

Biotransformation Technology

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Context- A company based in the United Kingdom has asserted that it has developed a Biotransformation Technology that has the potential to alter the state of plastics and make them biodegradable.

About Biotransformation Technology

- Biotransformation technology is a novel strategy for efficiently processing and breaking down plastics that escape waste streams.
- This technology gives plastics a pre-programmed time period during which they look and feel like conventional plastics without sacrificing quality.
- When the product reaches its expiration date and is placed in contact with the outside world, it self-destructs, transforming into bioavailable wax.
- After that, microorganisms consume this wax, transforming waste into biomass, CO₂, and water.
- The world's first biotransformation technology guarantees that polyolefins completely biodegrade in an open environment without producing microplastics.

Need for this Technology

- India produces 3.5 billion kilograms of plastic waste each year, and the amount of plastic waste produced per person has also doubled in the past five years. A third of this is generated by packaging waste.
- In 2019, plastic bundling waste from web based business firms was assessed at north of a billion kilograms around the world, as per Statista.

- It is necessary to develop technology in order to combat the Plastic Menace in light of the enormous amount of plastic waste that exists and poses a threat to biodiversity.

Utility

- The health care and food packaging industries are the two most likely applications for this technology to reduce waste.
- When compared to non-contained conventional plastic, the cost increase is relatively minor.

What other options are there for reducing plastic waste?

- Packaging made of jute or paper could potentially reduce plastic waste. This could likewise construct maintainability inside the paper business and save money on the import bill on ethylene arrangements.
- Another option is wooden packaging, which will make the packaging heavier and cost more.
- To promote alternatives to single-use plastics, the Government of Tamil Nadu held the National Expo and Conference of Startups in Chennai.
- The choices displayed were made utilizing coir, bagasse, rice and wheat grain, plant and horticultural buildup, banana and areca leaves, jute and fabric.

What are the Initiatives Related to Plastic Waste?

- The Indian government has launched multiple initiatives to move the country towards sustainability. They introduced a plastic waste management gazette to help tackle the ever-growing plastic pollution caused by single-use plastics.
- In 2022, the government imposed a ban on single-use plastics to bring a stop to its use in the country.
- The National Dashboard on Elimination of Single Use Plastic and Plastic Waste Management brings all stakeholders together to track the progress made in eliminating single-use plastic and effectively managing such waste.
- An Extended Producer Responsibility (EPR) portal helps in improving accountability, traceability, and facilitating ease of compliance reporting in relation to EPR obligations of the producers, importers and brand-owners.
- India has also developed a mobile app to report single use plastics grievances to check sale, usage or manufacturing of single use plastics in their area.