

For the World from the Global South

YEAR IN REVIEW
2022-23

Impacting Sustainable Development at Scale

Transformations

- › Low-carbon Economy
- › Energy Transitions
- › Power Markets
- › Industrial Sustainability
- › Sustainable Livelihoods

Quality of Life

- › Clean Air
- › Sustainable Water
- › Sustainable Food Systems
- › Sustainable Cooling
- › Sustainable Mobility

Enablers

- › Sustainable Finance
- › Technology Futures
- › Circular Economy
- › Climate Resilience
- › International Cooperation

CEEW Talisman

Fight Ignorance | Stay True | Raise the Bar

Our Values

Integrated | International | Independent

Special Initiatives

CEEW Centre for Energy Finance | Powering Livelihoods



250+ Multidisciplinary team

20+ States engaged

410+ Partners

CEEW's growth as a recognised and ranked public policy research institution owes much to the trust, collaboration and contribution of our partners since our inception in 2010. Our deep gratitude and many thanks to peerless organisations, institutions and individuals who have enabled and empowered us to stay true to our purpose.

Scan to see
our valued
partners



Strategic Outreach



R. K. SINGH, Minister of Power (MoP), and New and Renewable Energy (MNRE), Government of India (GoI), at the CEEW-Villgro national summit, *Powering Sustainable Livelihoods*, New Delhi, 17 May 2023.



GAJENDRA SINGH SHEKHAWAT (R), Minister of Jal Shakti (MoJS), GoI, with **ARUNABHA GHOSH**, CEO, CEEW, at the launch of the CEEW coffee-table book, *Ripples: India's Sustainable Water Management Story*, at the Namami Gange side event at UN 2023 Water Conference, New York, 22 March 2023.



HARDEEP SINGH PURI, Minister of Housing and Urban Affairs (MoHUA), and Petroleum and Natural Gas (MPNG), GoI, at the launch of two CEEW studies, at the *15th Urban Mobility India Conference & Expo 2022*, Kochi, 4 November 2022.

Image: Urban Mobility India Conference & Expo 2022

ANTÓNIO GUTERRES, UN Secretary General, at a *Doordarshan News* exclusive conversation with CEEW's **ARUNABHA GHOSH**, on *Lifestyle for Environment (LiFE)*, New Delhi, 25 October 2022.



JETSUN PEMA, Her Majesty the Queen of Bhutan, addressing the G20 Development Working Group side event, co-organised by CEEW, *Infusing New LiFE into Green Development*, Mumbai, 13 December 2022.



CHRYSOULA ZACHAROPOULOU, Minister for Development, Francophonie and International Partnerships, Government of France, at the CEEW-Embassy of France roundtable, *Charting a Just Transition in Today's Complex Global Energy Scenario in Perspective of COP27 and India's G20 Presidency*, New Delhi, 18 October 2022.



AMITABH KANT, India's G20 Sherpa, at the G20 Development Working Group side event, co-organised by CEEW, *Infusing New LiFE into Green Development*, New Delhi, 13 December 2022.



NAOKO ISHII, former Deputy Vice Minister of Finance, Government of Japan, at CEEW's Sagarmatha Talks series, New Delhi, 18 July 2023.

Images: CEEW

LIGIA NORONHA, Assistant Secretary-General, UN, and Head of United Nations Environment Programme (UNEP), New York Office, at the G20 Development Working Group side event, co-organised by CEEW, *Infusing New LiFE into Green Development*, Mumbai, 13 December 2022.



DAMILOLA OGUNBIYI, CEO and UN Special Representative of the Secretary-General for Sustainable Energy for All and Co-Chair of UN-Energy, at the G20 Energy Transition Working Group side event, co-organised by CEEW, *Role of Decentralised Renewable Energy for Achieving SDG 7*, Goa, 20 July 2023.



FRANS TIMMERMANS, then Executive Vice-President for the European Green Deal, European Commission, at the CEEW-EU high-level roundtable, *Turning Ambitions into Actions in the Context of India's G20 Presidency and COP28*, New Delhi, 25 May 2023.

MAHMOUD MOHIELDIN, UN Climate Change High-Level Champion for Egypt, at the CEEW-Embassy of Egypt-Bloomberg Philanthropies roundtable, *COP27 India Roundtable with the UN Climate Change High-Level Champion*, New Delhi, 4 October 2022.



Images: CEEW



BHUPINDER SINGH BHALLA, Secretary, MNRE, GoI, at the G20 Energy Transition Working Group side event, co-organised by CEEW, *Diversifying Renewables & Critical Minerals Supply Chains to Advance Energy Transition*, Gandhinagar, 3 April 2023.

VIVEK BHARADWAJ, then Secretary, Ministry of Mines (MoM), GoI, at the G20 Energy Transition Working Group side event, co-organised by CEEW, *Diversifying Renewables & Critical Minerals Supply Chains to Advance Energy Transition*, Gandhinagar, 3 April 2023.



RICHA SHARMA, then Additional Secretary, Ministry of Environment, Forest & Climate Change (MoEFCC), GoI, at the CEEW workshop, *What does the Global Stocktake Mean for India?* New Delhi, 16 March 2023.



DEBASHREE MUKHERJEE, then Special Secretary, MoJS, at the CEEW-IWMI-CGIAR national stakeholder workshop, *Policy Coherence in Food, Land, and Water*, New Delhi, 16 June 2023.



MERCY EPAIO, Joint Secretary, Ministry of Micro, Small and Medium Enterprises, at the CEEW-Villgro event, *Mainstreaming Women in Tech-enabled Rural Livelihoods*, New Delhi, 16 February 2023.



SANJEEV SANYAL, Member, Economic Advisory Council to the Prime Minister of India, and Secretary to the Government of India, at the CEEW carbon forum launch event, *Carbon Pricing: Enabling the Net-Zero Transition*, New Delhi, 20 February 2023.

Images: CEEW

AMIR SUBHANI, Chief Secretary, Government of Bihar, at the steering committee meeting with UNEP-India, CEEW, WRI, RTI, ICLEI, CII, and DA, for a low-carbon and climate-resilient Bihar, Patna, 26 May 2023.



Image: WRI

SUPRIYA SAHU, Additional Chief Secretary, Department of Environment & Climate Change, Forests, Government of Tamil Nadu (GoTN), at a CEEW-GoTN meeting, New Delhi, 22 February 2023.



Image: Instagram/@supriyasahujis



SUJATA SAUNIK, Additional Chief Secretary, (Home and Administrative Reforms & Operation Management, General Administration Department), Government of Maharashtra (GoM), at the CEEW expert dialogue, *How can Technology Help Strengthen India's Disaster Preparedness?* New Delhi, 13 July 2023.

PUNEET KUMAR GOEL, Chief Secretary, Government of Goa, at the G20 Energy Transition Working Group side event, co-organised by CEEW, *Role of Decentralised Renewable Energy for Achieving SDG 7*, Goa, 20 July 2023.



PHANINDRA REDDY, Additional Chief Secretary, Department of Transport (DoT), GoTN at a CEEW-GoTN meeting, Chennai, 18 August 2023.

Images: CEEW

PRAVIN DARADE, Principal Secretary, Department of Environment and Climate Change, GoM, at a CEEW-GoM meeting, Mumbai, 15 December 2022.



Image: DoECC, GoM

MAJID AL NEKHAILAWI, Deputy Chief of Mission, Embassy of the United Arab Emirates (UAE), New Delhi, at the CEEW workshop, *What does the Global Stocktake Mean for India?* New Delhi, 16 March 2023.



DR LE VIET ANH, Director General, Department of Science, Education, Natural Resources & Environment, Ministry of Planning & Investment, Socialist Republic of Viet Nam, at the CEEW-CEF event, *Advancing a Low-cost Energy Transition in Viet Nam*, Ha Noi, 11 October 2022.



UGO ASTUTO, then Ambassador of EU to India and Bhutan, at the CEEW-EU High-level Roundtable, *Turning Ambitions into Actions in the Context of India's G20 Presidency and COP28*, New Delhi, 25 May 2023.



DR PHILIPP ACKERMANN, Ambassador of Germany to India and Bhutan, at the CEEW-Embassy of France roundtable, *Charting a Just Transition in Today's Complex Global Energy Scenario in Perspective of COP27 and India's G20 Presidency*, New Delhi, 18 October 2022.

Images: CEEW

From the Chairperson and the CEO



JAMSHYD N. GODREJ
Chairperson, CEEW



ARUNABHA GHOSH
CEO, CEEW

What is the difference between equality and equity? While equality emphasises sameness, equity aims to ensure fairness by recognising and rectifying historical and systemic inequalities, striving for justice rather than uniformity. As the Council on Energy, Environment and Water (CEEW) completed 13 years of operations, our aim was to bridge the inequity gap between the Global North and South through action, ambition and acceleration. For that, it is important that the Global South has a seat at the table to offer its analysis of the state of the world and its narratives for a more sustainable and equitable future.

Growth must be both vertical and horizontal — spread across topics of interest and varied geographies and connecting communities. This year, CEEW has done just that by entrenching our roots locally, nationally and internationally. Whether through working with farmers in Andhra Pradesh to champion sustainable food systems or working on several national-level missions or as a knowledge and strategic partner to the Indian government for its G20 presidency. The Council has championed the lived experiences, desires and aspirations, and leadership of the Global South.

We walked the talk with local action. Our teams worked on the ground to empower women-run juice and jam enterprises in Agra through clean tech, drafted a state climate action plan, centred consumers in India's power sector transformation, and informed the EV transition from Amritsar to Kochi. At the same time, CEEW collaborated with several other organisations to

bring impact on the ground — with Villgro to bring clean tech to rural India, with the Clean Air Punjab collective to strategise air pollution mitigation measures in the state, and Prerna Ojas to mainstream distributed renewable energy solutions for livelihoods in Uttar Pradesh. This is crucial for a country such as India where studies need to be grounded in diverse geographies and markets so that policies and solutions are tailored for impact.

We showed ambition nationally. Eleven years ago, The Council asked the question, how would India set an agenda for the world should it host the G20 comprising the world's largest economies? This year, we were partner to 10 Union ministries and the NITI Aayog to support India's Presidency and helped inform the New Delhi Leaders' Declaration that put in place a new GDP for the planet — a Green Development Pact.

Internationally, we pushed for the acceleration of a globally inclusive energy transition. From highlighting climate finance needed at the UN's climate negotiations, to informing Viet Nam's renewable energy projects, to advising on the Paris Financing Pact, The Council has pushed for international outcomes and putting developing economies at the centre of discussions that shape and reform the world as we know it.

If 2023 has taught us anything it is that the world is no longer what it used to be. But it still has hope – to bridge gaps, inequity and the crisis of empathy.

Informing India's G20 Presidency



Image: CEEW

CEEW's journey to inform India's G20 Presidency began in December 2010, when we convened a working group to co-author a first-of-its-kind report from the developing world, *Understanding Complexity, Anticipating Change*. The report was submitted to the then Prime Minister's Office and asked the question, when India hosts a G20 summit, how will it set an agenda for the world? The report became essential reading in the Singapore Civil Service College, was circulated in the Brazilian Senate, and was discussed within the UK's foreign office.

