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Eco-Edu Hubs

ZERO WASTE

The global population is growing and facing with limited resources from the nature. To relieve the pressures placed on the search for resources available it has become more important to prevent waste. The spread of industrialisation globally has been accompanied by a large increase in waste production. For example, in 2012 1.3 billion tons of waste was produced in urban areas and estimation is that the waste will reach 2.2 billion tons by 2025.The increase in waste production increases the need for landfills and dumps which are placed close to cities, in less developed and poor neighbourhoods. Many hazardous waste facilities were considered to be a risk to human health in recent years.
The goal of the Zero waste movement is to avoid sending trash to dumps, landfills, forests, seas, oceans, or anywhere else in the nature. Currently 9% of global production of plastics is recycled.

Photo: Md Mudassir Hossain

Zero Waste is a set of principles focused on decreasing the waste that encourages changing life cycles of products in such way that all products are reused until the optimum level of consumption is reached. Zero Waste is simply about reducing the waste we produce, reusing and recycling what we can and composting the organic waste. This makes our economy circular and creates a more sustainable lifestyle following the example of nature. The circular economy is all about maximising the value of products and services by designing them to last and not to become waste, contrary to the current

Zero waste encompasses more than eliminating waste through applying 3R principle: reducing, reusing and recycling. Its focus is on changing production and distribution systems to reduce waste. In the book Zero Waste Home: The Ultimate Guide to Simplifying your Life by Reducing your Waste the author, Bea Johnson, provides a modified version of the 3 Rs, the 5 Rs: Refuse, Reduce, Reuse, Recycle, Rot to achieve Zero Waste at home. The method, which she developed through years of practicing waste free living and used to reduce her family's annual trash to fit in a pint jar, is now widely used by individuals, businesses and municipalities worldwide

Pickles

Ingredients:
1 cauliflower
1 kg baby carrots
1 kg gherkins
1 kg small bell peppers
4 l water
150 g salt
200 g sugar
1 l pickling vinegar

Method:
Heat the water, salt, and sugar until boiling. Take the liquid off the heat and leave to cool. When cold, add the pickling vinegar. Break the cauliflower into pieces and arrange with the rest of the vegetables. Put the vegetables in the large jars and pour the mixture so that the mixture covers all the vegetables. Hermetically seal the jars. Keep the pickles in a dark, cool place for at least four weeks.

Homemade sour milk

Ingredients:
1 l fresh full-fat milk
125 ml sour milk

Method:
Bring fresh milk to boil. Leave aside to cool.
When the milk is lukewarm, pour it into 2 jars, add sour milk, stir well and close the jars. Cover the jars with a blanket and leave overnight, or for at least 2-3 hours. Keep in a fridge.

Fruit syrup

Ingredients:
5 kg fresh seasonal fruit (strawberry, apricot, peach, raspberry, blackberry, sour cherry, red current etc.)
2,4 kg sugar
3 l water
15 g citric acid (optional)

Method:
Wash the fruit and remove any seeds. Add water and citric acid. Bring mixture to a boil and cook for 10 minutes while stirring. Blend the mixture, add sugar and stir well, then cook for another 10-15 minutes.
Pour the warm syrup into warm, sterilized bottles (half an hour in an oven at 1000 C) and wrap them in a blanket to cool. Dilute 10 ml of syrup with 150ml water before serving (the ratio should be at least 1:10 or more). Once bottle is opened, keep it refrigerated. If stored in a cool, dry place the syrup will last up to one year.

Home Cooking

One third of all food produced is lost or wasted –around 1.3 billion tonnes of food –costing the global economy close to $940 billion each year. Up to 10% of global greenhouse gases comes from food that is produced, but not eaten. Source: United Nations Environment Program (UNEP) (2021).

Fortunately, there are many things we can do at home to reduce food waste, and there are tons of zero-waste recipes you can easily make in your kitchen. First of all, buy locally and only buy what you need. Store your food properly. Repurpose leftovers, roast squash or sunflower seeds (popular snacks in South Eastern Europe and the Middle East), use beet or radish greens for soup or pesto, zest lemons and limes (dry lemon zest you can use for flavouring cakes), use vegetable scraps for broth, eat fruit with skin and start preserving (sweet syrups and jams: strawberries, plums, apricots, berries etc. and pickles: gherkins, peppers, cauliflower, carrots, mushrooms etc.)

Find below few simple recipes to start a journey of cooking at home!

