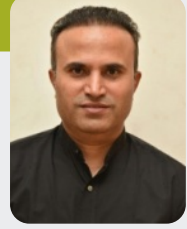


A Guidebook for Local Governments for **MAJHI VASUNDHARA ABHIYAN**

An initiative of the Environment and Climate Change Department,
Government of Maharashtra



Foreword



Climate change is a critical issue with far reaching impacts. The global surface temperature of the planet has increased by 1.1°C over the last 100 years and is further projected to increase owing to rapid rate of deforestation and urbanization. As a result, it is pertinent to take strong action on climate change. With this view in mind, the Government of Maharashtra had launched Majhi Vasundhara Abhiyan, a statewide campaign, to mitigate and adapt to the impacts of climate change.

At present, in Majhi Vasundhara Abhiyan, 4.0, 414 urban local bodies and 22,218 rural local bodies of the state of Maharashtra have registered under the Abhiyan. However, the concept of climate change and its affiliated terms viz., sequestration, water audit, energy audit and many more have come into use frequently in recent times. Hence this handy book has been developed by the department and RCUES of AILSG, Mumbai under Maha-UWES-C with support from UNICEF, Maharashtra to support the local bodies of the state, especially rural local bodies.

I appreciate the efforts taken up by RCUES of AILSG, Mumbai to develop this interactive guidebook that will play a crucial role in creating awareness and building capacities of the local bodies of the state on climate change in alignment with the Majhi Vasundhara Abhiyan, toolkit.

Pravin Darade, IAS
Principal Secretary,
Environment and Climate Change Department,
Government of Maharashtra

About the guidebook

This is a handy, interactive book that aims to give useful information on Majhi Vasundhara Abhiyan. The Abhiyan was launched in October 2020 with an aim to create sustainable Maharashtra. In the last 3 years, the Abhiyan has received immense response from the local bodies of the state. At present, more than 22,000 local bodies of the state have participated in this Abhiyan to create awareness on the impacts of climate change and to ensure sustainable development of the state. The toolkit published under this Abhiyan consists of details of activities to be undertaken by the local bodies. However, the concept of climate change, its impacts and a few activities mentioned in the toolkit are unfamiliar for some participants. Considering this, this guidebook is being developed to help the local bodies understand the importance of the activities mentioned in the toolkit to fight against climate change.

The guidebook consists of pictographic information along with QR codes and YouTube video links to access additional information on the subject matter. It also contains a list of government schemes and a comprehensive indicator-wise list of documents that need to be uploaded in the MIS.

Developed by:

Environment and Climate Change Department, Government of Maharashtra

&

Regional Centre for Urban and Environmental Studies (RCUES) of All India Institute of Local Self-Government, Mumbai with support from UNICEF, Maharashtra under Maharashtra Urban WASH-ES Coalition.





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Bhumi

The **Majhi Vasundhara Abhiyan** toolkit contains two parts in Bhumi thematic area: Green Cover and Biodiversity, and Solid Waste management.

Bhumi is a Sanskrit word for 'Earth'. While the Earth is comprised of various elements, biodiversity constitutes a significant aspect of the Earth's composition. Biodiversity consists of different kinds of life on the Earth's surface: animals, plants, fungi, and micro-organisms. Each of these species and organisms work together in ecosystems to balance and support life on the Earth. Biodiversity forms the web of life on which human life depends for things such as food, medicine, water, stable climate, economic growth and many more. Forests and ocean, a part of biodiversity, are significant to absorb more than half of the carbon emissions on the earth.

However, our nature is in crisis. A number of species have become extinct from the planet while many more are critically endangered. Deforestation, industrialization, and rapid urbanization have altered ecosystems around the world. It has caused the loss of local species, increased diseases, and driven mass mortality of plants and animals, resulting in the first climate-driven extinctions¹. Carbon sinks have become a source of carbon emissions. Thus, it is essential to protect, manage and restore forests; biodiversity has the potential to mitigate climate change with the help of nature-based solutions.

Solid waste management is yet another important component of Bhumi. With increasing population along with rapid urbanization and changing consumption patterns, there is an increase in annual waste generation. At present, India generates 62 million tons of waste every year with an average annual growth rate of 4% and only 23% of the total waste generated is processed². Thus, majority of the waste ends up in landfills in India. Such waste accumulation causes significant damage to the ecosystem by negatively impacting land, soil, air, and water. Improper waste management practices also result in degradation of landscape, health issues and extinction of aquatic and terrestrial species.

As a result, it is critical to conserve and protect biodiversity and to manage the waste generated to adapt and mitigate the impacts of climate change.

¹<https://www.un.org/en/climatechange/science/climate-issues/biodiversity#:~:text=Conserving%20and%20restoring%20natural%20spaces,as%20forests%20or%20coral%20reefs.>

²<https://www.investindia.gov.in/waste-to-wealth>

Biodiversity

How can trees address climate change?

Trees absorb carbon dioxide (CO₂) from the atmosphere and produce food and release oxygen (O₂) during photosynthesis. Along with this, trees also use carbon dioxide from the atmosphere to create wood and other plant matter. Thus, trees are called 'carbon sinks'.



For more detailed information, do watch:



<https://www.youtube.com/watch?v=vJY3DTaE0sl>



Name the schemes that strive to promote tree plantation.

- ✦ National Mission for Green India /Green India Mission by MoEFCC, GoI
- ✦ Vanmahotsav Plantation by Maharashtra Forest Department, GoM
- ✦ National Afforestation Programme, MoEFCC, GoI

To better understand tree maintenance tips, please visit : <https://www.wikihow.com/Take-Care-of-a-Tree>



How to make a tree census report?

The tree census is an important document to maintain a record of trees within the jurisdiction of local bodies.



Detailed information on tree census preparation and documentation can be found here:



https://www.youtube.com/watch?v=F9dURQ_4RRI



How to create a nursery?



Land



Irrigation facility



Electricity



Mother plants



Hedges and compound



Space for Hardening of Nursery Plants



Propagation structures



Store and office



Did You Know

A mature tree absorbs over 25kg of CO₂ every year. The absorption rate depends upon the age of the tree. Older the tree, greater is the rate of absorption.





How do green areas address climate change?

Increased green areas is the solution to urban health. Green areas help create a cooling effect to mitigate the impact of heat from concrete jungles. Apart from this, green areas are also important to improve the living quality and wellbeing of surrounding residents by positively impacting the mental health of the residents.

For more detailed information on importance of green areas, do watch.



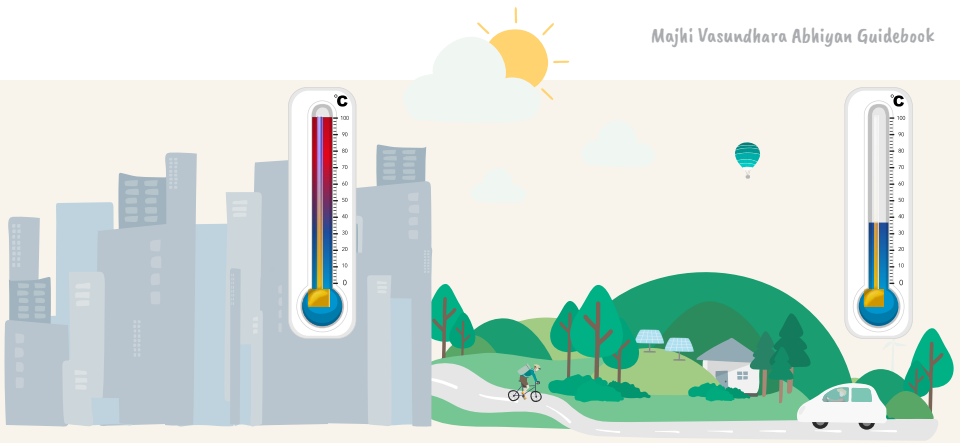
<https://www.youtube.com/watch?v=z4M17moYCVI>



**Fun
Fact**

The cooling effect of 1 banyan tree is equal to the cooling effect of 5 air conditioners working for 20 hours!





What is the significance of 33% green cover?

India's National Forest Policy, 1988, recommends that 33% of the total land area of the country should be brought under forest or tree cover to bring an ecological balance and environmental stability. At present, India has only 25% of its area under green cover and requires restoring of 26 million hectares of land by 2030 to achieve the 33% green cover target³.

Subsequently, Government of India has launched schemes such as National Mission for Green India, National Afforestation Program to increase green cover across the country. The government has also launched Nagar Van Yojana scheme to promote afforestation in the urban areas of the country.

In Maharashtra, Maharashtra (Urban Areas) Protection and Preservation of Trees (Amendment) Act, 2021 mandates local bodies to earmark green cover of the area, to the extent of not less than 33 per cent on land owned by the urban local authority or by government.

The details of the policy can be found here:



https://mpforest.gov.in/img/files/Policy_NFP.pdf



³<https://www.weforum.org/agenda/2022/03/forest-restoration-india-ambitious-climate-goals/>

Did You Know

Maharashtra's green cover is only 16.5%



Biodiversity Action Plan

Plans



Sub Plans



How to prepare BMC action plan?

Each BMC shall prepare an Action Plan, drawing information validated in the People's Biodiversity Register. The Technical Support Group (TSG) shall guide in the preparation of the action plan. The Action Plan may include in addition to the steps outlined for conservation of the bio-resources, the training needs identified for the personnel of the BMC and the list of potential items for consideration for registration as Geographical Indicators (G.I).

