

The Way Forward Future Ready Jharkhand in 2070

Workshop Report

SUSTAINABLE PATHWAYS FOR FUTURE READY JHARKHAND

09 May 2022, Ranchi

About DoFECC

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Department of Forest, Environment & Climate Change

(DoFECC) is one of the important departments in Government of Jharkhand that aims to foster ecologically sound, socially beneficial and economically prosperous development of Jharkhand State by effectively enforcing relevant policies and regulations for the sustainable management of its forests and forest resources.

About CEED

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Centre for Environment and Energy Development (CEED),

an environment and energy expert group, which 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.

For further details, please contact :

apccfcampaworkshop@gmail.com

info@ceedindia.org

Design by :

SRAS Graphic

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Message from PCCF Jharkhand

This is a defining moment and tremendous opportunity for all of us since Jharkhand is one of the first states in India, that has taken a lead in exploring sustainable pathways for becoming future ready in true sense. In the wake of climate change impacts and imminent resource depletion in many parts of the world, including India and key states like Jharkhand, the current development paradigm based on fossil fuel is poised to be changed in favour of environmentally sustainable models. We essentially need a green vision and a new development model for a fair and sustainable transition that puts sustainability, inclusivity and public interest at the center stage.

In order to define this transition in the state, Department of Forest, Environment & Climate Change (Government of Jharkhand) and Centre for Environment and Energy Development (CEED) organised a workshop on 09 May, 2022 in Ranchi which was aimed towards making a future ready economy guided by the mandates of Glasgow Convention (COP-26, under the United Nations Framework on Climate Change Convention in 2021).

The Government of India (GoI) at Glasgow Convention announced that the country will achieve net zero emissions by 2070. Jharkhand has a greater task to move in this direction and it requires a set of policy frameworks and guidelines that can help in managing the social, economic and environmental dimensions of the sustainable transition.

Similarly, the workshop deliberated on and brought forward the vision centric ideas, perspectives and learning from key policy makers, stalwarts from PSUs, industry leaders, leading academicians to transform the Jharkhand for achieving sustainability, inclusivity and prosperity!

We are happy to share the workshop report in front of you and I am hopeful that the actions points and recommendations can lead towards an informed public policy discussion and decision making process for a better future ahead!

Shri A.K Rastogi, IFS
PCCF, Jharkhand
Chairman, Jharkhand State Pollution Control Board (JSPCB)



Message from APCCF, Special Projects, Jharkhand

The Glasgow Convention has put greater onus on us to move from fossil fuel based economic models to a greener and sustainable economy for a better future. The critical need for the sustainable transition should be both accurate and fair as recognised in the Paris agreement (2015) and Katowich convention (2018) under the United Nations Framework on Climate Change Convention (UNFCCC). It has all been agreed that the shift to a resilient and low-carbon economy can immensely boost prosperity, growth trajectory and inclusive development.

Situated in this context, this workshop has given us a glimpse of initiating visionary policies and programs and building an ecosystem, where every stakeholders's contribution counts since working in silos won't make a difference on ground. This workshop brought a holistic and inclusive approach of pathbreaking solutions to enable Jharkhand attaining sustainable development goals!

**Shri Sanjay Srivasatava, IFS
APCCF, Special Projects
GoJ**



Message from APCCF-CAMPA, Jharkhand

As the Paris Agreement (2015) and Glasgow Convention has pressed the need to move from a new development model for mitigating the concern of climate change impacts globally, the transition to a resilient, low-carbon economy is underway, however states like Jharkhand have the greater role to drive this shift. This is high time that we bring all concerned stakeholders right from the govt department and agencies, public sector units, private players, academicians to key stakeholders to constructively deliberate in a vision centric manner and bring required policy intervention and action points for the state.

We are hopeful that the discussion and suggestions emerged from the workshop will immensely help various stakeholders in leading the process of a low carbon development pathway in the state.

**Shri Sanjeev Kumar, IFS
APCCF-CAMPA
GoJ**



Message from CEO, CEED

In a watershed moment at the Glasgow Convention (COP-26 under UNFCCC in 2021), more than two-third of the world, including India, agreed to be Net Zero by 2070. Indeed this is a massive task, yet achievable, provided all stakeholders concerned t share a comprehensive, forward-looking perspective and have well-calibrated planning and implementation procedures in place. It is quite clear that without the involvement of mineral rich states like Jharkhand, a Net Zero scenario is not possible. Therefore, this workshop became a timely initiative since it focused on envisioning Jharkhand @ 2070 with putting forward pathways for enabling just transition in the state.

"Though today we are taking the right step in the right direction by moving in inches, however, we need to gallop in miles" goes one of my favourite quotes. This workshop has been organised with the same intent to provide knowledge, options and key recommendations to the state government on future action points and creating a visionary roadmap for a forward looking economy in Jharkhand.

**Shri Ramapati Kumar
CEO
CEED**

List of Abbreviations

APCCF	Additional Principal Chief Conservator of Forests
AT&C	Aggregate Technical and Commercial Losses
BCCL	Bharat Coking Coal Limited
BIT	Birla Institute of Technology
CBM	Coal Bed Methane
CCL	Central Coalfields Limited
CIMFR	Central Institute of Mining and Fuel Research
CMD	Chairman-cum-Managing Director
CMPDI	Central Mine Planning and Design Institute
CSIR	Council of Scientific and Industrial Research
CSOs	Civil Society Organizations
CSR	Corporate Social Responsibility
CUJ	Central University of Jharkhand
ESG	Environment, Social, Governance
FASAT	Fly Ash Soil Amendment Technology
GoJ	Government of Jharkhand
HoFF	Head of the Forest Force
IFP	Institute of Forest Productivity
IFS	Indian Forest Service
JSPCB	Jharkhand State Pollution Control Board
LDN	Land Deterioration Neutrality
PCCF	Principal Chief Conservator of Forests
RE	Renewable Energy
SDG	Sustainable Development Goals
SFM	Sustainable Forest Management

Speakers



Mr. A.K. Rastogi, IFS
PCCF, Jharkhand
Chairman, JSPCB



Mr. Sanjay Srivastava, IFS
APCCF, Spl. Project
Govt. of Jharkhand



Mr. Sanjeev Kumar, IFS
APCCF, CAMPA
Govt. of Jharkhand



Mr. Ramapati Kumar
CEO, CEED



Mr. P.M. Prasad
CMD, CCL



Mr. Manoj Kumar
CMD, CMPDI



Mr. Samiran Dutta
CMD, BCCL



Mr. Afroz Ali
VP, Adani



Dr. Nitin Kulkarni
Director, IFP



Mr. C.S. Srinivas
GM, NTPC



Dr. I.N. Rao
EH, Tata Power



Mr. M. Raghu Ram
DT, DVC



Mr. Sanjiv Paul
VP, Tata Steel



Dr. N.K. Srivastava
Sr. PS & C CIMFR



Mr. Jagmit Sindhu
CEO, Jojobera, Power



Mr. Vivek Mishra
Head HINDALCO



Mr. Susant K. Guru
JP - St. HINDALCO



Mr. S.M. Srivastava
CRE, Tata Steel



Prof. Indranil Manna
VC, BIT Mesra



Dr. Anshumali
IIT (ISM)



Dr. Anupam Ghosh
Assistant Prof., BIT Mesra



Prof. S.K. Samdarshi
D&C, CoE-GEET, CUJ



Prof. Ramesh Sharan
Former VC, VBU

Participating institutions



125 leaders from Government Departments, industries & academic institutions participated in the workshop.

The background features a large, stylized tree with a dense canopy of leaves. The color palette is primarily orange and white, with the tree's branches and leaves rendered in a lighter, semi-transparent orange against a darker orange background. The overall aesthetic is clean and modern.

KEY RECOMMENDATIONS OF THE WORKSHOP

Key Recommendations

1.

Adoption of Environment, Social and Governance (ESG) on mandatory basis to analyze the company behavior and must be linked to future business investment.

2.

GHGs reporting, carbon neutrality and carbon budgeting is key for future business investment. Technology has to play a key role in governance, implementation and monitoring to avoid governance challenges.

3.

Agriculture, forest-based businesses, service economies such as education, tourism, and hospitality have tremendous roles to play in transition.

4.

A State Ecological Restoration Mission for degraded land or areas must be launched with tangible targets. The industrial sector must take initiative by converting derelict mined areas into biomass production areas to recover degraded mine land.

5.

Augmenting the implementation capacity across the sector to achieve the desired goal for overall transition. Council of key nodal agencies shall work in tandem to achieve the desired goal.

6.

Promotion of RE through sectoral integration and solar manufacturing could be a game changer to create jobs and for that RE based skill mission need to be created.

7.

Re-purposing of de-commissioned thermal assets & Mines, re-skilling of thermal & mines workforce (formal & Informal), re-using of closed mine land for renewable energy should be initiated. Re-skilling mission needs to be initiated to absorb the current workforce from fossil fuel industries.

8.

Jharkhand has immense potential for green hydrogen development to decarbonise steel industries in Jharkhand. Jharkhand has to formulate state hydrogen policy to be a lead partner in "Green Hydrogen Mission".

9.

Localization of the knowledge network through Research & Innovation with the help of academic institutions in the state is key to support public policy and diversification of the economy in the light of transition.

10.

Financing mechanism needs to be strengthened and new avenues to create funds must be tapped. Carbon budgeting, carbon tax, carbon trading, CSR, DMF funds, public and private financing and integration of departmental funds for a holistic approach is key to deliver the transition.

11.

Collective efforts, convergence, multi stakeholder approach and defined short, mid and long term target is key to measure the progress under overall transition program

12.

Increase awareness and sensitization program to achieve transition process for future ready Jharkhand.



**THE WAY FORWARD
FOR FUTURE READY
JHARKHAND IN 2070**

The Way Forward

01

With the Net Zero goal in mind, it is critical to have a structured framework in place to make Jharkhand's economy more Inclusive, Sustainable and Just.

02

A 'Just' Transition with an inclusive strategy is required to investigate possible solutions for a sustainable future which encourages new business ventures that benefit everyone, including coal firms.

