

Regional Workshop on **Energy Enabled Production Hub: A holistic approach towards strengthening of agriculture ecosystem**

Date: July 18, 2023, 10:00 hrs - 14:00 hrs

Venue: BNR Chanakya Hotel, Ranchi

Organisers: Collectives for Integrated Livelihood Initiatives | Sustain Plus Energy Foundation | Selco Foundation



Background

Access to affordable and reliable energy is the cornerstone for just transitions to modern technology - for better livelihoods, improved health, education and overall human well-being. Evidence from the field has shown that the decentralisation of energy and technology leads to more democratised access, enables essential services to reach communities more readily, locates operational agency and control within the community, and empowers children and women through enhanced opportunities for access and choice.

Agriculture and allied livelihoods are the mainstay of the livelihoods for marginalized communities and particularly tribals in Jharkhand. However, the livelihood systems are subsistence-based and barely fulfill the quality of life of the communities. In order to strengthen the agriculture ecosystem, the Lakhpati Kisan program was conceptualized and rolled out by CInI in the year 2015. Rolled out across 7 blocks of Jharkhand, the

program envisaged increasing the income of the households from 30,000 to more than a lakh and in the process increasing the quality of life. The concept basically highlights all the agricultural operations starting from seeding production by entrepreneurs, farm mechanization, increasing crop production, and precision farming, to be undertaken in a village or a contiguous cluster of villages. The result of this leads to marketing at the farm gate. Layering of other allied livelihoods at the household level is another aspect being looked into.

Under the Lakhpati Kisan initiative, it is seen that energy is the hidden catalyst in most of the interventions. As the community moves to the next orbit of development, energy becomes an extremely crucial element. To mitigate these challenges and accelerate the growth of Lakhpati Kisan, energy gaps were identified, and a renewable energy program was designed with the support of Sustain Plus Energy Foundation. The center point of the entire work was to develop the cluster as an Agriculture production hub.

The Workshop

The workshop brought together experts from policy, civil society, finance, and solution providers and was attended by over 70 stakeholders from the livelihoods, agriculture, and energy sectors to exchange insights and experiences on the various aspects of the production hub in Jharkhand. Users of such technologies and members of the community also participated and shared their experiences, adding nuance and an end user's perspective to the discussion.

The day-long workshop was planned over 2 interactive sessions with expert panels which included representatives from civil society organisations, policy, and implementation agencies, technology service providers, and other eco-system enablers.

Session 1: PROGRAMS + POLICY		Session 2: FINANCE + MARKETS	
Sirshendu Pail, Moderator	Collectives for Integrated Livelihood Initiatives	Ayan Deb, Moderator	Sustain Plus Energy Foundation
Santosh Singh	Intellectap	Supriya Gowda	Selco Foundation
Prerna Sharma	Deutsche Gesellschaft fur GIZ India	Debanjan Gathak	PRADAN
Nikhita Pathak	Social Alpha	Rahul Verma	National Dairy Development Board
Philip Kuriachen	International Water Management Institute	Suraj Mumru	Collectives for Integrated Livelihood Initiatives
Garima Kumari	Collectives for Integrated Livelihood Initiatives	Mandeep Singh / Vikash Mansoor	Rainmatter