The action plan should include a micro-plan for the sustainable management of local biodiversity, including medicinal plants and their associated traditional knowledge.

For more detailed information on biodiversity, do click here



<https://www.youtube.com/watch?v=GIWNuzrqe7U>



Why is soil important to address climate change?

While the Earth supports the entire ecosystem, soil acts as a major source of carbon sink. Soil plays a major role in decomposition of dead plant and animal matter. This process of decomposition adds organic matter to soil in the form of Soil Organic Matter (SOM) and thus, carbon is sequestered in soil.

Apart from this, compost is also another critical factor to sequester carbon in soil. All the biodegradable organic waste (kitchen waste) when composted adds carbon to the soil and thus helps in carbon sequestration. Although composting releases methane, a GHG, in the atmosphere, the net carbon sequestered due to composting is greater, making it a valuable carbon sink. Along with carbon sequestration, composting has added benefits such as improved soil health and water quality, improved rainwater retention and improved crop yield with a decreased demand for synthetic fertilizers⁴.

⁴<https://repository.usfca.edu/cgi/viewcontent.cgi?article=2010&context=capstone>



Conclusion

As is evident, for every indicator mentioned above, a strong climate action is integrated into it. The impact of these climate actions will be evident only if the scale of implementation of these indicators is on a large scale.

In the case of the thematic area of Bhumi: Green Spaces and Biodiversity, it is worthy to note that all the activities mentioned are inter-linked. It can be suggested that the local body can start with a tree plan to identify areas available for plantation and simultaneously map or create nurseries in the local body to keep the plants ready for tree plantation activity. As per the plan, the trees can be mapped to create a tree census report and a Peoples's Biodiversity Register. Plantation activity can be conducted in the available areas to develop new green areas. While implementing this, the committees, and officers such as Biodiversity Management Committee, Local Tree Authority can work in alliance to facilitate effective implementation, protection and conservation of local biodiversity.

Schemes for Assistance

- ✦ *National Mission for Green India /Green India Mission, Ministry of Environment, Forest & Climate Change, Govt. of India*
- ✦ *Vanmahotsav-Plantation by Maharashtra Forest Department, Govt. of Maharashtra*
- ✦ *AmrutVanUdyanNirmiti, Revenue and Forest Department, GoM, GR dated 10 April 2023*
- ✦ *BelVanUdyanNirmiti, Revenue and Forest Department, GoM, GR dated 10 April 2023*
- ✦ *Maharashtra (Urban Areas) Protection and Preservation of Trees Act, 1975*
- ✦ *Maharashtra (Urban Areas) Protection and Preservation of Trees (Amendment) Act, 2021*
- ✦ *AMRUT 2.0 -Atal Mission for Rejuvenation and Urban Transformation scheme, Ministry of Housing and Urban Affairs, Govt. of India*
- ✦ *National Mission for Green India /Green India Mission, Environment, Forest & Climate Change Ministry, Govt. of India*
- ✦ *Maharashtra (Urban Areas) Protection and Preservation of Trees (Amendment) Act, 2021*
- ✦ *Biological Diversity Act, 2002*
- ✦ *Biological Diversity Rules, 2004*



Waste Management

What is the importance of solid waste management?

1. Protection of places and communities we live in: If solid waste is managed improperly, it can have serious health and environmental impacts.

This includes soil, air, water contamination including harming wildlife.

Effective solid waste management is important to reduce waste in landfills and proper disposal.

2. Improvement of public health: Solid waste can lead to increased pests, bacteria, viruses leading to diseases.

3. Conservation of natural resources: Many materials are thrown in landfills, instead we can recycle precious resources such as glass, wood, etc.

4. Promotion of circular economy: Circular economy involves every stage of a product's lifetime from its production till it reaches the customer and ends up as waste. It refers to a closed loop system in which the materials constantly flow without leaking into the environment, keeping the value of the product in the economy⁵.



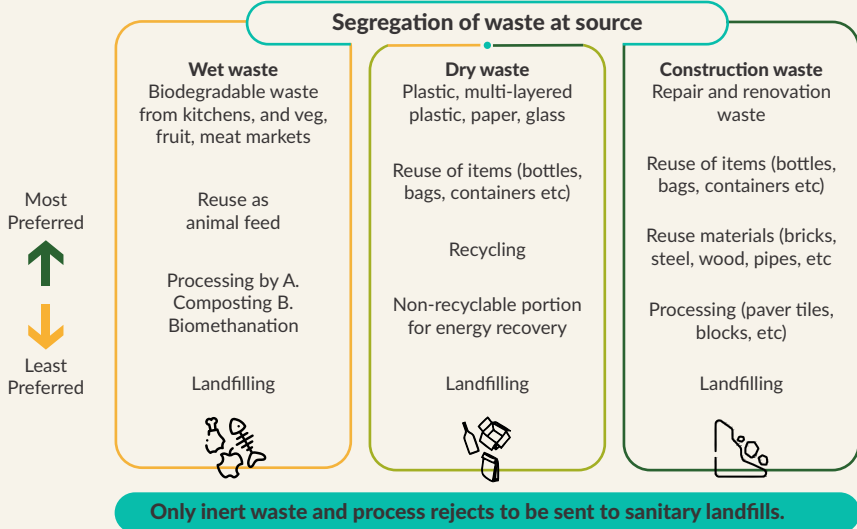
Why should we segregate waste?



Waste segregation helps the process of reuse, recycling, and recovery of waste. Firstly, separating wet waste from dry waste is a simple way to help recycling companies. It will help to recycle non-biodegradable waste and treat biodegradable waste directly⁵. Following is a hierarchy of waste management suggested under the Swachh Bharat Mission of the Government of India:

⁵<https://www.teriin.org/article/towards-circular-plastics-economy-indias-actions-beatplasticpollution#:~:text=In%202021%2C%20a%20Roadmap%20for,alternative%20uses%20of%20plastics%20waste>

Hierarchy of municipal waste management



Source: Guidelines for Swachh Bharat Mission (urban) 2.0, 2021

It is important to hold awareness campaigns in the local community, schools, anganwadis, etc to spread the message on segregation.

For more detailed information on segregation in Marathi, do watch:



<https://www.youtube.com/watch?v=8aPW8z5IYZg>
<https://www.youtube.com/watch?v=d2EVy3vaWnY>



What is the role of local body in waste segregation?

The responsibility of local bodies in Municipal Solid Waste Management is clearly defined in Rule 4 of the Municipal Solid Waste (Management and Handling) Rules, 2000 notified by the Ministry of Environment Forests and Climate Change (MoEFCC), New Delhi.

Rule 4 of Municipal Solid Waste Rules, 2000

“Every municipal authority shall, within the territorial area of the municipality, be responsible for the implementation of the provisions of these rules, and for any infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes”.



What is Composting?

Composting is similar to nature's method of decomposition, allowing organic material to break down aerobically. Composting reduces our overall waste load being sent to landfills, and also cuts greenhouse gas emissions.

Important benefits of composting:

- ✦ **Enhancing Nutrient-Rich Soil:** Adding compost enriches the soil quality, enhances moisture retention and promotes healthy plant growth and reduces the need for chemical fertilisers. This helps the agriculture sector and kitchen gardens.
- ✦ **Minimising Water Usage:** Compost helps the soil retain moisture, reducing the need for frequent watering. In a country like India and state like Maharashtra, where water scarcity is a pressing issue, composting can contribute to conserving water resources.

For more detailed information on composting, do watch:

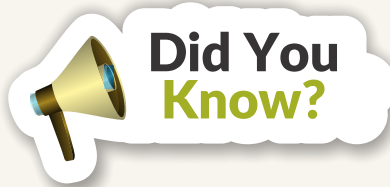


<https://www.youtube.com/watch?v=Hog8LFLfXvo>



How is the disposal of dry waste typically managed?

Materials categorized under dry waste which are no longer useful can be recycled and made into other products for use. For e.g., wastepaper can be recycled and made into cartons. Recycling helps save precious resources from getting dumped. In India, a large amount of recycling happens in the informal sector. The kabadiwalas, the bhargarwalas who collect newspapers, milk sachets, and such material from homes, sell it further to waste collection shops from where it is separated and sent for recycling.



Did You Know?

‘According to government estimates, 18,000 million litres of liquid waste is generated per day in rural areas and 0.4 million tonnes of solid waste are generated per day.’

*Liquid waste generation per person daily is 21.6 l/ day
Solid waste generation per person daily is 0.48 kg/day*

Exhaustive list of startups and technologies based in Maharashtra aiming to reuse/recycle waste to inculcate forward linkages:

- ✦ Refillable: Supplies cleaning detergents delivered straight to households, organisations, communities in reusable packaging
- ✦ Recykal: tech startup providing digital solutions for sustainability, connecting brands, government agencies, recyclers, aggregators
- ✦ Ekonirmitee: creates sustainable value out of construction waste
- ✦ Recube : provides smart packaging without polluting or generating waste.
- ✦ Padcare: works with various organizations in order to reach menstruators on a community scale
- ✦ Swach: collects and recycles your old electronic items, furniture, bicycles, kitchen utensils, etc.
- ✦ The Shakti Plastic Industries: Company recycling all types of polymers

⁶<https://snrd-asia.org/wp-content/uploads/2018/04/cmpa-43.pdf>

What is the monetary value of waste?