03

A Task Force or Committee to be formed for providing knowledge, options and key recommendations to the Government of Jharkhand. The task force shall analyze the best practices available in India and abroad for future ready Jharkhand. A proper guidelines for task force formulation to be decided at a later stage after the consultation with Government officers. **Subcommittees to be formed under a task force with defined strategic targets with experts from Academician, Industry and Intellectuals.** The task force to work as an apex body in terms of finalizing the recommendations.

04

The task force shall have a **defined timeline and engage with relevant stakeholders to finalize the scale and types of interventions.** Understanding the current central and state schemes, district level transition action plan and gaps in policy and program to support the transition.

05

The main output of the **Taskforce will be to provide two reports; Interim and Final on action plan and recommendations to the Government of Jharkhand.** The timeline for the task force shall be a minimum of three years.



Shri A.K Rastogi, IFS
PCCF, Jharkhand
Chairman, JSPCB

“Very soon we will have a roadmap for Just Transition in Jharkhand”



INTRODUCTION

Introduction



Jharkhand is widely known as the mineral hub of India, which faces a formidable task of achieving economic growth, inclusive development and environmental sustainability. Effects of climate change and the depleting resource base have put focus on phasing down of fossil fuels for adopting climate mitigation measures such as carbon neutrality and energy transition. This has been the core theme of the international consensus under the United Nations Framework Convention on Climate Change since the Paris Convention in 2015 (COP-21) to the Glasgow Convention in 2021 (COP-26). Further, The commitments made under Glasgow convention to achieve Net Zero Emission have put greater onus on key global players like India in general and Jharkhand in particular. Given the risks that peak coal in India and Jharkhand may arrive in the next two to three decades, all stakeholders need to develop long-term strategies and plans.

Situated in this context, the Department of Forest, Environment and Climate Change (GoJ) in association with Centre for Environment and Energy Development (CEED) organised a state level workshop on 09 May 2022 in Ranchi. It was organised in the light of goals of the Glasgow Convention (Conference of Parties-26 held in 2021), where Government of India has pledged to achieve the Net Zero Emission by 2070, similarly constructive discussion pondered over new opportunities for India in general and Jharkhand in particular.

Why this workshop?

The state has a looming concern of resource depletion in the next 30-40 years, where about 12 coal rich districts (Hazaribagh, Ramgarh, Dhanbad, Bokaro, Giridih, Palamu, Ranchi, Chatra, Latehar, Godda, Pakur and Dumka) are poised to face its multiplier effects on the state economy and the people at large.

Jharkhand falls under the climate vulnerable zone which faces a disproportionate burden of environment, land and forest degradation. Jharkhand has 68.98% of its geographical area under desertification and it is among the top five states with highest area under desertification in the country.

In the run up to the Net Zero Emission target of 2070 set by GoI, Jharkhand needs to convert challenges into opportunities to create pathways for a forward looking economy.

Goals and objectives :

This workshop was aimed towards deliberate on and bringing forth vision centric ideas, perspectives and learning from key policy makers, stalwarts from PSUs, industry leaders, leading academics to transform Jharkhand for achieving sustainability, inclusivity and prosperity and making it future ready and sustainable!

Bring together representatives of key depts/agencies, public sector units, and academic institutions to deliberate on visionary steps for future ready Jharkhand

Facilitating the information exchange of pathbreaking ideas and solutions between policymakers and experts to present roadmap and action plans for strengthening the process of sustainable transition.



Overview of the Workshop :

This workshop was divided into 4 technical sessions that dealt with core concern around the imminent sustainable transitions in Jharkhand.

- ▶ **Session 1:** Environment, Social, Governance (ESG) Challenges in Jharkhand
- ▶ **Session 2:** Desertification and Natural Landscape Restoration
- ▶ **Session 3:** Glasgow Convention - Coal Production Scenario and Energy Security
- ▶ **Session 4:** Diversification of Economy: Challenges, Opportunity and Pathways for Jharkhand

The first session (Environmental, Social, Governance related challenges in Jharkhand) discussed climate risks and the prospect of decarbonisation in the backdrop of the phase down of coal. The second session (Desertification and Natural Landscape Restoration) broadly looked at the policy intervention and action points to rejuvenate the land and forest. The third session (Coal production scenario and Energy security) explored energy security in the wake of resource depletion and promotion of renewables to make energy mix cleaner. The fourth session (Diversification of Economy: challenges, opportunity and pathways) laid emphasis on identifying emerging sectors, required financing, skill enhancement and localised jobs with facilitating social infrastructure in the state.

The conference witnessed participation from key government dept & agencies (Energy, Mines, JSPCB, JREDA), prominent public sector units e.g. CCL, ECL, BCCL, Damodar Valley Corporation, Central Mine Planning and Design Institute, National Thermal Power Corporation, leading corporates like Tata Steel, Tata Power, Hindalco, Jindal Steel, Adani Industries, and academicians from institutions (e.g. Central Institute of Mining and Fuel Research, Institute of Forest Productivity, IIT-ISM, Dhanbad, Central University of Jharkhand, Birla Institute of Technology, Ranchi University, Xavier Institute of Social Service) from the state.



INAUGURAL SESSION

Inaugural Session

The workshop began with the inaugural session composed of Mr AK Rastogi (IFS), Principal Chief Conservator of Forest (PCCF) and Chairman, Jharkhand State Pollution Control Board (JSPCB), Mr Sanjay Srivastva, Additional Principal Chief Conservator of Forest (APCCF), Government of Jharkhand, Shri Sanjeev Kumar, APCCF-CAMPA, Government of Jharkhand, and Mr Ramapati Kumar, Chief Executive Officer, Centre for Environment & Energy Development (CEED).

The session set the broader context and elaborated the key goals and objectives of the conference and pledged the esteemed guests, session chair, panelists and participants to indulge in an open and constructive discussion and suggest the key issues and solutions for making the state future ready through sustainable means.

Mr AK Rastogi (IFS), Principal Chief Conservator of Forest (PCCF) and Chairman, Jharkhand State Pollution Control Board (JSPCB) delivered the keynote address and emphasis that there is need of integrated approach for mainstreaming of the climate adaptation strategies in planning, programmatic and implementation phase with a clear vision to attain the sustainable goals and net zero emission target.



Key Highlights

1

To ensure a successful sustainable transition in achieving the mandates of net zero, it is important to put in place a visionary plan that streamline the in-depth feasibility and scalability assessments of technical, social, and economic transition.

2

It must support a convergence model of aligned departments and agencies with policy guidelines for a proper coordination in a multi-stakeholder approach

3

Key departments and institutions leading the just transition process must ensure creating forums and platforms for dialogue, awareness building and capacity development for key stakeholders located in state, private, civil society and community realms.

4

A comprehensive approach should be part of this process which includes adhering to the sustainability principle, management of environmental and socio-economic assessments, creation of social and physical infrastructure and community and stakeholder engagement for ensuring a better and secure habitat.

5

There is a need for a greater understanding of forest-water-climate relationships where communities play a key role in rejuvenation of the natural resources.

6

Energy security and livelihood security is at the centre of sustainable transition and creation of a forward looking economy.

7

An effective, result oriented and socially responsive governance is the key to achieving the sustainable development goals.

Key takeaways from Speakers



“This is a defining moment for all of us since Jharkhand is one of the first states in India that is taking the lead in formulating pathways for creating a future

ready economy. The current development paradigm based on fossil fuel is poised to be changed in favour of environmentally sustainable models. We essentially need a green vision that puts sustainability, inclusivity and public interest at the center stage. The Department of Forest, Environment & Climate Change of Jharkhand is developing visionary roadmap for enabling just transition to achieve growth trajectory and environmental sustainability in the state.”

Shri A.K Rastogi, IFS
PCCF, Jharkhand
Chairman, JSPCB



“The Government of India has committed the Net Zero Emission target by 2070 in the Glasgow Convention, which has put greater onus on us to move from fossil fuel

based economic models to a greener and sustainable economy for a better future. It essentially requires a new vision and approach with infusing sustainability and environmental management practices in every spheres of the economy and society.”

Mr Sanjay Srivastva (IFS),
APCCF, Special Projects
Government of Jharkhand



“Creation of institutional frameworks as well as environmental and social safeguards is required to facilitate the implementation, monitoring, and learning

associated with transitions in the state. In order to support public policy making in the state, there is a need to have deep dive and localised research on a range of themes with a solution driven approach.”

Shri Sanjeev Kumar, (IFS)
APCCF-CAMPA,
Government of Jharkhand



“For creating a forward looking economy, there is an urgent need to have a special task force or a committee that should be given mandate to map out the magnitude of ensuing

impacts and prospective opportunities in the transition phase through a series of studies and stakeholders consultations for an informed public policy discussion and decision making process. Essentially what is required here is the creation of an ecosystem and establishment of the institutional frameworks in a convergence mode to support the implementation, monitoring, and learning related to just transition at the subnational level.”

Mr Ramapati Kumar
Chief Executive Officer
(CEED)

Session 01

ENVIRONMENTAL, SOCIAL, GOVERNANCE (ESG) CHALLENGES IN JHARKHAND

Background

Environmental, Social, and Governance (ESG) aspects should be considered while making investment decisions, according to the United Nations Principles for Responsible Investment (UN-PRI). While global mitigation measures are still being argued and discussed in many forums, there are obvious signals and directions that industry in India is moving in the direction of a low-carbon economy and holistic growth for a better future.

States like Jharkhand must look to alternative possibilities, accelerate wise investment, and build social infrastructure to strengthen the local economies in the run-up to the net-zero ambition by 2070 and the gradual phase-out of coal.

Objective of the Session

The aim of the session was to better understand the mining industry's multi-sectoral role in terms of sustainability and green economy in the framework of just transition and how to integrate the ESG principle in business verticals.

The topics that were covered included climate risk, the prospect of mining & decarbonization, grey to the green economy, environmental sustainability in industry, and ESG prospects and their challenges in Jharkhand.

Shri PM Prasad, Chairman cum Managing Director (CMD), Central Coalfields Limited (CCL) chaired the session and was supported by Dr Ivaturi Nandikeswara Rao, Head-Corporate, Environment & Climate Change, Tata Power to moderate the discussion.

Shri PM Prasad outlined the focus of investors and other stakeholders seeking businesses to be responsible and sustainable towards the environment and society and highlighted the importance of reporting on ESG and sustainability.

