT COP28

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

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December 02, 2023 10:44 pm | Updated 11:48 pm IST - DUBAI

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Margueritte Sanou poses for a photo at the COP28 U.N. Climate Summit on Saturday in Dubai, United Arab Emirates. | Photo Credit: AP

The BASIC grouping, comprising Brazil, South Africa, India and China, has pushed during annual climate talks here that the Global Stocktake should also account for the failures of the developed nations, sources said.

The Global Stocktake (GST) is a fundamental component of the 2015 Paris Agreement which is used to monitor its implementation and evaluate the collective progress made in achieving the agreed goals.

During the ongoing COP28 climate talks in Dubai, the Global Stocktake is expected to take centre stage.

According to multiple delegates who were present in the preliminary negotiations which put forward their initial expectations, the BASIC grouping condemned fragmented multilateralism of the developed world.

“The grouping pushed that the GST should account for achievements and failures, including on the part of developed countries,” one of the delegates from the Pacific Islands, who was not authorised to speak to the media, told PTI.

When the Indian delegation was contacted, they confirmed the BASIC grouping demands but also underlined that these were the preliminary demands put forward before the negotiations started in full flow.

Another delegate from Kenya also confirmed the demand of the BASIC nations and said the bloc also condemned unilateralism and trade protectionism.

The BASIC countries (also Basic countries or BASIC) are a bloc of four large newly industrialised countries — Brazil, South Africa, India and China — formed by an agreement in 2009. The four committed to act jointly at the Copenhagen climate summit, including a possible

united walkout if their common minimum position was not met by the developed nations.

Dubai is abuzz with activity as the highly-anticipated annual climate talks, COP28, opened on Thursday.

Nearly 1,00,000 delegates from 198 countries are participating in the global conference and will run through December 12.

Heads of state and governments, including Prime Minister Narendra Modi, King Charles III of England, and UK Foreign Secretary David Cameron were present at the climate summit.

The leaders engaged on December 1 and 2, taking part in the Global Climate Action Summit. Subsequent days will witness closed-door discussions among officials and experts, with significant high-level political decisions anticipated in the final days to shape the resolution.

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Source : www.thehindu.com Date : 2023-12-04

INDIA'S EMISSION INTENSITY REDUCED BY 33 PER CENT BETWEEN 2005 AND 2019: GOVT REPORT

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 03, 2023 02:44 pm | Updated December 04, 2023 01:59 am IST

The report called 'The Third National Communication to the United Nations Framework Convention on Climate Change' will be submitted to the UN climate change body. | Photo Credit: AP

India reduced its GDP emission intensity by 33 per cent between 2005 and 2019, achieving the target 11 years in advance, according to a government report.

The report also said India's GDP grew at a cumulative annual growth rate of 7 per cent but its emissions rose by only 4 per cent per year during this period, suggesting that the country has been successful in decoupling its economic growth from planet-warming greenhouse gas emissions.

The report called 'The Third National Communication to the United Nations Framework Convention on Climate Change' will be submitted to the UN climate change body during the ongoing climate talks in Dubai, officials said.

National communications contain information on a country's greenhouse gas emissions, its vulnerability to climate change, and the measures any country is taking to mitigate emissions and adapt to the impacts of climate change.

Also Read | PM Modi pitches for 2028 edition of COP in India

Environment Minister Bhupender Yadav said that India reduced its GDP emission intensity by 33 per cent between 2005 and 2019, achieving the target 11 years in advance. India created an additional carbon sink of 1.97 billion tonnes of CO_2 equivalent during this period.

However, the country's total emissions (including the Land Use, Land-Use Change and Forestry sector) have increased by 4.56 per cent with respect to 2016.

The emission intensity of the economy refers to the total amount of greenhouse gases emitted for every unit increase of gross domestic product (GDP). It is different from absolute emissions.

"We are well on track to achieve the target of reducing our GDP emissions intensity by 45 per cent by 2030, compared to the 2005 level, and of creation of additional carbon sink of 2.5 to 3.0

billion tonnes through tree and forest cover by 2030," the minister said.

Nationally Determined Contributions or NDCs are any country's national action plans to limit the earth's average temperature rise to well below two degrees Celsius and preferably to 1.5 degrees Celsius as compared to the pre-industrial (19850-1900) levels.

Scientists say climate impacts like heat/cold waves, floods, cyclones, heavy rains, melting of glaciers and resulting sea level rise will be worse if the guardrail of 1.5 degrees Celsius is breached.

According to the third national communication, the energy sector accounted for the maximum share of anthropogenic emissions (75.81 per cent), followed by agriculture (13.44 per cent), Industrial Process and Product Use (8.41 per cent), and waste (2.34 per cent).

The LULUCF sector removed 4,85,472 gigatonnes of carbon dioxide equivalent (GgCO2e) of emissions.

Considering total emissions and removals, India’s net national emissions in 2019 were 26,46,556 GgCO2e (or 2.6 billion tonnes of CO2e).

India is among the 26 developing countries which have submitted their national communication based on the GHG (Greenhouse gases) inventory of 2019 or later years. China has submitted its latest communication with GHG inventory of 2014; Brazil of 2016; South Africa of 2017 and Saudi Arabia of 2012.

Pitching India as a global climate leader which has achieved its earlier NDC targets well ahead of schedule, Prime Minister Narendra Modi on Friday proposed to host the annual UN climate talks in the country in 2028.

If India's proposal to host the UN climate conference in 2028 or COP33 is accepted, it would be the next big global conference in the country after the G20 Summit earlier this year.

India hosted COP8 in New Delhi in 2002 but it was then a small event, unlike the glitzy affair it has become over the years.

Modi highlighted that India is home to 17 per cent of the world's population, but its share of global carbon emissions is less than 4 per cent.

"India is one of the very few economies in the world that is on track to achieve its NDC targets," he said.

Also Read | Rising ambitions on climate action must see matching progress on climate finance: PM Modi

India achieved its emissions intensity-related targets 11 years ahead of the committed time frame and non-fossil fuel targets nine years ahead of schedule.

The country aims to reduce GDP emission intensity by 45 per cent by 2030 from 2005 levels and achieve 50 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. It has also committed to become a net zero economy by 2070.

The Prime Minister also called out rich nations at COP28, saying a small section of humanity has indiscriminately exploited nature over the past century but the entire humanity is paying the

price, especially people living in the Global South.

He said poor and developing nations bear disproportionate impacts of climate crisis despite contributing little to it.

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Source : www.thehindu.com Date : 2023-12-04

COP28 CLIMATE SUMMIT

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 03, 2023 07:36 pm | Updated 08:23 pm IST - DUBAI

Environment Secretary Leena Nandan at the release of a publication on “India’s journey towards sustainable cooling”, at the India Pavilion during the COP28 meeting in Dubai on December 3, 2023. Photo: PIB

India, while being committed to expanding renewable energy, would not be bound by “restrictions” on what kind of energy sources it could or could not use, Leena Nandan, Secretary, Ministry of Environment and Forests, told *The Hindu*.

On December 2, at COP28, India was conspicuously absent from a list of 118 countries signed on to a pledge to triple installed renewable energy capacity by 2030. The elision was odd as India was a proponent of tripling energy capacity, beginning with a mention in the G-20 declaration text this September

.India, so far, has also not signed on to another major pledge signed by 123 countries on December 3, namely, the ‘Declaration on Climate and Health’. The latter was a precursor to the first ever ‘health day’ organised at a climate summit. The declaration enjoins governments to protect communities and prepare healthcare systems to cope with climate-related health impacts such as extreme heat, air pollution and infectious diseases.

Both of these texts, though still drafts and far from having legal sanctity, link climate and health goals to restricting fossil fuel emissions. The draft of the Global Renewables and Energy Efficiency Pledge as of today, says: “...renewables deployment must be accompanied in this decade by a rapid increase of energy efficiency improvements and the phase down of unabated coal power, in particular ending the continued investment in unabated new coal-fired power plants.” Unabated coal power refers to running coal plants without technology that stores and captures carbon.

Nudges to shun coal power runs contrary to India’s long-standing position that it needs to rely on its largest source of energy, coal power, to rapidly improve living standards for the mass of its population. India has also reiterated its right to use coal on the grounds that its historical contribution to the carbon crisis has been negligible, as below-global-average per-capita emissions of 4%.

The climate health declaration, according to an accompanying press statement from the COP Presidency, mentions the “...need to reduce the health impacts of climate change beyond the health sector and include new initiatives to drive rapid de-carbonisation to reduce emissions...”

India’s discomfort lies in linking the objectives of these declarations to cutting specific categories of emissions. “We need cold storages for storing vaccines and medicines and these are linked to making our healthcare systems resilient. However, suggestions that using these are contributing to climate emissions and that we must choose some fuels over the other are not acceptable,” said Ms. Nandan. Though it is still early days in COP-28 negotiations, which is expected to last at least until the 12th of this month, India would be “constructive” but not at the cost of denying energy access to those at the margins of development, she added.

According to India’s latest communications to the United Nations, its greenhouse gas emissions increased 4% from 2016-2019 to 2.6 billion tonnes of C02. The energy sector contributed the most to the overall anthropogenic emissions (75.81%), followed by the agriculture sector (13.44%), Industrial Process and Product Use (IPPU) sector (8.41%), and Waste (2.34%).

climate change / United Nations (climate change) / health / energy and resource / energy resources

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Source : www.livemint.com Date : 2023-12-05

MINT

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

CoP-28 underway in Dubai puts, for the first time, a spotlight on the role of trade in addressing climate change. The core issue is not one of climate trumping trade or vice versa. It is one of equity, fairness and common sense. Climate change knows no borders and the only way to address it is through collaborative action. However, the journey of the 1992 UN Framework Convention on Climate Change (UNFCCC) has been one of unfulfilled promises, specially in relation to commitments for the transfer of financial resources and environmentally sound technology (EST), which the recent IPCC Sixth Assessment Report notes has led to lagging adoption of low-emission technologies in most developing countries.

Meanwhile, the stage has shifted increasingly towards unilateral trade measures adopted with the stated objective of addressing climate change. The UNFCCC underscores that any unilateral measure to combat climate change should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. This principle mirrors that of the World Trade Organization (WTO), the underlying concern being that protectionism must not operate in the guise of climate action.

The implementation of emission reduction obligations has implications for the competitiveness of domestic industry. In response, the EU's green industrial policy has turned to regulatory action to support its own competitiveness, while the US is providing large subsidies to its home industries. Such approaches raise concerns under WTO rules and also represent uncoordinated action, which is unlikely to achieve climate goals. Importantly, they fail to address the main hurdle to green development faced by developing countries: lack of access to finance and EST.

Take the EU's Carbon Border Adjustment Mechanism (CBAM), which requires importers in select carbon-intensive sectors (including iron, steel and aluminium) to purchase CBAM certificates to ensure equivalence in the price that EU producers pay for their emissions with the aim of preserving their competitiveness. The World Bank and UNCTAD have highlighted that this could have a significant impact on the competitiveness of developing countries that export goods to the EU.

By demanding equivalence in carbon pricing, however, the EU strikes at the root of differential emission cut obligations, reflected as Nationally Determined Contributions (NDCs) under the Paris Agreement. Yet, the UK is likely to replicate the EU's CBAM; Australia too is mulling carbon leakage steps.

To stem this tide of carbon border measures, it is essential to arrive at emission-pricing principles that are aligned with the differential NDCs of countries. Trade levies at the border of an importing country must not impose its own carbon price on shipments from an exporting country that has a lower carbon price due to different NDCs and other operating factors.

Another interface of trade with climate change is trade in environmental goods and services (EGS), an area where several developed countries are seeking tariff liberalization on the reasoning that opening up such trade is a climate-friendly step. An UNCTAD report notes that the key exporters of EGS are the EU, US, Japan, UK, Singapore, Canada, South Korea, Switzerland and China, and developing countries are net importers. It further estimates that in 2019, tariff revenue collected on these goods by developing countries amounted to $15 billion. Clearly, it would be perfectly legitimate for developing countries to use tariff revenues from EGS imports as a source of climate finance. Any trade liberalization of EGS, on the contrary, will

simply eliminate that source of tariff revenue while possibly enhancing market access for other countries.