- ✦ PET / PETE Bottles of Drinking water, having liquid holding capacity of one litre or more, shall be printed on it, the Deposit and Refund Price of Re.1 or buyback price as decided by the Manufacturer.
- ✦ Drinking water PET / PETE Bottles, having liquid holding capacity of less than one litre but more than 200 ml. shall be printed on it, the Deposit and Refund Price of Rs. 2 or buy back price as decided by the Manufacturer.

Reference: : https://mpcb.ecmpcb.in/images/pdf/plasticwasteGazetteSearch_03072018.pdf

What are the best alternatives to Single Use Plastics?

- ✦ Stainless steel. Tough and easy to clean, stainless steel options for reusable food and beverage storage
- ✦ Glass
- ✦ Platinum silicone
- ✦ Cotton cloth
- ✦ Natural fiber cloth
- ✦ Wood
- ✦ Bamboo
- ✦ Pottery and Other Ceramics



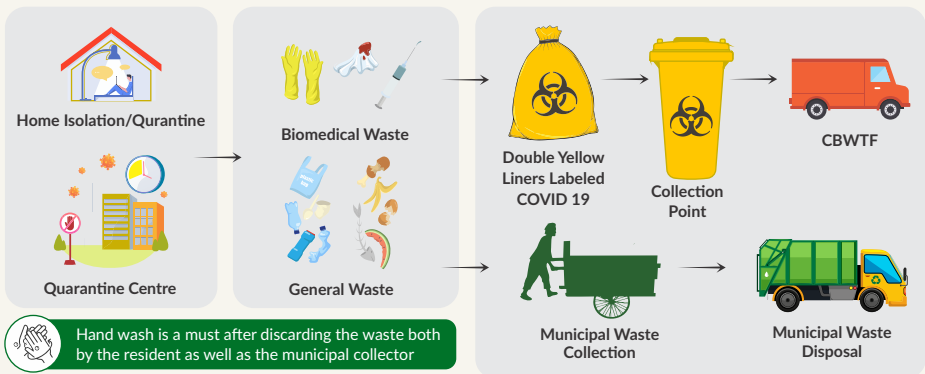
Segregation of Hospital Bio-Medical Waste



Reference: bit.ly/3UmdngY

Why is it important to properly handle biomedical waste?

Healthcare waste generated from hospitals, clinics, and laboratories is categorised as infectious or biomedical waste. Its harmful effect on humans and other living organisms requires careful handling of such waste. The Biomedical Waste Management Rules 2016 and the amendment in 2022 provide for the management and handling of this waste by healthcare establishments. Local bodies are responsible for monitoring and implementation of the Rules.



Remember

1. Liners/Bins/Vehicle to be sprayed/cleaned with 1% sodium hypochlorite daily.
2. Personal protective equipment is a must while handling waste.

Key resources by MPCB: <https://mpcb.gov.in/waste-management/biomedical-waste>

What are the impacts of malpractices in biomedical waste disposal mechanism?

Poor segregation of bio-medical waste has led to disposal mixed with dry waste or sometimes flushed in toilets. This has severe impacts on landfills and water bodies where sewage is disposed. At worst, India's waste-pickers are forced to sort dangerous waste in the most inhuman conditions, leading to further dangerous diseases.

As per the Biomedical Waste Management Rules, the biomedical waste is collected separately in yellow bags. The bags are then taken to Common Biomedical Waste Treatment Facility (CBWTF) or a waste-to-energy plant. There they are incinerated, autoclaved, or burnt to produce energy.

What is E-waste Management?

E-waste" refers to any unwanted electronic device. E-waste frequently contains hazardous materials, predominantly lead and mercury, and is produced by households, businesses, governments, and industries.

The E-waste (Management) Rules 2016 have made local bodies as one of the major authorities and have laid down the following corresponding duties:

- ✦ To ensure that E-waste if found to be mixed with municipal solid waste is properly segregated, collected and is channelised to authorised dismantler or recycler.
- ✦ To ensure that E-waste pertaining to orphan products is collected and channelised to authorised dismantler or recycler.

Why is e-waste management important?



Soil acidification



Releases carcinogenic substances into air



Pollution of groundwater



Gas emissions, toxic fumes



Fastest-growing portion of municipal waste

Implementation Guidelines for E-Waste (Management) Rules, 2016:

https://mpcb.gov.in/sites/default/files/electronic-waste/related-documents/Guidelines_for_implementation_of_EWASTE_RULES_25072019.pdf

Comprehensive updated list of E-waste Recyclers & Dismantlers in Maharashtra:

<https://mpcb.gov.in/sites/default/files/List%20of%20Authorized%20E-waste%20Dismantlers%20and%20Recyclers%20in%20Maharashtra.pdf>

Conclusion

Waste Management features a holistic set of action points aimed at addressing various aspects of waste management, including solid waste segregation, wet and dry waste processing, legacy solid waste treatment, plastic waste management, bio-medical waste management, e-waste management, and achieving Open Defecation Free (ODF) status. These actions are not only essential for improving sanitation but are also linked to climate action.

Effective implementation of these action points will result in a sustainable and environmentally friendly future for the local communities.



Schemes for Assistance

Swachh Bharat Mission 2.0 (Urban), Ministry of Housing and Urban Affairs, Govt. of India

Water Supply and Sanitation Department, Govt. of Maharashtra

Urban Development Department, Govt. of Maharashtra

Guidelines for Disposal of Legacy Waste, CPCB

Clause 'J' of Schedule-I of the SWM Rules, 2016

Swachh Bharat Mission 2.0 (Rural), Department of Drinking Water and Sanitation, Ministry of Jal Shakti

Notification on Ban on identified Single Use Plastic Items from 1st July 2022, Govt. of India: G.S.R. 571 (E) dated 12th August 2021

Maharashtra Plastic and Thermocol Products (MUSTH&S) Notification, 2018

Biomedical Waste Management Rules, 2016

E-Waste (Management) Rules, 2022

E-Waste (Management) Rules, 2016



Vayu

Vayu means air and air plays an important role in our ecosystem; it is a critical aspect of life on earth. Air is the source of oxygen required for survival of life on earth. Even though air is an important source of oxygen, the majority of earth's atmosphere is not oxygen but nitrogen (78%), followed by oxygen (21%), argon (0.9%) and other gases (0.1%). Trace gases include water vapor, carbon dioxide, methane.

The air maintains temperature and is an important source of energy. Air plays a critical role in maintaining the water cycle of the earth. The ozone layer, which is a part of earth's atmosphere, protects life on earth from harmful radiation.

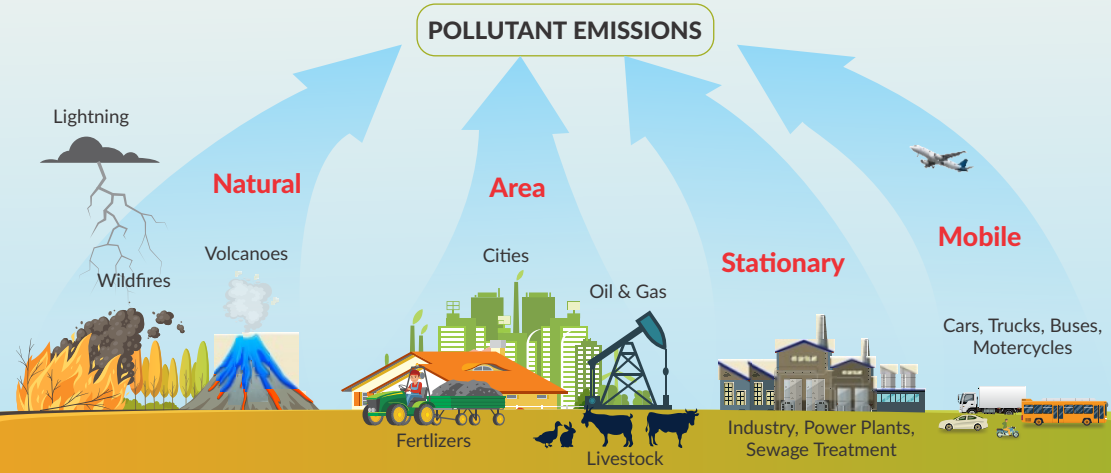
However, air pollution is affecting this natural composition and thus is adversely impacting life on earth.



What are the sources of air pollutants?

Air pollutants are harmful gases, dust or smoke that adversely impact plants, animals, and human beings. A certain percentage of these gases (CO₂, CFCs, Ozone, NO_x, SO_x, VOCs, Particulate Matter) is essential to support life on earth and is present in the atmosphere. However, an imbalance in this gaseous composition causes air pollution and is responsible for global warming.

The major sources of pollution are of four types: mobile, stationary, area and natural sources and have been illustrated in the figure below:

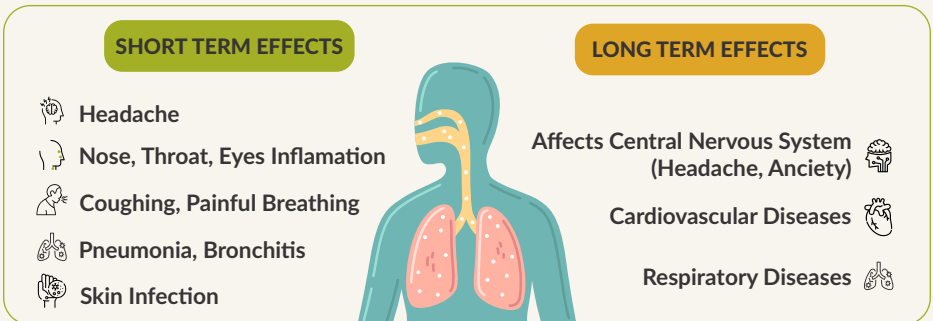


Impact of air pollutants

Air pollutants can cause harm to humans, animals, and plants. Overall, air pollutants adversely affect the respiratory system in the case of humans and animals, whereas it impacts crop productivity and causes loss of overall biodiversity in case of plants.

