

MAINSTREAMING SUSTAINABILITY

Year in Review 2021-22

CEEW at a Glance

Impacting **Sustainable Development** at Scale

TRANSFORMATIONS

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

Clean Air Sustainable Water Sustainable Food Systems Sustainable Cooling Sustainable Mobility

Fight ignorance | Stay true | Raise the bar

VALUES Integrated | International | Independent

SPECIAL INITIATIVES CEEW Centre for Energy Finance | Powering Livelihoods

200 +Multidisciplinary team

22+States engaged

380+ Partners

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

"Institutions are like trees. They need vision and nurturing, but the best ones stand on their own, resilient, independent and always reaching higher than the day before. CEEW is an institution."



he cover illustration is part of a bespoke mural at the CEEW office. t reimagines sustainability as a way of being.

QUALITY OF LIFE

ENABLERS

Sustainable Finance **Technology Futures Circular Economy Climate Resilience** International Cooperation

CEEW TALISMAN



Scan to see our valued partner

STRATEGIC OUTREACH





"CEEW has enabled India's leadership in sustainable cooling innovations that could help maximise economic gains."

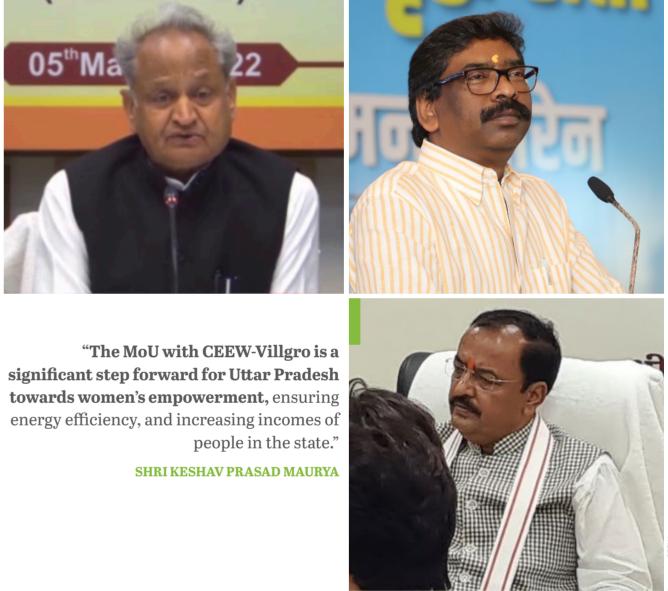
SHRI BHUPENDER YADAV

L to R from top

R. K. SINGH, Minister of Power, and New and Renewable Energy, Government of India (Gol), at the event, New Frontiers - India's Citizen-Centric Energy Transition, held to felicitate Indian cities and organisations that have submitted their UN Energy Compacts with CEEW as the knowledge partner, 16 February 2022.

BHUPENDER YADAV, Minister of Environment, Forest and Climate Change (MoEFCC), and Labour & Employment, Gol, at the CEEW-SHEETAL national dialogue, How can India Lead a Sustainable Cooling Transition? 13 May 2022.

BHAGWANTH KHUBA, Minister of State for New and Renewable Energy, and Chemicals and Fertilizers, Gol, at the event, New Frontiers - India's Citizen-Centric Energy Transition, held to felicitate Indian cities and organisations that have submitted their UN Energy Compacts with CEEW as the knowledge partner, 16 February 2022.



L to R from top

ASHOK GEHLOT, Chief Minister of Rajasthan, at the webinar on CEEW's study on scaling sustainable agriculture in Rajasthan, during the 3rd meeting of the Chief Minister Rajasthan Economic Transformation Advisory Council (CMRETAC), 05 March 2022.

HEMANT SOREN, Chief Minister of Jharkhand, at the launch of the Jharkhand State Solar Policy 2022, co-authored by CEEW and the Jharkhand Renewable Energy Development Agency (JREDA), 05 July 2022.

KESHAV PRASAD MAURYA, Deputy Chief Minister of Uttar Pradesh, at the UPSRLM-Prerna Ojas-CEEW MoU signing event with CEEW and Villgro, 06 July 2021.



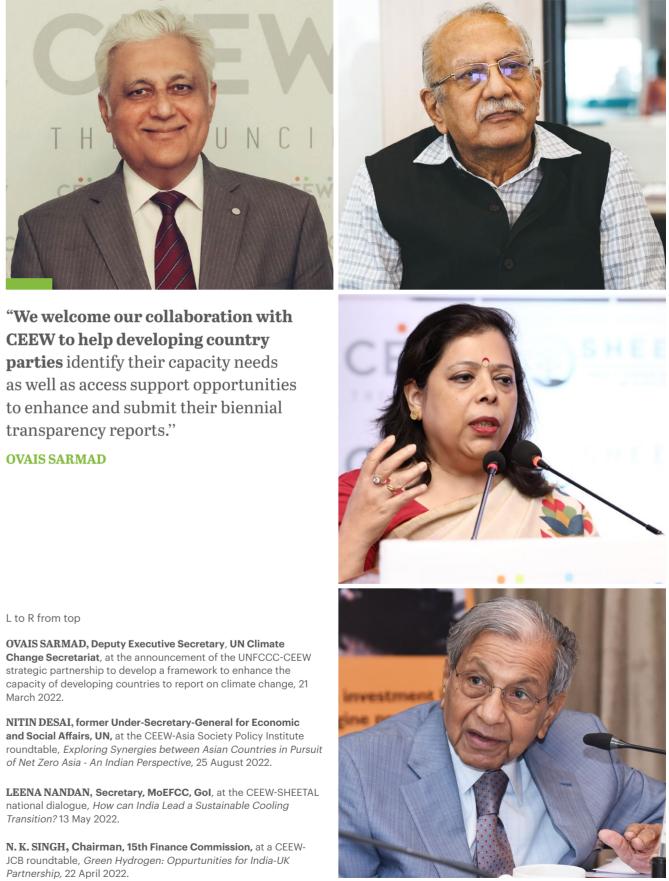
L to R from top

KEVIN M. RUDD AC, former Prime Minister of Australia, at the CEEW-Asia Society Policy Institute roundtable, Exploring Synergies between Asian Countries in Pursuit of Net-Zero Asia - An Indian Perspective, 25 August 2022.

STEFAN LÖFVEN, former Prime Minister of Sweden, at a virtual CEEW briefing on the UN High-Level Advisory Board on Effective Multilateralism, 02 June 2022.

BAN KI-MOON, former Secretary General, UN, at the CEEW-Asia Society Policy Institute roundtable, Exploring Synergies between Asian Countries in Pursuit of Net-Zero Asia - An Indian Perspective, 25 August 2022.

INGER ANDERSEN, Under-Secretary-General, UN, and Executive Director, UNEP, at a Stockholm+50 event moderated by CEEW and Stockholm Environment Institute (SEI) during COP26 at the Nordic Pavilion, 10 November 2022.







"With CEEW as a knowledge partner for the implementation of the Revamped Distribution Sector Scheme (RDSS), we can build capacities within REC Ltd and discoms to undertake evidencebased research to help improve discom performance and bring down their financial losses."

R. LAKSHMANAN

"We welcome our partnership with CEEW to support the Small Island Developing States (SIDS) and other vulnerable countries to identify and devise a common framework to mainstream disaster and climate resilience for infrastructure development."

SHRI KAMAL KISHORE



L to R (previous page)

INDU SHEKHAR CHATURVEDI, then Secretary, Ministry of New and Renewable Energy (MNRE), Gol, at the roundtable discussion, *Circular Economy of Solar Photovoltaics*, organised with CEEW as its knowledge partner, 07 June 2022.

ABHAY BAKRE, Director General, Bureau of Energy Efficiency, at the CEEW-SHEETAL national dialogue, *How can India Lead a Sustainable Cooling Transition*? 13 May 2022.

R. LAKSHMANAN, then Executive Director, REC Limited, at the CEEW-RECL MoU signing event to collaborate on improving operational and financial sustainability of discoms, 07 July 2022.

KAMAL KISHORE, Indian Co-Chair of CDRI's Executive Committee, and Member Secretary, National Disaster Management Authority, Gol, at the CEEW-IMD national dialogue, *How can India Make Climate Information People-Centric?* 30 August 2022.

Top to Bottom (this page)

JUAN ANGULO, Ambassador of Chile to India, concurrent to Bangladesh, Sri Lanka and Nepal, at the CEEW webinar, *A Multilateral Approach to Building a Global Hydrogen Economy*, 08 September 2021.

EMMANUEL LENAIN, Ambassador of France to India, at the CEEW-French Embassy workshop, *Indo-French Partnership to Power a Decarbonised Hydrogen Industry*, 23 May 2022.

HANS JACOB FRYDENLUND, Ambassador of Norway to India, at CEEW for a discussion on technology co-development collaborations for India's energy transition, 06 April 2022.



mages: CEEV







FROM THE **CHAIRPERSON AND CEO**



Chairman, CEEW

JAMSHYD N. GODREJ ARUNABHA GHOSH

CEO, CEEW



sustainability.