Homemade village bread

Ingredients:
500g white baking flour
Half of baker's yeast cube
1 tsp sugar
1 tsp salt
Lukewarm water

Method:
Put the yeast and sugar in a small glass of warm water and leave for half an hour. Prepare the dough by adding this mixture, with salt, to the flour. Knead the dough – so that it is neither too soft, nor too hard – and then place it in a bowl and cover with a tea towel. Leave to rise for half an hour.
Roll out the dough with a rolling pin into one larger or 2-3 smaller loafs. Place the loaf(s) in an oiled baking tray(s) and stab with a fork evenly all over. Leave for a further 20 minutes for the dough to rise. Bake at 2000 C for 20-25 minutes

Zero Waste Lifestyle Hierarchy – 5 Rs

01 - REFUSE: Rethink and refuse to purchase what you don't really need.
02 – REDUCE: Whenever you can, try reducing consumption. Buy what you truly need and what will last. Avoid packaging as much as you can.
03- REUSE: Reuse what you already have when you can and use things for another purpose instead of throwing them away. Repair, upcycle, be creative!
04 – RECYCLE: Recycling is a process of collecting and sorting rubbish in order to treat it and produce materials that can be used again.
05 – ROT: Make a simple compost bin where you can put your organic waste and get natural fertilizer for your garden and plants.

1. Refuse

The consumerist society encourages people to buy, use and dispose of things quickly. This leads to the uncontrolled creation of massive amounts of waste and pollution. The best advice is: Think twice before next shopping! Rethink and refuse to purchase what you don't really need or products that just don't last or are unnecessarily wrapped in single-use plastics. Choose products that are sustainably and locally made over imported mass-produced goods. Finally, rethink how you live and read about life in an Eco-village in a separate booklet: Eco-village.

Single-use bags
It takes over 1,000 years to single-use plastic bag to degrade. There is a selection of reusable bags, also hand-made, on the market (in bookstores, home stores, online). Remember to have one with you when you go shopping.

Plastic bags and wraps for fruits and vegetables
Either bring your own bag to the grocery shop or ask for a box or paper bag. Avoid wrapping your food in plastic.

Plastic bottles
Plastic bottles are the most commonly found type of waste. Use a reusable water bottles instead. Reusable water bottles can always be refilled with fresh tap water.

Single-use coffee cups and food packaging
Single-use coffee cups and food packaging are a huge source of unnecessary waste. Have a reusable mug in your bag, bring already used packaging or your own pots.

Plastic cups, plastic cutlery, plastic straws
Plastic straws are well known for being found in the deepest parts of oceans. Use reusable metal or bamboo cutlery, bamboo cups and stainless steel or bamboo straws and keep them in your bag.

Wet wipes
Wet wipes pollutes nature a lot and often contain toxic chemicals. Instead, use (organic coconut) oil and reusable cotton rounds. Get the pads made at your tailor with left-over fabric or sew them yourself, as in the past.

Cosmetic products
Their packaging is problematic in terms of reuse. Usually, it is not recyclable and often contains microplastics and chemicals. Instead, choose a good quality soap.

Coffee pads
Most coffee pads are single-use and not recycled. Buy an Italian moka pot or coffee machine that brews or uses directly coffee powder. Or enjoy local black coffee, which is even more sustainable.

Try also: tea that is not packed in the bags, to make your own detergent and face cosmetics like peeling paste, masks, tonics etc. (look for the recipes on Internet), paper handkerchiefs and napkins (use textile ones), cotton or bamboo ear cleaning sticks, natural sponge etc.

2. Reduce

Be conscious of the choices you make when purchasing new things. There are many eco, green and recycle labels on the market which give you authentic sustainable alternatives. Reducing the waste you produce is one of the best ways to fight pollution.
Start growing your own food! Get a garden done. Grow your vegetables, fruits and spices. Make your own natural fertilizers. Read more about how to start a garden in a separate booklet: Gardening and composting.
Star cooking at home! Instead of buying fast food, with unnecessary packaging, learn to cook and cook at home for you and your friends. You can find few recipes at the end of this booklet.

3.Reuse

Reuse what you already have whenever you can. Use things for another purpose instead of throwing them away. Buy clothing in second-hand shops! Upcycle and repair! Instead of buying new items, you can learn how to fix and repurpose existing ones, allowing you to allocate your budget more effectively. Read more about basic repairing and upcycling in our separate booklet: Upcycling and repairing.

Ideas for reuse

- Buy locally-made yoghurt in glass jars and reuse them to store your food in your kitchen or make your own preserves. You can also make your own yoghurt at home.
- Amend your old clothes with patches, and dye them with new colours.
- Reuse old textile to sew grocery shopping bags for fruits and veggies.

Read more in a booklet: Art crafting waste.

4.Recycle

Recycling is a process of collecting and sorting rubbish in order to treat it produce materials that can be used again. For instance, the Japanese recycle more than half their waste paper. Plastic and other recyclable rubbish (paper, still, aluminium, glass, cardboard etc.) need to be collected, transported, sorted, washed, transported again, crushed, melted, transported, and transformed into a new product and it can only be recycled a few times. Many locally-owned eco business have started with recycling. Green businesses evolved in the meantime and you can read about them in two booklets: Green businesses and Waste materials crafting.

5. Rot

Composting is a gem for waste reduction. It can decrease up to 40% of your solid waste! It is natural process of turning organic waste into fertilizer.
Create a simple compost bin in your garden or on your balcony where you can put your organic waste and get free natural fertilizer for your plants and garden.
Want to learn how to compost? Find more in a booklet Gardening and composting.