Dr Ivaturi Nandikeswar Rao from Tata Power set the context by citing the challenges and importance of investment needed in the state in order to ensure the smooth transition to a green economy.



Key Highlights

1 Climate risks are associated with the transition to a lower-carbon economy as well as the physical effects of climate change on mining.

2 An increase in the frequency of extreme weather events impacts the investment and the businesses.

3 The majority of emissions in this sector originate from fugitive coal-bed methane that is released during coal mining, mainly at underground operations. Efforts are being made to tap the CBM as fuel.

4 Companies in the oil and gas, electricity generation, automotive, and financial sectors are demonstrating that acting on climate is good for the Earth and also a smart business strategy.

5 3Ps of Sustainability such as 'Planet, Profit, and People' need to be the key factors determining the ESG for business.

6 Sustainability reporting is necessary for the long-term conceptual framework.

7 Reporting on a company's performance in terms of sustainability is as important as reporting on financial and operational performance.

8 Sustainability reporting is necessary for the long-term conceptual framework.

9 The social aspects of technological transformation continue to be a blind spot. Technological transformation is a must to reduce the negative consequences on the economy.

Key Recommendations

- 1 Sustainable mining methods, lessened deforestation, and improved waste and water management are required for a successful transition from a grey to a green economy.
- 2 ESG has a major beneficial impact on core business concerns that are critical to any company's long-term performance, regardless of industry.
- 3 ESG is a part and parcel of the "National Land Utilization policy" which is the mother of all policies and must be implemented in totality.
- 4 A greater need to have multi-pronged skill enhancement & capacity-building measures for all key stakeholders to adopt such a transition process.
- 5 Re-skilling and Re-training people must be adopted as a non-negotiable component for just transition in Jharkhand
- 6 Academic institutions and other think tanks should lead task-based research funded by leading industries to find the way forward for transition.
- 7 A Task-force with representation from leading Industries, Academicians & CSOs in the state should be constituted to find a way forward on inclusive transition.

Key takeaways from Chairman & Speakers

Concluding remarks by Session Chair



**Shri PM Prasad, Chairman cum Managing Director,
Central Coalfields Limited (CCL)**

ESG may be used to analyze company behavior and, on the way to net-zero emissions by 2070, it can help estimate the future performance of coal mining firms in the state that are confronting sustainability problems.

The coal industry wholeheartedly will support the transition process and will move toward the net-zero path as per the frameworks and guidelines suggested by the Government of India. Collective efforts and convergence are key to achieve the transition process.

“To promote employment and ensure balanced regional development of backward areas, the key to industrial growth strategy will require substantial rise in rural infrastructure investment. Traditional ways of investing must be re-evaluated in light of excellent ESG principles.”

**Dr Ivaturi Nandikeswara Rao,
Head-Corporate, Environment & Climate Change, Tata Power**



“Jharkhand must move forward in addressing this transition. Since Jharkhand’s industries and economy are primarily based on coal, therefore, a strategy for reducing climate risk and re-skilling and retraining people is required for equitable growth of Jharkhand.”

**Shri Samiran Dutta, Chairman cum Managing Director,
Bharat Coking Coal Limited (BCCL), Dhanbad**



“Jharkhand should have the sectoral carbon footprint analysis and prepare a sector-wise action plan for carbon neutrality aligning with Glasgow’s commitment.”

**Shri Manoj Kumar, Chairman cum Managing Director,
Central Mine Planning and Design Institute (CMPDI)**





“Environmental concerns are important to businesses and industry must work on CSR plus strategies by focusing more on ESG. As a result, an Integrated Development model based on environmental, financial, human, and corporate governance is a must.”

Dr Anupam Ghosh, Assistant Professor, BIT Mesra, Ranchi

“Rejuvenation of natural resources and rivers is highly required for a sustainable habitat.”

Dr Anshumali, Professor & Head, IIT(ISM)



Session 02

DESERTIFICATION AND NATURAL LANDSCAPE RESTORATION

Background

Jharkhand has over two-thirds of its land covered in desertification, with Giridih and Bokaro among India's most desertified districts. Desertification has a wide range of socioeconomic consequences since it causes erosion of land, soil, and water, resulting in a loss of livelihood possibilities for people and indigenous communities, as well as a cycle of poverty, unemployment, and outmigration in the region.

Natural landscape restoration is a multi-step process that restores ecological functionality while also improving human well-being in deforested or degraded forest settings. This includes numerous solutions that have been combined to achieve the goals of sustainable land management by minimizing land degradation, restoring degraded areas, and guaranteeing the most efficient use of land resources.

Objective of the Session

The session's goal is to look at different areas of policy intervention and action points for revitalizing degraded and wastelands for better economic and cultural prospects.

Land deterioration neutrality for sustainable development, natural landscape restoration, resilient strategies for utilizing forest potential in a sustainable way, and ecological restoration of degraded mined lands: a sustainable approach were among the themes presented in this session.

Shri PM Prasad, CMD, CCL presided over the session, which was facilitated by Mr Afroz Ali, Vice President, Adani Enterprises Ltd. Mr Prasad stated the session's goal and urged leaders and participants to find solutions to combat desertification and restore the natural landscape. The moderator set the tone by recognising the limitations of Jharkhand's landscape, as well as its rapid degradation, and emphasizing the necessity to adapt to these obstacles.



Glasgow Convention Sustainable Pathways - Future Ready Jharkhand

09 May 2022, Ranchi



Key Highlights

- 1 Desertification is one of the major global challenges affecting human survival such as reduction in water table, conversion to infertile land, migration to other land, etc.
- 2 Soil and Water erosion is quite high in Jharkhand because of mining activity.
- 3 Greater understanding of fundamental forest water climate relationship is required.
- 4 Strategic approach by Jharkhand Forest department towards land degradation neutrality encapsulates Avoidance, Reduction, Restoration and rehabilitation.
- 5 A State Plan must be made for ecological restoration and restoration of degraded areas.
- 6 Groundwater management should focus attention on over exploited areas.
- 7 Strong monitoring framework should be adopted to restore forest degradation.
- 8 Reclaiming the mined areas and converting it to biomass production areas can generate revenue for the coal companies.
- 9 Climate resilient agriculture practices should be promoted to offset the effects of climate change and desertification problems.
- 10 SFM, SDGs, land neutrality etc. are long term programmes requiring people's participation, but our every effort requires us to be oriented towards that now.
- 11 The forest research institutions are to be kept on board as scientific partners so that they are key indicators of changes in any given area and are scientifically identified and evaluated pre and post implementation, time to time.
- 12 Land degradation can be considerably reduced through bio reclamation of low-lying areas.
- 13 FASAT (Fly Ash Soil Amendment Technology) has the potential to greatly boost crop output in waste land and mining wastes.

Key Recommendations

- 1

In order to adapt to the challenges of a changing environment, the industrial sector must take initiative by converting derelict mined areas into biomass production areas that can help recover degraded mine land.
- 2

Need for a better understanding of fundamental forest water climate relationship.
- 3

Prepare a state specific plan for ecological restoration and restoration of degraded areas.
- 4

To encourage people's participation in order to achieve goals of long-term programmes like SFM, SDGs, land neutrality etc.
- 5

Utilization of fly ash in restoring degraded mine land will act as a twin solution to two major problems i.e., land restoration and utilization of byproducts such as fly ash.

Key takeaways from Chairman & Speakers

Concluding remarks by Session Chair

Shri PM Prasad CMD, Central Coalfields Limited (CCL)



Businesses, universities, and research institutions should work together to restore degraded land and develop state-level programmes. Restoration of degraded land is crucial because our country has 17 percent of the world's population but only 2.5 percent of the land. Land becomes scarce as the population grows. For a brighter economic and cultural future, industries, researchers, the government, and other stakeholders must collaborate to revitalize damaged and wastelands.

"Desertification is one of the key global concerns affecting human existence, such as a drop in the water table, conversion to barren terrain, and distressed migration. As representatives of the industrial sector, we cannot conduct our businesses in a vacuum, apart from the needs and requirements of the environment, and as a result, businesses must take initiative to adapt to the challenges of a changing environment."

Mr. Afroz Ali, VP, Adani Enterprises Ltd



"Coal firms can create revenue by reclaiming mined areas and turning them to biomass production regions. Academic institutions, the research and development wing of industries, and other businesses should all strive in this approach."

Shri AK Rastogi (IFS), PCCF, Jharkhand & Chairman, JSPCB



"Climate change is exacerbated by land degradation, which renders people more vulnerable. Stopping and reversing land degradation in order to transition to a more sustainable society requires a greater understanding of the underlying forest-water-climate interplay. Furthermore, to reverse forest degradation, groundwater management with a focus on over-exploited regions, as well as a comprehensive monitoring framework, are required."

Shri Sanjay Srivastava (IFS), APCCF-Special Project, GoJ





“To counteract the effects of climate change and desertification, climate resilient agriculture practices should be promoted. In order to counteract land degradation, the importance of forestry research in sustainable forest management, sustainable development goals, and climate resilience must be underlined.”

Dr Nitin Kulkarni, Director, Institute of Forest Productivity

“Bio-reclamation of low-lying areas can significantly decrease surface runoff and also improve the fertility status of ash-filled areas. FASAT (fly ash soil amendment technology) has the potential to greatly boost crop output in waste land and mining wastes. This will aid in the reclamation of low-lying areas in the state’s mining zones.”

**Dr NK Srivastava, Sr. Principal Scientist & Coordinator,
CSIR-CIMFR, Dhanbad**



Session 03

GLASSGOW CONVENTION COAL PRODUCTION SCENARIO AND ENERGY SECURITY

Background

At the Glasgow convention, nearly two-thirds of countries pledged for Net Zero Emission guided by the threshold temperature limit (1.5 degrees above pre-industrial levels) of the Paris Agreement (2015). The Net-zero target (reducing carbon emissions) is a framework around which the pathway of the energy transition will, and the future of the economy, be peremptorily imagined and structured.

India is the second-largest producer and consumer of coal in the world. Jharkhand tops the chart with about 25% of India's total coal reserve. Nearly 15 million people depend directly or indirectly for employment and income on this resource. Coal demand in India is continuously increasing and it has further set a target of reaching 1BT of production by 2023-24 considering the ever increasing energy demand thrown by expanding economy, population, urbanization and industrialisation.