Eleven years later, CEEW was invited to be a strategic/knowledge partner to 10 Union Ministries and the NITI Aayog to support India's G20 Presidency.



Image: CEEW

AMITABH KANT (R), India's G20 Sherpa, in conversation with CEEW's **ARUNABHA GHOSH**, at the G20 Development Working Group Meeting side event, co-organised by MEA, CEEW, UNEP, and UNIDO, *Infusing New LiFE into Green Development*, Mumbai, 13 December 2022.

10

central ministries and NITI Aayog supported for India's G20 Presidency

340+

knowledge engagements via briefings, discussions, roundtables, and presentations

8

official G20 publications co-authored

12

official T20 and U20 publications co-authored

Source: CEEW compilation

As a strategic/
knowledge partner to
10 Union Ministries
and the NITI Aayog,
CEEW's research
informed several G20
Working Groups and
outcome documents

G20 Working Groups

- ▶ Development Working Group (DWG)
- ▶ Energy Transitions Working Group (ETWG)
- ▶ Environment and Climate Sustainability Working Group (ECSWG)
- ▶ Sustainable Finance Working Group (SFWG)
- ▶ Framework Working Group (FWG)

Think20

- ▶ Task Force 4: Clean Energy and Green Transitions
- ▶ Task Force 5: Reassessing the Global Financial Order

- ▶ G20 New Delhi Leaders' Declaration
- ▶ Development Ministers' Meeting Outcome Document and Chair's Summary
- ▶ Energy Transitions Ministers' Meeting Outcome Document and Chair's Summary
- ▶ Environment and Climate Ministers' Meeting Outcome Document and Chair's Summary
- ▶ G20 High-Level Principles on Lifestyles for Sustainable Development
- ▶ G20 Voluntary High-Level Principles for Collaboration on Critical Minerals for Energy Transition
- ▶ G20 Voluntary High-Level Principles on Green Hydrogen
- ▶ Think20 India Communiqué and T20 Task Force 4 Communiqué

#CEEWPride



CEEW's **ARUNABHA GHOSH** was nominated as a Member of India's G20 Finance Advisory Group, which was led by the Reserve Bank of India and the Ministry of Finance.



CEEW's **ABHISHEK JAIN** at the G20 Energy Transitions Working Group side event, *Role of Decentralised Renewable Energy for Achieving SDG 7*, organised by CEEW and MNRE, Goa, 20 July 2023.



CEEW's **RISHABH JAIN** and **SHUVA RAHA** at the G20 Energy Transitions Working Group side event, *Diversifying Renewables & Critical Minerals Supply Chains to Advance Energy Transition*, co-organised by MNRE, MoM, MoP, CEEW, and Asian Development Bank, Gandhinagar, 3 April 2023.



CEEW's **ARJUN DUTT** at the G20 Sustainable Finance Working Group side event on climate finance, organised by IIM Shillong, Ministry of Finance (MoF) and North Eastern Council (NEC), Shillong, 4 February 2023.



CEEW's **TULIKA GUPTA**, **SAIBA GUPTA**, and **NITIN BASSI**, were a part of the official delegation of MoJS, GoI, at the second G20 Environment and Climate Sustainability Working Group Meeting, Gandhinagar, 27-29 March 2023.

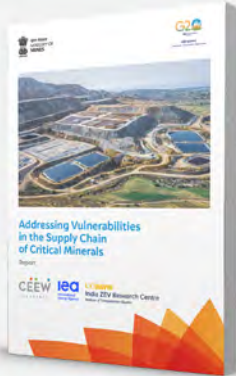


CEEW team at the G20 Energy Transitions Working Group side event, *Diversifying Renewables & Critical Minerals Supply Chains to Advance Energy Transition*, co-organised by MNRE, MoM, MoP, CEEW, and Asian Development Bank, Gandhinagar, 3 April 2023.

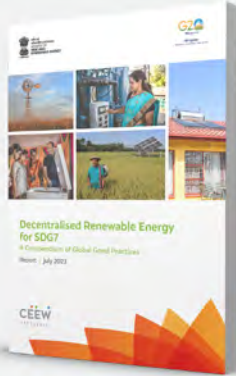
Some Key G20 Knowledge Products



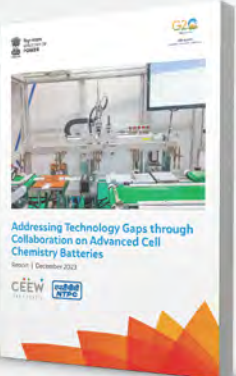
Developing Resilient Renewable Energy Supply Chains for Global Clean Energy Transition
Report | April 2023



Addressing Vulnerabilities in the Supply Chain of Critical Minerals
Report | April 2023



Decentralised Renewable Energy for SDG7: A Compendium of Global Good Practices
Report | July 2023



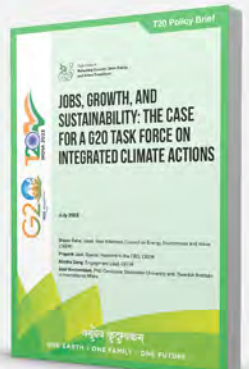
Addressing Technology Gaps through Collaboration on Advanced Cell Chemistry Batteries
Report | December 2023



G20 Compendium on Best Practices for Water Management
Report | July 2023



Millet Mantra: The Culinary Centrepiece of India's G20 Presidency
Coffee Table Book | November 2023

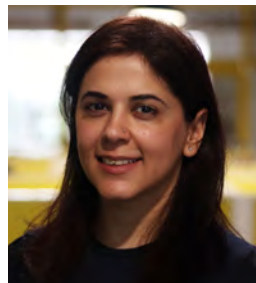


Jobs, Growth, and Sustainability: The Case for a G20 Task Force on Integrated Climate Actions
Policy Brief | July 2023

#CEEWPride



CEEW's **ARUNABHA GHOSH** was appointed Co-Chair of the T20 Task Force 4 on Refuelling Growth: Clean Energy and Green Transitions, January 2022.



CEEW's **SHIKHA BHASIN** was appointed Co-Chair of the T20 Task Force 5 on Purpose & Performance: Reassessing the Global Financial Order, January 2022.



CEEW's **RISHABH JAIN**, was part of the official delegation of MoM during the fourth G20 Energy Transitions Working Group meeting, Goa, 20 July 2023.



CEEW's **NITIN BASSI** was nominated as a member of the U20 Task Force for developing the white paper, *Ensuring Water Security*, March 2023.



{ OVER THE HORIZON }

Arunabha Ghosh



For India's G20 presidency, three priorities, five pillars

India has assumed the G20 presidency at a time of peril and promise. The world faces many crises — food, fuel, finance, and a continuing fever (the pandemic) — compounded by the climate crisis. At the half-way mark of the Sustainable Development Goals (SDGs), many targets are out of reach with development metrics sliding back. Planetary boundaries are being breached, carbon space is shrinking, fiscal resources are stretched, and currency reserves dwindling. As the world's fastest growing major economy, with the intention of being the voice of the Global South, India is well positioned to leverage its G20 presidency to demonstrate that a different pathway is possible.

The first priority is to organise a non-crisis summit. Since 2019, G20 summits have been plagued with crises, whether the Covid-19 pandemic or the Russia-Ukraine conflict. The G20 was forged in crisis in 1999, in response to the Asian financial crisis. For it to play a vital role in coordinating responses to global crises, deeper political understanding and economic cooperation are needed. Creating that constructive atmosphere of partnership is paramount for India's presidency to succeed. The theme — One Earth, One Family, One Future — is not just reminiscent of India's ancient cultural ethos of *Vasudhaiva Kutumbakam* (the world is one family), but also a callout for a vision for the future. As Prime Minister (PM) Narendra Modi has written, the objective is to deliver a presidency of "healing, harmony and hope".

The second priority should be that the two pillars of the G20 — finance and Sherpa tracks — cohere and complement each other. Over the years, the agenda has expanded vastly, to include trade, energy, the climate crisis, sustainable development, health, agriculture, and anti-corruption. Embedded within are numerous sub-themes, from ecosystem preservation, land restoration, ocean-based action and marine litter, to food security, fishing and nutrition, to infrastructure, innovation, supply chains, inclusive business, and green finance. For each issue, outcomes can have low, medium or high impact, from calls for further study and sharing of good practices at one end, to agreeing on high-level principles or launching targeted initiatives at the other.

Managing such a volume of issues and expectations will be challenging at the very least. To leave a legacy of action, focus and coordination will be essential. India's presidency must aim for outcomes that are high priorities for all, the delivery of which will depend on how sectoral ambitions and financial innovations cohere.

Therefore, the third priority is for the G20 to be "ambitious, action-oriented and decisive" in the PM's words. It must design rules, initiatives and platforms that can trigger action with requisite resources. There is a need for an alternative development pathway, which allows countries to provide for minimum needs, industrialise with the latest technologies, create opportunities for decent livelihoods, raise living standards, and become more energy secure and financially resilient. The quest is for jobs, growth and sustainability.

For this, the G20 must drive reform in multilateral institutions, so that they are more responsive to changed economic and environmental circumstances.

Against these priorities, India should aim high for a package deal on green development. Such a pact would tie together outcomes from various working groups, respond to members' priorities, showcase innovations in inclusive and sustainable development in India, and allow India to be a voice of the Global South and a bridge to the Global North. As a leaders' initiative, it could deliver concrete outcomes centred around five pillars.

First, sustainable lifestyles. India's Mission LiFE (Lifestyle for Environment) forces an honest assessment of our individual and collective footprints. Technology cannot fix excessive greed. G20 members can agree on how to nudge individual behaviour and how to enable markets to deliver more sustainable products and services. By making resource efficiency a driver of new business models, G20 could create conditions for circular economy unicorns to emerge and flourish.

Second, trillions for the billions. The sustainability transition for billions of people in the Global South is capital-intensive. The cost of finance is the biggest bottleneck to unlocking trillions in private investment. The G20 can create a truly global platform to de-risk private investment and align financial regulation to trigger substantial new investment in sustainable infrastructure in developing countries.

Third, fuels of the future. At a time of growing energy insecurity, India can demonstrate far-thinking statesmanship to avoid energy crises in the future over emerging critical energy fuels and technologies. These could include, for instance, rules to govern a global green hydrogen economy; or an initiative on technology co-development to catalyse and democratise access to clean energy technologies.

Fourth, action agenda 2030. A G20 action plan on accelerating progress on SDGs must identify ways to make more resources available, especially to target SDGs that have the broadest human development benefits and underserved geographies and sectors. Equally, a global resilience reserve fund can protect the most vulnerable by providing an insurance cushion when economies are impacted by compounding shocks.

Fifth, data for development. India has a remarkable record of using advances in digital technology for development purposes. A G20 initiative to leverage data for development could expand financial inclusion, scale up access to health and education services, target subsidies better, and enable more effective monitoring and preservation of natural resources.

Together, these pillars hold up a grand bargain that delivers positive outcomes for all, including those not formally at the G20 table. The G20 can be a wish list, but India's presidency can grant a few key wishes.