CEEW has been integrally involved with A read and MoEFCC in drafting the Mission LiFE (Lifestyle for Environment), and the integration of LiFE into India's G20 Presidency documents and events.

L to R from top

JAMSHYD N. GODREJ, Chairman and Managing Director, Godrej & Boyce Manufacturing Company Limited, at the CEEW-Asia Society Policy Institute roundtable. Exploring Synergies between Asian Countries in Pursuit of Net-Zero Asia - An Indian Perspective, 25 August 2022.

DR NAUSHAD FORBES, Co-Chairman, Forbes Marshall, at the CEEW fireside chat, How can India Achieve Jobs, Growth and Sustainability? 22 February 2022.

DR JANMEJAYA SINHA, Chairman India, Boston Consulting Group, at the CEEW-Villgro webinar, Powering Livelihoods in the Global South: Energy Transition for Citizen-centric Development, 04 October 2021.



How do you build a world for tomorrow? You shape it today.

2022 was the year that changed everything. A war in one region created an energy crisis for all, but there was also a conflict about growth versus sustainability in all major economies. In 2022, the urgent and the important melded into one.

As India sits firmly in the driver's seat of the G20 in 2023, it's time to showcase why we can be the voice for the Global South. And CEEW, as a strategic partner to several government ministries for the G20 Presidency, is shaping and mainstreaming ambitious roadmaps to a sustainable future. Whether it is informing the national green hydrogen mission, mobilising finance for India's net-zero transition, scaling sustainable agriculture, creating plans to revamp the power sector, creating a circular economy for renewables, or situating people at the centre of climate policies and action. Our team of 200+ professionals is not just thinking about the here and now, but also acting to shape the

CEEW's work spreads across the global, national, sub-national, and local levels - India's cities and villages. Our calculations and collaborations spread upwards into other countries, setting a global agenda at the Stockholm+50 summit and through our work in other emerging economies. Our analysis and actions also spread downwards in supporting 22 state governments within India with their plans for

Last year, we also opened the doors to our new offices in Delhi and Lucknow, with our principles built into the foundations of the buildings - integrated, international, and independent. From recycled furniture and upcycled material to biodegradable flooring and energy-efficient lighting, every corner has a sustainability story to tell. It ties into Mission LiFE (Lifestyle for Environment), an India-led global people's movement to nudge individual behaviours and enable markets to redefine our aspirations for a sustainable future. And CEEW has played an integral part in devising the economic framework for sustainable lifestyles.

We cannot fix the planet on which we live, without fixing how we live. Can we be a brave new world again? India has already set the ball rolling with its climate leadership. And CEEW is proud to be a strategic partner in that journey, at home and in the world.

MOVING THE NEEDLE NATIONALLY

Informing the National Green Hydrogen Mission Supporting India's Sustainable Cooling Goals Mainstreaming Decentralised Renewable Energy Technologies for Livelihoods **Scaling-up** Sustainable Agriculture **Revamping** the Power Distribution Sector Shaping India's Circular Economy for Solar Waste Making Climate Information People-centric Mobilising Finance for India's Net-Zero Transition



Informing the National Green Hydrogen Mission



CEEW provided technical advice to the Ministry of New and Renewable Energy (MNRE), Gol, in developing the National Green Hydrogen Mission. We provided inputs on the sizing of electrolysers, developed water consumption estimates for green hydrogen projects, the impact of green hydrogen blending on the prices of CNG and PNG, refinery products and fertiliser units, and gap assessment of hydrogen safety standards in India. We continue to advise multiple stakeholders on the governance, production and end-use of green hydrogen.

INR ~400 billion

can be saved by offsetting 68% natural gas imports, if India achieves the target of 5 MTPA green hydrogen production by 2030

Source: CEEW analysis



CEEW's study, Greening Steel - Moving to Clean Steelmaking Using Hydrogen and Renewable Energy, has been archived in the US Library of Congress, November 2021.

L to R from top:

SHUVA RAHA, Head, New Initiatives, CEEW: BHAGWANTH KHUBA. Minister of State for New and Renewable Energy, and Chemicals and Fertilizers, Gol: INDU SHEKHAR CHATURVEDI, then Secretary, MNRE, Gol; R.K.SINGH, Minister for Power and New and Renewable Energy, Gol; ARUNABHA GHOSH, CEO, CEEW; STEFFEN N. KOCH. Minister and Head of Department for Economics & Global Affairs, Embassy of the Federal Republic of Germany; JUAN ANGULO, Ambassador of Chile to India, concurrent to Bangladesh, Sri Lanka and Nepal; and NATALIE TOMS, then Economic. Climate & Development Counsellor, British High Commission, New Delhi, India, at the CEEW webinar, A Multilateral Approach to Building a Global Hydrogen Economy, 08 September 2021.





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Supporting India's Sustainable Cooling Plans

How can India Lead a Sustainable Cooling Transition?

13 May 2 Jew Delhi

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CEEW organised a national dialogue, How can India Lead *a Sustainable Cooling Transition*? as part of the SHEETAL **consortium, May 2022.** It brought together key stakeholders in the Heating, Ventilation and Air Conditioning (HVAC) sector from the government, industry, and academia. The experts underscored the need for enhanced implementation and accountability under the *India Cooling Action Plan* (ICAP), the first such official plan on sustainable cooling in the world, co-authored by the Ministry of Environment, Forest and Climate Change (MOEFCC), GoI, CEEW, and other partners.



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(L to R) LEENA NANDAN, Secretary, MoEFCC, Gol; BHUPENDER YADAV, Minister of Environment Forest and Climate Change and Labour and Employment, Gol; and ARUNABHA GHOSH, CEO, CEEW at the CEEW-SHEETAL national dialogue, How can India Lead a Sustainable Cooling Transition? 13 May 2022.

CEEW's **SHIKHA BHASIN** at the CEEW-SHEETAL national dialogue, *How can India Lead a Sustainable Cooling Transition?* 13 May 2022.



"If we align our goals under the ICAP with the larger goals of our COP26 announcements, we can have a stronger, more integrated approach to meet our climate commitments."

LEENA NANDAN, Secretary, MoEFCC, Gol at the CEEW-SHEETAL national dialogue, *How can India Lead a Sustainable Cooling Transition?* 13 May 2022.





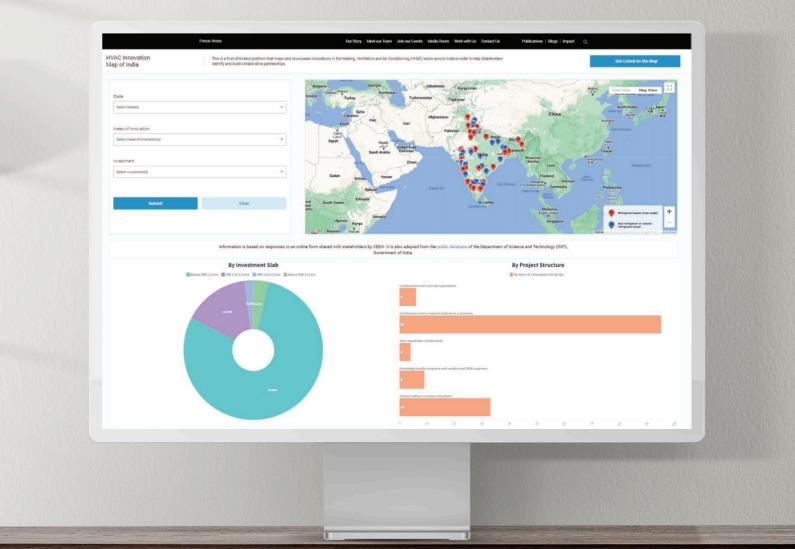
CEEW has signed an **MoU with the Refrigeration & Air-conditioning Trades Association (RATA)** to build capacity and market readiness of MSMEs operating in India's HVAC sector, October 2021; an **MoU with the Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)** to galvanise efforts towards deployment of sustainable cooling technologies and practices, December 2021.

HVAC INNOVATIONS DASHBOARD NOW LIVE!

CEEW has developed India's first HVAC Innovation Dashboard that showcases over 150 innovations in the sector. The dashboard aims to encourage collaborative research and development (R&D) among different stakeholders.



Explore the dashboard here: https://www.ceew.in/cooling-dashboard







Mainstreaming Decentralised RE Technologies for Livelihoods

CEEW's research and experience of rolling out 'Powering Livelihoods' (PL), a joint initiative with Villgro, contributed to drafting the policy framework released by MNRE to promote decentralised renewable energy (DRE) for livelihood applications.



mages: CEEW

>USD 50 billion the market potential for DRE-based livelihood solutions in India

Source: CEEW analysis



"The DRE policy for livelihood applications focuses on scaling field-tested solutions and promoting new and innovative solutions to power microentrepreneurship and productivity in rural India. CEEW's range of work on DRE applications and their support in formulating the policy is appreciable."

