

## The Technology

- Provides a practical solution for utilization of fallen pine needles, a major cause of forest fire.
- Process of isolation of the natural fiber from the needles is simple, cost-effective, energy efficient, resource friendly and adoptable by local people.
- The fiber obtained is aesthetic with cream yellow color having length upto 20 cm with reasonable bundle strength and good water absorption ability.

**Products:** Handloom cloth, jackets, coat, purse, wall curtains, lamp shades, coaster, sleeper, mats, carpets, ropes.

Cost for isolation of fiber
Rs. 70-110 per kg depending upon the fineness of the fibre

## **Beneficiaries of the Technology**

- State Forest Departments of Himalayan region
- NGOs and Women Self Help Groups (SHGs)
- Handicrafts manufacturers

Indian Patent Application Number 202011051242 dated 25.11.2020.



चीड़ की पत्तियाँ Pine needles



चीड़ का रेशा Pine fibre

चीड़ के रेशे से बने उत्पाद Products from pine fibre



काता गया रेशा Woven fibre



योगा चप्पल Yoga chappal



हथकरघा उत्पाद Handloom products



चीड़ के रेशे से बनी रस्सी Rope from Pinus fibre



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