The presence of pollutants viz., NO_x and SO_x causes acid rain damaging the buildings, plants, soil, and water. Particulate matter is yet another type of air pollutant that can cause various health problems; the smaller the size of the particle, the more harmful they are as they can penetrate deeper into the lungs.

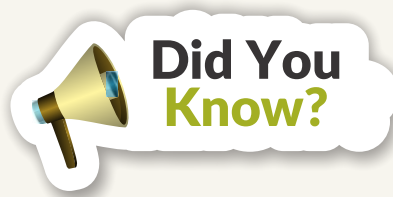
The overall long-term and short-term impacts of air pollutants have been mentioned in the figure below:



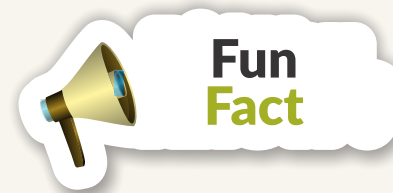
How can air pollution be reduced?

While air pollution is one of the important challenges faced by the humanity, there are certain solutions available to reduce air pollution:

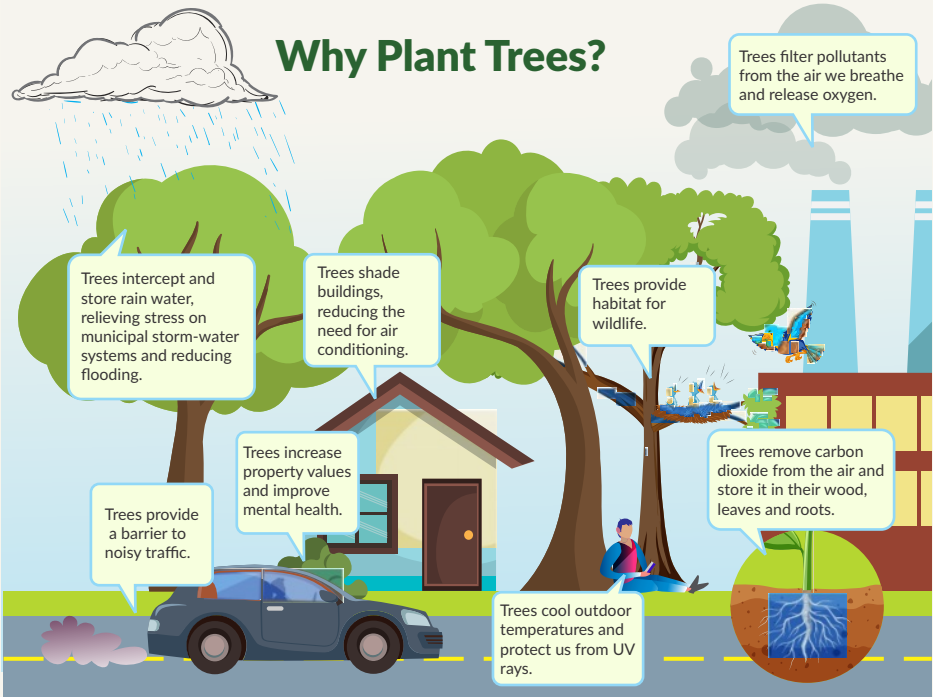
- ✦ **Mode of transport:** Using public transport, cycling, walking, carpooling instead of driving
- ✦ **Energy:** Turning off lights and appliances when not in use
- ✦ **Reuse and recycle** materials, especially plastic bags
- ✦ **Tree plantation** and indoor plants to improve air quality
- ✦ **Avoid combustion** of fossil fuels, crackers, forest fires.



The Great Smog of London in December, 1952 lasted for five days and killed thousands of people due to impacts of coal combustion.



The Great Britain is a coal free country since 2020.



For more detailed information, please visit:



https://youtu.be/t7Q7y_xjR5E



How does C&D waste contribute to air pollution?

Construction and demolition waste is responsible for air pollution because of the following reasons⁷⁸:

- ✦ Emission of toxic dust particles and particulate matter from waste debris and during construction and demolition
- ✦ Causes resuspension of dust during transportation and construction activities

⁷<https://www.downtoearth.org.in/news/waste/india-recycles-only-1-of-its-construction-and-demolition-waste-cse-73027>

⁸<https://www.outlookindia.com/national/cost-of-development-the-drastic-environmental-fallout-of-demolition--news-196234>

Ways to reduce C&D waste

C&D waste has negative impacts on the environment as a result of air, water, and land pollution, greenhouse gas (carbon dioxide and methane) generation in landfills and puts an increased demand on mining and for natural resources. The following are the ways to reduce C&D waste:

- ✦ *Segregating waste into different streams for recycling or reuse*
- ✦ *Buying recycled or low-carbon materials or products*
- ✦ *Adopting an integrated design approach that minimizes waste generation*
- ✦ *Reuse of treated wastewater of prescribed quality standards and guidelines for purposes such as concrete mixing, curing, landscaping, etc.*

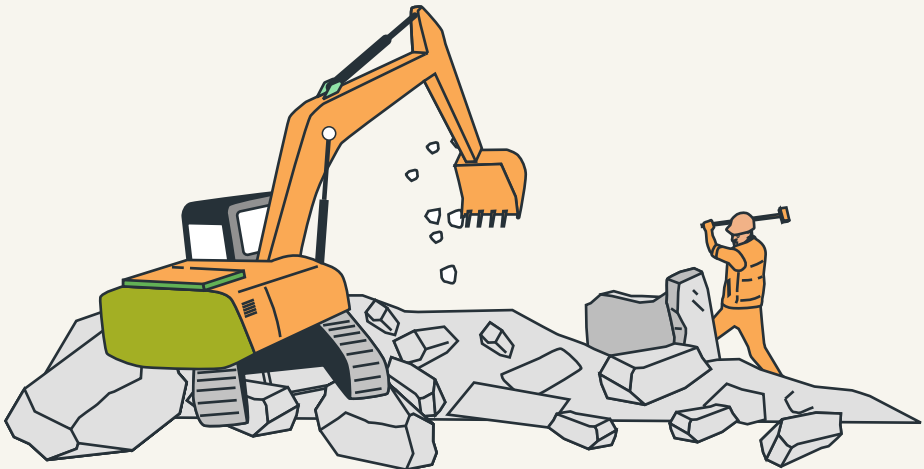
Recycled products from C&D waste include:

- ✦ *Washed sand for construction*
- ✦ *Mixed aggregates of different sizes for concrete or road base*
- ✦ *Ready mix concrete (RMC) with recovered material*
- ✦ *Value-added products like kerb stones, pavement blocks, concrete bricks, etc.*
- ✦ *Beams, insulation, fiberboards, and furniture made from C and D debris*

To understand more details about C&D waste plant at Burari, Delhi, please



<https://youtu.be/Uuqd67JOTek>





Why is youth important in climate action?

In India, youth are defined as those aged 15 to 29 in the national youth policy. Almost 27.5% of India's total population falls under this category. Thus, youth constitute a major part of India's population.

Along with this, youth are not only the victims of climate change but are also the future of the planet. Youth are aware of the challenges and risks presented by the climate crisis and of the opportunity to achieve sustainable development brought by a solution to climate change. Thus, the youth are agents of change and hence they play an important role in climate action.

Did You Know

12th August is celebrated as International Youth Day since the year 2000.



How can youth be involved in Majhi Vasundhara Abhiyan?

Youth can be a part of various activities, directly or indirectly:

- ✦ Awareness building
- ✦ Assisting and facilitating local governments by taking part in action-based activities such as tree plantation, waste collection.
- ✦ Providing assistance to government bodies in monitoring and evaluation of programs

What is the National Youth Policy?

The NYP envisages a 10-year vision for youth development that India seeks to achieve by 2030. The policy aims to unlock the potential of youth to advance India.

It covers various aspects such as education, employment, entrepreneurship, health, fitness, sports, and social justice. The policy recognizes that young people are a vital demographic and a powerful agent of change and progress and serve as a critical component in the larger vision of Atmanirbhar Bharat.

Conclusion

Air quality is a significant component that determines the quality of life on earth. Thus, it is pertinent to take up actions mentioned in the toolkit such as use of EV, ban on use of firecrackers, C&D waste management, use of bicycles to improve air quality.

The indicator on air quality testing is important to understand the impacts of these activities on overall air quality of the local body. The local body can analyze the results of the tests and evaluate the causes of air pollution and thus, take effective measures to reduce it.

Climate education plays a key role in tackling the impacts of climate change and youth are an integral part of the solution.



