

PRESS RELEASE
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iFOREST releases the first study on Just Energy Transition in Odisha to strengthen the state's Climate Action

- iFOREST's latest report – “**Angul: Planning a Just Energy Transition and a New Green Economy**” – elaborates how Odisha's largest coal mining district and an industrial hub, can plan an energy transition and build a green economy, to achieve climate change and sustainable development goals.
- Coal production in Angul is expected to increase nearly 3 times in the next 10 years, reaching over 300 million metric tonnes (MMT) by 2033. Simultaneous expansion is planned in other coal-dependent industries, such as steel, aluminium, fertilizer, etc.
- An estimated 168,000 people are currently engaged in coal and coal-based industries; nearly 69% of them are informal.
- Coal will continue to play a major role in the district's economy in the next two decades. However, post 2040 mines will start closing. Coal-based thermal power units will start closing after 2025 due to age and their inability to meet environmental norms.
- Developing a 'just transition plan' early on will be necessary to prevent job/income loss, strengthen the local economy and boost government revenue. Ushering a green industrialisation along with coal transition, lies at the core of planning a Just Transition highlights the study.
- Environmental remediation and pollution mitigation must be a key focus while building the new economy, as Angul-Talcher has been a critically polluted area.
- At least Rs. 3 trillion can be available to support just transition in Angul in the coming years, considering district mineral foundation (DMF) funds, and if the coal cess is reinstated as a clean energy and environmental cess.
- Development of a state-level just transition policy will be necessary to support a just energy transition and green economy development in Angul; the Climate Action Plan need to include just transition provisions.

Bhubaneswar: The International Forum for Environment, Sustainability and Technology (iFOREST) released its latest report to evaluate how Odisha's biggest coal producing and key industrial district can plan a just energy transition and build a green economy in the coming years. At the event, India's first website and portal on Just Transition, developed by iFOREST was also launched.

The report is based on an in-depth analysis of Angul, which currently accounts for 12% of India's and 56% of Odisha's coal production. The district is also a major power producer, and a steel and aluminium manufacturing hub. Coal mining and industries collectively account for about 61% of the district's GDP.

The report was released at an event in Bhubaneswar, and attended by the Deputy Speaker of the Odisha State Assembly, Shri Rajanikant Singh, Member of the Legislative Assembly from Talcher Brajakishore Pradhan, Angul district collector and magistrate Siddharth Shankar Swain, Chairman and Managing Director of Mahanadi Coalfields Limited O.P. Singh, and founder of Centre for Youth and Social Development, Jagadananda. The event was attended by key state government officials, industry leaders, labour union representatives and civil society groups.

Speaking on the occasion, Chandra Bhushan, President and CEO of iFOREST said that “the report highlights key interventions necessary to put Angul on a path of a green energy and economic future. While coal will dominate the district's economy for the next 10-15 years, districts like Angul also need to start planning for a just energy transition to support climate change mitigation, as Odisha is highly vulnerable to climate change impacts. Therefore, we have outlined a long-term just transition plan spanning over the next three decades, which can aid a strategic phase-down of coal mining and coal-based power production, green the economy, create high-quality jobs, and improve the district's environmental conditions. This will be also essential for enhancing Odisha's climate change action.”

Speaking on the occasion Rajanikant Singh, Deputy Speaker of the Odisha State Assembly said: “Angul, as the biggest coal district has faced massive environment burden due to industrialisation and mining activity. We have seen how temperature in Angul-Talcher industrial belt change over the years impacting both air and water in the region. There needs to be a serious rethinking at the district as well as state level on how the balance between industrial development and environment and climate change can be achieved.

The speakers emphasised that while coal has created livelihoods, going ahead, the economy needs to be diversified through proper planning to support the communities in case of a coal phase-out. **Braja Kishore Pradhan, MLA Talcher said** that we need to start planning now to improve pollution burden, address the need for diverse livelihoods through local resources and engage people in this planning for the future.”

Siddharth Shankar Swain, district collector and magistrate, Angul said “that a just transition planning needs to start, even though coal mining in Angul is expanding. District Mineral Foundation (DMF) funds can be important for some of the investments. The time to take action on climate change is now.”

Speaking on the iFOREST study, Srestha Banerjee, Director of India Just Transition Centre of iFOREST, said “Angul will have start planning a just energy transition now as it will take 2-3 decades to build a green economy. Our strong recommendation is that Odisha should use cheap coal to build the backbone of the green economy and invest in grey hydrogen, coal gasification, electric vehicles and battery storage.” She further added: “Our assessment show that about 168,000 workers are currently engaged in coal mining and coal-dependent industries. The workforce requirement will at least double in the next 10 years to support a three-fold expansion of coal mines; a large proportion of these workers will be informal and contractual. It is therefore important that these workers are provided skilling and reskilling and vocation education to improve the quality of employment.”