Objective of the Session

The session aims to understand the real challenges of coal phase down and managing energy security in the light of just transition.

The topics that were covered included carbon neutral aspirations, technical challenges, cost and future financing, emission control and grid management to support transition from coal to clean energy.

Shri AK Rastogi, PCCF, Government of Jharkhand (GoJ) & Chairman, JSPCB chaired the session and was supported by Shri Sanjay Mohan Srivastava, Chief Resident Executive (Tata Steel) to facilitate the third session.

Shri AK Rastogi, outlined the objective of the session and urged industry leaders to look for an alternative to fossil fuel.

The moderator set the context by citing energy security challenges in the context of the Glasgow convention. India, a developing nation, is going to face serious challenges while ensuring energy security.



Key Highlights

1

Demand Supply gap at Jharkhand is approx. 4.4% against a national average of approx. 0.4%.

2

Slower growth of clean/renewable energy capacity addition considering Jharkhand's ambitious target of energy transition is a matter of concern. However, the Solar Policy of Jharkhand is the ray of hope to ramp the capacity addition from solar.

3

Innovation in advanced batteries, hydrogen electrolyzers, Carbon capture and storage/use shall be vital in reduction of CO₂ emissions between 2030 and 2050.

4

In order to integrate RE power, the thermal fleet needs to adopt a flexible operation regime with focus to reduce startup time and higher ramp rates.

5

Grid stabilization is key to integrate more RE capacity and need to shift in resilient manner from Base Load technologies to Load Flowing technology

6

Share of Clean Energy sources will be about 66% of the installed capacity mix in 2029-30.

7

Coal to lose share in power generation, however, may be resilient on an absolute basis.

8

The production of coal from Jharkhand has remained constant in the last 5 years and needs to increase its production at 5.62% compared to 0.42% currently to meet India's coal demand and energy security.

9

Current thermal power plant technology should evolve in the wake of a carbon neutral scenario.

Key Recommendations

- 1**

Coal sector is ready to play its role in the transition process and shall extend support for meeting energy security. Mapping of degraded land (Not possible to restore) from closed mines area can be used as a land bank to promote large scale solar projects.
- 2**

Promotion of Renewable Energy (RE) through sectoral integration and solar manufacturing could be a game changer to create jobs and for that RE based skill mission needs to be created. An emphasis needs to be given to decentralized mode of RE generation to meet various demands in sectors such as agriculture.
- 3**

Re-purposing of de-commissioned thermal assets, re-skilling of thermal & mines workforce, and re-using of closed mine land for renewable energy should be initiated.
- 4**

Strengthening of implementation capacity to achieve the target set under Solar Policy of Jharkhand is key to create confidence among the project developers.
- 5**

Research & Innovation in conversion and conservation (of energy) and carbon capture technologies will provide pathways to energy transition within a carbon neutral framework.
- 6**

As projected thermal power generation will have to operate under a flexible operation regime as more and more RE power is being accommodated into the Indian grid which will throw design challenges to recent thermal power.
- 7**

Decentralized utility concept needs to be promoted to cut down the Aggregate Technical & Commercial (AT&C) losses and provide better series to the consumer.
- 8**

Jharkhand has immense potential for green hydrogen development to decarbonise steel industries in Jharkhand. Jharkhand has to formulate state hydrogen policy to be a lead partner in "Green Hydrogen Mission".
- 9**

Human Development Index/goal and skilled capacity building needs to be integrated with energy policy of the state.h.

Key takeaways from Chairman & Speakers



Concluding remarks by Session Chair

Shri AK Rastogi (IFS), PCCF, Jharkhand & Chairman, JSPCB

The coal and thermal power industries should use this opportunity and self-regulate to adopt more efficient/cleaner technologies. Coal sector is the second largest owner of land after Railway should re-purpose their land bank for natural landscape restoration and to possibly use it for RE installation. In tryst with carbon neutrality, continuously maturing clean/renewable energy technology will be key to energy security for the nation.

“One of the most significant social challenges in the energy transition is overcoming political, economic, behavioural, and cultural barriers. Since Jharkhand is heavily reliant on coal, it requires a supportive environment and enabling structure to enable inclusive growth for all stakeholders.”

Shri Sanjay Mohan Srivastava, Chief Resident Executive, Tata Steel



“Successful implementation of the policy on ground shall be key in building confidence among project developers and DVC under **Beyond Coal Initiatives** are repurposing the decommissioned plants and possible re-engagement of the workforce through re-skilling is our priority”.

Shri M Raghu Ram, Director-Technical, Damodar Valley Corporation (DVC).

“The human development index of Jharkhand/India to be met through renewable sources and new technologies. Research & innovation in conversion and conservation (of energy) and carbon capture technologies will provide pathways to just transition within a carbon neutral framework.”

Shri SK Samdarshi, Professor, Central University of Jharkhand (CUJ)





"The technical challenges to address the issues like variability, economic cost of transition, recyclability and raw material availability has to be met for smooth transition from coal to ensure energy security."

Shri Vivek Mishra, Head-Coal Mining Vertical, Hindalco Industries

"Use of advanced digital technologies like artificial intelligence along with other efficient and lower emission technologies can make thermal power plants relevant for a longer time."

Mr C.S. Srinivas, NTPC Ltd



"Re-skilling mission needs to be initiated to absorb the current workforce (70% informal workforce & Industry) to utilize it for RE plant in India. Technical issues such as flexibilization & RE bundling and phasing-out (decommissioning) of thermal assets in a cost effective manner is key for India transiting to RE power."

Shri Jagmit Singh Sidhu, CEO, Jojobera Power Plant (Tata Power)



Session 04

DIVERSIFICATION OF ECONOMY & CHALLENGES OPPORTUNITY AND PATHWAYS FOR FUTURE READY JHARKHAND

Background

Following the COP-26 summit, India reiterated its commitment to mitigating climate change impacts, establishing 2070 as its net-zero target year. India's energy goals are also causing a move away from fossil fuels and toward renewable energy. States like Jharkhand will be the hardest hit in this scenario. With 40% of India's mineral reserves and 26% of the country's coal reserves, the state faces a unique resource curse, with 42.17 percent of the population being multidimensionally poor and 68.9% of the state's land being degraded and desertified, where the entire economy is dependent on coal-related sectors, and inhabitants have relied on it for decades, however resource depletion is a problem because half of the mines are stopped temporarily or permanently.

While energy transition is a reality and is already happening, the socioeconomic impact of such transition is a concern for Jharkhand since coal is the backbone of 12 out of 24 districts, and millions of people, formally/informally work in the coal mining, transportation, power, sponge iron, steel, and bricks industries. This is where the concept of just transition comes into play, which can help address social and economic vulnerabilities resulting from the probable loss of livelihoods during the shift.

Objective of the Session

The session focused on diversifying Jharkhand's economy, with a special emphasis on developing new sectors and businesses in coal-dependent districts, given the state's dependency on coal. Prof Indranil Manna, Vice Chancellor, Birla Institute of Technology Mesra, presided over the fourth session, which was facilitated by Shri Susant Kumar Guru, Joint President-Sustainability, HIndalco.

The discussion focused on successful decarbonisation of the state's economy for a resilient and sustainable future, as well as the challenges that various sectors in Jharkhand face in reaching net-zero goals. Prof Indranil Manna, the session chair, underlined the need for new investments, skill development, and localized jobs backed by social infrastructure so that workers can reintegrate into new industries in the energy transition process while highlighting the possibilities and challenges.



Key Highlights

1

Ramgarh, Hazaribag, and Ranchi have the potential to become state horticultural and plantation leaders.

2

With 56% forest cover, Latehar in Jharkhand has the potential to become a hotspot for adventure and medical tourism. Handicraft, sericulture, Lac processing, and the promotion of abundant herbal resources can all help in economic diversification of Jharkhand.

3

Ranchi, Bokaro, Ramgarh, and Dhanbad, with their significant solar rooftop potential, can usher in an energy revolution and green jobs in Jharkhand.

4

Palamu, with its abundant Palash forest, has the potential to become a state hub for organic color production, with one district and one product scheme.

5

Premiere Academic institutes should collaborate with IT Sectors to train young minds and provide workforce to the IT sectors.

6

In order to enable a thorough dive and localised study on numerous subjects of Just Energy Transition in Jharkhand, constructive collaboration with notable academic institutes and universities is required.

7

It is significantly more challenging to provide alternative livelihood options and income replacement for informal employees, coal gatherers and sellers, than it is for formal workers.

8

After mining operations have finished, abandoned mine pits might be used to build tanks or for water-based recreational activities.

9

Agriculture, forestry, recreation, industrial development, and wildlife residence and habitat are all possibilities on the reclaimed land.

Key Recommendations

- 1

A holistic approach is required for ensuring a smooth transition which includes planning and measures for skills training, economic progress, inclusive growth, and social support.
- 2

A holistic approach is required for ensuring a smooth transition which includes planning and measures for skills training, economic progress, inclusive growth, and social support.
- 3

CIL's energy transition and decarbonisation plan: Given CIL's significant contribution to the state and local economies, its diversification efforts could be crucial to a local coal-dependent district's energy transition and decarbonisation.
- 4

The manufacturing base in the state is well-established, with various companies producing steel, cement, and auto parts, among other things. With proper skilling, this strong manufacturing workforce can help with economic restructuring.
- 5

Improved MGNREGA and NRLM implementation for land reclamation, watershed development, agriculture and associated activities, combined with other schemes/programs, can assist the district's overall natural resource potential and community resilience.
- 6

For finance and programme delivery support, collaboration and institutional strengthening are required.
- 7

Carbon Trading Markets, CSR, DMF funds, public and private financing, and other methods are some of the options.

Key takeaways from Chairman & Speakers



Concluding remarks by Session Chair

Prof. Indranil Manna, Vice Chancellor, BIT, Mesra, Ranchi

An action plan for future ready Jharkhand is needed to help Jharkhand diversify its economy and promote livelihood. This plan will serve as a blueprint for providing the state with all of the resources it needs to design and implement industry-relevant skilling and livelihood promotion interventions for transitioning workers.

“The potentiality of tourism-based activities not only boosts international and domestic money, but also produces jobs, supports the tourism industry’s expansion, and stimulates general economic growth. Furthermore, the state’s infrastructure push and local residents’ involvement in the tourism sector are both promising for the state’s future.”

