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Agricultural waste streams in Asia are source for sustainable textiles

Agriculture in South and Southeast Asia provides waste streams that can be used for the large-scale production of natural textile fibres. This has been shown in research by the Institute for Sustainable Communities, the World Resources Institute and WUR.

The researchers looked at the major agricultural waste streams available in eight countries — Bangladesh, Cambodia, India, Indonesia, Pakistan, Sri Lanka, Thailand and Vietnam. They considered the waste streams from more than 40 crops and assessed the potential for extracting cellulose pulp and fibres as a basis of textiles. Crops with suitable waste streams are rice, wheat, maize, okra, oil palm, pineapples, sugar cane and bananas.

The researchers also identified promising locations in South and Southeast Asia for the establishment of textile fibre production based on these waste streams. Surat Thani in Thailand and Riau in Indonesia, for example, are places where there is a great deal of biomass left over from palm oil production. Other suitable locations have access to large volumes of banana stalks, waste from cane sugar production, wheat straw, rice straw or pineapple leaves.

'The textile industry needs more sustainable and renewable inputs to reduce its negative impact on the climate,' says Paulien Harmsen of Wageningen Food & Biobased Research. 'The study sets out a roadmap for making more sustainable textiles.' The research was commissioned by the Laudes Foundation of the Brenninkmeijer family, which owns the C&A clothing store chain.

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