



Working together  
for Red Panda  
conservation in  
Sikkim and  
Darjeeling



# A GUIDE TO ZERO WASTE & WASTE SEGREGATION



**This handbook has been developed under the WWF- India and SBI Foundation partnership project for Conservation of red panda in the Sikkim - Darjeeling Landscape**

Content for the handbook has been adapted from Zero Waste Himalaya's training modules and resource materials

Text: Priyadarshinee Shrestha and Roshan Rai

Design: Priyadarshinee Shrestha

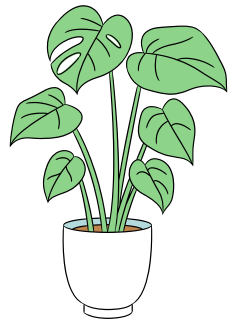
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**THERE IS NO SUCH THING AS AWAY,  
WHEN WE THROW ANYTHING  
AWAY, IT HAS TO GO SOMEWHERE.**

• Annie Leonard





# THE ZERO WASTE WAY

Not creating waste is the best way to manage it. This is the Zero Waste way, and everyone can do it.

In our lives, we buy stuff for our everyday use, and we use these items from the time we are awake to the time we sleep. What we buy and use, we ultimately end up throwing away.

We are buying and throwing away at a much faster rate than ever before and products are designed to break down faster or are irreparable.

**But, there is no such thing as away!**

All that we throw will reach an overfilled landfill, will be burned, dumped or will end up as litter. All of these pollute the environment and impact our health as well.

**It all boils down to what type of products are being made by companies. But we have a choice in which products we choose to buy, why we buy, how much we buy as well as how and what we throw.**

**Zero waste is being conscious and mindful of all these questions and making conscious lifestyle choices to address them.**





# THE ZERO WASTE WAY

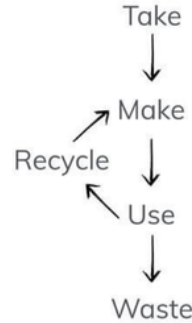
Zero waste advocates for moving from a use and throw mindset to adopting a more circular approach.

It is understanding and acknowledging that mere convenience should not be a reason to trash the planet.

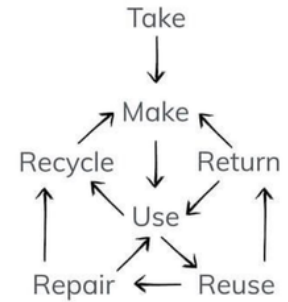
## LINEAR ECONOMY



## RECYCLING ECONOMY



## CIRCULAR ECONOMY





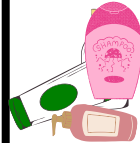
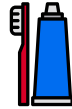
# THE ZERO WASTE WAY

Some items that we use, we throw immediately after one time use, such as a disposable cup, a plastic water bottle, a chips packet, a plastic bag, a shampoo sachet, sanitary pads, etc. These products are also known as use and throw items.



**ALMOST 40% OF PLASTICS IS USED TO MAKE SINGLE USE ITEMS.**

Some items we might use for a few days or few months such as a shampoo bottle, oil jar, shoes, clothes, packaged food items, toothbrush, etc. but they will still end up as trash that has to be thrown.



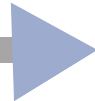
And then there are those items that last longer, are sturdy, has reuse value, can be repaired, can be returned, refilled, or bought loose, are made from natural material and even when disposed, can biodegrade.



**HOMEMADE HANDMADE DIY**

LESS

MORE



Buying and using stuff that fall in the last category means that we will automatically create less waste, than if we buy stuff that we have to throw immediately after use or in a few days or month's time.

*Buy Less  
Choose Well*

**MAKE IT LAST**



- VIVIENNE WESTWOOD -



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# THE ZERO WASTE WAY

Zero Waste is equally about demanding for sustainable products and packaging, and holding companies accountable for the waste they are forcing upon us. It is also about advocating for bringing changes at a systemic level.