The chief role of trade in addressing climate change is in enabling the diffusion of EST, as two recent WTO submissions have highlighted. This is more important than EGS trade liberalization. As the IPCC report notes, finance, technology and international cooperation are critical enablers for accelerated climate action. The key barriers to insufficient EST transfers are man-made: lack of political commitment, limited resources and widening gaps between available finance and estimated adaptation and mitigation costs.

The WTO will co-lead the 'trade day' discussions at CoP-28. It should steer them away from myopic EGS market access demands and the tweaking of trade rules to legitimize unilateral border measures. As noted by the World Trade Report, 2022, climate change can impact international trade by affecting trade costs, altering comparative advantages and disrupting global value chains. Both CoP-28 and the upcoming WTO Ministerial to be hosted by the UAE in February 2024 should ensure (a) unilateral trade steps do not undermine the balance of rights and obligations under the UNFCCC and Paris Agreement, (b) an implementable plan for the transfer of EST, (c) smooth access to finance for enhancing climate resilience, (d) assistance to developing countries in research and adaptation of green technologies, and (e) global agreement on carbon pricing consistent with NDCs.

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Source : www.thehindu.com Date : 2023-12-06

WHAT'S THE STATUS OF THE UN TREATY TO END PLASTIC POLLUTION?

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

December 06, 2023 06:00 am | Updated 06:00 am IST

A shoal of fish swims around floating plastic items off the coast of Indonesia, May 20, 2021. | Photo Credit: Naja Bertold Jensen/Unplash

The Intergovernmental Negotiating Committee (INC), under the United Nations Environment Programme, met in Nairobi on November 13-19 for its third round of negotiations to develop an international legally binding instrument to end plastic pollution worldwide. Under the UNEA Resolution 5/14, the INC is responsible for delivering a global plastics treaty by 2025

The INC-3 was a make-or-break opportunity as countries came together to negotiate the 'zero draft' text developed by the Committee's Secretariat, with various options for core obligations and control measures. The zero draft was a good starting point for the negotiations because it catered to ambitions at all levels: strong and binding, moderate and flexible, weak and voluntary.

The expected outcome of INC-3 was to assess the zero draft, select favourable options from the draft, and adopt a mandate proceeding with the development of a first draft for the global plastics treaty.

INC-3 fared relatively better than INC-2, in Paris earlier this year, by being able to discuss the substantive contents of the treaty instead of debating only the rules of procedure. This said, what were the outcomes?

The zero draft as prepared by the Secretariat contained strong options for an international legally binding treaty to end plastic pollution. But during negotiations, member states managed to water down their core obligations, particularly those pertaining to some high-impact elements: primary polymer production, chemicals of concern, problematic and short-lived plastics, trade, and financial mechanisms, among others. Some states also disagreed on the objective and scope under UNEA Resolution 5/14.

Most countries agreed that the treaty's objective should be to end plastic pollution and protect human health and the environment. But a group of like-minded countries – including Saudi Arabia, Russia, China, Iran, and some members of the Gulf Cooperation Council – argued to include the clause "while contributing to the achievement of sustainable development", to ensure their economic interests and investments can be protected in the name of development.

The most important provision, reduction in production of primary polymers, also stirred controversy because of its implications for industry. Indeed, the industry's influence was apparent by its presence – with 36% more lobbyists for the fossil fuels and chemicals sector than in INC-2 – at the negotiations. Some member states also submitted that "to even discuss … reducing plastic production was completely out of the scope of the mandate of UNEA Resolution 5/14 and that such a provision should be completely deleted from the draft" and that "UNEA Resolution 5/14 calls to end plastic pollution and not plastic production".

While it is agreed that plastic pollution can be managed only with strong, concrete measures at each stage throughout the lifecycle of plastics, many countries disagreed where the lifecycle begins. Common sense dictates this should be at 'birth', i.e. at the point of sourcing raw materials for production. But some countries argued that the lifecycle starts at product design, in order to exclude production from the scope of the treaty.

Similarly, the same like-minded group objected to including provisions pertaining to eliminating compounds and polymers of concern and problematic and avoidable plastics, which are key in ending plastic pollution, and called for a 'null option' despite broad agreement from other countries that were pushing for a binding agreement.

A financial mechanism is one of the cornerstones of the treaty to determine how it will be implemented, and it was yet another point of divergence.

The zero draft contains options such as imposing a plastic-pollution fee, to be paid by plastic polymer producers, and another on reducing the financial flow into projects with a high carbon footprint. But the like-minded countries demanded that these provisions be deleted altogether from the draft.

Should these provisions be included, they will have considerable implications; in particular, countries will have to cut, if not eliminate, fossil-fuel subsidies and investments in environmentally disfavourable technologies such as incineration and waste-to-energy plants. This would have been a big victory for the environment and human health if they hadn't been blocked by the like-minded countries.

Another crucial provision that the same bloc argued against was the trade in polymers, chemicals, plastic products, and waste. While the plastics treaty is expected to plug the holes left open by the Basel Convention, any restrictions on trade is considered to be impinging on the freedom and sovereignty of nations, or so the bloc contended.

However, the Centre for International Environmental Law (CIEL), a non-profit in Washington, D.C., has found that the bloc misconstrued the World Trade Organisation (WTO) rules to their advantage. According to CIEL's analysis, the WTO rules provide for sufficient scope for trade restrictions when they are "necessary to protect human, animal or plant life or health" and nothing prohibits States under international law to regulate or restrict the trade of certain products and materials.

Indeed, the group of like-minded countries rejected every single upstream measure, and diluted midstream measures with the inclusion of voluntary measures and phrases (such as "national circumstances", "national priorities", "bottom-up approach", etc.).

Excluding the provision on waste management, in fact, almost all other provisions were watered down to account for "national circumstances and capabilities". Even under waste management, there is a high risk of these countries insisting on the treaty accommodating unsound solutions. This is because the phrase "environmentally sound management" isn't well-defined even as

terms such as “best available science” and “best available technology’ continue to be used.

At INC-2, representatives of the member states debated the rules of procedure for two days with no concrete outcome, even as a handful of countries, including India, continued to demand consensus-based decision-making instead of a two-thirds vote majority.

The rules of procedure continued to apply provisionally at INC-3, without any final determination, and the meeting passed the buck to INC-4 to deal with them. If a decision had been made on the voting procedure and the rules of procedure were formally adopted, the negotiators could have better staved off the objections of the like-minded countries at INC-3.

In this context, the African group of countries and Small-Island Developing States (SIDS) played an important role. They advocated for strong binding provisions for the high-impact elements in the treaty. Their submissions stood out from the rest as they championed the voices of waste-pickers and Indigenous peoples, and approached the treaty from human-rights and public-health perspectives.

Recall that at INC-3, members were to study the zero draft, pick between the options, and adopt a mandate ahead of preparing the treaty’s first draft. But the draft text has now tripled in size, with member states adding and deleting the text as befits their national interests. The meetings themselves were frequently delayed and stretched into the wee hours because of the stalling and blocking by the like-minded countries.

In fact, one of the closed-door meetings that discussed the synthesis report and possible list of topics for intersessional work was unable to reach a consensus until the very end. As a result, no intersessional work will happen between now and INC-4. This is a big setback: many countries were counting on this work to make some headway in hammering out the finer points, such as the definitions, targets, and timelines, before INC-4.

Thanks to the stalling, INC-3 didn’t adopt the mandate to proceed with developing the first draft. One delegate from the African group said in reply: “No State has the right to keep others hostage … Those who don’t want to move ahead with us are free to stay behind.” As such, INC-3 exposed the considerable influence of industry and revealed those member states that are opposed to a strong binding treaty to end plastic pollution.

Madhuvanthi R. is a researcher at Citizen Consumer and Civic Action Group, and a delegation representative at the INC-3 Nairobi.

END

Source : www.thehindu.com Date : 2023-12-06

COP28 CLIMATE SUMMIT

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

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December 05, 2023 11:50 pm | Updated 11:50 pm IST - DUBAI

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Activists, including Vanessa Nakate, of Uganda, right, protest against fossil fuels at the COP28 U.N. Climate Summit in Dubai on December 5, 2023. | Photo Credit: AP

For the first time, a key document being negotiated at the U.N.'s annual climate summit has underlined the need for the world to do away with all fossil fuels, in its draft text. As the first week of negotiations at COP 28 nears an end, the latest version of the Global Stocktake includes a clause committing all signatories to "an orderly and just phase out of fossil fuels".

The summit's location in the United Arab Emirates, a petro state, and the COP leadership's own ties to oil have "influenced language" in the GST, said a person closely involved in negotiations, but who declined to be identified.

In previous years, climate talks have generally circled around the need for the world to wean itself away from coal, given that it is the most commonly used fossil fuel and ranks only after methane in heat-trapping potency. But given the significance of coal to the economies of India, China, and even the United States, negotiations have generally ended in a stalemate, as they demand an end to all fossil fuels — oil, gas, and coal — or none at all.

However, with the science becoming more emphatic that any hope of keeping a global temperature rise below 1.5°C requires significant reductions in emissions, and fossil fuel responsible for 80% of emissions, its mention in an early draft is significant.

Editorial | Time for action: On COP28 climate meeting in Dubai

The GST, the first of its kind since 2015, is expected to take stock of the implementation of the Paris Agreement; assess the progress made towards its goals of preventing temperature increases from going beyond 2°C, preferably 1.5°C; and guide countries in updating their stated commitments to reduce greenhouse gas emissions.

The GST is only one of many negotiation tracks. There are separate drafts expected, for instance, on finance and adaptation. After intensive discussions on each draft – expected to last at least until next Thursday – a final agreed 'declaration' or 'agreement' is expected to take shape.

The GST also includes a clause calling for "...tripling renewable energy capacity globally by 2030 compared to the 2022 level to 11,000 GW and doubling the global average annual rate of

energy-efficiency improvement compared to the 2022 level to 4.1 per cent by 2030." This was first formally articulated during the G-20 leaders summit in Delhi, though at that time, there was no mention of improving energy efficiency. In Dubai, India was not among the 118 signatories to the 'energy efficiency pledge', which laid down this directive, reportedly on the grounds that it came with a caveat to give up the use of coal.

The text also mentions "...the importance of transitioning to sustainable lifestyles and sustainable patterns of consumption and production in efforts to address climate change and encourages efforts towards transitions to sustainable lifestyles, sustainable patterns of consumption...", a sentiment that undergirds the 'Mission Life' movement articulated by Prime Minister Narendra Modi.

There are 193 separate points spread out over the 24 pages of the GST draft. Several lay out 'options' that countries can agree to adopt, reject or avoid mention of in the final agreement.

Independent experts who have seen the draft said that in its current format, it would seed multiple points of contention. "The mention of phasing out of all fossil fuels is quite big. There is also separate language on ending coal as well as phasing out 'inefficient fossil-fuel subsidies' that will be disputed," said Vaibhav Chaturvedi, a fellow at the Council on Energy Environment and Water, a prominent think-tank.

Others described the text as 'disappointing', as it gave no clear roadmap yet on how to actually implement the GST. "The text as it stands now is too large, vague and lacks clear language on how countries should report their progress and goals," said Suruchi Bhadwal, senior fellow and associate editor at The Energy Resources Institute.

global warming / climate change / United Nations (climate change) / energy and resource

END

Source : www.thehindu.com Date : 2023-12-07

SCIENCE CLEAR ON NEED TO ‘PHASE OUT’ FOSSIL FUELS: U.S. CLIMATE ENVOY JOHN KERRY

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 07, 2023 12:17 am | Updated 07:25 am IST - DUBAI

John Kerry, U.S. Special Presidential Envoy for Climate, speaks during a press conference on Day 7 of the UNFCCC COP-28 Climate Conference at Expo City Dubai on December 6, 2023. | Photo Credit: Getty Images

“The science was clear on the need to phase out some fossil fuel,” the U.S. lead climate negotiator, John Kerry, said at a press conference on December 6. “Else we are not going to be able to make the goal of being net zero by 2050 or have a shot at keeping temperatures below 1.5°C.”

On December 5, a draft text of the Global Stocktake (GST), said to be the most important and contentious element of the climate talks ongoing in Dubai, for the first time mentioned that countries ought to be undertaking a “just and orderly phase out of fossil fuels”.

