



THE ENERGY AND RESOURCES INSTITUTE
Creating Innovative Solutions for a Sustainable Future

Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future

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Planned transition to non-fossil fuel economy would create conditions for environmental and social justice...



As the renewable energy sector grows exponentially, fuelled by an urgent need to meet peoples' energy needs cost-effectively and address the planet's climate emergency, it is essential that the RE sector and its allied industries act responsibly. We all need to act in ways that address energy equity, participatory governance, protect the livelihoods and ecosystems of places where RE is sited, and ensure that the full lifecycle of the RE system is safe and secure

Ajay Mathur
Director General, ISA



The World Sustainable Development Summit (WSDS) 2022, the annual flagship event of **The Energy and Resources Institute (TERI)**, was hosted virtually during **February 16-18, 2022** addressing the theme, **'Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future'**. The Hon'ble Prime Minister of India, Shri Narendra Modi inaugurated the Summit. Further details of the WSDS can be viewed here: <http://wds.teriin.org/>. A dedicated session (Thematic Track) on **"Responsible climate action towards a low carbon & resilient pathway: An inclusive worldview"** was held on February 16, 2022.

About the World Sustainable Development Summit (WSDS)

The World Sustainable Development Summit (WSDS) is the annual flagship Track II initiative of The Energy and Resources Institute (TERI). Instituted in 2001, in 2021, the Summit series marked 20 years in its journey of making 'sustainable development' a globally shared goal. Over the past two decades, the Summit platform has pioneered conversations by bringing together governments, scholars, corporates, youth groups, thought leaders, and civil society representatives from across the world.

The present state of planetary health and humanitarian crises calls for revisiting the agenda around global action and equity. The 21st edition of the WSDS was held under the umbrella theme of 'Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future' from February 16-18, 2022 in a virtual format.

Backdrop of the Thematic Track

"Responsible climate action towards a low carbon & resilient pathway: An inclusive worldview"

While retaining focus on de-carbonisation and cleaner energy options, one cannot afford to lose sight of the human dimensions as socioeconomic factors like lives and livelihoods of vulnerable segments of population who are at a greater risk, access to services and opportunities, rights and entitlements, local and institutional capacities, etc. In this context, seeding 'Just Transition' assumes significance and this new lens offers an insightful understanding about how one takes a holistic view of energy, climate and development considerations in order to effectively deal with energy, technology and socioeconomic barriers and envision newer opportunities.

In India especially resource rich geographies contributed significantly towards State and national revenue generation and created islands of prosperity and affluence. On the other hand, one sees pockets of insufficiency, extreme poverty, weakening of social capital and inherent inequities, which seems all pervasive. Such vulnerabilities and paradoxes deepened further during the unprecedented pandemic that has hit the humanity hard than ever before, globally. Such stark realities may be better understood as one takes closer view of the coal-based economy in resource rich states, such as Jharkhand, Madhya Pradesh and Chhattisgarh, which are mostly tribal dominated, recognized for their backwardness, poverty and poor human development scenario. Coal mining offers opportunities to many upstream and downstream sectors but it also brings miseries, environmental damages and enhances climate related risks. It is the need of the hour to take a closer look at the fossil-fuel economy, environment, people, market and other actors / stakeholders. The ability to phase down, and eventually phase out coal has become a top priority. This needs the adoption of a fair transition paradigm that addresses climate change mitigation while also assuring the protection of workers, communities, and companies, as well as economic advantages.

Many coal producing industries do not assign importance to the necessity of a planned closure of coal mines and it is evident in several locations, where coal mines closed without adequate planning and skill generation. In the absence of any alternative economic choices and social support systems, poor people became more vulnerable as coal dependent local businesses got impacted, many migrated to other locations and crisis deepened. Moving forward, if coal phase-down/-out happens in an unplanned manner, the entire local economy would collapse and it will destabilise the social fabric. Besides, local businesses, MSMEs, communities and pro-coal constituencies often fail to think beyond coal as it creates insecurity. General perception is, any scenario without coal would be impossible or risky as many, especially the local people lack adequate market linked skills and owing to coal industry related employment, many never thought of optimally using land or forest resources for generating alternative or supplementary livelihoods choices. MSMEs generally are driven by profit orientation rather than broader considerations such as climate change necessitating adoption of efficient and green technologies, which could create better working conditions and reduced environmental hazards. Alternative scenario has hardly been part of mainstream discourse.