JEEVAN KUMAR JETHANI, Senior Director/Scientist-F, MNRE, Gol

About the DRE Policy Framework

This first-of-its-kind policy framework positions India as formally championing DRE for livelihood applications. It was released in February 2022, and will be critical to realise the market potential of this sector and support millions of jobs in the process. It emphasises a gender-inclusive approach to mainstream DRE for livelihoods by assessing demand, catalysing innovation, unlocking finance, generating awareness, and supporting pilots and scale-ups.



Impact of the Powering Livelihoods Initiative

77.2%

women out of 13,669 end-users

9,106

deployments of PL-supported technologies

2.7X

increase in cumulative revenues of targeted microenterprises

Source: CEEW-Villgro analysis (as of August 2022)

CEEW's **DIVYA GAUR** (R) and **WASE KHALID** (C) conducting an impact assessment of the PL programme in Gumla, Jharkhand, December 2021



"UNDP's efforts to support communities across the globe to advance the transition to a zerocarbon future are closely aligned with the Powering Livelihoods programme."

ACHIM STEINER, Administrator, United Nations Development Programme, and Vice-Chair, UN Sustainable Development Group, at the CEEW-Villgro webinar, Powering Livelihoods in the Global South: Energy Transition for Citizen-centric Development, 04 October 2021.



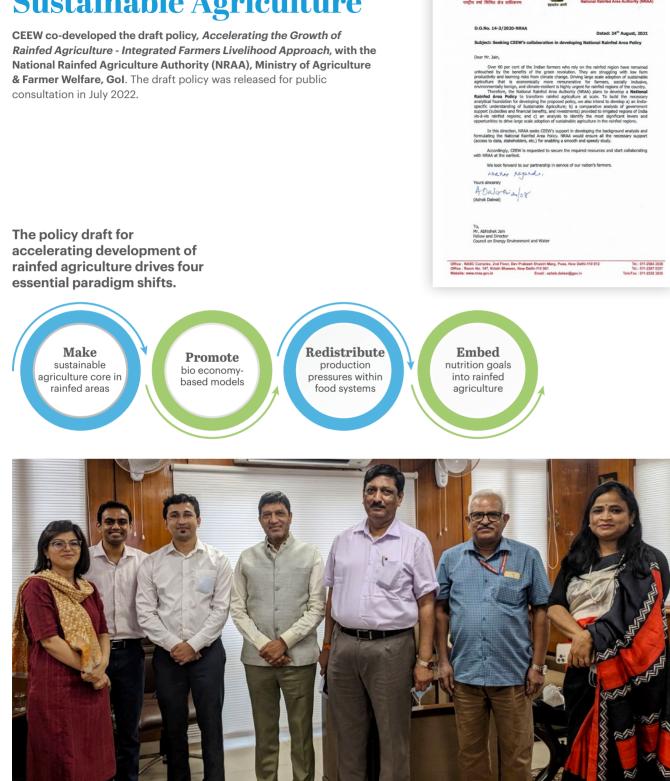
CEEW's **ABHISHEK JAIN** (C) at the session, *India: Unlocking an Inclusive Energy Transition*, held at Sustainable Energy for All Forum (SEforALL) event, organised by the Gol and the Global Energy Alliance for People & Planet (GEAPP) in Kigali, Rwanda, 18 May 2022.



"The PL programme's technical assistance and networks have helped boost milk production and storage for our group through solar refrigerators. They prevent milk spoilage during the summers when temperatures peak. Increased shelf life of our products gives us more bargaining power."

MEERA JATT, Chairperson, Maitree Mahila Dairy & Agriculture Company Limited, Rajasthan, and a Powering Livelihoods end-user.

Scaling-up Sustainable Agriculture



(L to R) SHANAL PRADHAN, Programme Associate, CEEW; ABHISHEK JAIN, Fellow and Director - Powering Livelihoods, CEEW; APOORVE KHANDELWAL, Senior Programme Lead, CEEW; ASHOK DALWAI, CEO, NRAA; JAI MISHRA, Adviser, NITI Aayog; B. RATH, Technical Expert (Water Management), NRAA; BABITA SINGH, former Senior Technical Consultant (Agriculture and Horticulture), NRAA.

Revamping the Power Distribution Sector

CEEW has an MoU with REC Ltd to collaborate on activities to improve the operational and financial sustainability of distribution companies (discoms). We will strengthen the power distribution networks and improve quality of service for electricity consumers across India through the deployment of smart meters.

Under this partnership, CEEW is conducting primary and secondary research to help discoms in their efforts to deploy smart meters. CEEW's research will also help leverage smart metering infrastructure for improved service delivery and ensure a positive consumer experience.







CEEW's KARTHIK GANESAN was appointed to the Expert Committee overseeing selection of applications and overall monitoring of POWERTHON, a hackathon launched by the Ministry of Power to find technology-driven solutions to solve the complex problems in power distribution and ensure quality and reliable power supply, March 2022.





(L to R) SUNIL MANI, Programme Lead, CEEW; VIVEK CHHAJER, Chief Manager, REC Ltd; R.K.GUPTA, Chief General Manager (Technical), REC Ltd; R. LAKSHMANAN then Executive Director, REC Ltd; ARUNABHA GHOSH CEO, CEEW; SHALU AGRAWAL, Senior Programme Lead, CEEW; PRATEEK AGGARWAL, Programme Lead. CEEW, at the MoU signing, 07 July 2022.

(L to R) CEEW's HARSHA V. RAO. DISHA AGARWAL. PRATEEK AGGARWAL. DHRUVAK AGGARWAL. VAIBHAV PRATAP SINGH, and TARUN MEHTA at the NTPC Dadri power plant exploring thermal power plant operations and management, 12 April 2022.





CEEW's VAIBHAV CHATURVEDI was invited to join the MoEFCC Task Force 1 on Power Sector Decarbonisation within the ambit of India's Long-Term Low-Carbon Development Strategy, April 2022.





Shaping India's Circular Economy for Solar Waste

CEEW has been appointed as the Knowledge Partner by MNRE to support a circular economy in solar in India. This includes assistance over e-waste management rules, solar photovoltaic (PV) waste estimation, and an R&D ecosystem for recycling technologies.



#CEEWPride SUPPORTING CENTRAL MINISTRIES

CEEW's recommendation for a closedbidding mechanism procurement for new wind capacity to help India achieve 140 GW of wind capacity by 2030 was accepted and announced by the MNRE, April 2022.

CEEW's assessment of the socio-economic benefits of the New National Biogas and Organic Manure Programme (NNBOMP), and the Programme on Energy from Urban, Industrial, Agricultural Wastes/Residues and Municipal Solid Waste (2019-20) for the MNRE led to budgetary approvals from the Ministry of Finance to continue with the central subsidy support to these schemes, July 2022.



(L to R) CEEW's AKANKSHA TYAGI, NEERAJ KULDEEP, and KARTHIK GANESAN at the roundtable, Circular Economy in Solar Photovoltaics, organised by MNRE, Gol, 07 June 2022.

Mobilising Finance for India's Net-Zero **Transition**

Having informed India's net zero goal of 2070, CEEW has been at the forefront of facilitating India's transition by estimating investments and derisking sustainable finance.

CEEW-Centre for Energy Finance's first-of-its-kind study estimated that India's power, industrial, and transport sectors would need investments of USD 10.1 trillion for the nation to achieve net-zero by 2070.

USD 8.4 trillion

worth of investment needed by India's power sector alone to achive net zero

USD 1.5 trillion

needs to be invested in green hydrogen production capacity to decarbonise India's industrial sector

All data points: CEEW analysis





CEEW's ARUNABHA GHOSH was appointed member of CEEW-CEF's ARJUN DUTT was a special invitee as the Advisory Group for the G20 Finance Track Agenda for India's 2023 G20 Presidency, January 2022.

KK KK

Investment Sizing India's 2070 Net-Zero Target

Vaibhav Pratap Singh and Gagan Sidhu Issue Brief | November 202



Executive summary

On 1 November 2021, India's Prime Minis ents Achie nathways as well as financial flows. T nce flows or investments are required to fun tion of the associated physical infras nent). In India's case, such invest trillions of dollars. The investmen ld have been steeper if th

ent will requir





#CEEWPride



a sector expert in the **Taxonomy Working Group**, September 2021. This task force on sustainable finance was constituted by the Ministry of Finance and cochaired by NITI Aayog and MoEFCC.



Making Climate Information People-centric



CEEW and the India Meteorological Department (IMD) organised the national dialogue, How can India Make Climate Information People-Centric? in August 2022. The dialogue brought together key stakeholders, including central agencies such as the National Disaster Management Authority (NDMA), State Disaster Management Authorities, and meteorological agencies, to improve impact-based forecasting and end-to-end information dissemination to vulnerable communities through a comprehensive Multi-Hazard Early Warning System (MHEWS) at the national and sub-national levels.