If we think back to our parent's or grandparent's age, stuff were built to last. They were durable and sturdy. Stuff did not break down as easily, and if they did, repair was an easy option.

Now there has been a transformation in how products are made, packaged and marketed to us. Obsolescence is planned into most products so that they break down easily and quickly, with no repair solutions, compelling us to chuck it, and buy another piece.

There is also extensive use of media to create demand for products that we dont need and did not use in the past, with the result that we buy unnecessarily, opt for unhealthy products, and end up contributing to endless pollution and the climate crisis.

The Zero Waste Way is to be mindful. We have to ban companies that pollute through unnecessary packaging, use harmful chemicals, promote unhealthy food and practice unfair trade.

We have to raise our voice against plastic pollution.



“As consumers we have so much power to change the world by just being careful in what we buy”

- EMMA WATSON-

# MAKING ZERO WASTE POSSIBLE- AS INDIVIDUALS



DO I REALLY NEED TO BUY THIS?

As consumers, we have to be more mindful of our choices.



**SUPER SALE**  
**BUY NOW!**

We cannot keep on buying stuff and throwing them away.

THROW AWAY!



THERE IS NO AWAY!!!  
THERE IS NO PLANET B

Our landfills are filled up with the waste we have thrown, and we are running out of space to dump our waste.




**THE BUYERARCHY of NEEDS**  
(with apologies to Maslow)

We have to start by buying less, and only when needed.



Warranty 5 years



Repairable

Items that are made for single use should be a strict NO NO!

If we do buy, then we should choose stuff that are durable, if possible, locally made and unpackaged.

Segregate your waste as much as possible.

Compost your wet waste.

Do not burn!!



Follow the 12 steps to zero waste to reduce your waste footprint.

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# MAKING ZERO WASTE POSSIBLE- AS COMMUNITY



As a community, we have to come together to tackle this problem.

We can ensure that our community events - like marriages, deaths, religious and cultural festivals, etc. are zero waste by having strict protocols in place.



Follow the Zero Waste Event Guides to plan for your events.



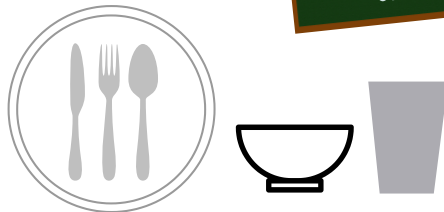
Planning well in advance is important to reduce and manage waste of the event.

- WE SUPPORT REUSE, NOT SINGLE USE.
- WE PROMOTE LOCAL FOOD, NOT JUNK FOOD
- WE SERVE FILTERED & BOILED WATER, NOT PLASTIC PACKAGED

Resolutions for community single-use plastic bans, celebrating local food and no burning can be passed through local samajs or Panchayats.

Invest in cutlery banks that can be loaned out during festivals and events at nominal costs.

UTENSILS ON HIRE FOR PARTY, PICNICS AND OTHERS



Material Recovery Facilities at community level will help in storage of recyclables and other dry waste for longer periods of time.



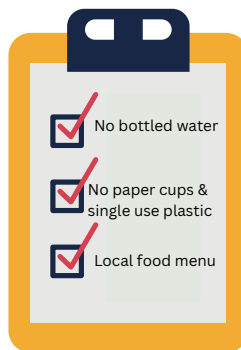
# MAKING ZERO WASTE POSSIBLE- AS INSTITUTIONS



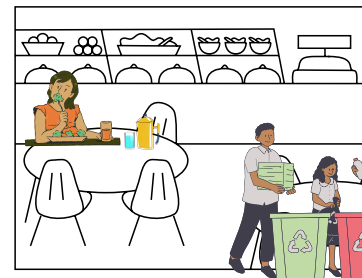
Institutions are usually bulk generators of waste, and adopting zero waste practices and protocols will help reduce considerable waste load.

