Sustainability 101

Your handy guide to conscious living

An independent project by ME2WE

Preamble

The Intent

Sustainability is the need of the hour, but for many, the biggest obstacle is, where to start. Having been there, at a not-too-distant point in time, a few of us decided to come together and co-create a document that is useful for anyone wishing to embark upon a journey that is remarkable, reflective and life-altering once you begin—a step towards sustainability. We are aware of the multitude of resources available and so, we have deliberately tried to keep this simple and doable. Of course, as you move deeper in this journey, your own learning will evolve and you will feel more confident about making better choices for you and your loved ones, including our only home, The Earth.

The Content

This handbook will take you through items you can buy online, steps you can take, resources you can learn from, and questions as well as issues to ponder over, in your everyday lives.

It is not comprehensive, but most of the information is tried-and-tested, and will be meaningful, irrespective of where you are in your quest towards a more sustainable lifestyle. Many of us are already doing some things, like carrying our own shopping bags and buying local produce, but if we collectively move towards all that is earth-friendly, we can hope it drives the market, too, and change is nigh!

Food for Thought

When we buy something, let us for a moment dwell on “What is driving our purchase *NOW*?”. Is it necessity, circumstance, peer pressure or a chance to display what we have? Instead of justifying the purchase, play devil’s advocate. Then make ‘that’ purchase only if it makes sense to buy. While any of these may seem a good enough reason to buy something, stopping to think is more likely to help us see that purchase for what it really is. When buying something because it makes us feel good, instead of giving in to guilt, we need to allow it to make us feel good.

We all have different thresholds, too. Some of us may be well into our journey towards sustainability—let's not put down those who're still looking for a way to begin. Sustainability is, after all, a collective journey. Each of us does what we can, which is also about fairness—an important aspect of sustainability. We can all do with a lot more kindness, empathy and help.

Get creative with your learning and you will surprise yourself with all your work at managing resources efficiently and effectively!

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Disclaimer

This is an independent project intended for the purpose of supporting everyone, especially beginners, in their journey towards a sustainable lifestyle. The links and resources mentioned are our personal recommendations and we have not received any kind of monetary support from any of the companies or organizations mentioned.

We have taken care to ensure the content is simple and doable. We are, however, not responsible for any broken links or content that is misconstrued as fake or false.

Personal Care

I Wonder

Every year, the beauty and personal care industry produces 77 billion units of plastic. Less than 10% of that is recycled.
The industry is also the biggest consumer of palm oil—found in everything from soaps and shampoos, to body lotions, creams and deodorants. The same palm oil that has led to the burning down of forests in Indonesia and Malaysia, so palm trees can be planted and palm oil extracted—unsustainably.

How can I cut back on the plastic waste that comes out of my bathroom, and off my dressing table? What part can I play in controlling the palm oil menace?

How safe and effective is homegrown personal care?
Is that 'natural', 'organic' brand really all it makes itself out to be?

I Do

Dental care

The average person goes through four toothbrushes a year. That's four plastic sticks you send to a landfill per year—120 over a lifespan of 60 years! Switching to bamboo toothbrushes takes care of that, though most bamboo toothbrushes come with nylon bristles that are non-biodegradable. Read the product description carefully before you buy. Beco and Bitto are brands that do make toothbrushes with biodegradable bristles.

Making your own toothpaste at home is quite easy. Here's what you need:
¼ cup baking soda
¼ cup coconut oil
A few drops of peppermint essential oil
A dash of salt.
Combine all ingredients and you're good to go. A word of caution, though: Peppermint essential oil is contraindicated with certain medications and medical conditions, and is not recommended if you're pregnant. Stick with sea-salt or the ancient daatun, but make sure you

clean it properly. If you're prone to cavities however, and for children, the ADA advises you use toothpastes with fluoride. You can reduce the plastic waste from toothpaste tubes by alternating between a regular toothpaste with fluoride and homemade toothpaste.

Dental floss has also been found to make its way to the oceans and into the food chain of marine life. Water flossers are a great way to go. Even though you're using a battery-operated gadget, it lasts long enough to offset the impact. If you're unable to lay your hands on one, just use your regular floss sparingly.

Hair removal

The good old safety razor is a better alternative to a multi-cartridge razor. It lasts you a lifetime and steel blades can be sharpened and reused, at least a couple of times. Switch to a soap bar instead of shaving foam or cream.

For ladies, sugaring and epilating are better alternatives to waxing. Sugaring uses a combination of sugar, water and lemon juice, heated to a toffee consistency, to remove body hair. No wax strips and empty vials! Epilating is quick, convenient, and your epilator will last you a lifetime.

Deodorants

Spray-on deodorants in pressurized containers are a huge strain on landfills. So are roll-on deodorant bottles, since neither can be recycled. In addition, spray-on deodorants and talcum powders aerosolized and their particles remain suspended in the air, adding to air pollution.

A combination of arrowroot powder and cornstarch are a good alternative to powders. If you can't make your own, Juicy Chemistry and Forest Essentials have some really good options. Juicy Chemistry and Neemli also have stick deodorants that come in biodegradable recycled paper packaging.

Cleansers

Traditional ubtan cleansers are a great way to go, but if you have sensitive skin that can't take the abrasiveness, there are plenty of options in the market for natural soaps with zero or low waste packaging, from brands like Bare Necessities, Juicy Chemistry and Rustic Art. Pick soap bars over body washes. At any rate, avoid anything with

microbeads. Loofahs made from dried gourd and other plant fibres are readily available.

Hair care

Shampoo bars are more eco-friendly than liquid shampoos, but depending on your hair and skin type, you may need to use a regular shampoo. Pick from a brand that has a recycling policy—Mama Earth, The Body Shop, Juicy Chemistry, Kiehls will all take back your empties. And, they're all certified!

But also remember, you don't need to wash your hair every day—you'll only strip it of its natural moisture, no matter what you use. In between washes, if it gets too greasy, sprinkle some corn flour on your scalp, to absorb the extra moisture. Bonus tip: Adding some cocoa will make sureyour hair smells great, too!

Sustainable Menstruation

According to a WSSCC report, 12 billion sanitary pads are disposed of, every year, in India alone. A menstrual cup is made of medical-grade silicone, which is hypoallergenic and completely safe, and will last you 30 years—that's most of your menstruating life. However, it may not be for everyone. Cloth pads (Eco Femme), bamboo and cotton pads (Carmesi), and period panties (Athlos) are all excellent eco-friendly options.

