

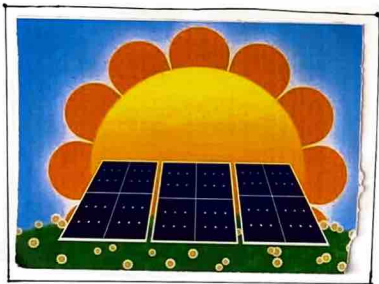


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AMTICS GROUP: 11 CS-02



WORLD EARTH DAY



- GENRATE ELECTRICITY
- POWER SOURCE



USES:-

- SOLAR WATER HEATING
- SOLAR COOKING
- SOLAR FURNACE



ADVANTAGES:-

- Reduce Use of Fossil Fuel.
- No Toxic Emission In Air.
- Renewable Energy.





WORLD EARTH DAY CELEBRATION - 2022

Pollution Control



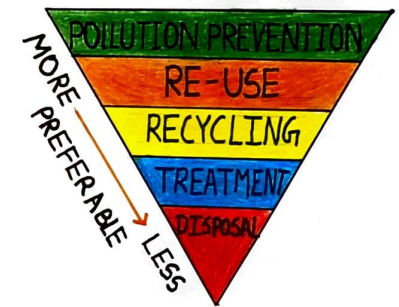
* MILESTONES UNDER THE AIR ACTIONS *



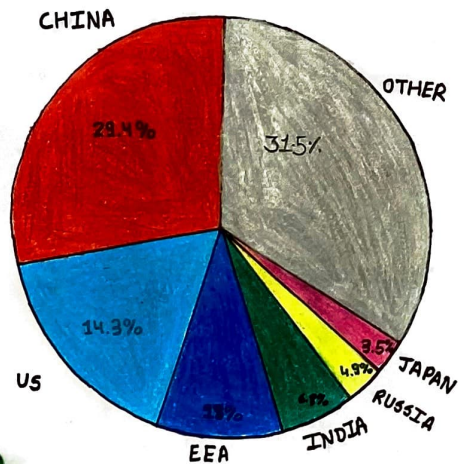
NATIONAL POLLUTION CONTROL DAY

- 1981** - Enactment of the Air Act
- 1984** - Launch of the NAAQU
- 1987** - Amendments to Air Act
Renaming the Central Board for the Prevention and Control of water Pollution for PCB.
Provisions empowering the PCB's to issue directions to any person under s. 31A
- 1994** - First National Ambient Air Quality Standards launched for SO₂, NO₂, PM, lead and CO.
- 1998** - Standards for Ammonia added to NAAQS
- 2000** - National Standards for Emission launched for 31 categories of industries
- 2009** - NAAQM renamed to NAMP, extended to cover more stations, cities
- 2011** - Categorisation of industries into red, orange and green
- 2014** - The National Air Quality Index was launched
- 2016** - Revised categorisation of industries into red, orange, green and white
Non-attainment cities gives a set of 42 action points for improving air quality
- 2020** - Deadline to implement city action plans

POLLUTION CONTROL HIERARCHY



CO₂ EMISSION PIE CHART



AMTICS GROUP - 9





Government Initiative For Environmental Conservation

Environmental Protection Sustains Development : Some Initiatives In Gujarat

⇒ Air Action Plan for Industrial Clusters in the Ankleshwar Region

⇒ Paryavaran Bhavan - Solar Building

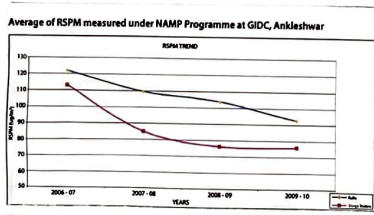
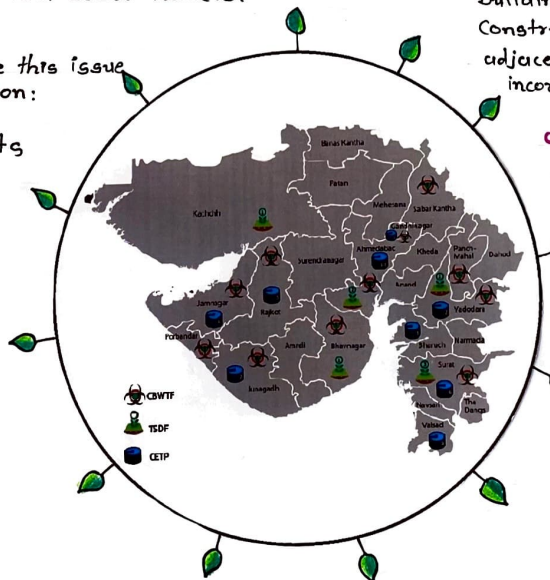
Several of these industries have installed cyclone/multi cyclone separator/water, APCM to tackle flue gas emissions. The problem of foul odour however continues.

An Odour Control Committee has been formed to overcome this issue and suggests 8 industrial air pollution and its mitigation:

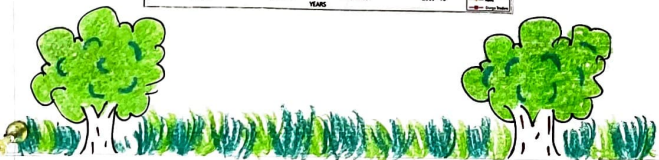
- Use of non-halogenated and non-aromatic solvents (eg. Ethyl acetate, alcohols and acetone) instead of such toxic solvents as butch, chloroform etc.
- Contained and enclosed batch reactors and install close feed system.
- Lower operating temperatures if appropriate.

The government of Gujarat is promoting the concept of green building in this regard the Gujarat Pollution Control Board is constructing its new Head office as a solar building this is located adjacent to its existing building. Environmental considerations were incorporated right at start

- The new building is designed and constructed by the R&B Division, Gandhinagar.
- Natural light and cross ventilation at every floor will be optimized and the quantum of electricity consumed shall be reduced.



CBWTF - Common Bio Medical Waste Treatment
 TSDF - Treatment storage and Disposal
 CETP - Common Effluent Treatment Plant





Antics

USE OF RENEWABLE ENERGY

Group - 3

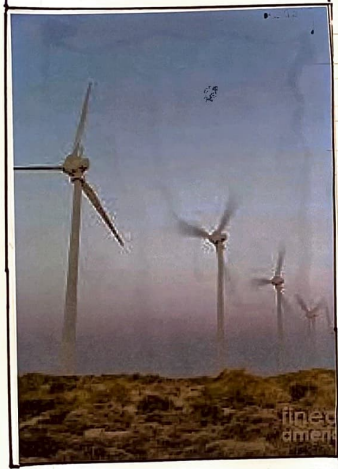


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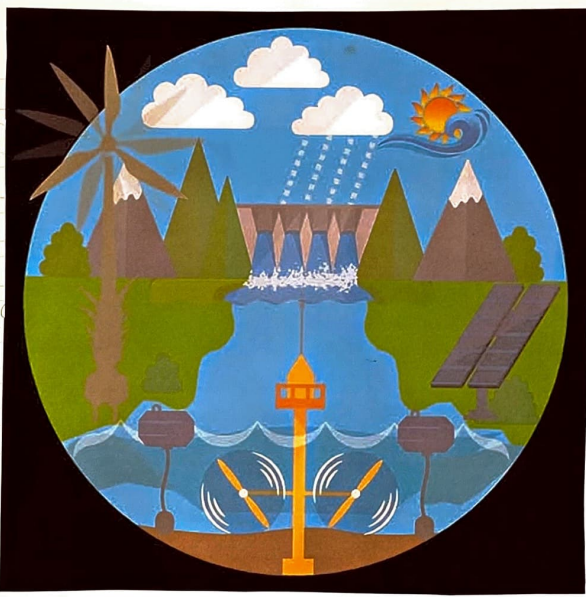
WHAT IS RENEWABLE?

