



Shaping the Decarbonisation Future of Jharkhand



Report Back of Conference

Facilitating Decarbonisation in Jharkhand

05 December 2023, Ranchi

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About Task Force on Sustainable Just Transition, Jharkhand

The Government of Jharkhand has established a Task Force on Sustainable Just Transition to support national climate goals of achieving net-zero emissions by 2070 along with addressing associated socio-economic issues. The Task Force aims to provide key recommendations to the Government of Jharkhand on the sustainable transition for future-readiness by identifying innovative pathways for transitioning to a non-fossil fuel-based ecosystem, assessing the impact on the economy, identifying opportunities in green sectors, and recommending policy interventions. The Task Force's work will support economic development and job creation in Jharkhand while achieving climate goals.

About CEED

Centre for Environment and Energy Development (CEED), an environment and energy expert group, is involved in creating sustainable solutions to maintain a healthy, rich and diverse environment. CEED primarily works towards energy transition, ambient air quality, clean water for all and zero waste solutions by creating an enabling ecosystem to scale up investments in low carbon development pathways, climate mitigation and adaptation. CEED engages with industries, think tanks, stakeholders and the public to create environmentally responsible and socially just solutions. CEED is the technical partner to the Task force on Sustainable Just Transition (GoJ).

For further details, please contact

Task force-Sustainable Just Transition (GoJ)
E-mail : sjtjharkhand.office@gmail.com

Centre for Environment and Energy Development (CEED)
(Technical Partner to the Task Force), Email : info@ceedindia.org

Designed by:

SRAS Graphics

Acknowledgments

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Foreword



Decarbonisation is not just a buzzword, it's a commitment to sustainable development. Accepting decarbonisation means opening doors for innovation, creating new jobs in green technologies, and attracting sustainable investments. Creating a roadmap that fosters a circular economy, minimizes waste, and maximizes resource efficiency is a must. It is also about building a resilient economy that thrives in harmony with nature.

The journey toward decarbonisation will require determination, collaboration, and perseverance. Moreover, this journey isn't just about reducing emissions but it's about creating new opportunities. With our collective efforts, we can transform Jharkhand into a model of sustainability and prosperity.

One way to enhance the efforts is to focus on developing a comprehensive cross-sectoral decarbonisation framework for the state. This will help ensure that all sectors are working towards the same goal of reducing carbon emissions and transitioning to a more sustainable future.

We are happy to share the report back of the conference 'Facilitating Decarbonisation in Jharkhand' to further inform policy discussions and move towards creating sectoral pathways.

The need is to inspire change by setting examples. Implementation of sustainable practices is inevitable and is the right thing to do for our planet and future generations.

Shri A.K. Rastogi, IFS (Retd.)

Chairman, Task Force-Sustainable Just Transition
Government of Jharkhand

Message



The journey towards sustainable transition is not easy, yet it is inevitable. It requires bringing all stakeholders' concerns onboard and putting a convergence of efforts with a unitary vision of creating a low carbon economy in the state.

Decarbonisation is a necessary process for moving towards net zero scenarios. This requires implementing measures that fosters economic sustainability by encouraging the growth of eco-friendly and green industries, attracting investments, and ensuring long-term economic resilience.

It also places the need to formulate decarbonisation pathways and action plans tailored to the unique challenges of hard-to-abate industries and MSMEs in the state.

A comprehensive cross-sectoral decarbonisation framework is important to ensure seamless alignment of the strategy with the state's overarching goals, fostering a synergistic approach to sustainable development.

This is a shared journey, where every contribution made by stakeholders has immense value. Collaboration with industries, business associations, research institutions and experts will be essential in finding eco-friendly alternatives and implementing efficient solutions. This will not only benefit the environment but also create new opportunities for innovation and economic growth.

Shri Ramapati Kumar

Chief Executive Officer

Centre for Environment and Energy Development (CEED)



Executive Summary

Jharkhand, a state which foresees economic development, climate-resilient future and environmental sustainability, counts on some concrete decarbonisation strategies. The focus of the state is on understanding the ongoing issues and challenges, particularly how they manifest at local scales and communities. The exploration of pathways for decarbonizing the economy in the state forms a core part of the strategy, recognizing the significant impact of carbon emissions. The conference “Facilitating Decarbonisation in Jharkhand” marked a significant stride towards understanding and addressing the challenges of reducing carbon emissions, from various economic sectors. With a focus on the unique environmental and socio-economic landscape of Jharkhand, the conference brought together a diverse range of experts to explore innovative strategies and best practices in the journey towards net-zero emissions. Keynote speakers and panel discussions also shed light on global best practices in decarbonisation, offering insights into how these could be adapted and implemented in the context of Jharkhand. The importance of collaboration emerged as a recurrent theme, with discussions underscoring the need for synergies between industries, associations, and government bodies to foster a climate-resilient economy. Some salient features of the conference which are relevant to the state are summarised further.

Green Mobility and Net-Zero Targets

Central to Jharkhand’s decarbonisation efforts is the concept of green mobility. This encompasses a shift towards low-emission vehicles, such as electric vehicles (EVs), and the exploration of hydrogen initiatives as a sustainable fuel alternative. The goal is to align these initiatives with the broader net-zero target, ensuring that mobility in Jharkhand not only becomes more efficient but also environmentally friendly. This transition includes not just private vehicles but also public transit systems, highlighting the role of EVs in revolutionizing mobility and public transportation.

In addition to focusing on mobility, the industrial sector in Jharkhand also plays a pivotal role in the state’s decarbonisation efforts. Industrial decarbonisation involves reimagining and restructuring manufacturing processes, energy usage, and waste management to significantly reduce carbon emissions. This aspect is particularly crucial in Jharkhand, given the state’s rich mineral resources and heavy reliance on industries such as mining and manufacturing. Strategies for industrial decarbonisation discussed include the adoption of cleaner and more efficient technologies, the transition to renewable energy sources, and the implementation of carbon capture and storage solutions. The role of industries and associations becomes integral in this context, not only in adopting these new technologies but also in driving innovation and investment in sustainable practices. The discussion around industrial decarbonisation underscores the necessity of an integrated approach that encompasses all major sectors contributing to carbon emissions, ensuring a comprehensive and effective path towards a decarbonized economy in Jharkhand.

Global Best Practices and Local Implementation

Drawing from global experiences, the discussions then pivot to integrating these best practices within the local context of Jharkhand. This involves adapting successful strategies from around the world to suit the specific needs and constraints of the region. Such an approach ensures that the strategies for decarbonizing mobility are both effective and sustainable in the long term. Recognizing the multi-faceted nature of decarbonisation, there is an emphasis on the role of various stakeholders, including industries, associations, and government bodies. Collaborative efforts are deemed essential in building a climate-resilient economy. These collaborations aim to create synergies that can drive more significant progress in decarbonisation efforts.

Enablers and Initiatives

Finally, the focus shifts to identifying the key enablers for decarbonisation in Jharkhand. This includes finding win-win situations that benefit both the environment and the economy. Ongoing initiatives are reviewed, with an eye on scaling up successful models and exploring innovative approaches to tackle the decarbonisation challenges. The conference concluded with a focus on enablers for decarbonisation, where practical initiatives and potential win-win situations for both the environment and the economy were identified. These sessions provided actionable insights and set the stage for ongoing and future efforts in the region.

The journey towards decarbonisation in Jharkhand is multi-dimensional, involving a thorough understanding of local challenges, the adoption of green mobility solutions, learning from global best practices, collaborative stakeholder engagement, and identifying enablers for sustainable progress. These concerted efforts are crucial in steering Jharkhand towards its goal of achieving a net-zero carbon footprint, thereby contributing to the broader global fight against climate change.



State Level Conference Facilitating Decarbonisation in Jharkhand

05 December 2023, Ranchi



Notable Speakers



Shri A.K. Rastogi, IFS (Retd.)
Chairman
Task Force-Sustainable Just Transition
Government of Jharkhand



Dr. D. K. Saxena, IFS
APCCF
Government of Jharkhand



Shri Arava Rajkamal, IAS
Director-Mines
Department of Mines & Geology
Government of Jharkhand



Shri Bhor Singh Yadav, IAS
Director
Department of Industries
Government of Jharkhand



Shri Pradip Kumar
Joint Transport Commissioner
Department of Transport
Government of Jharkhand



Shri Ramapati Kumar
Chief Executive Officer
Centre for Environment and
Energy Development (CEED)



Shri Ajit Dhanraj Kothari
Chief (Sustainability and
Decarbonisation Projects, E&P)
Tata Steel



Shri Amit Bhatt
Managing Director
International Council on
Clean Transportation (ICCT)



Shri M. Vidya Sagar
Senior Manager, Hydrogen,
National Thermal Power
Corporation (NTPC)



Shri H.K. Sethi
AGM, EMG
NTPC Ltd. (North Karanpura)



Ms. Sweta Khoshy
Project Analyst
UNDP India



Ms. Aparna Vijaykumar
Senior Program Manager –
Electric Mobility,
WRI India



Dr. Manish Kumar
Director (R&D)
Centre for Environment and
Energy Development (CEED)



Shri Aditya Malhotra
Vice President
FJCCI

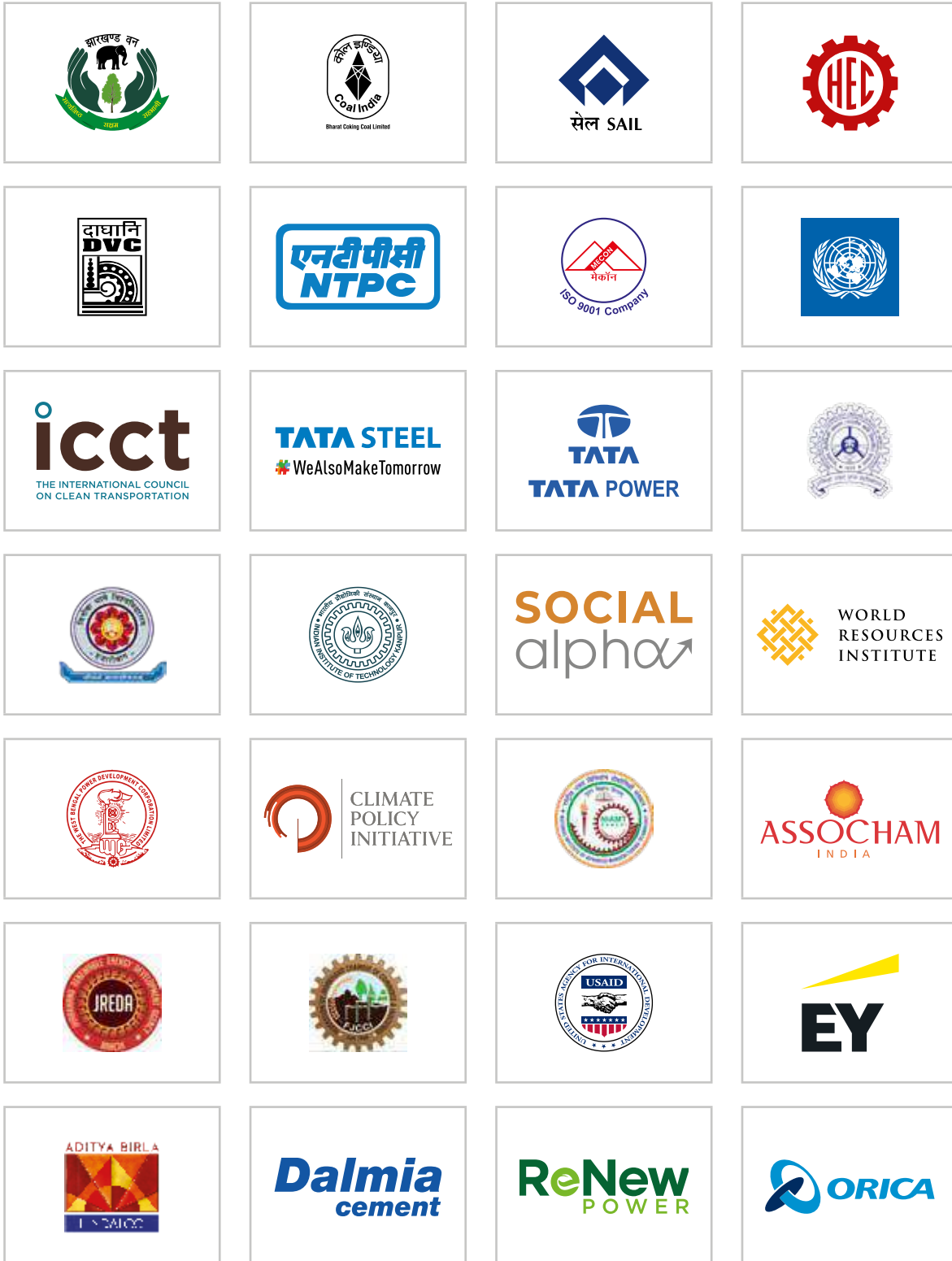


Shri Prasanta Bose
Vice President, Head –
Technical, Sustainability &
Production Planning
Hindalco Industries Ltd.