Recycle your empties: Most beauty brands—conscious or not—will take back your empty containers, for recycling. Check in with them while making your purchases.

I Buy

Bare Necessities: Dental care, haircare, body care. https://barenecessities.in

77 Eco Stuff: Bamboo toothbrushes, neem combs, cotton ear Buds https://77ecostuff.com/collections/the-pocket-friendly-collection?pag e=1

Juicy Chemistry: Skin and hair care. https://juicychemistry.com

Neemli: Skin and hair care. https://www.neemlinaturals.com

Upciclo: A one-stop shop for all things sustainable. https://upciclo.com

Rustic Art: Personal care products, menstrual cups. https://www.rusticart.in

Boondh: Menstrual cups

Beco: Biodegradable toothbrushes, bamboo toilet paper, cotton ballsand earbuds. https://letsbeco.com

I Learn

https://www.reusablenation.com/zero-waste-living/is-your-homemade-ze ro-waste-toothpaste-ruining-your-teeth-how-effective-is-homemade-toothpaste

https://www.livekindly.co/myths-clean-beauty-debunked/

https://safetymonitor.org is a third-party verification organization where you can check the safety of personal care products. It is free for consumers to use. All you need to do is create an account and submitthe name and brand of the product you want to enquire about. You will receive an email with the verified details, on criteria such as data compliances, and ingredients associated with toxicity, endocrine disruption and cancer.

Certifications for personal care and beauty products.Ecocert
Cosmos
IndiaUSDA
MadeSafe

Certifications for Palm Oil:
RSPO (Roundtable for Sustainable Palm Oil)Green Palm Sustainability label

Cleaning Solutions

Cleaning solutions span the following areas -

- Handwash
- Floor cleaner
- Toilet cleaner
- Dishwash
- Clothes wash

I Wonder

Why look for alternatives to mainstream products?

Although chemical cleaning agents leave your clothes and dishes sparkling and almost sweet-smelling, they often contain a cocktail of harmful chemicals that have negative side effects on our health. Not to mention, synthetic detergents damage our clothes and reduce their life-span. Every time we wash using these chemicals, they wash into our sewers and pollute our water bodies. The packaging of these cleaners is also an environmental waste that cannot usually be reused effectively and ends up in a landfill.

I Do

Make your own bioenzyme.
Bioenzyme is a fermented output of fruit or vegetable peels, which can be used to clean.

Preparation of Bioenzyme
Ingredients: Jaggery, citrus peels, water
Apparatus: Plastic or glass container

Process:

1. Fill the container with jaggery, citrus peels and water in 1:3:10 ratio (by volume) and close tightly.
2. Open the container once a week to let out the gas.

Duration:

Initially, 3 months (without yeast addition). Subsequently, 1 month.

A pinch of yeast or addition of some of the old bioenzyme can speed up the process and curtail it to 1 month. Similarly, when preparing the second batch, some of the peels and enzyme from the earlier batch can be used to accelerate the process. The process completes when the peels settle at the bottom of the container.

The acidity can be adjusted to a comfortable level by diluting with water, so that it is not too concentrated for your needs and you do not end up consuming all of it too quickly till the next batch is ready.

I Buy

If preparing your own bioenzyme cleaner seems a bit too daunting, you can look for brands that sell these. Be sure to look for products with organic/natural ingredients in their labels.

Do not...

1. Trust products that claim to be ‘organic’ or ‘natural’ but do not mention ingredients. If ingredients are confusing or ambiguous, opt for a different product or seek written clarification of the ingredientsby email.
2. Buy products that have any of the hazardous chemical compounds listed among the ingredients. If you have a doubt about any of the ingredients, you can search about it online to determine if it is safe or not.

Do...

1. Trust products that explicitly mention they are skin-safe, non-allergenic or safe for grey-water, which is a thumbs-up for any product (though it is still important to have some idea of the ingredients).

2. Trust products that mention they are paraben-free, SLS-free and free of harmful chemicals mentioned in the earlier section.
3. Buy products that not just claim to be safe but also mention their natural ingredients.

The first time you purchase a new product, buy a small quantity as a testing sample. Once you are satisfied with it, you can go ahead and purchase a larger quantity.
Some of the brands we have found to be good are –
Soil and Soul - https://www.soilandsoul.in/Home-Care-Products
Krya - https://krya.in/
Herbal Strategi - https://herbalstrategi.com/
Native Circle - https://nativecircle.in/
You can search ‘bioenzyme’ or ‘natural cleaner’ or ‘organic cleaner’ on e-commerce sites too and find a product to your liking.

I Learn

Some of the potentially toxic chemicals present in cleaning agents are:

1,4-dioxane has been identified as a human carcinogen, and is a common ingredient in detergents and shampoos.

Sodium Laureth Sulphate (SLS) is known to irritate human skin and is often implicated in conditions such as eczema, rosacea and psoriasis. It is best avoided by those with sensitive, allergy-prone skin.

Sodium Hypochlorite is the bleach contained in detergents. When it comes in contact with the skin, this bleach can cause allergic reactions. It is an eye and lung irritant and is toxic to marine organisms, too.

A common phosphate compound in detergents is sodium tripolyphosphate. Despite their effectiveness, phosphates have been banned in several American states and European countries because of their adverse impact on water bodies.

Fragrances and formaldehydes are a class of compounds called Volatile Organic Compounds, which cause indoor air pollution and irritate the respiratory system.

A quick check for the ingredients of a popular detergent shows multiple sodium compounds, which have varying levels of toxicity. These may manifest in certain side-effects in the long-term for a person exposed to these chemicals.

Many a time, even famous brands do not mention the harmful chemicals present in their products. Here is an example: https://www.reuters.com/investigates/special-report/johnsonandjohnson-cancer/.

Your Kitchen

I Wonder

The history of my food

What have the people of my area always eaten? Why? How and when did something become a part of staple diet?

https://www.weforum.org/agenda/2019/02/20-easy-ways-to-reduce-your-food-waste#:~:text=Pickling%2C%20drying%2C%20canning%2C%20fermenting,simple%20and%20can%20be%20fun.

The Ecological Impact of my food
Where does my food come from and how did it get to me? How water/resource intensive is my produce? How is the production of the things I eat affecting ecosystems? What is my food packed in? Am I buying it from a local market or a heavily air-conditioned mall? What are the by-products that my food has left behind?

