## RECYCLING FLORAL WASTE IN INDIA

Adopting a circular economy approach, the <u>HelpUsGreen®</u> <u>company</u> based in Uttar Pradesh, India, recycles floralwaste into useful products: charcoal-free incense, organic compost and a biodegradable



packaging material. The founders of this green company, Ankit Agarwal and Karan Rastogi, have successfully trademarked the term *Flowercycling*® for their innovative technology.

Starting activities in 2015, the company has achieved impacting results as 11, 060 tons of recycled flowers and 11 tons of pesticides eliminated. HelpUsGreen have a 21,000 sq. ft. plant with a 15-members team and also employs full time 73 women providing them with benefits such as provident funds, health insurance and transport to and from work.

The company collects 8.4 tons of floral-waste from temples in Uttar Pradesh on a daily basis offering a profitable solution to the 'temple-waste' problem. Showering flowers (8 Million tonnes annually) at Temples/Mosques is a religious ritual in India. These sacred flowers end in nature or in the Ganges and create havoc in the fragile ecosphere of the waterways and into the groundwater. Pesticides and insecticides used to grow flowers in the farms mixed with the river water make it highly poisonous and generate diseases that affect the population and are important causes of death.

The process adopted by the HelpUsGreen® Company consists of the following stages:

- Flowers waste is collected from the temples and brought to the company' facility.
- Flowers are segregated by hand and plastics or paper are weeded out.
- The organic bloculium created by the Company is sprayed on the flowers to offset the chemical residue.
- Flowers are then carefully washed and the water is stored and used in composting.
- Petals of each flower are broken and sun dried.

Depending upon the species, carotenoid level and other characteristics of flowers, the Company adopts three different processes, described in the website, to produce environment-friendly incense sticks, the *Mitti* organic compost composed by a mix of 17 natural ingredients, including coffee grounds discarded by the local outposts of a coffee chain, and the innovative Florafoam product for packaging purposes.







Florafoam® is a high-performing, mouldable and durable material, an eco-friendly and cheaper alternative to the traditional Thermocol currently used for packaging with a negative impact on the environment. Florafoam® has superior functionality than Thermocol: it is fire resistant and 100% biodegradable (it can be buried in the garden after having been used). It is customizable to any shape, size, and strength, depending upon the usability.

Taking into account the excellent results achieved, the company has launched two additional plants in Varanasi and Mathura. Another HelpUsGreen facility is under construction in the city of Tirupati (Andhra Pradesh) daily visited by 50,000 devotees. Built in collaboration with the Municipality, the new facility will employ 128 women and recycle 12 tons of flower waste a day.

The goal of the company is to help stop the flowers from the temples ending up in the river. In their website the co-founders of HelpUsGreen underline that pollution, over-use of water and emaciated farm canals are killing the Ganges river, which is virtually synonymous with the Indian civilization. More than 420 million people rely on the Ganges for food, water, bathing and agriculture and not to mention the tens of Millions of pilgrims who visit the India's most holy of rivers each year to bath and worship.

However, in the short-term, Helpusgreen® is reducing the pollution generated by the flower-waste and their goal is to expand the impact of the activities. The company is also heavily investing in research and development to use the waste to make stationery and other products.

The approach adopted by HelpUsGreen can be easily replicated in any city of India and possibly also in Bangladesh and Nepal. New products are being processed and the company is in talks with the government of India to scale up across the country. The <u>United Nations Climate Change</u> <u>website</u> published an important article about the Helpusgreen approach and results.

Thanks to the innovative technology developed and the economic, environmental and social benefits achieved, the Helpusgreen® Company has been recognized with numerous prestigious awards in India and internationally.

## To know more

HelpUsGreen company website

United Nations Climate Change website

Video in Youtube

Helpusgreen Awards

Article in ourbetterworld.org

HelpUsGreen story in ourbetterworld.org

Article in forbesindia.com



Article in fastcompany.com

Article in deccanchronicle.com

Article in fortuneindia.com