We can ensure that our meetings and events do not end up creating more waste.

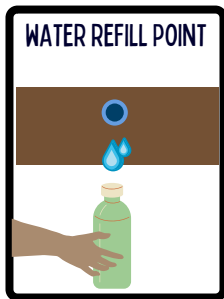
Sufficient clean, safe and unpackaged drinking water should be available in the institution.



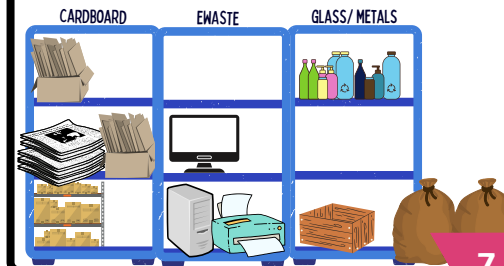
Canteens should be instructed on no single-use plastics policy, serving unpackaged local food along with proper segregation



Institutional Zero Waste Protocol: On an everyday basis too, we have to put measures that reduce our waste within our institutions by thinking through food, water and stationery that are not single use, are refillable and with no plastic packaging.



Institutions can convert available store rooms into **Material Recovery Facilities** where the segregated dry waste can be stored. Recyclables can be given to scrap dealers on a regular basis.



# 12 STEPS TOWARDS ZERO WASTE



**1** CARRY YOUR OWN REUSABLE CLOTH BAG

**CHOOSE natural and reusable**

**BWARE OF BAGS THAT LOOK LIKE CLOTH BUT ARE PLASTIC**



**2** CARRY YOUR OWN REUSABLE WATER BOTTLE

- SERVE FILTERED / BOILED
- USE DISPENSERS



**3** CHOOSE REUSABLE / BIODEGRADABLE CUTLERY

REFUSE SINGLE USE PLASTIC LINED PAPER CUPS AND PLASTIC CUPS



**4** CHOOSE TOILETRIES THAT ARE PLASTIC FREE



**5** REFUSE PLASTIC STRAWS



**6** SWITCH TO SUSTAINABLE MENSTRUAL PRODUCTS. GOOD FOR YOUR HEALTH AND ENVIRONMENT

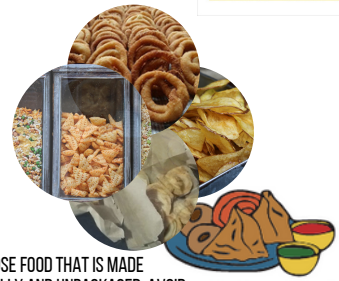


**7** BUY FOOD IN BULK AND UNPACKAGED. CARRY REUSABLE CONTAINERS WHILE SHOPPING.

BUY MILK FROM LOCAL MILK VENDOR TO REDUCE PLASTIC USE



**8** CHOOSE FOOD THAT IS MADE LOCALLY AND UNPACKAGED. AVOID JUNK PLASTIC PACKAGED FOOD AND REDUCE YOUR FOOD MILES



**9** FASHION IS POLLUTING. BUY LESS!! ENCOURAGE THRIFT SHOPPING AND SECOND HAND BUYING



**10** PRACTICE PLASTIC FREE DECORATIONS AND GIFT WRAPPING. USE CLOTH BANNERS. LET YOUR EVENTS NOT CREATE PLASTIC WASTE



**11** SEGREGATE YOUR WASTE COMPOST YOUR WET WASTE.



**12** BURNING IS POLLUTING AND HARMFUL! DO NOT BURN WASTE! ADVOCATE FOR NO WASTE BURNING IN YOUR VILLAGES





# WHY SHOULD WE NOT BURN

Burning has been promoted as the easiest way to dispose waste and make waste disappear from our sight. However convenient it may seem, waste burning has many challenges.

## **POLLUTING AND HARMFUL**

Burning waste releases toxic chemicals, particulate matter, and greenhouse gases into the air, which have negative impacts on human health, the environment, and the climate.