The event had specific panels on green industries and sustainable investment attended by key industry representatives such as from Mahanadi Coalfields Limited (MCL), National Thermal Power Corporation (NTPC), Tata Mining Steel; on people’s perspective on just transition with representation from key labour unions and civil society groups and; on policies for climate change action in Odisha attended by state government officials, experts and civil society members.

“There is a gap in regulation that can help to address the various environmental issues that need to be dealt with in the coming years in transition planning in coal and industrial districts. Therefore, a discussion on how the law can be strengthened needs a discussion,” said **Nihar Sahoo, chief environment engineer, Odisha State Pollution Control Board (OSPCB)**. He also added that there needs to be an assessment of the cumulative impact of various industries on the region to understand the actual environmental impact.

Chandra Bhushan, CEO, iFOREST further emphasised that “ Odisha has shown leadership in developing Climate Change Action Plan to enhance integrated climate action. The state can also be a leader to support a just energy transition. The Angul experience will also be important for India to strategize and plan for achieving the net zero emission target”.

Key findings and recommendations of the report

1. Coal production is expected to grow threefold over next 10 years in Angul, from 96.7 MMT currently to 308.8 MMT by 2033. Mine closure will start after 2040 and the last mine will close by 2070, considering a full operational life. However, an accelerated and ambitious climate action to meet 1.5°C climate goals, requires coal production to be phased out by 2050 through strategic planning.
2. While, 30% of the 6.2 GW installed coal-based power capacity, is currently below 10 years of age, by 2050 all the thermal power units can be retired as they will be more than 35 years old.
3. Transition to ‘green’ economy will be central to Angul’s just transition planning over the next three decades. Developing green industries will be a central component of this considering job and revenue aspects. Besides, boosting climate resilient agriculture and agro and forest-based economic activities will be essential to achieve inclusive growth.

4. The green industrial development can be planned in two phases, given the districts coal potential. Over the next 10-15 years, coal resources must be used in the most environmentally responsible manner to build the green economy backbone. For example, the cheap coal-based electricity can
5. be used to support high-value green manufacturing, such as solar PVs, electric vehicles, battery, etc. Grey hydrogen can also be produced through coal gasification, and used to build the base for green steel and green urea production.

After 2035, the district should move to green energy and industries, based on growth of the RE sector and technology advancements and viability. This will include, renewable-based electricity, hydrogen-based steel and urea production, production of green aluminium using RE, and enforcing circular economy practices.

6. Repurposing of mining and industrial land will be crucial for environmental sustainability and economic diversification. About 33,000 hectares of land will be available from closure of coal mines and power plants over the next 3-4 decades. Besides biological restoration, this high value land should be repurposed for investment in green economic activities, including, installation of solar PVs, development of industrial and food parks, development of fisheries and tourism sectors, etc. Reform in coal mine closure laws, and industry and land laws will be required to support investments.
7. Massive skilling and reskilling programmes must be developed in the district and adjoining areas to create a skilled workforce for the RE sector and green industrial development. Simultaneous investments will be necessary in education, vocational and skill training institutes. Reform of industrial and labour laws will be required to ensure better wages, job security, and social safety net, for contractual and informal workers.
8. Environmental remediation of land and water resources will be key for planning the new economy in a critically polluted area like Angul-Talcher. Strong laws for pollution mitigation, waste management, and material reuse and recycling, will be essential to ensure a sustainable growth and well-being of the local community.
9. Massive financial resources will be necessary for implementing just transition. Use of coal mining related funds, government support, private financing, and international cooperation will be necessary. As a seed fund, DMF and coal cess holds enormous opportunity. Even in an accelerated closure scenario by 2050, nearly Rs. 3 trillion can be available to support just transition combining these funds.
10. Inclusive and bottom-up planning will be essential for just transition. Social acceptance of a coal transition and understanding of opportunities in the new economy will be crucial for building stakeholder support for the energy transition and implementing just transition measures.
11. Three important state-level policy action will be necessary. First, the Odisha Climate Change Action Plan, must integrate principles of just transition to enhance climate change action and reduce GHG emissions. Second, an integrated RE and green industry policy will need to be developed. And third, a comprehensive state-level just transition policy and plan will be necessary to guide just transition in the coal districts and develop a green economy.

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