Newsletter | February 2024

Green News

West Bengal Pollution Control Board

EDITORIAL

I am happy to release the second issue of GREEN NEWS highlighting some interesting rather Impacttul events of the State Board. All these recent events of workshops, model exhibitions etc. are mainly based on Mission LiFE. Mission LiFE (Lifestyle for Environment) is an India-led global mass movement to encourage every individual and community to develop some good habits as well as modify their daily life activities, i.e., environmentally conscious lifestyle for the betterment of our environment. It focuses on Change in Demand, by nudging every individual, communities and institutions to practice simple behavioral changes, eco-friendly actions in their lifestyles. Considering the overall environmental aspects and related issues, seven (07) Categories, i.e., Energy Saved; Water Saved; Single Use Plastic Reduced; E-Waste reduced; Sustainable Food Systems Adopted; Waste Reduced (Swachhata Actions) and Healthy Lifestyles Adopted comprising 75 actionable points have been identified under the Mission LiFE programme, which aim to fulfil Sustainable Development Goals (SDGs) related to Environment. I am proud to share that the West Bengal Pollution Control Board is successfully implementing the programme mobilizing environmental awareness among the students of different enlisted schools and colleges across the State since April, 2023. Most importantly, West Bengal has secured the second highest position after Delhi in respect of number of registered schools as a result of two consecutive virtual training programmes for the teachers of different schools enlisted under the Environment Education Programme (EEP). The State Board has already conducted several different types of events so far including workshops, model exhibitions, Nature Study Camps, Nature trail, displaying messages of Mission LiFE through outdoor display board in front of the WBPCB Head Ofice at Paribesh Bhawan, Kolkata, Mission LiFE logo on all official correspondences, publications etc. During the recent model exhibitions, the students showcased beautiful models prepared by them based on the Mission LiFE themes. This newsletter contains brief description of all those impressive events. I hope, this endeavour will continue to grab so much attention and create awareness among all in future also.

Dr. Rajesh Kumar, IPS
Member Secretary, WBPCB

East Kolkata Wetland conservation- emphasis on wastewater treatment

Students of Bethune College with their model on Mission LiFE

Bethune College used all natural materials in making their project. The East Kolkata Wetlands, a Ramsar Convention designated site, stands as a testament to the harmonious coexistence of nature and urban life. One of the primary functions of the East Kolkata Wetlands is wastewater treatment. A network of interconnected water bodies, ponds, and marshes serves as a natural sewage treatment plant. Domestic sewage and industrial effluents from the city pass through a series of fishponds and aquatic vegetation, undergoing a natural purification process. The wetlands act as a bio-filter, removing pollutants and nutrients from the water, transforming it into nutrient-rich, clean water that can be safely discharged. Urban encroachment, illegal construction, and solid waste disposal pose threats to the delicate ecosystem. Sustainable urban planning, coupled with strict regulations and community involvement, is essential to safeguard the ecological integrity of the wetlands. Preserving the East Kolkata Wetlands is not just an environmental imperative; it is a demonstration of the symbiotic relationship between nature and human activities.

Message from Dr. Kalyan Rudra, Chairman, WBPCB about the workshop- cum model Exhibition on Wetland Conservation