Dr Arunabha Ghosh is CEO, Council on Energy, Environment and Water. CEEW is a knowledge/strategic partner to several ministries for India's G20 presidency. The views expressed are personal.



DD Dialogue
G20: For Sustainable Future

The G20 could get the world to raise its bar for energy efficiency

India should go beyond leading by example to achieve three concrete outcomes for climate action



SHALVA AGRAWAL
DHRUV AGGARWAL

are, respectively, a senior programme lead and a programme associate at the Council on Energy, Environment and Water (CEEW).

The year 2023 has been a year of hope and despair. A severe slowdown in global economic activity combined with high inflation has pushed many sections of the population into a cost of living crisis. The Russia-Ukraine conflict, the hovering shadow of the Covid pandemic, and climate shocks have all contributed to the ongoing economic crisis. In India, retail inflation has been above the Reserve Bank of India's tolerance limit of 6% for most of 2022, fuelled by high food and fuel prices. Against this backdrop, India can leverage its G20 presidency, assumed on 1 December, to realise ambitions and

track record on energy conservation and efficiency. The country already has a well-functioning standards and labelling programme, has managed to transform its lighting market through the Ujala scheme, and is the first nation with a comprehensive national cooling action plan. In August, the country submitted its enhanced ambitions for climate action, including the reduction of its GDP's emissions intensity by 45% by 2030 over 2005 levels, up from the previous commitment of 35%. On 12 December, Indian Parliament passed the Energy Conservation (Amendment) Bill, 2022, strengthening the country's legal framework to enable carbon markets and nudge consumers on reducing energy and carbon footprint.

Besides leading by example, what can India do to raise the bar on energy efficiency? As we step into 2023, here's a wish list of three concrete outcomes for energy supply situations. Noting the importance of sustainable lifestyles in the G20 '23 decision text was a clear endorsement of its importance by all parties to the UN Framework Convention on Climate Change. Using India's Mission LiFE as a platform, the G20 must seek to reshape social norms around energy conservation, mobility,

2030 to realise the global 2050 net-zero goal as per the World Energy Outlook 2022. This is higher than the growth in investments required in any other clean energy vertical. India must focus on forging a partnership to mobilise capital flows at scale to enhance energy efficiency in critical demand sectors, specially buildings and industrial facilities that are capital intensive and have a large potential for technical lock-in.

Third, leverage Mission LiFE to inspire global action on responsible energy consumption. The year 2022 saw power utilities in California asking consumers to curtail electricity consumption to avoid grid failures. Japan and some EU members continue to ask consumers to conserve energy as peak winter approaches. Stalling consumer behaviour has clearly emerged as one of the primary levers to manage a fledgling energy supply situation. Noting the importance of sustainable lifestyles in the G20 '23 decision text was a clear endorsement of its importance by all parties to the UN Framework Convention on Climate Change. Using India's Mission LiFE as a platform, the G20 must seek to reshape social norms around energy conservation, mobility,

India must shape the climate action agenda

This year was marked by climate paradoxes, ranging from fuel price phase-out and famine to the role of China. In 2023, India must use its G20 status to effect change.

The first priority is to ensure that a country's environmental and climate credentials are not just a marketing exercise but a reality. India's reputation for being a global climate leader and shaper of the emerging world is at stake. It is not a hidden fact that China is using its energy power to leverage geopolitical mileage. China has made and continues to make large investments in sustainable projects abroad, especially through the Belt and Road Initiative. For geopolitical reasons, China has been a net exporter of clean energy. India's reputation for being a global climate leader and shaper of the emerging world is at stake. It is not a hidden fact that China is using its energy power to leverage geopolitical mileage. China has made and continues to make large investments in sustainable projects abroad, especially through the Belt and Road Initiative. For geopolitical reasons, China has been a net exporter of clean energy.

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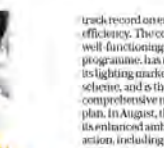
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This year was marked by climate paradoxes, ranging from fuel price phase-out and famine to the role of China. In 2023, India must use its G20 status to effect change.

The first priority is to ensure that a country's environmental and climate credentials are not just a marketing exercise but a reality. India's reputation for being a global climate leader and shaper of the emerging world is at stake. It is not a hidden fact that China is using its energy power to leverage geopolitical mileage. China has made and continues to make large investments in sustainable projects abroad, especially through the Belt and Road Initiative. For geopolitical reasons, China has been a net exporter of clean energy. India's reputation for being a global climate leader and shaper of the emerging world is at stake. It is not a hidden fact that China is using its energy power to leverage geopolitical mileage. China has made and continues to make large investments in sustainable projects abroad, especially through the Belt and Road Initiative. For geopolitical reasons, China has been a net exporter of clean energy.

Second, trillions for the billions. The sustainability transition for billions of people in the Global South is capital-intensive. The cost of finance is the biggest bottleneck to unlocking trillions in private investment. The G20 can create a truly global platform to de-risk private investment and align financial regulation to trigger substantial new investment in sustainable infrastructure in developing countries.

Third, fuels of the future. At a time of growing energy insecurity, India can demonstrate far-thinking statesmanship to avoid energy crises in the future over emerging critical energy fuels and technologies. These could include, for instance, rules to govern a global green hydrogen economy; or an initiative on technology co-development to catalyse and democratise access to clean energy technologies.

Fourth, action agenda 2030. A G20 action plan on accelerating progress on SDGs must identify ways to make more resources available, especially to target SDGs that have the broadest human development benefits and underserved geographies and sectors. Equally, a global resilience reserve fund can protect the most vulnerable by providing an insurance cushion when economies are impacted by compounding shocks.

Fifth, data for development. India has a remarkable record of using advances in digital technology for development purposes. A G20 initiative to leverage data for development could expand financial inclusion, scale up access to health and education services, target subsidies better, and enable more effective monitoring and preservation of natural resources.

Together, these pillars hold up a grand bargain that delivers positive outcomes for all, including those not formally at the G20 table. The G20 can be a wish list, but India's presidency can grant a few key wishes.

Dr Arunabha Ghosh is CEO, Council on Energy, Environment and Water. CEEW is a knowledge/strategic partner to several ministries for India's G20 presidency. The views expressed are personal.

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Moving the Needle Nationally



Image: Atul LokeParose

Championing Sustainable Livelihoods

CEEW and Villgro Innovations Foundation's Powering Livelihoods (PL) initiative organised the national summit, *Powering Sustainable Livelihoods*, in May 2023. It brought together 400+ stakeholders — from clean tech enterprises, financiers, investors, policymakers, to state government officials and technology users — to showcase the potential of India's decentralised renewable energy (DRE) sector across lives and livelihoods.

Minister **R. K. SINGH** (C) with CEEW's **ABHISHEK JAIN** (L) and **ARUNABHA GHOSH** (R) at the DRE technologies exhibition, at CEEW-Villgro national summit, *Powering Sustainable Livelihoods*, 17 May 2023.



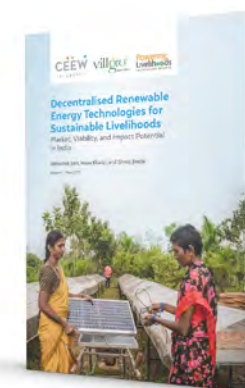
Image: CEEW

~19,700
livelihoods enabled using clean
energy-powered appliances

~12,500
new clean energy-based
livelihood installations
supported

69%
women end-users

Source: CEEW- Villgro analysis
as of May 2023



Decentralised Renewable Energy
Technologies for Sustainable
Livelihoods: Market, Viability, and
Impact Potential in India
Report | May 2023

“We'll be making decentralised renewable energy equipment affordable. CEEW's conclave is very timely and we will consult you when we are tailoring our scheme to maximise assistance to beneficiaries.”

R. K. SINGH

Minister of Power and New and Renewable
Energy, GoI, at the national summit, 17 May
2023.



Images: CEEW

“Along with growing my enterprise of juices and jams, as a demo champion of energy-efficient horticulture processing machines, I am supplementing my income and also reaching new geographies, thanks to the Powering Livelihoods programme.”

NEETU TANDON
A micro-entrepreneur from Agra.



The CEEW authored *G20 Compendium on Distributed Renewable Energy (DRE) for SDG7* was launched at the Energy Transitions Working Group side event, *Role of Decentralised Renewable Energy for Achieving SDG 7*, organised by CEEW and MNRE, Goa, 20 July 2023.

Shaping the Future of Mobility

CEEW's Centre for Energy Finance (CEEW-CEF) organised a national dialogue, *Emerging Trends in E-Mobility*, in March 2023. The dialogue reflected on the trajectory that electric mobility in India is expected to take over the next few decades, with policymakers, investors and industry stakeholders such as original equipment manufacturers (OEMs) and charge point operators (CPOs) participating.

AMITABH KANT, India's G20 Sherpa, GoI, with CEEW's **ARUNABHA GHOSH** (L) and **APOORV MINOCHA** (R) viewing the CEEW-CEF Electric Mobility Dashboard at the CEEW-CEF national dialogue, *Emerging Trends in E-Mobility*, in New Delhi, 6 March 2023.



Images: CEEW



CEEW-CEF's **GAGAN SIDHU** at the national dialogue, 20 March 2023.

2x market growth in states with electric vehicle (EV) policies incorporating consumer incentives, compared to states without such incentives

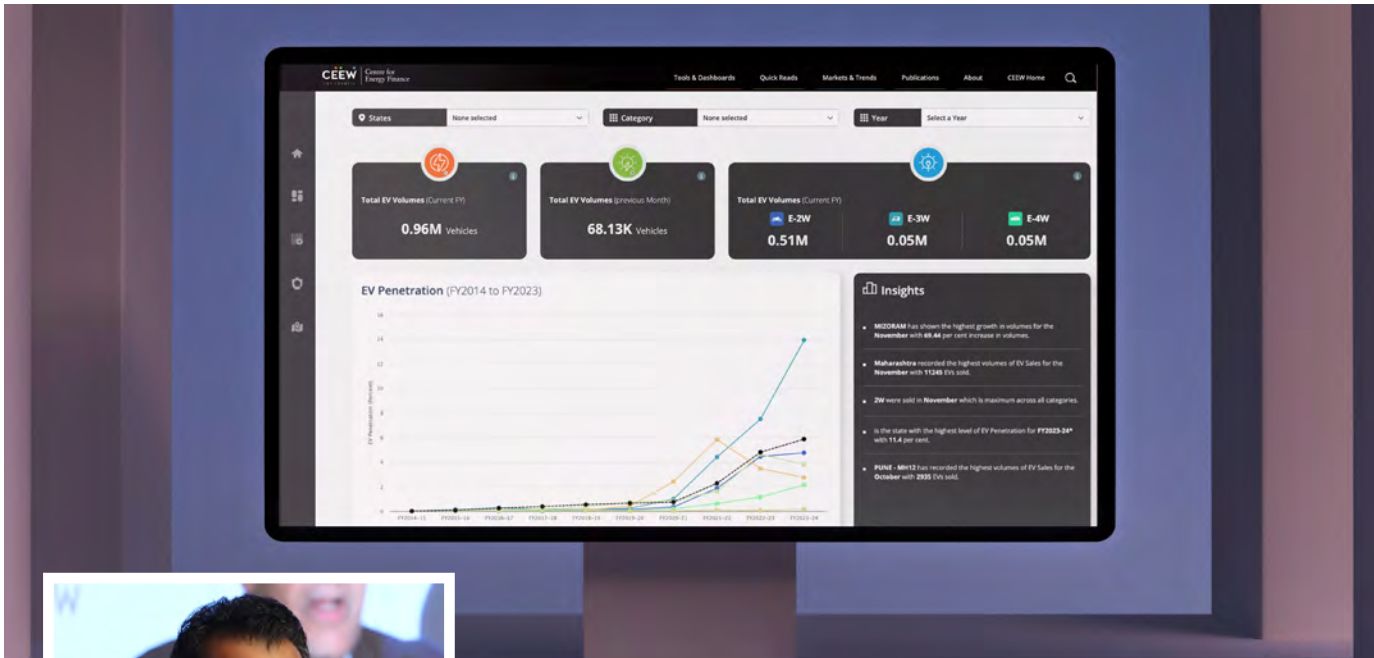
~20x growth in EV sales volumes registered in Assam, Goa and Gujarat in the first six-month period after the notification of their incentive policies