Shri Susant Kumar Guru, Joint President- Sustainability, Hindalco



“Diversification focused on agro and forest-based businesses, as well as service economies such as education, tourism, and hospitality, have tremendous promise in the state”

Shri AK Rastogi (IFS), PCCF, Jharkhand & Chairman, JSPCB



“We were part of the problem; now we must be part of the solution. We must act not merely to safeguard the planet, but also to save life on it as we progress. Steel, cement, aviation, and other industries are critical to the expansion of our economy. The problem is figuring out how to grow in a way that is both sustainable and decarbonized”

Shri Sanjiv Paul Vice President (Safety, Health & Sustainability), Tata Steel





“To mitigate the impact of the coal phase-out on human resources, state skill action plans for an equitable and inclusive transition are considered essential. A roadmap for planning and implementing skill-based transition programmes in Jharkhand is necessary.”

Prof. Ramesh Sharan, Former VC, Vinoba Bhave University, Hazaribagh



The background features a photograph of a tree with dense foliage, overlaid with a semi-transparent orange and blue gradient. The text is centered in the lower half of the image.

MEDIA COVERAGE OF THE WORKSHOP

Morning India

A task force needed to create future ready economy in Jharkhand

RANCHI: Department of Forest, Environment and Climate Change (Government of Jharkhand) and Centre for Environment and Energy Development (CEED) jointly organised a state level conference "Sustainable Pathways for Future Ready Jharkhand" in Ranchi with the key objective to bring forth the broader vision and solutions to achieve growth trajectory and environmental sustainability in the state. This workshop was organised in the light of goals of the Glasgow Convention (Conference of Parties-26 held in 2021), where Government of India has pledged to achieve the Net Zero Emission by 2070, similarly constructive discussion pondered over new opportunities for India in general and Jharkhand in particular. The conference unanimously recommended that a special Task Force/Commission must be constituted by the State Government with representations from government, private sector, academicians and civil society to streamline the transition process to



enable Jharkhand future ready.

Elaborating the broader context of the conference, Mr AK Rastogi (IFS), Principal Chief Conservator of Forest (PCCF) and Chairman, Jharkhand State Pollution Control Board (JSPCB) said, "This is a defining moment for all of us since Jharkhand is one of the first states in India that is taking the lead in formulating pathways for creating a futuristic economy. We essentially need a green vision and a new development model that puts sustainability, inclusivity and public interest at the centre stage." While further elaborating about the initiative, Mr Rastogi highlighted that, "The current development paradigm based on fossil fuel is poised to be changed in

favour of environmentally sustainable models. We also need to look for alternative sources of energy for other sectors such as steel and cement, etc.' In order to define this transition in the state, the Forest department can play a positive role', he concluded.

Climate change impacts threaten the long-term socio-economic goals and undermines the ability of people to live in a stable and prosperous world. Net zero, or becoming carbon neutral is one of major pathways, where energy transition will play a key role. In such a scenario, it is important to initiate constructive dialogue to discuss farsighted plans that account for technical, social, and economic transition in the state.

THE TIMES OF INDIA, RANCHI
TUESDAY, MAY 10, 2022

Environmentalists propose special task force to achieve Net Zero target

Jaideep Deogharia
@timesgroup.com

Ranchi: The department of forest, environment and climate change and experts working towards mitigating the impacts of climate change have proposed a special task force or commission by the state government to streamline the transition from fossil fuels to renewable energy.

The suggestion came forward at the state-level conference titled "Sustainable Pathways for Future Ready Jharkhand" organised on Monday by the forest department and the Centre for Environment and Energy Development (CEED).



AK Rastogi calls the conference a defining moment for Jharkhand

The workshop was organised in the light of the Glasgow Convention (Conference of Parties-26 held in 2021), where the Union government pledged to achieve the Net Zero Emission by 2070. Principal chief conservator of forest and chairman, Jharkhand State Pollution

Control Board (JSPCB) AK Rastogi said, "This is a defining moment since Jharkhand is one of the states that is formulating pathways for creating a futuristic economy. We need a green vision and a new development model that puts sustainability, inclusivity, and public interest at the centre stage."

Chief executive officer, CEED, Ramapati Kumar, said there is an urgent need for a special task force or a commission that should be given the mandate to map out the magnitude of ensuing impacts and prospective opportunities in the transition phase through a series of studies and stakeholders consultations.

Jharkhand Darshan

झारखंड में भावी अर्थव्यवस्था के निर्माण के लिए टास्क फोर्स के गठन की आवश्यकता



रांची : झारखंड सरकार के वन, पर्यावरण और जलवायु परिवर्तन विभाग तथा सेंटर फॉर एनवायरनमेंट एंड एनर्जी डेवलपमेंट (सीड) द्वारा संयुक्त रूप से एक कॉन्फ्रेंस ह्यसस्टेनेबल पॉथवे फॉर फ्यूचर रेडी झारखंड का आयोजन किया गया, जिसका मुख्य उद्देश्य ग्लासगो सम्मेलन (2021) के परिप्रेक्ष्य में राज्य में सततशील विकास और पर्यावरण संतुलन से संबंधित भावी नीतियों और एक्शन प्लान पर विचार करना था। वैश्विक जलवायु परिवर्तन से संबंधित ग्लासगो सम्मेलन में केंद्र सरकार ने घोषणा की है कि भारत वर्ष 2070 तक नेट जीरो एमिशन (शून्य कार्बन उत्सर्जन) का लक्ष्य प्राप्त कर लेगा, इसी सन्दर्भ में राज्य सरकार के विभिन्न विभागों, प्रमुख सार्वजनिक उपक्रमों, कॉर्पोरेट कंपनियों एवं शैक्षणिक संस्थानों के उच्च पदाधिकारियों ने झारखंड के लिए नये अवसरों की पहचान की। सम्मेलन में यह सहमति बनी कि सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए राज्य सरकार द्वारा एक विशेष टास्क फोर्स या कमीशन का गठन किया जाये, जिसमें सरकार के अलावा निजी क्षेत्र, अकादमिक जगत तथा सिविल सोसाइटी का प्रतिनिधित्व हो, ताकि झारखंड में भविष्योन्मुखी अर्थव्यवस्था का रोडमैप तैयार किया जा सके। कॉन्फ्रेंस के व्यापक उद्देश्य और संदर्भ के बारे में झारखंड के प्रधान मंत्री व वन संरक्षक और राज्य

प्रदूषण नियंत्रण बोर्ड के अध्यक्ष एके रस्तोगी (आईएफएस) ने कहा कि ह्यह कांफ्रेंस निश्चय ही हम सबके के लिए एक निर्णायक अवसर है। जब झारखंड देश में सबसे पहले फ्यूचर रेडी इकोनॉमी के लिए नीतिगत कार्यक्रम निर्धारित करने की दिशा में अग्रणी हो रहा है। हमें समावेशी विकास के लिए एक नया मॉडल बनाने और सततशील दृष्टिकोण की जरूरत है, जिसके केन्द्र में जनहित और पर्यावरण संरक्षण हो। बताया कि ह्यदुनिया भर में जीवाश्म ईंधन पर आधारित वर्तमान विकास मॉडल से नए बदलाव पर ठोस पहल हो रही है। हमें प्रमुख क्षेत्रों जैसे कोयला, स्टील, सीमेंट आदि में सततशील मॉडल्स और स्वच्छ ऊर्जा तकनीकों को अधिकाधिक प्रोत्साहित करना चाहिए। राज्य में सस्टेनेबल ट्रांजिशन की प्रक्रिया को गति प्रदान करने में वन एवं पर्यावरण विभाग बेहद सकारात्मक भूमिका निभायेगा। इस अवसर पर सीड के सीईओ रमापति कुमार ने कहा कि ह्यवन, पर्यावरण और जलवायु परिवर्तन विभाग द्वारा ली गयी यह पहल वाकई सराहनीय है और समय की मांग भी है। दरअसल राज्य में भविष्योन्मुखी अर्थव्यवस्था के निर्माण के लिए एक स्पेशल टास्क फोर्स या कमीशन के गठन की आवश्यकता है। यह टास्क फोर्स राज्य में सस्टेनेबल ट्रांजिशन की संभावनाओं एवं प्रभावों से जुड़ा

शोध-अध्ययन, वर्तमान नीतियों एवं कार्यक्रमों की समीक्षा और सभी स्टैकहोल्डर्स के साथ व्यापक संवाद-परिचर्चा के जरिए एक विजनरी रोडमैप तैयार करे, जो भावी नीति-निर्धारण प्रक्रिया में सहायक साबित होगा। कार्यक्रम को संबोधित करते हुए सेंट्रल कोलफील्ड्स लिमिटेड के चेयरमैन सह मैनेजिंग डायरेक्टर पीएम प्रसाद ने कहा कि ह्यकोयला उद्योग जगत राज्य में सस्टेनेबल ट्रांजिशन की प्रक्रिया का समर्थन करता है और नेट जीरो एमिशन की दिशा में आगे बढ़ने के लिए भारत सरकार के दिशानिर्देशों एवं कार्यक्रमों का अनुपालन करेगा। संजीव पॉल, वाइस प्रेसिडेंट (सेफ्टी, हेल्थ एंड सस्टेनेबिलिटी), टाटा स्टील ने कहा कि ह्यटाटा समूह राज्य की अर्थव्यवस्था, समाज और सार्वजनिक हित से संबंधित सस्टेनेबल ट्रांजिशन की प्रक्रिया को मदद प्रदान करेगा, साथ ही केंद्र और राज्य सरकार द्वारा इससे जुड़े कदमों को सहायता देगा। कॉन्फ्रेंस के पहले सत्र ह्यझारखंड में एनवायरनमेंट, सोशल और गवर्नेंस की चुनौतियां में विस्तार से चर्चा हुई कि कोयला आधारित ऊर्जा उत्पादन से कार्बन उत्सर्जन के समाधान के लिए क्या नीतिगत पहल लिए जा सकते हैं। दूसरे सत्र ह्य डे साट रॉफि के शान (मरुस्थलीकरण) और प्राकृतिक संसाधनों की पुनर्स्थापना के लिए जरूरी एक्शन पॉइंट को तलाशने की कोशिश हुई। तीसरे सत्र ह्यकोयला उत्पादन परिदृश्य और एनर्जी सिक्स्युरिटी में खनिज संसाधनों की विलुप्ति के क्रम में अक्षय ऊर्जा की संभावनाओं एवं नई अर्थव्यवस्था के रूपरेखा पर चर्चा की गयी। चौथे सत्र अर्थव्यवस्था का विविधीकरण: चुनौतियां, अवसर और भावी राह में अर्थव्यवस्था में उभरते क्षेत्रों की पहचान, वित्त पोषण एवं निवेश, स्थानीय रोजगार की संभावनाओं एवं इससे जुड़े कौशल विकास की जरूरत आदि विषयों पर विचार किया गया।