Some unburnt waste and ash remains may release toxic chemicals into the environment.

**The smoke from the fire is highly toxic and harmful for human health.**



## **Fire hazards**

Improperly managed waste burning can result in uncontrolled fires, which can pose a threat to human safety and damage the environment.

## **WASTE OF RESOURCES**

Burning mixed waste is wasting precious resources. Much of what is trashed can be recovered and put back into use, if properly segregated and sent for recycling or repurposing.

## **LIMITED WASTE REDUCTION**

Burning waste does not reduce the volume of waste and may even increase it through the production of ash and other by-products.





# WHY SHOULD WE NOT DUMP

Throwing of waste into jhoras or drains, rolling down the hill and dumping in forest areas are also common practices. All these have serious consequences on environment, wildlife and humans.

## DISASTER RISK

Dumping waste in jhoras blocks water flow and increases risk of landslides.



## SOIL AND WATER POLLUTION

Waste dumping can result in the release of toxic chemicals and pollutants into the soil and water, which can harm wildlife and pollute drinking water sources.

Waste dumping sites produce methane, a greenhouse gas that contributes to climate change.



## INCREASE IN FREE RANGING DOGS

Dumping of waste, especially food waste in forest areas leads to increase in dog populations that thrive on these food sources. These dogs then start hunting wildlife such as red pandas, and other mammals; pheasants, etc.



## IMPACT ON TOURISM

Waste dumping can result in unsightly landscapes and decreased property values, as well as damage to natural habitats and wildlife.

## DISEASE SPREAD

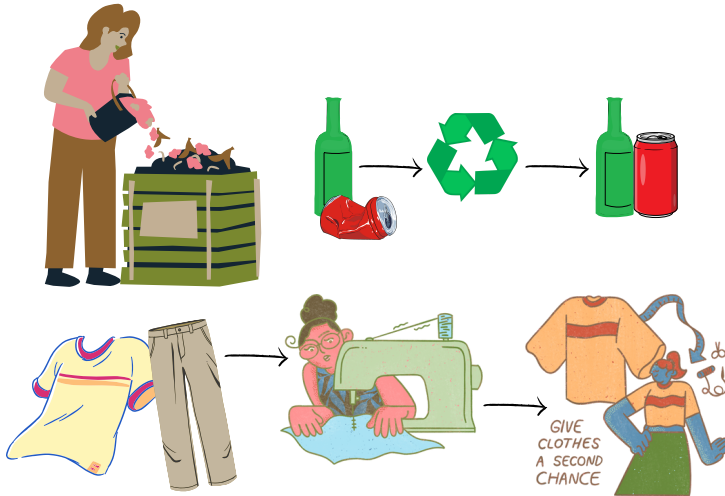
Waste dumping can attract vermin and other pests, which can spread disease and pose a health risk to local communities.







# WHY SHOULD WE SEGREGATE!!



Proper segregation means that resources can be recovered for composting, recycling, reusing or repurposing.

Segregating also eases the work for waste workers who do not have to rummage through mixed waste to recover recyclables.



Dry waste can also be stored for longer periods of time, instead of being dumped or burnt.  
Recyclables can be given to scrap dealers in bulk.



## THINGS TO REMEMBER

- Cleaning or rinsing items before storing and segregating is very important.
- Unclean trash items can attract flies, rats, dogs, etc. and can also start to smell.
- Cleaning is also important as contamination of recyclables reduces its possibility of recycling.



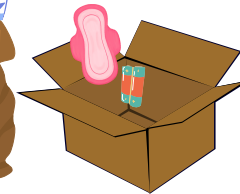
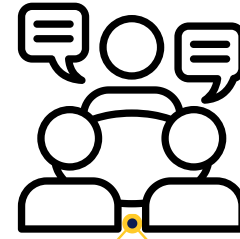


# THE SEGREGATION JOURNEY



## Get everyone on board

- For segregation to work, there must be cooperation and support from every member. 1 or 2 persons who are disinterested will make others lose interest too, as well as increase the possibility of contaminating segregated waste. Identify and work with such members separately.
- Every household member / employee should be aware of the idea and able to distinguish the different types of materials.
- Ensure that everyone in the household / office is aware of what goes where.
- Put up posters or notice boards so that everyone is clear about the process.