Source: CEEW-CEF analysis



Greening India's Automotive Sector: EV Policies, Categories and Subnational Trends
March 2023 | Issue Brief

CEEW-CEF's Electric Mobility Dashboard updates EV volumes at the national, state and RTO levels on a fortnightly basis. It does this across seven EV categories while allowing users to apply multiple filters and view alternative perspectives on India's electric mobility transition. The dashboard also includes a comprehensive comparison of state-level consumer policies that incentivise the purchase of electric vehicles and an EV penetration heatmap for states and RTOs.



“I congratulate CEEW for its path-breaking e-mobility dashboard that will encourage healthy competition between states.”

AMITABH KANT

India's G20 Sherpa, Gol, at the national dialogue, 6 March 2023.

CEEW was appointed as a knowledge partner by the Ministry of Housing and Urban Affairs for its flagship event, the *Urban Mobility India Conference*, held in Kochi on 4-6 November, 2022. We organised a roundtable, *Integrating Urban and Transport Planning as a Statutory Process (Discussion on Low-Emission Zone)*, and presented our research on the potential impacts of sectoral contributions to GHG emissions.



CEEW's **HIMANI JAIN** with **DR O.P. AGGARWAL**, former Officer Special Duty (Urban Transport), Ministry of Housing & Urban Affairs (MoHUA) and former Director General, Institute of Urban Transport, Gol, at the CEEW roundtable, *Integrating Urban and Transport Planning as a Statutory Process (Discussion on Low-Emission Zone)*, 5 November 2022.

Images: CEEW

Innovating Solutions for Cleaner Air and Better Health

CEEW and the U.S. Agency for International Development (USAID) hosted the national dialogue on *Cleaner Air and Better Health: Innovating Pathways to Scaling Solutions*, on 31 August 2023. It brought together key stakeholders from government bodies, media, academia, industry, and civil society organisations to deliberate on the multiple approaches to mainstream evidence, successes and technology to improve air quality at scale with a focus on mitigating health impacts.

Ideator Fellowship students with key speakers and panellists from the CABH project consortium at the CEEW-USAID national dialogue, *Cleaner Air and Better Health: Innovating Pathways to Scaling Solutions*, New Delhi, 31 August 2023.



Images: CEEW



“In India, USAID's Cleaner Air and Better Health initiative is strengthening pollution mitigation, with a focus on proven models that reduce pollution and improve community health. It is also engaging local communities and addressing the needs of the most vulnerable.”

VEENA REDDY

Mission Director for India and Nepal, USAID, at the national dialogue, 31 August 2023.

The CABH project supported by USAID aims to strengthen air pollution mitigation and reduce exposure to air pollution in India by establishing evidence-based approaches for better air quality management. The project is being implemented by a consortium led by CEEW and includes ASAR Social Impact Advisors, Environmental Design Solutions, Enviro-Legal Defence Firm, and Vital Strategies.

CLEANER AIR & BETTER HEALTH PROJECT



Image: Shawn Sebastian/CEEW

At the event, we showcased prototypes of clean air solutions and interventions developed through USAID's Cleaner Air and Better Health project. Some of the innovations featured included battery-powered wearable heating solutions, a natural-gas furnace for manufacturing handicrafts, electric crop residue management machines, a green hydrogen cookstove, and other technology solutions developed as part of the CABH Ideator Fellowship.



Images: CEEW

The CABH Ideator Fellowship for school students began in 2022 as an effort to spark innovation and entrepreneurial spirit in unconventional problem areas surrounding air pollution. Out of 1,000 applications, students and teachers from five schools across the country were chosen for the Fellowship — Lilawati School (Delhi), Birla Shishu Vihar, Pilani (Rajasthan), Aiswarya Public School, Kollam (Kerala), Sri Vyasa Maharshi Vidya Peetha Kilpady (Karnataka), and Sunbeam School, Mau (Uttar Pradesh). They developed innovative solutions ranging from sustainable packaging made out of areca leaves for food delivery, a first-of-its-kind cost-effective solution to improve air quality in small factories, to a comprehensive kit to standardise waste management as part of the Fellowship.

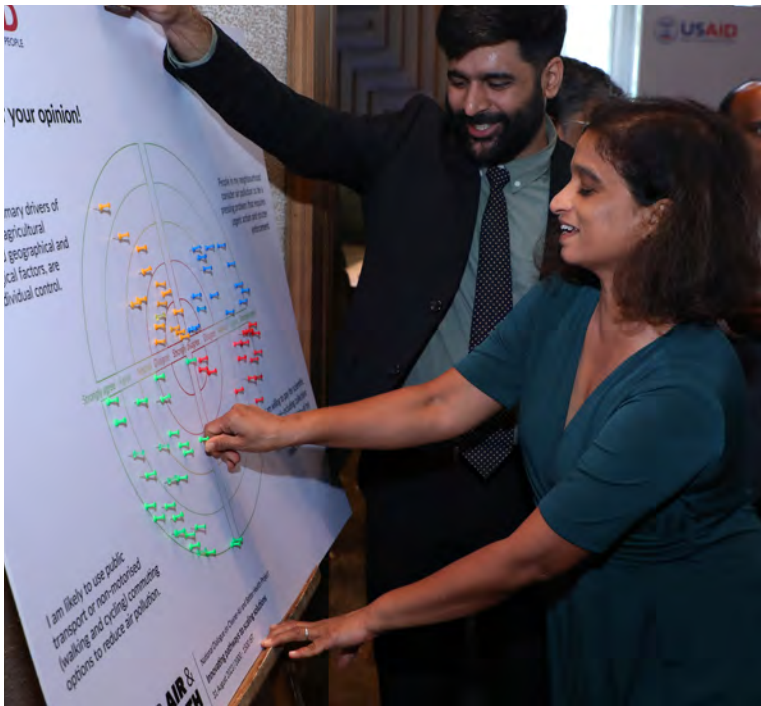


Images: CEEW



#CEEWPrize

CEEW has collaborated with Signature Global (India) Ltd to improve adoption of clean construction practices by strengthening self-regulation at construction sites. **Our pilot site will demonstrate how on-site pollution monitoring and systematic behaviour interventions can strengthen compliance with construction dust mitigation measures, thereby, reducing pollution from construction sites.**



Making the Power Sector Transition Consumer-centric

CEEW, in collaboration with IntelliSmart Infrastructure and Bloomberg Philanthropies, organised a national dialogue, *Smart-metered India for a Digitalised & People-centric Power Sector*, in March 2023. It convened policymakers, industry experts, scholars, and civil society members to reflect on the challenges and opportunities in India’s smart metering transition and deliberate on approaches to make this transition consumer-centric.

R. K. SINGH, Minister of Power and New and Renewable Energy, GoI with CEEW’s **ARUNABHA GHOSH**, at the CEEW-IntelliSmart Infrastructure-Bloomberg Philanthropies national dialogue, *Smart-metered India for a Digitalised & People-centric Power Sector*, New Delhi, 20 March 2023.



Images: CEEW



CEEW’s **SHALU AGARWAL** at the national dialogue, 20 March 2023.

92%
Smart meter consumers surveyed reported a smooth installation experience

~60%
Smart meter users were satisfied with their billing and payment

Source: CEEW analysis



Enabling a Consumer-centric Smart Metering Transition in India: Insights from a Survey of Six States
Report | March 2023

Strengthening India’s Disaster Preparedness

CEEW organised an expert dialogue, *How can Technology Help Strengthen India’s Disaster Preparedness?* in July 2023. It brought together the National Disaster Management Authority (NDMA), the India Meteorological Department (IMD), State Disaster Management Authorities (SDMAs), meteorological agencies, and private sector stakeholders to discuss and encourage accurate and timely warnings to vulnerable communities to improve impact-based forecasting and end-to-end information dissemination.

RAJENDRA RATNOO, Executive Director, National Institute of Disaster Management (2nd from left); **MEEKHA HANNAH PAUL**, Senior Adviser, GIZ India; **DR UMAMAHESHWARAN RAJASEKAR**, Adviser – Urban Resilience, Coalition for Disaster Resilient Infrastructure; with CEEW’s **VAIBHAV CHATURVEDI** (left) at the CEEW dialogue, *How can Technology Help Strengthen India’s Disaster Preparedness?* in New Delhi, 13 July 2023.



“CEEW’s detailed analysis of current climatic occurrences are helping the SDMA create district-level planning for Maharashtra. This is helping urban and district managements make resilience plans.”

SUJATA SAUNIK
Additional Secretary, Department of Home Affairs, GoM, at the expert dialogue, 13 July 2023.

100%
of India’s population exposed to cyclones has access to cyclone warnings

25%
of Indian districts exposed to extreme flood events have flood forecasting stations

Source: CEEW analysis



Strengthening India’s Disaster Preparedness with Technology: A Case for Effective Early Warning Systems
Report | July 2023

Decoding the Global Stocktake for India

CEEW, in collaboration with the Indian Institute of Management Ahmedabad (IIMA) and Institute for Sustainable Development and International Relations (IDDRI), organised a series of workshops in the run-up to the 28th Conference of Parties (COP28), to explore the global stocktake (GST) process, opportunities and challenges, and the key recommendations for the GST output. Additionally, the workshops also provided recommendations on operationalising equity within the GST and how finance could play a role in bridging the existing inequity gap.



RICHA SHARMA, then Additional Secretary, MoEFCC, GoI and **MAJID AL NEKHAILAWI**, Deputy Chief Of Mission, UAE Embassy, New Delhi, at the CEEW-IDDRI-IIMA workshop, *What does the Global Stocktake (GST) Mean for India?* New Delhi, 16 March 2023.

Developing R&D Roadmap for Green Hydrogen in India

CEEW was appointed as a technical advisor to the MNRE’s drafting committee for the interministerial report on accelerating R&D related to green hydrogen in India. We also led the sub-committee on hydrogen transportation.