Shri Abhishek Biswas
Director
Orica India

Participating Institutions & Industries



Key Recommendations

- ▶ Decarbonisation pathways are essential for the green growth of Jharkhand. The state has a substantial industrial base which presses it to take a leading role in spearheading climate change mitigation and adaptation efforts and embrace decarbonised pathways.
- ▶ For undertaking a journey towards decarbonisation and just transition, identifying 'hard-to-abate' industries and MSMEs, is crucial. This involves evaluating direct and indirect emissions from them following IPCC Scopes 1 and 2 and considering emissions from supply chains (Scope 3). As a solution, creating industry and sector-specific decarbonisation pathways is important.
- ▶ In order to decarbonize the steel, cement, and allied sectors, businesses are in need to alter whole manufacturing methods in addition to developing new, more dependable technologies. Environment Social Governance (ESG) compliances and Sustainability Reporting can bring the required changes.
- ▶ Government agencies must come to an agreement on an ambitious vision for the industrial decarbonisation and provide hand-holding support, capacity building and facilitate incentivisation to bring the industry and business players onboard.
- ▶ Initiatives required to conserve existing forests and undertake large-scale reforestation efforts that can contribute significantly to carbon sequestration and mitigate the effects of climate change. This also involves exploring the state's potential in the carbon market, tailoring strategies to suit different industry scales and impacts.
- ▶ To achieve effective decarbonisation of the mobility sector in Jharkhand, focus should be on ensuring the widespread availability of affordable cleaner fuels, adopting low-carbon-emitting fuel alternatives, and exploring the integration of hydrogen-based solutions.
- ▶ Investing in technologies that capture Greenhouse Gas (GHG) emissions from industries and transport, preventing them from entering the atmosphere and to encourage the use of green hydrogen energies and cleaner fuels such as compressed natural gas (CNG) in vehicles and industries to further reduce emissions.
- ▶ Encouraging the adoption of electric vehicles in the transport sector by offering incentives, establishing charging infrastructure, and promoting the use of EVs in public transport and enhancing public transportation systems to reduce reliance on private vehicles, thereby decreasing emissions from individual vehicles.
- ▶ Sharing knowledge, tech know-how and exchanging best practices are important. Emphasis should be on the establishment of partnerships to expedite the alignment of actions towards creating a resilient and low-carbon future.
- ▶ It is recommended to create a collaborative forum and convergence of actions involving key stakeholders from diverse sectors to plan and execute the viable pathways for decarbonizing Jharkhand.

Introduction

Jharkhand, a state rich in mineral resources, is at a crucial juncture of environmental challenges and developmental needs, making its shift towards a low-carbon economy both imperative and complex.

India's pledge at COP26, encapsulated in the "Panchamrit" or "The Gift of Five Elixirs", outlines an ambitious roadmap for 2030, including enhancing non-fossil energy capacity to 500 GW, meeting 50% of energy needs from renewables, reducing carbon emissions by one billion tonnes, and cutting carbon intensity of its economy by less than 45%, with a long-term vision of achieving net-zero by 2070.

Jharkhand's role in this national narrative is significant due to its heavy reliance on mineral resources and the environmental impact of its industrial and urban expansion. The state faces direct threats from climate impacts to its forests and water resources, essential for ecological balance and community well-being.

To navigate these challenges, Jharkhand has initiated comprehensive measures focusing on carbon budgeting and accounting. This involves evaluating direct and indirect emissions following IPCC Scopes 1 and 2 and considering emissions from supply chains (Scope 3). Such an approach is pivotal for assessing Jharkhand's contribution to national carbon emissions and formulating strategies tailored to the state's industrial sector.

The Task Force-Sustainable Just Transition (GoJ) and its technical partner Centre for Environment and Energy Development (CEED) have organized a series of consultations & workshops and created collaborative platforms, which is a testament to the state's commitment to decarbonisation. These forums bring together government bodies, sustainability organizations, and industry stakeholders to discuss current GHG emissions, address challenges in their measurement and reporting, and develop strategic roadmaps towards a net-zero scenario.

These efforts are crucial for Jharkhand to not only mitigate its environmental impact but also to contribute significantly to India's overall goals of sustainable and climate-resilient development.

Jharkhand's path towards decarbonisation, aligned with India's national targets and global commitments, highlights the state's proactive role in the transition to a low-carbon economy. It showcases the integration of environmental priorities with developmental objectives, crucial for achieving the dual goals of ecological sustainability and economic growth in the face of global climate challenges.



Motivation

The state-level conference 'Facilitating Decarbonisation in Jharkhand,' organised by the Task Force and CEED, was primarily motivated by the urgent need to address and mitigate the challenges of carbon emissions in the region. Aimed at crafting specific decarbonisation strategies for Jharkhand, the conference brought together a diverse array of stakeholders, including government bodies, industries, and technology firms.

This collaboration was focused on discussing and outlining practical and sustainable pathways for reducing carbon emissions across various sectors. By pooling strategic inputs and fostering a commitment among the key players, the conference sought to initiate a sustainable and socially just transition towards a lower-carbon future in Jharkhand, emphasizing the importance of tailored solutions to meet the unique environmental, economic, and social challenges of the state.

Goals and Objective of the conference

The conference was aimed to spearhead a low-carbon future in Jharkhand by addressing carbon emission challenges and developing tailored decarbonisation strategies. Its objective was to unite key stakeholders, including government, industry, and tech firms, to collaborate on sustainable solutions and pledge support for a just and effective transition to a greener economy, focused on the specific needs and dynamics of the region.

The conference had the following major objectives:

- ▶ Developing decarbonisation strategies for Jharkhand's industry and transport sector by bringing together all stakeholders concerned.
- ▶ Integrating global best practices for decarbonising varied sector in the local context of Jharkhand.
- ▶ Creating industry-specific decarbonisation pathways, particularly for high-emission industries like the steel, iron & cement sector.
- ▶ Fostering collaboration among industries, associations, and stakeholders for a climate-resilient economy and sustainable growth.

Structure of the Conference

The conference was meticulously structured into a series of sessions focusing on the decarbonisation of various sectors in Jharkhand. The conference began with a plenary session, which included a ceremonial lighting of the lamp, welcome addresses, and keynote speeches that set the context for the discussions to follow.

The conference was divided into two main sessions:

Session 1: Pathways for Decarbonising Mobility in Jharkhand

This session was chaired by the Director-Mines of the Department of Mines & Geology. It included discussions on strategies for decarbonizing mobility, with topics such as hydrogen initiatives for green mobility, transforming mobility through hydrogen, revolutionizing mobility and public transit with electric vehicles, and global best practices for decarbonizing the mobility sector. Speakers from various organizations, including the International Council on Clean Transportation, NTPC, Tata, WRI India, and UNDP, shared their insights.

Session 2: Pathways for Decarbonisation in Jharkhand

Chaired by the Director of the Department of Industries, this session focused on understanding the challenges of decarbonisation in Jharkhand. The session featured speakers from various sectors, including research think-tanks, industry associations, and major companies like Tata Steel, Dalmia Cement Bharat Ltd., Hindalco Industries Ltd., and Orica India. The topics ranged from the role of industries in a climate-resilient economy, enablers for decarbonisation, decarbonisation pathways for the cement and other industries, and industrial decarbonisation pathways.

Each session had an open discussion and concluding remarks by the session chair, facilitating a comprehensive and engaging dialogue. The conference provided a platform for key stakeholders, including government departments, industry leaders, and experts, to collaborate and discuss viable pathways for achieving decarbonisation in Jharkhand.



Plenary Session

The session began with a welcome address by Shri Ramapati Kumar, CEO of CEED, who reflected on the evolving nature of the climate change discourse over the last two decades. He highlighted the transition of climate change from a marginal issue to a central topic in global policy discussions, emphasizing the need for collaborative action at various levels.

Shri Amit Bhatt from the International Council on Clean Transportation (ICCT) spoke about the severe air pollution crisis in North India, especially around Delhi. He stressed the need for a clean transport system that not only addresses environmental concerns but also bolsters industrial productivity and economic sustainability.

Dr. D. K. Saxena, IFS, APCCF Additional Principal Chief Conservator of Forests then took the stage, emphasizing Jharkhand's crucial role in climate change mitigation and adaptation, especially given the state's extensive industrial sector. He pointed out the urgency of immediate action against climate change, highlighting its widespread impact across both urban and rural communities.

The session culminated with a keynote address by Shri Ajay Kumar Rastogi (IFS, Retd.), Chairman, Task Force-Sustainable Just Transition (GoJ). Mr. Rastogi underscored the significant role of the industry and business sectors, traditionally the drivers of economic growth, employment generation, and social development. He emphasized that catalyzing the green transition necessitates collaborative efforts from all key stakeholders to shape a carbon-neutral and inclusive future.

Overall, the inaugural session set a powerful tone for the conference, emphasizing the urgency and collaborative nature of creating pathways for decarbonisation. Each speaker brought a unique perspective, collectively highlighting the need for immediate, effective, and inclusive action in the journey towards sustainable development and decarbonisation in Jharkhand.



Key Highlights



Climate change has transitioned from a fringe topic to a mainstream global concern, emphasizing its growing importance in global events and policy-making.



Jharkhand is identified as a key state for leading climate change mitigation and adaptation efforts, given its industrial profile and potential for innovation.



The energy sector's substantial contribution to greenhouse gas emissions was highlighted, underscoring the need for focused decarbonisation strategies in this area.



Clean transportation solutions are advocated for, noting their dual benefits for environmental sustainability and industrial productivity.



The importance of state-level action in implementing climate change strategies is emphasized, with a call for Jharkhand to serve as a model state for others.



The Task Force's role in bringing together various stakeholders, including government, industry, and environmental experts, is crucial for deliberating on decarbonisation pathways.



There is a growing global and national consensus on the need for urgent action against climate change, as observed in international forums and corporate discussions.



Addressing the complexities and challenges in decarbonizing traditionally carbon-intensive industries, such as steel, iron and cement, is crucial for effective climate action.



Balancing economic concerns with environmental imperatives is recognized as essential in the journey towards sustainable development and effective climate strategies.

Key Speakers:



"Given that Jharkhand is an industrial state with a significant presence of hard to abate industries like iron-steel & cement and MSME clusters, it is imperative that industrial and business actors prioritize decarbonisation. The task force is working to identify strategies for a low carbon pathway, which is vital for both local and global environmental goals. Catalyzing the green transition necessitates collaborative efforts from all stakeholders to shape a carbon-neutral and inclusive future.

Shri A.K. Rastogi, (IFS, Retd.)

Chairman, Task Force- Sustainable Just Transition
Government of Jharkhand



The effects of climate change are starkly visible globally and locally. The actions should be multifaceted and farsighted. Jharkhand must take a leadership role in mitigating and adapting to the climate impacts and set the benchmark for others. Emphasis should be given on forging partnerships and knowledge sharing to expedite the alignment of actions towards creating a resilient and low-carbon future."