Schemes for Assistance

- + *National Clean Air Programme (NCAP), Ministry of Environment, Forest & Climate Change, Govt. of India*

- + *Central Pollution Control Board*

- + *Maharashtra Pollution Control Board*

- + *Swachh Bharat Mission 2.0, Ministry of Housing and Urban Affairs, Govt. of India*

- + *C&D Waste Rules (amendments), 2016*

- + *National Clean Air Programme (NCAP), Environment, Forest & Climate Change Ministry, Govt. of India*

- + *National Policy for Management of Crop Residues (NPMCR)*

- + *National Mission on use of Biomass in Coal based thermal Power Plants, Ministry of Power*

- + *Pradhan Mantri Ujjwala Yojana (PMUY), Ministry of Petroleum and Natural Gas, Govt. of India*

- + *Maharashtra EV Policy, 2021, Govt. of Maharashtra*
- + *GR No: MSEVP-2021/CR 25/TC 4, Environment and Climate Change Department, Govt. of Maharashtra*

Jal

Water is one of the most important elements essential to support life on earth. Although 71% of the Earth's surface area is covered by water, only 0.01% of this water is available as a freshwater source for drinking. 97.5% of the water on Earth's surface is saltwater and 2.5% is stored in the form of glaciers and ice. Thus, even though an ample amount of water is available on the Earth, a minute percent of the total available water is suitable for drinking.

Water security is a pressing issue in Maharashtra as climate change is making it difficult to access freshwater. The state faces a double challenge: meeting rising water needs while dealing with unpredictable weather like irregular rains and long droughts. Urban areas struggle with water infrastructure problems and excessive demand. Thus, effective implementation of the action points would help in sustainable water management and build climate resilience of local communities.

What is a water audit?

Water audit is the study of water use by an entity. It involves critical examination of water use from the point from where water enters the premises to the point from where used water is discharged. The water audit can be done for a building/society/local body.

Water audit is an important tool to understand the quantity or volume of water used by an entity, to examine if there are any leakages in the water supply system, excess use of water in order to identify areas where water consumption can be reduced.



What does the audit report convey?

The audit report recommends changes to the system to improve efficiency of the water supply system to reduce usage and wastage. The report is critical to understanding the recommendations given on improvements in treatment practices and methodology along with cost benefit analysis. Apart from this, the water audit is a significant tool that sets up a system to maintain a balance sheet of water with regards to amount of water entering the entity, its distribution, and its usage.

Who is authorized to conduct a water audit?

Certified water auditors can conduct a water audit in line with CGWA guidelines. List of organizations that are accredited by CGWA to conduct water audit in India are:

- ✦ Confederation of Indian Industries (CII)
- ✦ Federation Indian Chamber of Commerce and Industry (FICCI)
- ✦ National Productivity Council (NPC)
- ✦ PHD Chamber of Commerce & Industries

For detailed information on water audit, you can visit here:



<https://www.youtube.com/watch?v=ALLhdLoQ77Y>



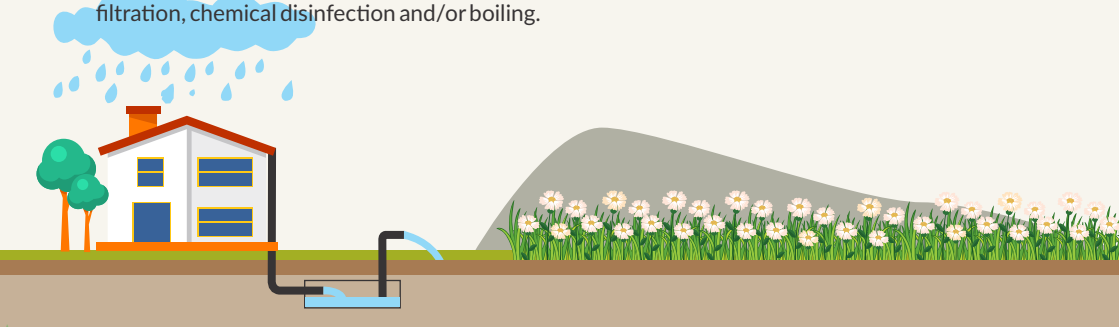
Is geological study important while implementing rainwater harvesting?

Rainwater harvesting is a simple technology or process used to conserve rainwater by collecting, storing, conveying, and purifying rainwater. The process is of two types: rooftop rainwater harvesting and surface rainwater harvesting. The rainwater collected by both these techniques can be either stored in a tank or can be recharged in a deep pit or an aquifer to restore groundwater.

However, geological surveys are important to understand the flow patterns of the underground aquifers so that the restored groundwater can be utilized during water-deficit months.

Is rainwater potable?

While the rainwater collected can be used for various purposes: cleaning, bathing, it is not safe to use collected rainwater without proper treatment. To understand the quality of water, it is important to test water quality on a monthly basis and then conduct proper treatment such as filtration, chemical disinfection and/or boiling.



What is a suitable location for percolation pits?

Percolation pits are excavations filled with porous materials like broken bricks or pebbles. They are important to facilitate groundwater recharge so that the replenished water can be utilized during water deficit months.

Groundwater Surveys and Development Agency provide technical guidance by locating suitable sites for groundwater recharge. The report developed by the agency helps with the easy identification of recharge points.

Treated water can be reused for?

Treated water can be reused for non-potable purposes viz.,

- ✦ *Thermal power plants and power generation/energy sector in general;*
- ✦ *Industrial reuse of treated water including in industrial estates of MIDC or private industrial estates outside MIDC areas;*
- ✦ *Large scale bulk water consumers in urban areas such as railways, bus depots, commercial complexes and other such yards;*
- ✦ *Municipal uses such as landscaping, parks, public toilets, and washing/sprinkling on roads*
- ✦ *Environment including discharge into surface water bodies after meeting the specified standards by the CPCB/SPCB, maintenance of wetlands and environmental flows is to be promoted in the instances where treated water is in excess after meeting all other designated uses.*
- ✦ *Agriculture (including agro-forestry, forestry, aquaculture)*

However, reuse of treated water for agricultural purposes necessitates treatment of water as per the standards prescribed by CPCB and MPCB in order to prevent any potential environmental pollution and safeguard human health from any associated risks.

What are wetlands?

An area of land saturated with water is described as a wetland. The amount of water present in the wetland varies greatly; some wetlands are permanently saturated while others are only seasonally flooded. The wetlands can be saltwater or freshwater bodies. The wetlands are characterized by saturated soil that creates a low-oxygen environment which favors the presence of typical plants, animals and microbes which can tolerate periods of sluggishly moving or standing water.

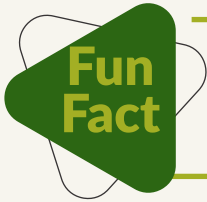
Many wetlands are transitional zones between upland and aquatic ecosystems, although others are scattered across the landscape in upland depressions that collect water or in zones where groundwater comes to the surface.

For more information, visit



<https://www.youtube.com/watch?v=xIj9BRsLvg>





Maharashtra has 44,714 wetlands as identified by national Wetland Inventory Atlas (NWIA)



How does a water body classify as a wetland?

Formation of wetland is characterized by following factors⁹:

- ✦ *Climate patterns: The net balance of precipitation and evaporation determines the quantity and timing of water available for formation of wetlands.*
- ✦ *Soil: wetland soils form when saturated or flooded conditions last long enough during the growing season resulting in creation of oxygen depleted areas in the upper part of the soil during the growing season.*

Wetlands can be classified ^{10,11} into two broad categories: coastal systems and inland systems. Coastal systems constitute mangroves, salt marshes, tidal freshwater marshes, and intertidal flats while inland systems consist of freshwater marshes, peatlands, freshwater forested swamps, and riparian wetlands.

⁹<https://www.britannica.com/science/wetland/Wetland-types>

¹⁰<http://www.wetlands-initiative.org/what-is-a-wetland>

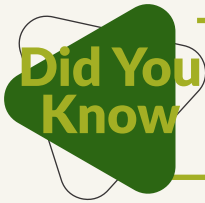
¹¹<https://www.britannica.com/science/wetland/Wetland-types>

Why is it important to conserve wetlands?

Wetlands are one of the most important ecosystems that support immense biodiversity. Wetlands provide services such as Water purification and waste treatment, flood control and storm protection, carbon storage and sequestration, fisheries.

Wetlands constitute a significant aspect of Nature-Based solution to climate change, wherein they are important to mitigate and adapt to the impacts of climate change. Overall, wetlands cover 6% of the Earth's surface, but 'lock in' significant amounts of carbon.

Despite their benefits, these ecosystems are one of the fastest degrading ecosystems that receive very little attention.



2nd February is celebrated as World Wetlands Day.



What is Water Rejuvenation?

Water rejuvenation involves restoring and enhancing the quality and quantity of water in natural sources like rivers, lakes, ponds, and groundwater. It's a process that aims to replenish and revitalize water resources that have been depleted or degraded due to various factors like pollution, overuse, or climate change. This method includes techniques to purify water, prevent erosion, and maintain the natural balance of ecosystems.

Why is Water Rejuvenation needed?

Water rejuvenation is crucial because it ensures sustainable access to clean and abundant water for communities, agriculture, and ecosystems. With increasing demands and environmental stresses, many water sources are under threat. Rejuvenation efforts safeguard against water scarcity, mitigate the impact of droughts, preserve biodiversity, and enhance the overall resilience of communities to adapt to changing environmental conditions.

How can we implement water rejuvenation?

