



Green News



LIFE
Lifestyle for Environment

West Bengal Pollution Control Board

17th EPS held at Oberoi Grand, Kolkata

At the 17th Environment Partnership Summit,(EPS) held at Oberoi Grand, Kolkata on 11 January 24 the Hon'ble Minister-in-charge Department of Environment, Go WB, Md Ghulam Rabbani stated " We are stepping into an era fighting with unprecedented challenges and possibilities, natural resources are under immense strain, carbon emission has reached alarming levels, and societal inequalities are on the rise. Both the environment and people are bearing the brunt of these issues, as a result , businesses are increasingly recognising the significance of sustainability. These awareness places substantial pressure on them to adapt best practices in order to align with the evolving needs of the environment.

According to Mr. Rabbani as per the last report released by Centre for Science and Environment, it can be said that West Bengal under the leadership of Mamata Banerjee is in a front line position in several sustainability parameters such as employment, health, economy and infrastructure. The ESG reporting landscape is rapidly changing at the global level with ever increasing challenges pertaining to the environmental, social, governance dimension. At same event



Md Ghulam Rabbani Hon'ble MIC, Department of Environment, Dr Rajesh Kumar, Member Secretary WBPCB along with other dignitaries inaugurating the Summit.

Dr. Rajesh Kumar, IPS, Member Secretary, WBPCB, expressed gratitude towards the ICC for intivating in the 17th Environment Partnership Summit and Environment Excellence Award. Dr Kumar highlighted that in the recent past the Indian government has made a mandate through SEBI, that the top 1,000 companies need to submit their BRSR - business responsibility and sustainability reporting, indicating their compliance with ESG norms and their value chain partners. He said " We want to develop a system and we will also discuss with the SEBI representatives about the possibility of implementing a system that can yield meaningful results from audit reports submitted by different companies and their valuable partners.

He believes that if everyone works together towards a common goal, India can become a developed nation by 2047. hazardous waste, solid waste, plastic waste, electronic waste and other. It is crucial for the industries to ensure compliance in these areas. This is important because in the Pollution Control Board, we take care whether companies have obtained necessary consents to establish and consent to operate and are complying with air emission and water effluent norms." He also informed the audiences about the adverse consequences that ultimately affect human beings.

Report on distribution of smokeless stove in Howrah district

The West Bengal Pollution Control Board (WBPCB) is committed to improve the air quality of Kolkata and other non- attainment cities. As part of the 'National Clean Air Programme', the WBPCB has started a drive to motivate people to use eco-friendly fuel in order to mitigate harmful impacts due to air pollution. For this purpose, a special programme was organized at Sarat Sadan in Howrah district on 7 December, 2023 to distribute eco-friendly smokeless stoves, which is an innovative initiative of the WBPCB. Md. Ghulam Rabbani, Hon'ble Minister-in-Charge, Department of Environment, Government

of West Bengal; Shri Arup Roy, Hon'ble Minister-in-Charge, Department of Food Processing and Horticulture, Government of West Bengal;



Hon'ble Minister- in- Charge, Department of Environment, Md. Ghulam Rabbani distributing the Smokeless Stoves.

Dr. Kalyan Rudra, Chairman, WBPCB; Dr. Rajesh Kumar, IPS, Member Secretary, WBPCB ; Shri Manoj Tiwari,

Hon'ble Minister of State, Department of Youth Services and Sports, Government of West Bengal and other personalities graced the

occasion. Eminent doctor and chairperson of Howrah Municipal Corporation Dr. Sujoy Chakraborty advised the beneficiaries to use the chullahs, which prevent eye irritation and breathing problems. On behalf of the State Board, eco-friendly smokeless stoves were handed over to 500 families of Howrah Pilkhanaarea

with an aim to improve the air quality as well as minimize the health hazards.

Editorial



It's my great pleasure to introduce the newest version of the Newsletter. 'GREEN NEWS' of the West Bengal Pollution Control Board's (WBPCB). Through this newsletter we would like to highlight and share some of the exciting activity updates as well as news from our end.