Dr. D. K. Saxena, IFS

Additional Principal Chief Conservator of Forests
Government of Jharkhand



"Climate change has evolved from being a fringe topic to a mainstream concern, affecting us on a global, national, and state level. Jharkhand has the unique opportunity to lead by example, showing how integrated action can address this pressing global issue. Jharkhand has to take a pivotal role, given its industrial background, especially in sectors like steel, cement, and fertilizer. Convergence of actions from public and private players are vital for creating effective and sustainable decarbonisation pathways in the state."

Shri Ramapati Kumar

Chief Executive Officer
Centre for Environment and Energy Development (CEED)



"Climate change is a year-round, pervasive challenge affecting the Indo-Gangetic Plain. In the transport sector, there's a clear pathway to cleaner systems. This transition is not just crucial for the climate but also for boosting industrial productivity and competitiveness. Jharkhand's endeavour to decarbonisation is not only a step towards preserving the environment but also a proactive measure to enhance the quality of life for its citizens."

Shri Amit Bhatt

Managing Director
International Council on Clean Transportation (ICCT)



CEED

State Level Conference Facilitating Decarbonisation in Jharkhand

05 December 2023, Ranchi



Session 1

Pathways for Decarbonising Mobility in Jharkhand



Overview:

In Jharkhand, decarbonizing the mobility sector is a key issue with wide-reaching outcomes for both ecological sustainability and public welfare. As the state's urbanization and industrial activities increase, the transportation sector is becoming a major source of carbon emissions and air pollution. Meeting the goal of decarbonisation necessitates a multifaceted approach, such as the propagation of electric vehicles to reduce reliance on fossil fuels, the improvement of public transportation infrastructure to reduce personal car use, and the promotion of active forms of mobility such as cycling and walking.

This move towards greener mobility is consistent with global attempts to accomplish net-zero emissions and limit the effects of climate change. Jharkhand's endeavour to decarbonize its mobility sector is not only a step towards preserving the environment but also a proactive measure to enhance the quality of life for its citizens.

Moreover, utilizing hydrogen as a clean fuel in the transportation sector provides a sustainable choice, reducing carbon emissions and meeting the state's aspirations for a cleaner and healthier future.

This comprehensive discussion for decarbonizing mobility in Jharkhand communicates a dedication to sustainable development and emphasizes the interconnectedness of environmental, economic, and social well-being.

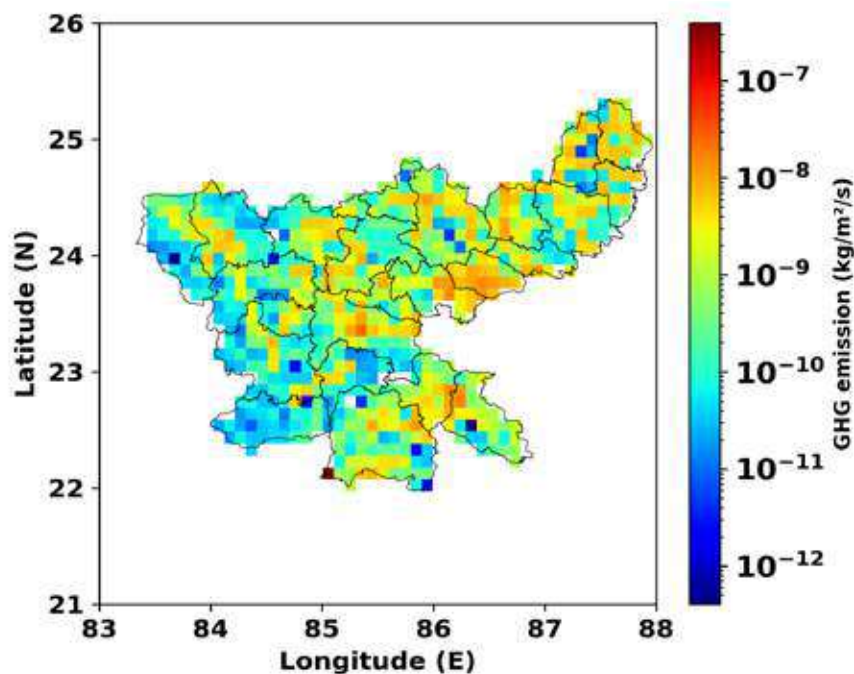


Fig 1: GHG emission from transport sector

The GHG (Greenhouse Gas) Emission Map for the Transport Sector provides a comprehensive visual representation of greenhouse gas emissions within various subsectors of the transportation industry. This map relies on data sourced from the Emissions Database for Global Atmospheric Research (EDGAR) for the year 2021 and presents emissions in units of kilograms per square meter per second ($\text{kg}/\text{m}^2/\text{s}$). It encompasses several key subsectors within the transportation sector, including Shipping, Road Transportation, Railways, Pipelines, Off-road Transport, and others.

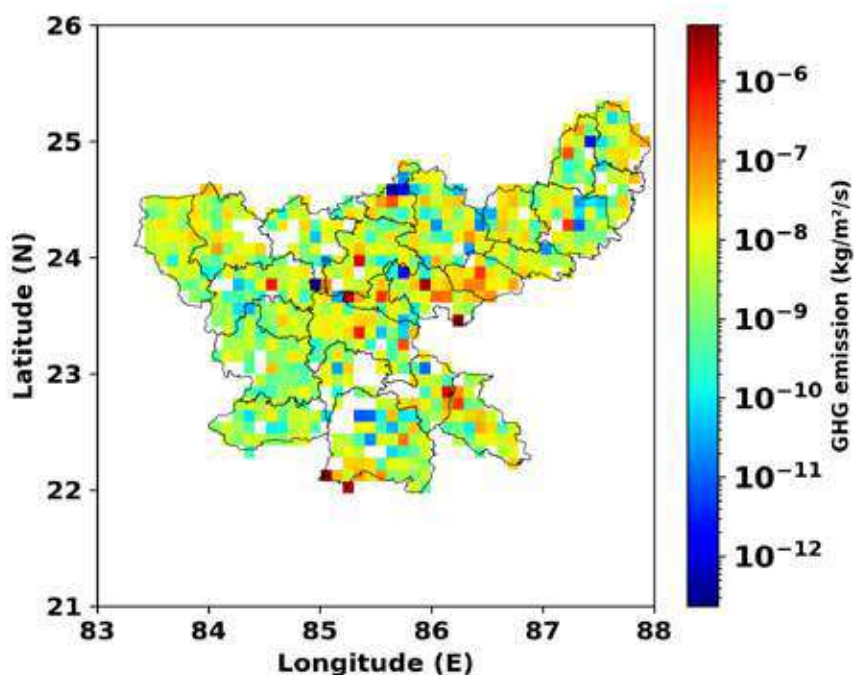


Fig 2 : GHG emission from industry sector

The GHG (Greenhouse Gas) Emission Map for the Industry Sector offers a comprehensive visualization of greenhouse gas emissions within various subsectors of the industrial landscape, utilizing data from the Emissions Database for Global Atmospheric Research (EDGAR) for the year 2021 and presenting emissions in units of kilograms per square meter per second ($\text{kg}/\text{m}^2/\text{s}$). Subsectors, including oil refineries, fuel exploitation, power generation, non-ferrous metals production, iron and steel production, non-metallic minerals production, food and paper industries, fossil fuel fires, chemical processes, and combustion for manufacturing, are featured on the map.



Objectives

The conference aimed to delve into the significance of decarbonisation in the mobility sector, elucidating various pathways to achieve this goal. It particularly focuses on the initiatives and strategies for decarbonizing mobility in Jharkhand, aligning with the overarching objective of attaining net-zero emissions. Furthermore, the session explored the role of hydrogen in promoting green mobility within the state.

The first technical session focused on a key theme related to the Decarbonisation of Mobility in Jharkhand. This included discussions on sub-themes: 'Decarbonising Mobility for Net-Zero in Jharkhand', 'Strategies for Decarbonising Mobility in Jharkhand', 'Hydrogen Initiatives for Green Mobility', 'Electric vehicles: Revolutionising Mobility and Public Transit, and 'Global Best Practices for Decarbonising the Mobility Sector'.

The session was chaired by Shri Arava Rajkamal, IAS, Director-Mines, Department of Mines & Geology (Government of Jharkhand), who set the tone by highlighting the prospects within the challenges involved in the transition towards cleaner fuels in the mobility sector.

Other speakers of the session were Shri Pradip Kumar, Joint Transport Commissioner, Department of Transport (Government of Jharkhand); Shri Amit Bhatt, Managing Director, International Council on Clean Transportation (ICCT); Shri M Vidya Sagar, Senior Manager, Hydrogen, NTPC; Ms Aparna Vijaykumar, Senior Program Manager - Electric Mobility, WRI India; and Ms Sweta Khoshy, Project Analyst, UNDP.



Key Highlights



The transport sector in India is responsible for approximately 75,000 premature deaths. Hence, Jharkhand must prioritize the decarbonisation of its mobility sector to address this significant public health concern.



A strong emphasis was placed on the necessity for robust empirical evidence and technical analysis to effectively illustrate the pathway for decarbonizing the mobility sector.



The Jharkhand Electric Vehicle Policy 2022 aims to achieve a substantial increase in the contribution of electric vehicles (EVs) by setting a target of around 10% by the year 2026.



The FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) scheme provides incentives for the electrification of vehicles. The transition from FAME 1 to FAME 2 has significantly reduced the upfront costs and purchasing risks associated with electric buses and the necessary charging infrastructure.



It's crucial to acknowledge the limitations of EVs, characterized by an energy density ranging from 0.1 to 0.27 kilowatt-hour per kg. This is where hydrogen energy vehicles, particularly fuel cell electric vehicles (FCEVs), emerge as a game-changer. Hydrogen, with its impressive energy density of 39.6 kilowatt-hour per kg, stands out as a powerhouse, offering a solution nearly 400 times more efficient than traditional electric vehicles. This makes hydrogen a compelling and efficient choice, especially for addressing the challenges in long-haul transportation.



In the realm of electric mobility, the positive trend is evident, with electric vehicles accounting for 14% of total car sales last year. This indicates a growing demand, and projections suggest that the demand is poised to peak in the next three years.



The development of a low-carbon-based fuel system for freight transport is a crucial step towards sustainable and environmentally friendly transportation. Tata Cummins is actively addressing this challenge by exploring and implementing innovative solutions like Green Hydrogen based engine for heavy trucking.



The National Mineral Exploration Trust, armed with a corpus of 4000 crores, is strategically planning and executing projects focused on critical minerals. These minerals play a pivotal role in supporting the ongoing energy transition and fostering sustainable development.



The IPCC emphasizes the importance of urban space utilization, design, and transport infrastructure. Specifically, the focus is on promoting non-motorized modes of transport such as cycling and walking. Implementing dedicated cycling lanes and pedestrian paths in urban areas can contribute significantly to reducing congestion and optimizing urban spaces.

Key Recommendations

- ▶ Establishing a Sustainable Road Transport Corporation in Jharkhand can revolutionize the state's transportation landscape. By providing efficient, safe, and reliable public transport services, the corporation intends to enhance connectivity, boost economic activities, and contribute to sustainable mobility solutions for the residents of Jharkhand
- ▶ The majority of Jharkhand's districts heavily rely on coal for their livelihoods. Ensuring a smooth transition for these communities is crucial, especially with the target of reaching peak coal demand by 2035 and eventually reducing it. Timely and effective agents of transformation are essential due to the limited time available for this transition.
- ▶ To actively engage in collaborative efforts with the transportation department to accelerate the electrification of the transport sector. Industries should undertake projects focusing on EV infrastructure and vehicular technology to contribute significantly to this transformative initiative.
- ▶ Providing non-fiscal incentives to expedite a just transition in the transport sector. Additionally, there is a need for a robust quantification mechanism for transport emissions to accurately capture real-world emission scenarios.
- ▶ Given the absence of Regional Public Transport Corporations (RPC) in Jharkhand, there is an opportunity to implement the "PM-eBus Sewa scheme" and Regional Public Transport Corporations (RPC) - (RPTC) and explore initiatives in freight transport.
- ▶ Initiatives such as "eFast" can play a crucial role in creating awareness and providing support for building pathways toward electrification.