ENERGY THAT CAN BE USED AGAIN AND AGAIN IS CALLED RENEWABLE

Wind Energy

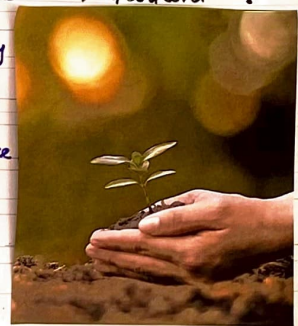


The Energy in the wind turns two or three Propeller-like blades around a rotor. The rotor is connected to the main shaft, which spins a generator to create Electricity

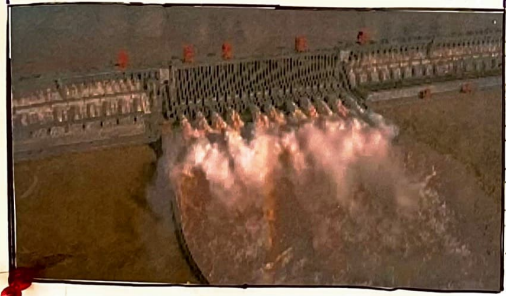


Why Renewable Energy is Important?

Using Renewable energy can help to reduce energy imports and reduce fossil fuel use, which is the largest source of CO₂ emissions.



Hydro power



Hydropower uses the natural flow of moving water to generate electricity.



Solar energy is defined as the transform of energy that is present in the sun and one of the renewable Energies

Solar Energy





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AMTICS

WORLD EARTH DAY CELEBRATION



GROUP NO :- 11

-2022

RENEWABLE RESOURCES

A Renewable resource is one that can be used repeatedly and does not run out because it is naturally replaced. That is collected from renewable resources that are naturally replenished on a human timescale. Below are the types of renewable resources.

- WIND
- BIOMASS
- HYDROPOWER
- GEOTHERMAL
- SOLAR



WIND

Wind power or wind energy is mostly the use of wind turbines to generate electricity. China is the largest producer of wind energy. Wind power is cost-effective. Wind energy doesn't pollute the air like power plants that rely on combustion of fossil fuels, such as coal or natural gas. Wind is a domestic source of energy. Wind turbines can be built on existing farms or ranches. Also, on the other hand, wind plants can impact local wildlife. Turbines might cause noise pollution.

On combustion of fossil fuels, such as coal or natural gas, wind is a domestic source of energy. Wind turbines can be built on existing farms or ranches. Also, on the other hand, wind plants can impact local wildlife. Turbines might cause noise pollution.



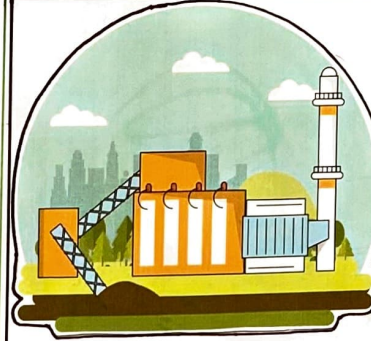
SOLAR

Solar energy is radiant light and heat from the sun that is harnessed using a range of technology such as solar power to generate electricity, solar thermal energy include solar water heating, and solar architecture.

Pros:-

- solar energy dependent on weather.
- Reduces Electricity Bills
- solar energy can be used for diverse purposes.

- Cons:-
- The initial cost of purchasing a solar system is high.
 - use a lot of space
 - Toxic materials are used for manufacturing.



BIOMASS

Biomass is plant-based material used as fuel to produce heat or electricity. Like wood and wood residues, energy crops, agricultural residues, and waste from industry, farms and households. About 32% of the total primary energy use

in the country is still derived from biomass and more than 70% of the country's population depends upon it for its energy needs. It reduces pollution of waste and creates energy, it's not completely clean. It has high costs in comparison to other alternatives.



HYDROPOWER

Hydropower or hydroelectric power is one of the oldest and largest sources of renewable energy, which uses the natural flow of moving water to generate electricity. As of 31 March 2020,

India's installed utility scale hydroelectric capacity was 46,000 MW or 12.3% of its total utility power generation capacity. There are 197 hydro power plants in India. In India, Uttarakhand is the largest producer. This can impact on fish and other animals. Due to this, much collection of water, carbon, and methane are emitted because of the plants in water.



GEOTHERMAL

Geothermal energy is the thermal energy in the Earth's crust which originates from radioactive decay of material in the crust. It is currently uncertain but possibly roughly equal proportion. Geothermal is a reliable source of renewable energy. We can save up to 80% over conventional energy use.

- The extraction of geothermal energy from the ground leads to a release of greenhouse gases like hydrogen sulfide, carbon dioxide, methane, and ammonia.
- Possibility of depletion of geothermal source.
- High investment costs for geothermal system.



AMTICS

CS-2

WORLD EARTH DAY 2022

GROUP - 10



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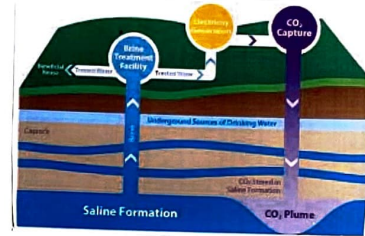
AIR POLLUTION



PREVENTION!-

- Using public transport is a sure short way to contributing to less air pollution as it provides with less gas and energy.
- Implement Afforestation:- Plant and grow as many trees as possible. The practice of planting trees provides a lot of benefits to the environment and helps with the release of oxygen.

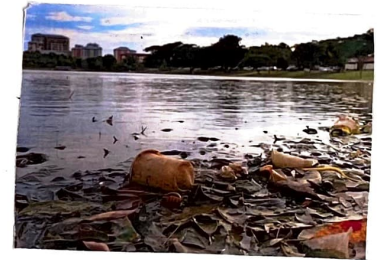
POLLUTION-CONTROL



WATER POLLUTION



- Practice water conservation.
- Dispose of your medication properly.
- Avoid the use of pesticides and herbicides.
- Avoid water polluting recreational activities.
- Avoid disposing of items into the toilet.



LAND POLLUTION



- Stop throwing waste on land.
- Avoid use of Toxic Materials and disposal on land.
- Buy Organic products, especially cleaners, pesticides and fertilizers.
- Recycle waste materials.

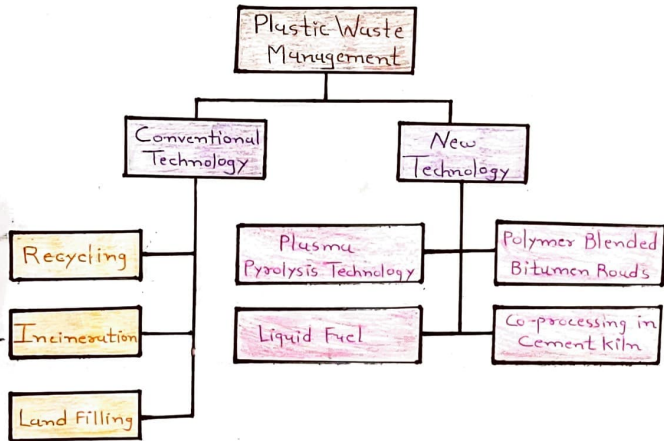
AMTICS (03)

WORLD EARTH DAY CELEBRATION 2022



Plastic Waste Management

- Disposal of plastic waste is a serious concern in India. New technologies have been developed to minimize their adverse effect on the environment.



"Each one of us can make a difference. Together we can make a change."

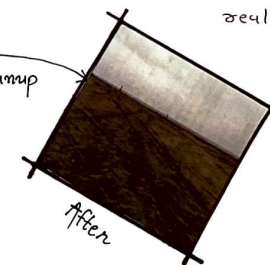
Ways to keep the Earth clean

- Bring a bag.
- Invest in a reusable water bottle.
- Bring your own reusable cup.
- Refuse single-use items.
- Avoid products with microbeads.
- Make sure your waste goes to the right place.
- Compost.



Why is clean up important?

- Taking care of the environment is an important part of how children develop a positive sense of self and responsibility towards their surroundings, as well as real-life skills.



Plastic Cleanup

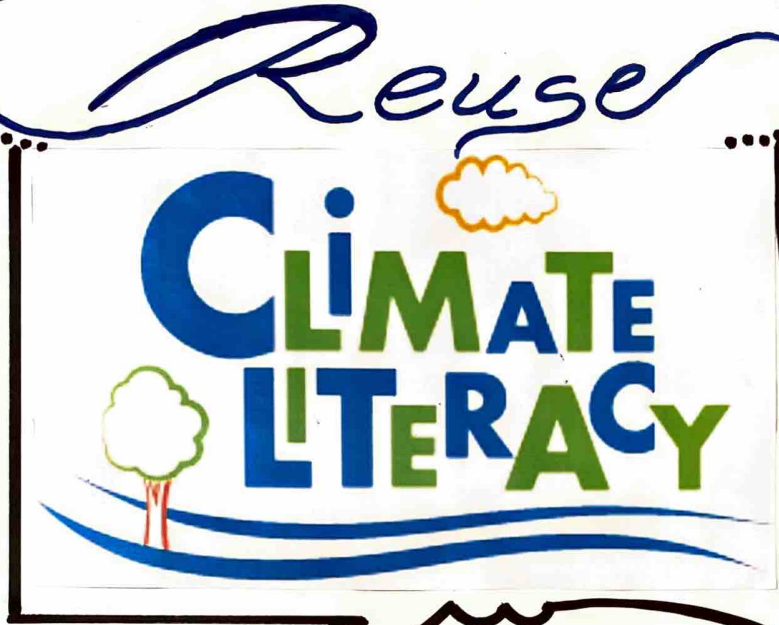


Date..
22
2022
Apr.