While this could mean all of the major fossil fuels – coal, oil and gas—that are responsible for human-led greenhouse gas emissions, Mr. Kerry said that there would be some “tough negotiations” in the week ahead.

He said that the United States and China had reached agreements on reducing methane emissions and the position of both countries as the “number one and number two economies” of the world were critical to achieving these goals.

He endorsed the need for the use of “carbon capture and storage”, a contested and largely unproven technology, to capture carbon emissions as necessary towards achieving the 1.5 degrees Celsius target. “You can raise some very legitimate questions around it, [but] I believe it is working to some extent,” he said at the briefing.

Mr. Kerry, however, refrained from commenting on what potential roadblocks to a deal on fossil fuels existed. In COP-26 at Glasgow, countries had veered close to a commitment to phase out coal until India objected to it and proposed instead that all fossil fuels be phased out. Ultimately it was agreed that all countries would ‘phase down’ coal and “inefficient fossil fuel subsidies.” There is, however, considerable opacity on the definitions around these terms.

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Source : www.thehindu.com Date : 2023-12-09

NEW CLIMATE DRAFT SEEKS TRIPLING OF RENEWABLE ENERGY CAPACITY

Relevant for: Indian Economy | Topic: Infrastructure: Energy incl. Renewable & Non-renewable

December 08, 2023 10:13 pm | Updated December 09, 2023 01:56 am IST - NEW DELHI

Though by no means final and only offered as an ‘option,’ it expresses a strong push by the leadership at the COP 28 climate talks to move towards ending the fossil fuel economy. | Photo Credit: Reuters

The latest draft of the Global Stocktake, one of the key documents being negotiated at the UN’s climate summit in Dubai, has linked the tripling of renewable energy capacity with a ‘phase-out’, or a time-bound ending, of the use of fossil fuels. Though by no means final and only offered as an ‘option,’ it expresses a strong push by the leadership at the COP 28 climate talks to move towards ending the fossil fuel economy.

“Tripling renewable energy capacity globally by 2030... ensuring that the increase in renewable energy capacity is strategically implemented to displace fossil fuel-based energy, thereby significantly reducing global reliance on non-renewable and high-emission energy sources,” appears as one of the options that participant Ministers can deliberate upon and choose to retain or exclude in the final version of the agreement, expected on December 12. The draft can be viewed on the UN climate website. India is unlikely to agree to such a clause, a source close to negotiations told *The Hindu*, as it was “prescriptive” in tenor. “Much more consultation remains and India’s position is to not support such a clause. Tripling capacity is fine but not with such conditions which are prescriptive in nature,” the person said.

The latest draft also does away with the clause calling for a “just and orderly phase-out of fossil fuel” that appeared in the first version of the text on December 6. This has now been replaced with four pointed options demanding that fossil fuels – responsible for 80% of greenhouse gas emissions – be phased out in such a way that global temperatures do not rise more than 1.5 degrees C by 2100, and energy companies become fossil fuel-free by mid-century. Here too, there’s an option for “no text”, meaning that all references to doing away with fossil fuels can be entirely deleted.

Explained | Analysing the Global Stocktake Report

Unchanged from an earlier version of the text is the clause on a “rapid phase-out of unabated coal power”. At COP 26 in Glasgow two years ago, on the insistence of India and backed by the United States and China, the world had agreed to “phase down” but not “phase out” coal.

The tripling of energy capacity was a clause that first came up formally in international agreements during the G-20 summit in India. However, India has chosen not to commit to such a pledge at COP 28 as it came with “unacceptable” riders, according to those familiar with the Indian position.

On Friday, Simon Steill, executive secretary of the UN Framework Convention on Climate Change, under whose purview the talks are taking place, said, “This week, I don’t want to see diversions and political tactics that hold climate ambition hostage. I urge all ministers and negotiators to think outside the box.”

India on Friday focused on the other big lacuna in negotiations regarding ‘climate finance’. While this broadly refers to funds that are necessary for countries to transition their economies to renewable energy, and adapt to climate change, only a fraction of promised sums have made their way from developed to developing countries and a definition of such financing remains hazy.

“The lack of a definition leads to a lack of trust and transparency on a matter that should be as clear as crystal,” said Environment Minister Bhupendra Yadav, addressing a ministerial dialogue on climate finance on Friday. He said that countries should prioritise defining climate finance, which would then automatically translate into the best ways to fund the clean energy transition.

Differing definitions mean that the Organisation for Economic Cooperation and Development (OECD) has estimated that climate finance in 2020 amounted to $83 billion, while Oxfam estimated that it was only $22 billion.

Climate finance must account for the specific circumstances of a country, to be actual grants not requiring interest payments, and low-cost loans, Mr. Yadav argued. “The flow of finance has to be along with access to technology such as offshore wind, battery storage. In the absence of these, it would not be possible for the developing countries to meet their commitments on the Paris Agreement,” he warned.

END

Source : www.thehindu.com Date : 2023-12-09

AN ICY WARNING: THE HINDU EDITORIAL ON THREATS FROM CONTRACTING GLACIERS

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 09, 2023 12:10 am | Updated 09:44 am IST

Few barometers measure the climate crisis as evocatively as the state of glaciers, a key component of the cryosphere. The World Meteorological Organization's recent report, *The Global Climate 2011-2020*, gives a broad view of the planet's response to greenhouse gas emissions. In the section on the state of glacier health, it points out that, on average, the world's glaciers thinned by approximately a metre a year from 2011 to 2020. When compared across decades, there is significant regional variability, but the overall pattern remains that glaciers in all regions of the world are becoming smaller. In fact, some of the reference glaciers, which are used to make long-term assessments of glacier health, have already melted away as the nourishing winter snow is completely melting away during summer. In Africa, glaciers on the Rwenzori Mountains and Mount Kenya are projected to disappear by 2030, and those on Kilimanjaro by 2040. The report points to the rapid growth of pro-glacial lakes and the likelihood of glacier lake outburst flood (GLOF), posing additional threats to ecosystems and livelihoods. The reports singled out how "...water from glacial melt contributed to one of the decade's worst flooding disasters, the Uttarakhand floods of June 2013".

The fury of a GLOF event was brought home this year by the destruction of the Chungthang dam in Sikkim after the South Lhonak Lake flooded from a melting glacier, triggering catastrophe downstream. Earlier this year, a separate report by the International Centre for Integrated Mountain Development found that the disappearance of glaciers in the Hindu Kush Himalayas was "65% faster in the 2010s than in the previous decade". At the current rate of global greenhouse gas emissions, which is expected to see temperatures increase by 2.5°-3°C by the end of the century, the volume of glaciers is forecast to decline anywhere from 55% to 75%. This means sharp reductions in freshwater supply in the immediate vicinity of 2050. The sensitivity of glacier systems to warming underlines the need for their careful monitoring. Despite awareness of the risks posed by Himalayan glaciers there is no early warning system for the likelihood of GLOF events. Much like warnings before cyclones, floods and earthquakes, authorities must elevate threats from contracting glaciers to the same category of risk. Correspondingly, there is a need to make comprehensive risk assessments, map regions of vulnerability and commission infrastructure development with the highest standards of care.

climate change / water / African Union / mountains / Uttarakhand / flood / Sikkim / cyclones / earthquake / natural disasters / greenhouse gases / carbon emissions

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Source : www.thehindu.com Date : 2023-12-10

SULTAN AHMED AL JABER

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 10, 2023 03:20 am | Updated 09:53 am IST

Sultan Ahmed Al Jaber. Illustration: R. Rajesh | Photo Credit: The Hindu

The 28th edition of the Conference of Parties (COP) under way in Dubai is hot, flat and crowded — a Thomas Friedmanic mural of globalisation.

The hundreds of pavilions sprawled across Expo City host conferences, exhibits, food courts, stages, laser light shows all tie into the larger theme of climate change. The Grand Vizier, as an orchestrator of this confluence, is a man in his 50s. In some of the plenary meetings under way in the operatic halls, he can be seen in the centre in an elegant thawb. His beard is sharp and trimmed and his 6’3”frame lean. As the President of COP28, Sultan Ahmed Al Jaber plays the role of Persuader-in-Chief.

His role, to get the various heads of state, Ministers to meet on common ground on the greatest simmering problem that humanity faces as a collective. The UN Framework Convention on Climate Change (UNFCCC) that came into force in 1994 was a landmark one of sorts that, over the years, has got 194 countries to agree that the globe faces an existential threat from rising levels of greenhouse gas emissions. In the 1990s, this wasn’t yet scientific fact despite which, nations came around to acknowledging the existence of the problem.

The UNFCCC also classifies countries as ‘Annex’ and ‘Non-Annex,’ where the latter consist of the bulk of developing and industrialising countries who have contributed minimally to the historical store of carbon in the atmosphere. Annex countries (and there are sub-classifications within them) are expected to finance clean energy development in non-annex nations. Over the years, this arrangement has taken byzantine turns, with different coalitions forming, sometimes breaking, grand promises made, pledges broken, subtle and veiled threats of non-cooperation and with the result that greenhouse gas emissions are nowhere close to what science says they should be for a chance at keeping temperatures below the levels necessary to avoid cataclysm.

What has, however, stayed constant since 1995 are the annual COP meetings where ministerial delegations congregate and spend close to two weeks, trying to iron out an agreement that moves the world, by inches, towards meeting the goals of the UNFCCC. Ahead of the year’s COP, a team from the UN Secretariat assesses the logistical and technical suitability of a country to host one. Once done, a President is chosen. Like the Speaker of India’s Parliament, the President is expected to be neutral.

At COPs, the President ensures the observance of rules of procedure and works with country

delegations to reach consensus on key issues. Before being designated as President, the chosen one spends nearly a year as the ‘President-designate,’ during which time they work at raising ambition to tackle climate change internationally. The Presidency works to develop effective international relationships with countries, institutions, businesses and stakeholders to achieve the necessary commitments in advance of and at COP.

The role also includes developing a vision for the best possible outcome of the meeting. Though Presidents are not obliged to recuse themselves when matters involving their countries emerge, the onus of maintaining neutrality and rising above national constraints — in the service of the greater UNFCCC good — is expected. It was this key balance that appeared off-kilter in the case of Sultan Al Jaber.

His position as the Chief Executive Officer of Abu Dhabi National Oil Company (ADNOC), one of the largest oil companies globally, implied, the criticism went, that he could not be expected to further the elimination of fossil fuels. Rather than the gavel, he would most likely hold a flaming torch, that would give an even longer rope to the fossil fuel industry — oil and gas especially — to avoid producing and exporting these propellants that, while indispensable to the world as we know it, contributed to nearly 60% of annual emissions.

In his year as President-designate, Mr. Al Jaber, who’s also the United Arab Emirates’ Minister for industry and advanced technology, has given a few interviews. In those ones he has underlined that he sees no conflict in his role as a CEO of an oil company. Rather, this actually enabled him to involve more such industrialists, bring them to the table at COP, and have them commit to a timeline to phase out fossil fuels.

“Never in history has a COP President confronted the oil industry, let alone the fact that he’s a CEO of an oil company,” he told *The Guardian*. “Not having oil and gas and high-emitting industries on the same table is not the right thing to do. You need to bring them all. We need to reimagine this relationship between producers and consumers. We need this integrated approach.”

He has also sought to highlight his former leadership of another prominent renewable energy company, Masdar, in the UAE. Masdar, whose development strategy lies in buying significant stakes in renewable energy companies, boasts as its flagship project Masdar city, a ‘zero carbon’ city that is situated a few kilometres of Abu Dhabi, Mr. Al Jaber’s home city.

In the run-up to the COP meet, reports emerged that the UAE planned to use its role as host of the climate talks to facilitate oil deals with at least 15 countries. Mr. Al Jaber vociferously denied this, a day ahead of the commencement of the COP. Later, on another report, he said that he had in an online discussion raised questions about whether a fully fossil-free future was even possible, unless humanity “chose to go back to living in caves”.

He addressed this during a press conference, as President. “I am quite surprised with the constant and repeated attempts to undermine the work of the COP28 presidency.” He said his training as an engineer had taught him all his life to “respect science” and that said, for a shot at 1.5°C, all unabated coal had to be phased out and fossil fuel use “greatly reduced”.

