



# SUSTAINABLE WASTE MANAGEMENT

A ROAD MAP FOR MOUNTAIN LANDSCAPES

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INTEGRATED MOUNTAIN INITIATIVE  
AND  
ZERO WASTE HIMALAYA







# CHANGING THE NARRATIVE ON WASTE MANAGEMENT

The Himalaya is being plagued by the fast changing waste profiles and the rapid rise in use of non-recyclable and single use plastics, many of which have no solutions once trashed. The so-called 'solutions' that mountain cities and peoples have long adopted of collection of unsegregated waste and rolling it down the hill or burning have huge health and environmental impacts. The importance of changing the narrative on waste management in the mountains in view of the escalating waste crisis is of utmost importance.

The **Solid Waste and Plastic Waste Management Rules (2016)** along with others, have ensured policy support to move towards sustainable waste management pathways. For multiple reasons, there has been massive failure in implementation of these policies at the local level. The result is that the waste situation has seen no change, rather with more single use plastics being used, the problem has compounded further. This is evident from the fact that our landfills and dumping sites are overflowing.



Sustainable waste management solutions work with the main objective of **reducing what is ultimately trashed and sent to the landfill**. A waste audit of the landfill trash reveals that a lot of what ends up in the dumping site is biodegradable waste. Recyclable plastic waste also constitutes a large part of the waste.

Planning for sustainable waste management is based on **strategically diverting waste from the landfill** and ensuring only ultimate discards are taken there. For the mountains that have limited land for landfill sites, this gains even more importance. Multiple interventions and stakeholder engagement backed by policy support is required to reduce load on the landfill.

The key to sustainable waste management lies in a **decentralised approach and ensuring segregation of waste at source**. Sustained campaigns, rigorous IEC using innovative methods with community and political leaders leading the way through examples can make it possible. Segregation at source needs to be followed through with segregated collection, material recovery and composting solutions at various levels.

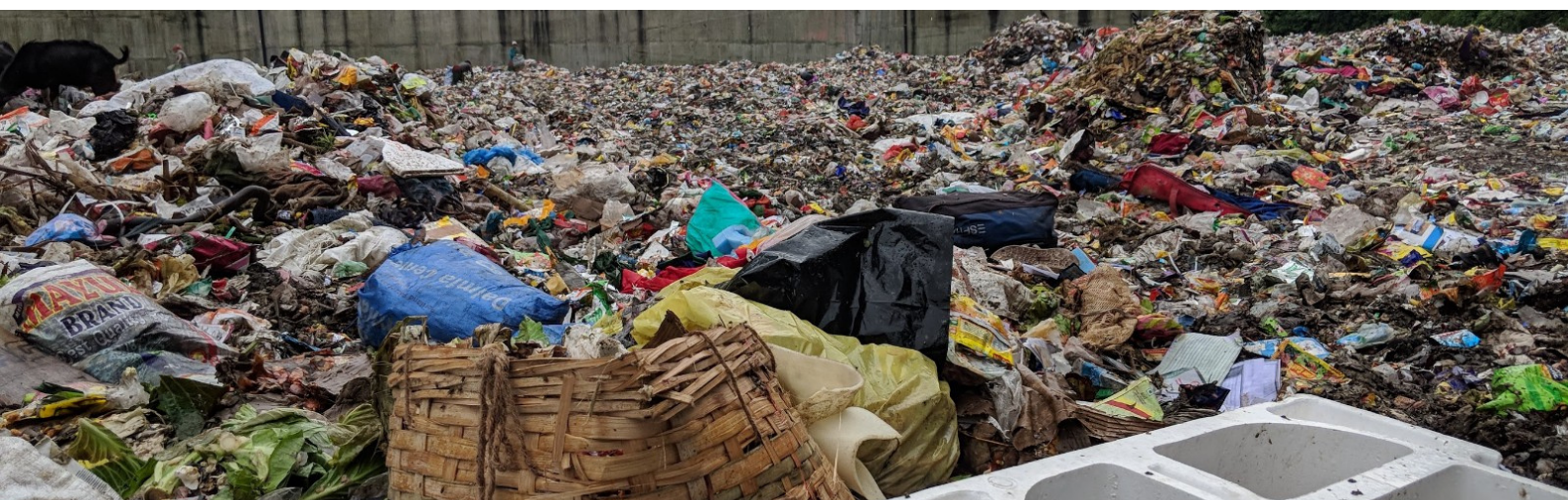
The problem can be tackled in a staggered manner starting with a few pilot wards at a time, mandating segregation for bulk generators (such as hotels, schools, hostels, etc.). Segregation at source will make door to door collection and linkage to treatment and recycling facilities efficient.