मंगलवार 05.2022 खबर मन्त्र 03

सतत विकास और पर्यावरण संतुलन संबंधी भावी नीतियों और एक्शन पर की गयी चर्चा

खबर मन्त्र संवाददाता

रांची। झारखंड सरकार के वन, पर्यावरण और जलवायु परिवर्तन तथा सेंटर फॉर एनवायरमेंट एंड एनर्जी डेवलपमेंट द्वारा संयुक्त रूप से एक कॉन्फ्रेंस 'सस्टेनेबल पॉथवे फॉर फ्यूचर रेडी झारखंड' का आयोजन किया गया। इसका मुख्य उद्देश्य ग्लासगो सम्मेलन 2021 के परिप्रेष्य में राज्य में सततशील विकास और पर्यावरण संतुलन से संबंधित भावी नीतियों और एक्शन पर विचार करना था। जलवायु परिवर्तन से संभावित ग्लासगो सम्मेलन में केन्द्र

सरकार ने घोषणा की है कि भारत वर्ष 2070 तक नेट जीरो एमिशन (शून्य कार्बन उत्सर्जन) का लक्ष्य प्राप्त कर लेगा। इसी संदर्भ में राज्य सरकार के विभिन्न विभागों, प्रमुख सार्वजनिक उपक्रमों, कॉर्पोरेट कंपनियों एवं शैक्षणिक संस्थानों के उच्च पदाधिकारियों ने झारखंड के लिए नये अवसरों की पहचान की। सम्मेलन में यह सहमति बनी कि सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए राज्य सरकार द्वारा एक विशेष टास्क फोर्स या कमीशन का गठन किया जाये। जिसमें सरकार के अलावा निजी

क्षेत्र, अकादमिक जगत तथा सिविल सोसाइटी का प्रतिनिधित्व हो, ताकि झारखंड में भविष्योन्मुखी अर्थव्यवस्था का रोडमैप तैयार किया जा सके। कॉन्फ्रेंस के व्यापक उद्देश्य और संदर्भ के बारे में झारखंड के प्रधान मुख्य वन संरक्षक और राज्य प्रदूषण नियंत्रण बोर्ड के अध्यक्ष एके रस्तोगी ने कहा कि यह कॉन्फ्रेंस निश्चय ही हम सबके के लिए एक निर्णायक अवसर है। जब झारखंड देश में सबसे पहले फ्यूचर रेडी इकोनॉमी के लिए नीतिगत कार्य प्रारंभ करने की दिशा में आगे बढ़ेगा।

राजाद सिपाही रांची, मंगलवार, 10 मई, 2022 www.azadsipahi.com 05

सस्टेनेबल पॉथवे फॉर फ्यूचर रेडी झारखंड विषय पर कार्यशाला आयोजित

रांची (आजाद सिपाही)। झारखंड सरकार के वन, पर्यावरण और जलवायु परिवर्तन विभाग तथा सेंटर फॉर एनवायरमेंट एंड एनर्जी डेवलपमेंट (सीड) की ओर से सोमवार को सस्टेनेबल पॉथवे फॉर फ्यूचर रेडी झारखंड विषय पर एक कॉन्फ्रेंस का आयोजन किया गया। कार्यशाला का उद्देश्य ग्लासगो सम्मेलन (2021) के परिप्रेष्य में राज्य में सततशील विकास और पर्यावरण संतुलन से संबंधित भावी नीतियों एवं एक्शन प्लान पर विचार करना था। मौके पर झारखंड के प्रधान मुख्य वन संरक्षक और राज्य प्रदूषण नियंत्रण बोर्ड के अध्यक्ष एके रस्तोगी ने कहा कि यह कॉन्फ्रेंस निश्चय ही हम सबके के लिए एक निर्णायक अवसर है। जब झारखंड देश में सबसे पहले फ्यूचर रेडी इकोनॉमी के लिए नीतिगत कार्यक्रम निर्धारित करने की दिशा में आगे बढ़ेगा। हमें समावेशी विकास के लिए एक नया मॉडल बनाने और सततशील दृष्टिकोण को जरूरत है, जिसके केंद्र में जनहित और पर्यावरण संरक्षण हो। रस्तोगी ने बताया कि दुनिया भर में जो वन संरक्षण पर आधारित वर्तमान विकास मॉडल से नए बदलाव पर टोस पहल हो रही है। हमें प्रमुख क्षेत्रों जैसे कोयला, स्टील, सीमेंट आदि में सततशील मॉडल और स्वच्छ ऊर्जा तकनीकों को अधिकाधिक प्रोत्साहित करना चाहिए। राज्य में सस्टेनेबल ट्रांजिशन की प्रक्रिया को गति प्रदान करने में वन एवं पर्यावरण विभाग बेहद सकारात्मक भूमिका निभाएगा। सीपीएल के सीएमडी पीएम प्रसाद ने कहा कि कोयला उद्योग जगत राज्य में सस्टेनेबल ट्रांजिशन की प्रक्रिया का समर्थन करता है और नेट जीरो एमिशन की दिशा में आगे बढ़ने के लिए भारत सरकार के दिशा निर्देशों एवं कार्यक्रमों का अनुपालन करेगा। इस अवसर पर सीड के सीईओ रामपति कुमार ने कहा कि वन, पर्यावरण और जलवायु पर्यावरण विभाग द्वारा की गयी यह पहल सराहनीय है। यह समय की मांग थी।

रांची, मंगलवार, 10 मई 2022 www.live7tv.com

सन्मार्ग रांची/झारखंड

वन व जलवायु विभाग का सस्टेनेबल पॉथवे फॉर फ्यूचर रेडी झारखंड का आयोजन, बोले रस्तोगी

झारखंड फ्यूचर रेडी इकोनॉमी के लिए नीतिगत कार्य करने में देश में अग्रणी

संवाददाता

रांची : वन, पर्यावरण और जलवायु परिवर्तन विभाग तथा सेंटर फॉर एनवायरमेंट एंड एनर्जी डेवलपमेंट (सीड) के तत्वावधान पर सोमवार को सस्टेनेबल पॉथवे फॉर फ्यूचर रेडी झारखंड का आयोजन होटल चोपनआर चाणक्या में किया गया। इस अवसर पर झारखंड के प्रधानमुख्य वन संरक्षक और राज्य प्रदूषण नियंत्रण बोर्ड के अध्यक्ष एके रस्तोगी ने कहा कि यह कॉन्फ्रेंस निश्चय ही हम सबके के लिए एक निर्णायक अवसर है। जब झारखंड देश में सबसे पहले फ्यूचर रेडी इकोनॉमी के लिए नीतिगत कार्य प्रारंभ करने की दिशा में आगे बढ़ेगा। हमें समावेशी विकास के लिए एक नया मॉडल

बनाने और सततशील दृष्टिकोण को अर्थव्यवस्था को प्रोत्साहित करना चाहिए। मुख्य उद्देश्य ग्लासगो सम्मेलन के परिप्रेष्य में राज्य में सततशील विकास व पर्यावरण संतुलन से संबंधित भावी नीतियों व एक्शन प्लान पर विचार करना था।

मॉडल और स्वच्छ ऊर्जा तकनीकों को अधिकाधिक प्रोत्साहित करना चाहिए। मुख्य उद्देश्य ग्लासगो सम्मेलन के परिप्रेष्य में राज्य में सततशील विकास व पर्यावरण संतुलन से संबंधित भावी नीतियों व एक्शन प्लान पर विचार करना था।

सम्मेलन में केन्द्र सरकार ने घोषणा किया कि भारत वर्ष 2070 तक नेट जीरो एमिशन कालक्ष प्राप्त कर लेगा। इसी संदर्भ में राज्य सरकार के विभिन्न विभागों, प्रमुख सार्वजनिक उपक्रमों, कॉर्पोरेट कंपनियों एवं शैक्षणिक संस्थानों के उच्चपदाधिकारियों ने झारखंड के लिए नए अवसरों की पहचान की। सम्मेलन में यह सहमति बनी कि सस्टेनेबल ट्रांजिशन की प्रक्रिया को सुगम बनाने के लिए राज्य सरकार द्वारा एक विशेष टास्क फोर्स या कमीशन का गठन किया जाए, जिसमें सरकार के अलावा निजी क्षेत्र, अकादमिक जगत तथा सिविल सोसाइटी का प्रतिनिधित्व हो, ताकि झारखंड में भविष्योन्मुखी अर्थव्यवस्था का रोडमैप तैयार किया जा सके।

कोयला उद्योग जगत सस्टेनेबल ट्रांजिशन की प्रक्रिया के समर्थन में : पीएम प्रसाद

सेंट्रल कोलफील्ड्स लिमिटेड के चेयरमैन सह मैनेजिंग डायरेक्टर पीएम प्रसाद ने कहा कि कोयला उद्योग जगत राज्य में सस्टेनेबल ट्रांजिशन की प्रक्रिया का समर्थन करता है और नेट जीरो एमिशन की दिशा में आगे बढ़ने के लिए भारत सरकार के निर्देशों का अनुपालन करेगा।

टाटा समूह सस्टेनेबल ट्रांजिशन की प्रक्रिया को मदद करेगी : पॉल सेफ्टी हेल्थ एंड सस्टेनेबल टाटा स्टील के वाइसप्रेसिडेंट संजीव पॉल

ने कहा कि टाटा समूह राज्य की अर्थव्यवस्था, समाज और सार्वजनिक हित से संबंधित सस्टेनेबल ट्रांजिशन की प्रक्रिया को मदद प्रदान करेगा। साथ ही केन्द्र व राज्य सरकार द्वारा इसे जुड़े कदमों को सहायता देगा। कॉन्फ्रेंस में निष्कर्ष के रूप में कुछ विचारणीय बिंदु उभर कर सामने आये। जैसे अर्थव्यवस्था की राह में आने वाले प्रमुख अवरोधों और सहायता की पहचान करना, सभी पक्षों को साथ लेकर अल्पकालिक एवं दीर्घकालिक योजनाएं बनाना, कैंबेजिस मॉडल के साथ सभी विभागों एवं एजेंसियों के बीच समन्वय को बढ़ावा देना आदि, ताकि चुनौतियों में भावी अवसरों को तलाश करते हुए झारखंड को देश का एक अग्रणी राज्य बनाया जा सके।

छाया : सन्मार्ग

A Brief Profile of Session Chairs and Speakers



Mr. A.K. Rastogi (IFS), PCCF (GoJ), Chairman - JSPCB

Mr A. K. Rastogi is an officer of Indian Forest Service of 1986 batch and presently working as PCCF, in the Government of Jharkhand. He also holds the position of Head of Forest Forces (HoFF) & Chairman of Jharkhand State Pollution Control Board. He was also a Special Secretary, Department of Revenue & land reforms and in addition to that he also served as Director Land Acquisition, Director survey & settlement. During his tenure, he initiated a program on the modernisation of land record and modern techniques for land survey in the state. He revised various laws & was instrumental in denitrifying redundant laws like the urban ceiling act.