In the recent past, the WBPCB has initiated a number of remarkable steps involving different government agencies and with the active participation of representatives of civil societies with an aim for a cleaner and greener West Bengal. For this purpose, effective initiatives were taken for successful implementation of the National Clean Air Programme (NCAP) of the MoEF&CC through improvement of air quality of different non attainment cities like Kolkata, Howrah, Haldia, Barrackpore, Asansol and Durgapur by extensive water sprinkling to suppress road dusts to mitigate air pollution caused by vehicular movement during the winter months, dousing of fire in active dumpsites of Dhapa and Promodnagar areas, strict monitoring of construction activities to minimise their contribution towards air pollution, completely banning indiscriminate open burning of solid waste and constant monitoring of the same

3-Day training programme organised by Central Pollution Control Board

A three day training program on Water quality: addressing emerging pollutants and challenges has been organized by the Central Pollution Control Board, Regional Directorate, Kolkata from 17th to 19th January '24. The program took place at the conference hall of Central Pollution Control Board, RD, Kolkata.

Dignitaries from various fields attended the three day training program. Among all the dignitaries, guest of honour Dr Rajesh Kumar, IPS, Member Secretary, West Bengal Pollution Control Board, shared his thoughts on challenges towards environment; especially treatment of degrading water quality.

through GIS-based modern laboratory, distribution of LPG cylinders to coal based road-side eateries etc. Notably, the WBPCB has developed most intensive air quality monitoring network (Ambient Air Quality is regularly monitored at 83 locations in West Bengal) in the country, installed 175 Sensor based CAAQMS and 175 Real time Noise Monitoring Stations along with 125 LED Display Board inside the campus of educational institutions, police stations and district towns of our State and the Emission Testing Facility for Green Firecrackers at Haldia Regional Office in Purba Medinipore district. Moreover, the WBPCB has made its significant digital footprint through manifold innovative initiatives, like West Bengal Paribesh App, introduction of Social Media Page (Facebook, Twitter), Integrated Grievance Management System (IGMS). Online Consent Management & Monitoring System (OCMMS), Paribesh News Portal of the Youtube etc, which have enabled common people to easily lodge complaints, access different environmental information, apply for different certificates and authorizations and school students may share some relevant environmental information as well as their views for the betterment of the environment. The whole process has become transparent, interactive and time saving.

Apart from this, the West Bengal Pollution Control Board is giving its full effort as the State Nodal Agency (SNA) to build up a green brigade comprising students and teachers of different schools and colleges across the State under the national-level environmental awareness programme-Environment Education programme (EEP). In present day, the WBPCB has successfully enlisted 5632 schools and 100 colleges covering 23 districts of West Bengal to be involved in several environmental activities and events including Mission LiFE Programme focusing on our lifestyle change for environment, saplings plantation, campaign against single-use plastic carry bags, air and noise pollution, rally, seminars/workshops etc. which are being carried out by the State Board itself and the dedicated teams of schools and colleges throughout the year. Recently, the State Board organized a Workshop Cum model exhibition at Behrampore in Murshidabad district and many more in different districts of the State are in pipe line.

It's our great privilege to be a part of this continuous environmental movement involving the energetic students. The WBPCB is committed to carry out the EEP forward involving more such young force with all the fruitful and positive ideas as well as sincere efforts and enthusiasm towards betterment of the environment.

I hope, this event-based compact newsletter will be able to attract the more attention and create huge interest as well as awareness amongst all.

Dr. Rajesh Kumar, IPS, Member Secretary, WBPCB



Dr. Rajesh Kumar, IPS, Member Secretary at the programme organised by Central Pollution Control Board

Talking about organizing the event, Dr Kumar assured participants that through these three days of training program they will surely acquire a better understanding about the intricacies and challenges that are present in assessment of water quality. They will learn not only how to do testing and sampling but can also perform on site experiments, and learn how things are to be done and how new things are being done by different states and their Pollution Control Boards.