Celebration of world Earth Day **6/13**



Reduce-



Q. what is climate literacy?

- climate literacy is an understanding of your influence on climate and climate's influence on you and society.
- A climate-literate person understands the essential principles of earth's climate system.
- Knows how to access scientifically credible information about climate.
- Communications about climate and climate change in a meaningful way.
- IS able to make informed and responsible decisions with regard to action that affects climate.

Educational keys for combating climate change

Workforce and university education improves the ability to generate innovative, cost-effective solutions to climate crisis.

Strengthening education in science, technology, engineering and mathematics (STEM) will produce qualified specialists with the training needed by a green economy.

The promotion of environment education as a separate subject or a transversal theme in the school curriculum and in training programmes.

The construction of schools that reflect environmental principles by using energy efficiently, and promoting a close relationship with the environment.

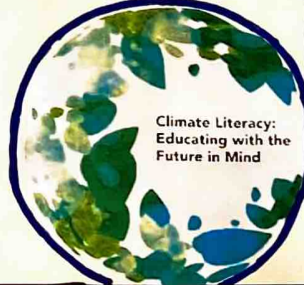
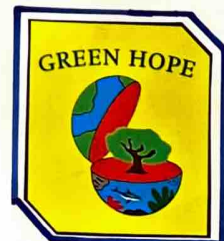
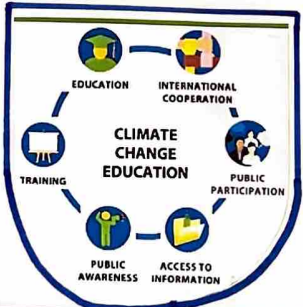
literacy energy fragmentation natural evolution global health biodiversity water environment education sustainable stewardship

pollution future environmental public conservation change resources

Q. Teaching climate?

- Each summary links to a more detailed discussion of what makes the topic important.
- Why it can be challenging to teach, and suggestions for grade level specific teaching strategies and links to relevant teaching materials.

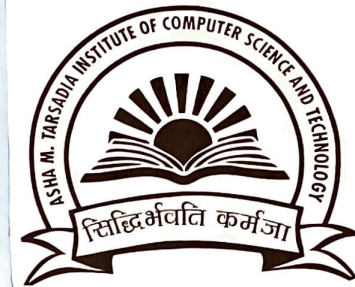
Save the Earth





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AMTICS-02



WORLD EARTH DAY CELEBRATION 2022

Earth Day Facts

- Earth Day is April 22
- Instituted by an US senator who felt that we need to pay more attention to the environment and our impact on it.

"POLLUTION IS SUICIDE
HARMFUL FOR EARTH AND FOR YOU"

GO GREEN

IT WON'T TAKE MUCH ENERGY TO CONSERVE ENERGY.

Why did we begin to Celebrate Earth day?

- Globally celebrated holiday that is sometimes extended into Earth Week. A full seven days of events focused on green awareness.

"One of the first condition of happiness is that the link between Man and nature shall not be broken"



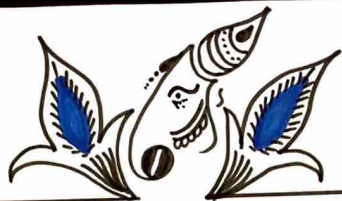
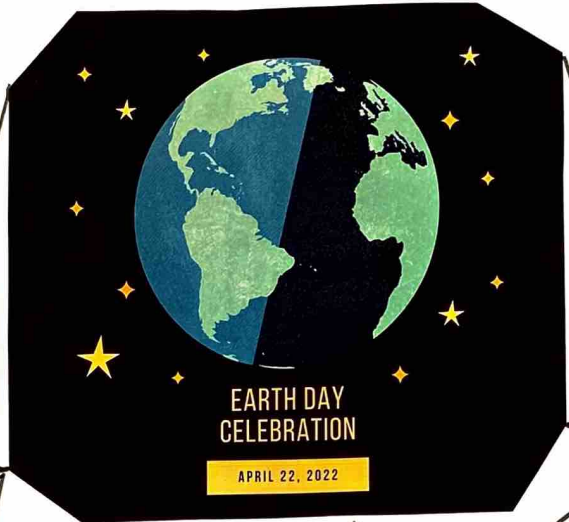
- Earth is One of the eight planet of Our Solar system that revolves around the Sun.
- Earth is the only known planet that supports life in the entire solar system
- World Earth Day is celebrated On the 22nd of April every year. It is to increase public awareness of the Earth's Sustainable environment.

"PROGRESS IS IMPOSSIBLE WITHOUT CHANGE AND THOSE WHO CAN'T CHANGE THEIR MINDS CAN'T CHANGE ANYTHING."

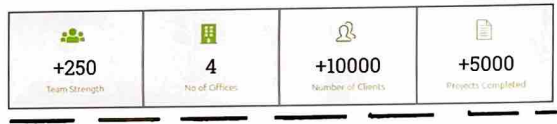
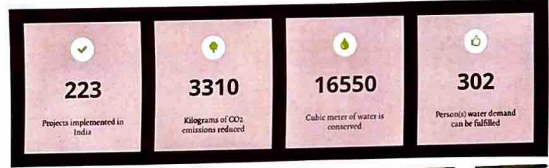
Earth is the God's best gift to us.
We made it worse
Let's care for it.
Save the Green.
Fight Global Warming

WHICH PLEDGE
YOU WANT
TAKE TODAY

LET'S SAVE THE WORLD TOGETHER



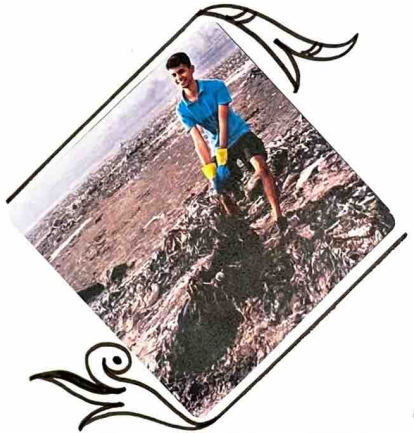
NAME OF THE CLIENT	PROJECT LOCATION
1. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
2. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
3. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
4. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
5. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
6. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
7. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
8. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
9. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
10. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
11. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
12. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
13. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
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15. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
16. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
17. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
18. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
19. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra
20. Asha M. Tarsadia Institute of Computer Science and Technology	Thane, Maharashtra



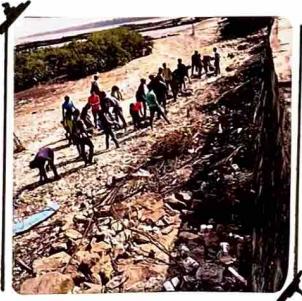
Case Study

Documents....

- For water consent/NOC:**
- Compliance with water consent clauses
 - Reports of treated wastewater analysis
 - Water cess returns
 - Effluent Treatment Plant report/ Sewage treatment plant report
 - The layout of the effluent treatment plant and sewage treatment plant
- For air consent/NOC:**
- Specifications of air pollution control facility
 - Drawing of monitoring facility
 - Report of emission analysis
 - Compliance with air consent clauses



Members of NGO 'Environment Life' with bags filled with trash that they collected from a waterfall at Tapalwadi Neral, Matheran, Maharashtra, October 2, 2018. (HT Photo)





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AMTICS - GROUP 4 WORLD EARTH DAY CELEBRATION - 2022



NO LANDTILLING.