I Do

Meal Planning

Spend time at the beginning of each week or fortnight to plan meals for the coming period. In addition to generally prepping for meals better, andkeeping your everyday life more organized, it...
(1) Keeps your pantry in check (What do I already have? What is going bad? What do I need to buy? What's in my fridge?). **This is the most relevant point in terms of food wastage.**
(2) Helps with food budgeting (What am I spending money on? How often do I spend on going out/ ordering in? What are my essential foods vs. luxury foods?)
(3) Makes you watch what you eat—balancing nutrition.
The question, 'What is the quantity and frequency that I should be buying/cooking something so that it doesn't get spoilt/infested/wasted?' helps to have an only leftovers meal after every few 'fresh' meals. Less time spent cooking + no throwing away food!
https://www.thekitchn.com/the-beginners-guide-to-meal-planning-what-to-know-how-to-succeed-and-what-to-skip-242413

Prepare Vegetable Stock

Save vegetable scraps, stalks, stems, peels, etc. and use these to make a no-fuss stock. Replace water with this stock in savory cooking wherever possible - curries, doughs, gravy, soup, pulao.

Why? These things were out to throw (hopefully composted!) anyway. Why not gain as much nutrition as possible on their way out?

https://tasty.co/recipe/how-to-make-veggie-stock-with-kitchen-scraps

Extending Life of Products*

How to store each food item in a way that...

- Keeps it fresh for as long as possible.
- Retains its nutrition.
- Minimizes pests and insects that render food useless.

Freeze the foods that won't lose their taste and texture when thawed. Look at foods that can be revived. This does not have to be limited to food that you have already bought. It also applies to buying produce. For example, tomatoes with minor bumps (suboptimal product) are not chosen while buying. These usually have no major problem on the inside but end up getting wasted because no one buys them! What do I check for when I select my product? What is the reason behind this? Is it only for the aesthetics?

Using EVERYTHING that has Nutrition

Observing the parts of food that we throw out and looking up their nutritional value and other utility. Eg. Potato peels, bread edges, watermelon rind, etc.

**These points need research and imagination based on each individual food item. A simple Google search answers most queries! It is important to note that this needs to be well researched by each person. Not all thrown out stuff has nutritional value, some is poisonous, some can be consumed in limited quantities only and so on.*

Consuming a low-impact diet

Opting for plant-based foods over animal food products is a great way to reduce your ecological food-print. However, nutrition needs to remain your primary focus. Food is a very personal choice. And the ability to

choose what we eat is also a privilege. Recognizing the impact our food choices have and acting upon them, whenever possible, is key.

I Buy

Local and Seasonal

Buying local means we are limiting the fuels burnt and other resources used in getting the food to us. Seasonal ensures the same and alsolimits the additional resources invested in growing something out of character-modified seeds, cold storage, etc.

I Learn

Different Recipes to extract as much nutrition from the same food, to use ALL nutritious parts of the produce, to revamp leftovers.
www.veganricha.com
www.holycowvegan.net
www.yupitsvegan.com
www.vegan.com

How to make low-impact versions of my favourite recipes

Only for people who can choose to go the plant-based way, there is a just as yummy plant-based substitute recipe for almost everything. Dates, nuts, arrowroot powder, nutritional yeast, and some other ingredients are your best friends in this case!

Your Wardrobe

I Wonder

Let's be completely honest: There's no such thing as sustainable fashion. The idea of sustainability and the nature of the fashion industry are inherently at odds with each other. According to McKinsey's August 2020 Fashion on Climate report, the fashion industry alone contributed 4% of the global greenhouse gas emissions in 2018, amounting to a staggering 2.1 billion metric tons of GHGs. That's more carbon footprint than all the flights and all the ships in the world put together! Add to that unethical labour practices, all outsourced to developing countries like ours, and we're sitting on a ticking bomb.

Ever since the Industrial Revolution, the fashion industry has made its profits off its stupendous production scales, whether by way of multiple collections across the year or by way of mass-producing clothes typified by a low cost of production, and therefore affordable prices.

On the one hand, the industry is encouraging consumerism through building aspirations, and on the other, it is making those aspirations more accessible. People want to wear brands that they see more of as well as those that give them a better bang for their buck, often picking quantity over quality. In 2017, Euromonitor International reported 6 billion apparel units were sold in India, third in line only to China and the US. Five apparel units per person may not seem like much, but when you juxtapose it against the per capita income and the spending power of the average Indian, you get quite another story. And this story is what poses the biggest challenge for sustainability.

What is Fast Fashion

Fast fashion is a business model wherein popular fashion brands bring out new collections, often inspired by high fashion runways, at an alarming frequency—according to some estimates, as often as twice a week. These collections are mass-produced, with little attention to production practices, quality or their cost to the environment and the

people who make these clothes. Because these are mass produced, these garments can be made available to the consumer at extremely low prices, and because these garments aren't of the highest quality, they don't last very long in your closet.

Besides, the sheer volume of clothing that floods the market, with every subsequent collection, acts as a catalyst for new trends to emerge. The frequency of these collections ensures trends change at a pace so rapid, it's hard to keep up, creating a Fear of Missing Out, or FOMO as it has more popularly come to be known. Basically, being fashion forward is very 2000-and-late, because in 2020-21, you're scrambling to cope, if you care about being on-trend.

The Cost of Fast Fashion

Fashion is the second-most polluting industry in the world, next only to oil & petroleum. It uses up billions of gallons of water every single day. Just one pair of shoes takes over 2000 gallons of water to make. Most synthetic materials use petroleum in the manufacturing process and are extremely polluting, not to mention the polluting dyes and chemicals used in the finishing process.

And then, it may all not even be worth it. According to an Ellen MacArthur Foundation report, the average piece of clothing is worn about 7 times before it is discarded, and 1 garbage truck full of clothes is burned or sent to a landfill every second. That's 2,625 kilograms of clothing being junked every single second of every single day!

That's not even the entire picture. The annual value of this prematurely discarded clothing is a whopping $400 billion. Imagine how many people that could feed! But perhaps the saddest part of the story is, the fashion industry isn't even successfully feeding the mouths of those who make these garments.

In 2017, Zara shoppers found little notes tucked into the pockets and hems of their clothes. The notes, which read, 'I made this item you are going to buy, but I didn't get paid for it,' were traced back to Bravo Tekstil, a Turkish manufacturing facility for multiple brands, including Zara, Mango and Next. Bravo Tekstil had abruptly shut down, without any notice or severance to its employees, leaving hundreds in the lurch. This is only one of many such horror stories.

I Do

Wash your clothes less often. They really don't need to be washed after every single wear. If you haven't been sweating into them, hanging them to sun for an hour or two will kill any bacteria there may be.