Key Speakers



"Jharkhand has substantial natural resources and critical mineral deposits to set the pace of the decarbonisation journey in the state and country as well. For transitioning towards a cleaner ecosystem, sector specific decarbonisation plans become pivotal which can open the doors for alternative opportunities and sustainable economic growth."

Shri Arava Rajkamal, IAS

Director-Mines
Department of Mines & Geology, Government of Jharkhand



"Encouraging people to use electric vehicles (EVs) plays a crucial role in contributing towards decarbonizing mobility. The state has an EV policy and various subsidies and grants are provided by the government for electric vehicles and cleaner transportations. The state is looking forward to a robust clean energy infrastructure aiding to efficient transport management."

Shri Pradip Kumar

Joint Transport Commissioner
Department of Transport, Government of Jharkhand



"Achieving self-reliance in terms of energy security entails reducing dependence on imported crude oil. Promoting rural electrification and electric mobility in India is crucial for upscaling cleaner and sustainable transportation. Incentives and hand-holding support can play a vital role in accelerating the adoption of sustainable energy practices, fostering self-reliance."

Shri Amit Bhatt

Managing Director
International Council on Clean Transportation



"The environmental impact of road transport, primarily due to CO2 emissions, underscores the urgency of transitioning to cleaner alternatives. Fuel Cell Electric Vehicles (FCEVs) emerge as a promising solution to mitigate these harmful emissions and pave the way for a more sustainable and eco-friendly future in the realm of transportation."

Shri M. Vidya Sagar

Sr. Manager, Hydrogen
National Thermal Power Corporation (NTPC)



"Jharkhand possesses the potential to employ demand aggregation as a cost-reduction strategy and to establish equity in the adoption of electric vehicles. Leveraging this potential could lead to a more economical and widespread acceptance of electric mobility within the region."

Ms Aparna Vijaykumar

Sr. Program Manager – Electric Mobility,
World Resources Institute (WRI) India



"India stands out as the fastest-growing market for electric vehicles (EV), particularly in the realm of micro mobility encompassing two and three-wheelers. To further catalyze this growth, there is a pressing need for a coordinated push in infrastructure development for charging facilities, customized incentives, and robust governance measures."

Ms Sweta Koshy

Project Analyst
UNDP India



State Level Conference
Facilitating Decarbonisation in Jharkhand

05 December 2023, Ranchi



Session 2

**Pathways for
Decarbonisation in
Jharkhand**



Overview

A pathway for decarbonisation provides options to national and state governments so they may decide how best to cut emissions while tackling interrelated environmental, social, and economic problems that are either caused by or worsened by the climate crisis. As the goal approaches its Net Zero emission target of 2070, Jharkhand must turn obstacles into opportunities to pave the road for an innovative economy.

The overview of this session is to show the way towards reducing emission while addressing an interconnected approach that considers multiple factors like industrial growth and emission, energy infrastructure, policy and governance and other socioeconomic factors as well. Jharkhand's policies regarding renewable energy targets, subsidies, and regulations can significantly impact decarbonisation efforts.

Objectives

The session's objective is to suggest long-term strategies for reducing emissions and share ideas that support the achievement of net zero emissions and promote cooperation between stakeholders and governmental entities.

The second technical session focused on the 'Pathways for Decarbonisation in Jharkhand'. This included discussions on sub themes: 'Understanding Decarbonisation Challenges in Jharkhand', 'Role of Industries /Associations in the Climate Resilient', 'Enablers for decarbonisation, Finding a win-win situation', 'Basics of Decarbonisation', 'Initiatives for Decarbonisation' and 'Industrial Decarbonisation Pathways'.

The session was chaired by Shri Bhor Singh Yadav, IAS, Director- Department of Industries (Government of Jharkhand), who highlighted that decarbonisation of industries can be the key factor which can contribute to overall green economic growth. He further emphasised that transitioning industries to cleaner energy sources or adopting carbon capture technologies create opportunities for green infrastructures and investments in the state.

Speakers of the session were Dr. Manish Kumar, Director-Research and Development, Centre for Environment and Energy Development (CEED); Shri Aditya Malhotra, Vice President, FJCCI; Shri Ajit Dhanraj Kothari, Chief (Sustainability & Decarbonisation Project, E&P), Tata Steel; Shri H.K Sethi, AGM- EMG,NTPC LTD (North Karanpura); Shri Prasanta Bose, Vice President, Head -Technical, Sustainability & Production Planning, Hindalco Industries Ltd; and Shri Abhishek Biswas, Director, Orica India.

Key Highlights



To achieve climate neutrality by 2070, the focus should be on well-calibrated decarbonisation pathways. Key goals include crafting specific plans for hard-to-abate industries, MSMEs, Transport and other sectors.



In Jharkhand's energy landscape, it's evident that about 91% of carbon emissions originate from the energy sector. Industries contribute nearly eight percent of GHG emissions. Other activities, such as increased incineration, waste handling, agriculture, forestry, and land use, also significantly impact its carbon footprint.



Decarbonisation process in Jharkhand differs significantly from other Indian states due to unique state complexities. One major challenge is the state's high climate vulnerability, which influences its unique decarbonisation approach.



In India, and specifically in Jharkhand, the high cost of natural gas—a key factor for decarbonisation—poses a challenge. This contrasts with Middle Eastern countries, where subsidies make natural gas competitive with coal in steel and cement production. Overcoming this cost barrier is crucial for Jharkhand's transition to greener energy, in line with just transition and decarbonisation goals.



In Jharkhand, embracing technological advancements is key for decarbonisation. This includes the adoption of solar panels and rooftop installations within industrial plants. Additionally, moving towards paperless office systems represents a significant step in reducing the environmental footprint and promoting sustainable practices.



Jharkhand can leverage technological innovations to boost decarbonisation. Improved blasting techniques lower carbon intensity in material processing, contributing significantly to eco-friendly practices. Mining and tunneling also benefit from advanced analysis tools, enhancing efficiency and safety. Key to this sustainable shift are projects like a 1.6 gigawatt hydrogen plan and a 50 megawatt renewable energy project.



In Jharkhand, the decarbonisation process significantly involves the industrial sector, as addressing its emissions is vital for meeting climate goals. As part of Jharkhand's industrial sector, there is a heightened awareness and sensitivity towards the importance of decarbonisation, reflecting a commitment to a just and sustainable transition.

Key Recommendations

▶ For successful decarbonisation strategy, it's essential to focus on three key areas: the energy sector, general industries, and particularly, the hard-to-abate industries. This comprehensive approach is vital for Jharkhand's journey towards a decarbonisation.

▶ For Jharkhand's decarbonisation, understanding the role of fossil fuel is crucial for farsighted planning. Similarly, recognizing the potential and process of transitioning towards renewable energy is important. From an industry standpoint, accurately quantifying emissions from MSMEs is vital, given the significant uncertainty in regional and sectoral variation in carbon emissions.

▶ In developing Jharkhand's decarbonisation plan, it's crucial to analyze the demand and supply dynamics of the low carbon value chain. This includes assessing the readiness of green products and the availability of green fuels necessary for their production.

▶ It's important to raise awareness among department officials about the significance of decarbonising the various sectors. This involves promoting and incentivizing the adoption of energy-efficient changes and practices within industries, transport and other segments.

▶ Jharkhand's commitment to a greener future is evident in its push to integrate renewable energy sources like solar and wind into its industrial processes. Equally important is the development and enforcement of policies that champion eco-friendly and sustainable methods in industry.

▶ In Jharkhand, prioritizing low-grade energy emerges as a prime choice for the decarbonisation process. Additionally, shifting towards non-fossil fuels for energy consumption represents another crucial approach in the state's strategy for sustainable transition.

▶ A shift towards more efficient systems, whether in the automobile sector through improved gear systems or in the belt conveyor industry, is essential. This includes adopting strategies like using LEDs instead of older technologies, which plays a significant role in reducing power consumption. Such energy-efficient upgrades are critical for controlling energy use and advancing decarbonisation.

Key Speakers



"Decarbonisation process holds paramount importance in reducing carbon emissions globally and locally. This critical process involves transitioning to cleaner energy sources, implementing efficient technologies, and adopting low carbon strategies at cross sectoral level. Jharkhand can take a lead in crafting decarbonisation plans tailored to its unique needs and further contribute to achieving national climate goals."

Shri Bhor Singh Yadav, IAS
Director, Department of Industries
Government of Jharkhand



"The decarbonisation efforts should be focused on reducing greenhouse gas emissions and transitioning to low-carbon practices. In 2018, Jharkhand's net GHG emissions were 108 MtCO₂, accounting for about four percent of India's total emissions. These figures highlight the need for targeted decarbonisation strategies, which can be shaped through science and data based research interventions, tech know-how sharing and facilitation of collaborative forums".

Dr. Manish Kumar
Director (R&D)
Centre for Environment & Energy Development (CEED)



"The industry and business players have greater onus to undertake the decarbonisation efforts for stated development goals. State policies and regulations regarding subsidies, incentivisation, financing and hand holding support can significantly impact the decarbonisation journey."

Shri Aditya Malhotra
Vice President,
Federation of Jharkhand Chamber of Commerce & Industries (FJCCI)



"For the industry sector in Jharkhand, the decarbonisation journey is challenging yet rewarding. Nationally, about 30–40% of GDP is directly from industries, with an additional 20–30% from industry-related services. This means 60–70% of GDP is industry-driven, highlighting the significant role of sectors like steel in Jharkhand's economy and the importance of their decarbonisation".

Shri Ajit Dhanraj Kothari
Chief (Sustainability and Decarbonisation Projects, E&P)
Tata Steel



"Advanced technology in NTPC Plant utilizes high-efficiency water pumping in condensers for cooling steam. This state-of-the-art approach is exemplified in the region's first power plant using air conditioning systems, significantly reducing water requirements from 90 to just 6 molecules. Such innovations are key in the state's decarbonisation efforts".

Shri H.K Sethi

AGM, Environment Management
NTPC Ltd. (North Karanpura)



"An ambitious roadmap for decarbonisation involves transitioning industries to green alternatives like hydro power, biomass, and hydrogen, with a focus on solar energy and biomass to reduce carbon footprints. In addition, a key strategy involves converting grey areas to green areas, particularly in Jharkhand, attracting tourists while promoting sustainability".

Shri Prasanta Bose

Vice President, Head -Technical, Sustainability & Production Planning,
Hindalco Industries Ltd.



"In the context of Jharkhand's mining industry and its decarbonisation goals, efforts are being made to develop and adopt alternative feedstocks. Initiatives include the integration of biomass, such as briquettes, although the scarcity of briquettes presents challenges. Additionally, there's a focus on exploring hydrogen as a potential energy source, reflecting the industry's commitment to sustainable and less environmentally impactful practices".

Shri Abhishek Biswas

Director, Orica India



The background is a vibrant green illustration. In the foreground, there are several solar panels with a grid pattern, tilted upwards. To the right, a wind turbine is visible, with its blades and tower. In the background, there are stylized buildings and trees. The overall theme is clean energy and sustainability.

Media Coverage

Discussion on Critical Challenge in the dominance of fossil fuels during a programme on decarbonisation for green growth in Jharkhand

By Correspondent

Ranchi: 'Facilitating Decarbonisation in Jharkhand' programme was organised by the Task Force-Sustainable Just Transition, Government of Jharkhand and its technical partner Centre for Environment and Energy Development (CEED) in Ranchi on Tuesday.

There was a discussion of the challenges of reducing carbon emissions and outlined the decarbonisation pathways for Jharkhand. Chairman, Task Force-Sustainable Just Transition, Government of Jharkhand, IFS A.K. Rastogi said, "Jharkhand is known for its robust industrial base and presence of large industries and MSMEs."