Hence, while transitioning to the envisaged non-fossil fuel economy in time, it is crucial to map implications of coal phase-down/-out and create a blueprint for a proactive planning and an inclusive, fair and humane transition. Basis TERI's past interaction and research in Betul (Madhya Pradesh), there was a felt need for an action research agenda in the coal producing belts, which could create a ground for further reflection and trigger a futuristic worldview. This will go a long way in providing an insightful understanding of fossil-fuel dependence and the ecosystem. TERI in association with MacArthur Foundation has embarked on this journey, which will further enable us in creating a stakeholder platform, develop a Just Transition framework and create a milieu for alternative thinking. Eventually, this initiative will enable TERI in creating a blueprint for shaping future policies, adapting to changing scenario and offering pragmatic solutions for mitigating risks.

Any transition from fossil-fuel dependence to alternative cleaner options would have wide ranging ramifications on the existing ecosystem in any coal producing belt and the intent of the Just Transition project is to put our thoughts together for a humane transition and to build resilience. While we take this opportunity to share the contours of the project that has a futuristic tenor, we also pose few key questions which could set the stage for deeper deliberation, assimilation of multiple perspectives and future action.

The key intent of this discussion forum is to share the ideas of Just Transition and to elicit views of the participants, which could enrich our research and provide a larger perspective for further reflections. Basis this deliberation, brainstorming and consolidation of multiple views, TERI would create a thought note, which could guide future policy, research and action on the ground.

Key Questions the Session Addressed

- (i) Who are the key stakeholders that can play an important role in making the transition to low-carbon economies fair and just?
- (ii) What are channels through which engagement can be established across various actors?

- (iii) What are the challenges envisaged towards implementing a Just Transition strategy in the energy sector?
- (iv) Can coal producing States take a balanced view of human development scenario and economic as well as political priorities?
- (v) Given the geographical and cultural diversity of communities in coal mining locations, how opportunities at the local level be explored and implemented with support from the government, business, and civil society organizations?
- (vi) How public entities in a federal governance structure can work together in developing strategies/policies that help in creating social and development opportunities for affected communities?

Highlights of the Thematic Track

Mr A K Saxena, Senior Director, TERI, welcomed the Chief Guest and the panelists. In his welcome address, Mr Saxena observed that coal as we all know, continues to remain the mainstay of electricity generation. He further elaborated and observed that it finds use in industries and also in cooking fuel. It has fuelled economy and contributed to development of trade and business in coal belt and adjoining area. It also contributes to state revenue.



Thinking beyond coal has therefore been only an imaginative exercise. However, the adverse effect of coal on health, air pollution, etc, is well known. It was noted that it would not be wrong to say that the quality of life of people in such areas needs substantial improvement. Social, climate change, global warming and the environmental pollution imperatives demand thinking beyond the coal. Mr Saxena apprised that TERI initiated research in this area in 2018–19 starting with on-ground assessment of implications of closure of 4 out of 10 mines due to exhaustion in the mining districts in Betul in Madhya Pradesh and we are taking our research further into developing a holistic framework for assessment of implications arising from the imperative of phase down of coal. He finally remarked that with the announcement of Net Zero target by the hon'ble Prime Minister, it is time to start moving away from 'imagining beyond coal' to 'thinking beyond coal'.

Launch of Just Transition Project



Dr Jayanta Mitra, Senior Fellow, TERI made a presentation on the key theme - Just Transition and had set the tone for the day. The presentation touched upon the following broad points.

- Overdependence on coal deep-seated
- Transitioning beyond coal to be just, fair and inclusive
- Participatory process to unfold
- People-centric reforms is the key to successful reforms
- Human development reality in coal belt - Islands of prosperity and affluence & pockets of poverty (inherent paradoxes)
- Pooling of fund and need-based planning a necessity
- Promoting entrepreneurial ecosystem, natural resource and agro-based diversified livelihood strategies, is the way forward
- Alternative trajectory could trigger incremental and transformative changes and promote common good

Keynote address was delivered by Dr Anil Kumar Jain, IAS, Secretary (Coal), Government of India and Just Transition webportal was also launched by the honourable Chief Guest, Dr Jain.

The panel discussion was chaired by Shri Ajay Shankar, Distinguished Fellow, TERI & Former Secretary Department of Industrial Policy and Promotion, Government of India.

Quotes



The World Sustainable Development Summit tries to bring together political leaders who can translate sustainable development into policy; corporate leaders and executives who can translate it into investment choices; and researchers and academics who can bring the knowledge, analysis and technology to allow corporates and governments to pursue sustainable development and people involved in civil society organizations to connect people with leaders who have the power.