MINIMISE SOIL
DISTURBANCE



NO OVER GRAZING



USE CROP
COVERS



CROPS BETWEEN
CASH CROPS
AS COVER



ADVANTAGES



PLANTS AS COVER

5 Principles of Regenerative Agriculture



NO
CHEMICALS !!



NO PESTICIDES



ORGANIC FARMING.



NO FERTILIZERS



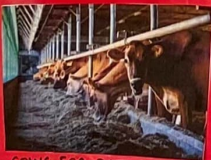
INTEGRATE
LIVESTOCK



SHEEPS USED FOR WOOL



COW DUNG AS MANURE



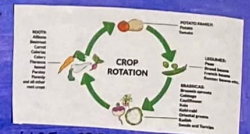
COWS FOR DAIRY PRODUCTS



INCREASE PLANT
DIVERSITY



PRACTICE
AGROFORESTRY



USE CROP ROTATION
METHOD



PLANTS WITH SAME GENES



WORLD EARTH DAY CELEBRATION 2022

REFORESTATION



"Trees On, Global warming gone."

"If you cut a tree, you kill a life"

"Save Trees, Save Life"

"Take Care of the Trees, They will take care of you."

AMICS-G5



PLASTIC CLEANUPS



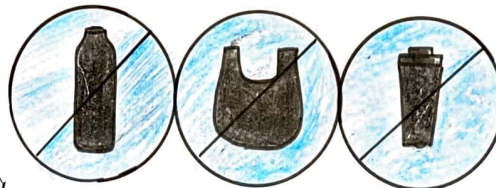
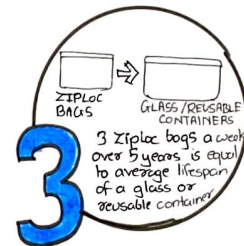
TO PLASTIC BAGS!



1. In general, say no to plastic.
2. Carry a reusable coffee cup.
3. Don't buy water: get a reusable bottle and fill it with tap water.
4. Bring your own shopping bag
5. Cook more & avoid take-away.
6. Avoid plastic packaging
7. Try to buy zero-waste products
8. Participate in a beach clean-ups.
9. Prefer sustainable companies which use upcycled materials
10. Wear reusable face masks.

FOUR WAYS

TO REDUCE SINGLE USE PLASTIC





EARTH DAY

GO FOR GREEN

Reverence for the Earth and Protecting Ecological Environment have related to the safety of human Beings. More Attention should be paid to Environmental Protection and try our Best to take good care of our UNIQUE EARTH



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Non-renewable energy comes from sources that will run out, or will not be replenished in our lifetimes — or even in MANY, MANY lifetimes. These sources include: **Fossil Fuel**, **Natural Gas**, **Minerals** and **Nuclear Energy**



FOSSIL FUELS...

India is witnessing acute shortage of fossil fuels leading to electricity blackouts in many states while the country swelters under record summer temperatures.

The coal inventories at Indian power plants have shrunk recently because of lower domestic output.

NATURAL GAS

Natural gas markets are usually price-inelastic and thus volatile. Nonetheless, recent emphasis on the environment and affordability during the early part of energy transition may have led to less attention to energy security thus resulting in shortage of natural gas.

EARTH MINERALS

The complicated recycling process and environmental impacts of these materials are some of the reasons why rare earth minerals are in short supply. Some minerals like gold can be extracted from legacy technology through recycling.

But still it's harder to get earth minerals in the proper supply chain as we want.

NUCLEAR ENERGY

A nuclear power phase-out is the discontinuation of usage of nuclear power for energy production. Often initiated because of concerns about nuclear power, phase-outs usually include shutting down nuclear power plants and looking towards fossil fuels and renewable energy.



AMTICS - 8

The World Earth Day Celebration 2022



Let's work together towards greener planet



Restore Our Earth

What is it!

→ Hydroelectricity is generated from the flow of water. It won't run out until a long time because the water cycle keeps on going. It is also known as Hydroelectric power.

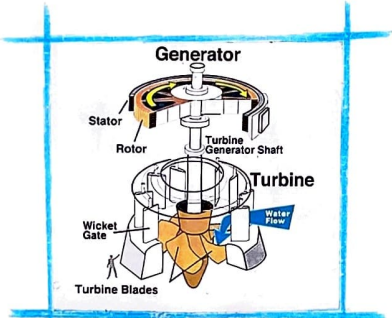
→ It is one of the oldest and largest sources of renewable energy which uses the natural flow of moving water to generate electricity.

Advantages

→ It does not pollute the air. It is a very reliable energy. Hydropower is also very easy to control so when they don't need a lot of energy they can slow down the waves. It is also very safe to use. It won't run out because of the water cycle. It can also prevent flooding.

Disadvantages

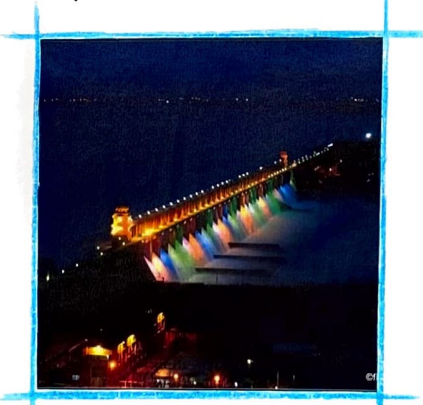
→ Building a dam will change water flows. It will also destroy fishes habitats and the dam will block the movements of fish. It is expensive to build a dam. Also droughts can affect the water so their would be little amount of energy. We also have very limited reservoirs that have the technology that uses hydropower.



Working

→ The water turbine changes the kinetic energy of the falling water into mechanical energy at the turbine shaft.

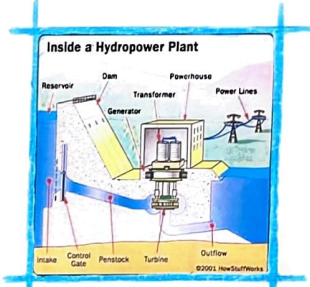
→ In simple words, falling water spins the water turbine. The turbine drives the alternator coupled with it and converts mechanical energy into electrical energy. This is the basic "working principle of hydroelectric power plant".



Ukai Dam



Sardar Sarovar Dam



Components

- Water Reservoir
- Dams
- Turbine
- Catchment area
- Generator
- Penstock
- Transformer



WORLD EARTH DAY

GRP.NO:- 6



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HOW IT WORKS ?

DATA

50 million classifications were received by the "Galaxy Zoo" in its first year, contributed by more than 150,000 people around the world.

PAPERS

More than 60 scientific papers have been used. Cornell Lab citizen science data collected by the BirdLab team since 1917.

DISCOVERY

Filipi Playans discovered the most likely protein based structure which cuts the enzyme produced by an AIDS like virus in monkeys in just 9 weeks.

Typology	Degree of control	Example
Co-legal	Citizen scientist	autonomous or bottom up citizen science
Co-created		participatory modeling
Collaborative		
Contributory	Professional scientist	opportunistic sensing social media harvesting

How A professional scientist and a Normal scientist who are general Public can make research more Generative and Problem Solving.



What is Citizen Science ?

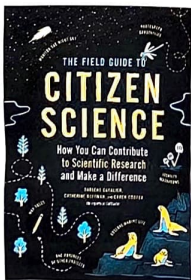
Citizen Science dates back at least 17th Century but over the past 20 years, Citizen Science has become a buzzword among the science, science educators, and Political Parliaments. In simple terms, Citizen Science is defined as the Public Participation in organized research. Citizen Science creates a way or environment for the general public and Scientists to come together and contribute on reaching the global goals for Sustainable Development.



5 Key Points of Citizen-Science

- * Observing
- * Questioning
- * Planning
- * Analyzing
- * Communicating

Book Recommendation on Citizen Science if you want to know about Citizen Science in Depth and More Details - By Darkene Davlier



A FEW WAYS YOU CAN PARTICIPATE

Donating Money:-

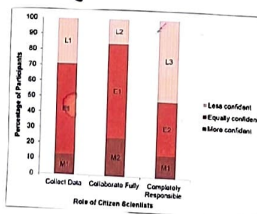
The easiest way to contribute towards citizen science is by donating money to verified sources which is working on the Sustainable development goals and for the betterment of Environment by planting trees (Mostly Non-profitable Ntios).

Set And Forget:-

Another easy way is to become a citizen scientist is to install a program in your surrounding which collect data on daily basis and you can monitor your progress after certain period of time.