27/35 states and UTs*

in India are highly vulnerable to extreme hydro-met disasters and their compounded impacts

>80%

of India's population lives in districts highly vulnerable to extreme hydromet disasters

* as per 2011 Census All data points: CEEW analysis



Key speakers and panellists with the CFFW team at the CEEW-IMD national dialoque. How can India Make Climate Information People-Centric? 30 August 2022.

CEEW became the the first Indian think-tank to sign an MoU with the Coalition for Disaster Resilient Infrastructure (CDRI), in July 2022.

> AMIT PROTHI, Director General, CDRI (L) and ARUNABHA GHOSH, CEO, CEEW, at the MoU signing event, 12 July 2022.



CEEW's NITIN BASSI (L) presenting on water management and climate action in cities at the City Climate Alliance Partners Consultation for CITIIS 2.0 organised by National Institute of Urban Affairs, 04 August 2022.

Lok Sabha questions related to India's preparedness on climate change and the nation's vulnerability were tabled at the Winter Session of Parliament (Lok Sabha Question. Diary No. 86 for answer on 29.11.2021 reg. Climate Vulnerability Index) based on CEEW's first-of-its-kind study, Mapping India's Climate Vulnerabilities: A District Level Assessment.

CEEW's SHREYA WADHAWAN 30 August 2022.

presented the team's research on mapping India's vulnerable districts and the need for early warning systems at the CEEW-IMD national dialogue, How can India Make Climate Information People-Centric?



"I congratulate CEEW for taking this important and timely initiative to help connect people with multi-hazard early warning systems."

DR MRUTYUNJAY MOHAPATRA, Director General of Meteorology, IMD at the CEEW-IMD national dialogue, How can India Make Climate Information People-Centric? 30 August 2022.







DRIVING '-CHANGE IN THE STATES

Informing Solar Policies of Jharkhand and Uttarakhand
Enabling Low-carbon Transitions in Bihar, Maharashtra and Rajasthan
Improving Capacities to Enable Power Reforms and Sustainable Livelihoods in Uttar Pradesh
Strengthening Regional Air Quality Management in Uttar Pradesh and Punjab
Supporting Green Hydrogen Policies of Rajasthan and Gujarat
Scaling-Up Natural Farming in Rajasthan
Building Climate Resilience in Maharashtra and Uttarakhand
Enabling Sustainable Mobility in Uttar Pradesh and Kerala



Informing Solar Policies of Jharkhand and Uttarakhand

Jharkhand



CEEW helped formulate the Jharkhand State Solar Policy for 2022-27 in consultation with the Jharkhand Renewable Energy Development Agency (JREDA). The policy targets to achieve 4,000 MW of solar capacity across a diverse set of applications – enabling ease of doing business, promoting efficient technologies, creating enabling infrastructure, promoting innovation and locally relevant business models, and equipping implementing agencies and technical institutions to become best in class. CEEW will continue to work with JREDA as a policy implementation partner for the next two years.

Uttarakhand



CEEW's **DISHA AGARWAL**, **NEERAJ KULDEEP**, and **BHAWNA TYAGI** (all in the left row) conducting bilateral meetings with the officials of the Uttarakhand Renewable Energy Development Agency (UREDA) and other key actors to inform **Uttarakhand's State Solar Policy**.

(L to R) ARUNABHA GHOSH, CEO, CEEW: AVINASH KUMAR. Principal Secretary -Department of Energy, Government of Jharkhand: HEMANT SOREN. Chief Minister of Jharkhand: VINAY KUMAR CHOUBEY, Secretary to CM Jharkhand; K.K. VERMA, Director, Jharkhand Renewable **Energy Development** Agency (JREDA) and Jharkhand Bijli Vitran Nigam Limited (JBVNL), at the launch of the Jharkhand Solar Policy in Ranchi, 05 July 2022.



CEEW's **DISHA AGARWAL** at the launch of the Jharkhand Solar Policy in Ranchi, 05 July 2022.

Enabling Low-carbon Transitions in Bihar, Maharashtra and Rajasthan

Bihar



CEEW'S **ARUNABHA GHOSH** (2nd from right) presenting at the kick-off meeting with the Chief Secretary and principal secretaries of various departments in Bihar on low-carbon development strategies, 06 December 2021.

CEEW, UNEP India and other partners are working together with the Government of Bihar to develop its climate-resilient, low-carbon development strategy. As part of the project 'Strategy for a Climate Resilient and Low-Carbon Development Pathway for Bihar', CEEW is modelling low-carbon transition and design strategies for mitigation in the state.

Rajasthan



CEEW has an MoU with Rajasthan Renewable Energy Corporation Limited (RRECL), the state nodal agency on clean energy transition, to draft *Rajasthan's Energy Policy 2050*. In consultation with the Government of Rajasthan, experts and other relevant stakeholders, CEEW will define the broader vision for Rajasthan's energy sector, aligning it with the state's economic growth prospects for 2050.



CEEW has been appointed by the Government of Maharashtra to inform the state's transition to a low-carbon economy through robust evidence-based policy research and analysis. CEEW is advising the government by modelling scenarios under which the state could achieve net-zero emissions, their sectoral implications and the economic opportunities and challenges such a transition could entail.

(L to R) PAWAN KR. TANWAR Fechnical Manager RRECL; PRAVEEN CHANDRASEKARAN, Engagement Lead CEEW: PRATEEK AGGARWAL Programme Lead, CEEW: SHALU AGRAWAL, Senior Programme Lead, CEEW; T. RAVIKANT, IAS, former Chairman, RRECL: ANIL DHAKA. IRS, Managing Director, RRECL SUNIT MATHUR, General Manager RRECL; NAVEEN SHARMA, Officer on Special Duty to MD, RRECL; SURESH JEWALIA, Technical Manager, RRECL, at the MoU signing, 29 July 2022.

Supporting Green Hydrogen Policies of Rajasthan and Gujarat

Rajasthan

CEEW has an MoU with the Rajasthan Renewable Energy Corporation Limited (RRECL) to develop and implement their *State Policy on Green Hydrogen*.

In Rajasthan, CEEW will also assess macro-level benefits of renewable energy, its job creation potential and develop long-term sectoral transition pathways to inform the state-level *Urja Niti* (energy policy).

USD ~100 billion

investment needed to achieve India's 2030 hydrogen production target of 5 MTPA

Source: CEEW analysis







CEEW has signed an MoU with Gujarat Power Corporation Limited (GPCL) to develop and implement the State Policy on Green Hydrogen. We submitted a detailed report on techno-economics of green and grey hydrogen production, investment, infrastructure, land and water requirements for scaling up the green hydrogen ecosystem in the state.



Images: CEEW

CEEW's **DEEPAK YADAV** presented pathways to realise Rajasthan's potential for scaling up green hydrogen production to RRECL, 26 June 2022.

CEEW's **HEMANT MALLYA** (L) at a meeting with RRECL, 26 June 2022.







Improving Capacities to Enable Power Reforms and Sustainable Livelihoods in Uttar Pradesh

CEEW signed an MoU with the Uttar Pradesh State Rural Livelihood Mission (UPSRLM) to support capacity building, market research, and draft strategies to deploy DRE-based livelihoods among rural communities across the state.

CEEW is also extending technical and implementation support for the Vidyut Sakhi initiative of the government to ensure improved revenue recovery by discoms in rural areas while enhancing income/livelihood opportunities for rural women



KESHAV PRASAD MAURYA (C), Deputy Chief Minister, Uttar Pradesh at the MoU signing ceremony between CEEW-Villgro, UPSRLM, and Prerna Ojas Pvt. Ltd, CEEW's ARUNABHA GHOSH (L) with BHANU GOSWAMI (R), then Managing Director, UPSRLM, 06 July 2022.



The CEEW team at the MoU event, 06 July 2022



"We are thrilled to be joining hands with CEEW-Villgro and Prerna Ojas in promoting DRE-powered livelihoods for people living in UP's rural areas. We are also keen to receive support from CEEW for our Vidyut Sakhi initiative."

Improving Discom Revenue Losses in UP

CEEW is partnering with the Uttar Pradesh Power Corporation Limited (UPPCL) and Madhyanchal Vidyut Vitaran Nigam Ltd Lucknow (MVVNL) discoms to implement a pilot-cum-demonstration initiative to diagnose bottlenecks and improve revenue recovery in a high-loss feeder of Mohan in Unnao district, UP.



CEEW conducted a drawing competition on sustainability and the power sector for school students in Mohan, Unnao district, Uttar Pradesh, 14 July 2022.



CEEW's CHANMEET SYAL instucting the audio announcer in an e-3-wheeler to invite residents to the CEEW-MVVNL camp held for consumers to resolve electricity billing issues, address consumers' grievances and collect pending payments. Mohan, Unnao district, Uttar Pradesh, 12 July 2022.

