

UFLEX RECYCLES MIXED PLASTIC WASTE AT ALL ITS MANUFACTURING LOCATIONS AND IS OPEN TO SHARING THIS TECHNOLOGY WITH THE INDUSTRY

UFlex is India's largest multinational flexible packaging and solutions company that has a strong presence across all verticals of the packaging value chain. It is credited as the first company in the world to be recognized by the "Davos Recycling Forum' in 1995, for recycling mixed plastic waste. In a conversation with Business Today, Mr. Jeevaraj Pillai, joint president and head of product development, Flexible Packaging, UFLex Limited, talks about the company's pioneering efforts and experience in addressing plastic pollution. Here are a few excerpts.



Plastics have a largely negative public image and are seen as a problem material that needs to be eliminated. Is demonization justifiable?

Flexible packaging requires less energy to manufacture and transport, which reduces greenhouse gas emissions and fossil fuel usage. Comparatively, materials like glass, rigid PET, and steel boxes commonly used in conventional packaging require large amounts of water and fossil fuels to manufacture. A McKinsey report states that in 5 of 6 categories in flexible packaging, the packaging material made from plastics had lesser greenhouse gas emissions when compared to its non-plastic alternative. While flexible packaging reduces a company's carbon footprint, it does not address the issue of plastic waste pollution if that post-consumption packaging does not reach the appropriate recycling streams.

How big is the problem of plastic waste pollution?

In India, a very small amount of flexible plastic waste is collected, and the remaining stays in the environment. The most important barrier to plastic waste management in India is the lack of source segregation and

Recycling

Flexible Packaging (FP) ought to move up the recycling chain (FP+) with efficient waste management and well-developed recycling infrastructure

Low

High

Carbon Emissions

AL Aluminum/Tin PackagingGL Glass PackagingPa Paper PackagingFP Flexible Plastic Packaging



FOCUS SUSTAINABILITY

efficient collection. Landfill dumping is sometimes favored because many ULBs don't have the technology to collect and segregate various waste categories.

Hence, the problem of littered plastic waste is gigantic causing severe environmental damage and getting into aquatic life, drinking water, and soil.

What are the hurdles to effective waste management in the country?

Collection and sorting of Municipal Solid Waste (that comprises plastic, paper, food, glass, metal, cloth, and more) to recover recyclable waste materials and send them to different streams is a very important link in the recycling chain. If waste is segregated at source, it becomes easy to recycle and put it back to use rather than let it go to landfills.

Material recovery facilities (MRFs) and recyclers in the waste management industry often receive contaminated waste that cannot be recovered and is eventually disposed of in landfills.

In India, as opposed to developed countries, optimal source segregation and efficient collection will take another 15-20 years and hence, in the interim, it is important to invest in Al and technology to collect and segregate MSW (Mixed Solid Waste) and explore biodegradable packaging as a solution for uncollected waste

The Indian Government's guidelines on Extended Producer Responsibility (EPR) in a phased manner is a step in the right direction. EPR is designed to provide a pathway to circularity by obligating the brand owners and producers to collect, recycle, use the recycled content, and reuse it wherever possible.

How can UFlex support the efforts toward addressing this problem?

At UFlex, we have always believed in three pillars to ad-

dress plastic waste pollution. They are source reduction, source substitution, and the use of sustainable packaging material.

UFlex as its corporate philosophy has set up all its manufacturing plants with zero waste discharge.

We were the first company, back in 1994, to establish recycling plants where multi-layer plastics (MLP), considered difficult to recycle, could be treated. We are recycling close to 30,000 MT of plastic waste, setting an example for the industry, the government, and the public. We recycle post-consumer MLP mixed plastic waste into granules; upcycle recycled resins into PCR (post-consumer recyclate) PET films, and partner with brand owners to create sustainable packaging solutions to reduce the use of virgin plastic at source. Our goal is to reach 1,00,000 tonnes of recycling by building additional recycling capacities across global locations.

A few months ago, at an Alliance to End Plastic Waste (AEPW) board meeting at the New York Stock Exchange, our Chairman and Managing Director, Mr. Ashok Chaturvedi, presented a virtual walk-through of our recycling facilities in India, Mexico, and Poland where we have recycled more than half a million MT of mixed plastic waste till date.

UFlex is open to sharing the recycling technology for multi-layer mixed plastics which we have mastered and put into practice for the last three decades.

The second pillar is source substitution, where we use alternate recyclable materials in place of difficult-to-recycle components in multi-layer plastics. In addition, we also use recycled content in flexible packaging structures. In this direction, we recycle polyester (PET) bottles and convert them into packaging film. This was something we started five years ago and today we are using 90% post-consumer recycled content in polyester packaging film.

The third pillar is biodegradation. UFlex is at an advanced

stage of development of enzyme-based biodegradable polymers, and this reaffirms the company's vision and focus on sustainable packaging. Enzyme-based technology breaks down uncollected flexible packaging waste into biomass in the soil under ambient conditions.

Biodegradation is not considered a preferred option by developed countries because of their well-established collection infrastructure and lack of intent to develop suitable biodegradable technologies.

However, till we build the necessary collection infrastructure in India, we anticipate massive leakage in the environment and hence, biodegradation is one of the most suitable options for addressing the challenge of uncollected waste in India.

What do you think should be the action plan to maximize recycling in the country?

The country consumes approximately 200,000 MT of flexible packaging material per month. To recycle these quantities, we would need at least 2000 to 2500 mechanical recycling plants.

This is not difficult to achieve. A policy to encourage entrepreneurs to set up recycling facilities will go a long way in managing waste. In parallel, we would need to invest in auto-segregation and collection technology and infrastructure so that the recycling facilities have access to post-consumer waste to make them financially viable.

Source segregation and technology-led innovation to separate plastic waste from MSW (Mixed Solid Waste) along with building a robust infrastructure for recycling should be the roadmap for the industry and all concerned stakeholders in India. In conclusion, India can become the first nation to demonstrate to the rest of the world how post-consumer Multi-Layer Plastic (MLP) and aseptic packaging waste can be efficiently recycled to remain truly circular.