Implementing water rejuvenation involves a combination of strategies. This includes promoting responsible water usage, employing water conservation practices, reducing pollution through better waste management, restoring natural habitats, implementing rainwater harvesting systems, and utilizing eco-friendly agricultural practices. Collaborative efforts between local communities, government bodies, NGOs, and experts are vital to successfully execute rejuvenation projects. These initiatives not only enhance water quality and availability but also contribute to the overall sustainability and well-being of the region.

Case Study

- ◆ Mission Amrit Sarovar, launched in 2022 by the Indian government, aims to conserve water resources and revive traditional water bodies in every district. In Palghar district, BAIF Maharashtra and Sumant Moolgaokar Development Foundation (SMDF) have joined forces to identify and rejuvenate 75 water bodies, increasing storage capacity, improving groundwater recharge, and ensuring water availability. Key activities include desilting, embankment construction, fencing, tree planting, and community engagement. The project has enhanced agricultural productivity, livelihoods, and environmental sustainability.

Read More on

https://www.linkedin.com/posts/baif-development-research-foundation_bringing-baifs-expertise-to-mission-amrit-activity-7132719384803897345-0o8c/?utm_source=share&utm_medium=member_ios

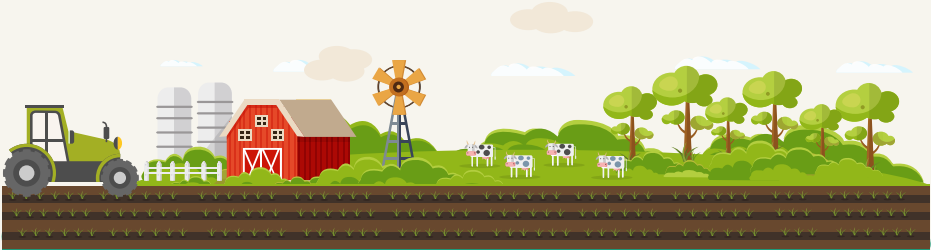
Why should we practice sustainable farming?

With climate change causing unpredictable weather patterns, it's essential for us to find ways to use water wisely and produce food sustainably. Organic farming focuses on growing crops without using harmful chemicals. Instead, it uses natural materials like animal manure and plant residues to nourish the soil and produce crops free from chemical residues. This approach not only benefits the environment but also ensures healthier food for us to eat. Drip irrigation, on the other hand, is a method of delivering precise amounts of water and nutrients directly to the roots of plants. This saves water, energy, and reduces the need for pesticides, ultimately leading to higher crop yields and increased profits. By embracing organic farming and drip irrigation, we can adapt to the changing climate, protect our environment, and secure our food supply for the future.



ORGANIC FOODS COME FROM ORGANIC FARMING

Organic farming makes use of both traditional and modern techniques that spur the growth of high-quality crops without harming the environment.



7 REASONS WHY ORGANIC FARMING IS GOOD FOR THE ENVIRONMENT

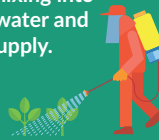
USES FEWER CHEMICALS

Organic farms prevent the spread of pesticides and other harmful chemicals into the environment.



REDUCES WATER POLLUTION

No pesticides mean no chemicals mixing into the groundwater and our water supply.



CONSERVES WATER

Effective soil techniques reduce the amount of water needed for irrigation.



CREATES HEALTHIER SOIL

A single teaspoon of healthy organic soil contains over a billion helpful bacteria, which helps grow healthier plants.



COMBATS SOIL EROSION

Organic farms have thicker topsoils, which are more effective in preventing erosion and retaining natural nutrients.

SIGNIFICANTLY REDUCES GREENHOUSE GAS EMISSIONS

Converting a whole country into organic farming is the equivalent of removing nearly a million cars from the road.

Source:

<https://www.facebook.com/ADECInnovations/photos/7-reasons-why-organic-farming-is-good-for-the-environment/1716735395139888/>

PROMOTES BIODIVERSITY

Thriving organic farms are welcoming environments for birds and other animals and insects.





Did You Know?

One can join PGS-India program as Individual farmer or as PGS-India local group by making a new group of at least 5 members belonging to same or close-by villages!

Organic products can be exported to USA, European Union, Canada, Great Britain, Switzerland, Turkey, Australia, Ecuador, Korea Republic, Vietnam, Japan, etc. as part of National Program for Organic Production!

Conclusion

Sustainable water management is an important aspect to build climate resilient ecosystems and to reduce carbon emissions. This section of the toolkit includes various indicators that focus on water conservation at source as well as throughout the consumption cycle.

A water audit is an important aspect of sustainable water management to understand the water needs of the society/community/locality and the water available for consumption. The audit helps in the development of water accounts. Along with this, water treatment and reuse of treated water is crucial to reduce freshwater consumption.

Water body rejuvenation is critical to strengthen water storage capacity while rainwater harvesting, and percolation pits are important to replenish groundwater storage. Along with this, reduction of water pollution is vital to conserve water.

Wetlands are an important element of the ecosystem. Thus, it is pertinent to conserve wetlands and develop a brief document.

Schemes for Assistance

- ✦ *AMRUT 2.0 -Atal Mission for Rejuvenation and Urban Transformationscheme under Ministry of Housing & Urban Affairs*

- ✦ *Pradhan Mantri Krishi Sinchayee Yojana (Har Khet ko Pani), Ministry of Jal Shakti*

- ✦ *Jal Yukt Shivar Abhiyan, Govt. of Maharashtra*

- ✦ *AMRUT Sarovar, Jal Shakti Abhiyan, Catch the Rain, 2022*

- ✦ *Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS), Ministry of Rural Development*

- ✦ *Government of Maharashtra, Water Supply and Sanitation Department, Circular no. RWS 1004/ CR 24/WS-07 Date: 25 May 2004*

- ✦ *Central Water Commission - Draft general guidelines for water audit and water conservation, 2017*

- ✦ *Catch the Rain: Jal Shakti Abhiyan, Ministry of Jal shakti, Department of Water Resources, River Development and Ganga Rejuvenation*

- ✦ *Swachh Bharat Mission 2.0, Ministry of Housing and Urban Affairs, Govt. of India*

- ✦ *Urban Development Department, Govt. of Maharashtra*

- ✦ *Pradhan Mantri Krishi Sinchayee Yojana, Department of Agriculture, Govt. of India.*

- ✦ *Paramparagat Krishi Vikas Yojana - Central scheme to promote Organic Farming*

- ✦ *Jal Jeevan Mission, Department of Drinking Water & Sanitation, Ministry of Jalshakti*

- ✦ *Revised Guidelines For Idol Immersion issued by CPCB, 2020*

- ✦ *Wetlands conservation and management rules 2017, Ministry of Environment, Forest and Climate Change*

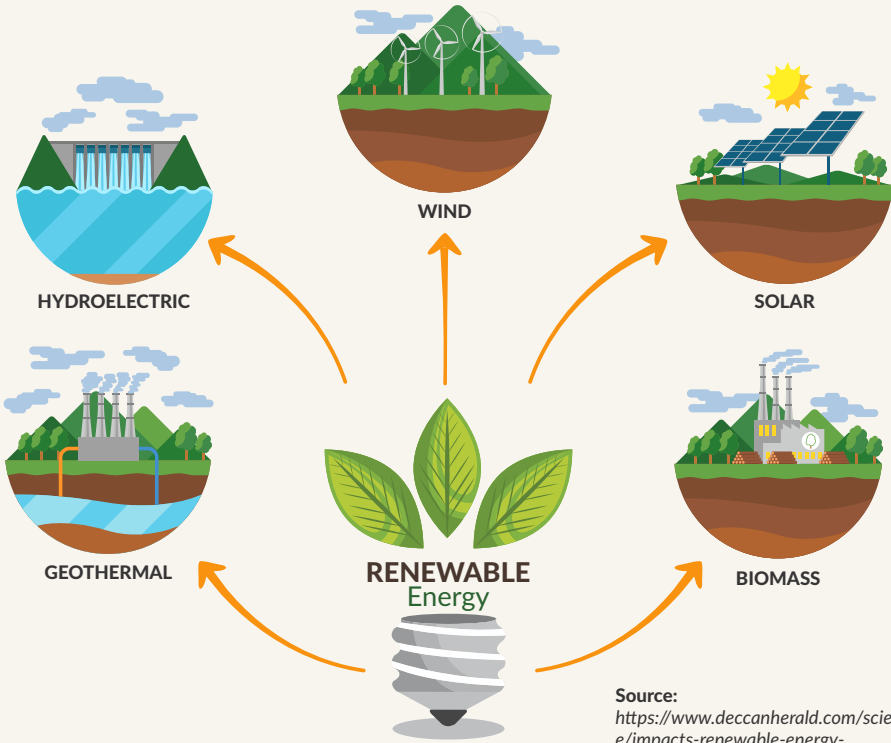
Agni

Energy plays a crucial role in driving development across various sectors, including agriculture, manufacturing, and transportation. However, most of the methods we use to make energy are harmful for the environment. 84% of our energy comes from burning of fossil fuels (coal, oil and gas), a major source of greenhouse gases, which causes climate change.

To solve climate change, we need to adopt low carbon and renewable energy sources. Renewable energy is the energy that is produced from natural resources and can be replenished continuously.