Perhaps to make up, Mr. Al Jaber, on the very first day of the COP, got countries to begin committing money to the Loss and Damage Fund, a key outcome at last year’s talks in Egypt. So far $750 million has come in that will go towards assisting countries adapt to the damage being wreaked by climate change. He even got several oil companies to become ‘net zero’, or net carbon emissions free, by 2050. He has also claimed credit for getting the United States and China, amidst their diplomatic chill, to come together and commit to a roadmap to cut methane,

a potent greenhouse gas.

Negotiations are nearing the final stretch with acrimony and the sabre-rattling over punctuation approaching a crescendo. Versions of the final text do seem to suggest a concerted push by developed countries to take a decisive step towards the phasing out of fossil fuels. COP history shows that momentous changes can unfurled as the last minute. If he aspires to set a legacy and make the COP the “historic” one that he claims it will be, Mr. Al Jaber must pull a rabbit out of his gavel.

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Source : www.thehindu.com Date : 2023-12-10

GREEN TURTLES NESTING RANGE EXPANDS UNDER WARMING CLIMATE

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

December 09, 2023 09:20 pm | Updated 09:20 pm IST

Rising global temperatures could lead to an increase in the nesting range of green turtles in the Mediterranean Sea, as per a study in *Scientific Reports*. Under the worst-case climate scenario, the nesting range could increase by over 60% points, spreading west from the current area to include much of the North African, Italian, and Greek coastlines.

Human-caused climate change has caused sea surface temperatures to increase globally, with severe impacts on some marine life. Sea turtles are potentially particularly susceptible, as the sex of their offspring is dependent on incubation temperature. Although previous research has investigated the effects of climate change on several different populations of sea turtles worldwide, there has been very little research into the green turtle (*Chelonia mydas*) population in the Mediterranean Sea.

The researchers developed a model for predicting the suitability of a point on the Mediterranean coastline as a green turtle nesting location. The authors first assessed the predictive power of the model by evaluating it against 178 confirmed nesting locations, recorded between 1982 and 2019 and mainly limited to Turkey and Cyprus in the eastern Mediterranean. They found that sea surface temperature, sea salinity, and human population density most affected the suitability of a specific location as a nesting site.

They then modelled how four different greenhouse gas emission scenarios could affect the nesting range of green turtles in 2100. They found that progressively worse climate scenarios were associated with greater increases in the nesting range in the Mediterranean. Under the worst-case climate scenario modelled, the nesting range increased by 62.4% points, and included the North African coastline to Algeria, much of Italy and Greece, and the south Adriatic Sea. However, the authors warn that this increase in green turtle nesting range in the heavily populated central and western Mediterranean would bring them into increased contact with humans and urbanised beaches, which could negatively affect nesting success.

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Source : www.thehindu.com Date : 2023-12-10

EQUITY AND CLIMATE JUSTICE MUST BE BASIS OF CLIMATE ACTION: INDIA AT COP28

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

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December 09, 2023 07:17 pm | Updated 08:40 pm IST - Dubai

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Union Environment Minister Bhupendra Yadav delivers India’s National Statement at COP28 summit in Dubai on December 9, 2023. Twitter/@byadavbjp

India firmly believes that equity and climate justice must be the basis of climate action and this can be ensured only when the developed countries take the lead in combating climate change, Environment Minister Bhupendra Yadav said in Dubai at the COP28 on December 9.

Delivering the national statement at the high-level segment during the ongoing annual climate conference, Mr. Yadav also highlighted India's contribution to the global actions in restricting temperature rise by reducing emission intensity much ahead of the promised target year as mentioned in the Nationally Determined Contributions (NDCs), country’s action plan for dealing with the impacts of climate change.

Also Read | COP28: will there be an agreement to phase out fossil fuels?

“In our endeavour to decouple economic growth from greenhouse gas emissions, India has successfully reduced the emission intensity vis-a-vis its GDP by 33 per cent between 2005 and 2019, thus achieving the initial NDC target for 2030, 11 years ahead of the scheduled time,” Mr. Yadav asserted.

He said India has also exceeded expectations in renewable energy, achieving 40 per cent of installed electric capacity through non-fossil fuel sources, nine years ahead of the 2030 target.

Presented India's National Statement at #COP28 in Dubai today.

Reaffirmed India's commitment underlined by PM Shri @narendramodi ji to work together for the common objective of a greener, cleaner and healthier planet as we have One Earth, we are One Family and we share One… pic.twitter.com/KXSO5BU5bV

Hosted the LeadIT Summit 2023 at #COP28 in Dubai, UAE today.

The end of 2023 marks the beginning of LeadIT 2.0, launched by PM Shri @narendramodi ji.

As we look back on the progress made since LeadIT's inception in 2019, it has emerged as a

beacon of leadership, bringing… pic.twitter.com/8pds0fNNru

As the COP28 proceedings continue, Mr. Yadav said India looks forward to the Global Stocktake's (GST) outcomes and emphasised the importance of resource mobilisation and new collective, quantified goals based on the needs of the developing countries.

“The resource mobilisation and a new collective quality collective quantified goal must be guided by the needs and requirements of the developing countries. India firmly believes that equity and climate justice must be the basis of global climate action this can be ensured only when the developed countries take the lead in ambitious climate action,” he said.

GST is a two-year review of collective global efforts to achieve the Paris agreement goals, especially the target of limiting global warming to 1.5 degrees Celsius compared to the pre-industrial era (1850-1900).

Calling the ongoing climate negotiations as a ‘COP28 of action', the Minister said it was evident on the first day with the operationalisation of the Loss and Damage Fund.

“India has been at the forefront of supporting action-oriented steps at the global level in response to climate change. The successful operationalisation of the Loss and Damage Fund is a testament to our commitment to a sustainable future,” he said.

He further said that India showcased its dedication to the environment by launching the Green Credit Initiative at COP28 on December 1.

The Initiative aims to create a global trade forum facilitating the exchange of innovative environmental programmes and instruments.

He also reminded Prime Minister Narendra Modi’s announcement of LiFE, the Lifestyle for Environment initiative that underscores India's action-oriented approach.

Mission LiFE aims to minimise per capita carbon footprint by promoting mindful utilisation instead of wasteful consumption.

Noting that India has consistently contributed to climate action, as seen in the historic adoption of green development backed by G-20 nations earlier this year, the Environment Minister said India's third national communication, based on the Green Gas Inventory of 2019, along with the initial adaptation communication, reinforces its commitment to climate action while prioritising the development and well-being of its people.

“India revised its NDCs upward, signalling a deepened commitment to enhanced climate action,” he said.

India added around 100 gigawatts of installed electric capacity between 2017 and 2023, with 80 per cent attributed to non-fossil fuel-based resources.

Yadav also listed India's global contributions to climate action including initiatives such as the International Solar Alliance (ISA), Coalition for Disaster Resilient Infrastructure (CDRI), and the creation of LeadIT and Infrastructure for Resilient Island States (IRIS).

The launch of the Global Biofuel Alliance during the G20 summit earlier this year in India further emphasises India's commitment to fostering global collaboration for the widespread adoption of bio-fuels, Mr. Yadav added.

Appealing to the comity of nations to “reaffirm our commitment to work together for the common objective of a greener, cleaner, and healthier planet,” Yadav exhorted, “It is of paramount importance to repose our trust and confidence in the principles and clauses of the convention and its Paris Agreement.” The annual global climate talks under the aegis of the United Nations Framework Convention on Climate Change (UNFCCC) are scheduled to conclude on December 12.

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Source : www.thehindu.com Date : 2023-12-11

NATURAL VEGETATION ON NEARLY 12,850 SQ. KM IN THE CAUVERY BASIN HAS BEEN LOST, SAYS A RESEARCH PAPER

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

December 10, 2023 07:30 pm | Updated December 11, 2023 02:13 am IST - CHENNAI

The Cauvery flows into the water spread area of the Stanley Reservoir near Mettur in Salem district in Tamil Nadu. | Photo Credit: The Hindu

Natural vegetation on nearly 12,850 sq. km of land in the Cauvery basin was lost in the 50 years between 1965 to 2016, according to a recent paper published by scientists and researchers at the Indian Institute of Science (IISc), Bengaluru. Karnataka has lost much more than any other State in the basin. It accounts for three-fourths of the lost cover, while Tamil Nadu's share is around one-fifth, the study added.

Pointing out that natural vegetation cover went down by around 46% all these years, the paper, authored by T.V. Ramachandra, Vinay S., Bharath S., and Bharath H. Aithal, stated that the quantum of reduction of dense vegetation was 35% (6,123 sq. km) and that of degraded vegetation, 63% (6,727 sq. km).

Areas that suffered adverse changes in the extent of forest cover include the Brahmagiri Wildlife Sanctuary, Bandipur National Park, Nagarhole National Park and the Cauvery Wildlife Sanctuary. In respect of the Bannerghatta National Park, the moist deciduous forest area, which was about 50% in 1973, stood at 28.5% in 2015 due to "anthropogenic pressure" on the National Park and its environs.

Taking a historical view of the growth in the cropping area in the basin, the paper, titled "Cauvery River: Land Use Dynamics Biodiversity & Hydrological Status," said that in respect of Tamil Nadu, the extent of area under irrigation rose from 6,556 sq. km in 1928 to 20,233 sq. km now and in the case of Karnataka, it was from 1,193 sq. km to 8,497 sq. km. Consequently, the water demand of the two States increased. It added that land use analysis showed that in 73.5% of the catchment, agriculture and horticulture constituted the dominant activity.

The paper identified "inappropriate" cropping patterns, inefficient use of water, adoption of multi-season water-intensive crops, "unsustainable" mining of river sand, and the decline in community participation in watershed management as problems that characterised the basin.

To remedy the situation, the paper called for the integrated management of the catchment with

an interlinked system of natural resources; restrictions on “large-scale water-intensive” cash crops, monoculture and over-exploitation of groundwater; enrichment of the catchment with native species; promotion of organic farming; setting up effluent treatment plants, and ensuring zero discharge from industries.

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Tamil Nadu / Karnataka / water rights

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Source : www.thehindu.com Date : 2023-12-11

KEY COP28 DRAFT DOCUMENT SAYS COUNTRIES MUST SHOW PROGRESS ON ADAPTING TO CLIMATE CHANGE BY 2030

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 10, 2023 10:06 pm | Updated 10:48 pm IST - NEW DELHI

Union Environment Minister Bhupender Yadav walks through the COP28 U.N. Climate Summit after a meeting in Dubai on December 10, 2023. | Photo Credit: AP

By 2025, all countries must have in place a detailed plan to adapt to the current and future impacts of climate change in their countries, and must demonstrate progress in implementing such a plan by 2030, Sunday's draft of a key climate document said.

A final version of this Global Goal on Adaptation (GGA) document is expected to be part of the agreement when the UN's COP-28 climate summit concludes in Dubai on December 12.

Much of the focus at the annual talks is on 'mitigation', getting countries to commit to time-bound plans to reduce the greenhouse gas emissions which cause climate change, reflected in the emphasis on the Global Stocktake process. However, there is an equally important process underway on 'adaptation', to push countries to take the steps necessary to cope with the current and future impacts of a changing climate. Global temperatures have already risen 1.1 degrees C since pre-industrial times and brought in their wake an acceleration in climate-related disasters, exhaustive scientific investigations show.

'Adaptation' refers to the adjustments in ecological, social or economic systems that countries must make in response to these, and other anticipated climate effects. These actions are country-specific and can range from building flood defences, setting up early warning systems for cyclones, switching to drought-resistant crops, and redesigning communication systems, business operations, and government policies, according to the UN climate division.

At COP 21 in Paris, negotiators decided that the GGA was necessary to get all countries on board a common framework for adaptation. Eight workshops were held after the last COP in Sharm el-Sheikh, Egypt where country representatives proposed concrete targets that could be used to quantitatively define whether the world was indeed becoming more adaptable vis-a-vis climate change.

For instance, they framed targets such as: "Enhance the adaptive capacity and resilience of the global population to adverse impacts of climate change by at least 50% by 2030 and by at least

90% by 2050", or "...achieving100% coverage of multi-hazard early warning systems, climate information services and response systems by 2027".