Developing a comprehensive cross-sectoral decarbonisation framework for the state is one of the key thematic areas for the task force. We had conducted several consultation sessions with diverse stakeholders in previous months, and one overarching theme that came across was accelerating the

decarbonisation journey in the state. Hence, this conference marks a crucial step towards sharing knowledge and best practices, building partnerships and accelerating convergence of actions for a resilient and low-carbon future." Jharkhand has several energy-intensive industrial activities that lead to a

considerable amount of GHG emissions.

The study report suggests that the state contributes about 4% of total GHG emission in the country while per capita emission is more than national average.

A critical challenge in the dominance of fossil fuels in the state's energy mix.

A strong emphasis on a multi-stakeholder approach resonated throughout the conference.

Chief Executive Officer, CEED, Ranapati Kumar emphasized that 'Decarbonisation process requires a collective effort.

A convergence approach, with partnerships and collaborations between state agencies, industries and business players and research think-tanks, is fundamental.



Decarbonisation pathways inevitable for green growth in Jharkhand

RANCHI: A state level conference 'Facilitating Decarbonisation in Jharkhand' was jointly organised by the Task Force-Sustainable Just Transition, Government of Jharkhand and its technical partner Centre for Environment and Energy Development (CEED) on Wednesday. The key objective of the conference was to discuss the challenges of reducing carbon emissions and outline the decarbonisation pathways for Jharkhand. The conference convened key stakeholders from government departments and agencies, industries, business associations and technology firms from the state and beyond who pledged support and provided strategic input for creating sustainable path-

ways and best practices, building partnerships and accelerating convergence of actions for a resilient and low-carbon future."

Jharkhand has several energy-intensive industrial activities that lead to a considerable amount of GHG emissions. The study report suggests that the state contributes about 4% of total GHG emission in the country while per capita emission is more than national average. A critical challenge is the dominance of fossil fuels in the state's energy mix. The presence of hard-to-abate industries (e.g. steel, sponge iron, cement, and ammonia production) place the need of augmenting the decarbonisation process to meet net-zero goals.

Jharkhand focuses on decarbonisation

ANIMESH BISOEE

Jamshedpur: Decarbonisation pathways are inevitable for green growth of Jharkhand, felt experts during a conference. Facilitating Decarbonisation in Jharkhand, in Ranchi on Tuesday.

The day-long conference was organised by a Jharkhand government task force, Sustainable Just Transition, and its technical partner Centre for Environment and Energy Development (CEED). The conference discussed the challenges of reducing carbon

emissions and outlined the decarbonisation pathways for Jharkhand.

Elaborating on the intent and context of the conference, chairman of the government task force and retired forest official A.K. Rastogi said: "Jharkhand is known for its robust industrial base and presence of large industries and MSMEs. Developing a comprehensive cross-sectoral decarbonisation framework for the state is one of the key thematic areas for the task force. We had conducted several consultation sessions

with diverse stakeholders in previous months, and one overarching theme that came across was accelerating the decarbonisation journey in the state."

"Hence, this conference marks a crucial step towards sharing knowledge and best practices, building partnerships and accelerating convergence of actions for a resilient and low-carbon future," added Rastogi.

Jharkhand has several energy-intensive industrial activities that lead to a considerable amount of GHG

(greenhouse gas) emissions. The study suggests that the state contributes about four per cent of total GHG emissions in the country while per capita emission is more than the national average. A critical challenge is the dominance of fossil fuels in the state's energy mix. The presence of hard-to-abate industries (e.g. steel, sponge iron, cement, and ammonia production) places the need for augmenting the decarbonisation process to meet net-zero goals.

The conference convened key stakeholders from govern-

ment departments and agencies, industries, business associations and technology firms and beyond who pledged strategic input for creating sustainable pathways towards reducing cross-sector emissions.

Bhor Singh Yadav, director of industries department, emphasised that the department was supportive of creating an environment conducive to sustainable industries practices through incentives, capacity and hand holding support for steering toward a low-carbon industrial ecosystem.

झारखंड दर्शन

राजधानी

झारखंड में ग्रीन इकोनॉमी के लिए डीकार्बनाइजेशन रोडमैप पर कांफ्रेंस डीकार्बनाइजेशन से जुड़े बेस्ट प्रैक्टिसेज एवं समाधानों पर विचार-विमर्श

संघटनसंग संघी। टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन, झारखंड सरकार और इसके टैक्निकल पार्टनर स्टेट फॉर एनक्वायरमेंट एंड एनर्जी डेवलपमेंट (सीई) द्वारा संयुक्त रूप से आज एक राज्य सरोज कर्मि 'डिफिनेटिंग डीकार्बनाइजेशन इन झारखंड' का आयोजन किया गया। इस कार्यक्रम का मुख्य उद्देश्य कर्मि उद्योगों को कम करने की चुनौतियों पर चर्चा करना और नीलमधुमुखी झारखंड के लिए डीकार्बनाइजेशन रास्ते की रूपरेखा तैयार करना था।

कार्यक्रम में डीकार्बनाइजेशन और सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए रोड-आउट, बेस्ट प्रैक्टिसेज एवं समाधानों पर विचार-विमर्श किया गया और सस्टेनेबल विकल्प बनाने पर जोर दिया गया। कार्यक्रम में राज्य सरकार के विशेष विभागों के तथा अधिकारियों के अलावा प्रमुख उद्योगों एवं बिजनेस एसोसिएशन के वरिष्ठ प्रतिनिधियों, सार्वजनिकी विचार-टैंक के विशेषज्ञों और निजी क्षेत्र से उद्योगों के प्रतिनिधियों की सहभागिता थी। कार्यक्रम के उद्देश्य एवं संदर्भ के बारे में एक सत्रोत्तर अहोरात्र, सार्वजनिक, अग्रणी, टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन द्वारा प्रस्तुत किया गया, झारखंड विद्यालय उद्योगों एवं एनक्वायरमेंट की मजबूत



एनर्जी के लिए जाना जाता है। एक डीकार्बनाइजेशन डीकार्बनाइजेशन प्रक्रिया विकल्पों को प्रस्तुत करने के लिए अग्रणी प्रमुख कार्यकर्ताओं में से एक है। यह कई सत्रोत्तरों में निजी उद्योगों के साथ डीकार्बनाइजेशन रास्ते पर चर्चा करने के उद्देश्य से एक कार्यक्रम के रूप में आयोजित किया गया, इसकी अगली कड़ी में डीकार्बनाइजेशन रास्ते तैयार करने के उद्देश्य से एक कार्यक्रम के रूप में आयोजित किया गया। झारखंड में डीकार्बनाइजेशन रास्ते की रूपरेखा तैयार करने का उद्देश्य है। एक अग्रणी-सस्टेनेबल जस्ट ट्रांजिशन द्वारा

देता के कुल प्रोत्साहन उद्योगों में लगभग 20, का योगदान देता है, जबकि जीएनपीडीपी में इसका योगदान राष्ट्रीय औद्योगिक से अधिक है। राज्य के एनर्जी-संगत में जोड़कर उद्योगों को प्रोत्साहित है, जो नेट-जीरो रास्ते की दिशा में एक रास्ते चुनौती है। डीकार्बनाइजेशन प्रक्रिया के लिए हाई-टू-लैंग्वेज रोकथाम करने वाले को उद्योग जैसे स्टील, एनई अद्यतन, सीमेंट और अग्रणी उद्योगों में सशक्त ऊर्जा एवं तकनीक का औद्योगिक समाधान एवं काम उद्योगों में सशक्त उद्योगों को प्रोत्साहित करता है।

कार्यक्रम के लिए इन्वेंटरिय, कैपेसिटी बिल्डिंग और रेगुलैटरी सपोर्ट की भूमिका अग्रणी है और सभी स्टेकहोल्डर्स को साथ लेकर डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने के लिए विभाग टास्क फोर्स उद्योगों को प्रोत्साहित करता है। अलावा राज्य सरकार अग्रणी, निदेशक-खान और प्रमुख विभाग झारखंड सरकार ने डीकार्बनाइजेशन रोडमैप बनाने का समर्थन किया और काम करने उद्योगों को प्रोत्साहित करने के लिए कुशल खनिज अद्यतन और औद्योगिक समाधान के लिए अहोरात्र, डीकार्बनाइजेशन और एनर्जी सेक्टर में डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने पर और दिया। इस अलावा पर चर्चा पर एनक्वायरमेंट एवं एनर्जी डेवलपमेंट सीई के वरिष्ठ उद्योगों को प्रोत्साहित करता है। इस विभाग में सशक्त उद्योगों, उद्योग जगत और निजी क्षेत्रों के बीच सस्टेनेबल एवं समाज-उद्योग सहयोग है। सस्टेनेबल जस्ट ट्रांजिशन में डीकार्बनाइजेशन प्रक्रिया की अग्रणी भूमिका होगी। इस अलावा पर अग्रणी

एन. प्रोडिंग कर्मि, इंटरनेशनल कोलल और कर्मि उद्योगों में जोर दिया कि कर्मि उद्योगों को उद्योग-संगत रूप से काम करने के लिए डीकार्बनाइजेशन रास्ते पर अग्रणी उद्योगों एवं इन्वेंटरिय बनाने की और सशक्त उद्योगों में सशक्त उद्योगों को प्रोत्साहित करने के साथ सस्टेनेबल विकल्प बनाने उद्योगों में। कार्यक्रम के उद्योगों एवं उद्योगों में कई सस्टेनेबल रास्ते पर चर्चा की गई।

विचार-विमर्श, डीकार्बनाइजेशन इन झारखंड विषय पर कार्यशाला, एके रस्तोगी ने कहा

नेट जीरो के लिए चुनौती बना जीवाश्म ईंधन

प्रति संघटन, टीई
राज्य का सस्टेनेबल जस्ट ट्रांजिशन, टास्क फोर्स और इसके टैक्निकल पार्टनर सीई की ओर से मंगलवार को 'डिफिनेटिंग डीकार्बनाइजेशन इन झारखंड' विषय पर राज्य सरोज कार्यशाला का आयोजन किया गया। इसका मुख्य उद्देश्य कर्मि उद्योगों को कम करने की चुनौतियों पर चर्चा और झारखंड के लिए डीकार्बनाइजेशन की रूपरेखा तैयार करना था। कार्यक्रम में डीकार्बनाइजेशन और सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए रोड-आउट, बेस्ट प्रैक्टिसेज एवं समाधानों पर विचार-विमर्श किया गया। टास्क फोर्स के अग्रणी एके रस्तोगी ने कहा कि झारखंड विद्यालय



कार्यशाला में अपने विचार रखते विशेषज्ञ.