Dr Kumar stated, "This challenge of degrading water quality has been ever-present from generations to gener-

ations and from different ages and epochs".

He pointed out with today's pharmaceutical companies which on one hand produces medicines that increase lifespan but on the hindsight disposal of pharmaceutical waste from these industries into water bodies has brought an array of environmental deterioration and various health hazards along with it. He said, "if we don't take care of other species than nature will take its won course."

Message from Dr Kalyan Rudra, Chairman, WBPCB

On 5th of January, 2024, the WBPCB and faculty of Krishnath College jointly conducted an awareness campaign on the theme Mission Life. The awareness campaign was on degradation of environment and how to minimise its effects via various rather meticulous ways which



Dr. Kalyan Rudra, Chairman, West Bengal Pollution Control Board, Delivering his speech on Mission Life

Among them when the Britishers first visited Murshidabad, Robert Clive was flustered for words to describe its beauty and accomplishments. At the very end Dr. Kalyan Rudra puts his emphasis on that it would have been better if it was more of an Indian way of planning rather than the west". Again quoting Gurudev Rabindranath Tagore "India has been dragged by the pros

was presented in an array of brilliant projects, models exhibited by students from various schools across the district. The exhibition was directed towards raising awareness among students against climate change and how to prevent Environmental degradation due to it. The Chief Guest of the event was Dr. Kalyan Rudra, Chairman, WBPCB. Born in the year 1952 in Lalbagh city of Murshidabad, West Bengal, his parents migrated from East Pakistan which is today's Bangladesh during the 1947 Bengal partition. In his speech, he spoke about the amalga

mation of emotions during the partition as well as his affection particularly for Murshidabad. He took a break from his protracted teaching career in 2007 and join the research project of the West Bengal Pollution Control Board. He was also a member of the National Flood Management Core group. Talking about Bengal and particularly Murshidabad's rich history, Dr. Kalyan Rudra spoke about how its never ending prosperity, rich cultural diversity and dazzling traditions attracted 7 European Clans towards itself.

perous West behind a Chariot, being dragged along when I asked what is this they say this is development. "The emphasis and purpose of the Workshop cum Model Exhibition organised by WBPCB is to raise awareness regarding environmental degradation among the students and teachers. The main aim of MISSION LIFE is to make efforts in changing the lifestyles towards creating and safeguarding a better environment for our future generation" as said by Dr Kalyan Rudra, Chairman, West Bengal Pollution Control Board.

Workshop cum Model Exhibition in Murshidabad District Theme: Mission LiFE

The West Bengal Pollution Control Board in association with Krishnath college, Behrampore, Murshidabad dist. organized an Environmental workshop cum Model Exhibition under the Environment Education Programme (EEP) funded by the Ministry of Environment, Govt.

of India involving the Eco-club students of different schools and colleges enlisted under the said Programme at the auditorium of Krishnath College, 1, Sahid Surya Sen Road, Gora Bazar, Behrampore, Murshidabad dist. on 4- 5 January, 2024. It was based on seven different

themes of Mission LiFE Programme, focusing on Energy saving, Water Conservation, Single-use Plastic Reduction, Sustainable Food systems Adoption, Waste Reduction, Healthy Lifestyles Adoption and E-waste Reduction.



1. Dr Kalyan Rudra and Mr Subrata Ghosh giving away the 1st prize to Seva Milani High School.



2. Dr Kalyan Rudra handing over the 2nd Prize to Saidabad Sudarshan Chakra Boys High School.

3. Dr Kalyan Rudra handing over the 3rd Prize to Chanak Vivekananda Bani Mandir High School.

4. Dr Kalyan Rudra handing over the Environment Excellence Award to Department of Chemistry, K N College, Berhampore.



An overview on population increase, its consequences on environment



A Model prepared by the students of Ahiran Himangini Bidyatan High School

The project of Ahiran Himangini High School was on degradation of environment caused by pollution in urban life due to migration of more and more of rural population towards urban settlements. Rural settlements generally succumb to producing less polluting factors than what the urban population produces on a daily basis. They proposed the idea of keeping equal or adequately proportional horizontal ground space with sufficient plantation in the area for every vertical flat/apartment. Creating such ingenious green zones can