Just as billions and trillions of dollars are needed for mitigation, adaptation too is expected to require developed countries to invest trillions of dollars in developing countries and island states, which are most at risk from climate hazards. Again, only a fraction of what is required has made its way to where it is required.

On Saturday, India had formally conveyed to the United Nations that it was meeting most of its adaptation expenses with its own money. "The total adaptation relevant expenditure was 5.6% of the GDP in 2021-2022, growing from a share of 3.7% in 2015-16... There is significant gap in adaptation resources which cannot be met only through governmental resources. Considering the increase in the adverse impacts of climate change as well as costs of resilience measures, significant contributions need to be channelized through bilateral and multilateral public finance and private investments," India's statement said.

Several experts have expressed disappointment with the latest draft of the adaptation document, given the scale of the issue it aims to address. "There are no clearly defined targets, no clear definition of a framework, lots of very general exhortations, no outcome targets... This doesn't do anything for the adaptation agenda for developing countries and is disappointing," Dr. Anand Patwardhan, who teaches and researches climate policy at the University of Maryland in the United States, told *The Hindu.*

"Strengthening adaptive capacity is a multi-faceted endeavour that requires sustained and significant support. The Global Goal on Adaptation needs to have an ambitious and specific climate finance and technology commitment from developed nations that the current text lacks," said Sameer Kwatra, policy director for India at a U.S.-based non-profit, the National Resources Defence Council.

Another expert said that it was encouraging that the GGA at least recognised the need for more adaptation finance. "We have seen that out of $1.27 trillion in climate finance flows in 2021-22, only $63 billion is allocated for adaptation. The allocation for adaptation has to increase given the acceleration of the effects of climate change globally," said Arun Krishnan, an analyst with the think-tank, the Climate Policy Initiative. "The GGA's implication is that India would need to increase domestic capital allocation for adaptation. India needs to set up a new fund with a broader mandate than the [existing] National Adaptation Fund for Climate Change to provide coverage for all aspects of adaptation and resilience."

END

Source : www.thehindu.com Date : 2023-12-14

VALPARAI PLATEAU GIVES WAY FOR ELEPHANTS AS ANNUAL MIGRATION SEASON NEARING ITS PEAK

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

December 13, 2023 09:38 pm | Updated December 14, 2023 01:39 am IST - COIMBATORE

Elephants moving along a tea estate in the Valparai plateau in Coimbatore district. | Photo Credit: Ganesh Raghunathan

With the annual migration season of elephants nearing its peak in the Valparai plateau, the Forest Department, non governmental organisations like the Nature Conservation Foundation (NCF) and residents of the hill station are all prepared to ensure free movement of the pachyderms.

At present, nearly 100 elephants are moving along plantation areas in the plateau, which include tea, coffee and cardamom estates, swamps, abandoned fields, eucalyptus patches and forest fragments inside estates. The number is expected to increase when the migration peaks between January and February.

Accustomed to the annual migration of elephants from the Kerala side, residents of the plateau and estate workers have learnt the way to avoid negative interactions between the large herbivores.

According to the Forest Department, the last human death due to elephant attack in the plateau was reported in June 2021.

The migration of elephants from the Kerala side starts in September and Valparai's mosaic landscape of estates and fragmented forest patches serves as key habitats for them. The migration ends by March.

A lot of factors, including rain, availability of grass and people's behaviour towards elephants, influence their migration movement, said Ganesh Raghunathan, Senior Programme Manager with NCF, which has been documenting elephant migration in the Valparai plateau since 2002.

"A team of three people visit plantation areas and collect the numbers of elephants on a daily basis as part of NCF's ongoing study. Alerts on elephant movement are sent to people based on these data," he said.

NCF started its early warning system by sending alerts through local cable TV networks in 2007, which was upgraded to SMS alerts and warning lights in multiple locations in 2011.

Though the number of elephants in plantation areas alone stood nearly 100 as of Wednesday, there could be over 200 elephants in the reserve forest areas of the Anamalai Tiger Reserve (ATR) spread across Valparai and Manambolly ranges. “Being a free ranging animal, they move between forests and plantations,” added Mr. Raghunathan.

The Forest Department is also closely monitoring the elephant movement as its biologists collect data in the morning and evening daily. The department has deployed around 60 frontline staff to monitor elephants during the migration season and avoid negative interactions between residents.

“We have created youth groups in selected villages in Valparai and Manambolly ranges. Details of elephant movement are shared on WhatsApp groups, namely ‘Thadam’, that ensure two way communication between Forest Department and the people,” said K. Bhargava Teja, TR Deputy Director of Pollachi Division of ATR.

A. Sudhakar, a resident of Cinchona near Valparai, said awareness created by the department among the people also helped in reducing the negative interactions.

“Earlier, people used to throw firecrackers and stones at elephants to chase them. Now they have learnt the way to give space for elephants. In fact, all these places were once forests,” said Mr. Sudhakar, a former ward councillor, who has been observing the human-animal conflict situation for decades.

Coimbatore / nature and wildlife / habitat (conservation) / flora and fauna

Source : www.thehindu.com Date : 2023-12-15

WHAT ARE THE LOOPHOLES IN THE COP28 CLIMATE DEAL?

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

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December 15, 2023 08:33 am | Updated 08:40 am IST

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An oil rig off the coast of Huntington Beach, California, October 10, 2021. | Photo Credit: Arvind Vallabh/Unsplash

Nations struck a historic deal on Wednesday at the COP28 climate summit in Dubai to transition the global economy away from fossil fuels. But some delegations and environmental groups say it contains major loopholes that could keep oil, gas, and coal flowing indefinitely.

One of them is the inclusion of a phrase calling for accelerated deployment of carbon capture.

Carbon capture is a technology that would theoretically allow users of oil gas and coal to keep their emissions from reaching the atmosphere by capturing them at the source, and storing them permanently underground.

Lots of people are skeptical about carbon capture. It is expensive and has yet to be proven at the scale needed to impact climate change. And environmental groups call it a false flag that justifies continued drilling.

On the other hand, if it ever did manage to get off the ground, it would allow for ongoing production and consumption of fossil fuels, presumably without a climate impact.

That does not sit well with some countries – especially those most vulnerable to the impacts of warming.

“We are being asked to endorse technologies that could result in actions that undermine our efforts,” said Anne Rasmussen, lead negotiator of the Alliance of Small Island States.

The pact also pushes for the acceleration of low-carbon hydrogen - which typically means hydrogen produced by electrolyzing water in a process powered by clean-energy sources like solar and wind. Practically none of this is made today because it is so expensive.

The deal also includes the line that the summit “recognizes that transitional fuels can play a role in facilitating the energy transition while ensuring energy security.”

What are transitional fuels? Well, they are fossil fuels.

US Special Climate Envoy John Kerry said at a press conference on Wednesday that his definition of transitional fuels is natural gas, produced in such a way that its greenhouse gas emissions are captured during production.

He said that all the provisions of the COP28 deal have to be in line with the international target of limiting global warming to 1.5 C above pre-industrial times.

“That means they’re going to play either a limited role or temporary role, while you’re largely phasing out fossil fuels in the system over a period of time,” he said.

Environmentalists do not like it. They are worried that language like this will encourage ongoing investment in oil and gas development.

Gas has been a tricky topic since Russia’s invasion of Ukraine last year, because the Ukraine War has triggered a massive increase in European imports of U.S. liquefied natural gas.

Another area of concern raised by observers is a clause calling upon parties to transition away from fossil fuels “in energy systems” – as opposed to across the entire economy.

This, says the International Pollutants Elimination Network, sends a signal that other energy-intensive sectors like plastics and petrochemicals production can continue to rely on fossil fuels.

Negotiations around a separate treaty on plastic pollution are split around whether countries should tackle pollution from the production side of the plastics’ life cycle, drawing opposition from countries like Saudi Arabia.

Norway’s foreign minister, Espen Barth Eide, told *Reuters* that the deal means “there might be a small space for a major fossil fuels, but that will be in the hard-to-abate sectors.”

carbon emissions / carbon capture and sequestration / climate change / climate change (politics)

Source : www.thehindu.com Date : 2023-12-15

SHOULD INDIA SET A HIGHER BAR TO ADDRESS CLIMATE CHANGE?

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

December 15, 2023 02:36 am | Updated 02:42 am IST

A woman works at a coal depot in Ahmedabad. | Photo Credit: AP

In a historic first, all 198 signatories to the 28th United Nations' Conference of the Parties (COP28) adopted to "transition away" from "all fossil fuels" as opposed to only coal, as was agreed upon at COP26, in Glasgow. India had played a pivotal role in Glasgow in modifying the language from "phasing out" coal to "phasing it down". Unsurprisingly, it supported the incumbent COP President Sultan Ahmed Al-Jaber of the UAE when he proposed to "transition away" from oil and gas, as opposed to "phasing out", as demanded by several developed countries and small island nations. As the third largest emitter of greenhouse gases, albeit with a drastically smaller per capita emission rate, should India set a higher bar to mitigate and adapt to climate change? **Karthik Ganesan** and **Harjeet Singh** discuss the question in a conversation moderated by **Kunal Shankar**. Edited excerpts:

What are your thoughts on the UAE Consensus adopted at COP28?

Harjeet Singh: This COP has been different for many reasons. [It was held] in a petrostate and headed by an oil company chief. But the outcomes have been unprecedented and historic. The Loss and Damage Fund (LDF) has been operationalised, which was a hard-won victory. The text (UAE Consensus) is historic because for the first time it talks about 'transitioning away from fossil fuels' in energy systems in a 'just, orderly and equitable manner'. Of course, as civil society, our demand was a fossil fuel phase out, which is not the case. There is a lot of a mention of so-called zero to low emission technologies such as renewables. That is fine, but nuclear abatement, removal technologies, carbon capture and utilisation storage, and low carbon hydrogen production are massive loopholes, which are going to provide cover to the fossil fuel industry to prolong its business.

Karthik, do you view the COP28 outcome as being reasonable? What do you think is the role of developing countries in this regard?

Karthik Ganesan: Just to clarify, it is actually the phasing out of fossil fuel subsidies, but really, it's transitioning away from fossil fuels in the energy system and phasing down the unabated use of coal. It's a maze of words. What is clear is that subsidies for fossil fuels must go, but the reality is that if you don't have alternatives to fossil fuels, you have to keep subsidising them because a large part of the population still relies on subsidies to consume energy. So, without

the active phase out of these commodities, phasing out subsidies alone is very unlikely.

Comment | **COP28 — many a slippery slope ahead**

Having said that, is this a desirable outcome? No. It is pretty weak in terms of ambition. Developing countries will keep bringing back to the table the problem of financing and that will be the reason for a lack of action on their part. This is where it becomes dicey. For, developing countries, including India, will face the impacts of climate change that will have costs on the economy. India is a net importer of a lot of fossil fuels. It imports 80% of all its petroleum demand, nearly 50% or more of its gas demand, and a sizeable amount of its coal demand. Given this, it is in India's interests to see how it can bring together industry leaders and the financing ecosystem to channel resources to hasten the transition domestically and create jobs and industrial value add within the economy. It's happening in some way through the PLI (performance-linked incentive) scheme which speaks specifically to solar and battery technology. But it's not happening at a scale at which India needs it — primarily because the dependence on the current energy ecosystem is significant for revenues. India needs to be clear that the impacts of climate change are going to be far more than what we have to gain by continuing our sustenance on fossil fuels.

Harjeet, the LDF has only raised about $700 million when we require trillions to address climate impacts. Developing countries still do not seem to have the know-how to effectively de-carbonise several of their sectors. How could they then be expected to raise their ambition?

Harjeet Singh: We are not happy with the overall outcome, but there are several references now to 1.5°C in the energy section, which is what we were pushing for. Talking about deep, rapid and sustained reductions in greenhouse gas emissions, 1.5°C is fundamental for India but more importantly, for other vulnerable countries in the Pacific. And that also connects to your point on the LDF. More fossil fuels and emissions equal more loss and damage. What we got at COP28 was a compromise after 30 years. Yes, $700 million is not enough, but we see this as a major victory for climate justice movements and for vulnerable countries.