Use organic detergents or natural cleaning solutions like bioenzyme /soapnut solution. Not only are they better for the environment, they're also better for your health. And, you can use the greywater to water your plants.

Swap clothing. Tired of that cardigan you've worn a million times? Swap it with a friend. You both get something new, and it keeps things exciting.

Use second-hand clothing for kids. Dressing up a kid can really burn a hole in your pocket. And in the ozone. Since children outgrow their clothing very quickly, more often than not, things are in great shape to be passed on to another child.

Upcycle. Old saris make excellent curtains. Denim scraps can add spunk to worn out accessories. Old T-shirts make excellent headgear.

Compost. Cut up old t-shirts and cotton/bamboo underwear that are past their shelf-life and put them in the compost. They will decompose faster and without producing the methane they would in a landfill.

Donate. If you're done with something and it's still in good shape, let someone else put it to better use. But make sure what you're giving out is clean, not torn and wearable without having to be mended.

Repair. A little stitch here, a little tuck there, and it's good as new. If you can't do it yourself, you don't have to—it's employment for someone! https://fcomindia.com/affordable-pricing/ is a Bangalore-based organization that offers doorstep pick-up and delivery of items you need to get stitched, repaired or upcycled. They also believe in minimizing waste, but if you're in another city, ask your local tailor to save up the scraps from your job—you can use them to mend stuff around the house. They also make great gift wrappings!

Recycle. If nothing else works, you can drop it off for recycling, with an enterprise like Eco Wise or Recycle Green. Or drop them off at one of the brands that are recycling post-consumer waste.

For clothes: Doodlage, H&M, Marks & Spencer, Zara.

For shoes and accessories: Greensole, Funky Kalakar.

I Buy

The most sustainable piece of clothing is the one in your closet.

A sustainable wardrobe is born not out of buying more from 'sustainable brands', but from buying less of what you don't need. If it doesn't spark joy, don't buy it! You're adding to your clutter, you're feeding into the demand for a product that may be potentially harmful to the environment, you may be encouraging brands that follow unethical practices and

Kondo-ing it later may see it end up in a landfill. Basically, what doesn't spark joy, could spark climate change.

But what if it does spark joy, even though it may be all things nasty? Well, let's put it this way: One glittery dress alone can only create so much havoc.

As conscious consumers, we need to look for transparency from the brands. We need to ask for accountability. And we need to read labels. Most synthetic fibres, such as polyester and polyamide, when put in the wash, release plastic fibres that then go into the soil with the greywater. And, they take 100s of years to biodegrade. Basically, these fibres are polluting at every stage, from production to maintenance to the post-consumer stage.

Fibre Guide

To Buy	Not to Buy
Cotton	Polyester
Bamboo	Polyamide
Hemp	Acrylic
Lyocell	Elastane
Ahimsa Silk	Polyurethane
Merino wool	PVC
Recycled polyester	Leatherite
Econyl	Synthetic Acetate
Linen	
Jute	

Brands to buy from:
No Nasties
Doodlage
Aslee
Tailor & Circus (innerwear), We Are Equal (innerwear)
Athlos (sportswear)
LataSita (upcycled clothing)
Funky Kalakar (footwear and accessories)
Cauchos (slippers)
Paaduks (footwear)
Swara – Voice of women (Clothing)

I Learn

Podcast:
https://podcasts.apple.com/in/podcast/big-closets-small-planet/id1438519526

Minimalism

Originally an art concept, which talks about simplicity in design, more recently being adapted to lifestyle as well. Traditional Indian cultures/lifestyles have been extremely frugal and minimalist in nature. You might remember your mothers or grandmothers making cleaning cloths from old discarded clothes, or making shopping bags or even pillows. These were ways of reusing existing objects for different purposes and reducing the purchase of new objects. This thought has in modern times become very outdated and unfashionable to follow. We have been increasingly made to believe that “it’s never enough”, how keeping up with the changing fashion is the “need”.

Thoughts like Minimalism are actually challenging these notions. Minimalism might mean different things for different people and it’s an evolution.

https://www.theminimalists.com/minimalism/

Netflix: The Minimalists, Less is Now

TedX: Why I live a zero-waste life -Lauren Singer
https://www.youtube.com/watch?v=pF72px2R3Hg

Influencers promoting sustainable fashion

https://www.vagabomb.com/9-Ethical-Responsible-Bloggers-Who-Will-Make-You-Fall-In-Love-with-Sustainable-Slow-Fashion/

Your Garden

I Wonder

A garden is just a piece of nature, which is created to one's choice and appeal.

In the most sustainable sense, a forest is the best example; it doesn't need any input to sustain itself.

Anything to do with soil, water and air, the most sustainable formula is to replicate nature.

I Learn

Methods of zero budget natural farming (ZBNF) mimics nature and is one of the most sustainable and cost-effective ways of growing plants. It integrates plants and animals just like in the natural world and nourishes the plants in a natural way without addition of any chemicals, be it as a fertilizer or pesticide.

We can grow endlessly without repotting and changing soil.

The soil, plants, animals and birds are all tied to each other's life cycles and are interwoven. Pulling one string disturbs others--breaking the cycle for one will break it for all.

Going native is the most sustainable way of gardening, native plants have a connect with soil, birds, insects and worms.

The best way to attract butterflies and birds to your garden is by planting and growing native plants.

ZBNF is based on 4 pillars:

- **Jeevamrutha:** It is a mixture of fresh cow dung and aged cow urine (both from India's indigenous cow breed), jaggery, pulse flour, water and soil; to be applied on farmland.
- **Bijamrita:** It is a concoction of neem leaves & pulp, tobacco and green chilies prepared for insect and pest management, that can be used to treat seeds.

- **Acchadana (Mulching)**: It protects topsoil during cultivation and does not destroy it by tilling.
- **Whapasa**: It is the condition where there are both air molecules and water molecules present in the soil. Thereby helping in reducing watering requirements.

I Do

Put 20 litres of water in a barrel; Add 1 Kg fresh local cow dung and 0.5 to 1 litre aged cow urine; Add 200 gm of Jaggery (a local type of brown sugar), 200 gm of pulse flour and a handful of soil from the bund of the farm. Stir the solution well and let it ferment for 48 hours in the shade. Now jeevamrutha is ready for application. 20 litres of jeevamrutha is sufficient for 1/10th acre of land.

Jeevamrutha Application

Apply the jeevamrutha to plants twice a month as a 10% foliar spray.