Examples of renewable energy resources are as follows:



Source:
<https://www.deccanherald.com/science/impacts-renewable-energy-projects-1922246>

For more information on renewable energy sources, do watch:



<https://www.youtube.com/watch?v=AUHAsRI4jmo>
<https://www.youtube.com/watch?v=taPnzGV2o6A>



Did You Know

India's new climate goals aim to reduce emissions, 50% of its electricity to come from clean, non-fossil fuel sources by 2030!



How to raise awareness and encourage the adoption of renewable energy initiatives?

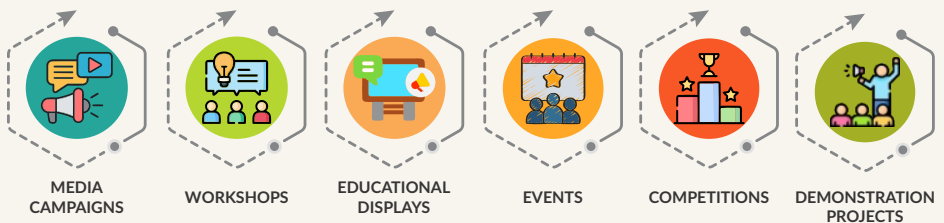
Consumer awareness campaigns: Local bodies can take a lead in instituting consumer awareness programs and create partnerships with technologies to develop local level campaigns e.g promote, campaign, and install solar rooftop systems.

Local government should organize support campaigns to persuade local citizens and create awareness, to attract renewable energy technologies e.g. solar heaters.

Potential organizations to spread awareness among consumers:

- ✦ State and local governments,
- ✦ Municipal corporations,
- ✦ Colleges and universities, green clubs and eco-clubs
- ✦ Non-profit organizations,
- ✦ Energy utility companies,
- ✦ Residential society welfare associations,
- ✦ Market associations
- ✦ Industry associations

Activities that can be implemented at the local or regional level to empower the public about renewable energy technologies:



Implementation Options:

- ✦ Developing portal/blog/videos spreading information about renewable energy technologies
- ✦ Sharing existing successful renewable installations in local newspapers and radio stations
- ✦ Displaying educational information on renewable energy in office premises and public places
- ✦ Organizing renewable energy technologies fairs

Reference: : <https://solarrooftop.gov.in/knowledge/file-34.pdf>

Case Study

- ◆ The Energy Resources Institute (TERI) developed a website for Surat Municipal Corporation (SMC) in order to create awareness about solar energy adoption and its benefits for their consumers. The website is maintained by corporation itself.

“National clean air programme (NCAP) is envisaged as a collaborative, cross sectorial and multi-stakeholder programme to tackle all sources of air pollution. Under National clean air programme (NCAP); TERI has been selected as the Institute of Repute (IoR) to function as a technical partner and provide technical assistance to Surat City by MoEF&CC. Under the NCAP, city specific interventions and action plans will be formulated for implementation by the Gujarat Pollution Control Board (GPCB) and SMC, along with TERI. The National Knowledge Network (NKN), Central Pollution Control Board (CPCB) and MoEF&CC will be overseeing the coordination and technical compliance.”

Read More on

<https://www.suratmunicipal.gov.in/Departments/MoUwithTERI>

ULBs can run targeted awareness campaigns to create awareness about renewable energy technologies e.g. solar rooftop, solar plants, heaters, etc, elaborate on its benefits, schemes and other support provided by the Centre / State / Local Government.

Local government bodies can showcase innovation by shifting to clean energy for buildings. Installing solar photovoltaic (solar PV) panels on public and private building spaces allows redundant space to be used and can even generate a return. This will also support employment and increase energy security.

For more information on renewable energy sources, do watch:



<https://reality.economicstimes.indiatimes.com/news/regulatory/maharashtra-makes-solar-panels-must-for-all-new-buildings/50739581#:~:text=The%20target%20for%20government%20buildings,buidings%20is%2010%2C000%20square%20metres>



Can biogas plants be used to generate renewable energy?

Biogas is a renewable energy source produced by the breakdown of organic matter by certain bacteria under anaerobic conditions. This renewable energy source has gained popularity in the recent years as 'greener fuel'. Biogas is a fuel and is mainly composed of methane (65-70%) and CO₂. The biogas plants capture these gases and generate electricity, heat or as a biofuel.

Clear biogas explanation through animation in Marathi:



https://www.youtube.com/watch?v=jj7_DBio1e4



What are Green Buildings and why are they important

Designed and built with environmental responsibility and resource efficiency in mind, green buildings minimize their impact throughout their life cycle. Indian Green Building Council (IGBC) is India's premier certification body for green buildings. The council is headquartered at Hyderabad.



Reference: : <https://www.linkedin.com/pulse/circular-economy-connection-between-climate-change-tech-michael-mori/>

For more information on eco-friendly houses, do watch:



<https://www.youtube.com/watch?v=mMgT7-dloKI>



For more detailed information on green buildings, do watch this:



<https://www.youtube.com/watch?v=Cb7u98-My6Q>



What is an Energy Audit?

Energy audit is an inspection survey and an analysis of energy flows to check for energy conservation in a building and to find ways to reduce electricity bills. Accredited energy auditors in accordance with the Bureau of Energy Efficiency Regulations can conduct energy audits. Personal home energy audits can be conducted for your own knowledge.

Energy audit benefits:

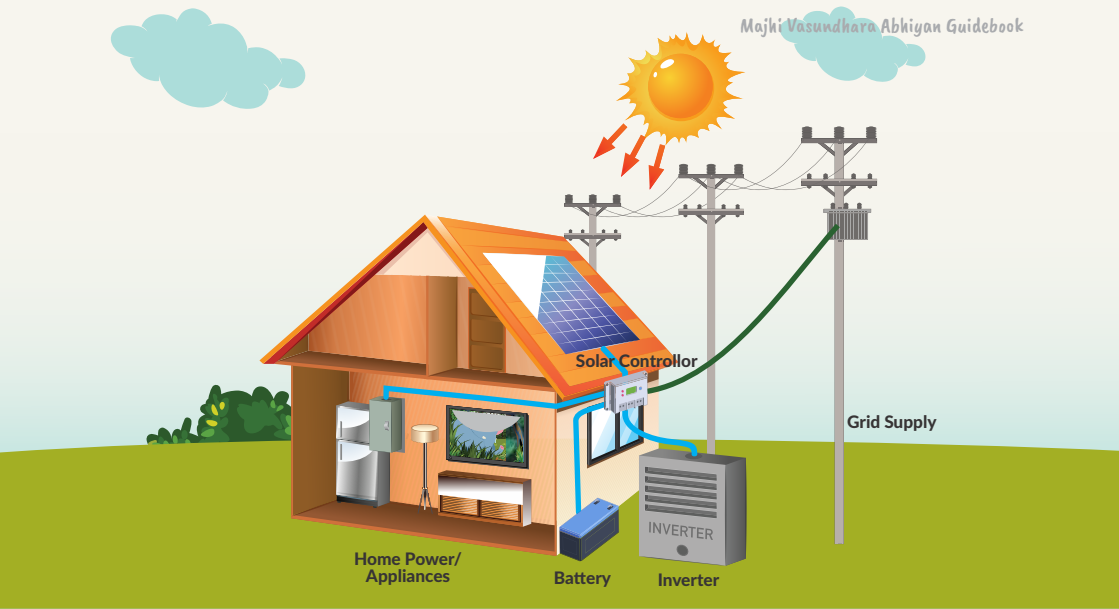
- ✦ Identify energy-saving opportunities
- ✦ Helps you understand your energy usage and ways to use energy better.
- ✦ Identifies safety concerns with electrical systems, wiring, and ventilation, thus making your home or business safer.
- ✦ Can increase home/building's resale value.

What is the importance of conducting energy audit?

- ✦ Helps to reduce your carbon footprint by clearly showing areas in your home or building that may be wasting energy.
- ✦ Reduces your energy consumption can help save money on your energy bill.

If you are conducting an energy audit, here is a checklist to look out for:

- ✦ Lighting
- ✦ Electric motors
- ✦ Air leakage
- ✦ Insulation
- ✦ Water heating
- ✦ Household or business heating systems
- ✦ Cooling systems
- ✦ Electronics
- ✦ Doors and windows
- ✦ Habits



What is meant by decentralized solar energy plant?

Decentralized solar energy plant refers to generation of solar energy close to where it will be used rather than generating it at a large plant and transmitting it through the national grid. Such plants include small power generation plants and storage units that can be connected to grids to provide power supply.

Decentralized solar energy plants reduce transmission losses making the system more efficient than the centralized energy plant. Surplus energy generated from such decentralized energy plants can be fed into the grid.

Did You Know

Mahatma Phule Renewable Energy and Infrastructure Technology Ltd (MAHAPREIT) under Mukhyamantri Saur Krushi Vahini Yojana (MSKVY 2.0) plans to install 500 MW of decentralized solar projects in rural areas for agricultural irrigation.



Conclusion

Energy efficiency and conservation is crucial to reduce demand for fossil fuel-based electricity generation, air pollution, and mitigate greenhouse gas emissions. By promoting renewable energy activities, adopting low-carbon electricity sources, implementing LED streetlights, installing solar panels on public and private buildings, increasing the number of green buildings, and conducting energy audits of public structures, local bodies can contribute to a sustainable environment and build their resilience by reducing their carbon footprint.