Dr. Kalyan Rudra delivering his speech

Dr. Kalyan Rudra, Chairman, WBPCB gave his thoughtful insights on wetland biodiversity and its conservation around East Kolkata at the workshop come model exhibition. He stated about the ancient Greeks who called Bengal as "Ganaridai" or the land with the river Ganga. Bengal was always a lowland filled with wetlands all around untill the rise of Magadha empire there were still very few settlements in what today we see as Bengal. Later on, the lower lands accumulated nutrient rich water from himalayas which turned this land into the most fertile region in the world. These natural resources attracted many European clans towards Bengal later. Dr. Rudra added, there are 3 types of wetlands fresh water wetland, saline and fresh mixing zones and waste water wetlands. Earlier, these wetlands faced a terrible fate as nearly 87% of wetlands has disappeared in the last 300 years or so. During 1960s there was a petition raised towards restricting the city's growth towards the east to avoid further damage to the "East Kolkata Wetland (EKW)", Ramsar site which is dubbed as "Kolkata's Kidneys" and around 12500 hectar area was provided and declared as a part of EKW. Still today there are numerous instances of illegal occupation and especially after the construction of the eastern metropolitan bypass. According to Dr Kalyan Rudra, this can lead to irreversible changes in the natural ecosystem of a wetland and must be dealt as soon as possible. Dr Kalyan Rudra highlighted how these wetlands functions in flood retention. "Year after year we have seen a dramatic irregularity in rainfall pattern which has caused considerable threat. These wetlands are immensely effective in getting rid of excess water." Environmentalist Dr. Dhrubayoti Ghosh, who was a close colleague of Dr. Kalyan Rudra himself, worked alongside others to develop a 3 pond system of water treatment where in the first pond the nutrients were collected, this was then transferred to the second pond where this nutrient rich water was left to rest under sunlight where it got oxidised, finally after transferring this to the final pond the water quality rises and there is a certain decrease in the BOD (Biological Oxygen Demand) of the water and a considerable increase in DO (Dissolved Oxygen). Later this technique was accepted and adopted by other international firms. Dr. Rudra said, wetlands has played a key role in land water retention. One example he provided was Fishing Cat (Prionailurus viverrhinus) which is also the state animal of West Bengal, local fishermans used to hunt these animals as these cats would hunt for their natural prey -"fish", this dietary rifts with humans caused fishing cats to be listed Vulnerable in the IUCN red list since 2016. Dr. Rudra also spoke about how modern society has migrated from more natural ways of farming toward more chemical ways or farming from the 60s, which has on one hand increased crop yield from 50 million tonnes to more than 300 million tonnes, but on the hindsight this has contributed towards foul eating habits, reduced nutritional value of food, more chemically contaminated food lately. Dr. Kalyan Rudra urged everyone to contribute their fair share in conservation of our biodiversity and ecosystem.

Wetlands: The Nature's Kidney

Wetlands, often referred to as "Nature's Kidneys," play a pivotal role in purifying water and mitigating pollution. Their unique ability to act as natural filters makes them indispensable in maintaining water quality. The saying, "dilution is the solution for pollution," aptly captures the essence of wetland functionality. Wetlands absorb and dilute pollutants, effectively cleansing water and preventing harmful substances from entering aquatic ecosystems. Emphasizing a steady and calculated reduction in pollutants is paramount to ensuring the efficacy of wetlands as nature's purifiers. Sustainable practices, such as minimizing industrial runoff and adopting eco-friendly agricultural methods, contribute to maintaining the health of wetland ecosystems.

Students of Bidyabharati Girl's High School with their model

Programme on wetland management and conservation

Dr. Rajesh Kumar, IPS, Smt. Neelam Meena, IAS, Ms. Tripti Sah, IFS and Dr. Kalyan Rudra inaugurating the programme

