

CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST) and North East Centre for Technology Application and Reach (NECTAR) Join Hands to Establish Vegan Leather Manufacturing Units in Northeast India

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In a significant step towards promoting sustainable technologies and circular economy in India's Northeast, the CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram, today signed a Memorandum of Understanding (MoU) with the North East Centre for Technology Application and Reach (NECTAR), an autonomous body under the Department of Science & Technology, Government of India.

The MoU facilitates the transfer of CSIR-NIIST's plant-based vegan leather technology to NECTAR for establishing common facility centers and manufacturing units in Meghalaya and other north-eastern states. These centers will support farmers, MSMEs, and women-led self-help groups in converting agro-waste into high-value sustainable products.

The MoU was exchanged between Dr. C. Anandharamakrishnan, Director, CSIR-NIIST, and Dr. Arun Kumar Sarma, Director, NECTAR, in the presence of Dr. N. Kalaiselvi, Director General, CSIR, during a formal ceremony held at CSIR Headquarters, New Delhi.



Speaking on the occasion, Dr. Kalaiselvi emphasized the pressing need to address the growing agro-waste challenge in Northeast India. "Agricultural residues such as rice straw, banana and pineapple waste are typically discarded or burned, leading to air and water pollution, soil degradation, and biodiversity loss," she said. "CSIR-NIIST's technology provides a sustainable solution by converting this biomass into plant-based leather, replacing 50–70% of the chemicals used in synthetic leather and significantly reducing the environmental footprint of the leather industry."

This initiative is aligned with national missions like Atmanirbhar Bharat, Make in India, Innovate in India, and the Swachh Bharat. By harnessing locally available agro-waste, the partnership aims to promote regional

entrepreneurship, generate employment, and foster environmentally responsible manufacturing practices in the Northeast.

NECTAR will lead the implementation through the development of common manufacturing centers, with a focus on creating inclusive economic opportunities and uplifting local communities, especially women entrepreneurs.

In a parallel stride toward sustainable innovation, CSIR-NIIST also announced a Joint Declaration of Intent (JDI) with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) under the Indo-German Energy Programme. This collaboration will establish a Centre of Excellence (CoE) for Building Integrated Photovoltaics (BIPV)—a transformative solar technology seamlessly embedded into roofs, walls, and windows. Through joint training, research, testing, and standardization, CSIR-NIIST and GIZ India aim to fast-track BIPV innovation, support local manufacturing, and unlock over 309 GW of clean energy potential. This initiative reinforces India's ambition to lead the world in solar-integrated infrastructure and green buildings.

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