~700 electricity poles geotagged in the entire Mohan feeder

area that services 2.500+ customers

INR ~2.5 lakh

electricity dues collected at the Unnao consumer camp

Data points: CEEW analysis



CEEW's RASHI SINGH conducted interactive sessions in schools with students from standards 6-10 to discuss how the power distribution system works, in the run-up to the consumer camp, 12 July 2022.

Strengthening Regional Air Quality Management in Uttar Pradesh and Punjab

Uttar Pradesh

CEEW signed an MoU with the Department of Environment, Forest and Climate Change (DoEF&CC), Government of UP, in October 2022, in the presence of MANOJ SINGH, Additional Chief Secretary, and ASHISH TIWARI (2nd from right), Secretary, DoEF&CC. The objective of the collaboration is to strengthen clean air planning and implementation in Uttar Pradesh to improve the states's air quality.

CEEW collaborated with Kanpur Nagar Nigam (KNN) to support implementation of their clean air plan. We provided technical assistance, created local evidence for prioritising action, assessed impact of implemented measures. We also conducted awareness workshops for schools and construction companies in Kanpur.





CEEW's SHREYA CHADHA conducted a session on air pollution at the Nagar Nigam Mahila Inter College, 20 May 2022.



CEEW's PRIYANKA SINGH conducting a training session on field reconnaissance survey protocol to build hyperlocal databases that capture pollution emission sources, 17 November 2021.

Punjab









CEEW's SRISH PRAKASH

(C) conducted group discussions on farmers' perspectives on stubble burning and associated air pollution, 21 October 2021.

CEEW's TANUSHREE GANGULY, at CEEW-ASAR workshop, Punjab Townhall: Pollution Da Solution as part of the Cleaner Air and Better Health Project, supported by the United States Agency for International Development (USAID), . 07 July 2022.

#CEEWPride NOMINATED TO THE COMMISSION FOR AIR QUALITY MANAGEMENT IN NCR AND ADJOINING AREAS

CEEW's **KURINJI SELVARAJ** was appointed to an expert panel constituted by the Commission for Air Quality Management (CAQM) in NCR and adjoining areas. The expert panel formulated a long-term policy for improving air quality in Delhi NCR.



Scaling-up Natural Farming in Rajasthan and Andhra Pradesh

Rajasthan

CEEW was part of the Chief Minister's **Rajasthan Economic Transformation** Advisory Council (CMRETAC) to develop a policy action plan to scaleup natural farming in the state. CEEW's recommendations directly led to the FY2022-23 budget announcement of the INR 600 crore Rajasthan Organic Farming Mission, which will impact 400,000 farmers.



CEEW's APOORVE KHANDELWAL (R), in Sikar, Rajasthan, engaging with officials and farmers, 22 December 2021.

CEEW's analysis in Rajasthan was informed through discussions and meetings covering

10

100 +Government officials

State-level

District-level departments departments

20

22

Non-governmental organisations

Andhra Pradesh



CEEW researchers at a focus group discussion with local farmers on sustainable and regenerative agriculture in the Sri Sathyasai district of Andhra Pradesh, May 2022.

Building Climate Resilience in Maharashtra and Uttarakhand

CEEW is engaging with state-level and district-level nodal agencies across India to map climate-related risks, build adaptation and mitigation capacities of associated systems and departments.



"This workshop by CEEW- Uttarakhand State Disaster Management Authority (USDMA) and Social Development for Communities Foundation (SDC) is timely and shows us the need to integrate national, sub-national and city level disaster preparedness."

SUNIL UNIYAL GAMA, Mayor, Dehradun at the CEEW-USDMA-SDC workshop, How Can We Make Uttarakhand Climate Resilient? 15 June 2022.



"Early warning systems have to be strengthened and this can help save lives, livelihoods and avert loss and damage across sectors. Urban Local Bodies and Panchayats should also have robust alert mechanisms and should remain prepared to deal with climate disasters round the year."

DR PIYOOSH RAUTELA, Executive Director, Disaster Mitigation and Management Centre (DMMC), and USDMA at the CEEW-USDMA-SDC workshop. How Can We Make Uttarakhand Climate Resilient? 15 June 2022.



CEEW is supporting the revision of Maharashtra's State Action Plan on Climate Change (SAPCC) and disaster management plans through granular vulnerability assessments and enhanced mitigation and adaptation targets.

Uttarakhand







Enabling Sustainable Mobility in Uttar Pradesh and Kerala

Uttar Pradesh

CEEW has an MoU with the Regional Centre for Urban & Environmental Studies (RCUES), Lucknow, to build capacity of state government officials on sustainable mobility. CEEW has prepared action plans and is conducting trainings as per the needs identified by officials across the state.



CEEW's CHRIS TERESA and ARAVIND HARIKUMAR (C) conducted a focus group discussion with delivery workers in Lucknow to understand challenges impeding their switch to EVs, 03 August 2022.

Kerala



(L to R) GREESHMA GIRI, former Principal Correspondent, The Times of India; G.P. HARI, Executive Officer, Kochi Metropolitan Transport Authority; D. DHANURAJ, Chairman CPPR; HIBI EDEN, Member of Parliament, Ernakulam; ARAVIND HARIKUMAR Research Analyst, CEEW JOHN L PAUL, Specia Correspondent, The Hindu, at the CEEW-CPPR workshop, Creating Policy Pathways With The Fourth Estate: Towards Achieving Sustainable Mobility In Kerala, 13 July 2022





CEEW team members with city government officials of Lucknow and Kanpur at the CEEW-RCUES workshop, Intermediate Public Transpot Systems in Urban Areas, 04 August 2022.





CEEW's HIMANI JAIN has been nominated as council member for the National Transport Decarbonisation Council (NTDC) to assess and support the decarbonisation and zero-emission targets set by the GoI.

CEEW's KARTHIK GANESAN (R) moderated a panel discussion at the CEEW-Centre for Public Policy Research workshop, Creating Policy Pathways With The Fourth Estate: Towards Achieving Sustainable Mobility In Kerala, 13 July 2022.

CEEW is part of the expert committee at Kochi Metropolitan Transit Authority for 'Accelerating Electrification of Autos in Kochi' and 'Parking Policy'.



SHAPING GLOBAL SUSTAINABILITY EFFORTS

Informing India's Net-Zero Goals at COP26

Urging Climate Action at Stockholm+50

Showcasing India's Global Leadership in Energy Transition

Building a Global Rules-based Architecture for Green Hydrogen



वर्य्धेव कुटुम्बकम् ONE EARTH • ONE FAMILY • ONE FUTURE

#CEEWPride PARTNERING WITH THE GOVERNMENT OF INDIA FOR G20 PRESIDENCY

KKKK K

CEEW has been appointed as a Strategic Partner to the Ministry of Environment, Forest and Climate Change, and a Knowledge Partner to the Ministry of External Affairs, Ministry of New and Renewable Energy, and as India's Economic Adviser for India's G20 Presidency. CEEW is also supporting NITI Aayog, Ministry of Finance, and Ministry of Power on India's G20 Presidency.



Informing India's Net-Zero Goals at COP26



CEEW was the first Indian policy research institution to bring out an economy-wide analysis for India's netzero transition. Our research and sustained engagements with various ministries helped inform India's netzero goal of 2070 at the 26th session of the Conference of Parties (COP26) to the UN Framework Convention on Climate Change (UNFCCC) in Glasgow, in November 2021.

Across 40+ events

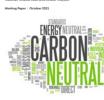
we presented our research and data

on the status of non-fulfilment of pre-2020 commitments by developed countries, the use and misuse of carbon space by countries, the need for climate finance and adaptation grants, de-risking renewables, enabling a just transition, co-developing climate-friendly technologies, and insuring climate-vulnerable populations through a global fund.

CÉEW COP26

The Carbon Space Implications of Net Negative Targets





India's Sectoral Energy Tran and Climate Policy

CEEW COP26

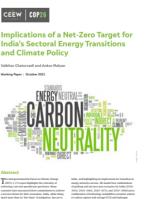
e gistal	Further, it has made significant progress on its pledge to reduce, by 2010, the emission intensity of its GDP by	
1 Nations INFCCC)	as per cent compared with nors, levels. In norsi, it had already reduced its GDP's emissions intensity by as	Abstr
ational	much as 24 per cent (MoEFCC 2021).	T(PO)
based on NDC	By contrast, the developed would has failed to deliver	achievings
or to limit the INIP 2020).	on its pre-acco-commitments. Since 2008, rich countries have emitted the equivalent of nine times india's annual emissions over and above the limit they committed to	countries 1 a net avoi much more
on its than so per	(Prasad, Pandey and Bhasin 2021). The US, EU, China, and many developed countries have appounded net-	announce: the absence
des capacity he ambition em).	areo targets in response to the need to stay below 1.5%. However, evidence from the past raises concerns about their future course of action.	This study abscuatio





Scan to read respective studies.

(L to R) CEEW's delegation: RIDDHIMA SETHI, ARUNABHA GHOSH. SHIKHA BHASIN. ARJUN DUTT and PRAYANK JAIN, at COP26 in Glasgow, 05 November 2021.