Dr Anil Kumar Jain

IAS, Secretary (Coal), Government of India



If the coal-related activities shut down in the major 20-30 coal bearing districts, there would be a major setback in the economy of these areas. Need engagement of finance institutions or other forms of financing and not just budgetary support for this transition and calls for huge challenge considering such a long transition. Optimum use of land under coal mines, skilling, redeployment, retraining are major areas of intervention to deal with transition challenges.

Mr Sumanta Chaudhuri

IAS, Former Secretary (Coal), Government of India



Just Transition to happen in a gradual and phased manner. Need to optimally utilize land and natural resources to create alternative livelihood choices. Chandrapur is the region with one of the highest forest cover with around 42%, but is also one of the most polluted areas in India due to presence of more than 27 coal mines causing health hazards. Gram panchayats, local ministry, NGOs and private players are significant players in the rural districts and hence they should be considered as key stakeholders. Lack of advanced agricultural skills, opportunities other than coal-related activities, political willpower, presence of experienced administration, cooperative societies for agriculture would be big challenges in these transitions.

Dr Kunal Khemnar

IAS, Addl. Municipal Commissioner (Estate),
Pune Municipal



India is moving on a dual pathway, renewable energy and coal transition; simultaneously focusing on clean energy and energy security requirements. We have to focus on Sub-national, state level approaches for Just Transition. Capturing local voices is crucial especially while engaging with the vulnerable communities. Collective engagement and Just Transition discourse can perhaps pave the way for a brighter decade ahead and redefine the development model.

Mr Jarnail Singh

Deputy Director, India Office, MacArthur Foundation



The diversification is the only means to achieve sustainability. Alternative financing model by exploring opportunities in the local level is necessary. Trust deficit to be bridged by engaging local people, SHGs, community, etc, during this transition. Local democracy, people and district level actors are the key stakeholders. Central and State level policies should be aligned.

Mr Ayaskant Kanungo

General Manager (Commercial & Corporate Affairs),
Odisha



Need to think about Just Transition as an opportunity for development of the local areas and the people. Emphasised participatory approaches, budgetary allocations, setting up of dedicated institutions and hand holding the local communities is an important step ahead. Politics is often driven by protection of the coal economy and Just Transition narrative must align with the political priorities and it needs to be made part of developmental policy. We need to fit Just Transition as a part of development policy in the country.

Dr Ashwini K Swain

Centre for Policy Research



Just Transition may be ahead of its time but is very necessary. The coal production is peaking in 5–10 years and after that industry will start unbundling, which would make Just Transition easy. Regulatory aspects and ability to deal with such ambitious agenda needs to be understood and dealt with. Coal enriched states are poor and is it because of any systematic gap? It is crucial for TERI to gain deeper understanding on this.

Mr Subhomoy Bhattacharjee

Consulting Editor, *The Business Standard*



Conversion of solid coal into liquid and gaseous coal has the potential of reducing 90% of CO₂ emissions. Carbon capturing and storage could be one efficient option. Switching over to synthetic natural gas, CNG or coal-based methane may be used as alternative and cleaner options. Reskilling and retraining of workers for business switch over is an essential prerequisite.

Sri Surendra Kumar Pandey

All India Secretary of BMS and Deputy In charge for Coal Sector

Narrative of the Thematic Track

India holds the fifth largest coal reserves in the world and more than 70% share in energy supply manifests the nation's overdependence on coal-based generation. However, with "Net Zero Target" as the futuristic ambition, there is a need to think beyond coal and explore cleaner alternatives to build resilience despite temporary challenges. Visualising an alternative worldview through a new lens is possible and this belief would take us through new trajectories of energy transition. Focusing on de-carbonisation and cleaner energy options, can have potential adverse implications on the social and economic sector of coal-rich states, and hence, calls for a transition that is just and fair. Just Transition needs to consider a broad range of social and economic dimensions, geographic locations, diverse stakeholders, local planning, policies, resources and time horizons. It also offers an opportunity to take a holistic view of energy, climate and development considerations.