As per the guidelines of the Ministry of Environment, Forest and Climate Change, Govt. Of India, the WBPCB organised a closing ceremony for the campaign on Wetland Conservations on 25 January, 2024 at Nalban Banquet Hall, as a part of the Ministry's wetland conservation programme from 15 January, 2024 to 25 January 2024 under the Environment Education Programme. The ceremony highlighted numerous projects of various schools spanning across Kolkata and students from all these schools showed their keen interest against climate change via their model exhibited especially wetland conservation around areas of East Kolkata or EKW which was declared a Ramsar site on 19 August, 2002 and Sundarban wetland which was declared on 30 January, 2019. Dr. Kalyan Rudra, Chairman, WBPCB, Dr. Rajesh Kumar, IPS, Member Secretary, WBPCB, Smt. Neelam Meena, IAS, Director, IESWM, Dept. of Environment, GoWB and Smt. Tripti Sah, IFS, Senior Environment, Officer, graced the occasion. Selected students from the schools were inducted as Volunteers of "Wetland Mitras " and were registered at National Wetland Portal. These students also took pledge to conserve and work towards a sustainable wetland ecosystem. In the programme, Smt. Neelam Meena conveyed "we can reduce the level of plastic use that has spiked up in recent years by making little changes in our lives like abrogate the use of plastic commodities that we use on a daily basis. We should put more work towards building an overall sustainable society and smaller, steadier consistent steps will surely make this journey attainable." At the event, Member Secretary, WBPCB, Dr. Rajesh Kumar, shared four basic principles of ecology. Dr. Kumar, shared his observations of how farmers usually burn stubbles in the fields to clear weeds, rodents pollution, which sets a domino effect of negative impacts on the environment and human health. He also stated that he was very impressed by various model displayed in the exhibitation by the students and how they have meticulously devised various innovation on conserving this wetlands eco system. He also informed that this events that the WBPCB has organised, have provided successfull results in creating the correct mindset towards tackling this wetland degradation. Smt. Tripti Sah further enlightened the audience about the importance of East Kolkata Wetlands (EKWs). which is also the first Ramsar site for the state declared in 2002. Ever since various campaigns have been held to spread awareness among masses towards the importance of this site that has been dubbed "The Kidneys of Kolkata". Majorly EKW harbours sewage waters from various canals in its more than 260 embankments, this water then naturally gets oxidised booming algae and plankton growth on which most fishes feed naturally, which proliferates fish growth, flourishing pisciculture and economy. Also, vegetation increases near EKWs due to extremely fertile land in between canals and it contributes in agriculture industry as well. This makes it extremely important natural asset of West Bengal.

Students taking the pledge as "Wetland Mitra"

Smt. Neelam Meena, Dr. Rajesh Kumar, Dr. Kalyan Rudra, and Mr. Subrata Ghosh at the venue

Smt. Neelam Meena and Ms. Tripti Sah taking a glance at the model exhibited

Dr. Rajesh Kumar delivering his speech on Mission LiFE

Cyclic use of composite fish culture

Students of Bidhannagar College with their model on Mission LiFE

Students of Bethune College who was ranked 1st in the exhibition.

The students of Bidya Bharati Girls High School who was ranked 2nd in the exhibition.

The cyclic use of composite fish culture in aquatic ecosystems stands as a sustainable approach, ensuring both environmental balance and a thriving fish population. However, maintaining the health of these water bodies requires a multifaceted approach. Invasive species pose a significant threat to the equilibrium of aquatic ecosystems. Netting becomes a vital tool for their removal, curbing their negative impact on indigenous fish species. Lime treatment, which helps control acidity and restores water alkalinity, further supports a conducive environment for fish growth. Addressing contemporary environmental concerns, efforts to remove microplastics from water bodies are integral. Microplastic removal not only safeguards aquatic life but also preserves water quality, contributing to the overall health of the ecosystem. Furthermore, the removal and reuse of heavy metals from water bodies exemplify a commitment to sustainable practices. The establishment of ecological parks and bird sanctuaries around water bodies plays a crucial role in biodiversity conservation. These protected areas provide a habitat for various species, ensuring ecological resilience and offering opportunities for environmental education and recreation. Embracing organic farming practices in the surrounding areas enhances the overall health of aquatic ecosystems.

Dr. Kalyan Rudra, Dr. Rajesh Kumar, Smt. Neelam Meena and Ms. Tripti Sah giving away the 3rd prize to Bidhannagar College

Message from Dr. Kalyan Rudra about the workshop-cum model Exhibition on Mission LiFE at Sahebkhali, Hingalganj

Dr. Kalyan Rudra, Chairman WBPCB being welcomed by the Headmaster of Sahebkhali Nityananda High School