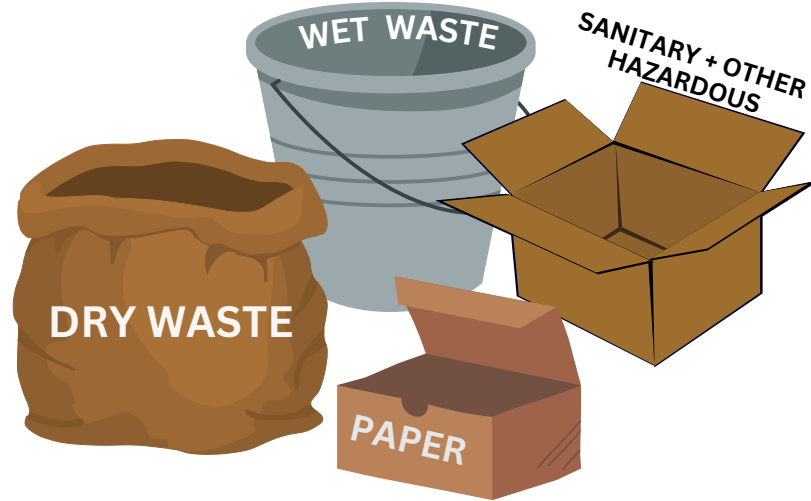


# 2

## Keep 3 separate sacks to begin with

3 sacks is a good beginning, but if possible, waste items can be segregated into more categories as convenient to the households.

- These can also be buckets/ cardboard boxes or old sacks.
- Wet waste will be moist. So, a bucket or container would be best. Wet waste needs to be treated within 24 hours otherwise it will start rotting and smell.
- A Separate box can be kept for paper / cardboard waste, especially for offices where paper waste is generated in larger volumes.



# 3

## Set up system / linkages for collection

- It is crucial to have the linkages in place before the segregation initiative.

Wet waste has to be taken care of daily. Make sure your composting system is ready for that. This can be at household or community level.

If the municipality / panchayat / local body has composting facility, wet waste can be collected by the waste collector.



 **COMPOSTING** 

Dry waste can be picked up by the waste collector on a regular basis to be taken to MRF or further segregation and storage.



 **Material Recovery Facility**

Hazardous waste also should be collected along with dry waste.

Local solutions are not always available to manage hazardous waste.





# WHAT GOES INTO THE DRY WASTE SACK?

Dry waste is anything that can be kept for extended periods of time without decomposing or rotting.

## Hard Plastic items

- Oil jars
- Plastic bottles of cold drinks / oil/
- Personal care items - shampoo bottles / lotions and creams, hair oil,
- Other broken items



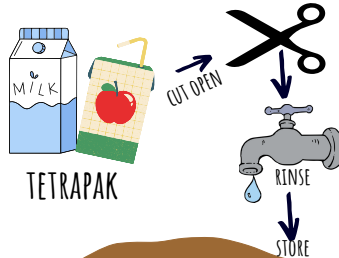
HARD PLASTICS



GLASS / METAL

## Soft plastic items

- Food wrappers - Biscuits / chips / noodles
- Oil sachets
- Plastic from online package
- Milk pouches



## Glass items

- Empty jars of pickle / jam / coffee
- Liquor bottles
- 

## TetraPak items

- Cartons of juice / milk



CLOTH / SHOES / OTHERS



SOFT PLASTICS

**!** It is important that items are cleaned or rinsed before being put into the sack so that they can remain for longer.