Editorial | **Keeping it relevant: On the United Nations Conference of Parties meetings**

If you look at technology transfer and development that the Technology Executive Committee has been doing, they have decided to establish a technology implementation programme and that has to be supported by the financial mechanism. This has been extremely slow for developing countries for the transition towards renewable energy. It is absolutely critical that there are no trade barriers. It looks like as a package developing countries really insisted upon it and there's going to be some movement going forward.

India is in a Catch-22 situation on fossil fuels. While accepting the common but differentiated responsibility argument, is there anything that India could do more to address climate impacts?

Karthik Ganesan: It comes down to what we consider as our economic paradigm for growth. Unfortunately, we are still wedded to the notion of GDP. Coal, for instance, has environmental consequences and is valued around 50,000 crore in output today. The solar PV sector is valued at 7,000 crore and growing within the domestic economy. So, coal is about 20 times the size of the solar economy as far as domestic value is concerned. The bottom line is that we need to run the economy and the problem is that this seems to be the narrow focus. One can say that for a developing economy, livelihoods must come before the environment. This is the trade-off that is always discussed, but it shouldn't be a binary. For instance, our air quality standards are significantly more lax than what the World Health Organization puts out. Unless we start thinking about what is it that we are getting from economic growth and how it speaks to equity of

outcomes for different parts of the population, we will continue to prioritise what works for the majority. This may not even be a numerical majority. It may be a majority in the way that they control some of the decisions that are being made. Each of these stakeholders is ultimately trying make India's GDP grow. The government and stakeholders must come together and think of the metric through which we should assess whether this next step that we're taking for economic growth also speaks to our long-term environmental interests.

Watch | **COP28 Summit and India — Is climate fatigue setting in?**

Harjeet Singh: I would argue that environment has to be at the centre of our growth paradigm. The discourse on de-growth has begun. Of course, rich countries have to do more. I'm not trying to apply that to developing countries where millions still don't have access to adequate electricity or other energy sources. But India must have its own developmental paradigm and not blindly follow the same model that has brought destruction.

Some might say that India will soon be a $3 trillion economy and so it must contribute towards loss and damage.

Karthik Ganesan: This is the dichotomy that India has always faced. It is a regional power and an emerging economy. Smaller developing countries look up to India's leadership. For that reason, I think India must ensure that it is able to transfer a lot of its learnings to other economies. Now, whether that should spillover into the economic realm and its ability to contribute to the LDF for poorer economies... I think India does contribute in its own way. India has assisted Sri Lanka, East Africa. It wields enormous soft power in the region. For instance, an IIT-Madras campus was inaugurated in Zanzibar recently. India has a responsibility, and it will contribute towards soft power. But when it comes to monetary contribution (to the LDF), there are corners of India which aren't seeing the kind of financial assistance they need. So, the imperative is for charity to begin at home.

Also read | **India welcomes Dubai consensus even as new flanks open**

Harjeet Singh: In the last two years, India's engagement in the development of the LDF has increased. The National Disaster Management Authority has a role to play in the adaptation and the loss and damage negotiations. There was a natural tendency to think that India is going to be drawing money from the LDF. The expectations of Pacific nations and other vulnerable countries has been that India will be contributing. India being a large country must engage with the process and India did, in making sure that this fund is robust. But India has a lot to contribute and not just in monetary terms. It must be part of the Santiago network. India must also learn a lot. There are countries like Bangladesh who have done a lot more on disaster management.

India needs to be clear that the impacts of climate change are going to be far more than what we have to gain by continuing our sustenance on fossil fuels.

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Karthik Ganesan is Director, Research Coordination, Council on Energy, Environment and Water; Harjeet Singh is Head of Global Political Strategy at Climate Action Network International

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AN UPHILL STRUGGLE TO GROW THE FOREST RIGHTS ACT

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

December 18, 2023 12:56 am | Updated 12:56 am IST

‘The Forest Rights Act is remarkable because it first of all acknowledges historical (colonial) injustices and their continuation post-Independence.’ | Photo Credit: RITU RAJ KONWAR

On December 18, 2006, the Rajya Sabha endorsed the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, enacted by the Lok Sabha. This Act, commonly known as the Forest Rights Act, or FRA, marks a watershed in India’s socio-environmental legislation, as it attempts to put an end to the long-drawn conflict over supposed ‘forest encroachments’. Simultaneously, it seeks to create a much more democratic, bottom-up forest governance.

Unfortunately, the implementation of the FRA has been plagued by political opportunism, forester resistance and bureaucratic apathy, and the discourse around it by deliberate canards and misconceptions. Hence, 17 years after it was enacted, the FRA has barely begun to deliver on its promise of freeing forest-dwellers from historic injustices and democratising forest governance. To understand why this is so, we must first delve into what it sought to do and how.

Prior to colonialism, local communities enjoyed customary rights over forests in their vicinity or even a large region. Even when kings or chieftains claimed (say) hunting rights in certain forests, local communities continued to enjoy all other forest benefits. The colonial takeover of India’s forests, however, resulted in a massive disruption of these traditions. Based on the false idea of ‘eminent domain’ (that the ruler always owns all property), the 1878 (colonial) Indian Forest Act was passed and the takeover of India’s forests began. The Imperial Forest Department was established to harvest and transform the forest to maximise timber and revenue, and was also tasked with protecting ‘state’ property against local communities, now deemed trespassers.

The injustices imposed by this colonial forest policy took multiple forms. First, now that forests were seen as primarily a timber resource, shifting cultivation was banned. Second, the so-called survey and settlement of agricultural lands was incomplete and biased in favour of the state. Third, simultaneously, to ensure labour for forestry operations, ‘forest villages’ were created, wherein forest land was leased for agriculture to (mostly Adivasi) households in return for compulsory (virtually bonded) labour. Fourth, since forests were now state property, all access to forest produce was limited, temporary and chargeable, and always at the mercy of the forest bureaucracy that was armed with police powers. Any concessions to local livelihood needs were

termed ‘privileges’ that could be modified or withdrawn any time. Fifth, even where access was permitted, the local community had no right to manage the forest, as the state logged valuable forests and made heavily used forest de facto open-access.

Unfortunately, matters only worsened post-Independence. In the hurry to assimilate princely States and zamindari estates into the Union, their forest areas were declared state property without proper inquiry into who was residing in them. Legitimate residents and cultivators became ‘encroachers’ overnight. Later, forest lands were leased out under the ‘Grow More Food’ campaign and other initiatives to meet the needs of a growing population, but were never ‘regularised’. Communities displaced by dams were not given alternative lands, and ended up ‘encroaching’ forest land elsewhere. And, forest exploitation continued as in colonial times, but in the name of national interest.

The Wildlife (Protection) Act 1972 and the Forest (Conservation) Act 1980 (FCA), again conceived within the framework of eminent domain, became the sixth and seventh forms of injustice. Lakhs of communities were forcibly resettled when creating sanctuaries and national parks. And in ‘diverting’ forests for development projects, neither were the views or consent of local communities taken into consideration, nor, in spite of imposing hefty Net Present Value fees on the project, were the local communities compensated for the impact on their livelihoods.

The FRA is remarkable because it first of all acknowledges these historical (colonial) injustices and their continuation post-Independence. Redress then takes three broad forms. The issue of so-called ‘encroachments’ is addressed through recognising individual forest rights (IFRs) to continue habitation and cultivation or other activities that existed before December 2005. Forest villages are to be converted into revenue villages after full rights recognition. The issue of access and control is addressed by recognising the rights of village communities to access and use forests and to own and sell minor forest produce, and, most importantly, to manage forests within their customary boundaries, including in sanctuaries and national parks. This is the most far-reaching provision in the FRA, as it ensures decentralised forest governance, linking management authority and responsibility to community rights.

Finally, the Act lays down a democratic procedure for identifying whether and where wildlife conservation may require curtailing or extinguishing community rights. Simultaneously, having community rights over a forest translates ipso facto into the community having a say in, if not veto over, any diversion of that forest and a right to compensation if diverted. This right was reaffirmed by the Supreme Court in the Niyamgiri case, and although the Forest Conservation Rules 2022 and FCA Amendment 2023 seek to bypass this right, States can still put in place such consent mechanisms.

Unfortunately, the politicians in most States focused solely on individual rights and projected the Act as an ‘encroachment regularisation’ scheme. Some even encouraged illegal new cultivation in a few pockets. But even the recognition of IFRs was done rather shabbily, compromised by Forest Department resistance, the apathy and ignorance of other departments, and misuse of technology. Claimants were put through enormous hardship during claim-filing, subjected to faulty and non-transparent rejections and (equally important) arbitrary partial recognition (thereby getting tagged as ‘approved’ claims). Imposing absurd digital processes in areas with poor connectivity and literacy, such as the VanMitra software in Madhya Pradesh, is just a continuation of injustice. Even the open-and-shut case of ‘forest villages’ has not been addressed in most States.

But the biggest lacuna in FRA implementation is the extremely slow and incomplete recognition of community rights to access and manage forests (loosely, community forest rights or CFRs). The (still colonially structured) forest bureaucracy is vehemently opposed to these rights, as it

stands to lose its zamindari: our estimates show that 70%-90% of the forests in central India should be under CFRs. The other departments and political representatives can only visualise forest-dwellers as ‘labharthis’ (beneficiaries of state largesse), not as autonomous users and managers of their own forests.

Maharashtra, Odisha, and, more recently, Chhattisgarh, are the only States to recognise CFRs substantially. But only Maharashtra has enabled their activation by de-nationalising minor forest produce, at least in Scheduled Areas, resulting in at least a thousand villages managing their own forests. Even here, illegal non-recognition of community rights in densely forested potential mining areas has led to protest and unrest.

The non-recognition of community rights is convenient to the hardline conservationists and the development lobby alike: communities in Protected Areas are then precariously placed and easy targets for ‘voluntary rehabilitation’, and forests can be handed over for mining or dams without community consent.

As political regimes change and the memory of the struggle that led to the passage of this Act fades, calls for shutting down the FRA’s implementation have emerged. Simultaneously, some States have talked of ‘saturating’ rights recognition in mission mode. However, as examples from Chhattisgarh show, mission mode implementation invariably plays into the hands of the Forest Department, leading to distorted rights recognition and reinstatement of technocratic control. Unless political leaders, bureaucrats and environmentalists all appreciate the spirit and the intent of the FRA, the historical injustices will remain unaddressed, forest governance will remain highly undemocratic, and the enormous potential for community-led forest conservation and sustainable livelihoods will remain unrealised.

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AN OIL SPILL IN AN IGNORED WETLAND

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

December 18, 2023 12:19 am | Updated 12:19 am IST

On the day of Cyclone Michaung, oil spilled from the Chennai Petroleum Corporation Limited into the Buckingham Canal and Ennore Creek, affecting the lives and livelihoods of fisherfolk. | Photo Credit: JOTHI RAMALINGAM B.

On December 3-4, Cyclone Michaung, which lingered 100 km off the coast of Chennai for about 16 hours, brought heavy rainfall to the city. It forced the Tamil Nadu government to not only deal with the problem of heavy flooding, but also turn its attention to the wetlands of the heavily industrialised Ennore-Manali region in the northern part of the city where oil had spilled over from the premises of a public sector refinery.

Even as oil from the Chennai Petroleum Corporation Limited (CPCL) refinery flooded houses and entered the Buckingham Canal and the Kosasthalaiyar river, which empties into the Bay of Bengal, at Ennore, the Tamil Nadu Pollution Control Board underplayed the extent of the ecological disaster. Since the spill occurred in inland waters, the Indian Coast Guard could confirm that the oil had entered the sea only through an aerial assessment.

The State government began to act only eight days after the spillage and after it was nudged by the National Green Tribunal (NGT). The government's 20-member oil spill crisis management committee, headed by the Chief Secretary, inspected the mouth of the river, or Ennore Creek, and directed the CPCL to compensate for the damages caused to the environment and the fisher folk, and ramp up remediation.

The initial work was not only delayed but also haphazard. Without an approved standard operating procedure in place and for reasons that are unclear, the Tamil Nadu State Disaster Management Authority and district authorities, who, as per the draft 'Tamil Nadu State Oil Disaster Contingency Plan', are the nodal agency and the on-scene commander, respectively, took a back seat.