Article 6 No





Increasing Climate Transparency



CEEW's VAIBHAV CHATURVEDI at the event, Carbon Capture and Storage in Emerging Economies, organised by The University of Texas at Austin and IEA Greenhouse Gas R&D Programme, 10 November 2021.

Deploying Solar at Scale



CEEW's ARUNABHA GHOSH moderated the event, Unlocking Solar Energy Deployment at Scale, organised by the International Solar Alliance, 04 November 2021.

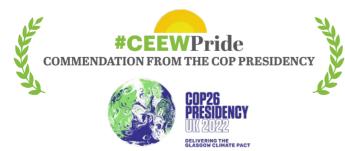
Raising Climate Ambitions Making Cooling Sustainable



CEEW's **ARJUN DUTT** at the side event, *Raising Ambitions* to Reach Carbon Neutrality by 2050, organised by Government of Tunisia and Association Tunisienne des Changements Climatiques et du Développement Durable (2C2D), 04 November 2021.



CEEW's SHIKHA BHASIN (R) at the CEEW dinner discussion, Reimagining the Sustainable Cooling Transition in the Global South, 04 November 2021.



"It was encouraging to hear about CEEW's assessments of India's climate ambitions and pathways to 2030 and 2070 targets.... Inputs provided by India's civil society, think tanks and research organisations are a key part of formulating national climate strategies.

I look forward to seeing CEEW's continued research and policy work supporting India's climate action."

ALOK SHARMA, COP President (2021-2022) in a letter dated 11 August 2022.

Debriefing Indian Parliamentarians



CEEW's ARUNABHA GHOSH debriefed Indian Parliamentarians post COP26 on India's net-zero commitments and potential pathways for achieving the targets, 09 December 2021.





PARTNERING WITH UNFCCC

CEEW has been selected by the UNFCCC Secretariat to develop a capacity building measurement tool, to be rolled out for all countries.



REPRESENTATION AT RINGO



CEEW's SHIKHA BHASIN has been selected to UNFCCC's Research and Independent Non-Government Organisations' (RINGO) Steering Committee, June 2022.



CEEW's **ARUNABHA GHOSH** has been appointed by the UN Secretary-General as a member of the **UN High-level Expert Group (HLEG) on Net-Zero commitments of Non-State Actors**, March 2022. He is the only South Asian and one of three Asians in the group.

with CEEW's ARUNABHA GHOSH at the MoU signing, 21 March 2022.

Urging Climate Action at Stockholm+50

CEEW was invited by the UNEP and the Government of Sweden to co-author the official scientific report for the Stockholm+50 UN International Meeting, with the Stockholm Environmental Institute (SEI). The report, Stockholm+50: Unlocking a Better Future, detailed how the human relationship with nature could be harmonised through the fundamental shifts of repairing our relationship with nature, achieving lasting prosperity for all, and investing in a better future. It was accompanied by an associated youth report that integrated findings from a global online survey conducted of over 900 young people (18-30 years old) from 91 countries.



CEEW's ARUNABHA GHOSH (standing) at the Leadership Dialogue 3: Accelerating the Implementation of the Environmental Dimension of Sustainable Development, 03 June 2022.



#CEEWPride



CEEW's **ARUNABHA GHOSH** has been nominated as one of the 12 members of the Global Commission on the Economics of Water, April 2022.



(L to R) ARUNABHA GHOSH, CEO, CEEW; BHUPENDER **YADAV.** Minister of Environment, Forest and Climate Change, and Labour & Employment Goland TANMAYA LAL, Ambassador of India to Sweden and Latvia at the CEEW-GCF event, Action Agenda for Sustainable Development: Innovations in Technology, Finance and Lifestyles, 01 June 2022

Showcasing India's Global Leadership in Energy Transition



CEEW, as a Knowledge Partner to the Government of India for the UN High-Level Dialogue on Energy (HLDE) and its Energy Compact Initiative, supported a collaborative effort of 15 Union Ministries and Departments led by the MNRE. We curated and produced the the Energy Compact booklet and the energytransition.in website as part of this effort.

CEEW co-convened multi-sector industry consultations and UN events with the MNRE and the Permanent Mission of India to the UN at New York to help draft and develop India's Energy Compact as well as 21 Compacts from public and private sector corporations, states, and Smart Cities. These engagements have strengthened India's position as a UN Global Champion for Energy Transition.

MINISTRY OF NEW







Read India's Energy Compact commitments here: nergytransition.in



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(L to R) ARUNABHA GHOSH, CEO, CEEW; ALOK KUMAR, Secretary, Ministry of Power; Gol: BHAGWANTH KHUBA, Minister of State for New and Renewable Energy, and Chemicals and Fertilizers, Gol; R.K. SINGH, Minister of Power and New and Renewable Energy, Gol: INDU SHEKHAR CHATURVEDI, then Secretary, MNRE, Gol, launched India's UN Energy Compacts booklet at New Frontiers: A Programme on Renewable Energy -India's Leadership in Energy Transition, 16 February 2022.

USD ~34 billion

committed by India's Energy Compacts is nearly half the total **UN Member States' commitments** of USD ~73.6 billion (as of Oct 2021)

Source: Energy Compacts Booklet



Building a Global Rules-based Architecture for Green Hydrogen

CEEW has proposed eight principles of a rules-based architecture for green hydrogen to serve as the foundation to develop a secure global energy economy of this strategic industrial fuel of the 21st century. CEEW's research and advocacy on green hydrogen over the past several years through policy papers and in-depth reports, and multilateral stakeholder consultations including multi-lateral and multi-stakeholder roundtables, expert workshops and seminars in India and abroad have found strong traction. Key developments include the Quadrilateral Security Dialogue (Quad) announcing a Clean Hydrogen Partnership in 2022.



CEEW's ARUNABHA GHOSH (L), at the roundatable on global rules-based architecture for green hydrogen organised by the Government of France and Mouvement des Entreprises de France (MEDEF), 19 April 2022.



TANMAYA LAL (R), Ambassador of India to Sweden and Latvia at the CEEW-GCF roundtable, A Deal for Development Global Governance of Green Hydrogen, 21 April 2022.

CEEW's HEMANT MALLYA speaking on the potential of green hydrogen at the CEEW-JCB roundtable, Green Hydrogen: Opportunities for India-UK Partnership, 22 April 2022.



CEEW's SHUVA RAHA at the CEEW-Embassy of France workshop. Indo-French Partnership to Power a Decarbonised Hydrogen Industry, 23 May 2022.



EMMANUEL LENAIN, Ambassador of France to India at the CEEW-Embassy of France workshop, Indo-French Partnership to Power a Decarbonised Hydrogen Industry, 23 May 2022.



JUAN ANGULO, Ambassador of Chile to India, concurrent to Bangladesh, Sri Lanka and Nepal at the CEEW webinar, A Multilateral Approach to Building a Global Hydrogen Economy, 08 September 2021.

LORD ANTHONY BAMFORD. Chairperson, JCB at the CEEW-JCB roundtable, Green Hydrogen: Opportunities for India-UK Partnership, 22 April 2022.



"Green hydrogen holds immense promise as a clean energy vector of the future. France and India can team up on green hydrogen to accelerate our clean energy transition, meet our carbon neutrality targets and strengthen our energy independence."

"Our discussions on green hydrogen are timely as both India and Chile plan their decarbonisation roadmaps. Green hydrogen has an important role to play in achieving our net-zero goals."

PRACTISING . SUSTAINABILITY @ CEEW

This year, CEEW proudly opened the doors to its two new homes in New Delhi and Lucknow. A labour of love and painstaking detail overseen by colleagues, our offices live and breathe sustainable choices. From recycled furniture and recyclable flooring to energy efficient lighting, every component has a sustainability story to tell.