उद्योगों एवं एनक्वायरमेंट की मजबूत उपस्थिति के लिए जाना जाता है। झारखंड में ऊर्जा-आश्रित उद्योग एवं अन्य औद्योगिक गतिविधियों के जरिये प्रोत्साहन रास्ते का जवाब उद्योगों

होता है। एक रिपोर्ट के अनुसार, झारखंड देता के कुल प्रोत्साहन उद्योगों में लगभग चार फीसदी का योगदान देता है। राज्य में ऊर्जा संसाधनों की उपलब्धता में जीवाश्म

ईंधन (फॉसिल फ्यूल) की प्रधानता है, जो नेट-जीरो (प्रदूषण समाप्ति) रास्ते की दिशा में एक रास्ते चुनौती है। **विचार-विमर्श में बदलाव आनेवाली पीढ़ी के लिए चुनौती** : तकनीकी सत्र के दौरान उद्योग निदेशक और सिंह यादव ने कहा कि विभाग स्ट्रेकोलडर्स को साथ लेकर डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने के लिए टास्क फोर्स उद्योगों को प्रोत्साहित करता है। अलावा राज्य सरकार अग्रणी, निदेशक-खान और प्रमुख विभाग झारखंड सरकार ने डीकार्बनाइजेशन रोडमैप बनाने का समर्थन किया और काम करने उद्योगों को प्रोत्साहित करने के लिए कुशल खनिज अद्यतन और औद्योगिक समाधान के लिए अहोरात्र, डीकार्बनाइजेशन और एनर्जी सेक्टर में डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने पर और दिया। इस अलावा पर चर्चा पर एनक्वायरमेंट एवं एनर्जी डेवलपमेंट सीई के वरिष्ठ उद्योगों को प्रोत्साहित करता है। इस विभाग में सशक्त उद्योगों, उद्योग जगत और निजी क्षेत्रों के बीच सस्टेनेबल एवं समाज-उद्योग सहयोग है। सस्टेनेबल जस्ट ट्रांजिशन में डीकार्बनाइजेशन प्रक्रिया की अग्रणी भूमिका होगी। इस अलावा पर अग्रणी

होना है, परिवहन विभाग के संयुक्त सचिव प्रदीप कुमार ने कहा कि राज्य में एलेक्ट्रिक मोबिलिटी का उपयोग उद्योगों से कम हो रहा है, इसकी बढ़ने के लिए राज्य सरकार एवी पॉलिसी भी लागू की है। इंटरनेशनल कार्बनिल और क्लीन ट्रांसपोर्टेशन (आइसीटीटी) के मैनेजिंग डायरेक्टर अग्रणी ने कहा कि ग्रीन हाइड्रोजन ईंधन पर आधारित ट्रांसपोर्टेशन एवं इलेक्ट्रिक वाहनों में ईंधन उपयोग को बदलने की जरूरत है। इस दौरान वन विभाग के अग्रणी प्रधान मुख्य वन सहायक डीके सक्सेना, टाटा स्टील के धनराज कोठारी, आरएडी के प्रशांत चोपड़ा, एनईडी के अग्रणी प्रधान मुख्य वन सहायक डीके सक्सेना, टाटा स्टील के धनराज कोठारी, आरएडी के प्रशांत चोपड़ा, एनईडी के अग्रणी प्रधान मुख्य वन सहायक डीके सक्सेना ने भी विचार रखे।

कार्बन उत्सर्जन को कम करने की चुनौतियों पर की गई चर्चा डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने के लिए विभाग उठा रहा ठोस कदम: भोर सिंह

रांची | टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन, झारखंड सरकार और इनको टैकनिकल पार्टनर सेक्टर फॉर एनकार्बनमेंट एंड एनर्जी डेवलपमेंट (सोड) ने संयुक्त रूप से मंत्रालय की फैसिलिटेटिंग डीकार्बनाइजेशन इन झारखंड विभाग पर एक राज्य स्तरीय कॉन्फ्रेंस कर आयोजन किया गया। इस कॉन्फ्रेंस का मुख्य उद्देश्य कार्बन उत्सर्जन को कम करने की चुनौतियों पर चर्चा करना और डीकार्बनाइजेशन पथ-वे को सुदृढ़ बनाना था। कार्यक्रम में डीकार्बनाइजेशन और सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए शोध-अध्ययन, केस स्टडीज और विचार-विमर्श किया गया। एक रस्तोरी अर्द्धसत्र, सेवानिवृत्त ने कहा कि प्रत्यक्ष विशाल उद्योगों और एम्प्लॉयर्स की मजबूत उपस्थिति के लिए काम ज़रूरी है। एक उच्च-सेक्टर डीकार्बनाइजेशन प्रेमकर्म विधायक बनकर टास्क फोर्स की अंतःप्रमुख प्रभावकारिता में से एक है। झारखंड में ऊर्जा-निर्भर उद्योग व अन्य औद्योगिक निकायों के जहाँ प्रौद्योगिकियों का जवाब उत्सर्जन होता है, पर निम्न गहन विश्लेषण, उद्योग विकास ने कहा कि सस्टेनेबल व हील औद्योगिक परिवर्तन के लिए इन्वेंचर, कैपेसिटी बिल्डिंग और क्लस्टरी सेक्टर को प्रोत्साहित करना है



और सभी स्टेकहोल्डर्स को साथ लेकर डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने के लिए विकास देना काम उठा रहा है। अलग टास्कफोर्स, डिप्लोमा-डान और भूकृषि विकास ने उद्योग सेक्टर को टारगेट करने का समर्थन किया। सोड के सीईओ समीर कुमार ने डीकार्बनाइजेशन प्रक्रिया इंटर-सेक्टर बनाने का एगेंडा प्रस्तुत किया और मजबूत प्रयास की मांग की। इन दिनों में सरकारी एजेंसियों, उद्योग जगत और निजी क्षेत्र के बीच सहयोग व समर्थन बढ़ाने की आवश्यकता है। इन चर्चों पर अर्द्धसत्र के पश्चात् अंतिम प्रयोग हुआ, एम्प्लॉयर्स के उदात्त अर्थव्यवस्था, उद्योग सेक्टर में अग्रणी भूमिका, डिप्लोमा से प्रभावित क्षेत्र व अन्य वे भी अग्रणी बनेंगे।

डीकार्बनाइजेशन से जुड़े बेस्ट प्रैक्टिसेज एवं समाधानों पर विचार-विमर्श झारखंड में ग्रीन इकोनॉमी के लिए डीकार्बनाइजेशन रोडमैप पर कांफ्रेंस

रांची : टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन, झारखंड सरकार और इनको टैकनिकल पार्टनर सेक्टर फॉर एनकार्बनमेंट एंड एनर्जी डेवलपमेंट (सोड) द्वारा संयुक्त रूप से आज एक राज्य स्तरीय कॉन्फ्रेंस फैसिलिटेटिंग डीकार्बनाइजेशन इन झारखंड का आयोजन किया गया। इस कॉन्फ्रेंस का मुख्य उद्देश्य कार्बन उत्सर्जन को कम करने की चुनौतियों पर चर्चा करना और भविष्य-नुस्खे झारखंड के लिए डीकार्बनाइजेशन पथवे को सुदृढ़ बनाना था। कार्यक्रम में डीकार्बनाइजेशन और सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए शोध-अध्ययन, केस स्टडीज एवं समाधानों पर विचार-विमर्श किया गया और साझेदारी विकसित करने पर जोर दिया गया। कार्यक्रम में राज्य सरकार के विविध विभागों के उच्च अधिकारियों के अलावा प्रमुख उद्योगों एवं बिजनेस एसेसोसिएशन के शोध-पदाधिकारियों, सस्टेनेबिलिटी थिंक-टैंक के विशेषज्ञों और निजी क्षेत्र से प्रवक्ताओं को शामिल किया। कॉन्फ्रेंस के उद्देश्य एवं संदर्भ के बारे में



में एके रस्तोरी (आइएफएस, सेवानिवृत्त), अध्यक्ष, टास्क फोर्स- सस्टेनेबल जस्ट ट्रांजिशन (झारखंड सरकार) ने कहा, झारखंड विशाल उद्योगों एवं एम्प्लॉयर्स की मजबूत उपस्थिति के लिए जाना जाता है। एक क्रॉस-सेक्टरल डीकार्बनाइजेशन प्रेमकर्म विकसित करना टास्क फोर्स की अंतःप्रमुख प्रभावकारिता में से एक है। उद्योगों एवं एम्प्लॉयर्स की मजबूत उपस्थिति के लिए जाना जाता है। एक क्रॉस-सेक्टरल डीकार्बनाइजेशन प्रेमकर्म विकसित करना टास्क फोर्स की अंतःप्रमुख प्रभावकारिता में से एक है। उद्योगों एवं एम्प्लॉयर्स की मजबूत उपस्थिति के लिए जाना जाता है। एक क्रॉस-सेक्टरल डीकार्बनाइजेशन प्रेमकर्म विकसित करना टास्क फोर्स की अंतःप्रमुख प्रभावकारिता में से एक है।

कंसल्टेशन मात्र आयोजित किये गये, उसकी अपनी कड़ी में डीकार्बनाइजेशन पथवे तैयार करने के उद्देश्य से यह कॉन्फ्रेंस बेहद महत्वपूर्ण है। इसमें बेस्ट प्रैक्टिसेज एवं नवोन्मेष समाधानों को साझा किया गया, विचारों, उद्योग-व्यवहार जगत, रिसर्च थिंक-टैंक एवं टेक्नोलॉजी कम्पनी के बीच सहयोग स्थापित किया गया। झारखंड में ऊर्जा-निर्भर उद्योग एवं अन्य औद्योगिक निकायों के जहाँ प्रौद्योगिकियों का जवाब उत्सर्जन होता है, पर निम्न गहन विश्लेषण, उद्योग विकास ने कहा कि सस्टेनेबल व हील औद्योगिक परिवर्तन के लिए इन्वेंचर, कैपेसिटी बिल्डिंग और क्लस्टरी सेक्टर को प्रोत्साहित करना है। इन चर्चों पर अर्द्धसत्र के पश्चात् अंतिम प्रयोग हुआ, एम्प्लॉयर्स के उदात्त अर्थव्यवस्था, उद्योग सेक्टर में अग्रणी भूमिका, डिप्लोमा से प्रभावित क्षेत्र व अन्य वे भी अग्रणी बनेंगे।

ग्रीनहाउस उत्सर्जन में झारखंड का चार प्रतिशत योगदान

जागरण संबोधना, रांची : टास्क फोर्स- सस्टेनेबल जस्ट ट्रांजिशन के अध्यक्ष एके रस्तोरी (आइएफएस, सेवानिवृत्त) ने संयुक्त रूप से मंत्रालय की फैसिलिटेटिंग डीकार्बनाइजेशन इन झारखंड विभाग पर एक राज्य स्तरीय कॉन्फ्रेंस कर आयोजन किया गया। इस कॉन्फ्रेंस का मुख्य उद्देश्य कार्बन उत्सर्जन को कम करने की चुनौतियों पर चर्चा करना और भविष्य-नुस्खे झारखंड के लिए डीकार्बनाइजेशन पथवे को सुदृढ़ बनाना था। कार्यक्रम में डीकार्बनाइजेशन और सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए शोध-अध्ययन, केस स्टडीज एवं समाधानों पर विचार-विमर्श किया गया और साझेदारी विकसित करने पर जोर दिया गया। कार्यक्रम में राज्य सरकार के विविध विभागों के उच्च अधिकारियों के अलावा प्रमुख उद्योगों एवं बिजनेस एसेसोसिएशन के शोध-पदाधिकारियों, सस्टेनेबिलिटी थिंक-टैंक के विशेषज्ञों और निजी क्षेत्र से प्रवक्ताओं को शामिल किया। कॉन्फ्रेंस के उद्देश्य एवं संदर्भ के बारे में



टास्क फोर्स- सस्टेनेबल जस्ट ट्रांजिशन, झारखंड सरकार व टैकनिकल पार्टनर सेक्टर की ओर से आयोजित कॉन्फ्रेंस में शामिल लोग।

हरित औद्योगिक परिवेश को रेगुलेटरी समर्थन की भूमिका अहम
तकनीकी सखी के दौरान उद्योग विभाग के निदेशक भोर सिंह यादव ने कहा कि सततशील एवं हरित औद्योगिक परिवेश के लिए इन्वेंचर, कैपेसिटी बिल्डिंग और रेगुलेटरी समर्थन की भूमिका अहम है। कॉन्फ्रेंस में डा डीके सखरीना (आईएफएस), संयुक्त परिवहन आयुक्त प्रदीप कुमार, अजीत धनरत्न कोठारी, प्रशांत बोस, डा. मनीष कुमार, श्वेता कोशी आदि की।