After assessing all displayed projects at the workshop cum model exhibition held at Sahebkhali Hingalganj, Dr. Kalyan Rudra, Chairman, WBPCB expressed his excitement, as he saw children from very remote parts of the district talking about and understanding their environment very devotedly. The approach of the students towards positive innovation of climate management and their keen interest in understanding the challenges it currently faces, was reflecting in the models exhibited in the programme. In his speech Dr. Kalyan Rudra pointed out that the Sundarban as one of the largest forest in the world that lies on the delta of Ganga, Bramhaputra and Meghna rivers on the Bay of Bengal. It is adjacently located between the border of India and Bangladesh. Sundarban was declared a UNESCO world heritage site in 1987, and in 2019 it was also declared a Ramsar site. Sundarban soaks up around 4 crore tonnes of CO_2, according to studies. Mangroves can store way more carbon dioxide than we thought earlier. Dr. Kalyan Rudra pointed out that the gap between the shores and the bay today is approximately 8.5km as supposed to earlier maps that he himself checked once. Sundarban also boasts a wide array of biodiversity housing around 260 avian species and a wide range of threatened species like the Bengal tiger, estuarine crocodiles and the Indian python. But Sundarbans has faced considerable challenges lately. There is always a risk of vulnerable climatic change. There have been 4 devastating cyclones in recent past in the region. Being a coastal zone, the risk of rising of sea level; coastel line soil erosion; floods and cyclone are ever present. There also lies risk of exploitation of natural resources. Sundarban is home to a large human population which due to poor infrastructure and limited options of income, solely relies on the use of fuel wood for cooking and hunting jungle livestocks for food. This disturbs the natural habitat; such unsustainable exploitation later leads on to loss of biodiversity, also poses a threat to local population, which on itself is a big threat towards the population living there. Dr. Rudra also spoke about the goals of Mission LiFE. He said 800 million to 3billion people are projected to experience chronic water scarcity, the global GDP could lose up to 18% by the year 2050. Saving energy by walking or using bicycles instead of cars and bikes would reduce CO_2 emission levels at an instant, also using LED lights in place of incandescent lights which saves up to 75% of energy. Also turning off electrical appliances when not in use is a practice toward conserving energy and keeping environment cleaner. Conserving water is another important obligation, Dr. Rudra said "by fixing leaks in taps and pipes or by installing water-efficient fixtures we can reduce up to 30-40% of our water consumption. By turning off running taps when not in use, we can save up to 9 trillion litres of water." "The reluctance in the use of plastic in any of its form, as single use plastic carry bags with thicknesses less than 120 microns are banned from December, 2022. Using paper bags or reusable fabric bags should be favoured. The WBPCB with this Mission LiFE programme will continue their work relentlessly towards eradication of plastic from our daily lives. Besides plastic, another non-biodegradable waste comes in form of electronic gadget waste" As stated by Dr. Rudra. He also mentioned that rather than discarding electronic gadgets it is better to repair and reuse them. And to achieve this we must also do our fair share of work. By adopting all these above mentioned eco-friendly practices, we can surely claim a sustainable efficient clean future.

Workshop cum Model Exhibition on Mission LiFE at Hingalganj

The WBPCB under it's "Mission liFE-LiFEStyle For Environment" campaign conducted an exhibition on the 28 and 29 January, 2024 in Sahebkhali, a village in Hingalganj, North 24 Parganas, West Bengal. The exhibition showcased model projects that were presented by 24 schools and colleges that participated from different districts. The programme was set in for raising awareness among young minds and others, towards climate change and as how a certain change in lifestyle can impact the environment. Students passionately exhibited their projects emphasizing on how they can themselves work better in the future in securing a sustainable society.

Dr. Kalyan Rudra giving away the 1st Prize to Bhanderkhali PCP Institution

Dr. Kalyan Rudra giving away the 2nd Prize to Dulduli Mathbari D N High School

Dr. Kalyan Rudra giving away the 3rd Prize to Sahebkhali Nityananda High School

Role of kitchen gardens in sustainability

In the lush landscape of West Bengal, kitchen gardens thrive with the adoption of organic fertilizers, ushering into a green revolution. Home to a rich agricultural heritage, West Bengal's kitchen garden have embraced organic fertilizers for their numerous benefits. soil health by promoting microbial activity and preserving natural nutrients. Comprising compost, animal manure, and organic waste, these fertilizers not only nurture plants but also contribute to sustainable waste management.The use of organic fertilizers in West Bengal's kitchen gardens aligns with the state's emphasis on eco-friendly agricultural practices. Families across the region now cultivate a variety of vegetables and herbs, enjoying chemical-free produce that is both safe and nutritious. As awareness grows about the environmental impact of traditional farming methods, the shift towards organic fertilizers in West Bengal becomes a small yet impactful step towards a greener, healthier future.