CEEW was represented by **DEEPAK YADAV**, **ANKUR RAWAL**, and **PRATHEEK SRIPATHY** at the convenings of the sub-committee on the R&D roadmap for hydrogen transportation.

Building Policy Coherence in Food, Land, and Water

CEEW, in collaboration with the International Water Management Institute (IWMI) and Consultative Group on International Agricultural Research (CGIAR), organised a national stakeholders’ workshop, Policy Coherence in Food, Land, and Water, to map coherence in existing government instruments, share research findings and disseminate recommendations to strengthen the food, land and water ecosystem.

DEBASHREE MUKHERJEE, then Special Secretary, MoJS, received a copy of the CEEW coffee-table book, *Ripples: India’s Sustainable Water Management Story* by CEEW’s **NITIN BASSI** (C) at the CEEW-IWMI-CGIAR national stakeholder workshop, Policy Coherence in Food, Land, and Water, New Delhi, 16 June 2023.



CEEW’s **APOORVE KHANDEWAL**, and **VISHWAS CHITALE** at the national stakeholders’ workshop, 16 June 2023.

“I congratulate CEEW for building an understanding of the policy coherence on food, land, and water. The water sector must cooperate with various ministries, stakeholders, and organisations to prepare for adverse weather events caused by climate change.”

DEBASHREE MUKHERJEE then Special Secretary, MoJS, at the national stakeholders’ workshop, 16 June 2023.

Demystifying Carbon Markets for India's Net-zero Transition

CEEW launched the 'Forum on Carbon Pricing in India' in February 2023 to discuss mechanisms for carbon pricing and their economic impact on India. The forum aims to promote awareness of carbon pricing among critical stakeholders by initiating dialogues to drive consensus and identify optimal pricing mechanisms.



Images: CEEW

SANJEEV SANYAL, Member, Economic Advisory Council to the Prime Minister of India, and Secretary to the Gol, and **ALISTAIR RITCHIE**, Director - Asia-Pacific Sustainability, Asia Society Policy Institute (ASPI), at the CEEW carbon forum launch event, *Carbon Pricing: Enabling the Net-Zero Transition*, New Delhi, 20 February 2023.



CEEW's **NAVEEN BALI**, **VAIBHAV CHATURVEDI**, and **KARTHIK GANESAN** at the forum launch event, New Delhi, 20 February 2023.

CEEW, in collaboration with ASPI, Indian Institute of Management, Ahmedabad (IIMA), Indian Institute of Technology Bombay (IITB), Ahmedabad University, and International Emissions Trading Association (IETA) organised a first-of-its-kind workshop for Emissions Trading Systems (ETS) in three Indian cities Delhi, Mumbai and Ahmedabad, in February 2023. The workshops were organised as capacity-building initiatives for stakeholders and were attended by 200+ participants from industry, academia, civil society organisations and the government.



Image: CEEW

CEEW's **AMAN MALIK** (C) with participants at the CEEW-ASPI-IIMA-IITB-IETA-Ahmedabad University workshop, *ETS Simulation Workshop on Indian Carbon Market*, in Mumbai, 17 February 2023.

Driving Change in the States



A survey enumerator recording a consumer's perception about smart meters, Indore, 13 February 2022.

Image: CEEW

Assessing Natural Farming Practices in Andhra Pradesh

CEEW, in collaboration with the Climate Policy Lab (CPL) at the Fletcher School, Tufts University, Woodwell Climate Research Centre (WCRC), and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), is undertaking a first-of-its-kind longitudinal impact assessment of natural farming, using a randomised control trial covering over 4,600 farming households in Andhra Pradesh, to collect evidence on the effectiveness of natural farming.

CEEW's **SATHESKUMAR KANAGARAJ** and **MADHUMITHA SRINIVASAN** (3rd and 4th from right) with groundnut farmers for a crop-cutting experiment to estimate yield in Bhattuvanipalli village, Ananthapuramu district, Andhra Pradesh, 19 October 2022.



Image: CEEW

Making Bihar Climate Resilient

CEEW, as a member of a UNEP-led consortium, has been working in Bihar for the last two years to prepare its long-term climate resilience and decarbonisation strategy. Leading on mitigation efforts, our research and engagements with state ministries, line departments, industry associations, academia and other stakeholders informed decarbonisation strategies and recommendations across sectors. Other members of the consortium include World Resources Institute (WRI), Research Triangle Institute (RTI), International Council for Local Environmental Initiatives (ICLEI), Confederation of Indian Industry (CII), and Development Alternatives (DA).



AMIR SUBHANI (5th from right, standing), Chief Secretary, Government of Bihar with **CEEW team** and consortium members, 24 May 2023.

Image: WRI

Tackling Air Pollution Hotspots in Delhi

CEEW is working with the Department of Environment, Government of the National Capital Territory of Delhi (GNCTD), as a technical knowledge partner to manage air pollution hotspots in Delhi. We conducted capacity building trainings through conceptual and on-field visits, provided technical support to develop prioritisation parameters, and created a decision support system for dispersed sources of air pollution.



Images: CEEW



CEEW's **PRIYANKA SINGH** (C) conducting an on-field training session to map and monitor hyperlocal dispersed air pollution sources for the Green War Room team of the Department of Environment, Delhi, 16 August 2023.

"CEEW's data insights on solving Delhi's pollution woes have become highly useful for the Delhi Pollution Control Committee (DPCC). DPCC will continue to look at CEEW's recommendations to help Delhi breathe better in the coming years."

DR K.S. JAYACHANDRAN
Member Secretary, DPCC, GNCTD

Supporting Power Sector Reforms in Haryana

CEEW conducted a telephonic survey of 1,600 domestic consumers in high-loss feeders of Sonapat, Panipat, Jhajjar and Rohtak — high-loss circles of the Uttar Haryana Bijli Vitran Nigam Limited (UHBVN) — to understand consumer perceptions around electricity services and identify factors to improve bill delivery and collection efficiency. Our research aims to capture UHBVN's best practices and strategies that helped it become a financially healthy power discom.

Building Capacity for Air Quality Management in Himachal Pradesh



Key speakers and participants with CEEW's **SANJEEV K. KANCHAN** (1st row, centre) at the CEEW-HPSPCB training, *Capacity Building Programme on CEMS and CEQMS*, in Baddi, 21 December 2022.

CEEW, in collaboration with the Himachal Pradesh State Pollution Control Board (HPSPCB), organised a two-day training, *Capacity Building Programme on CEMS and CEQMS*, in Baddi, in December 2022. The training included technical sessions and industry visits for HSPCB officials and industry stakeholders.

Implementing Jharkhand's Solar Policy

CEEW has been appointed as an implementation partner by the Jharkhand Renewable Energy Development Agency (JREDA) to support in preparing guidelines and standard operating procedures for the implementation of solar projects in the state. We are helping with the formulation of schemes, such as on solar villages and DRE for livelihoods, building capacity of government officials, and supporting discoms and regulators in carrying out reforms, as well as leading the consortium of think tanks supporting JREDA.



CEEW's **BHAWNA TYAGI** (R) discussing potential benefits of the Solar Village scheme with a group of women in Bharniya village, West Singhbhum district, 30 May 2023.

Images: CEEW

Making Livelihoods Sustainable in Kerala

CEEW conducted a study in the fishing villages of Chellanam and Puthuvypin, Kochi, to understand the various challenges impacting the livelihoods of fisherfolk. Using insights from focus-group discussions and secondary literature, we classified the challenges under a sustainable livelihood framework and explored the potential of solar-assisted e-boats as a solution to improve the livelihoods of the fishing community.

60%
lower total cost of ownership for solar-assisted e-boats than petrol-operated boats.

25%
lower vibration and sound pollution by e-boats than conventional vessels

Source: CEEW analysis



CEEW's HIMANI JAIN, ARPAN PATRA, and ANAND R.M. in conversation with a fisherman to understand their perceptions about e-boats, Alappuzha, 7 November 2022.

Strengthening Maharashtra's Climate Resilience Plans



CEEW team with residents of Pimpalner village, Bhiwandi, Thane district, 10 August 2023.

CEEW is supporting the Government of Maharashtra in revising its *State Action Plan on Climate Change* through granular vulnerability assessments and enhanced mitigation and adaptation targets. We also provided technical support to develop adaptation strategies for various sectors and proposed the required climate finance for such strategies. For the Thane Municipal Corporation we are supporting the preparation of its action plan for heat waves, urban flooding, and clean air.

CEEW has also collaborated with the Mangrove Cell of Maharashtra to pilot a framework on estimating the economic benefits of investing in Nature-based Solutions (NbS) in India. The project aims to highlight the immense potential of NbS in mitigating environmental challenges and enhancing ecological sustainability.

Improving Quality of Life in Punjab

CEEW is working with Amritsar Smart City Limited (ASCL) to accelerate the adoption of electric autos under the *Rejuvenation of Autorickshaws in Amritsar through Holistic Interventions (RAAHI)* scheme. We are developing scalable behaviour change solutions to nudge diesel three-wheeler (3W) drivers to switch to EVs and making this transition gender-inclusive by proposing actionable policy initiatives.

CEEW's CHRIS TERESA, ARAVIND HARIKUMAR, and NILANSHU GHOSH (R) at a focus group discussion with diesel auto drivers to understand their perceptions on transitioning to e-autos, in Amritsar, 28 February 2023.



CEEW's VANDANA VIDHANI and CHRIS TERESA (R) conducted a focus-group discussion with women interested in being electric 3W drivers to understand their concerns and motivations, 19 April 2023.

CEEW is working with the Department of Water Resources, Government of Punjab (GoP), as a knowledge partner to provide technical support to strengthen Punjab's *Integrated State Water Plan*. We are reviewing the crop diversification and irrigation efficiency plan, developing a district-level water risk index and providing suggestions to improve Punjab's score on Niti Aayog's Composite Water Management Index 2019.



Image: Instagram/@harjotsinghbains

“To help form the micro-level implementation plans (for identified recommendations included under the draft Integrated State Water Plan), CEEW has been engaged as a knowledge partner to facilitate the preparation of plans that considers crop suitability, technique feasibility, and socio-economic factors of the state.”

HARJOT SINGH BAINS
then Water Resource Minister, GoP, during the Punjab legislative assembly, 27 December 2022.



CEEW is providing technical support to the municipal corporations of Amritsar and Ludhiana on the implementation of their clean air action plans. We are developing strategies to strengthen the management of biomass including municipal solid waste in Amritsar and Ludhiana, and crop residue across villages in the state. We are also conducting capacity-building workshops for city authorities and other government stakeholders to deal with the implementation of air quality measures. Further, CEEW is working with the Clean Air Punjab collective in the state to strategise air pollution mitigation measures such as tackling construction and demolition dust.

CEEW's **ADEEL KHAN** (C) and **PRIYANKA SINGH** (C), discussing solid waste accounting at the transfer station in Zone D, Ludhiana, 12 April 2023.