Web-based:-

You can make your own website and do daily update about your installed set and forget program and its progress and help people to gain knowledge about your research.



Surrey done by US Geological Department about Citizen Scientist purpose or how Confident they are about their work



USA (California) 1990, when Citizen Science introduced for the first time by Rick Bonney

WHAT DO I GET OUT OF IT ?

An Educational Learn about your favourite topic in depth while Contributing.

Fun! You never know what you might find or what might find you.

A Purpose In LIFE!

Online games, reality TV shows are great for winding down, but Citizen science projects provide a way to put your spare time use in a more meaningful way.



USE OF RENEWABLE SOURCES

'GEOHERMAL ENERGY'



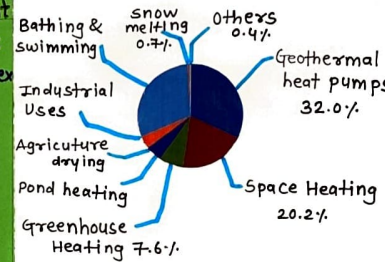
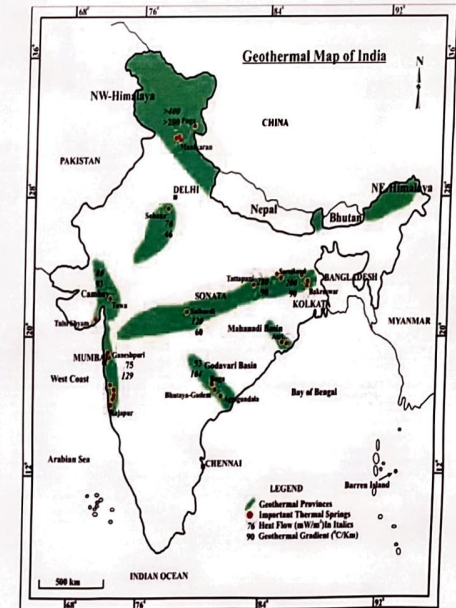
AMTICS

Group: 8



“The WORLD EARTH DAY CELEBRATION 2022”

Geothermal energy is heat within the earth. The word geothermal comes from the Greek words geo and therm. Geothermal energy is renewable energy source because heat is continuously produced inside the earth. People use geothermal heat for bathing, to heat buildings, and to generate electricity.



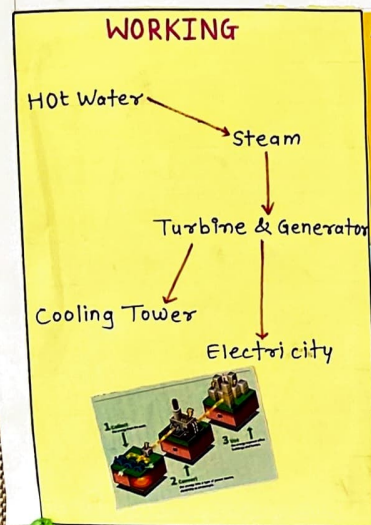
WHO? Geothermal energy is used in industrial application, office buildings and homes electricity or to heat.

WHAT? Thermal energy is a renewable resource derived from the earth's internal heat, contained in the rocks.

WHY? For the most part geothermal energy is a clean, widely available, resource. Geothermal power.

HOW? Geothermal energy is cultivated and converted for use by power plants. The three type commercial power.

- Top 10 Geothermal power plant**
- 1) Larderello Geothermal Complex
 - 2) Cerro Prieto Geothermal Complex
 - 3) Makban Geothermal Complex
 - 4) Salak Geothermal Plant
 - 5) CalEnergy Generation's Saton Sea Geothermal Plant



- Advantages:**
- o Available all the year around
 - o Does not involve any combustion of fuel.
 - o Independent of weather
 - o clean Resource - very little emission or overall environmental impact
 - o overall, geothermal energy is a sustainable resource.

- Disadvantages:**
- o Not Widespread source of energy
 - o High Installation costs.
 - o Can run out of steam.
 - o May release harmful gases
 - o Transportation
 - o Earth quakes.

CONCLUSION:-

Summarizing it all, the disadvantages to geothermal energy production. Consequently, many will argue against geothermal energy when it comes to reasons for investing in it.



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AMTICS

Group NO: 09



WORLD EARTH DAY POLLUTION CONTROL METHOD

AIR POLLUTION

- Air Pollution is contamination of the indoor or outdoor environment by any Chemical Physical or biological agent that modifies the natural characteristics of the Atmosphere.
- Best Ways to Reduce Air Pollutions:
 - Using public transports
 - Turn off the lights when not in use
 - Recycle and Reuse
 - No to Plastic bags
 - Reduction of forest fires and smoking
 - Use of fans instead of Air Conditioner
 - Use Filters for Chimneys
 - Avoid usage of crackers
 - Avoid using of products with Chemicals
 - Implement Afforestation



NOISE POLLUTION

- Noise can be simply defined as unwanted sound.
- The sound is pleasant or not depends upon its loudness, duration, rhythm and the mood of the person.

POLLUTION CONTROL METHOD:

- The Government should ensure the new machines that should be noise proof.
- Airport must be away from residential Area.
- The sound horn symbol is to be in school roads.
- Control noise at source by proper choice of equipment, design modification, mounting and proper layout.
- Isolation or use of baffles.
- Use of ear protection devices.



LAND POLLUTION

- Land Pollution is the demolition of Earth's land surfaces when often cause by human activities and their misuse of land resources. It occurs when waste is not disposed properly.

POLLUTION CONTROL METHOD:

- More and more land should be brought under farming.
- Trees should be planted everywhere.
- Waste matter should be disposed immediately.
- Avoid drilling the land for more underground water.
- Avoid using more fertilizers and pesticides.
- Integrated solid waste management.
- Good agricultural practices.
- Remediation of polluted soils.
- Prevention of erosion and silting.
- containment of hazardous waste and waste water treatment using treatment techniques.



WATER POLLUTION

• Water pollution is the Contamination of water sources by substances which make the water unusable for drinking, cooking, cleaning, swimming and other activities.

• Dispose of Toxic Chemicals properly.

• Shop with Water Pollution in Mind.

• Do Not Pour Fat and Grease Down the Drain

• Use Phosphate - Free Detergent and Dish Cleaners

• Check Your Sump pump or Cellar Drain.

• Dispose of Medical Waste properly

• Report Water Polluters

• Support Environmental Charities.

• Try to avoid Plastic containers

• Cut down on the Chemicals

• Plant some trees





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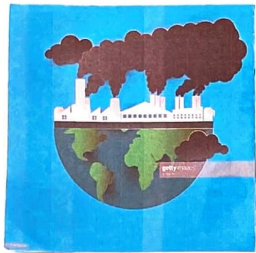
Group - 4

AMTICS

CELEBRATION OF WORLD EARTH DAY - 2022



AIR POLLUTION



There are many methods to control air pollution. One of the main method is to use public transport whenever possible. It contributes less to air pollution as it provides with less gas and energy. The collecting of garbage

and getting it on fire in dry seasons or dry leaves catching fires is a huge factor for causing air pollution, moreover smoking also causes air pollution. Also use of Air condition, fans and other electrical appliances causes air pollution.

RADIOACTIVE POLLUTION



There are four major methods to control Radioactive Pollution.

- (1) Radiation Exposure Protection
- (2) Radiation Contamination Protection.

(3) Controlled Area (4) Collection, Storage and disposal. These methods are about distance and time for shielding from exposure of radiation. Also eating and smoking is prohibit near radiations.

WATER POLLUTION



The water (Prevention and control of pollution) Act was enacted in 1974 to provide for the prevention and control of water pollution, and for the maintaining or restoring of wholesomeness

of water in the country. The Act was amended in 1988. Other ways to reduce water pollution is to reduce the use of chemicals when cleaning, dispose of your medications properly, Avoid the use of pesticides and Herbicides.

NOICE POLLUTION



Methods to control noise pollution are as follows:-

Turning off noisy appliances whenever not needed, Shutting the door while using noisy appliances,

Using of earply to bring down loud noises to manageable level, Planning trees near sensitive areas such as schools, hospitals. Making sound proof walls in theaters or auditoriums to suppress noise. Using proper Lubrication in machinery.

THERMAL POLLUTION



Thermal pollution can be controlled by employing of few effective scientific techniques such as construction of artificial lakes, cooling ponds,

and cooling of towers. Artificial lakes are human-made water bodies, which gives a potential alternative for cooling of power plants. Cooling ponds is the simplest and low-cost method for controlling thermal pollution.