The Department of Environment, Climate Change and Forests set up a coordination centre at Ennore. Along with the CPCL, the Department deployed one oil skimmer and 200 fishermen with their boats from the hamlets of Ennore to remove the oil. As of December 16, 300 additional workers from four sea-cleaning agencies were brought in along with a fleet of machinery comprising five gully suckers, four skimmers, poclains and tippers. Over 50 tonnes of oil-laden sludge have been removed from Kosasthalaiyar so far.

The Department has said that remediation is expected to be completed by December 19.

However, it would be unwise to rush the clean up as, in addition to the 11-kilometre stretch from the CPCL plant to Ennore Creek, oil has spread further south till the Kasimedu harbour and up north to the Pulicat backwaters, a fishing ground and also a biodiversity hotspot for thousands of migratory birds.

State government officials and the CPCL said that the incident was “unprecedented” and that they were “caught unawares”. However, in 2017, two cargo ships carrying oil collided near Kamaraj Port in Ennore, significantly affecting the fisherfolk and their livelihoods. Besides, there are 17 highly polluting industries in Manali of which nine are petrochemical, and the residents of the region have been flagging pollution concerns for years.

The Ennore backwaters, where the British once held the Madras Boat Club’s annual regatta, is now an ignored wetland. Fly ash from the leaky pipelines of the Tamil Nadu Generation and Distribution Corporation (TANGEDCO), and hot water, used as coolant, from the State-owned thermal power plants have together affected the biodiversity of the region.

In 2017, the NGT ordered TANGEDCO to fix the pipes and remove fly ash from the Ennore Creek. Six years on, no substantial work has been done in this regard. The wetland is still choked with ash, a fine particulate by-product of coal combustion that is known to be carcinogenic.

In 2022, the NGT directed the State to notify under the Tamil Nadu Wetland Mission the full extent of the portion of the Ennore wetlands that have not been encroached on, to protect them from further abuse. It also directed the Environment Department to study the wetlands as per the 1996 Coastal Zone Management Plan and develop a plan to restore the fragile creek ecosystem and the wetland complex of Ennore.

The reluctance of the State government to regulate industries in the Ennore-Manali region and restore the Ennore Creek despite court orders reflects how northern Chennai is subjected to deeply unfair environmental standards.

Tamil Nadu / Chennai / Environmental disasters / environmental pollution / wetlands / environmental issues

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INDIA’S ETHANOL CONUNDRUM

Relevant for: Indian Economy | Topic: Infrastructure: Energy incl. Renewable & Non-renewable

December 20, 2023 01:41 am | Updated 10:16 am IST

Sugar mill workers load harvested sugar cane in a tractor trolly in Sangli district, Maharashtra on December 3, 2022. | Photo Credit: Reuters

As more than 100 countries at COP28 in Dubai pledged the tripling of global renewable energy capacity by 2030, India faces a tightrope walk with regard to its ethanol blending target. While ethanol blended petrol (EBP) increased from 1.6% in 2013-14 to 11.8% in 2022-23, the 20% target by 2025 has run into trouble with low sugar stocks in 2022-23 and the impending shortfall in sugarcane production this year. As evident from Minister of Consumer Affairs Piyush Goyal’s statement in May, the government is looking at a major transition towards grains-based ethanol for meeting the target. The recent authorisation of the National Agricultural Cooperative Marketing Federation of India (NAFED) and the National Cooperative Consumers’ Federation of India (NCCF) to procure maize (corn) for supplying ethanol distilleries indicates emphasis on this transition and will boost an organised maize-feed supply chain for ethanol. This, however, risks creating more challenges for the economy.

The two major feedstock for ethanol production are sugarcane (Brazil) and corn (the U.S.). Ethanol production in both these countries boomed from 2000 when crude oil prices started rising and remained above a certain threshold for a decade. (At low crude prices, ethanol blending is not competitive; it is a slow process driven by heavy subsidies.) A crucial difference between the use of sugarcane and corn for producing ethanol is the degree of food-fuel conflict that emerges. In the case of sugarcane, ethanol is produced by processing the molasses (C-heavy/B-heavy) and constitutes minimal trade-off with the sugar output. The B-heavy molasses path produces less sugar compared to the C-heavy one, but both produce sugar and ethanol simultaneously from sugarcane. But using corn for producing ethanol directly reduces its use as food or livestock feed. It not only diverts grain to fuel use, but also links food prices directly with crude oil prices through the demand side. The very high crude prices that prevailed for a decade in 2004-14 pulled up ethanol and corn prices to historical highs. More importantly, the high corn prices were quickly transmitted to other grain markets as soft grains, such as wheat/barley, started getting redirected into the livestock industry as corn substitutes. Though only 5-7% of the world’s corn output was used for ethanol production at the peak of the U.S.’s corn-based ethanol programme, the price effect was widespread and remained the most important contributor to the 2006-14 global food crisis. This was primarily due to the relatively easy substitutability in grain use across food, feed, and fuel.

Also read | Govt. move allowing cane juice use for ethanol to offer ‘partial relief’

This strong link between crude and food prices in the era of agro fuels is re-emphasised by the fact that the food prices remained high even after the 2008 financial crisis caused most commodity prices to plummet. The Food and Agriculture Organization food price index softened only after 2014, when global crude prices fell below $80 per barrel, which also slowed down the U.S. ethanol blending trajectory. The post-pandemic recovery of oil prices has again pushed up food prices. In 2021, the food price index breached the previous record levels attained in 2011.

Unlike in the U.S., sugarcane is the more obvious choice for tropical countries such as Brazil or India where cane yields are higher. This is not to argue that using sugarcane for ethanol does not have adverse impacts on environment or hunger. More land under water-intensive sugarcane cultivation can displace food production as well as degrade water tables, but these can be regulated by appropriate land-use policies. It is far more difficult to control the market dynamics, driven by easily interchangeable grain use, as illustrated by the U.S.'s corn-based ethanol experience.

Editorial | Honest reckoning: On the reality behind the commitment to renewable energy

In India though, differential pricing introduced in 2017-18 incentivised the use of cane juice directly to produce ethanol and exacerbated the food versus fuel binary, which is otherwise relatively subdued in the case of cane-based ethanol. When price incentives were given for ethanol produced from cane juice without the extraction of sugar, a process which gives a substantially higher yield of ethanol, mills abandoned the more sustainable molasses route. This was driven by the urge to hasten the journey towards the 2025 EBP target, which it achieved. The success generated challenges in the form of reduced sugar stocks. The December 7, 2023 order by the Ministry of Consumer Affairs banning the use of cane juice for ethanol production is a timely, corrective step. But by adopting a transition to grains-based ethanol to fast-track the 2025 target achievement (maize is expected to supply around half of the ethanol feed in 2023-24 and beyond), is the government hurtling towards a looming spectre of uncontrollable food inflation? For this path to meet the EBP target by 2025, India needs 16.5 million tonnes of grains annually (government estimates). This is a sufficiently high quantity to trigger a short-run price spiral in grain markets.

The future of India's renewables strategy hangs on a delicate food-fuel trade-off; and a choice between intensifying hunger and reducing fossil fuel use. On the one hand, the government can reconsider its EBP target and stagger it to contain the contradictions. On the other hand, we need more investment in public infrastructure, urban design to contain the fuel demand for automobiles, and in renewables such as solar power.

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Source : www.thehindu.com Date : 2023-12-24

COIMBATORE’S FIRST BUTTERFLY PARK GETTING READY AT VELLALORE TANK

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

December 23, 2023 02:02 pm | Updated December 24, 2023 12:04 am IST - COIMBATORE

The works for the butterfly park at Vellalore tank in Coimbatore began in April this year. | Photo Credit: PERIASAMY M

The first butterfly park in Coimbatore city is getting ready at Vellalore tank, a semi-urban waterbody in the Noyyal river system that is home to a variety of avifauna and insects.

The butterfly park project, which commenced in April this year, has successfully completed its phase one construction.

Initiated by the Kovai Kulangal Padhukappu Amaippu (KKPA), the butterfly park is soon to be opened to the public, right after the completion of the phase two work. The park, coming up on the tank bund in a patch of 50 metre width and 300 metre length, will serve as a testament of a positive human-environment interaction, according to KKPA.

A year-long survey conducted by The Nature and Butterfly Society (TNBS) identified 101 butterfly species within the vicinity of the tank and the adjacent Miyawaki forest. In addition to the recorded species, the experts from TNBS spotted a new variety, Common nawab, following the conclusion of Phase one.

According to A. Pavendhan of TNBS, the 101 species of butterflies recorded in the tank belonged to five major families. Some of the important species that are found in the semi-urban biological hotspot include Bamboo treebrown, Medus brown and Chocolate albatross, which are predominantly forest species seeking shelter in the wetland.

“Wherever there is a butterfly, we tend to follow. It is as simple as that. At Vellalore, every month we used to have a few good species added to the list, so that is how the interest in Vellalore grew”, he added.

The corporate social responsibility funds from Milacron India Private Limited (Mold Masters Division) provided the primary sponsorship for the culmination of phase one, which encompasses the construction of the butterfly garden and a walkway.

The phase two would include the establishment of an inhouse information centre, which would provide scientific knowledge with respect to the butterfly species identified.

R. Manikandan, the founder of KKPA, envisions the park to serve as an educational platform to showcase the remarkable species of butterflies, their life-cycle and the phenomenon of butterfly migration. Interpretation centres with displays of knowledge guides and illustrations would enable the visitors to develop deeper insights regarding the butterfly population.

“The park is expected to emerge as a hub for disseminating valuable eco-critical knowledge. The prospect of exploring a butterfly park naturally intrigues visitors, prompting them to discover the myriad of butterfly species around. The presence of a butterfly park in a semi-urban landscape offers a unique opportunity to raise public awareness about the rich biodiversity existing in the urban wetlands. The park, which is also a home to a diverse population of birds is expected to attract bird watchers and nature enthusiasts”, he said.

The efforts of converting the Vellalore tank into a biological hotspot began in the year 2017. The Miyawaki forest with its ten thousand varieties of indigenous plants, serves as the backbone for the emerging project. As the phase two works are in progress, the park is soon to be out of its cocoon retaining its ecosophical spirits.

Source : www.thehindu.com Date : 2023-12-24

T.N. RAINS

Relevant for: Geography | Topic: Climate and Weather & Changes in Climate

December 23, 2023 09:04 pm | Updated December 24, 2023 11:23 am IST

School students wade through stagnated rain water at tsunami rehabilitation colony at Velankanni in Nagapattinam district. | Photo Credit: M Moorthy

While Tamil Nadu was recovering from the devastation caused by the tropical cyclone Michaung, another catastrophic event occurred on December 18, this time over the southernmost parts of the State. The southern districts of Tamil Nadu — Thoothukudi, Tirunelveli, Tenkasi and Kanyakumari — experienced unprecedented and extremely heavy rainfall on December 17 and December 18. At least nine rain gauge stations in these districts reported heavy rainfall of more than 50 cm. The Kayalpattinam station in Thoothukudi recorded 95 cm of rainfall in just 24 hours. In terms of probability, this event could be termed as a once in a hundred-year event. These heavy rains led to massive and widespread flooding, caused extensive damage, and claimed a few lives. Due to the heavy rainfall, many villages were under water and thousands of villagers were without food, drinking water and electricity for a couple of days. The heavy downpour was reminiscent of the heavy rains (94.4 cm) in Mumbai on July 26, 2005 in terms of the quantum of rainfall.

The 2023 northeast monsoon was in an active phase during this episode, characterised by the presence of an east-west trough (or ITCZ). The unprecedented heavy rainfall on December 18 was associated with an easterly wave with an embedded cyclonic circulation that moved from the southwestern Bay of Bengal across southern Tamil Nadu and Kerala into the southeastern Arabian Sea between December 16 and December 19. There was a large-scale, intense convergence of winds with the influx of abundant moisture into the region. Most of the recent rains fell in the early morning hours of December 18, supported by the climatological diurnal pattern over the region. The north-south running hills along the Tamil Nadu-Kerala border are also likely to have contributed to the dynamics of the heavy rains.