## Others

- Cloth / fabric
- Rubber - Shoes /
- Leather -
- Styrofoam - packaging material



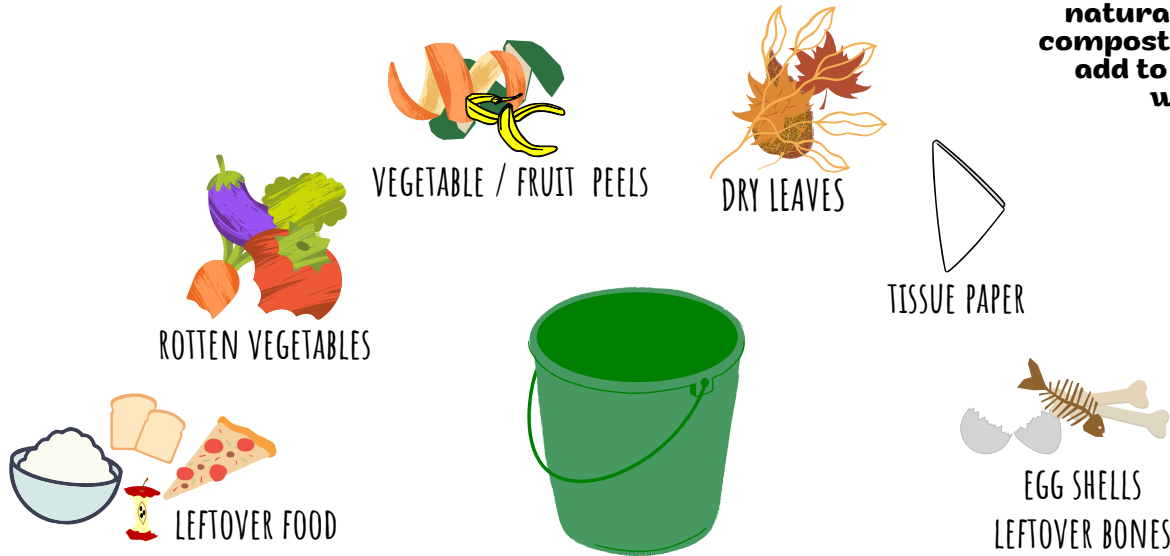
## Paper

- Most paper is recyclable, unless they have a plastic coating.
- For ease of storing, do not crumple used paper.
- Paper can be stored separately in a box, specially offices/ institutions that generate paper waste in larger volumes.

# WHAT GOES INTO THE WET WASTE CONTAINER?

- Vegetable / fruit peels
- Leftover food
- Soiled paper like paper that has oil in it or has come into contact with food.