tackle the carbon emissions that every flat grid building systems produce everyday. The overall project looks out in providing greener ideas in modern society so that the future world can experience cleaner environment than what we have today. As their teacher Mr Raghav Ghosh said that this kind of exhibition organised by West Bengal Pollution Control Board are extremely important for enlightenment of students towards the menace of environment degradation. More such expo's are necessary to help reach more and more people to understand the greater threat which may cause irreversible changes causing long term damage to our planet if not dealt appropriately and aptly. Overall, sustainable policies that focus on family planning, education, and economic development are essential for India to navigate the challenges of rapid population growth and create a prosperous, equitable, and ecologically sustainable future.

Rain Water Management and Harvesting in India



Students and Teachers of Nabagram High School

Rainwater management and harvesting have become pivotal practices in India, especially given the country's diverse climatic conditions and increasing water scarcity challenges. The scarcity of water resources has prompted many regions in India to embrace rainwater harvesting systems which collect and store rainwater during the monsoon season. Rainwater harvesting systems provide a valuable resource for agriculture, groundwater recharge, and domestic use during dry periods, promoting efficient water use and reducing dependence on conventional water sources. Government initiatives, coupled with community-driven efforts, promote awareness and implementation of

rainwater harvesting techniques. By harnessing the power of rain, India not only addresses water scarcity but also contributes to environmental conservation, mitigating the impact of erratic rainfall patterns and promoting resilience in the face of changing climate conditions. In addition to rainwater harvesting, rainwater management practices, such as reducing runoff and treating stormwater, play a significant role in effective water management. The management of rainwater enables the water to be available for various uses, reduces soil erosion and replenishes aquifers, benefiting agriculture and other environmental resources.

Household Water Treatment



Dr Kalyan Rudra, Chairman, West Bengal Pollution Control Board and Dr Sujata Bagchi Banerjee, Principal Krishnath College interacting with the students of Berhampur J N Academy

In India, household water treatment is crucial for combating waterborne diseases and ensuring access to safe drinking water, especially in rural areas where water quality issues are prevalent. Implementing simple and effective methods like boiling, chlorination or using household water filters as an essential solution to purify water at the point of use. These affordable and accessible solutions empowers communities to take charge of their water quality, contributing to improved health and sanitation. As India continues to improve its water infrastructure and sanitation facilities, prioritizing household water treatment becomes a pivotal step towards achieving a healthier and more sustainable future. Access to clean water at the point of use can help to reduce the prevalence of waterborne diseases, lower healthcare costs and improve the quality of life for individuals as well as communities.

E-Waste Management in India: Navigating Challenges, Embracing solutions

E-Waste Management in India has emerged as a pressing concern amid the country's rapid technological growth. With a surge in electronic item consumption, effective strategies are imperative to address the environmental and health risks associated with discarded devices. The E-Waste (Management) Rules implemented in 2016 and subsequent amendments in 2022 lay the foundation for responsible disposal, emphasizing Extended Producer Responsibility (EPR). However, challenges persist, including informal recycling practices and inadequate infrastructure. To mitigate the challenges, innovative solutions are gaining momentum, such as technology-driven recycling, awareness campaigns and collaboration with the informal sector.

Generating heat with the help of water through Electrolysis process



Students along with the teacher of Bankipur Nazrul Vidyapith

Environmental degradation and Global Warming have become major challenges in today's world. We've hit the rock bottom as our natural resources is getting exhausted with time. In order to mitigate the adverse effects of environmental

degradation and Global Warming, we have to give emphasis on renewable sources of energy. Bankipur Nazrul Vidyapith has come forward with their Model depicting Electrolysis Process where the water can be splitted and can gain heat as well as the fire can be obtained from this process. Sodium Chloride commonly known as Salt is used in this process as electrolytic solution. This process is exothermic so produces heat. And the best part of this process is presence of huge amount of water and the easy accessibility of common salt.