Charting Rajasthan's Transition Roadmap

CEEW was engaged by the Chief Minister's Rajasthan Economic Transformation Advisory Council (CMRETAC) to develop the Rajasthan Clean Energy Transition Roadmap 2030. The roadmap will guide the state's near-term strategies for sectoral transition as well as help Rajasthan leverage its natural high renewable energy potential. The state is crucial for India's clean energy transition and ensuring universal access to clean, reliable and affordable energy.



CEEW team at the CEEW-CMRETAC roundtable, *Rajasthan Clean Energy Transition Roadmap 2030*, Jaipur, 28 July 2023.



Image: CEEW

CEEW also supported the Energy Department, Government of Rajasthan (GoR), in formulating the draft Rajasthan Energy Policy 2050. Our inputs, collected through consultations with 50+ government officials (from 15 state departments) and external experts, informed the state's objectives to scale up renewable energy capacity, green hydrogen, electric mobility, and energy efficiency interventions. The draft policy was released for public consultation in August 2023.

CEEW also engaged with CMRETAC to assess opportunities to recalibrate the institutional capacities of 14 government departments across agriculture, water, environment, and transport to improve the efficiency of the state's climate action plan. We also reached out to five other states in the country – Gujarat, Tamil Nadu, Maharashtra, Bihar, and Odisha — to contextualise their learnings for Rajasthan.

Further, CEEW provided critical inputs to the development of the Rajasthan Green Hydrogen Policy 2023. We helped refine the draft policy by analysing the sizing of solar plants for grid banking, water requirements and implications, impact on tax collection from green hydrogen production in the state, and other miscellaneous tasks. We are currently helping the state identify optimal locations for green hydrogen hubs.

CEEW team conducted stakeholder consultations to identify the gaps in Rajasthan's capacity to deliver climate action (mitigation, adaptation and resilience), Jaipur, 8 December 2022.



Images: ETGovernment.com

“CEEW has been instrumental in formulating *Rajasthan's draft Energy Policy 2050*. The analytical rigour provided by the sectoral teams, combined with modeling Rajasthan's economy-wise energy demand offered good insights required for preparing a robust long-term energy policy.”

BHASKAR A. SAWANT
Principal Secretary, Department of Energy, Government of Rajasthan in a letter to CEEW, 30 December 2022.

Informing Tamil Nadu's Long-term Sustainability Pathways

CEEW is a technical partner to the Tamil Nadu Chief Minister's Governing Council on Climate Change, advising the 'green energy pathways' sub-committee on building an official greenhouse gas (GHG) inventory — India's first official GHG inventory for any state — and drafting a long-term net-zero transition plan.

PHANINDRA REDDY (2nd from right), Additional Chief Secretary, Department of Transport, Government of Tamil Nadu, with **CEEW team** at a meeting with the transport department, Chennai, 18 August 2023.



Images: CEEW



CEEW is the implementation partner of Anna University for the *Tamil Nadu Chief Minister's Green Fellowship Programme* (CMGFP). CEEW has designed the Fellowship and facilitated several training sessions as part of the CMGFP induction programme. Currently, there are 40 Green Fellows working closely with 38 district collectors across Tamil Nadu.

DR R. VELRAJ (3rd from left), Vice Chancellor, Anna University; **Dr G. RAVIKUMAR**, Registrar, Anna University; and **PROF R. SARAVANAN**, Professor, Anna University with **CEEW team** at the MoU signing, 14 June 2023.

Supporting Uttar Pradesh's Sustainable Transformations

CEEW is supporting the Uttar Pradesh State Rural Livelihood Mission (UPSRLM) with its Vidyut Sakhi Initiative, which aims to create livelihood opportunities for rural women and improve discoms' revenue collection for a better power sector. We are providing programme monitoring and implementation support, with a focus on training vidyut sakhis. Further, Powering Livelihoods, a CEEW-Villgro initiate, is helping UPSRLM and Prerna Ojas, an entity promoted by UPSRLM, to mainstream distributed renewable energy (DRE) solutions for livelihoods to enhance rural incomes in Uttar Pradesh.

CEEW's **RASHI SINGH**, conducted a training session with *vidyut sakhis*, in Dostinagar village, Unnao, 23 May 2023. A similar workshop was conducted in Varanasi.



Images: CEEW

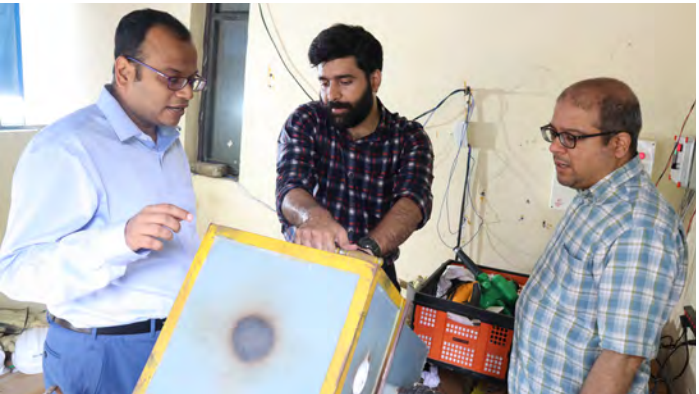


CEEW is also supporting the Directorate of Urban Transport (DUT), Government of Uttar Pradesh, to expand bus fleets, improve services and build robust technical capacity of special purpose vehicles. Our efforts include perception surveys of bus users and potential users, and bus stops infrastructure audit in Lucknow and Kanpur.

DR RAJENDER PENSIYA (2nd from left), Director, DUT; **A.K GUPTA**, Additional Director, DUT, and Additional Director, RCUES; and **T.K.S. VISEN**, former Joint Director, DUT, with **CEEW team** at the MoU signing, 16 March 2023.

CEEW has developed a first-of-its-kind furnace for small brass-smelting enterprises in Moradabad in collaboration with engineering innovators. It runs on piped natural gas instead of the traditional coal. We will test and evaluate its usability with a few brass-making enterprises and its ability to improve air quality in these clusters

CEEW's **DEEPAK YADAV**, **ANKUR RAWAL**, and **HEMANT MALLYA**, running tests on the natural gas furnace, Moradabad, 14 July 2023



Enabling Jobs, Growth and Sustainability Globally



Image: CEEW

CEEW@COP27

CEEW was an accredited observer at the 27th session of the Conference of Parties (COP27) to the UN Framework Convention on Climate Change (UNFCCC) in Sharm El Sheikh, Egypt. We presented our research and data on enabling a just energy transition, unlocking financing for loss and damage, strengthening climate accountability, co-developing technologies, decarbonising hard-to-abate sectors, making the global stocktake inclusive, and more.



Image: United Nations

ANTÓNIO GUTERRES (C), UN Secretary-General, with CEEW's **ARUNABHA GHOSH** (R) and other members of the United Nations' High-Level Expert Group (HLEG) on the Net-zero Emissions Commitments of Non-State Entities, at the launch of the HLEG report, *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions*, organised by the UN, Sharm El Sheikh, 8 November 2022.

- 25+**
knowledge engagements at COP27
including briefings, discussions,
roundtables and presentations
- 3**
studies authored for COP27
- 8**
RINGO briefings participated and
co-moderated



Image: CEEW

CEEW's **ARJUN DUTT**, at the India Pavillion side event, *Financing of Technologies to Enable the LiFE Movement in Developing Countries*, co-organised by MoEFCC and CEEW, Sharm El Sheikh, 9 November 2022.



CEEW's **SHIKHA BHASIN** (L) was a part of the RINGO steering committee and participated as well as co-moderated the briefings at COP27, Sharm El Sheikh, November 2022.



CEEW's **MILAN JACOB** (R), presented the *Faces of Climate Resilience*, an award-winning film series, at the event, *The First Global Stocktake Call for Poster Inputs and Information on Td1.2 Creative Space*, organised by the UNFCCC, Sharm El Sheikh, 11 November 2022.



CEEW's delegation @COP27 (L to R): **VAIBHAV CHATURVEDI**, **SUMIT PRASAD**, **TANUSHREE GANGULY**, **PALLAVI DAS**, **SHIKHA BHASIN**, and **ARUNABHA GHOSH** at COP27 in Sharm El Sheikh, 14 November 2022.

Images: CEEW

#CEEWPride



Image: Asia Game Changer Awards

CEEW's **ARUNABHA GHOSH** was honoured with the '2022 Asia Game Changer Award' by the Asia Society for his contributions to climate change and sustainability issues in India and across the world.



CEEW's **ARUNABHA GHOSH** was elected Vice-Chair of the UN Committee for Development Policy, February 2023.

CEEW's **SHUVA RAHA** was appointed a Fellow of the Global Solutions Initiative, a network of world-renowned think tanks that proposes policy responses to major global problems, addressed by the G20, G7 and other global governance fora, December 2022.



Our Common Air

CEEW, in partnership with Clean Air Fund (CAF), has co-convened Our Common Air (OCA), a global commission bringing together powerful voices to accelerate collective action on air pollution. The initiative brings together high-level global experts and is co-chaired by Rt Hon Helen Clark, Board Chair of Partnership for Maternal Newborn & Child Health and former Prime Minister of New Zealand, and UNDP Administrator, and Dr Soumya Swaminathan, former Chief Scientist at the World Health Organization and chair of the MS Swaminathan Research Foundation. The commission will explore pathways to improving the quality and quantity of finance from public, private and philanthropic sources; building an economic case for clean air; creation of a solutions network; and enable new mechanisms to track progress.

Co-Chairs

Rt Hon HELEN CLARK

Board Chair, Partnership for Maternal Newborn and Child Health (PMNCH), former Prime Minister of New Zealand and UNDP Administrator



Dr SOUMYA SWAMINATHAN

Chairperson, M S Swaminathan Research Foundation, Former Chief Scientist, World Health Organization

Commissioners



Dr ADRIANA ABDENUR

Special Adviser to the President of Republic of Brazil



Dr ARUNABHA GHOSH*

Founder-CEO, Council on Energy, Environment and Water



Dr CHRISTA HASENKOPF

Director, Energy Policy Institute at the University of Chicago (EPIC)



Ms GINA MCCARTHY

Senior Fellow, The Fletcher School



Dr IZABELLA TEIXEIRA

Co-Chair, International Resource Panel



Ms JANE BURSTON*

Executive Director and Founder, Clean Air Fund



Mr JUNAID AHMAD

Vice President, Operations, Multilateral Investment Guarantee Agency



H. E. MARIA FERNANDA ESPINOSA

Executive Director, GWL Voices for Change & Inclusion



Dr MARIA NEIRA

Director of the Public Health Environment and Social Determinants of Health Department, WHO



Ms MARTINA OTTO

Head of Secretariat, Climate and Clean Air Coalition



Dr NAOKO ISHII

Executive Vice President, Professor, Institute for Future initiative, University of Tokyo



Dr OLUSOJI ADEVI

President, Resilient Health Systems, LCC



Mr PAUL SIMONS

Senior Fellow, Yale Jackson School of Global Affairs



Dr PUJI LESTARI

Professor, Bandung Institute of Technology



Ms SHIRLEY RODRIGUES

Deputy Mayor, Environment and Energy, Greater London Authority



Ms YVONNE AKI SAWYERR

Mayor, Freetown, Sierra Leone

*Convenors, as well as Commissioners

Supporting Viet Nam's Energy Transition

CEEW Centre for Energy Finance (CEEW-CEF) launched its study Viet Nam Grid Integration Guarantee: A Financial Solution to Mitigate Curtailment Risk for Renewable Energy Projects and organised the event, Advancing a low-cost energy transition in Viet Nam, in Ha Noi, Viet Nam, in October 2022 to enable cost-competitive and calibrated capacity deployment for renewable energy projects.