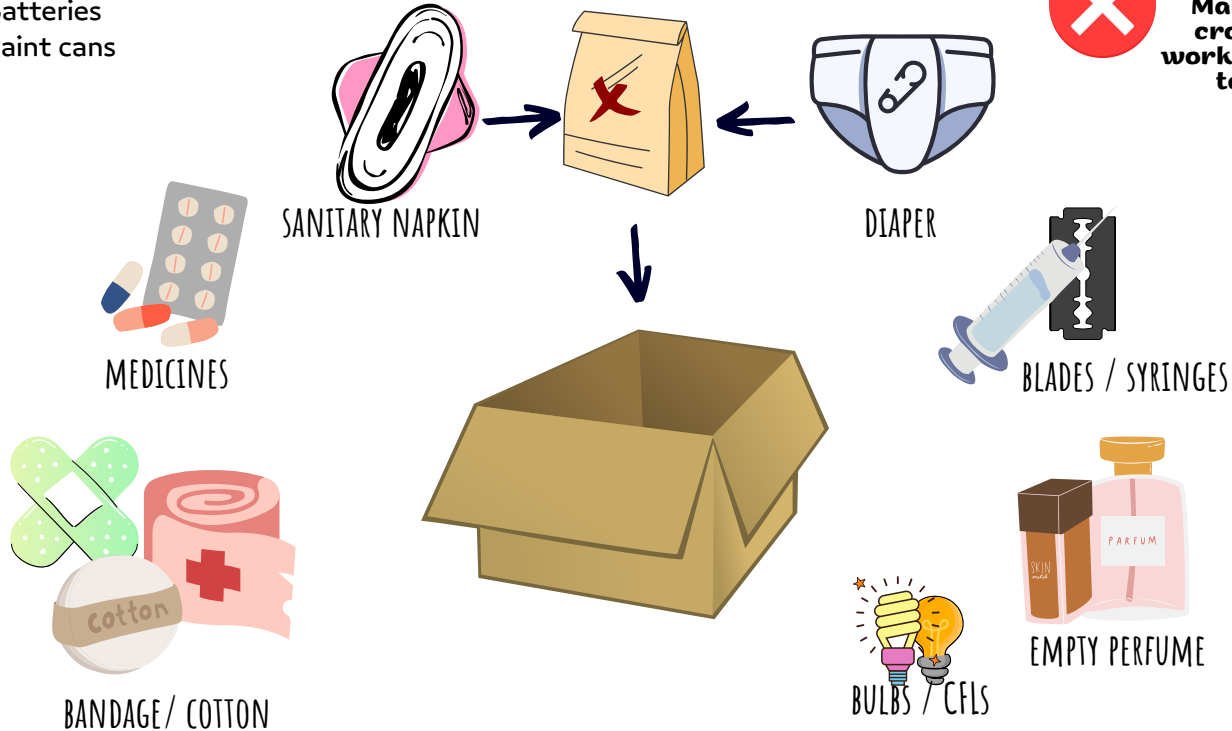
**!** Do not use plastic liners or garbage bags to put your wet waste. They hinder the natural process of composting as well as add to the plastic waste.





# WHAT GOES INTO THE HAZARDOUS SACK?

- Sanitary waste and diapers
- Other medical waste
- Batteries
- Paint cans





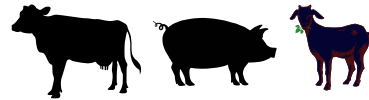
# TAKING CARE OF WET WASTE

Wet waste can be composted at home or at community level or given as animal feed.



If you have land, wet waste can be put into a pit and covered regularly and nature will take its course and compost.

Composting is a fairly simple process. All things natural, decomposes. This is nature's cycle.



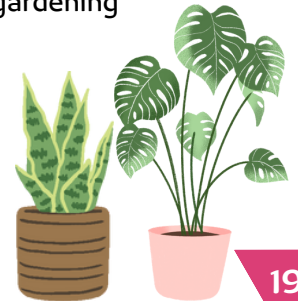
Animal feed is a good option for tackling a large part of wet waste. Remaining scraps will still need to be kept separately and tackled.



Link your composting to kitchen/ terrace/ balcony gardening



Wet waste can also be composted in a box, sack or bucket using earthworms or microbial cultures that will speed up composting process.