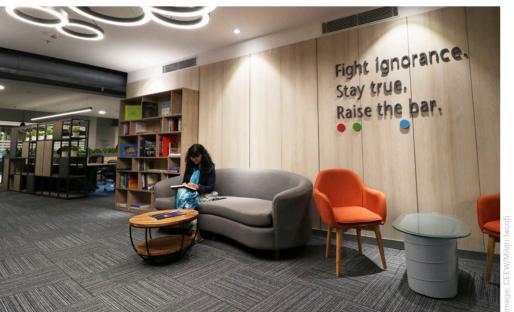


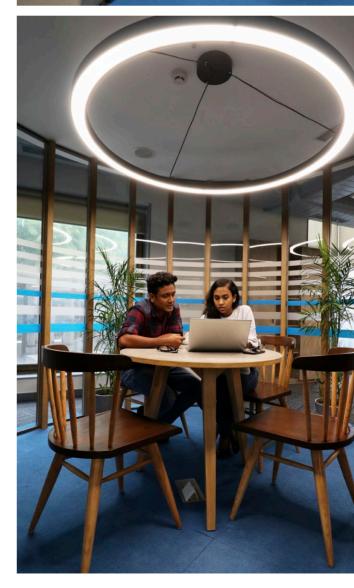
1,000+ **plants** across all three floors

60%

recycled material

used in the carpeting that is produced at an RE-powered factory







70% jute in the upholstery fabric

100% biodegradable Marmoleum on our floors



ss: Kartikeya Jain/CE

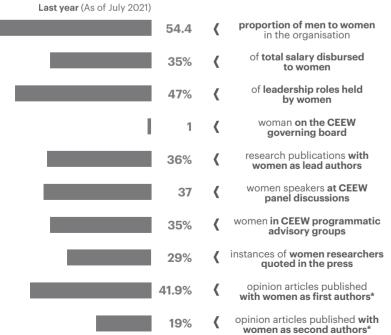
WOMEN IN SUSTAINAB

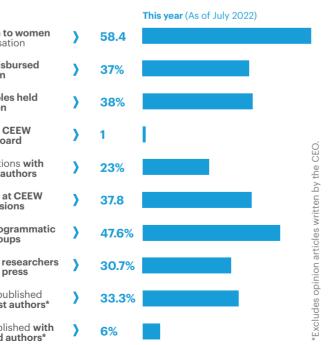
CEEW's Women in Sustainability (WiS) initiative is a network of individuals and institutions that aims to promote greater participation, inclusiveness, and visibility of women at all levels of the public policy workforce. Now in its fifth year, WiS has been empowering women to challenge the status quo through discussions, gender sensitivity trainings, book readings, film screenings and much more.



CEEW hosted RACHEL KYTE (C), Dean, The Fletcher School, Tufts University, for an interactive session Building Your Space in Sustainability Public Policy, 04 April 2022.

CEEW's Gender KPIs





PROPELLING CAREERS

People first at CEEW



Continuing our tradition of celebrating key milestones in our colleagues' professional journeys, we felicitated 21 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.



CEEW Leadership

Academy sessions were held in two cohorts -Winter Batch (September 2021) and Spring Batch (March - April 2022). In the two cohorts, workshops on topics such as managing people, building strategic government relationships, strengthening accountability, and developing a growthoriented mindset were organised.

Celebrating family



Leading up to our 12-year anniversary, our colleagues and their loved ones came together at our new office campus in New Delhi for a celebration. With over 120 family members, from grandparents to toddlers, joining us, it was a fun-filled day of guided office tours, film screenings, trivia guiz, sumptuous street food and more! 09 August 2022.



Informing Public Opinion

6,900+ media mentions

of CEEW's work in leading international and national media outlets such as Bloomberg, The Guardian, The Washington Post, The New York Times, The Indian Express, Hindustan Times, The Times of India, The Hindu, Mint, The Economic Times, Dainik Bhaskar, and Dainik Jagran.

~100 media appearances

of CEEW researchers in news channels such as Rajya Sabha TV, NDTV, CNBC TV18 and Al Jazeera.

82 op-eds

published in leading national and regional media outlets.

(September 2021 – August 2022)



A STATEMENT

or of the



Media mentions

India must colour coal cash green for mining communities to survive," PRATEEK AGGARWAL, guoted in The Economic Times, June 2022

To encourage sustainable use of groundwater, a system of individual groundwater rights and consumption-based electricity pricing is needed," NITIN BASSI, guoted in The Times of India, March 2022

Wind energy sector needs course correction," DISHA AGARWAL, quoted in *Hindu Business Line*, June 2022

"Targeted incentives likely for promoting green hydrogen," **HEMANT MALLYA**, quoted in *Business* Standard, January 2022

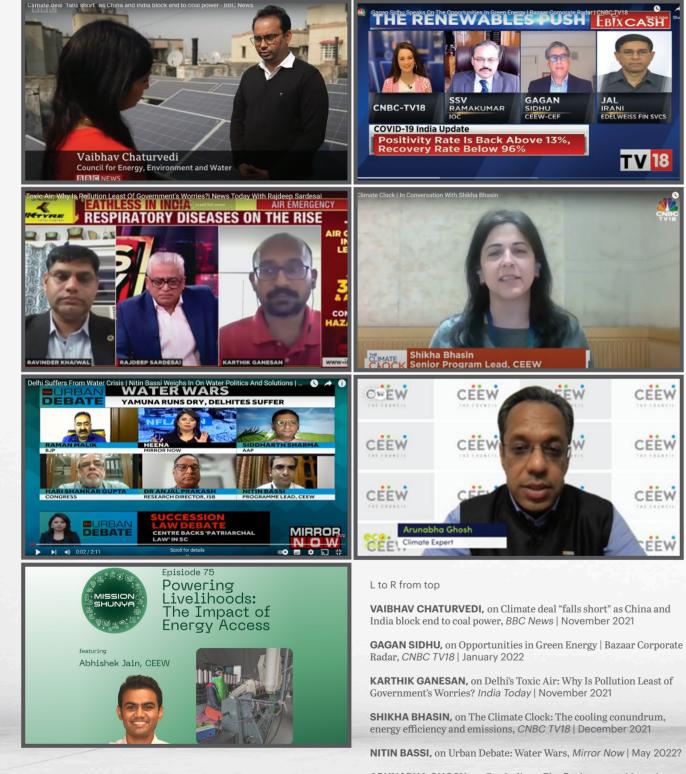
Sharp spike in farm fire episodes as peak pollution season nears," L.S. KURINJI, quoted in The Times of India, October 2021

India is seeking answers to a question that will concern us all: How do you cool a world that is getting hotter?" SHIKHA BHASIN, quoted in Neue Zürcher Zeitung, June 2022

For net-zero, India needs 5,600 GW of solar capacity, coal usage drop by 99%," CEEW **RESEARCH**, guoted in The Economic Times, November 2021

Electric 2- and 3-wheelers see highest-ever monthly sales in October," HIMANI JAIN, guoted in The Hindu Business Line, November 2021

Media appearances

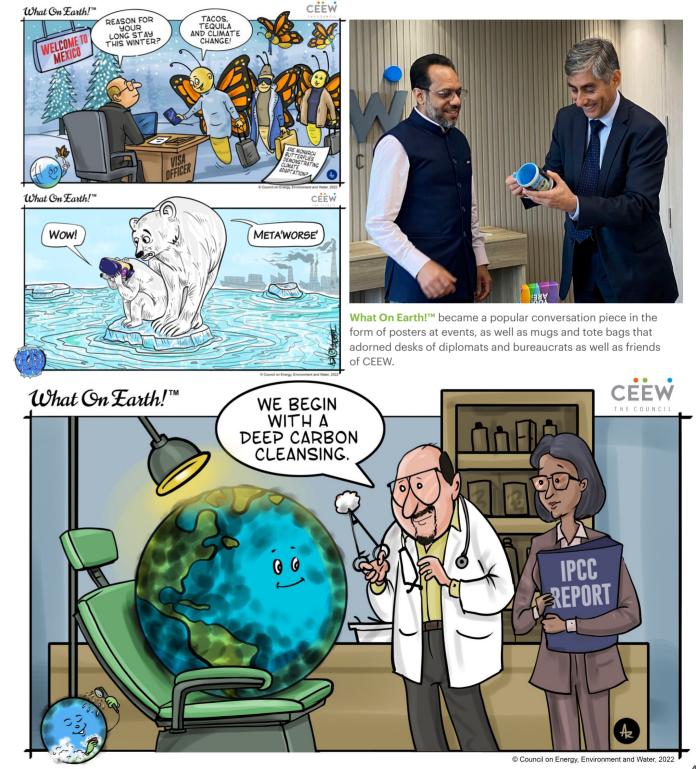


ARUNABHA GHOSH, on Eco India — The Environment Magazine, DW | August 2022

ABHISHEK JAIN, on Powering Livelihoods: The impact of energy access, Mission Shunya Podcast | March 2022

What On Earth!™ turns 1!

Dedicated to the planet, our Pale Blue Dot, CEEW is proud to present to you, What On Earth!™ Our cartoon series on sustainability. A new cartoon is published every Wednesday and on special days with a point or a counterpoint to ponder and share forward. #Sustainability



Outreach Innovations to Mainstream Sustainability

SHOWCASING GRASSROOT CLIMATE CHAMPIONS

Faces of Climate Resilience is a set of 16 short films that capture the voices of climate-vulnerable communities from different parts of India. The films cover stories of community resilience in the face of cyclones, floods, drought and forest fires across some of India's most climate-vulnerable states - Kerala, Maharashtra, Odisha, Rajasthan and Uttarakhand. The short films, supported by the India Climate Collaborative and EdelGive Foundation, were released in the lead up to COP27.





Watch the FCR films here

A PERFORMANCE POETRY VIDEO ON CLIMATE ACTION!

Portrait of a Silver Lining, a CEEW-SEI production, showcases a poem written and performed by **SIMAR SINGH**, a young poet from the Global South. The video urges viewers to take bold climate action and pursue accountability to heal our planet. The performance poetry video is the artiste's interpretation of the messages in the CEEW-SEI scientific report, *Stockholm+50: Unlocking a Better Future*.