Students and Teacher of Chanak Vivekananda Bani Mandir High School

Model on E-Waste management made by Chanak Vivekananda Bani Mandir High School

One of many innovative projects that were presented in the exhibition notably is the project of Chanak Vivekananda Bani Mandir High School. Teaching Staff of Chanak Vivekananda Bani Mandir High school, Mr. Sudip Kumar Pramanik said that their project is based on smart disposal of electronic waste. The project itself brilliantly showcased how e-waste bins can be placed all over cities and villages across the nation so that it can be easily distinguished among other kind of wastes. It also prevents some electronic parts such as Batteries, Microchips and other Electronic components from getting mixed among other wastes which may be consumed by animals which in turn can harm the local

ecosystem and may even cause death. "In case of humans, the electronic wastes always pose a credible threat as it engulfs our day-to-day life as we are slowly getting emerged into this abyss of technological carcass. We are greatly gracious that the West Bengal Pollution Control Board has taken such initiatives to spread more awareness among young minds about many such man made environmental threats that have been greatly displayed in today's exhibition by all other participants and has given us the opportunity to divert attention towards the concern that e-waste management pose" as conveyed by Mr Sudip Kumar Pramanik.



Dr Kalyan Rudra handing over the Certificate of Appreciation to Chanak Vivekananda Vani Mandir



Dr. Kalyan Rudra along with Dr. Sujata Bagchi Bandyopadhyay inaugurating the Workshop cum Model Exhibition

Conservation of Water

Water Conservation has become an important aspect in this era of Global Warming. It is the practise of an efficient usage of water by reducing unnecessary wastage of the same. Rain-water Harvesting has become the need of the hour. Water can be collected in the rooftops and the same can be filtered and stored in the underground reservoir for future usage. The stored water can be used for various day to day activities throughout the year, like in agricultural land, for gardening, washing clothes and utensils etc.



A Model depicting Water Conservation prepared by Geetgram High School

Benefits of using Organic Fertilizer

Farmers are using different types of pesticides and inorganic fertilizers in the agricultural land to make the farming more profitable. But this could be very harmful and can effect human health. The farmers needs to be educated about the ill effects of using these fertilizers. As we all know the organic fertilizers are very affordable and has no side effects. It balances the soil ecosystem and boosts plant health naturally at the same time.



Dr Kalyan Rudra and Mr.Subrata Ghosh interacting with the students on their Model-Solar EV Charging Stations

Mission Life Lifestyle For Environment

Environment degradation and Climate change has become a major threats to the people across the globe. There is an urgent need to address the same by using various Sustainable energy source. We need to curtail the usage of Non-Biodegradable products from our daily lives. The main aim of MISSION LIFE is mindful and deliberate utilization of resources. To achieve this, we need to make changes in our lifestyle so that our environment sustains. We need to spread awareness among common people regarding usage of renewable resources. This can be done by distributing leaflets, flyers, running campaigns in highly populated places, so that the message reaches the maximum number of people.

We can make changes in our lifestyle by following the themes mentioned below

By Saving Energy

- a) Energy can be saved by installing Solar Panels on rooftops of homes, offices and educational institutions.
- b) Switching off the lights and electrical appliances when not in use.
- c) Using more EVs or vehicles run by CNG. Switching engine off the vehicles at traffic signals.
- d) Using more public transportations.
- e) Using Energy Efficient electronic gadgets and LED lights.

By Reducing Waste

- a) Dry and wet waste to be segregated at homes.
- b) Biogas plants can be built where the cattle waste and agricultural waste can be used.
- c) Wastage of paper to be curbed.
- d) Leftover food to be used for compost and manure

- c) Composting kitchen waste as well as food waste at home can be practised. It can turn into nutrient rich fertilizers.
- d) The composite waste can be used in the kitchen garden/terrace garden.