To sum up:

1. Plants –native
2. Fertilizer and pesticide – diluted leachate from a home compost, cow urine and dung based with other natural based solutions as per ZBNF are cost effective and sustainable solutions.
3. Watering – drip for a large garden makes it an easy and effective way for watering plants.

Wellness and Wellbeing

I Wonder

Is there a difference?

The World Health Organization states that wellbeing is “a state of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity.”

“When you think about wellness, think prevention and health. When you think about well-being, think happiness”, says Susie Ellis, Chairman & CEO, the Global Wellness Institute.

Wellness refers to the physical state of health while wellbeing is more holistic as it encompasses the Emotional, Social, Spiritual and Intellectual along with the physical aspects of health.

Why Wellbeing?

The wellbeing of an individual depends on the wellbeing of every person and the wellbeing of the planet. Every day offers opportunities to learn more about what is happening around us and how it impacts what is happening within us.

Have a consistent wellbeing practice in place and you will be able to contribute more to the world, with your work.

Emotional: Family and school play a very important role - what techniques can make one more resilient and empathetic?

Physical: Get comfortable in your own skin. Exercise and food habits should make you feel better. Why do we seek approval from others?

Social: Connect with your family members. Talking to elderly people widens your thinking. Why don't we learn from them?

Intellectual: Knowledge sharing and collaborating enriches your life and the lives of others. Why do we hold onto our knowledge?

Spiritual: All that exists outside of us can never be enough if we do not look within. Why do we save this for later?

I Learn

Emotional: Balancing emotions, learning new techniques to process the challenges that happen in the outside world, making your own journal and journaling as an everyday practice is simple.

Link: https://www.healthline.com/health/emotional-health

Physical: Understanding food miles, the connection between colours in food and your energy centres, Benefits of Yoga and Pranayama, eating local, seasonal and traditional foods, walking and yoga, getting adequate sleep are least expensive and more sustainable options.

Link: https://www.who.int/news-room/fact-sheets/detail/physical-activity

Social: Connect virtually, write letters, take up Community Service

Intellectual: Learn new skills, collaborate, conduct workshops to share your knowledge and expertise

Link: https://askthescientists.com/pillars-of-wellness/

Spiritual: Connecting to the Inner Self – this is your unique journey.

Link: https://docs.google.com/document/d/1qrv4PkQDXx7TLIfWpOlHC789DJNaEwZloTJ81-FWeOI/edit?usp=sharing

I Do

The broad categories of wellbeing include:

a) **Emotional** - Having local, seasonal and traditional foods, having a good night's rest and practicing at least one self-care activity every day, even if it is for a few minutes, helps. Gratitude Journaling is a good practice that helps one to appreciate the blessings life offers.

b) **Physical** – Good Nutrition, Sleep and any Exercise you enjoy help you stay alert and active.

c) **Social** - Connecting with people, working for the community in whatever ways you can, improves your sense of wellbeing.

d) **Intellectual** - Continual learning, knowledge sharing.
e) **Spiritual** - Meditation for a few minutes, Aum Chanting, Sitting in Silence for a few minutes calm you.
Link: https://www.youtube.com/watch?v=ZToicYcHIOU

I Buy

Emotional

Seek a good therapist if you have any issues that need to be sorted out. There are many therapists offering counselling and therapy services online.

Physical

Everyone's health is unique and so explore options that help you stay fit – what works for one might not work for another.

For staying fit, go to a nearby gym if you must, or learn how to stay fit using Apps that you can install on your device and practice from home!

Few workouts will require basic accessories like a yoga mat, dumbbells and resistance bands, whereas others need nothing extra at all.

Link: https://www.techradar.com/in/best/workout-app

For yoga mats that are eco-friendly check:

1. https://www.yogaland.in/

2.https://www.spiritualwarrior.in/

Explore holistic, nourishing and plant-based food.

Link: www.sampoornahaara.com

Social

Promote local goods, gift handmade or handicraft items. If you are gifting plants, include the instructions / guide on how to take care of plants.

Link: https://theindiacrafthouse.com/, https://shop.gaatha.com/

Intellectual

Choose any online course that interests you from Coursera, Udemy, Skillshare. Go through Facebook events or Instagram events to enrol for any specific, short term course.

Spiritual

Meditation tracks, journals, books that support spiritual growth. There are certified coaches for wellbeing. Check out the reviews before investing.

Link: https://www.verywellmind.com/best-meditation-apps-4767322

Useful Information

Waste Management

Why segregate waste?

If it is segregated, it's no more waste. Recycling procedures and processes are different for different materials. The industry that recycles plastic cannot recycle metal or paper. Hence segregation becomes the first step to recycle.
Remember, what goes to earth will come back to your plate.

Start Composting

Most of the kitchen waste that is plant-based can go into the compost bin. There are several options available today that make composting easy for anyone to adopt—compost is a good resource for the plants and rejuvenates the soil.
See this link to know how to start composting: https://www.youtube.com/watch?v=mDlVpJgjoXQ

Taming Plastic Pollution

Plastics cause pollution of soil and water, as it degrades into microplastics and one frequently hears of marine animals with plastic in their organs. It also enters the food chain through agricultural soil and when people eat animals who have ingested plastic.

Burning plastic in normal temperature and aerobic conditions is also hazardous, as poisonous gases, such as dioxins and furans, are emitted, and not only polluting the air but also the soil and water bodies through soot that settles in.

Why is plastic useful?

The same property that makes plastic non-biodegradable and a pollutant is also its biggest strength for various use cases. Weather resistance, temperature resistance, chemical resistance and durability make it ideal for many uses. Hence, though it is recommended to avoid as much as

possible, but for certain scenarios, which require these properties, it continues to be used, as it is cheap too. Therefore, in certain cases, it may be practically nearly impossible to avoid.

Introduction to Plastic Grades

Plastic is a generic term used for a large variety of petroleum derivative materials. There are formally 7 grades of plastic, which vary according to the strength of material, reusability and recyclability. The code on any product within the triangle indicates which grade of plastic is in use. In certain cases, different parts of the product may have different grades of plastic used, which would be indicated on it.

https://learn.eartheasy.com/articles/plastics-by-the-numbers/

Reduce or Replace

There are alternatives to certain uses of plastic being explored worldwide -

1. Paper bags — Paper is biodegradable but a highly polluting industry and energy requirements for paper production are high. However, recycled paper bags made from newspaper are a good option for carrying light objects. Paper does lack strength and does not have longevity of usage but prolongs the life of a newspaper which is otherwise wasted.