THERE IS NO  
SUCH THING AS  
AWAY,  
WHENEVER WE  
THROW  
SOMETHING  
AWAY, IT HAS  
TO GO  
SOMEWHERE

Annie Leonard. Story of Stuff project

**No biodegradables to landfill policy** through diverse composting techniques, bio-methanation and links to animal feed will reduce a large portion of waste to the landfill.

Segregated collection mechanisms and recovery centers for storage of dry recyclable waste with linkages to existing recycling streams connect the dots of sustainable waste management.

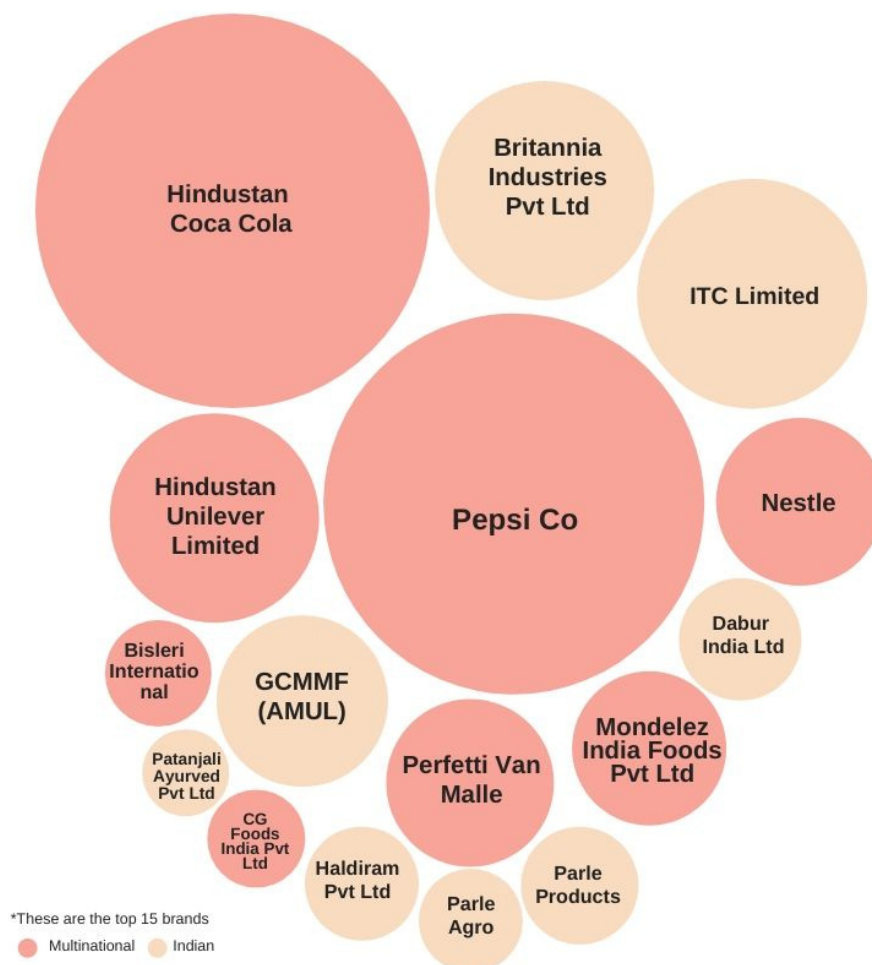


### Extended producer responsibility (EPR)

expands the narrative of waste management and makes companies to take responsibility of their waste.

**EPR** forms the main intervention point for waste reduction which needs to focus on redesigning / phasing single-use non recyclable material, initiating buy back / take back mechanisms for recyclables through their own networks. EPR is mandatory for plastic producers that require them to extend support to local self governance institutions manage plastic waste.