LAND POLLUTION



Major methods to reduce land pollution are using of organic fertilizers by farmers in agriculture process, Stopping of Deforestation and

beginning reforestation and afforestation, Proper disposal of industrial waste and to remember the 3R's which are reduce, reuse and recycle harmful substances to control land pollution.



WORLD EARTH DAY AMTICS-07

WORLD EARTH DAY

save the earth,
respect the environment

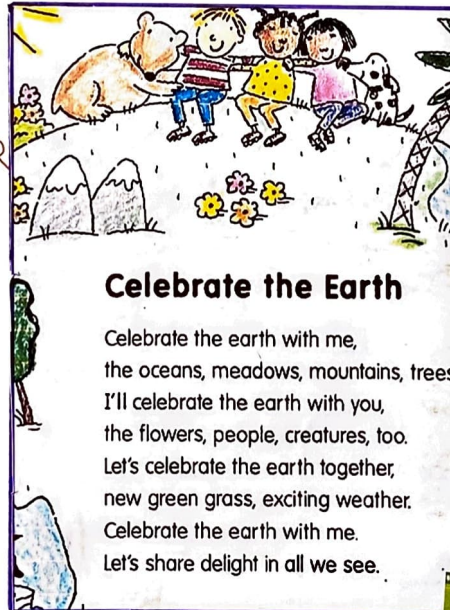


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WHAT IS EARTH DAY?

- ONE OF THE MOST WIDELY CELEBRATED EVENT ACROSS THE GLOBE.
- ORIGINALLY CELEBRATED AT SPRING EQUINOX AROUND 21 MARCH.
- UNITED STATE HAS DESIGNATED 22 APRIL AS THE INTERNATIONAL MOTHER EARTH DAY.
- CELEBRATED IN MORE THAN 192 COUNTRIES EACH YEAR



Celebrate the Earth

Celebrate the earth with me,
the oceans, meadows, mountains, trees
I'll celebrate the earth with you,
the flowers, people, creatures, too.
Let's celebrate the earth together,
new green grass, exciting weather.
Celebrate the earth with me.
Let's share delight in all we see.

WHY CELEBRATE EARTH DAY?

- ABOUT APPRECIATING THE UNIQUENESS OF OUR EARTH WITH ITS INCREDIBLE BIODIVERSITY.
- EARTH DAY IS DEDICATED TO INCREASING AWARENESS ABOUT EARTH, ITS ISSUES AND PROBLEMS.
- MORE THAN 1 BILLION PEOPLE NOW PARTICIPATE IN EARTH DAY, MAKING IT THE LARGEST CIVIC OBSERVANCE IN WORLD.
- MANY POLICY AND ACTS ARE SANCTIONED SUCH AS CLEAN WATER ACT, CLEAR AIR ACT.

BUT WHAT CAN I DO?

A handy guide to saving the planet

SHOP LOCAL

The closer food is grown to you, the better as it won't require driving or flying to get to you. You don't need onions from New Zealand if you live in the UK! Check for local organic shops and local veg box schemes. you'll also be supporting someone's enterprise rather than a massive corporation.
Even better, try and grow a few vegetables yourself.
This also works for beauty products from small businesses, clothes and anything else. If it is made down the road, much better than it sailing or flying from somewhere like China. Support friends of friends, not corporations!

BUY LESS

CHOOSE WELL.
It is estimated that the clothing industry is responsible for 10% of carbon emissions. Buy quality items over quantity, and always check if you can get it second hand before buying new. Look out for items that have been made from recycled products such as recycled plastic lunchboxes, or recycled too paper. Buy what you need in the biggest size that is practical to avoid packaging waste (its usually cheaper too)

BUY ORGANIC

Organic food production helps preserve local wildlife. By avoiding toxic chemicals, using of mixed planting as a natural pest control measure, and maintaining field margins and hedges, organic farming provides a retreat to local wildlife rather than taking it away its natural habitat like conventional agriculture.

CYCLE OR WALK

How far are you going? Can you ditch the car and walk? A second hand bike should be easy to come by - it will save you money on petrol & you could do that instead of paying for the gym tool if it's too far to cycle, can you get a bus or a train?

little ways

to Save our Planet

Turn off water while brushing your teeth

DON'T LITTER

Call all your friends how to save the planet

Use a reusable water bottle

Save energy unplugging unused appliances

Recycle your newspapers

EAT LESS MEAT

CAR POOL



AMTICS CS2 GROUP - 1

THE WORLD EARTH DAY

REDUCE USE RECYCLE

-2022



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REDUCE YOUR WASTE

- PACK YOUR OWN LUNCH
- REUSABLE BAGS AND PRODUCE BAGS
- SHOP ETHICAL BRANDS
- BUY SECOND HAND
- REUSABLE NOT DISPOSABLE
- MEND IT
- TRY TO FIX
- LEARN TO COMPOST
- BIODEGRADABLE OPTIONS
- REFILLABLE OPTIONS
- STORE FOOD WITHOUT PLASTIC
- EAT MORE WHOLE FOODS AND PACKAGE FREE OPTIONS



- ### Why Is It Imp...?
- * Recycling Saves Environmental Conditions and Reduce Pollution
 - * Recycling Saves Space for Waste Disposal
 - * Economic Benefits
 - * Saves Energy and Natural Resources
 - * India Recycle Roughly 40% of their waste a year.



Group
202103103510330 Mohit Acharya
202103103510336 Tandel Krishna Satishbhai
202103103510337 Subhajeet Bora



POLLUTION CONTROL METHODS



GROUP: 7

AMTICS



Environmental pollution is an incurable disease. It can only be prevented.



BE A PART OF SOLUTION NOT POLLUTION



THE WORLD EARTH CELEBRATION MAY 2022

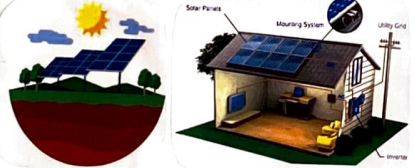


Where should we use solar energy?

- Solar Electricity: We can use it in home, in Road lights.
- Solar Heating: We can use solar energy to produce HEAT instead of using fossil fuel.
- Solar Ventilation: Solar ventilation solutions such as solar attic fans can reduce the burden of your HVAC by helping to cool your home during the summer.
- Solar Transportation: Can be used in Cars, Trains to provide energy in it.
- Portable Solar: Can be used in portable things like watch, mobile.

Why should we use solar energy?

Solar energy does not emit toxic substance or contaminants into the air, which can be very damaging to the environment and to human beings. Solar energy does not generate waste or contaminate water - an extremely important factor given the scarcity of water. Unlike fossil fuels.



Types of Solar panel

- Monocrystalline Solar Panels (Mono-SI)...
- Polycrystalline Solar Panels (Poly-SI)...
- Thin-Film Solar Cells (TFSC)...
- Bihybrid Solar Cell...

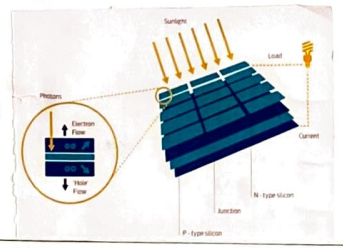
What is Solar Energy?

Solar energy is radiant light and heat from the sun that is harnessed using a range of technologies such as solar power to generate electricity, solar thermal energy including solar water heating, and solar architecture.

Importance: No greenhouse gas emissions are released into the atmosphere when you use solar panels to create electricity. And because the sun provides more energy than we'll ever need, electricity from solar power is a very important source.

How does solar energy work?

1. Sunlight activates the panels.
2. The cells produce electrical current. A silicon ingot and coater.
3. The electrical energy is converted.
4. The converted electricity powers your home.



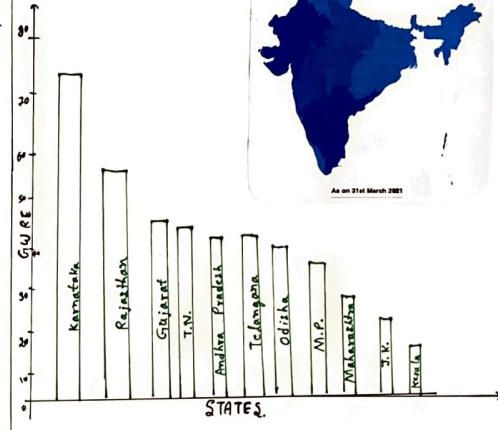
Advantages of solar energy

- Solar power is pollution-free and causes no greenhouse gases to be emitted after installation.
- Reduced dependence on foreign oil and fossil fuels.
- Renewable clean power that is available every day of the year, even cloudy days produce some power.
- Return on investment unlike paying for utility bills.