Just Transition requires a resilient strategy and it needs to happen in a phased manner especially in India, where coal and its mining is a major source of revenue and employment for mineral rich states like Jharkhand, Odisha, Chhattisgarh, West Bengal and Madhya Pradesh. Coal mining often gives stimulus to the local economy through the creation of



jobs and contributes to the development of local infrastructure. As coal or mineral enriched states are also rich in flora and fauna, the alternative solution to boost the existing economy could be bio-ethanol production through waste management, engagement in horticulture, setting up of botanical gardens and museums to showcase the indigenous culture and biodiversity, livestock farms, building micro and solar irrigation farms to improve the agriculture and power production. Creating a sustainable supply chain is crucial. Further in order to address the man-animal conflict owing to proximity to the forest, training institutes and forest academy could be established to build the local capacity to deal with it effectively. The development model needs to be redefined as a state level approach (micro approach) and a roadmap for Just Transition needs to evolve through engagement of local communities and other stakeholders. In the absence of any alternative economic choices and social support systems, low income population would become more vulnerable as coal dependent local businesses would get impacted owing to sudden or unplanned closure of mines. Consequently, large-scale migrations to urban areas, weakening of social capital and inequity would deepen this crisis.

The key challenges ahead during this transition would be the lack of reskilling, political willpower and burden on agricultural cooperative societies. In order to transform the economy of the coal producing states, promotion and diversification of these states' industrial establishment will help promote enhanced levels of economic activity, large-scale employment integration and explore alternative natural resource and traditional skill-based enterprise opportunities. There is also a felt need for micro-financing by dedicated institutions rather than exclusive dependence on budgetary allocations in order to plan effectively and ensure restoration, rehabilitation and livelihood generation for local communities.

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Not only from an economic perspective, but also from a social point of view there is a need to engage dedicated institutions involving the key stakeholders from the Gram Panchayats, local ministries, private players and Self-Help Groups (SHGs) for capturing the local voice, needs aspirations and collective action. Moving forward, if coal phase-

down/-out does happen in an unplanned manner, the entire local economy would collapse and it will destabilise the social fabric of that area. Hence, alternate financial model for development of state economy such as ensuring income security with the use of crucial resources like District Mineral Foundation (DMF) funds is the need of the hour. The potential of the combined DMFs across the country is enormous for improving the socio-economic conditions of local communities in the mining districts. Besides, a greater convergence is needed by leveraging resources from other flagship programmes like livelihood Mission as well as participation of financial institutions and corporates is a necessity for greater investment, which can go a long way in building resilience.

While transforming to the envisaged non-fossil fuel economy in time, it is crucial to map implications of coal phase-down/-out and create a blueprint for a proactive planning and an inclusive, fair and humane transition. As a large number of stakeholders are involved in the process of Just Transition, new technologies for carbon reduction such as conversion of coal from solid state into liquid, gaseous form and Carbon Capture Usage & Storage (CCUS) technologies need to be adopted. Therefore, a holistic approach combining newer technological developments in carbon reduction/capture/storage along with the promotion of entrepreneurial ecosystem, diversified livelihood strategies, keeping in mind the vulnerability of the social and political transition of the local level communities would be effective in creating a new developmental policy. This level of transitional policy would also solve the dual challenge of the country, which is energy security and clean energy production. The ideas of Just Transition provide a larger perspective for further reflections, which would guide future national, state and local level policies, research and action on the ground.

There are many international, national and local level entities, which are already working on equity and climate justice. Further with the net zero ambition, deliberation on Just Transition assumes significance. A thematic track on Just Transition during the WSDS by The Energy and Resources Institute (TERI) was quite timely and triggered the much needed churning among the thought leaders and other stakeholders. Moving forward, this would create more opportunities and space for further dialogue on the theme, influence future thinking, research, policies and action on the ground.

Mr Sanjay Mitra, Distinguished Fellow, TERI and Former Defence Secretary, Government of India made his concluding remarks. Mr Mitra highlighted essence of key points that emerged out of perspectives shared by various panelists and their rich observations. He lauded remarkable observations shared and concluded by saying that the deliberation resulted into a rich menu of solutions and pathways that TERI could build upon.

Actionable Messages & Recommendations from the Session:



Resilient strategy is critical to achieve clean energy targets



Need micro finance institutions not just budgetary support for this transition and huge investment needed



Optimally utilizing land and natural resources to create alternative livelihood choices



Collective engagement and Just Transition discourse can perhaps pave the way for a brighter decade ahead and redefine the development model



Trust deficit to be bridged by engaging local people, SHGs, community, etc, during this transition



Graded local level (district) micro-planning aligned with local needs and aspirations calls for engagement of stakeholders, sustained resource support and convergence to effectively build resilience and ensure inclusion



Such inclusive and sustainable models may have replication value and can be scaled across larger geographies



Developing a national level Just Transition framework is a prerequisite to guide future policy and action as we think beyond coal and closure of coal

For more information, please visit: <https://justtransition.in/>



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