2. Jute bags — Jute is biodegradable, grows naturally in wet climates and more easily turned into bags. It is also strong and thus, lasts long. Thus, it is well suited for the purpose of a carry bag.

These are also being used as grow bags for plants, though they are not very long-lasting for this purpose. Being biodegradable material, jute bags tend to have a short lifespan in outdoor environments.

3. Coir pots — Coir is a good replacement for plastic pots. Coir is both strong and environment-friendly.

4. Furniture — Plastic is cheap but wood is still the best material for furniture, for the environment and for the look of your home.

5. Garbage Bags
Kitchen waste can be composted, so mostly dry waste would remain

which can be thrown in a bin lined with old newspaper instead of using garbage bags.

6. Liquid/water tanks

Metal or concrete tanks can be used in place of plastic tanks. However, if the liquid is likely to be acidic or contain such chemicals that may react with metal, then you should opt for a high-grade plastic tank which prevents microbial formation and is UV-resistant (particularly, if your tank would be exposed to sun). If you opt for a plastic tank, it is best to use a HDPE tank which is chemically inert in relation to your liquid, durable and easy to recycle too.

7. Water bottle

Carry your own water bottle where possible to avoid buying plastic water bottles

8. Pipes and electric channels

Typically, these are made of PVC. Apart from the hassles of disposal, PVC is more sensitive to temperature and atmospheric conditions.

9. Carry bags

Instead of taking a plastic bag from the supermarket, prefer to carry your own jute or cloth bags, which are long-lasting.

10. Buy bigger packs of consumer goods

There is more waste of packing material in buying a larger number of small packs than fewer large packs of food and drink. Thus, more single-use plastic is wasted on buying too many small packs than fewer large packs.

11. Avoid tea bags

Tea bags have plastic ingredients and are single use. Therefore, it is better to buy loose packs of tea leaves than tea bags.

Reuse

1. Reuse PET bottles up to a few months, store them in cool places and not for storing warm/hot liquids. Upon exposure to heat, over a period of time they may leach Antimony. Ultimately, they can be sent for recycling or sold to kabariwala.
2. Reuse containers like chocolate or biscuit containers which are usually HDPE and thus, durable and do not leach.
3. More durable plastics (unlike PET and PVC) last longer too and thus, may be reused longer
4. Multi-layer Plastic are not reusable mostly because they are not durable

Getting Rid of your Plastic Waste

1. If it is plastic material that is durable and suited to the need, it can be reused by someone else. Eg. a bucket may be reused by someone else. However, a chips packet cannot be reused once opened. Nor can a tank meant for storing clean water necessarily be reused for storing some hazardous chemical.
2. Check your plastic grade code as mentioned in the initial section to determine whether it can be reused for the particular requirement (if there is a doubt) or if it can be recycled. You may check with the company which manufactured the product and with the recyclertoo. If reuse is not possible, then try to look for recyclers.
3. Plastic waste usually goes to landfill though there are municipalities (hardly in India) that use it in waste-to-energy plants to break down the chemicals in plastic to generate fuel or for power generation. If your item cannot be recycled, then you can look for agencies/municipalities which run waste-to-energy plants. https://www.youtube.com/watch?v=hZ6Rv6hERfY
4. Another possibility is to look for companies which are building homes or roads from waste plastic like PET bottles and Multi-layer plastic. Here are some examples-

a) https://www.business-standard.com/article/companies/itc-launches-first-multilayered-plastic-collection-recycling-drive-in-pune-119100201010_1.html

b) https://www.hindustantimes.com/india-news/up-couple-builds-homestay-using-plastic-bottles-in-uttarakhand/story-mXVYNO6JoVMgyoCUxMEScP.html

5. Multi-layer plastic can be sent to cement kilns where they are burnt with coal and mixed with cement.

Plastic Myths

Compostable plastic is usually considered environment-friendly but in fact, it does not compost in the usual manner in which all organic material does. It only composts at industrial facilities which are hardly available in India.

Bioplastic is often touted as clean but in fact, it may be a plastic made of a combination of materials, which is partly a naturally grown ingredient

and partly a chemical ingredient. Hence, the label should be treated with skepticism. A burn test would more accurately reveal if it is truly a completely natural material

.

1. BPA-free plastic is good and non-toxic
   BPA is found in polycarbonate plastics and epoxy resins. Polycarbonate plastics are often used in containers that store food and beverages, such as water bottles. They may also be used in other consumer goods. BPA is a chemical which can lead to hormonal imbalances. While it is necessary to avoid BPA, particularly for food and water storage, BPA-free does not ensure that the specific plastic grade used in the substance is non-toxic on exposure to heat.

Caution

1. While storing consumable food/liquids, only use food-grade plastics. These are typically HDPE, LDPE and Polypropylene. Ifthe grade is not indicated, make sure it mentions ‘food grade’. Please refer below - https://extension.usu.edu/archive/which-plastics-are-safe-for-food-storage
2. Remember PVC is not food grade and not generally recyclable
3. Do not burn any plastic as it is hazardous to your health and environment and can emit gases which are linked to cancer and hormonal disorders.
4. PVC is among the worst plastics because it cannot be recycled, tends to leach and is not food grade. Burning it produces among the worst kinds of toxins too, like dioxins and furans.
5. Be careful (avoid) of the non-woven PP bags being peddled as paper bags, since they are not too durable and meant for single use mostly. https://www.youtube.com/watch?v=Hgvmst-H0Eg
6. Avoid single-use plastics - that is, those plastic items which are not very durable (may tend to break over time) or leach. Certain plastics may not leach in room temperature but may tend to do so on sun exposure outdoors. Keep this in mind according to your usage.

Hence, while buying plastic (specially for critical uses like food and liquid storage), it is important to know what grade of plastic is used in the product. To buy or not buy plastic is a choice based on your requirements and consumption. However, if you do decide to use a plastic item, then it is best to do so after knowing the effects on your

health and environment and how you will get rid of it cleanly once it has served its purpose. Reusing and recycling are just delaying the inevitable need to dispose of plastic at some time. Thus, the best course of action when possible (particularly with PVC, PS and grade 7) is to opt for some other material than be complacent about plastic use. In fact, due to lack of collection most plastics are never reused or recycled in reality and just end up in landfills. Let's hope for a brighter future with less plastic waste.

Energy Management

1. Use LED bulbs in all rooms (including balconies). Replace all old lights with LED bulbs. It can save up to 80% on lighting energy demand.