Mr Rastogi has been a critical force in terms of taking lead on various policy issues and has worked in various departments such as Land acquisition, Water resource and Pollution control board. Mr. Rastogi has represented Jharkhand in CoP 2015 (Paris), CoP 2018 (Poland) and CoP 2019 (Spain) and has contributed to shape the GoI position on Climate Change. Mr. Rastogi took initiative to develop the star rating program for industry to ensure corporate governance on pollution. His efforts to develop the clean air action plan for various cities of Jharkhand resulted in the selection of Ranchi and Jamshedpur as a part of National Clean Air Programme (NCAP). Mr. Rastogi's ability to visualize the long term intervention and put it into policy and program has brought many changes on the ground. His interests include land/water resource management, biodiversity conservation, environmental laws and climate change issues.



Dr Sanjay Srivastava (IFS), Additional PCCF-Special Projects, GoJ

Dr Sanjay Srivastava is an officer of Indian Forest Service of 1989 batch and presently working as Additional PCCF-Special Projects in the Government of Jharkhand. He has an illustrious career in natural resources conservation and has led the Climate Change work in the state of Jharkhand for 3 years. He has presented many papers and participated in various international and national conferences. He is an avid believer of participatory approaches in forest protection and regeneration. Dr Srivastava represented Govt. of Jharkhand in COP-24 and COP-14. His interests include analysis of institutional and policy issues, and socioeconomic impacts of resource policies.



Mr Sanjeev Kumar, Additional PCCF-CAMPA, GoJ

Mr Sanjeev Kumar is an officer of Indian Forest Service of 1992 batch and presently working as additional PCCF-CAMPA, in Government of Jharkhand. He has several national/International publications. He is credited for two books on Ethnobotany. Mr Sanjeev received several awards for promoting livelihood through silk rearing/lac cultivation in rural areas. He has received a Special Jury Award in the International Film Festival for his documentary film on Folk Art-Vision through Images. His paintings have been exhibited in many art galleries in India and abroad.



Mr Ramapati Kumar, CEO, CEED

Mr Ramapati Kumar is CEED's Founder and CEO and has an experience of 25 years in the field of environment and energy sector. He has participated in various national, international conferences to highlight the issue related to climate change, energy, and sustainability. He has wide experience in public policy making and is part of various committees and groups of governments who are engaged on the issues of sustainable environment management.



Mr PM Prasad, CMD, Central Coalfields Limited

Mr PM Prasad has an illustrious career as an industry leader and successfully led key coal mining projects in various parts in India. Mr Prasad brings in more than three decades of experience in the coal sector and his interventions has led towards many policy shifts within the industry. With vast technical & managerial experience, he has been instrumental in bringing sustainable practices in mining. Mr Prasad has been supporting issues relating to the environment, and his presence today will be instrumental in defining the future action for sustainable development of Jharkhand.



Mr Samiran Dutta, CMD, Bharat Coking Coal Limited

Mr Samiran Dutta has over three decades of experience in coal area planning and management in the eastern part of India. He is an associate member of the Institute of Chartered Accountants of India. Mr Dutta has a humongous experience of overlooking finance related operations in the coal industry for more than three decades.



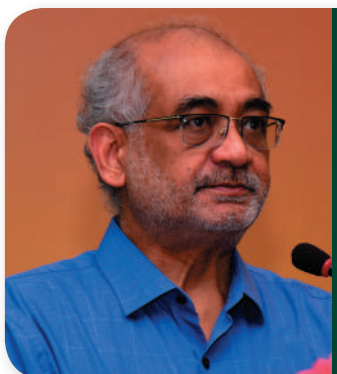
Mr Manoj Kumar, CMD, CMPDI, Ranchi

Mr Manoj Kumar has vast experiences in the coal mine planning and design sector in key regions of India. With exposure to global mining practices, he has facilitated the formulation of future roadmaps of Northern Coalfields Ltd, South-Eastern Coalfields Ltd and Central Coalfields Ltd. He is an avid believer of sustainability, will be key input to transition towards a more sustainable economy.



Mr Sanjiv Paul, Vice President (Safety, Health & Sustainability), Tata Steel

Mr Sanjiv Paul is a veteran in the steel industry with over three decades of experience in the field of sustainability operations. He has served in the position including the VP (Corporate Services) of Tata Steel Ltd and Managing Director at Tata Metaliks Ltd. He provides guidance as Chairman /Member of the Board to various organizations and is widely regarded as a visionary and mentor.



Prof. (Dr.) Indranil Manna, Vice Chancellor, BIT Mesra, Ranchi

Prof Indranil is a noted academics and JC Bose fellow-DST and he has received several other prestigious awards/appraisals for his immense contribution to science and technology. He has more than three decades of academic experience of serving at prestigious positions. He is a member of the Research Boards of several industries/R&D like RINL, GAIL, BHEL, ARCI, Min of Steel and serves in several national level committees of DST, CSIR, SERB, INSA, etc. He served as an expert in NAAC and NBA.



Prof (Dr) Ramesh Sharan, Former Vice Chancellor, Vinoba Bhave University & Director, Institute for Human Development (Eastern Region Centre)

Prof Ramesh Sharan is an eminent economist who has about four decades of experience in the academia and public policy sector. He specialises in Labour Economics, Mathematical Economics, Tribal Development & Public Policy. Prof Ramesh Sharan has been part of committees constituted by Govt of Jharkhand and was one of key members that drafted the Vision document and Action Plan for 2018-2020 for the state.



Mr Afroz Ali, Vice President, Adani Enterprises Limited

Mr Afroz Ali has vast experience of the mining profession and has held senior management positions in leading Indian industry. He has closely worked with different levels of government bodies for policy advocacy and corporate affairs.



Mr Sanjay Mohan Srivastava, Chief Resident Executive Tata Steel, Ranchi

He is a veteran in Steel Industry with over 32 years of experience in Tata Steel. During his career so far, he has contributed immensely in the commissioning of state-of-the-art processes in industry. During his stint in the By-products division, Mr. Sanjay led the team to become a pioneer in value creation by developing India's first ever By-products brand.



**Dr. Ivaturi Nandikeswara Rao
Head-Corporate, Environment & Climate Change, Tata Power**

Dr IN Rao has experience of three decades in the field of environment and environment. He has worked in areas of Impact assessment and pre project development and funding activities for several power plants. He associated /led activities of feasibility of assessment of new projects, site selection, air quality modelling, conducting and supervising environmental impact assessment studies. His interest areas are formulation of policies and setting up operating practices, compliance verification and strategy evolution.



Mr Vivek Mishra, Head Coal Mining Vertical, HINDALCO Industries

Mr Vivek Mishra has more than three decades of vast experience in the field of coal, iron ore mining and cement sector. He brings in a wide spectrum of experience such as policy, execution and futuristic thinking on transition. He has worked in various states including Chhattisgarh, Karnatak, Goa and Jharkhand.



Mr Susant Kumar Guru, Joint President-Sustainability, HINDALCO

Mr Susant has work experience of four decades in various organizations. He is a lead auditor of ISO 14001. He also has a certification on GRI reporting. He is a regular speaker in Management schools including IIM, ISBM and VSSUT. Mr. Susant has done extensive job on mine reclamation by completing many sustainability initiatives like bamboo cottage, aquaculture and biodiversity plantation.



Mr M Raguram, Director Technical, Damodar Valley Corporation (DVC)

Mr Raguram has rich experience of three decades in the field of thermal power plant, project construction monitoring, technical audit, gap analysis & performance testing of plant equipment /system. He has led several prestigious power projects like Korba Super Thermal Power Station.



Dr. Nitin Kulkarni, Director, Institute of Forest Productivity (IFP)

Dr Nitin has three decades of experience with several national/ international publications. His field of interest include Forest Entomology particularly Bioecology and Integrated pest management strategy for judicious use of chemical insecticides in forest. His vast understanding of forest ecology will provide critical input for sustainable development in Jharkhand. He is a life fellow of the Entomological Society of India, ICAR, New Delhi.



Dr NK Srivastava, Senior Principal Scientist & Coordinator Project Planning and Industry Interface, CSIR-CIMFR, Dhanbad

Dr Srivastava has developed Fly Ash Soil Amendment Technology (FASAT) for Agro-forestry applications in varying soil types and different agro-climatic conditions. The technology is commercialized and being used for yield improvement in different farm fields. His fields of interest include Ecological restoration, phytoremediation, fly ash utilization, solid waste management.



Prof. (Dr.) S.K. Samdarshi, Director & Coordinator, CoE-GEET, Central University of Jharkhand (CUJ), Ranchi

Prof Samdarshi brings three decades of academic experience in the field of energy education. He has several research national/international publications and patents. Prof. Samdarshi has been a member of several public bodies to give key input in electricity tariff reform policy.