The model exhibited by Sandelerbill A.B.S. Madan Mohan Vidyapith on Theme Mission LiFE

In West Bengal, the integration of kitchen garden vegetables into mid-day meals has emerged as a transformative initiative, blending nutrition, education, and sustainability. Schools across the state have embraced the concept of cultivating their own vegetables, fostering a connection between students and the food they consume. The inclusion of fresh produced vegetables from school gardens not only enhances the nutritional quality of mid-day meals but also imparts valuable lessons on agriculture and environmental stewardship.

Rainwater harvesting infrastructure in household and school

The implementation of rainwater harvesting infrastructure in households and schools stands as a transformative solution to address water scarcity and promote sustainability. In both residential and educational settings, rainwater harvesting systems are designed to capture and store rainwater for various purposes. In households, rainwater harvesting involves the installation of collection systems, typically on rooftops, to channel rainwater into storage tanks. The collected rainwater can undergo filtration and purification processes to meet the required quality standards. By incorporating rainwater into cooking practices, communities in the Sundarbans can not only mitigate water scarcity but also pro mote environmental conservation.

Students of Panchapalli D.S. Vidyatan with their model

In addition to direct use in cooking, rainwater conservation has multifaceted applications. It can be employed in irrigating home gardens, supporting aquaculture, and contributing to community-based water management systems. The integration of rainwater into cooking aligns with broader initiatives for sustainable living and local self-sufficiency. Education and awareness campaigns play a pivotal role in advocating for the benefits of rainwater conservation. Communities can adopt innovative cooking methods that minimize water usage, and collaborativeefforts involving local residents, government agencies, and non-profit organizations can enhance the success of these initiatives. Embracing rainwater conservation for the purpose of cooking not only ensures culinary sustainability but also fosters a harmonious relationship between communities and their environment in the Sundarbans and beyond. By integrating such systems into everyday life, communities can actively participate in creating a more sustainable and water-secure future.

The menace of global warming

Students of Shitalia High School with their model

Global warming, a consequence of the increasing concentration of greenhouse gases in the Earth's atmosphere, poses severe threats to ecosystems worldwide. The Sundarbans, a UNESCO World Heritage site spanning India and Bangladesh, is particularly vulnerable to the impacts of global warming. As temperature rises, the Sundarbans face a myriad of challenges that jeopardize its unique biodiversity and the communities dependent on its resources. Rising sea levels, a direct consequence of global warming, are menacing the low-lying Sundarbans. The region, crisscrossed by an intricate network of rivers, is experiencing intensified salinity intrusion. This intrusion not only disrupts the delicate balance of the mangrove ecosystem but also jeopardizes the livelihoods of the local population, primarily de pendent on agriculture and fishing. Cyclones, storm surges, and extreme rainfall events have become part of the new normal, causing widespread damage to infrastructure, agriculture, and human settlements. Global warming also amplifies the threat of biodiversity loss in the Sundarbans. Mitigation strategies, such as reducing greenhouse gas emissions and transitioning to sustainable energy sources, must be coupled with adaptation measures, including the development of resilient infrastructure and the implementation of sustainable livelihood practices.

Introduction of innovating solar-powered speaking robot

The students of Charalkhali Siksha Bhavan with their model

Introducing the innovative solar-powered speech robot, a marvel of technology that seamlessly blends clean energy and interactive communication. This futuristic creation harnesses the power of the sun to not only operate efficiently but also contribute to sustainable practices. Equipped with advanced solar panels, the robot taps into renewable energy, eliminating the need for conventional power sources. Its ability to convert sunlight into electricity ensures continuous functionality, making it an eco-friendly solution for a variety of applications. Beyond its energy efficiency, the robot boasts a unique feature the ability to mimic and repeat spoken words with precision. As we embrace advancements in robotics and renewable energy, the solar-powered speech robot stands out as a testament to the harmonious blend of technological innovation and environmental responsibility.