Non Usage of Single use of Plastic

- a) Single-use plastic bags to be replaced by Cloth/jute/ecofriendly Bags.
- b) Reusable water bottles to be used instead of plastic Water Bottles.
- c) Usage of biodegradable cutleries in events and functions.
- d) Recyclable plastic to be used instead of virgin plastic.

By adopting Healthy Lifestyle

- a) Encouraging people to use Millets for its nutritional value.
- b) Planting more trees to balance our ecosystem.
- c) More Biodegradable products to be used in our daily lives.
- d) Noise Pollution to be controlled

By Saving Water

- a) Rainwater Harvesting infrastructure can be built in dwelling units, educational institutions, offices and places where a large number of people gather everyday.
- b) Methods of Drip irrigation systems can be installed by the farmers.
- c) Fixing leaks in taps, water pipes, in homes and offices. Washing of cars to be done by using buckets and not with water pipes. Also turning off taps when not in use .
- d) Using automatic Washing machines and Dishwasher only for full load wash.

- e) Farmers to be educated about harvesting crops like millets where less amount of water is required other than rice and wheat.
- f) The water that gets drained out from the RO Purifier can be reused for Plantation. Even the water from washed vegetables can be reused.

By adopting sustainable food systems

- a) By taking small portions so that there is less wastage of food.
- b) By preferring locally available and seasonal foods.



Students of Seva Milani High School explaining about their Model Soak pit to Dr Kalyan Rudra

Waste Management in India

India faces a critical challenge in managing waste due to the increasing volume generated daily, exacerbated by rapid urbanization and population growth. To tackle this issue, the government has introduced initiatives such as the Swachh Bharat Abhiyan to promote cleanliness and efficient waste disposal.



1. Dr Kalyan Rudra inaugurating the Programme by lighting the lamp
2. Dr Kalyan Rudra, Dr Sujata Bagchi Bandyopadhyay and Mr. Subrata Ghosh at Krishnath College
3. Dr. Kalyan Rudra, Chairman, West Bengal Pollution Control Board, Delivering his speech on Mission Life.



Waste Management

One of the major challenges nowadays is waste management. Due to a surge in population, the waste is generated in millions of tons and affects the lives of people across the globe. The basic mantra of waste management is "Refuse, Reuse, Reduce, Repurpose and Recycle". Waste materials should be segregated into bio-degradable and non-bio-degradable Waste. People should be made aware about proper segregation of the wet waste and dry waste at source. In our daily uses we have papers, boxes etc. which are called dry waste and vegetable wastes and the waste that decomposes are called wet waste. We must use two different bins for two different wastes. Green bin for wet wastes and blue bin for dry wastes. By following this process we can make our environment clean.

Reduction of Plastic Usages

India is making a determined push towards reducing plastic use, aligning with the global movement towards environmental sustainability. The picturesque landscapes of West Bengal have been under threat due to plastic pollution, prompting comprehensive initiatives to curtail plastic consumption. Government policies, including single-use plastic bans and waste management regulations, aim to regulate the production and use of single-use plastics. Awareness campaigns at the community level encourage citizens to adopt eco-friendly alternatives, backed by local businesses and markets embracing sustainable packaging, fostering a culture of responsible consumption. West Bengal's commitment to plastic reduction is evident in the proliferation of plastic-free zones, community-led cleanup drives and the promotion of biodegradable materials. By amalgamating governmental efforts, community engagement and innovative solutions, West Bengal is forging a path towards a cleaner, greener state, preserving its natural beauty and biodiversity for generations to come.

EV takes on the world as an emerging giant in the automobile industries

As the world grapples with the urgent need to address climate change, the integration of solar panels in electric vehicles (EVs) emerges as a promising solution. Solar panels on EVs serve as a sustainable power source, harnessing the abundant energy from the Sun to charge batteries and extend driving adding to greenhouse range. The use of solar panels in EVs not only enhances their overall efficiency but also contributes in reducing carbon footprints significantly. Traditional methods of charging EVs often rely on electricity generated from fossil fuels, indirectly leading



Solar Powered EVs, a Model developed by Saidabad Sudarshan Chakra Boys High School

gas emissions. Solar-powered EVs, however, tap into clean and renewable energy, mitigating the environmental impact associated with conventional charging methods.