Schemes for Assistance

- ✦ *Street Lighting National Program, Energy Efficiency Services Limited, JV of PSUs under Ministry of Power, Govt. of India*

- ✦ *Grid connected Rooftop Solar Program, Ministry of New and Renewable Energy, Govt. of India.*

- ✦ *National Biogas and Fertilizer Management Program*

- ✦ *New National Biogas and Organic Manure Programme (NNBOMP), Ministry of New and Renewable Energy (MNRE), Govt. of India*

- ✦ *Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM KUSUM), Ministry of New and Renewable Energy, Govt. of India*

- ✦ *Mukhyamantri Saur Krishi Vahini Yojana (MSKVY 2.0), Government of Maharashtra*

- ✦ *Save Energy Program, Maharashtra Energy Development Agency*

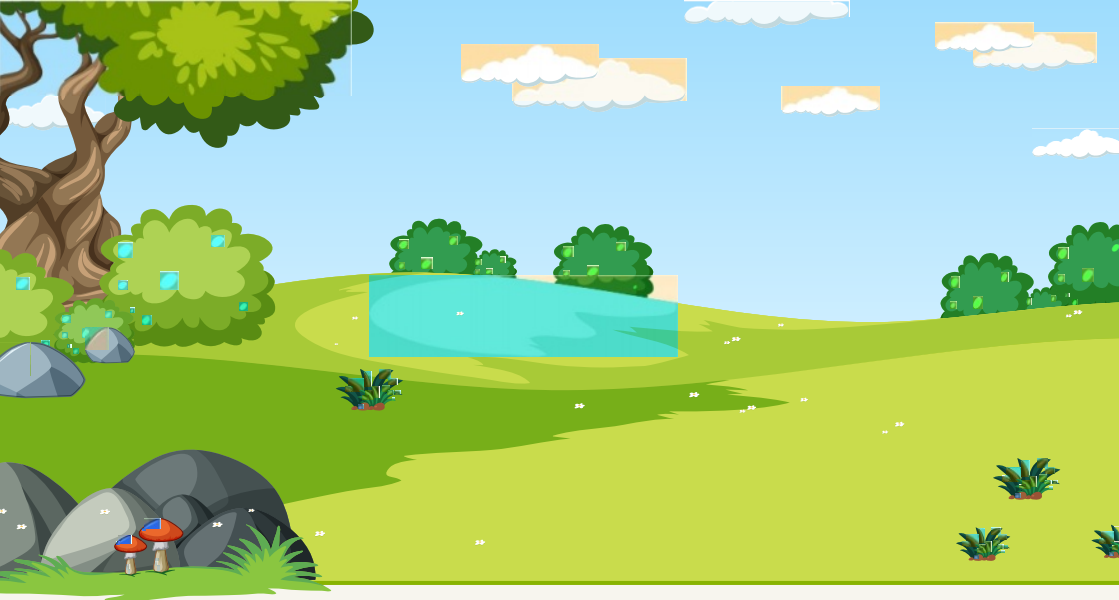
- ✦ *National Energy Conservation Act, Guidelines by the Bureau of Energy Efficiency.*



Akash

While the fifth and the last element of panchamahabhuta, Akash, stands for space, the Abhiyan describes this element as enhancement. As the word suggests, this thematic area focuses on enhancing the outreach of the initiative. The area focuses on IEC, community engagement and creation of awareness on environment conservation with a focus on the five elements of nature.

As a part of this thematic area, the local bodies can conduct competitions, use social media to increase their outreach with a focus on youth and create Majhi Vasundhara Abhiyan promulgation spots in the local body area.



Guidelines for events and photograph submission for IEC/Promotional activities

- ✦ All Photographs submitted for IEC/Awareness activities should be geotagged along with the date on which the activity took place.
- ✦ For every event, at least one photograph should be clicked with an angle that clearly showcases the backdrop/banner of the event.
- ✦ The backdrop must have Majhi Vasundhara Abhiyan 4.0 logo/Mission LiFE logo.
- ✦ The backdrop should have Event Title; for example, for an activity to create awareness about Climate Change, the backdrop should read - "Awareness regarding Climate Change"
- ✦ The picture must showcase the participants of the event.
- ✦ Awareness activities can cover points like basic definitions, concepts, effects, benefits, government regulations and policy support, national-international scenarios on that thematic area/ indicator.
- ✦ Details of the activity are to be posted on social media with the #majhivasundhara & #MissionLiFE.

List of documents required for almost every indicator is as follows:

- ✦ Work Order with details and certificate/MOU with the implementing agency.
- ✦ Work Completion Certificate with date and details of the activities.
- ✦ Financial Brief
- ✦ For IEC/Awareness campaigns, include Majhi Vasundhara Abhiyan 4.0 banner, detailed information about climate change and government interventions, photos, social media posts and hashtags.

Indicator-wise list of documents apart from the list mentioned above is as follows:

Green Cover & Biodiversity

Sr. No.	Indicator number		List of documents
	Urban	Rural	
1.	1.1.1	1.1.1	Maintenance Plan Report Excel Sheet
2.	1.1.2	1.1.2	Tree Census Report Heritage Tree Census Report
3.	1.1.3	-	NOC from ULBs of activities within 60 days of completion Excel sheet
4.	1.1.4	1.1.3	Excel sheet
5.	1.1.5	1.1.4	Maintenance Plan Report Excel Sheet
6.	1.1.6	-	Copy of GIS-RS based land use map displaying the land cover of the plantation with geotagged information. Tree Plan
7.	1.1.7	1.1.5	Copy of BMC formation letter Copy of agenda and Minutes of the Meeting of BMC PBR approval certificate from BMC Copy of submission of PBR Copy of BMC Action Plan
8.	1.1.8	1.1.6	Logbook containing daily/weekly/monthly record of activities. HARIT certificate (for Urban only) Compost quality report (for Rural only)



Solid Waste Management

Sr. No.	Indicator number		List of documents
	Urban	Rural	
1.	1.2.1	1.2.1	Logbook containing daily/weekly/monthly record of activities. Copy of GFC Star Rating Certificate (for Urban only)
2.	1.2.2	1.2.2	Logbook containing daily/weekly/monthly record of activities. HARIT certificate (for Urban only) Compost quality report (for Rural only)
3.	1.2.3	1.2.3	Logbook containing daily/weekly/monthly record of activities.
4.	1.2.4	1.2.4	Copy of Status of remediation along with authorized certificate
5	1.2.5	1.2.5	Excel sheet Logbook containing daily/weekly/monthly record of activities (for Rural only)
6	1.2.6	1.2.6	Logbook containing daily/weekly/monthly record of activities (for Rural only) Copy of agreement
7	1.2.7	1.2.7	Logbook containing daily/weekly/monthly record of activities (for Rural only) Copy of agreement
8	1.2.8	1.2.8	Copy of certificate



Vayu

Sr. No.	Indicator number		List of documents
	Urban	Rural	
1.	2.1	2.1	AQI report
2.	2.2.1	2.2.1	Excel sheet Copy of order AQI report
3.	-	2.2.2	Copy of order Document (letter of formation or MoM) regarding FPO Excel sheet
4.	2.2.3	-	Logbook containing daily/weekly/monthly record of activities
5.	-	2.2.3	Excel sheet
6.	2.3.1	2.3.1	Detailed RTO report
7.	2.3.2	2.3.2	Copy of electricity bill of EV charging stations Excel sheet
8.	2.4	2.4	Excel sheet
9.	2.5	-	Registration document Compiled pdf of invitation letters Excel sheet



Jal

Sr. No.	Indicator number		List of documents
	Urban	Rural	
1.	3.1	3.1	Copy of measurement book Excel sheet
2.	3.2.1	-	Water audit report Executive summary of authorized document for implementation of recommendations of water audit Excel sheet
3.	3.2.2	-	Summary of water supply system audit report
4.	-	3.2	Logbook containing daily/weekly/monthly record of activities Water budget report Water supply system audit report Implementation report as per water supply system audit report recommendations
5.	3.3.1	3.3.1	Excel sheet
6.	3.3.2	3.3.2	Excel sheet
7.	3.4	3.4	Maintenance Plan Water Quality report Excel sheet
8.	3.5	-	Copy of consent to operate Treated water quality report
9.	-	3.5	Excel sheet
10.	-	3.6	Copy of JJM portal Excel sheet
11.	3.6	3.7	Compiled report explaining management of worship material Excel sheet
12.	3.7	3.8	Excel sheet
13.	3.8	3.9	Brief document of wetland



Agni

Sr. No.	Indicator number		List of documents
	Urban	Rural	
1.	4.1	4.1	Excel sheet
2.	4.2.1	4.2.1	Energy saving report
3.	4.2.2	4.2.2	Energy saving report Commissioning certificate Excel sheet
4.	4.2.3	-	Excel sheet Valid certificate from GRIHA/IGBC/LEED Occupancy certificate
5.	-	4.2.3	Excel sheet
6.	4.2.4	-	Executive summary of energy audit report Excel sheet
7.	-	4.2.4	Excel sheet
8.	-	4.2.5	Excel sheet



Akash

1.	5.1	5.1	Screenshot of the dashboard
2.	5.2	5.2	Excel sheet
3.	5.3	5.3	Excel sheet
4.	5.4	5.4	Certificate of participation of schools Agenda of the meetings conducted by Paryavaran Seva Yojana Minutes of the meeting conducted by the PSY Excel sheet
5.	5.5	5.5	Excel sheet
6.	5.6	5.6	Copies of financial proofs Excel sheet



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