Rain water harvesting

In the delicate ecosystems of the Sundarbans, where freshwater resources are increasingly strained, rainwater conservation and harvesting emerge as crucial practices for sustainability. The Sundarbans, faces the dual challenges of rising sea levels and freshwater scarcity, making the implementation of rainwater harvesting systems a vital strategy for local communities. Rainwater, a freely available resource during the monsoon season, can be harnessed and stored for various purposes, particularly addressing the region's water needs. Rainwater harvesting infrastructure, such as rooftop collection systems and storage tanks, can be strategically deployed in both residential and community settings.

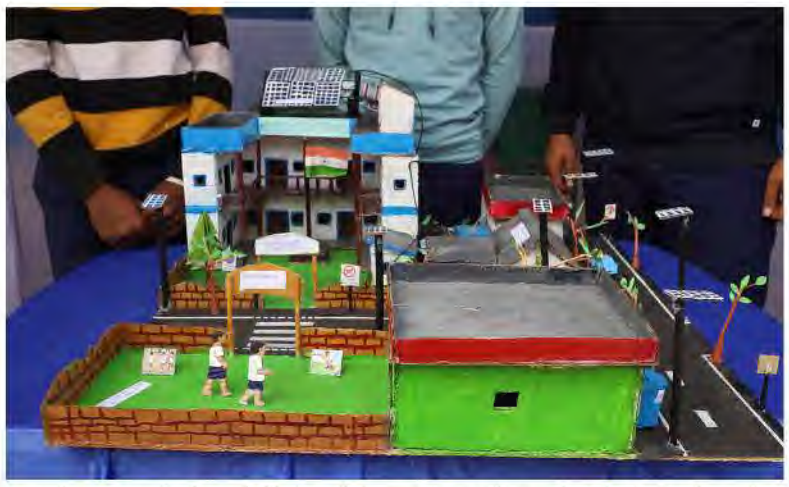
Students of Gobindakathi Siksha Niketan with their model on Rainwater Harvesting

Water conservation by reusing kitchen water

The student of Dulduli Mathbari D.N. High School with the exhibited model

Kitchen water, also known as grey water, is the wastewater generated from activities like washing dishes, fruits, and vegetables. Rather than letting this water go down the drain, it can be collected and repurposed for various household needs. A primary method involves installing greywater collection systems, diverting the water into storage tanks or channels. This greywater can then be utilized for various non-potable purposes within the household, reducing the demand on freshwater sources.