2. Recharge all batteries using a solar battery recharger.

3. Switch all clocks to battery operated (use a solar charger).

4. Insulate the ceiling: Plexiglass skylight covers creating an air barrier for insulation.

5. Purchase energy-efficient windows.

6. Group all errands so you can run multiple errands with one trip.

7. Avoid travel whenever possible.

8. Replace old taps, showerheads and flush tanks with fixtures that save 70 per cent on water flow, while enhancing comfort for users, at a cost of less than Rs 6,000.

9. Set up a rainwater harvest system and drive the water to borewells, with some basic filters. This will improve the health of all borewells in the neighbourhood if all of them followed the same.

10. Install a tertiary sewage treatment plant for a stand -alone, independent homes which saves 40% on fresh water demand –that can be used to water gardens, and flush tanks with such treated water.

11. Buy fans that draw 25watt of energy against the 75watt fans any over-5-years-old home have.

Before going to the city, municipality or the community, here are 10 easy ways to be more energy efficient, right inside our home:

1. Programmed home thermostats

Programming your home thermostat is one of the easiest ways to save energy, money, and help fight global warming. C-Bus thermostats can be easily set to function in a power saving mode. Heading off to work? Simply press the “leaving home” scene on your keypad or touch screen to turn off all of the lights and reduce your heating or cooling usage. Placing the fan unit under a tree saves 10% more energy than putting out in the sun. If you raise your thermostat setting by only two degrees and use your ceiling fan, you can lower your cooling costs by up to 14 percent. Programmed home thermostat will reduce your heating or cooling usage.

2. Change your light bulbs

The light emitting diodes (LED) are a type of solid-state lighting — semiconductors that convert electricity into light. Energy saving incandescent or halogen lamps save about 25% energy.

3. Solar hot water systems

Solar hot water systems collect free heat from the sun and transfer it to the water placed in the tank on the roof. This water can be used for various household activities. It is a good replacement for the energy hungry electric geyser. A 25-liter Solar hot water system can easily serve a family of four. Maintenance costs for solar water heating systems are generally very low. Most solar water heating systems come with a five-year or ten-year warranty and require little maintenance.

A 25-liter Solar hot water system can easily serve a family of four.

4. Minimum 3-star rated ACs, refrigerator, geysers, etc.

A three- star rated AC can reduce energy consumption by about 20% in a house. Similarly, a five -star rated AC can reduce energy consumption by about 30%. Any star-energy rated gadget or equipment can produce some significant power savings. Five-star ACs consume the lowest energy.

5. Use of blinds that have louvers or fins for windows

Blinds bring diffused light and cut glare and heat which is present in direct light. Automated blinds also change their direction depending on the time of the day and provide optimum light. Blinds or louvers are best in order to reflect the sun's heat back out. Light-coloured woven or translucent shades are acceptable, but may not control glare under bright summer conditions.

Blinds or louvers are best in order to reflect the sun's heat back out.
6. Replacing the single pane windows with double glazed units

Double glazed windows reduce the heat transfer inside the building and thus reduce the energy consumed by the AC. There are also triple glazed windows available these days which are even more energy efficient.

7. Painting of roof with reflective paint

Painting the roof with reflective paint or putting white tiles can reduce the heat flow into the building from the roof. This would decrease the energy consumed by ACs. Cool roof leads to reduced building heat-gain, as a white or reflective roof typically increases only 5–14 °C above ambient temperature during the day, it also saves up to 15% of the annual air-conditioning energy use of a single-story building. White roof decreases the energy consumed by ACs.

8. Use of inverters instead of generators

Inverters are more energy efficient than generators. At places where electricity load requirement is low, or frequency and duration of power failure is low inverters can easily replace generators. Inverters are extremely efficient, compared to generators, and only consume DC power in direct relation to the amount of power they put out.

9. Use of a mix of gas and electricity for cooking. Be aware of your cooking choices, including the vessels, the time taken to cook and then decide on using the gas or electricity, or a combination of both!

10. Save water

Using less water will lower your water bill. And when you use less hot water, you'll also see savings in your gas bill, or your electric bill if you

have an electric water heater. Check all faucets, pipes and toilets for leaks. Install water saving showerheads and ultra-low-flush toilets.

Useful Links

1. https://barenecessities.in/collections/online-courses

2. https://www.thebetterindia.com/246703/bengaluru-eco-friendly-house-sustainable-living-mud-rainwater-harvesting-solar-power-india-gop94/?fbclid=IwAR0BXhjz1HO35hB8AZXjLbC-oLIu0dBS_J6OUbWGVBdjCJFGmNUxEt5aW40

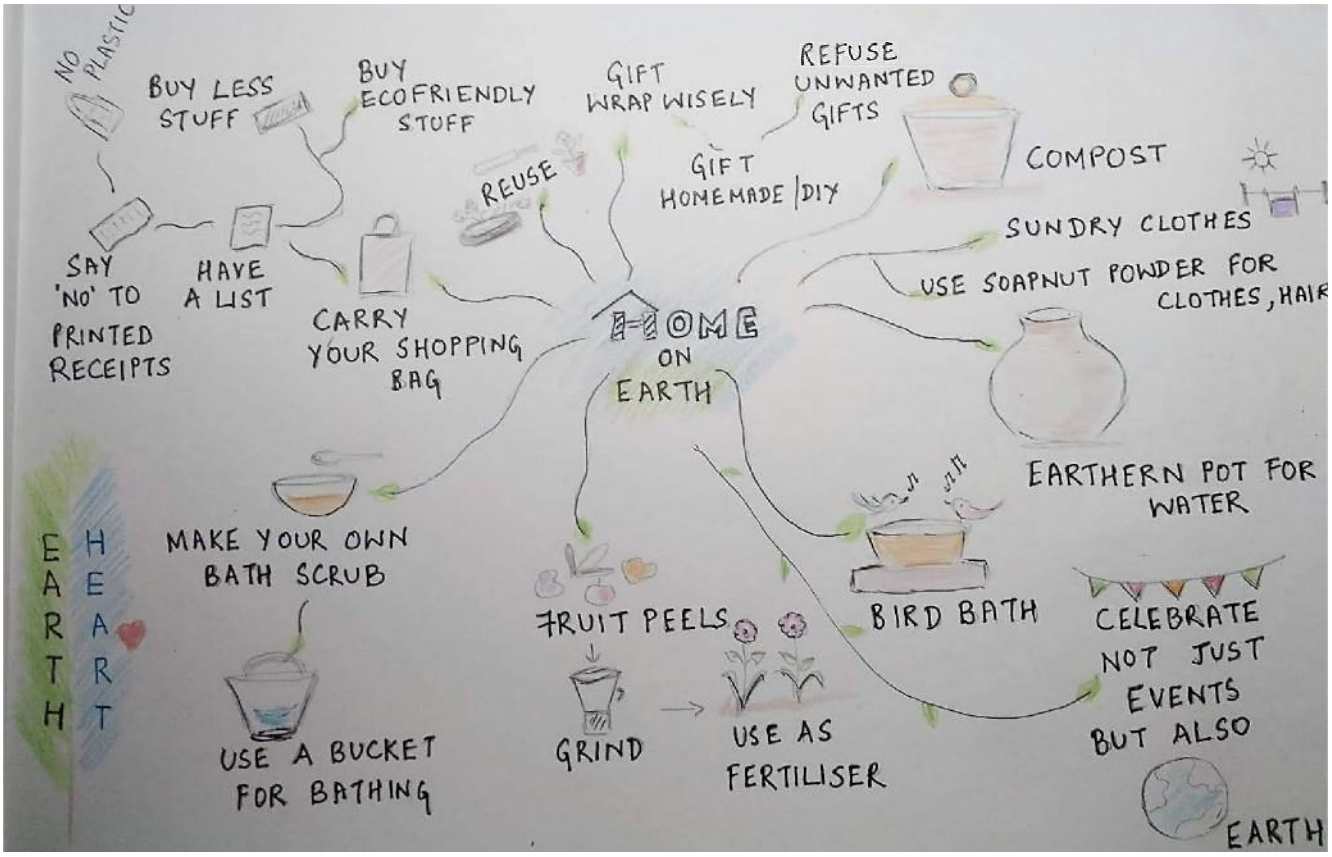
3. https://play.google.com/store/apps/details?id=org.cooltheglobe.ctg