● झारखंड में ग्रीन इकोनॉमी के लिए डीकार्बनाइजेशन रोडमैप आवश्यक
● प्रदेश के एनर्जी-मिक्स में जीवाणम ईंधन की है प्रधानता
पथवे की रूपरेखा तैयार करना था। इस मौके पर टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन के अध्यक्ष एके रस्तोरी (आइएफएस, सेवानिवृत्त) ने कहा कि झारखंड विशाल उद्योगों एवं एम्प्लॉयर्स की मजबूत उपस्थिति के लिए जाना जाता है। एक क्रॉस-सेक्टरल डीकार्बनाइजेशन प्रेमकर्म विकसित करना टास्क फोर्स की अंतःप्रमुख प्रभावकारिता में से एक है। झारखंड में ऊर्जा-निर्भर उद्योग व अन्य औद्योगिक निकायों के जहाँ प्रौद्योगिकियों का जवाब उत्सर्जन होता है, पर निम्न गहन विश्लेषण, उद्योग विकास ने कहा कि सस्टेनेबल व हील औद्योगिक परिवर्तन के लिए इन्वेंचर, कैपेसिटी बिल्डिंग और क्लस्टरी सेक्टर को प्रोत्साहित करना है। इन चर्चों पर अर्द्धसत्र के पश्चात् अंतिम प्रयोग हुआ, एम्प्लॉयर्स के उदात्त अर्थव्यवस्था, उद्योग सेक्टर में अग्रणी भूमिका, डिप्लोमा से प्रभावित क्षेत्र व अन्य वे भी अग्रणी बनेंगे।

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फैसिलिटेटिंग डीकार्बनाइजेशन पर हुई चर्चा

रांची | टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन, झारखंड सरकार और इनको टैकनिकल पार्टनर सेक्टर फॉर एनकार्बनमेंट एंड एनर्जी डेवलपमेंट (सोड) ने संयुक्त रूप से मंत्रालय की फैसिलिटेटिंग डीकार्बनाइजेशन इन झारखंड विभाग पर एक राज्य स्तरीय कॉन्फ्रेंस आयोजन किया गया। इस कॉन्फ्रेंस का मुख्य उद्देश्य कार्बन उत्सर्जन को कम करने की चुनौतियों पर चर्चा करना और भविष्य-नुस्खे झारखंड के लिए डीकार्बनाइजेशन पथवे को सुदृढ़ बनाना था। कार्यक्रम में डीकार्बनाइजेशन और सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए शोध-अध्ययन, केस स्टडीज एवं समाधानों पर विचार-विमर्श किया गया और साझेदारी विकसित करने पर जोर दिया गया। कार्यक्रम में राज्य सरकार के विविध विभागों के उच्च अधिकारियों के अलावा प्रमुख उद्योगों एवं बिजनेस एसेसोसिएशन के शोध-पदाधिकारियों, सस्टेनेबिलिटी थिंक-टैंक के विशेषज्ञों और निजी क्षेत्र से प्रवक्ताओं को शामिल किया। कॉन्फ्रेंस के उद्देश्य एवं संदर्भ के बारे में



रांची, बुधवार, 06 दिसंबर 2023

रांची/आसपास

Folio

झारखंड में ग्रीन इकोनॉमी के लिए डीकार्बनाइजेशन रोडमैप आवश्यक

स्वदेश संवाददाता

रांची : टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन, झारखंड सरकार और इसके टेक्निकल पार्टनर सेंटर फॉर एनवायरनमेंट एंड एनर्जी डेवलपमेंट (सीड) की ओर से संयुक्त रूप से मंगलवार को राज्य स्तरीय कांफ्रेंस 'फैसिलिटेटिंग डीकार्बनाइजेशन इन झारखंड' का आयोजन किया गया। इस कांफ्रेंस का मुख्य उद्देश्य कार्बन उत्सर्जन को कम करने की चुनौतियों पर चर्चा करना और भविष्योन्मुखी झारखंड के लिए डीकार्बनाइजेशन पाथवे की रूपरेखा तैयार करना था। कार्यक्रम में डीकार्बनाइजेशन और सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए शोध-अध्ययन, बेस्ट प्रैक्टिसेज एवं समाधानों पर विचार-विमर्श किया गया और साझेदारी विकसित करने पर जोर दिया गया। कार्यक्रम में राज्य सरकार के विविध विभागों के उच्च अधिकारियों के अलावा प्रमुख उद्योगों एवं बिजनेस एसोसिएशन के शीर्ष पदाधिकारियों, सस्टेनेबिलिटी थिंक-टैंक के विशेषज्ञों और मिजिल सोसाइटी के प्रोड्यूसर्स को शामिल किया गया। टास्क फोर्स- सस्टेनेबल जस्ट ट्रांजिशन (झारखंड सरकार) के अध्यक्ष ए.के. रस्तोगी ने कहा कि झारखंड विशाल उद्योगों एवं



एमएसएमई की मजबूत उपस्थिति के लिए जाना जाता है। एक क्रॉस-सेक्टरल डीकार्बनाइजेशन फ्रेमवर्क विकसित करना टास्क फोर्स की आठ प्रमुख प्राथमिकताओं में से एक है। गत कई महीनों से विविध स्टेकहोल्डर्स के साथ कंसल्टेशन सत्र आयोजित किये गये, उसकी अगली कड़ी में डीकार्बनाइजेशन पाथवे तैयार करने के उद्देश्य से यह कांफ्रेंस बेहद महत्वपूर्ण है। इसमें बेस्ट प्रैक्टिसेज एवं नवोन्मेष समाधानों को साझा किया गया, विभागों, उद्योग-व्यापार जगत, रिसर्च थिंक-टैंक्स एवं टेक्नोलॉजी फार्म के बीच सहयोग स्थापित किया गया। झारखंड में ऊर्जा-आश्रित उद्योग एवं अन्य औद्योगिक गतिविधियों के जरिये झेनहाउस गैसों का निष्कासन उत्सर्जन होता है। एक अध्ययन-रिपोर्ट के अनुसार झारखंड देश के कुल झेनहाउस

उत्सर्जन में लगभग चार प्रतिशत का योगदान देता है, जबकि प्रति व्यक्ति उत्सर्जन में इसका औसत राष्ट्रीय औसत से अधिक है। राज्य के एनर्जी-मिक्स में जीवाश्म ईंधन की प्रधानता है, जो नेट-जिरो लक्ष्यों की दिशा में एक बाधा बनती है। डीकार्बनाइजेशन प्रक्रिया के लिए हाई-टू-एंगेज सेक्टर (कठिन) माने जाने वाले उद्योग (जैसे स्टील, स्पंज आयरन, सीमेंट और अमोनिया उत्पादन) में सब्सिडी एवं तकनीक का अधिकतमिक समर्थन एवं कम उत्सर्जन मानक स्थापित करना बेहद आवश्यक है। उद्योग विभाग के निदेशक भोर सिंह यादव ने कहा कि सततशील एवं हरित औद्योगिक परिवेश के लिए इन्वेन्टिव्स, कैपेसिटी बिल्डिंग और रेगुलेटरी सपोर्ट की भूमिका अहम है और सभी स्टेकहोल्डर्स को साथ लेकर

डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने के लिए विभाग तैयार कदम उठा रहा है। खान और भूतत्व विभाग के निदेशक अरबा राजकमल ने क्रॉस सेक्टरल रोडमैप बनाने का समर्थन किया और कम कार्बन उत्सर्जन प्रणाली विकसित करने के लिए कुशल खनिज अन्वेषण और औद्योगिक संचालन के लिए ऑटोमोशन, डेटा विश्लेषण और एआई जैसी नई प्रौद्योगिकियों को शामिल करने पर जोर दिया। सेंटर फॉर एनवायरनमेंट एंड एनर्जी डेवलपमेंट (सीड) के सीईओ रमाजी कुमार ने इस बात पर जोर दिया कि 'डीकार्बनाइजेशन प्रक्रिया इंटर-डिपार्टमेंटल क्लॉसिंग एंजेंचर एवं सामूहिक प्रयास की बंधन करती है। इस दिशा में सरकारी एजेंसियों, उद्योग जगत और थिंक-टैंकों के बीच साझेदारी एवं समझौते तैयार करना आवश्यक है। राज्य में भविष्योन्मुखी अर्थव्यवस्था के लिए डीकार्बनाइजेशन प्रक्रिया की अग्रणी भूमिका होगी। इंटरनेशनल कौंसिल ऑन क्लीन ट्रांसपोर्टेशन (आईसीटी) के मैनेजिंग डायरेक्टर अमित भट्ट ने जोर दिया कि कार्बन उत्सर्जन को इलेक्ट्रॉनिक रूप से कम करने के लिए ग्रीन हाइड्रोजन ईंधन पर आधारित ट्रांसपोर्टेशन एवं इलेक्ट्रिक वाहनों की ओर बढ़ावा देना जरूरी है।

झारखंड में ग्रीन इकोनॉमी के लिए डीकार्बनाइजेशन रोडमैप आवश्यक

खबर मन्त्र संवाददाता

रांची। टास्क फोर्स-सस्टेनेबल जस्ट ट्रांजिशन, झारखंड सरकार और इसके टेक्निकल पार्टनर सेंटर फॉर एनवायरनमेंट एंड एनर्जी डेवलपमेंट (सीड) द्वारा संयुक्त रूप से मंगलवार को एक राज्य स्तरीय कांफ्रेंस 'फैसिलिटेटिंग डीकार्बनाइजेशन इन झारखंड' का आयोजन किया गया। इस कांफ्रेंस का मुख्य उद्देश्य कार्बन उत्सर्जन को कम करने की चुनौतियों पर चर्चा करना और भविष्योन्मुखी झारखंड के लिए डीकार्बनाइजेशन पाथवे की रूपरेखा तैयार करना था। मौके पर कांफ्रेंस के उद्देश्य एवं संदर्भ के बारे में ए.के. रस्तोगी (आईएफएस, सेवानिवृत्त), अध्यक्ष, टास्क फोर्स- सस्टेनेबल जस्ट ट्रांजिशन (झारखंड सरकार) ने कहा, झारखंड विशाल उद्योगों



एवं एमएसएमई की मजबूत उपस्थिति के लिए जाना जाता है। एक क्रॉस-सेक्टरल डीकार्बनाइजेशन फ्रेमवर्क विकसित करना टास्क फोर्स की आठ प्रमुख प्राथमिकताओं में से एक है। गत कई महीनों से विविध स्टेकहोल्डर्स के साथ कंसल्टेशन सत्र आयोजित किये गये, उसकी अगली कड़ी में डीकार्बनाइजेशन पाथवे तैयार करने के उद्देश्य से यह कांफ्रेंस बेहद महत्वपूर्ण है। इसमें बेस्ट प्रैक्टिसेज एवं नवोन्मेष

समाधानों को साझा किया गया, विभागों, उद्योग-व्यापार जगत, रिसर्च थिंक-टैंक्स एवं टेक्नोलॉजी फार्म के बीच सहयोग स्थापित किया गया। तकनीकी सत्रों के दौरान भोर सिंह यादव (आईएएस), निदेशक, उद्योग विभाग (झारखंड सरकार) ने कहा कि सततशील एवं हरित औद्योगिक परिवेश के लिए इन्वेन्टिव्स, कैपेसिटी बिल्डिंग और रेगुलेटरी सपोर्ट की भूमिका अहम है और सभी स्टेकहोल्डर्स को साथ लेकर

डीकार्बनाइजेशन की प्रक्रिया को सुगम बनाने के लिए विभाग तैयार कदम उठा रहा है। अरबा राजकमल (आईएएस), निदेशक-खान और भूतत्व विभाग (झारखंड सरकार) ने क्रॉस सेक्टरल रोडमैप बनाने का समर्थन किया और कम कार्बन उत्सर्जन प्रणाली विकसित करने के लिए कुशल खनिज अन्वेषण और औद्योगिक संचालन के लिए ऑटोमोशन, डेटा विश्लेषण और एआई जैसी नई प्रौद्योगिकियों को शामिल करने पर जोर दिया। कांफ्रेंस के दौरान जिन प्रमुख वक्ताओं और पैनेलिस्ट ने अपने विचार साझा किये, उनमें डॉ. डीके सक्सेना (आईएफएस), एपीसीसीएफ (झारखण्ड), ओरिका इंडिया; और आदित्य मल्होत्रा, उपाध्यक्ष, फेडरेशन ऑफ झारखंड चैंबर ऑफ कॉमर्स एंड इंडस्ट्रीज (एफजेसीसीआई) आदि।

Speakers Profile



Shri A.K. Rastogi, IFS (Retd.)

