INDIA TODAY

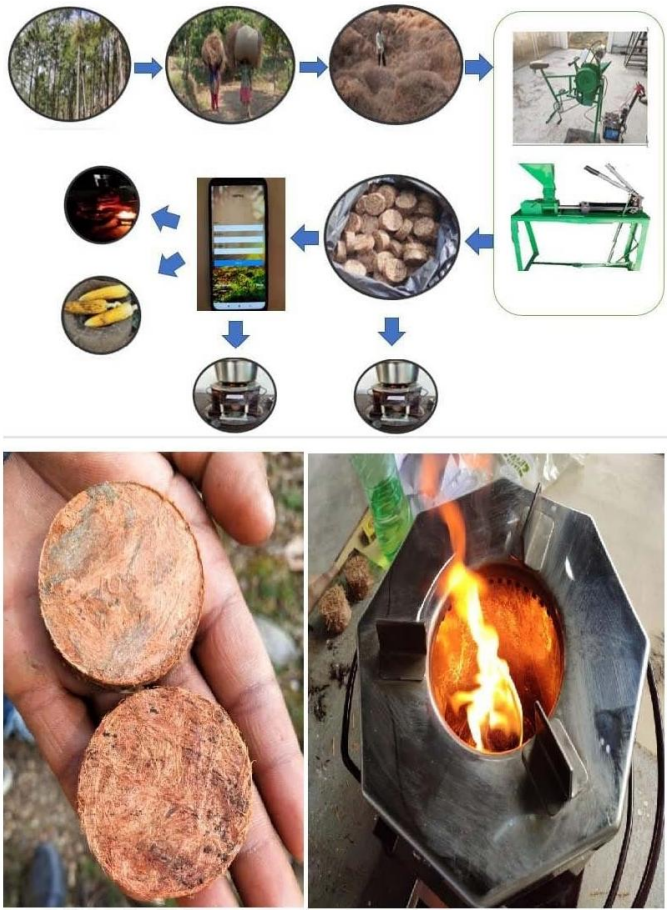
IIT Roorkee evaluates prospects for utilising forest bio residue for low carbon energy generation

23 June 2022

Professor Vinay Sharma and Professor Rajat Agrawal from the Indian Institute of Technology Roorkee (IITRoorkee), conceived a project on utilising forest bio residue for low-cost energy generation.

The project titled “Socio-Economic Value Creation through Forest Bio Residue Energy Generation in Alignment with the UNs SDGs” was granted and financially supported as a pilot project by the National Mission on Himalayan Studies under the Ministry of Environment and Forests Government of India and is focused on developing complementary source of low-cost energy generation from the forest bio waste residue as well as establishing sustainable management practices of indigenous green technologies in the Himalayan Region of Uttarakhand.

As per the project initiative plan, a total of more than 1000 quintals of pine needles from 100 acres of forest land was gathered with the help of the Forest Department, Uttarakhand.



These pine needles were crushed and processed with the help of machines and crushers designed and developed in the laboratories of IIT Roorkee and UPES, Dehradun. Prior to the launch of the project, community engagement and capacity-building programmes were initiated in the villages in the form of regular training and workshop sessions and focused group discussions between experts and locals.

Beneficiaries from the villages were provided a training cum workshop session to learn the installation and operations of briquetting machines and crushers where doubts and queries related to the operations and safety were addressed by the experts.

Dr. Gaurav Dixit, faculty in the Department of Management Studies, IIT Roorkee, developed a multipurpose and user-friendly mobile application "Himalayan Briquette Production & Management Software" to integrate the whole value chain by connecting seller and buyer of briquettes.

Now the second phase of the project at a bigger level for industrial expansion is being conceived which can be an answer to several forest fires originating in the forests of Uttarakhand and engulfing hectares of land.

THE CONCEPT

The concept of the project evolved through PhD. research guided by Professor Vinay Sharma and the PhD Scholar, Dr Kapil Joshi, Additional Principal Chief Conservator of Forests, Department of Forest, Government of Uttarakhand.

Source: https://www.indiatoday.in/education-today/news/story/iit-roorkee-evaluates-prospects-for-utilising-forest-bio-residue-for-low-carbon-energy-generation-1965797-2022-06-23