Keynote Address

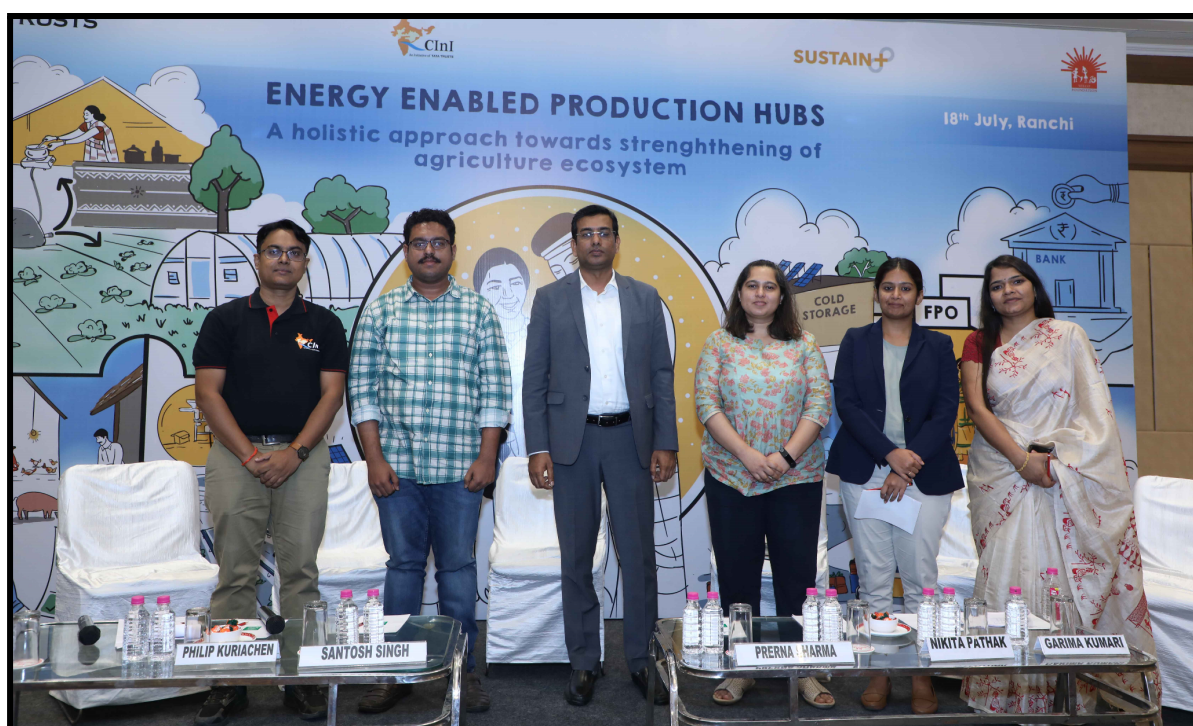
Shri Mukesh Prasad, Executive Engineer, Jharkhand Renewable Energy Development Agency (JREDA), opened the discussion identifying the gaps in the present ecosystem in the development sector and stressed on the need for all stakeholders to come together to promote the distribution and scale-up of Decentralised Renewable Energy technologies. Addressing the unutilised energy part, he emphasized on the need to look for alternatives to the utilisation of excess energy. He further added that if the technology really helps in augmenting the income generation based on successful pilot-scale implementation, subsidy support can be reduced, thereby increasing the contribution from end users, to facilitate ownership.



Shri Pranab Pal, Deputy Director, Directorate of Industries, highlighted the Government's efforts in shifting from conventional energy towards Renewable energy in the wake of increased use of energy consumption in recent times. He further added that the Government has introduced policies on rooftops and EVs that may look urban-centric at present, but efforts are in place to increase the awareness among the rural areas so that they also benefit from the subsidies. He also stressed on the need for other stakeholders to work together to promote renewable energy for rural applications.