Was this rain event accurately predicted? The India Meteorological Department (IMD) had predicted extreme rainfall (more than 20 cm of rainfall in 24 hours) for December 18 about 48 hours in advance and issued a red level warning. But rainfall of more than 50 cm was not expected at all. Compared to a tropical cyclone, this weather system was a weaker system. A review of the available numerical weather prediction (NWP) model forecasts showed that no model could predict the intensity of this heavy rainfall event. The models only predicted heavy rainfall in the order of 20-25 cm in 24 hours. However, the numerical weather prediction models cannot make a quantitative prediction for this kind of outlier — 95 cm of rainfall.

Editorial | Turbulence in south: On the heavy rain in southern Tamil Nadu, weather

forecasting and preparedness

For prediction of extremes, a probabilistic approach is generally used extensively to calculate the probability of such extreme events occurring in each region. These probabilistic forecasts can be generated using an ensemble approach, where we generate a larger number of forecasts (30-40 forecasts) with perturbed initial conditions. The Indian Institute of Tropical Meteorology (IITM) in Pune has developed such a prediction system for making probabilistic forecasts. This ensemble forecasting system was able to suggest the high probability of occurrence of extreme rainfall event in southern Tamil Nadu almost three days in advance. But the prediction did not indicate 95 cm rainfall in Thoothukudi. We should make more use of these probabilistic forecasts for extreme events instead of relying on quantitative predictions. Probabilistic forecasts provide more lead time, which can be used for better preparation. End users should be trained to use probabilistic methods for proper mitigation of such extreme events.

The fact that this event is once in a hundred-year event does not mean that it can happen only after 100 years. It could happen next year too. The IPCC models clearly indicate that extreme precipitation events may occur more frequently as global warming progresses. Heavy rainfall of this magnitude due to a relatively weak weather system should really worry us.

In the face of increasing extreme rainfall events, it is imperative that we take a multifaceted and proactive approach to mitigate the impact and strengthen the resilience of our communities. To meet the challenge of climate change, a comprehensive strategy that includes robust early warning systems, sustainable urban planning, ecosystem conservation, global climate action and community engagement is essential to effectively mitigate the impacts of increasing extreme precipitation events. Robust early warning system is very vital, but it is only one component of this comprehensive strategy. More research is required for better understanding of the physical processes of these extreme events. Public awareness and education also play a crucial role in building resilience. Communities should be educated about the risks associated with extreme precipitation events and receive information on how to prepare and respond effectively. Taking proactive measures today will contribute to a more resilient and sustainable future for generations to come.

(*Madhavan Nair Rajeevan was a former Secretary to the Government of India and presently the Vice Chancellor, Atria University, Bengaluru. Views expressed are personal*)

END

Source : www.thehindu.com Date : 2023-12-26

GLOBAL GOAL ON ADAPTATION AND THE ROAD FROM DUBAI

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

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December 26, 2023 01:17 am | Updated 09:11 am IST

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‘The COP28 Draft Decision notes with concern that the adaptation finance gap is widening’ | Photo Credit: REUTERS

The 28th meeting of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), in Dubai, was notable in terms of stopping the lackadaisical approach of the international community to the adaptation concern. Guided by the Paris Agreement on Global Goal on Adaptation (GGA), the efforts put in at COP26 and COP27 were what culminated in the adoption of the framework for GGA at COP28. The material progress on the implementation of the GGA requires that future climate change negotiations should show more urgency in treating adaptation on a par with mitigation as the world is witnessing extreme weather events, with devastating consequences. These climate change events are happening at only 1.1° Celsius as compared to pre-industrial levels.

Another fact is that the best mitigation efforts enshrined in the nationally determined contributions (NDCs) of the Parties to the Paris Agreement are not in sight of restricting global average temperature below 1.5° C as compared to pre-industrial levels. They would rather nudge the world towards the 2.8° C point by the end of the century.

The framework of the GGA is expected to influence what type of adaptation action will be prioritised. A main target in the GGA includes the Parties to the Paris Agreement having “conducted up-to-date assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities and have[ing] used the outcomes of these assessments to inform their formulation of national adaptation plans, policy instruments, and planning processes and/or strategies”, by 2030.

By 2027, all the Parties have to establish multi-hazard early warning systems, climate information services for risk reduction and systematic observation to support improved climate-related data, information and services. A significant point remains to be answered whether it will advance adaptation. A comprehensive review of experiences from the Millennium Development Goals found that globally agreed goals do not trickle down easily from the global to the national level. National conditions, including administrative capacity and economic development, were identified alongside adequate support as key influencing factors for the implementation of a global goal.

The Parties are expected to have progressed in their implementation of national adaptation plans, policies and strategies by 2030. And, it is not very simple to answer whether progress on adaptation has been made. Unlike mitigation of greenhouse gases, climate adaptation does not have a universal metric, and its ambition or implementation level cannot be simply aggregated based on countries' national pledges. The GGA framework has taken an important decision to launch a two-year work programme on indicators for measuring progress achieved towards the targets mentioned in paragraphs 9-10 of the GGA draft decisions (FCCC/PA/CMA/2023/L.18). But it does not currently mention who will develop them, or how.

A question that arises is about what the potential role of universal indicators after its finalisation in two-years' time would be. In a global context of scarce public funds and competing priorities, the idea of spending in those adaptation activities would not pose much difficulty if their results can be fairly measured and compared. The idea of developing a standardised metric is one that is being supported by international donors and the national budget managers, which would help them in applying this to all sorts of adaptation projects. This kind of thinking is bolstered by the fact that the most sought-after dimension of climate change problem mitigation is working with one relatively simple and universal metric of CO2 equivalents, which can be applied across specific contexts to measure impacts in an easily comparable format.

The COP28 Draft Decision notes with concern that the adaptation finance gap is widening, which amounts to highlighting the widening gap between the estimated costs of meeting a given adaptation target and the amount of finance available. The COP26's urge to developed countries to double overall adaptation finance from 2019 levels by 2025 was repeated in the Draft Decision. Estimation made on the basis of updated NDCs or national adaptation plans indicate a figure of $71 billion per year from now to 2030. The Organisation for Economic Co-operation and Development countries have already admitted that their combined mitigation and adaptation finance flows fell short of the annual $100 billion to $83.3 billion in 2020.

There is also a strong bias in climate financing in favour of mitigation as compared to adaptation.

Here are the reasons: the climate change regime has been largely mitigation centric; rich countries do not gain much as the benefits of adaptation are local, and mitigation projects generate benefits globally and the availability of low-cost mitigation options in developing countries.

Buchner, in a study, said that the split between mitigation and adaptation finance is 95:5 (Climate Policy Initiative, Venice, 2011). Self-reporting made by finance providers indicates there has been a trend of increasing international adaptation finance to developing countries in recent years, reaching $28.6 billion in 2020, but the share of adaptation in total climate finance to developing countries was 34% in 2020, still far behind mitigation finance (Adaptation Gap Report, 2022).

The GGA is an encouraging development as it contains a number of developments that are very useful for the cause of adaptation. But it still falls woefully short in terms of treating adaptation on a par with mitigation as it lays stress on holding the increase in the global average temperature well below 2° C and 1.5° C essential for ensuring the continued availability of the largest number of adaptation options, and also adds greater levels of mitigation that will reduce the need for additional adaptation efforts.

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A DIVE INTO SANITATION SOLUTIONS: PROCESSING, MANAGING AND TREATING USED WATER

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

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Apart from the water we drink and consume through our food, we use water for cooking, cleaning ourselves and our homes, and washing clothes and utensils. Where does the used waterfrom our homes go?

Common answers to this question are into the ground, into the open space around the house, into pipes underground or into open drains or canals, among other water bodies. Some of these responses are not entirely wrong, but the key concern is where this used water should go.

It should go into sanitation systems designed to contain, convey, treat, and either dispose of or reuse the used water (given its value as a resource, the term ‘used water’ is preferred over ‘wastewater’) – ensuring good public health and reducing environmental pollution. While rudimentary sanitation was introduced by ancient civilisations around 4000 BC, the modern sanitation system was built in London around the 1800s.

The type depends on where you live. In rural areas or spacious urban residences, used water goes into twin pits or septic tanks, also known as on-site sanitation systems (OSS), connected below ground to toilets.

While twin pits and septic tanks are widely used, other OSS types include bio-digester toilets, bio-tanks, and urine diversion dry toilets. These systems serve as collection and storage structures that passively treat the used water and dispose of the liquid into the surrounding soil. The residue that collects within the pits and septic tanks is called faecal sludge, or septage, and is composed primarily of solids from human excreta.

Twin pits are two pits separated by at least one metre. The pits, used alternatively, have porous walls that allow the liquid part of used water to soak into the ground while solids collect and degrade at the bottom of the pit.

When one pit reaches capacity, it is covered and left unused for two years until its contents are dry, pathogen-free, and safe for reuse. In this period, the second pit operates, and the cycle repeats.

Twin pits are a complete system by itself, as the full sanitation cycle from containment to treatment and disposal happens within the pit and its immediate surroundings. However, they

may not be suitable for all locations, such as rocky soil where water percolates slowly. In such conditions, septic tanks along with pits or other forms of soakaways are used.

Septic tanks are watertight; as used water flows through the tank, solids settle at the bottom, while scum – mostly oil and grease – floats to the top. The clear liquid is disposed of in the surrounding soil through pits that are like twin pits or in a longer, shallower trench.

While settled solids in septic tanks degrade over time, the accumulated faecal sludge and scum must be removed at regular intervals. This is done using trucks equipped with vacuum pumps that suck the faecal sludge out and transport it to treatment facilities called faecal sludge treatment plants (FSTPs).

Conversely, in densely populated urban areas that lack space within properties, an underground network of pipes – a.k.a. sewers – collects and conveys the used water to treatment facilities.

This network of interconnected pipes transports used water from toilets, bathrooms, kitchens to treatment facilities by gravity or with the help of pumps. Sewers have machine-holes for maintenance and to remove blockages. (Machine-holes is a better term than ‘manholes’, which is inappropriate since the law prohibits manual cleaning exercises.)

This used water, called sewage, is transported by sewers to sewage treatment plants (STPs).

FSTPs can be either mechanical or gravity-based. Mechanised systems rely on equipment such as screw presses or centrifuges for dewatering; gravity-based systems use sand drying beds and sunlight.

The treated solids can be reused in agriculture when composted with organic municipal solid waste. Treated water is often reused in landscaping within the FSTP facilities. This process of containing, conveying and treating faecal sludge is also called faecal sludge management (FSM). In many small and medium towns or villages, OSS-FSM is the predominant form of the sanitation system.

STPs use a series of physical, biological, and chemical processes to remove pollutants and contaminants from used water. Like FSTPs, the treatment of used water has a primary stage that separates solids from the liquid part, followed by purification (where solids settle and are digested by microorganisms), and disinfection.

To facilitate the reuse of used water, advanced systems use additional treatment such as membrane filtration. STP technology can be of several types, either mechanised and non-mechanised, and is often chosen based on techno-managerial and the financial capacities of a city’s government.

FSTPs are generally smaller than STPs and can be colocated with municipal solid waste management sites. They can also be decentralised and located closer to the sources of faecal sludge. In contrast, STPs are much larger, centralised installations designed to serve entire communities or large urban areas. They require substantial infrastructure and are typically located near water bodies so they can discharge treated water.

As water moves through its various domestic and non-domestic uses, it accumulates natural as well as human-introduced impurities – including organic matter, nutrients from detergents, pathogens such as bacteria, viruses, and parasites, and heavy metals from solvents and pesticides. It also includes solids like soil, debris, minerals, and salts.

To ensure that used water doesn't pollute or cause public health issues as a result of these impurities when reintroduced into natural environments, it's essential to contain, remove, and treat used water before it is disposed of or reused.

Odour and aesthetics have long been the main drivers of sanitation, but it wasn't until their connections with public and environmental health became clear that people realised that using an "out of sight" approach was inadequate.

There have been significant improvements in public health since sanitation systems were invented, but universal access to safely managed sanitation services remains a challenge. Overcoming issues like poorly designed and built systems and unsafe operation and maintenance practices are crucial to effectively manage used water and protect our increasingly precious water bodies and groundwater aquifers.

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