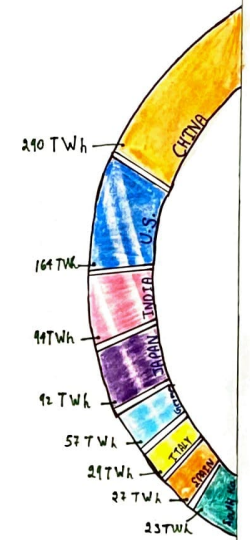
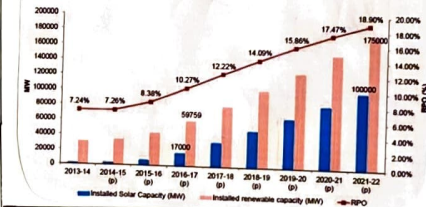
Disadvantages of solar energy

- Cost: The initial cost of purchasing a solar system is fairly high.
- Weather-dependent: Although solar energy can still be collected during cloudy and rainy days, the efficiency of the solar system drops.
- Solar energy storage is expensive.
- Uses a lot of space.

Statistics: 2022



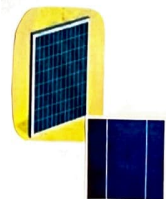
175 GW RE will contribute to 18.9% of the entire power consumption in India in 2022



Three Main Solar Panel Types



- Monocrystalline**
- Pure Silicon
 - 24.4% efficiency
 - Moderate Cost
 - Longest lifespan
 - 38.1g CO₂-eq./KWh



- Polycrystalline**
- Melted silicon crystals
 - 19.9% efficiency
 - Least expensive
 - Moderate lifespan
 - 27.2g CO₂-eq./KWh



- Thin-Film**
- Variety of materials
 - 18.9% efficiency
 - Most expensive
 - Shortest lifespan
 - As little as 21.4g CO₂-eq./KWh





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3R's REDUCE. REUSE RECYCLE ♻️

AM.T.I.C.S

GROUP-12



WORLD EARTH DAY



REDUCE

NO

YES

Reduce the Amount
of Waste you
Produce.



RECYCLE

Recycle the materials
which can't be
Reused.



REUSE

Use the same
Materials again
and Again.



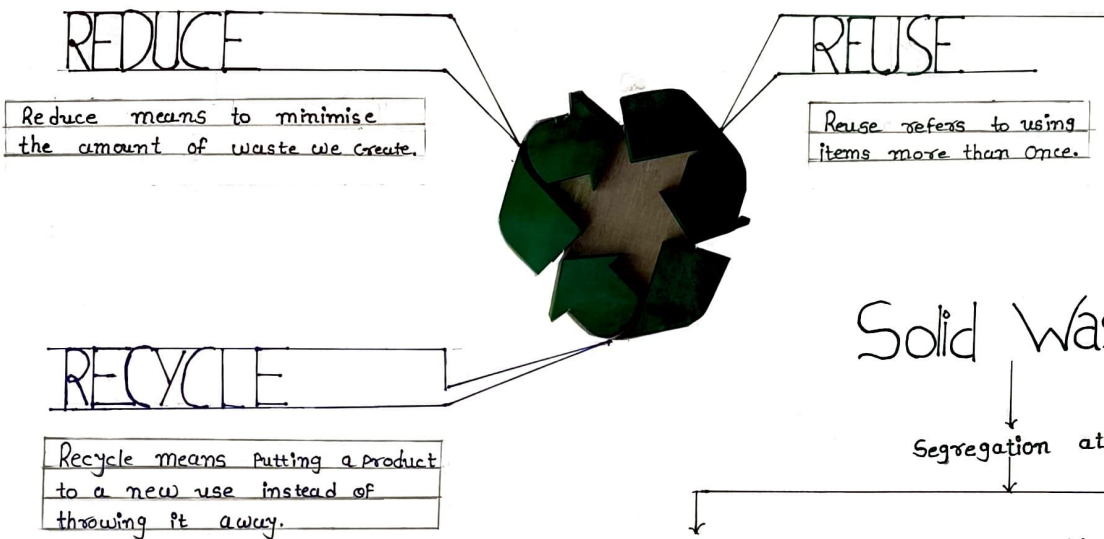


AMTICS-05

WORLD EARTH DAY CELEBRATION 2022



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Solid Waste

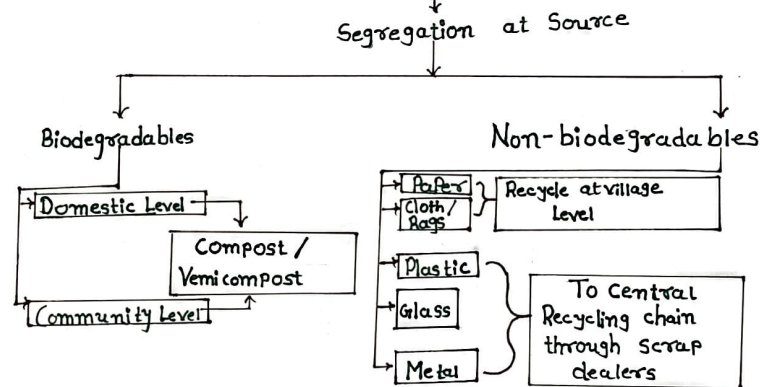


Table -1
India's Waste Management Initiatives

Policy and Regulation	
Institutional Framework	<ul style="list-style-type: none"> Central Level State Level
Legal Framework	<ul style="list-style-type: none"> Other Organizations/Associations 74th Constitutional Amendment Act, 1992 Management and Handling Rules Environment (Protection) Act, 1986 National Environment Tribunal Act, 1995 National Environment Appellate Authority Act, 1997 Water (Prevention & Control of Pollution) Act, 1974 Water (Prevention & Control of Pollution) Cess Act, 1977
Environmental Norms	<ul style="list-style-type: none"> Existing Environmental Standards Recently Notified Environmental Standards
Policy Initiatives	<ul style="list-style-type: none"> National Urban Sanitation Policy, 2008 National Environment Policy, 2006 Policy Statement for Abatement of Pollution, 1992 National Conservation Strategy and Policy Statement on Environment and Development, 1992 Law Commission Recommendation Ecomark Scheme, 1991
Key Government Programmes	
JNNURM	<ul style="list-style-type: none"> Programme Scope and Structure Funding Experience So Far Experience on Reforms Issues and Challenges
Total Sanitation Campaign	<ul style="list-style-type: none"> Programme Scope and Structure Funding Experience So Far Issues and Challenges
MNRE's Waste-to-Energy Programmes	<ul style="list-style-type: none"> Programme Scope and Structure Experience So Far Issues and Challenges
Other Programmes	<ul style="list-style-type: none"> Integrated Low Cost Sanitation Scheme National Biogas and Manure Management Programme
Technology and Practices	
Traditional Technologies	<ul style="list-style-type: none"> Landfills Waste Incineration Sanitation

Key Projects	
Key Projects	<ul style="list-style-type: none"> Kolkata: SWM Improvement Project Kanchrapara: SWM through Citizens' Participation Kollam: MSW Management Project Chennai: MSW Project Navi Mumbai: MSW Management Project Gurgaon: Ultra Modern Waste Management Plant Namakkal: Zero Garbage Status Suryapet: Dustbin Free and Zero Garbage Town Visakhapatnam: SWM Through Citizens Participation Thiruvananthapuram: Decentralised SWM CIDCO: SWM System at Areas Adjoining Navi Mumbai
Key Initiatives	<ul style="list-style-type: none"> Chennai: CPRS Equipped Waste Bin Ahmedabad: Tapping Methane Gas Goa: Solid Waste Management Corporation Nagpur: Bye-Laws to Collect Waste Generated in Hotels Nagpur: Management of Construction Debris Akola: CBO for Waste Management Yavatmal: Door-to-Door Collection of Solid Waste
Rural Waste Management	
Key Projects	<ul style="list-style-type: none"> Tamil Nadu: Zero Waste Mgt. at Vellore District Maharashtra: Swm at Dhanner Village Gujarat: Grey-water Mgt. at Fashpur Village Maharashtra: Greywater Mgt. at Waldgon Village Nashik: Waste-paper to Peppwood Kerala: Post-NGP Initiatives at Kattapana Village
Industrial Solid Waste Mgt.	
Key Projects	<ul style="list-style-type: none"> Andhra Pradesh: 3.66-MW Power Generation Project Uttar Pradesh: 6-MW Biomass Cogeneration Power Plant Other WTE Projects Kolkata: Waste Minimisation of Small-Scale Industrial Units Himachal Pradesh: Waste Treatment Plant
Liquid Waste Management	
Key projects	<ul style="list-style-type: none"> Municipal Liquid Waste Other Noteworthy Water Reuse and Recycling Projects Industrial Liquid Waste