Images: CEEW



ANDREW JEFFRIES (3rd from left), Country Director (Viet Nam), Asian Development Bank; **VAIBHAV SAXENA**, Counsel, Vietnam International Law Firm; **DR LE VIET ANH**, Director General, Dept of Science, Education, Natural Resources & Environment, Ministry of Planning & Investment, Government of Viet Nam; **SUBHASH P. GUPTA**, Deputy Chief of Mission & Charge d'Affaires, Embassy of India, Ha Noi, Viet Nam; **HA DO**, Senior Partner, KPMG; and **ERIC NGUYEN**, Country C&D Director (Viet Nam), Shizen Energy Group, with **CEEW team** at the CEEW-CEF event, *Advancing a low-cost energy transition in Viet Nam*, Ha Noi, 11 October 2022.

“I believe that CEEW’s report as well as the discussion today will bring a positive contribution to the green and sustainable energy transition in Viet Nam.”

DR LE VIET ANH
Director General, Department of Science, Education, Natural Resources and Environment, Ministry of Planning and Investment, Socialist Republic of Viet Nam at the event, 11 October 2022.

#CEEWPride



CEEW’s **ARUNABHA GHOSH** was appointed as a Member of the High-Level Consultative Group for the U.S. Department of State’s Energy Transition Accelerator, January 2023.

Activating Circularity in Cooling for Developing Countries

CEEW, in collaboration with the Norwegian Environmental Agency (NEA), organised a side-event, Operationalising Lifecycle Refrigerant Management in India and Other Developing Countries at the 45th meeting of the Open-ended Working Group (OWG) of the Parties to the Montreal Protocol. It brought together experts from international organisations, civil society, and industry to discuss ways that developing countries could prevent lifecycle refrigerant emissions.



Image: CEEW



Activating Circular Economy for Sustainable Cooling: How can India Effectively Manage the Lifecycle of Refrigerants?
Report | July 2023

~2 billion tonnes

of CO₂ equivalent emissions could be prevented in India by 2050 through the successful implementation of lifecycle refrigerant management practices.

Source: CEEW-NEA analysis

(L to R) **TORGRIM ASPHJELL**, Senior Adviser, NEA; **MIKE ARMSTRONG**, President & Managing Director, A-Gas America; **ANDREA VOIGT**, Head of Global Public/Industry Affairs & Communication, Danfoss Climate Solutions; **KRISTEN TADDONIO**, Director of Climate Control, Institute for Governance & Sustainable Development (IGSD); **CHARLIE MAYHEW**, Climate Solutions Analyst, Yale Carbon Containment Lab, with **CEEW team**, at the CEEW-NEA side event, *Operationalising Lifecycle Refrigerant Management in India and Other Developing Countries*, Bangkok, 3 July 2023.

Enabling a Globally Inclusive Energy Transition

CEEW is working closely with policymakers, industry, investors and academia to ensure that India's and the world's energy transition is reliable, responsive and responsible. We identify and action policy solutions for energy security, affordability and sustainability to bridge the inequity gap between developed and developing countries.



CEEW's **ARUNABHA GHOSH** moderated the session, *The Different Road to Energy Transition*, held at the World Economic Forum's Annual Meeting 2023, Davos, 19 January 2023.



CEEW's **DHRUV WARRIOR** and **AKANKSHA TYAGI** presented CEEW's research on R&D innovations for critical mineral supply chain strategies for batteries and co-chaired the session on changing demand for critical minerals, respectively, at the conference, *IRTC 2023 – Raw Materials for a Sustainable Future*, organised by the International Round Table on Materials Criticality (IRTC), Lille, 17-19 February 2023.

CEEW's **RISHABH JAIN** at the session, *End-Of-Life Management of Solar PV and the Circular Economy*, organised during the International Renewable Energy Agency's (IRENA) 13th General Assembly meeting, Abu Dhabi, 13 January 2023.



Images: CEEW

CEEW's **ABHISHEK KAR** moderated the session, *BLEENS: A clean cooking fuel stack solution for the Global South*, during the India Energy Week 2023, organised by the Ministry of Petroleum and Natural Gas, Bengaluru, 7 February 2023.

#CEEW Pride

CEEW provided knowledge support for multilateral and bilateral negotiations to the Government of India for Quad (Principles on Clean Energy Supply Chains in the Indo-Pacific), Indo-Pacific Economic Framework for Prosperity (IPEF), and the India- Australia Comprehensive Economic Cooperation Agreement (CECA).



CEEW's **DISHA AGARWAL** was invited by the Science Based Targets initiative (SBTi) to the Expert Advisory Group to provide technical advice on the development of Beyond Value Chain Mitigation (BVCM). SBTi's BVCM guidance will support companies in going beyond their science-based targets by channelling additional climate finance towards mitigation activities outside of their value chains, May 2023.

Fuelling Passion, Propelling Careers

We launched the 'CEEW Global South Fellowship' this year to identify and groom the next generation of climate leaders by providing them with a platform to gain first-hand knowledge of the most pressing sustainability issues from a Global South perspective. As part of the 18-month talent programme, the Fellows will spend an equal amount of time at CEEW and an Indian government department to work in big-bet areas as well as learn the nuances of policymaking.



Images: CEEW



(L to R) **REMAN SINGH**, Head, Human Resources, CEEW; **DR NAUSHAD FORBES**, Co-Chairman, Forbes Marshall; **USHASHI DATTA**, Global South Fellow, CEEW; **RICHIK BANDYOPADHYAY**, Global South Fellow, CEEW; **ISHITA GUPTA**, Global South Fellow, CEEW; and **ATIMA BAKSHI**, Human Resources Officer, CEEW, at a one-on-one interaction, 22 September 2023.

The CEEW Academy Spring Batch sessions were organised in early 2023 for the Research Analyst and Programme/Senior Programme Lead cohorts. The two cohorts covered topics relevant to their career milestones such as dissecting public policy, research skills, managing people, and building trusted government relationships.



Continuing our tradition of celebrating key milestones in our colleagues' professional journeys, we felicitated 29 team members who had completed 3, 5, 7, and 10 years at CEEW in the presence of our trustees. We also planted an equivalent number of trees in their name in collaboration with Grow-Trees.



Images: CEEW




















CEEW's Sagarmāthā Leadership talk series saw inspirational leaders from across sectors discuss enablers and challenges in their professional and personal journeys with the entire CEEW team. Over the year, we hosted senior policymakers, CEOs, and founders such as **NAOKO ISHI**, former Deputy Vice Minister of Finance, Government of Japan; **MOHIT SOOD**, Regional Managing Principal – India ZS; **JANE BURSTON**, CEO, Clean Air Fund; **MEGHANA NARAYAN**, Co-founder, Wholsum Foods; **PANKAJ SAHNI**, CEO, Medanta; and **RAUL RAI**, Co-founder, Nicobar.

How CEEW fared in its Gender KPIs

**Last year
as of July 2022**

**This year
as of July 2023**

58:42		proportion of men to women in the organisation		56:44
37%		% of total salary disbursed to women		38%
38%		% of leadership roles held by women		30%
1		women on the CEEW governing board		1
23%		% of research publications with women as lead authors		34%
38%		women speakers at CEEW panel discussions		35%
48%		women in CEEW programmatic advisory groups		30%
31%		instances of women researchers quoted in the press		18%
33%		opinion editorials published with women as first authors*		50%
6%		opinion editorials published with women as second authors*		32%

*Excludes opinion editorials written by the CEO.

Source: CEEW analysis

Informing Public Opinion

1,000+
media mentions

of CEEW's work in leading international and national media outlets such as Bloomberg, The Washington Post, TIME, The Indian Express, The Hindustan Times, The Times of India, The Hindu, Mint, The National, Politico, CNBC Asia, Climate Home News, The Economic Times, Dainik Bhaskar, and Dainik Jagran.

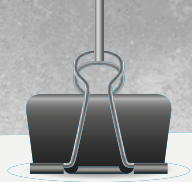
60+ electronic media
appearances

of CEEW researchers in news channels such as NDTV, CNBC TV18, Al Jazeera, CNA, WION and DD News.

110+ opinion articles

published in leading national and regional media outlets such as The Indian Express, Dainik Jagran, The Hindustan Times, The Hindu, The Times of India, Amar Ujala, Mint, ThePrint, The Economic Times, The Telegraph, NDTV, Rajasthan Patrika, and Scroll.

(September 2022 – August 2023)



Op-Eds



Cleantech, for an inclusive green future in India

In his address to the nation on Independence Day this year, Prime Minister Narendra Modi talked about India showing the world how to combat climate change. India's experience has shown that climate action is only effective and embraced at scale if it aligns with the development aspirations of millions and contributes to economic growth.

The green economy paradigm provides an optimistic pathway to align development and environmental outcomes. For instance, building a solar park or an electric vehicle charging station helps expand the much needed infrastructure in a developing economy while furthering climate action. Similarly, reviving millets helps improve farm incomes in rain-fed areas while making our agriculture climate resilient. But how do we take this green economy paradigm to the heart of our development needs in the form of youth looking for jobs, women seeking income opportunities, or farmers waiting to diversify their incomes?



Abhishek Jain
is a Fellow at the Council on Energy, Environment and Water (CEEW) and Director of 'Powering Livelihoods'.



VARBHAV CHATURVEDI AND PALLAVI DAS
are fellows at the Council on Energy, Environment and Water (CEEW).



अमर उजाला

खतरे से पहले चेतावनी



नेहा वघाव और विश्वास वितले

पवन में जोड़ते 4.4 पीसी जलवायु के समान धीमे-धीमे बढ़ा रहे हैं। ऐसे में जलवायु धराती भी जलवायु पर और अधिक ध्यान देने की जरूरत है।



जलवायु, जलवायु, जलवायु... जलवायु के खतरे से पहले चेतावनी देना जरूरी है। जलवायु के खतरे से पहले चेतावनी देना जरूरी है। जलवायु के खतरे से पहले चेतावनी देना जरूरी है।

जलवायु के खतरे से पहले चेतावनी देना जरूरी है। जलवायु के खतरे से पहले चेतावनी देना जरूरी है। जलवायु के खतरे से पहले चेतावनी देना जरूरी है।

FINANCIAL EXPRESS

Read to Lead

An impetus to green growth



ARIJUN DUTT & GAGAN SIDHU
are fellows at the Council on Energy, Environment and Water (CEEW).

ON FEBRUARY 9, India will conduct the auction of the second tranche of its planned ₹16,000 crore sovereign green bond issuance for FY23. That will be conducted amid a challenging global environment marked by economic uncertainty and capital flight from developing countries is a powerful reminder of India's commitment to sustainability.