Sustainable Solutions: 7-Step Water Purification

In the face of growing water scarcity and pollution, adopting sustainable practices like water purification

and rainwater harvesting have become imperative. A comprehensive



Water Purification & RainWater Harvesting, Seva Milani High School

7-step water purification process ensures access to clean and safe drinking water. The first step involves screening to remove large particles followed by coagulation where chemicals are added to clump together impurities. Sedimentation allows these particles to settle, while filtration further eliminates remaining contaminants.

Liquid trees, Hair as fertilizers and Reuse of Household Water

As the world grapples with the urgent need for sustainable solutions to combat climate change, innovative projects, like the Green Tree, Liquid tree or Algal Tank Tree initiative are gaining attention for their potential to contribute to environmental restoration. This visionary project envisions the creation of artificial trees equipped with algal tanks, designed to absorb carbon dioxide and produce oxygen, mimicking the ecological functions of natural trees. Microalgae are known for their exceptional capacity to sequester carbon dioxide during photosynthesis, making them a powerful tool in carbon capture technologies. The project aims to deploy these artificial trees in urban areas, industrial zones and other locations with high carbon emissions to offset

and mitigate environmental damage. The "liquid trees" stands out for its efficiency in carbon sequestration compared to

traditional afforestation methods. Additionally, these artificial trees are not constrained by geographical limitations or lengthy growth periods, offering a scalable and rapid-response solution to address climate challenges. While the project is in its early stages, the potential benefits are considerable. This liquid Tree initiative represents a forward-thinking approach to sustainable technology, providing a glimpse into a future where artificial structures collaborate with nature to restore ecological balance. As research and development progress, the Green Tree project could play a pivotal role in reshaping urban landscapes and contributing to a greener, healthier planet.



A Model prepared by KN College, Biology Department

Solar cities of India

In India, the concept of "Solar Cities" is gaining traction as urban areas prioritize the adoption of solar energy for various applications, including street lighting, water heating and power generation. Cities such as Gandhinagar, Chandigarh and Nagpur are leading the way in this initiative by incorporating solar technologies into their infrastructure. The implementation of solar energy helps to reduce reliance on conventional power sources, mitigating environmental impact and promoting clean energy. Governments and private entities are incentivizing solar installations through subsidies and policies, encouraging a shift towards green urban development.

Governments, NGOs, and communities are actively promoting rainwater harvesting techniques, emphasizing the need for sustainable water management. Rooftop rainwater harvesting, check dams, and recharge pits are some common methods implemented across the nation.

residues into valuable products like organic fertilizers or protein-rich animal feed. Industries are increasingly recognizing the economic and ecological benefits of incorporating mulberry waste into their production cycles.

Waste Minimisation and Industrial use of Mulberry

The silk industry is transforming towards sustainable practices with the growing emphasis on the industrial use of mulberry and the reduction of sericulture waste. While mulberry is commonly known as the primary food source for silkworms, there is untapped potential beyond the traditional sericulture domain. Researchers and entrepreneurs are exploring innovative ways to utilize mulberry residues and by-products for various industrial applications. Mulberry leaves, which are rich in nutrients, can be repurposed into organic fertilizers or livestock feed, contributing to agricultural sustainability. The minimization of sericulture waste is crucial for environmental stewardship. The traditional sericulture process generates waste, including leftover mulberry leaves and silkworm pupae. Waste management techniques such as bioconversion and composting can convert these



A Model depicting Waste Minimisation and Industrial use of Mulberry,KN College, Sericulture dept.

Rain Water Harvesting in India and it's benefits

Rainwater harvesting has emerged as a crucial solution to India's water scarcity challenges. In a country where erratic rainfall patterns and depleting groundwater levels are prevalent issues, this ancient practice has gained renewed importance. Rainwater harvesting involves the collection and storage of rainwater for various purposes, from household use to agriculture.

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