Chairman, Task Force – Sustainable Just Transition
Government of Jharkhand

Shri A.K. Rastogi is a retired IFS officer (1986 batch). He has held key positions e.g. Principal Chief Conservator of Forests (PCCF) and Head of Forest Forces (HoFF) in Jharkhand, and chaired the State Pollution Control Board. His notable expertise is in policy-making across various sectors, including revenue and land reforms, land acquisition, survey and settlement, water resources, forest, environment and climate change. With extensive experience in climate-related matters, Mr. Rastogi has keen interest in land and water resource management, biodiversity conservation, and environmental laws.



Dr. D. K. Saxena, IFS

Additional Principal Chief Conservator of Forests
Government of Jharkhand

Dr. D. K. Saxena is an IFS officer of 1992 batch. He is also the chairman of the Air Quality Monitoring Committee, Jharkhand. He has spearheaded progressive policies and planning for forests and ecology. Dr. Saxena's efforts have extended to climate adaptation and mitigation measures, emphasizing the importance of sustainability. His initiatives have been pivotal in protecting natural resources and promoting harmonious coexistence between development and the environment.



Shri Arava Rajkamal, IAS

Director-Mines, Department of Mines & Geology
Government of Jharkhand

Shri Arava Rajkamal is an IAS officer of 2008 batch. He has an MPA degree in International Development Economics from Harvard University and a Bachelor's in Chemical Engineering from IIT Madras. He served as District Collector-cum-District Magistrate in Saraikela, Chaibasa, Deoghar, Bokaro and Deputy Development Commissioner of Ranchi. Through policy making and program implementation in various sectors, he has played a crucial role in reducing carbon emissions and mitigating climate change's impact for sustainable development in the state.



Shri Bhor Singh Yadav, IAS

Director, Department of Industries
Government of Jharkhand

Shri Bhor Singh Yadav is an IAS officer of 2014 batch. He served as the SDO in Gumla, Khunti and Ranchi district. He was also District Commissioner cum District Magistrate of Godda as well as Latehar, Jharkhand. He has been instrumental in shaping the policy level planning for inclusive development and is currently playing a crucial role in transitioning to a low-carbon industrial scenario in the state.



Shri Pradip Kumar

Joint Transport Commissioner
Department of Transport, Government of Jharkhand

Shri Pradip Kumar, currently serves as Joint Transport Commissioner in the Transport Department, Jharkhand, is a key figure in shaping the transportation landscape of the region. Mr. Kumar's role reflects a dedication to advancing sustainable practices in the transportation sector, aligning with Jharkhand's vision for a greener and more efficient future.



Shri Ramapati Kumar

Chief Executive Officer
Centre for Environment and Energy Development (CEED)

Shri Ramapati Kumar is a seasoned public policy expert, social entrepreneur with over 26 years of experience in the field of social development. His contributions have been instrumental in addressing complex environmental and developmental issues through the creation of collaborative platforms for change. Mr. Kumar is actively involved in climate change mitigation projects and is well-versed in shaping effective public policies.



Shri Ajit Dhanraj Kothari

Chief (Sustainability and Decarbonisation Projects, E&P)
Tata Steel

Shri Ajit Kothari joined Tata Steel in 1991 as Metallurgical Graduate from IIT Kanpur and has completed 32 years. He has been instrumental in the design and operationalisation of steel plants with novel technologies and cleaner energy upgrades. For the past two years has been working on Sustainability & Decarbonisation Projects for Tata Steel. He is also a member of Green Hydrogen Mission Task Force constituted by Government of Jharkhand.



Shri Amit Bhatt

Managing Director
ICCT

Shri Amit Bhatt has over 20 years of experience in transportation, urban development, and management. Before joining ICCT, Amit was Executive Director for Integrated Transport at WRI India for 12 years. He has a Bachelor's degree in Architecture and a Master's degree in Transport Planning from the School of Planning and Architecture, New Delhi. Amit writes extensively on the issues of transportation and road safety for some of the leading media houses.



Shri M. Vidya Sagar

Senior Manager, Hydrogen
NTPC

Shri Vidya Sagar Madhurakavi is a seasoned professional with 22 years of diverse experience. He has a robust background in the operation, maintenance, and management of fuel systems and turbines across NTPC locations. With a BE in Mechanical Engineering from Andhra University, he holds certifications in energy auditing, radiological safety, IOSH safety management, Hydrogen Energy, etc.



Shri H.K. Sethi

AGM, EMG
NTPC LTD (North Karanpura)

Shri Harsh Kumar Shetty, currently serving as AGM in Environment Management at NTPC. With an extensive background in environmental management, he plays a pivotal role in NTPC's commitment to green initiatives. His insights and leadership in this realm underscore his dedication to steering initiatives that contribute to a cleaner, more sustainable future for the region.



Ms. Sweta Khoshy

Project Analyst
UNDP

Ms. Shweta Miriam Koshy is an Energy Analyst at the UNDP, India. She is a mechanical engineer by training along with a masters degree in energy management from ESCP Business School. She believes in infusing gender equity and inclusive approach in the policy planning process. At UNDP, she focuses on improving access and affordability of renewable energy technologies for the most vulnerable through the lens of gender, equity and justice.



Ms. Aparna Vijaykumar

Senior Program Manager – Electric Mobility
WRI India

Smt. Aparna has over 7 years of experience in urban transport and currently supports WRI India's efforts on electric buses – working with bus agencies to aid in their transition to clean technology. Recently, Aparna was instrumental in streamlining WRI India's efforts in supporting CESL to implement the world's largest tender for 5,500 e-buses which led to the formulation of the National Electric Bus Program.



Dr. Manish Kumar

Director (R&D)
Centre for Environment and Energy Development (CEED)

Dr. Manish Kumar leads the interdisciplinary research on ambient air quality, land use, and climate change issues in India and South Asia. He has been deeply instrumental in investigating the sources of air pollution over the Indo-Gangetic Plain (IGP) and Central Highlands of India. He has more than 10 years of experience in environmental research over a wider set-up, including government, industry, and academia.



Shri Aditya Malhotra

Vice President
FICCI

Shri Aditya Malhotra has been a known industrialist and past president of Rotaract Club, past chairman of round table, past president of Rotary Club besides executive member of various social and business organizations. He is actively associated with industries across Jharkhand and champions for the cause of the sustainable environment.



Shri Prasanta Bose

Vice President, Head – Technical, Sustainability & Production Planning
Hindalco Industries Ltd.

Shri Prasanta Bose has expertise in process and production control, enterprise risk management, customer interaction and handling complaints, Cost optimization by improving efficiency and reducing waste, Resource planning, quality control and debottlenecking, long term projects to improve profitability and decarbonisation efforts.



Shri Abhishek Biswas

Director
Orica India

Shri Abhishek Biswas is the Director of Orica India Business, and he oversees operations in India, Philippines, and Indonesia. He has over nineteen years of experience in manufacturing, projects, business administration and research and development across a variety of industries, including aluminum, power, fiber and now explosives.



Agenda



AGENDA

State Level Conference Facilitating Decarbonisation in Jharkhand

05 December 2023, Ranchi

Time	Agenda
09:30 AM- 10: 00 AM	Registration of Delegates
10:00 AM – 11:00 AM	Plenary Session
	10:00–10:05 AM: Lighting of the Lamp
	10:05–10:15 AM: Welcome & Context Setting Shri Ramapati Kumar Chief Executive Officer (CEO) Centre for Environment and Energy Development (CEED)
	10:15–10:20 AM: Special Address Shri Amit Bhatt Managing Director, International Council on Clean Transportation (ICCT)
	10:20–10:30 AM: Special Address Dr. D.K. Saxena, IFS APCCF,, Government of Jharkhand
	10:30–10:45 AM: Decarbonisation Pathways for Jharkhand: Challenges and Opportunities Shri A.K. Rastogi, IFS (Retd.) Chairman, Task Force-Sustainable Just Transition & Green Hydrogen Mission Government of Jharkhand
	10:45–11:00 AM: Keynote Address Shri L. Kiangte, IAS Additional Chief Secretary Department of Forest, Environment and Climate Change Government of Jharkhand
11:00 AM – 11:10 AM	Tea Break

11:10 AM – 12:30 PM	<p>Session 1: Pathways for Decarbonising Mobility in Jharkhand Chairperson & Moderator</p> <p>Shri Arava Rajkamal, IAS Director-Mines Department of Mines & Geology Government of Jharkhand</p>
	<p>Topic: Decarbonising Mobility for Net-Zero in Jharkhand</p> <p><i>Speaker 1:</i></p> <p>Shri Amit Bhatt Managing Director, International Council on Clean Transportation (ICCT)</p>
	<p>Topic : Strategies for Decarbonising Mobility in Jharkhand</p> <p><i>Speaker 2:</i></p> <p>Shri Pradip Kumar Joint Transport Commissioner Department of Transport Government of Jharkhand</p>
	<p>Topic : Hydrogen Initiatives for Green Mobility</p> <p><i>Speaker 3:</i></p> <p>Shri M Vidya Sagar Sr Manager, Hydrogen NTPC</p>
	<p>Topic : Transforming Mobility through Hydrogen</p> <p><i>Speaker 4:</i></p> <p>Mr. Ramesh Chode Tata Cummins</p>
	<p>Topic : Global Best Practices for Decarbonising the Mobility Sector</p> <p><i>Speaker 5:</i></p> <p>Ms Aparna Vijaykumar Senior Program Manager – Electric Mobility WRI India</p>
	<p>Topic : Global Best Practices for Decarbonising the Mobility Sector</p> <p><i>Speaker 6:</i></p> <p>Ms Sweta Khoshy Project Analyst UNDP</p>
	<p>Open Discussion & Concluding remarks by Chair of Session</p>

12: 30 PM – 01:45 PM	<p>Session 2: Pathways for Decarbonisation in Jharkhand Chairperson & Moderator</p> <p>Shri Bhor Singh Yadav, IAS Director Department of Industries Government of Jharkhand</p>
	<p>Topic: Understanding Decarbonisation Challenges in Jharkhand</p> <p><i>Speaker 1:</i></p> <p>Dr. Manish Kumar Director (R&D), Centre for Environment & Energy Development (CEED)</p>
	<p>Topic : Role of Industries /Associations in the Climate Resilient Economy</p> <p><i>Speaker 2:</i></p> <p>Shri Aditya Malhotra Vice President Federation of Jharkhand Chamber of Commerce & Industries (FJCCI)</p>
	<p>Topic : Enablers for decarbonisation, Finding a win-win situation</p> <p><i>Speaker 3:</i></p> <p>Shri Ajit Dhanraj Kothari Chief (Sustainability and Decarbonisation Projects, E&P) Tata Steel</p>
	<p>Topic : Decarbonisation Pathways for the Cement Industries</p> <p><i>Speaker 4:</i></p> <p>Shri Priya Ranjan Unit Head & Deputy Executive Director Dalmia Cement Bharat Ltd.</p>
	<p>Topic : Initiatives for Decarbonisation</p> <p><i>Speaker 5:</i></p> <p>Shri Prasanta Bose Vice President, Head-Technical Sustainability & Production Planning Hindalco Industries Ltd.</p>
	<p>Topic : Industrial Decarbonisation Pathways</p> <p><i>Speaker 6:</i></p> <p>Shri Abhishek Biswas Director, Orica India</p>
	<p>Open Discussion & Concluding remarks by Chair of Session</p>
01:45 PM- 02:00 PM	Vote of Thanks
02:00 PM onwards	Lunch & Networking





For further details, please contact :
sjtjharkhand.office@gmail.com
info@ceedindia.org