CEEW

Watch the performance poetry video here

GOING LIVE WITH A FARMING INFLUENCER



~600 enquiry calls received by Raheja Solar from potential customers

6.5 lakh+ views on Facebook

CAN YOU GET TO NET-ZERO? A CEEW STRATEGY GAME



PUBLIC SERVICE AD ON SUSTAINABLE COOLING



Promoted on YouTube targeting AC users in Delhi-NCR, it nudges viewers to 'Take Care' of their ACs through good servicing practices, which can optimise their cooling performance and reduce power consumption.

2.5 lakh+ viewers on YouTube in less than a fortnight

For the Powering Livelihoods (PL) programme, CEEW-Villoro collaborated with DARSHAN SINGH, a popular farmer influencer who runs an online channel, Farming Leader. The followers of the channel are primarily based in rural India and practice farming along with other allied activities. In the Facebook Live video, Darshan spoke with the PL-supported enterprise Raheja Solar and its end users.



Watch the video here

CEEW developed and launched this strategy and simulation game ahead of COP26 to help sectoral experts understand the scale and pace needed for India's energy transition. It allowed users to choose India's net-zero target year by exploring combinations of technology developments available.



Play the game here

CEEW-SHEETAL produced and launched a consumer-focused public service advertisement (PSA), Take Care, during the summer of 2022.



Watch the ad here



Research Publications

01 September 2021 to 31 August 2022

REPORTS/BOOKS

Mani, Sunil, Shalu Agrawal, Abhishek Jain, and Karthik Ganesan. 2021. State of Clean Cooking Energy Access in India: Insights from the India Residential Energy Survey (IRES) 2020. New Delhi: Council on Energy, Environment and Water.

Yadav, Deepak, Ashish Guhan, and Tirtha Biswas. 2021. *Greening Steel: Moving to Clean Steelmaking Using Hydrogen and Renewable Energy*. New Delhi: Council on Energy, Environment and Water.

Ghosh, Arunabha and Sanjana Chhabra. 2021. Speed and Scale for Disruptive Climate Technologies: Case for a Global Green Hydrogen Alliance. A GCF-CEEW Report. Stockholm: Global Challenges Foundation.

Sahdev, Garvit, Shruti Jindal and Abhishek Jain. 2021. *Solar-Powered Silk Spinning and Reeling Machines: How Big is the Opportunity?* New Delhi: Council on Energy, Environment and Water.

Jain, Abhishek, Arunabha Ghosh, and Sanjana Chhabra. 2021. Powering Livelihoods Globally through Clean Energy. A GCF-CEEW Report. Stockholm: Global Challenges Foundation.

Ghosh, Arunabha, and Nandini Harihar. 2021. *Coordinating Global Risk Mitigation for Exponential Climate Finance*. A GCF-CEEW Report. Stockholm: Global Challenges Foundation.

Malyan, Ankur and Vaibhav Chaturvedi. 2021. *The Carbon Space Implications of Net Negative Targets*. New Delhi: Council on Energy, Environment and Water.

Dutt, Arjun, Pablo Gonzalez, Nikhil Sharma, Lucila Arboleya, and Ruchita Shah. 2021. *Clean Energy investment Trends: Mapping Project-Level Financial Performance Expectations in India*. New Delhi, Paris: Council on Energy, Environment and Water; International Energy Agency.

Tyagi, Akanksha, Charu Lata, Jessica Korsh, Ankit Nagarwal, Deepak Rai, Sameer Kwatra, Neeraj Kuldeep, and Praveen Saxena. 2021. *India's Expanding Clean Energy Workforce*. New Delhi: Council on Energy, Environment and Water, Natural Resources Defense Council, and Skill Council for Green Jobs.

Goel, Siddharth, Rashmi Murali, Anas Rahman, Prajnashish Swain, Balasubramanian Viswanathan, Shalu Agrawal, Christopher Beaton, Mini Govindan, Abhishek Jain, Debajit Palit. 2021. Implementing Solar Irrigation Sustainably: A Guidebook for State Policy-makers on Maximizing the Social and Environmental Benefits from Solar Pump Schemes. Winnipeg: International Institute for Sustainable Development.

Aggarwal, Dhruvak and Shalu Agrawal. 2022. *Business Model for Scaling Up Super-Efficient Appliances: A Deep Dive on Ceiling Fans in India*. New Delhi: Council on Energy, Environment and Water.

Reynolds, Jesse, Arunabha Ghosh, Nandini Harihar and Prayank Jain. 2022. *Solar Radiation Modification: Governance Gaps and Challenges*. Carnegie Climate Governance Initiative (C2G), New York: www.c2g2.net.

Malyan, Ankur, Pallavi Das, Puneet Kamboj, Sweta Jha, Ujjawal, and Vaibhav Chaturvedi. 2022. *India's Vision Towards a Net-Zero Economy: Stakeholder Perspectives*. New Delhi: Council on Energy, Environment and Water.

Gupta, Akash Som, Bhawna Tyagi, Neeraj Kuldeep, and Selna Saji. 2022. Unlocking Demand for Residential Rooftop Solar in India: Learnings from Solarise Delhi Campaigns. New Delhi: Council on Energy, Environment and Water.

Aggarwal, Dhruvak, Nhilce Esquivel, Robin Hocquet, Kristiina Martin, Carol Mungo, Anisha Nazareth, Jaee Nikam, Javan Odenyo, Bhuvan Ravindran, L. S. Kurinji, Zoha Shawoo, and Kohei Yamada. 2022. *Charting a Youth Vision for a Just and Sustainable Future*. Stockholm: Stockholm Environment Institute and Council on Energy, Environment and Water. Garg, Shreyas and Rishabh Jain. 2022. Making India a Leader in Solar Manufacturing: Ways to Achieve Technology Leadership and Global Competitiveness. New Delhi: Council on Energy, Environment and Water.

Dixit, Himanshu and Shikha Bhasin. 2022. *Technology Gaps in India's Air-Conditioning Supply Chain: Enhancing Jobs, Growth and Sustainability.* New Delhi: Council on Energy, Environment and Water.

SEI & CEEW. 2022. Stockholm+50: Unlocking a Better Future. Stockholm: Stockholm Environment Institute. DOI: 10.51414/sei2022.011

Aggarwal, Prateek, Siddharth Goel, Tara Laan, Tarun Mehta, Aditya Pant, Swasti Raizada, Balasubramanian Viswanathan, Anjali Viswamohanan, Christopher Beaton, and Karthik Ganesan. 2022. Mapping India's Energy Policy 2022: Aligning Support and Revenues with a Net-Zero Future. Winnipeg: International Institute for Sustainable Development.

Khalid, Wase, Abhishek Jain, Shruti Jindal, and Arpan Thacker. 2022. Mainstreaming Micro Solar Pumps to Improve Incomes of Marginal Farmers. New Delhi: Council on Energy, Environment and Water.

Kamboj, Puneet, Ankur Malyan, Harsimran Kaur, Himani Jain, and Vaibhav Chaturvedi. 2022. *India Transport Energy Outlook*. New Delhi: Council on Energy, Environment and Water.

Tyagi, Akanksha, Sharayu Shejale, and Neeraj Kuldeep. 2022. Upgrading Suryamitra Skill Development Programme: Improving Uptake and Employability of Suryamitras in the Solar Sector. New Delhi: Council on Energy, Environment and Water.

Umemiya, Chisa, Sumit Prasad, and Shikha Bhasin. 2022. *M&E* Frameworks for Capacity Building in Climate Transparency: A Comparative Review of Two Quantitative Approaches. New Delhi: Council on Energy, Environment and Water.

JOURNAL PAPERS/BOOK CHAPTERS/OTHER PAPERS

Chaturvedi, Vaibhav. 2021. 'A Vision for a Net-Zero Energy System for India' in *Energy and Climate Change*, Volume 2, 100056, ISSN 2666-2787, https://doi.org/10.1016/j.egycc.2021.100056.(https://www.sciencedirect. com/science/article/pii/S2666278721000337)

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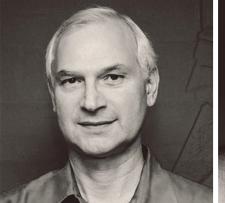
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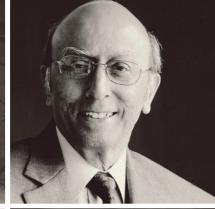
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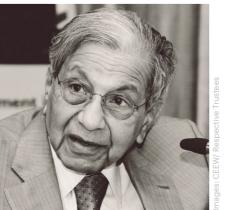
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REIMAGINE is a piece of art depicting a new way of life built on respect for all beings and care for the planet. It was made for CEEW by our creative partners, Aravani Art Project, a trans and ciswomen-led art collective.

Artists: Deepak, Hamsa, Prarthana, Purushi, and Shwetha.

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