Building a sustainable society in Sundarban

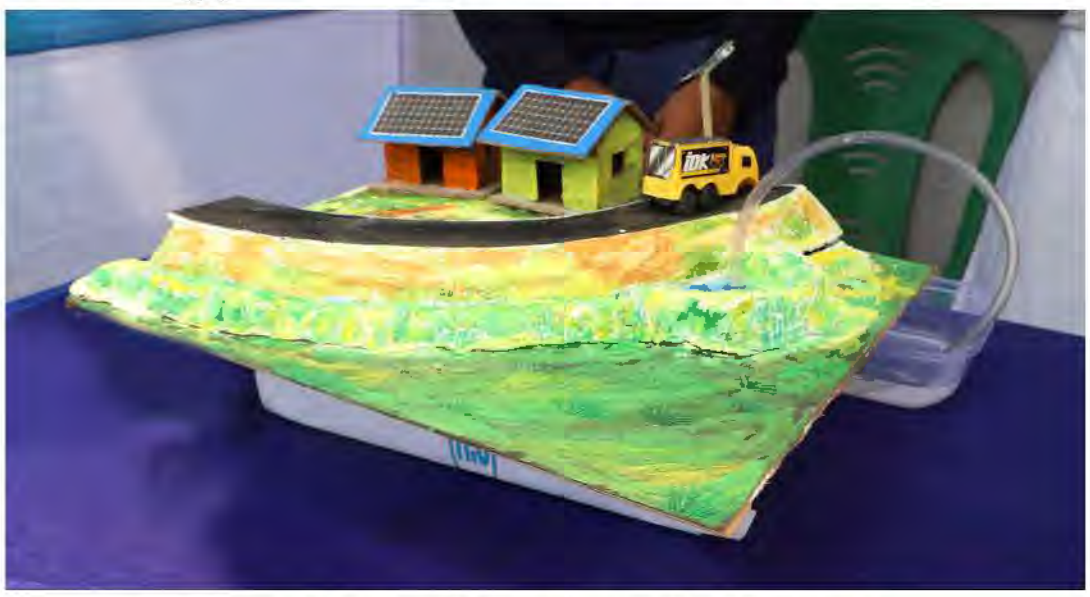


The model exhibited by Hingalganj High School

Building a sustainable society in the Sundarbans involves thoughtful practices that prioritize environmental conservation, local resilience and the well-being of communities. One key aspect is the promotion of kitchen gardens, which contribute to food security and reduce the ecological footprint. By cultivating a variety of fruits, vegetables, and herbs locally, communities in the Sundarbans not only ensure a fresh and diverse diet but also mitigate the need for long-distance transportation, thus minimizing carbon emissions. Simultaneously, sustainable procurement of drinkable of drinkable water is essential in this deltaic region. Rainwater harvesting systems,which is also a Theme of Mission LiFE equipped with basic filtration methods, provide a decentralized and eco-friendly solution to meet the clean water needs of house holds. By tapping into rainwater resources, communities can reduce reliance on external water sources and address water scarcity issues exacerbated by climate change. The synergy between kitchen gardens and rainwater harvesting exemplifies a holistic approach to sustainability in the Sundarbans.

Solar energy-a sustainable future

In the Sundarbans, harnessing the abundant solar energy can play a transformative role in creating a sustainable and resilient community. The region's unique ecological challenges, such as rising sea levels and frequent cyclones, make the adoption of efficient solar energy solutions crucial for the well-being of its inhabitants. One efficient way to utilize solar energy in the Sundarbans is through the installation of solar panels on rooftops. Solar photovoltaic systems can generate electricity to power homes, schools, and community centers, reducing reliance on traditional energy sources. This approach not only provides a clean and renewable energy source but also contributes to lowering greenhouse gas emissions, mitigating the impact of climate change in the region. Solar-powered water pumping systems can address the freshwater scarcity prevalent in the Sundarbans. These systems can draw water from wells or rivers, providing a reliable and sustainable source for agricultural irrigation and domestic use.



The model under theme Mission LiFE depicted by Hatgacha K.C.A. High School

Workshop on 'Awareness Programme on effective implementation of Plastic Waste Management Rules, 2022 in MSME Units' under Mission LiFE theme-' Single-use Plastic Reduced

The WBPCB supported the initiative of Central Institute of petrochemicals Engineering & Technology (CIPET), Dept. of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India to organize a one-day Workshop on 'Awareness Programme on effective implementation of Plastic Waste Management Rules, 2022 in MSME Units' on 30 January, 2024 at the Convention Centre of Science City, Kolkata. Shri Supriyo Ghoshal, Director, SUDA, Dr. Rajesh Kumar, IPS, Member Secretary, WBPCB, Shri Debasish Sarkar, Chief Engineer, WBPCB, Dr. T.K. Gupta, Chief Technical Adviser, WBPCB graced the inaugural session of the workshop. Prof. Brajesh Kr. Dubey, IIT-Kharagpur, Shri Sunil Konde, Regional Manager- East Branch, ITC Limited, Smt. Mrunmayee Parua, STO and HOD (Testing), CIPET-CSTS-Haldia, Shri Abhijeet Pathak, Sr. Scientist, CPCB, Shri Lalit Agarwal, President, Indian Plastic Federation and Shri Anjan Fouzdar, Environment Engineer, WBPCB delivered their valuable speeches during the technical session, which was followed by the interaction session. The speakers highlighted the harmful effects of using banned Single- Use Plastic carry bags and hence promoted awareness based on Mission LiFE theme- 'Single-Use-Plastic Reduced'.

Dr. Rajesh Kumar delivering his speech at the work shop

Published by Member Secretary, West Bengal Pollution Control Board (Department of Environment, Government of West Bengal)
Website: www.wbpcb.gov.in
Email: net.wbpcb-wb@bangla.gov.in
Prepared by ANM News Pvt Ltd.
Website: www.anmnews.in