CEEW research estimates that India's 'net zero by 2070' target requires \$10 trillion in investments. In this context, sovereign green bonds can emerge as a smart policy lever to address the financing challenges of low-carbon transition and stimulate green growth—one of the priority areas identified in Budget FY24.

First, sovereign green bonds can be an effective means of raising low-cost

foreign green bonds as specified securities under the 'fully accessible route', a pathway has been cleared for global capital to be channelled at scale to support India's journey towards sustainability. Going forward, the government should also consider sovereign Masala green bonds at GIFTIFSC as an additional route.

Second, the low-cost capital mobilised through sovereign green bonds can impart a green stimulus to economic growth. Pandemic-related disruptions and the Ukraine conflict have dampened growth in many economies. In addition, monetary policy responses to inflation have made capital more expensive.

A man
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investors



Recalibrating India's clean-cooking strategy

Over the last 15 years, the Government of India has attempted to replicate the success that liquefied petroleum gas (LPG) adoption has seen in urban households, in poorer and rural households. The Gramen Vitrak Yojana, launched in 2009, has helped grow the rural distributor base from 18% to 60% of the total LPG distributor base today. The ambitious Pradhan Mantri Ujjwala Yojana (PMUY) has provided more than 9.5 crore new households with LPG connections since 2016. With near-universal coverage of LPG, this is nothing short of an administrative and operational miracle. However, for the first time, LPG consumption in Indian households saw an absolute reduction in FY22 (minus 0.5% versus FY22) after years of steady growth. The questions are: how long must India consider just subsidising LPG to improve adoption? And what are the other options that it can explore?



Karthik Ganesan
is a Fellow and Director, Research, Coordination, at the Council on Energy, Environment and Water (CEEW).



The low carbon pathway

Delhi's long-term strategy for its net-zero targets outlines a road map for key industries

FINANCIAL REVIEW

Energy-hungry India has a natural green ally in Australia

Our unique EV transition is a leadership opportunity

ARAVIND HARIKUMAR & HIMANI JAIN



are, respectively, a research analyst and a senior programme lead at the Council on Energy, Environment and Water.

In the West the environmentally conscious and affluent are going the electric vehicle (EV) way with four-wheelers like Tesla's, a unique transition (shopping in India. Here, it is being spearheaded by two- and three-wheelers. Electric two-wheelers and three-wheelers (including e-rickshaws) accounted for 92% of EVs registered in the country in 2022. And the 2023-24 budget gave the EV industry a boost by announcing the removal of customs duties on capital goods used for manufacturing lithium-ion cells in these vehicles.

India's transport decarbonization is a good example of inclusive development and green growth, where lower income groups and vulnerable businesses stand to gain the most from the transition. In the Global South, then, India stands to gain from positioning itself as a global hub for EV two- and three-wheelers.

cost of owning an electric three-wheeler (e-SW) is 40% lower than that of owning similar vehicles using petrol, diesel and compressed natural gas. When drivers switch to electric, a 30% increase in daily savings is enough to pay back an e-SW loan. Commercial two-wheeler delivery riders can also significantly improve their earnings by adopting EVs.

So what's delaying the transition? Despite clear economic gains and availability of EV models, e-2Ws and e-3Ws are still not being adopted at the desired pace. Only 5.0% of three-wheelers registered last year were electric, up from 1.7% in 2021. Even though about 5.8 lakh e-2Ws were registered in 2022, they made up just 3.9% of total two-wheelers. This slow uptake can be attributed to low awareness, lack of trust in EV performance, high finance cost, poor visibility and poor access to charging infrastructure.

A greater focus on passenger three-wheelers and commercial two-wheelers can accelerate India's green push by improving livelihoods while reducing environmental and transport costs. We suggest four steps:



Malcolm Turnbull



Arunabha Ghosh

Indian Prime Minister Narendra Modi has concluded a successful visit to Australia. In March, Anthony Albanese received a warm welcome in India, where he called both countries 'natural partners'. The two sides have particularly committed to working more closely on renewable energy.

When one of us (as PM) visited India in April 2022, the country was already showing signs of serious intent behind the energy transition. Six years on, India's clean energy market has boomed—and its reputation over clean energy could become a central pillar of the Australia-India partnership.

This is going to be an important year for both countries. Australia's parliament legislated reforms to the safeguard mechanism, which will compel the country's 225 top-polluting facilities to keep their net emissions below a baseline, as well as create a new carbon credit system. The contribution of wind and solar to Australia's grid has gone from 1 per cent in 2009 to 18 per cent today.

The transition to a zero-emission energy system is being supported by the development of large-scale electricity storage projects, including one initiated by the Indian government—Snowy Hydro 2.0. India is also designing a carbon credit trading scheme, on top of numerous clean energy initiatives. With its G20 presidency this year, India has put energy security, energy transition and sustainability front and centre of the global agenda.

These developments come on the back of more than a decade of determined climate

दैनिक जागरण

दुर्लभ खनिजों से मिलेगी ऊजा सुरक्षा

दुर्लभ खनिजों के लिए अमेरिकी सरकार ने एक नया कानून पारित किया है। यह कानून दुर्लभ खनिजों की आपूर्ति को बढ़ावा देगा और ऊजा सुरक्षा को सुनिश्चित करेगा।

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Bloomberg

The clean tech arms race has begun

ARUNABHA GHOSH quoted in *Bloomberg*, January 2023



Green is for go

HEMANT MALLYA quoted in *The Times of India*, June 2023



Wastewater could be a future resource

NITIN BASSI quoted in *The Hindu Business Line*, April 2023



Breaking down India's diesel plan, in charts

HIMANI JAIN quoted in *Mint*, May 2023



Choked and gasping

KARTHIK GANESAN quoted in *The Economist*, June 2023



Deaths due to extreme weather events down, property damage up: Mahapatra

CEEW RESEARCH quoted in *Dainik Jagran*, July 2023



India's critical mineral list a step towards supply-chain security: Experts

RISHABH JAIN quoted in *Business Standard*, August 2023



COP27 | Indian business groups are a rising presence at U.N. climate summits

VAIBHAV CHATURVEDI quoted in *The Hindu*, November 2022



India's green bond issuances just 3.8 pc of overall domestic corporate bond market: Report

CEEW RESEARCH quoted in *The Economic Times*, February 2023

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ARUNABHA GHOSH on
Yamuna Submerges All Within Reach As Delhi Stares Flood Threat
India Today | July 2023



HEMANT MALLIA on Mad About Markets | Can Green Hydrogen Propel India towards Net-zero Target?
CNBC TV18 | September 2022



SHALU AGRAWAL on Special Broadcast | *India's Environmental Journey*
DD India | June 2023



ABHISHEK JAIN on India faces Challenge of Feeding its People as it becomes World's Most Populous Nation
PBS | May 2023



VISHWAS CHITALE on *El Nino is Coming: Are We Ready?*
WION | June 2023

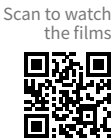


SHUVA RAHA on TEDxDYPakurdi: *What is LiFE: Lifestyle for Environment?*
TEDx Talks | September 2022

Outreach Innovations to Mainstream Sustainability

Faces of Climate Resilience

CEEW's documentary series has received wide acclaim and won awards at the Docs Without Border International Film Festival (USA) and the Aravali International Film Festival (India). It was also an official selection at five other film festivals. **In November 2023, the films won the prestigious 2023 CMCC Climate Change Communication Award "Rebecca Ballestra". The project stood out among 25 finalists out of 372 entries from over 50 countries.**



Scan to watch the films



Image: Aravali International Film Festival 2023



30+ screenings across the globe in educational institutions, corporate houses, international cultural centres, and film and literary fests.

What on Earth!™

Dedicated to the planet, our Pale Blue Dot, CEEW proudly presents What On Earth!™ – a cartoon series on sustainability. A new cartoon is published fortnightly on Wednesday and on special days with a point or a counterpoint to ponder and share. The series completed two years this year.



Image: Shawn Sebastian/CEEW

Naye Bharat ki Nayi Hawa: An Ode to Clean Air

Naye Bharat Ki Nayi Hawa (Breathing New Life into India's Air) is a poetry-led reflection of the aspirations of the USAID-supported Cleaner Air and Better Health (CABH) project. The film showcases facilitators and beneficiaries of India's journey to clean its air.

Scan to watch the film





Love in the Times of Climate Change: Art for Climate

Love in the Times of Climate Change is an ensemble of spoken-word poems on climate change in Hindi and English by seven leading Indian performance poets. The campaign, launched in March 2023, offered a fresh approach to sustainability literature by exploring the theme of 'love' while acknowledging climate change as an accepted reality. These poems on love, emerging after discussions on what climate change is and through a day-long workshop with the CEEW team, unpacked varied experiences and emotions through stories of how climate change impacts our experiences of companionship, nostalgia, and desire.

55 lakh+

views across Youtube and Instagram

as of November 2023



Image: CEEW

Suraj ka Gola: India's Solar Anthem

Dedicated to a new India and her new energies, CEEW and Villgro, in collaboration with Maati Baani ft. Ashish Kulkarni (of *Indian Idol* fame), produced *Suraj Ka Gola*, a solar anthem to celebrate an extraordinary story of how solar energy is powering and transforming lives and livelihoods in our villages. **The solar anthem was launched by Minister R. K. SINGH at the CEEW-Villgro national summit, Powering Sustainable Livelihoods, on 17 May 2023.**

2 lakh+

views on Youtube



Image: Kartikeya Jain/CEEW



Music and Millets

CEEW, in collaboration with Amarrass Society for Performance Arts, organised a musical evening, *Music and Millets*, to celebrate the International Year of Millets, at Sunder Nursery, New Delhi, 8 April 2023. The event featured an exhibition of millets, grassroot organisations championing millet-based food and beverages, and a performance by the Barmer Boys.



Images: Amarrass Society for Performance Arts

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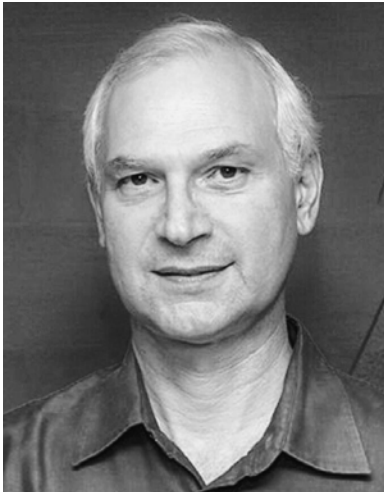
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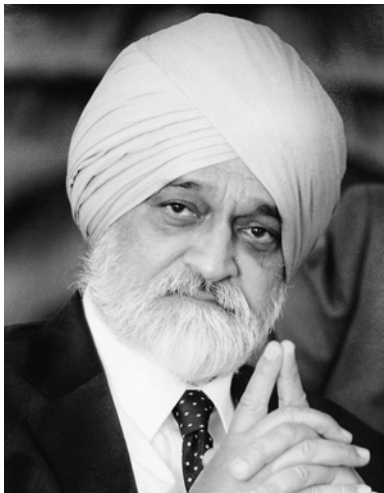
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Gratitude

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

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