Source- India Infrastructure report (2009)

THERMAL POWER PLANT

GROUP-13 AMTICS 13 WORLD EARTH DAY -2022



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Coal Power Plant Graphic With Electrical Power Station



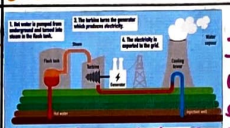
A thermal power station is a power station in which heat energy is converted to electricity. Typically, heat is used to boil water in a large pressure vessel to produce high-pressure steam, which drives a steam turbine connected to an electrical generator. The low-pressure exhaust from the turbine passes through a steam condenser and is recycled to what it was heated. The design of thermal power stations depends on the intended energy source: fossil fuel, nuclear & geothermal power.

NUCLEAR POWER PLANT



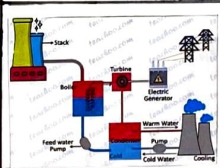
Nuclear Power plants use heat produced during nuclear fission to heat water. The heat produced during nuclear fission in the reactor core is used to boil water into steam, which turns the blades of a steam turbine. As the turbine blades turn, they drive generators that make electricity.

GEO THERMAL PLANT



It uses steam to produce electricity. The steam comes from reserved hot water found a few miles or more below the earth's surface. The steam rotates a turbine that activates a generator, which produces electricity. 3 types: Dry steam, Flash steam and binary cycle.

PREVENTION FOR THERMAL POLLUTION



1. Heated water from the industries can be treated before discharging directly to the water bodies.
2. Heated water from the industries can be treated by the installation of cooling ponds & cooling towers.
3. Industrial treated water can be recycled for domestic use or industrial heating.
4. Through artificial lakes: In this lake industries can discharge their used or heated water at one end and water for cooling purposes may be withdrawn from the other end. The heat is eventually dissipated through evaporation.

COAL-FIRED POWER PLANT



Coal-fired plants produce

electricity by burning coal in a boiler to produce steam. The steam produced, under tremendous pressure, flows into a turbine, which spins a generator to create electricity. The steam is then cooled, condensed back into water and returned to the boiler to start the process over.

FOSSIL FUEL POWER STATION



A fossil fuel power station

is a thermal power station which burns a fossil fuel, such as coal or natural gas, to produce electricity. Fossil fuel power stations have machinery to convert the heat energy of combustion into mechanical energy, which then operates an electrical generator.

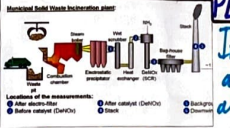
SOLAR THERMAL PLANT



Solar thermal power

plants are electricity generation plants that utilize energy from the sun to heat a fluid to a high temperature. The fluid then transfers heat to water, which then becomes super-heated steam. Mechanical energy is converted into electricity by generator.

WASTE INCINERATION PLANT



In most and all

newly constructed ones, the heat released from burning waste is used to produce electricity. This electricity can help to offset the cost of building & maintain the facility. Recycling, of plastic atleast, saves more energy than combustion generators. Plastic is challenge because of non-recyclable property.

CREATED BY:-

- NAIM
- MANTHAN
- RAKESH
- RAJ
- EKTA

CLASS:- CS-2.



AMTICS-14

WORLD EARTH DAY 2022

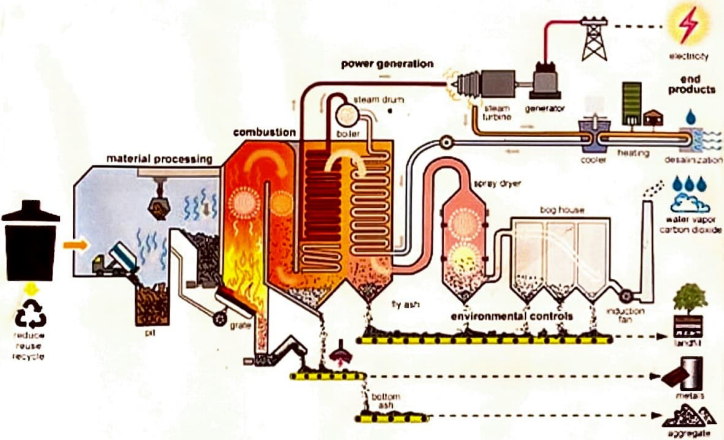
RENEWABLE RESOURCES

CS-2



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Bio-Mass Energy

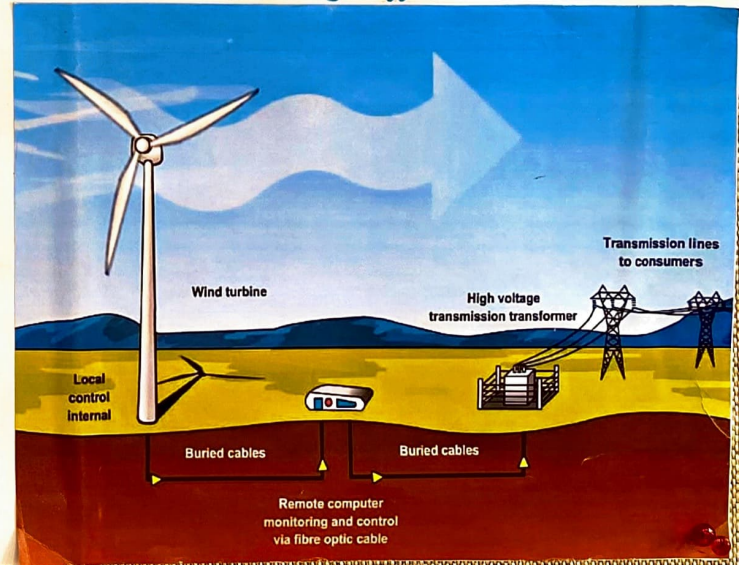


Solar Energy

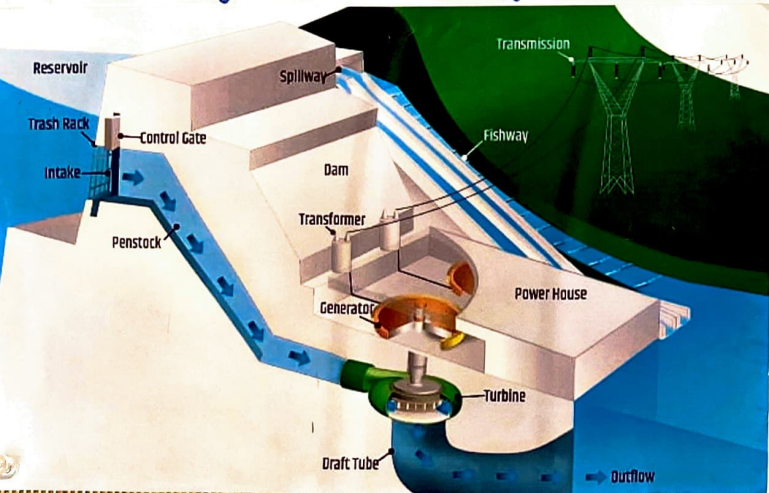
Geo-Thermal Energy



Wind Energy



Hydro Electric Energy



5 types of renewable energy sources

Solar Energy

Solar energy comes from the sun, and is harvested with several technologies, including solar panels.



Wind Power

Wind turbines capture the wind's power as they spin and convert it to electricity.



Hydroelectricity

Hydropower turbines rotate as water flows through them, generating electricity.



Geothermal Energy

Heat energy from within the earth can be harnessed to generate power.



Biomass

Biomass fuels are recently living organic matter (like plants and animals) that are burned for power.