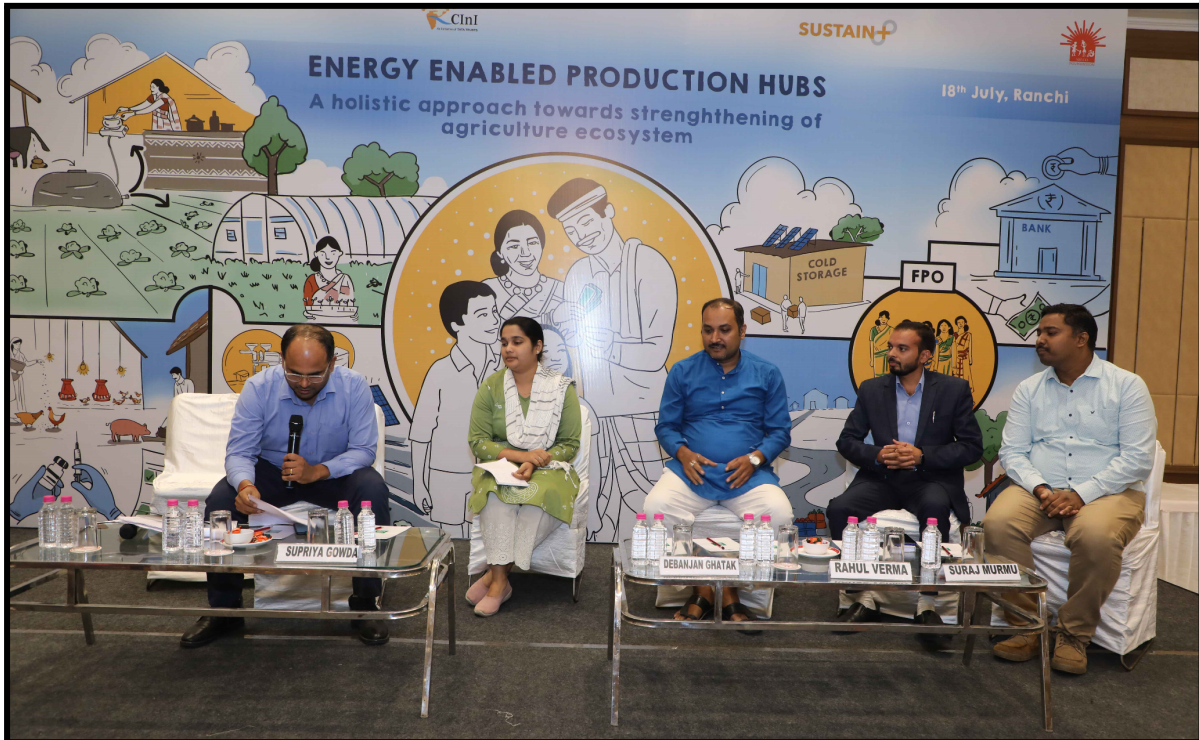
Key takeaways from the workshop

Drivers of Production Hub: The main forces behind a production hub which comprise of enabling the eco-system of input centers, farm mechanization, access to credit, post harvesting, etc. DRE is one of the critical enablers within irrigation, cold chains, etc., which ultimately facilitates soil health, mitigates climate change, and incrementally increases income. Sustained income enhancement of the farmer is the primary objective of a production hub, the key technologies also contribute to reduced emissions and climate change reduction as well. In addition to solar power and drip irrigation, which are both essential in the cultivation of productive crops, the other technologies that constitute a part of the production hub help reduce the application of harmful chemicals, thereby maintaining the health of the soil as a whole. Institutions like Farmer Producer Organizations play a key role in the facilitation of all promotional activities, including aggregation, storage, and marketing of the agricultural produce, that help enhance farmers' competitiveness, and increase their advantage in emerging market opportunities, thereby fetching better returns.



Climate Financing: Various financial mechanisms are available to support climate-smart agriculture techniques, but addressing climate change requires a two-pronged approach: Climate mitigation (reducing the sources of greenhouse gases) and Climate adaptation (adjusting to actual and future climate conditions). Most of the time, farmers are very little involved in the climate mitigation process, however, they are the ones most vulnerable. Financial options can be availed through the adoption and utilisation of climate-smart agriculture technologies, either in the form of carbon credits or through finance mechanisms available through institutions like NABARD, etc. As a

matter of course, in the former case, the adoption is complemented with a thorough registration process, which is followed by a survey that estimates the number of credits that will be generated. Carbon credits can be availed for a number of activities carried out under the Production Hub: irrigation through solar pumps, adoption of biogas for cooking, DSR or SRT method of rice cultivation, etc.



Policy intervention: Policy support is essential for stakeholders within the sector to build an enabling ecosystem for the scaled adoption of climate-smart agriculture technologies. These are available in the form of schemes promoted either by the Central or State Governments, for a variety of technologies of different functionalities and capacities, that aid in boosting the income of the small farmers. Presently, technology is implemented at the distributed project level, or through schemes facilitated by the Government. Integration with relevant policies can enable scale across geographic clusters and development or livelihood themes. Moreover, new business models can be developed at the Farmer Producer Organization level or community level in order to encourage entrepreneurship and generate additional income, the success of which can be replicated in other communities and collectively presented to the Government at a policy level.

FPO as centerstage: While the adoption of climate-smart agriculture technologies is at the individual level, FPOs can play an important role in assessing the need and aggregating the demand for tech intervention at a cluster level. This will prompt the solution providers to develop and build an infrastructure that addresses the post-sales serviceability by training the FPO members locally. FPOs can also act as an energy enterprise by owning the assets and providing service to its members by renting them

at a reasonable cost. This not only eliminates the risk of responsibility for asset maintenance and repairs at the individual level but also allows the farmer to focus only on crop cultivation rather than arranging the needs. The case of Gharonj Lahanti FPO promoted by CInI was shared by the board member, who highlighted the importance of post-sale service and how her FPO was able to generate 20% of their revenue last year through business around DRE.



Technological aspect: Start-ups in the energy space are working on identifying the problems at the grassroots level and designing/modifying the products to suit the local conditions. A range of solutions are available at the pre-production, production, and post-production stages and customised as per the needs of the farmers. Few solution providers are nurtured by organisations that help them to create high-quality, commercially viable, accessible, and affordable solutions across the value chain. Along with deployment, solution providers are also encouraged to focus on the serviceability to ensure maximum utilisation.