# TAKING CARE OF DRY WASTE

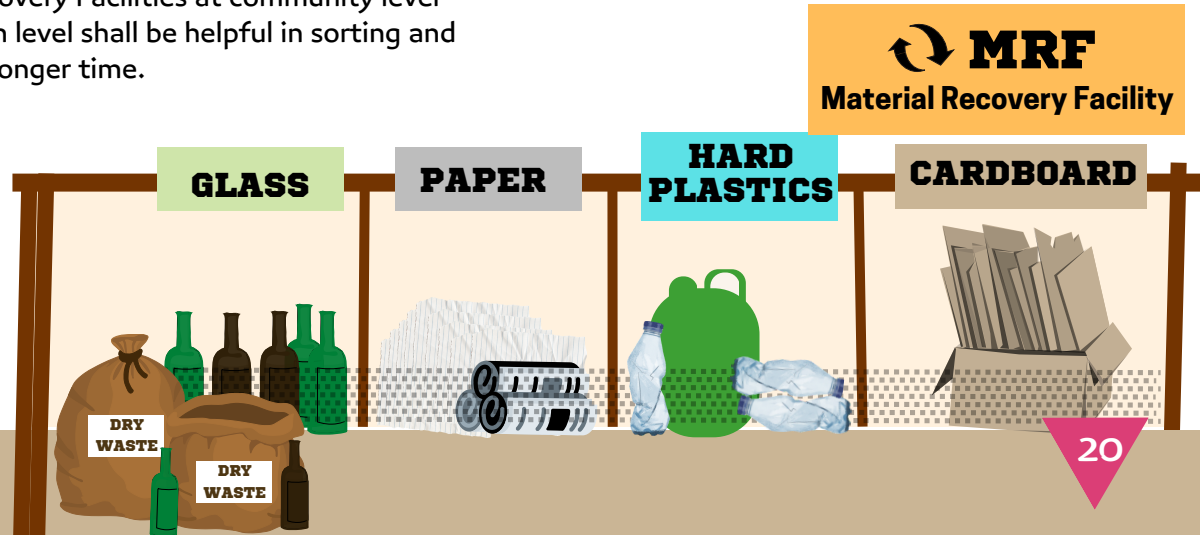
- The stored dry waste can be collected by the waste collector.
- Since dry waste does not rot, it does not have to be collected frequently.
- The collection timing can be decided as per the necessity of the households / institutions or community.
- Recyclables can also be given directly to the scrap dealer, if there are any.
- Material Recovery Facilities at community level or institution level shall be helpful in sorting and storage for longer time.



**Not all dry waste (mostly plastic) is recyclable. Our current production systems are geared for generating waste, as most of the items in our trash are non-recyclable.**

**Therefore reduction of such waste is the key to sustainable waste management.**

REDUCE







## TAKING CARE OF HAZARDOUS WASTE



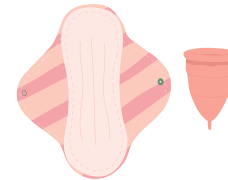
- Currently there are no solutions at local level to deal with hazardous waste.
- This type of waste can be stored and then transported to Government authorised landfill sites.



→ LANDFILL



- Sanitary waste can be reduced in the long run through switching to reusable options- such as cloth pads and menstrual cups.





## FAQS ON SEGREGATION

- **Will dry waste smell if I store it for a week?**



- Not if it is clean and dry. Make sure that plastic sachets of milk, curds, oil, or any food item, are cleaned of all their contents and dried before being put in the dry waste bag. Then they will not stink.

- **Is composting possible at home?**

- Of course. Home composting can be easily done in any aerated container. Composting can be sped by using earthworms and microbes. Composting when done properly will not smell.



- **Will there not be problems with cockroaches, rats or flies?**



- Only if any food residue or organic matter is present in the dry waste. Clean dry waste will not attract any vermin or flies.

- **Are all dry waste recyclable?**

- No, and this is the main challenge. Much of the dry waste is multilayered plastics, polypropylene, polystyrene or tetrapak items which are not recyclable. The only solution currently is to reduce their use.

- **Should I put my old clothes/ shoes/ handbags/belts/toys into the segregated sacks?**



- Repair and repurpose is the first choice. If they are still in usable condition, they should be given to some organisation that collects them. If they are totally unusable, or very damaged, they are still categorised as dry waste.
- If clothes are soiled with body fluids, they become sanitary waste and can be easily treated by washing it or sterilising it. If they are soiled with paint, or any chemicals, they are household hazardous waste.



WE DON'T NEED A HANDFUL OF  
PEOPLE DOING ZERO WASTE  
PERFECTLY, WE NEED MILLIONS OF  
PEOPLE DOING IT IMPERFECTLY.

*Anne Marie Bonneau*