Prof. (Dr.) Anshumali, Professor, Department of Environmental Science and Engineering (ESE) and the Center for Water Resource Management (CWRM), IIT(ISM) Dhanbad

Professor Anshumali has research interests in Biogeochemistry of Terrestrial and Aquatic Systems, Ecology and Biodiversity, Conservation of Natural Resources, Restoration Ecology and Environmental Impact Assessment (EIA).



Dr Anupam Ghosh, Assistant professor, Department of Management, Birla Institute of Technology, Mesra

Dr Anupam has more than fifteen years of research experience with national/international publication and academic awards. He works in the domains of Sustainable Business, Corporate Social Responsibility (CSR), and Rural Development. He is the editor and reviewer of many reputed international publication houses.

The background features a photograph of a tree with dense foliage, overlaid with a semi-transparent orange and blue gradient. The word "AGENDA" is prominently displayed in white, bold, uppercase letters in the lower-left quadrant.

AGENDA

TIME	AGENDA
09:00 AM- 10: 00 AM	Registration of Delegates
10:00 AM - 10:30 AM	<p>Inaugural Session</p> <p>10:00 AM: Lighting of The Lamp</p> <p>10:05 AM: Welcome & Context Setting Shri Sanjay Srivastava, IFS APCCF, Special Project, Government of Jharkhand (GoJ)</p> <p>10:10 AM: Enabling Framework for Forward Looking Economy Shri Ramapati Kumar Chief Executive Officer, Centre for Environment and Energy Department (CEED)</p> <p>10:15 AM : Keynote Address Shri A.K. Rastogi, IFS PCCF(HoFF), Government of Jharkhand (GoJ) & Chairman, JSPCB</p>
10:30 AM - 11:00 AM	Tea Break
11:00 AM - 12:00 PM	<p>Session 1: Environmental, Social, Governance (ESG) Challenges in Jharkhand</p> <p>Brief : In the run up to net-zero target by 2070 and gradual phase down of coal, states like Jharkhand need to look towards alternative options, accelerating smart investment and creating social infrastructure for coal dependent local economies.</p> <p>Session Chair : Shri P.M. Prasad CMD, Central Coalfields Limited (CCL)</p> <p>Moderator : Dr. Ivaturi Nandikeswara Rao Head - Corporate, Environment & Climate Change, Tata Power</p> <p>Climate Risks, Prospect of Mining and Decarbonization Provide perspective on climate risk and decarbonization, highlighting how a new shift is required for future ready Jharkhand. Speaker 1 : Shri Samiran Dutta CMD, Bharat Coking Coal Limited (BCCL), Dhanbad</p> <p>Shift From Grey to Green Economy Insights and far sighted ways on infusing sustainability and environmental management to mining practices right from the planning & operationalisation to execution, and post closure scenario of mines. Speaker 2 : Shri Manoj Kumar CMD, Central Mine Planning and Design Institute (CMPDI)</p> <p>Environmental Sustainability in Industries Approach on Re-envisioning Industries in a low carbon world: Practice, Progress & Challenges. Speaker 3 : Dr. Anupam Ghosh Assistant Professor, Birla Institute of Technology Mesra General Secretary, IIT Alumni Association : (Ranchi Chapter)</p> <p>Dying Rivers Posing Environmental-Social-Governance (ESG) Challenges in Jharkhand Views on possible solutions to dying rivers for creating sustainable future for Jharkhand. Speaker 4 : Dr. Anshumali Professor & Head, Department of Environmental Science and Engineering Indian Institute of Technology (Indian School of Mines), Dhanbad</p> <p>Concluding Remarks by Chair of Session</p>
	Moderated Session: Q/A along with concluding remarks from chair of the session

12:00 PM - 01:00 PM Session 2: Desertification and Natural Landscape Restoration	
Moderated Session: Q/A along with concluding remarks from chair of the session	<p>Brief : Jharkhand has almost two-third of area under desertification where Giridih and Bokaro are among the top districts in India. This has created serious environmental, economical and social problems in myriad ways. This session will focus on various aspects of policy intervention and action points to rejuvenate the land and forest from degraded and wastelands for a better economic and cultural prospect.</p> <p>Session Chair : Shri P.M. Prasad CMD, Central Coalfields Limited (CCL)</p> <p>Moderator : Mr. Afroz Ali Vice President, Adani Enterprises Limited</p>
	<p>Land Degradation Neutrality for Sustainable Development Perspective on halting and reversing land degradation for transitioning to a more sustainable society. Also put insights on nature based solutions to galvanize action for addressing land degradation and desertification in the state.</p> <p>Speaker 1 : Shri Sanjay Srivastava, IFS APCCF, Special Project, Government of Jharkhand (GoJ)</p>
	<p>Natural Landscape Restoration Provide insights on sustainable ways of integrated landscaping management for resolving the riddles of land, water and forest.</p> <p>Speaker 2 : Shri A. K. Rastogi, IFS PCCF (HoFF), Government of Jharkhand (GoJ) & Chairman, JSPCB</p>
	<p>Resilient Practices for harnessing Forests Potential in a Sustainable Way Ways and means to promote forestry research leading to scientific and sustainable management of forest resources with focus on forest productivity and rehabilitation of mined out areas & other stressed/degraded/difficult sites in the state.</p> <p>Speaker 3 : Dr. Nitin Kulkarni Director, Institute of Forest Productivity (IFP)</p>
	<p>Ecological Restoration of Degraded Mined Lands: A Sustainable Ecological Approach Focus on ways and means to adopt a guidelines for landscape management for mining companies in the context of Natural landscape Restoration. Reflection and learning from field.</p> <p>Speaker 4 : Dr. N.K. Srivastava Sr. Principal Scientist & Coordinator, Project Planning and Industry Interface CSIR- CIMFR, Dhanbad</p>
	<p>Concluding Remarks by Chair of Session</p>
01:00 PM - 02:00 PM Lunch Break	
02:00 PM - 03:00 PM Session 3: Glasgow Convention: Coal Production Scenario and Energy Security	
Moderated Session: Q/A along with concluding remarks from chair of the session	<p>Brief : The session aims to trace significant development in the dynamic domain of Jharkhand's energy transition. It aims to explore themes like energy security in the wake of resource depletion, the role of coal, prospects for renewables and a dedicated roadmap to make Jharkhand's energy mix cleaner while ensuring inclusive development.</p> <p>Session Chair : Shri A. K. Rastogi, IFS PCCF (HoFF), Government of Jharkhand (GoJ) & Chairman, JSPCB</p> <p>Moderator : Shri Sanjay Mohan Srivastava Chief Resident Executive, Tata Steel</p>
	<p>Energy Security in Jharkhand: Challenges and Opportunity Perspective on the real barriers for growth of renewable energy in Jharkhand; Policy/Regulatory changes required for enabling large scale investment within cleaner energy ecosystem.</p> <p>Speaker 1 : Shri M Raghu Ram Director Technical, Damodar Valley Corporation (DVC)</p>
	<p>Clean Energy in Jharkhand: Innovation & Research Insights and views on 'energy transition for Jharkhand highlighting the priorities policy measure to decarbonise energy mix with new age techno based solutions and practices.</p> <p>Speaker 2 : Prof. S.K. Samdarshi Director & Coordinator, CoE- GEET, Central University of Jharkhand (CUJ)</p>

	<p>Impact on Coal production in Light of Emerging Net Zero Scenario and Glasgow Convention</p> <p>Roadblocks and Hurdles for Jharkhand in realising the phase down of coal promises and net zero emission by 2070.</p> <p>Speaker 3 : Shri Vivek Mishra, Head Coal Mining Vertical, HINDALCO</p>
	<p>Implication of Net Zero target on thermal Power plants</p> <p>Key Insights on the present power scenario & future of power sector in light of energy transition and Glasgow pledge.</p> <p>Speaker 4 : Shri Jagmit Singh Sidhu CEO, Jojobera Power Plant, Tata Power</p>
	<p>Concluding Remarks by Chair of Session</p>
03:00 PM - 03:15 PM	Tea Break
03:15 PM - 04:15 PM	<p>Session 4: Diversification of Economy: Challenges, Opportunity and Pathways for Future Ready Jharkhand</p> <p>Brief: Given Jharkhand's large dependence on the coal ecosystem, the session can lay emphasis on diversification of the state economy, with a special focus on identifying emerging sectors and new industries in coal-dependent districts. This could help ensure that new investments, skill enhancement and localised jobs with social infrastructure.</p> <p>Session Chair : Prof. Indranil Manna Vice Chancellor, Birla Institute of Technology Mesra, Jharkhand President Indian National Academy of Engineering &</p> <p>Moderator : Mr. Susant Kumar Guru Joint President- Sustainability, HINDALCO</p>
Moderated Session: Q/A along with concluding remarks from chair of the session	<p>Challenges for Various Sectors in Jharkhand to Meet Net-Zero Goal</p> <p>Current thinking and vision for diversifying state's economy as well as business diversification of coal companies for effective decarbonisation of the economy. As the phase down of coal may pose a threat on revenue such as DMF etc.</p> <p>Speaker 1 : Shri Sanjiv Paul Vice President (Safety, Health & Sustainability), Tata Steel</p>
	<p>Emerging Livelihood Opportunities and Diversification of State's Economy</p> <p>Measure to promote the existing and niche sectors that could anchor the diversification process in the state.</p> <p>Speaker 2 : Prof. Ramesh Sharan Former Vice Chancellor, Vinoba Bhave University (VBU)</p>
	<p>Resilient and Sustainable Economy: Planning and Future Pathways</p> <p>Technical and advisory support for the creation of green jobs, preservation & restoration of the environment and promotion of socially inclusive development in the state.</p> <p>Speaker 3 : Shri A. K. Rastogi, IFS PCCF, Government of Jharkhand (GoJ) & Chairman, JSPCB</p>
	<p>Concluding Remarks by Chair of Session</p>
04:15 PM - 04:30 PM	Break
04:30 PM - 05:00 PM	<p>Valedictory session</p> <p>Conclusion & Outcomes :Decisive & Cohesive Action for Future Ready Jharkhand Shri Sanjeev Kumar, IFS APCCF, CAMPA, Government of Jharkhand (GoJ) Way Forward: Sustainable Pathways for Future Ready Jharkhand Shri A. K. Rastogi, IFS PCCF (HoFF), Government of Jharkhand (GoJ) & Chairman, JSPCB</p>