A very useful App that helps you track your steps towards a sustainable lifestyle, but is only available on Android. Carbon Trim does the same, and is also available on iOS.

4. https://fb.watch/2WCu740rs8/

Kintsugi is the ancient Japanese method of repairing ceramics using gold and lacquer.

5. https://reapbenefit.org/ninja-labs/ - Reap Benefit is empowering young citizens to adopt a sustainable lifestyle. Browse through the link to know more.



Take one step towards a sustainable lifestyle, explore a world of possibilities!

ME2WE Team

After 20 years in the software industry, **Ashish Mukherjee** is now exploring permaculture in a village in the Himalayan State of Uttarakhand. He believes sustainability is the key to self-reliance, healthy living and ensuring a cleaner environment for ourselves.

Jayanthi Sridhar has been an educator for the last 15 years, and has been facilitating eco-clubs in the school, among other activities. Her experiences have made her realize how important it is for everyone, especially young people, to connect with Nature and move towards a more sustainable lifestyle. Nature and our lives are very closely interconnected—we can have a tremendous impact by the choices we make as individuals. She, therefore, initiated this project and hopes that every person steps up to a more sustainable lifestyle for the sake of their wellbeing and that of future generations.

Karthik K N is a Helicopter maintenance engineer, supporting oil and gas companies in different roles, for the last 24 years. Sustainability has expanded his learning horizons in terms of material and economics. He believes we need to think before we buy anything, be it a sustainable solution or otherwise. Answering a simple question, "Do I need it or want it?" helps clear up our heads before we acquire anything new.

Prerna Singh Butalia is a freelance writer and editor with 16 years of experience across print, electronic and digital media. She writes extensively about sustainable fashion.

While certain elements of sustainable living had always been hardwired into her everyday life, the fast-paced consumerism associated with being a lifestyle journalist caught up with her. In 2016, caught in the Great Delhi Smog, with a newborn baby, surrounded by a pile of diapers, she decided it was time to hit reset. At first, she struggled with trying to change everything, all at once, and then, she struggled with feelings of guilt, till she was able to make her peace with certain facts:

1. Sustainability is a journey.
2. One person cannot know everything and one person can't save the world!
3. You cannot be 100% sustainable when you live in a modern, urban context, and time is at a premium. You have to look for trade-offs.

Born in the city of Patiala, Rajat's childhood memories are of open spaces, nice food, healthy living, abundanceof family time and affection. Honesty, integrity, and respect for individuals are values he lives by. A professional in the IT industry, Rajat leads a business group at Accenture and gets inspired by smart young people. He introduces himself as an artist, as that's an integral part of him and of all that he does. The fulfilment and feeling of being alive, comes to him from the experience of creating art. Every painting, sketch or photo he creates revolves around the question—how best to express the true nature of life around us. Technological advancement and lifestyle changes have altered how we behave and we need to take on the responsibility for a sustainable lifestyle. We need help to learn how to bring sustainability in our individual lives. It is not about solving the world climate issues but a startwith self. To be part of nature, is our true nature—realizing this is a good place to start!

Shruti Khanolkar is a millennial who is trying to make sense of this crazy, complex world. She is a development professional based in Mumbai. Some of the things she loves are animals, cooking, reading and board games. In her free time, she enjoys looking up plant-based variations of recipes, and articles related to culture, history and anthropology. Currently, she is focusing on expanding the ambits of sustainable living beyond herself.

Sruthi Pillai is a Research Scholar at the Centre for Technology Alternatives for Rural Areas (CTARA), Indian Institute of Technology Bombay, India. Her broad research interest isin Environmental Governance and Sustainability and she is also involved in the Canal Rejuvenation Project called Canalpy (https://canalpy.com/), which is an exciting project on reclaiming canal commons from current developmental demands. An Environmental Engineer by training, she realized, over the course of the years, the futility of only focusing on technology when politics and policies have somuch more bearing on decisions that affect our quality of life. Though policies are important, she also realized that individual action towards sustainability has the power to inspire collective efforts.

Umaima is a Curriculum and Digital Pedagogy Specialist at Slam Out Loud, which uses the transformative power of performance and visual arts to help build creative confidence (life) skills in children from disadvantaged communities. Prior to joining Slam Out Loud, she worked with Piramal Foundation on developing entrepreneurial skills amongst Rural Govt. schools in Rajasthan. She also co-founded Kaavyanam Organics, a for-profit that aimed to make sustainable organic farming practices easier for small-scale tribal farmers to adopt. Her project was incubated with IIT-Bombay and Atal Incubation Centre Banasthali Vidyapith. She served as a consultant to the Joint Secretary, Ministry of Rural Development-MGNREGA (GoI) and is on the Inclusivity Advisory Board of a US-based start-up advocating for mental health.

She is a Gandhi Fellow, a sustainable living practitioner and an art enthusiast.

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