EPR needs to be expanded to advocating for sustainable designs as products like multi-layered plastics have no solution. EPR could be made mandatory for brands as a prerequisite for sale within the state.



Top polluters of the Himalayan region. Source The Himalayan Cleanup, 2018



EPR is a longer term goal, and in the short and medium term, **waste reduction efforts** at individual / community / state level must be promoted. **Local policies to eradicate single use plastic and products** that have no solution would have huge benefits not only of waste reduction but also of supporting local enterprises that could replace the plastic products.

All these interventions tie up and converge with **empowered institutional processes** and **people's participation**. The waste management rules and grassroots democratic processes mandate local action and policy enactments that actualise the vision of the rules. Bye-laws for waste reduction, segregation, collection and treatment as well as levy of **user fees** are extremely important institutional processes that enable efficient and sustainable waste management.

## WASTE MANAGEMENT HIERARCHY



### FALSE SOLUTIONS

- **Waste to Energy, Incineration** are pushed as quick fix, solve it all solutions to the burgeoning waste crisis. They are nothing but burning scarce resources while polluting the environment. Neither do they produce energy as promised.
- **Bio-degradable, oxy-biodegradable, compostable plastics** have no clear guidelines and standards and give a false sense of environment friendly and are best avoided. They are still single use and have a cost of production that is externalised.
- **Plastic Roads** are promoted as solutions but their toxicity over a period of time is highly questionable. it does not promote systemic changes needed to address plastic pollution.



# 1

SUSTAINED AWARENESS AND EDUCATION CAMPAIGNS



# 2

BYE LAWS ON ..

SUSTAINABLE WASTE MANAGEMENT AND DOING AWAY WITH SINGLE USE PLASTICS.



GARBAGE COLLECTION FEES TO BE MADE MANDATORY



PROMOTING LOCAL FOOD CULTURES AND RESTRICT HYPER PACKAGED, PROCESSED FOOD AND DRINKS



# 3

EMPOWER GRASSROOTS DEMOCRACY



FORMATION/ STRENGTHENING OF WARD LEVEL COMMITTEES OR THE SMALLEST UNIT OF GOVERNANCE

STAKEHOLDER PARTICIPATION AND OWNERSHIP INCLUSION OF MICRO-REALITIES

# 4

IMPLEMENT MANDATORY SOURCE SEGREGATION OF WASTE

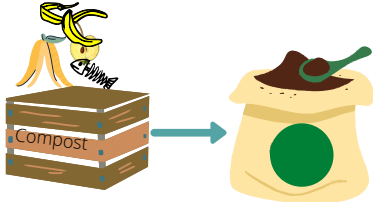


DOOR TO DOOR SEGREGATED COLLECTION



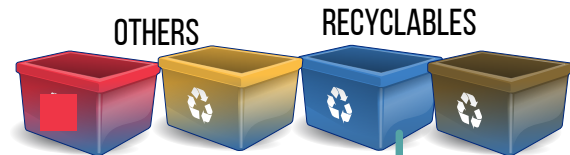
# 5

PROMOTE HOME AND COMMUNITY COMPOSTING SOLUTIONS



# 6

SET UP DECENTRALISED MATERIAL RECOVERY FACILITY



# 9

INITIATE PILOTS

2 - 3 PILOT WARDS COULD BE IDENTIFIED THAT ARE ALREADY UNDERTAKING SOME GOOD PRACTICES

PILOTS COULD ALSO BE DEVELOPED AT THE LEVEL OF EDUCATIONAL INSTITUTES, HOTELS AND RESTAURANTS, GOVERNMENT OFFICES, FAITH BASED ORGANISATION



# 8

LEVERAGE EXTENDED PRODUCER RESPONSIBILITY



# 7



LINKAGE TO RECYCLING THROUGH SCRAPDEALERS

Sustainable waste management is based on a vision of incrementally reducing load on the landfill. A diversity of participatory interventions that focuses on behavioural change that are site and stakeholder specific have to be designed. An acknowledgement that there is no magical wand that will wave the problem away is essential. Clear stepping stones on the road map towards the vision help achieve it.