WATER MANAGEMENT IN CURREENT TECHNOLOGY

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ABSTRACT

The objective of the paper is to make Institutions socially responsible by making students educate about zero waste, recycling and go green methods to create sustainable environments. Certain proven methods have been suggested in the paper that can be implemented in the Institutions with the engagement of students creating awareness of environment conservation. With rising challenges of global warming and climate changes, it has become imperative as a good citizen of a nation to take revolutionary steps contributing to the sustainability of the environment. The state of Tamil Nadu is a prosperous state that always has been contributing to a nation's building. With a good literacy rate in the state, it is an urge to the government to initiate a school level program to achieve a green and sustainable environment. The Students studying in different Institutions of Tamil Nadu are bright and diligent. They are the ones who can bring a dynamic change in the society we are living in. With resources become scarce, it is our moral duty to protect and conserve our environment. Students are the future of the nation. It is they who need to learn how to create a sustainable environment with their little steps. A joint program by Institutions of Tamil Nadu can make an initiative to become green Institutions that pledge for zero waste, use of minimum water, creating an energy-efficient building, waste management, implementation of bio septic tank, STP treatment, etc. With a selfless intention to protect our Mother Nature, certain important suggestions are put forth. The zero-waste program proposes that all the Institutions of Tamil Nadu should implement the steps given below in the Institutions should contribute as a social responsibility.

Segregating dry waste and wet waste at school for a sustainable environment: To become a zero-waste school, our students would learn to recycle dry waste and use wet waste for composting. Hence, none of the waste would go into landfills. With this effort, our students

would learn to understand the difference between wet waste and dry waste. Students would go home and follow the same practice with their parents at home. Hence, parents, teachers, staff, and students would pledge to promote the zero-waste program (1).

Bio-septic tanks at institutions – a mandate at school: Water conservation is the need of the hour. It is our ultimate responsibility to ensure that our Students live a long and healthy life. To make this possible, the students must learn about sewage treatment. A program to install bio septic tanks at Institutions would surely educate students about compact bio sewage treatment plants. The plants safely process the school water and recycle into clear and odorless water that can be further used for irrigation purposes. Understanding the concept of bio septic tanks would make them aware of the importance of water conservation.

Installation of sewage treatment plant (stp) for a sustainable environment: As the Institutions release huge liters of wastewater, it is recommended for all the Institutions of Tamil Nadu to install Sewage Treatment Plant (STP) at their premises. If the Institutions of Tamil Nadu would install the Sewage Treatment Plant (STP) at their premises, it would be very beneficial for the welfare of society. The sewage treatment plant is a proven technology that preserves the environment from the harmful effects of pollution. The plant installation and maintenance costs are very low; hence the Institutions can easily operate the plant (2).

A bio- toilet system for institutions: Gardening activities, rainwater harvesting, plantation of trees, control of air pollution, and other environmental projects at Institutions would educate thousands of students about the significance of a sustainable environment. To make school a zero-waste organization, Institutions should install a bio-toilet system that decomposes human waste.

Safe drinking water: It is also necessary to provide purified drinking water to Students for their good health. Such little initiatives of school can create synergy and contribute greatly to the welfare of society. Polluted water has harmful bacteria, germs and chemicals which have an adverse effect on the health of Students. WHO has warned nations to put a check on the quality of water that are causing life-threatening diseases to the Students.

Awareness for a "go green" environment by environmental projects: Our society is facing great challenges in achieving a sustainable environment. With students creating awareness among people is the best method to educate people about the significance of zero waste, recycling and single-use plastic in society. Institutions should conduct a rally every month on topics related to single-use plastic, dry waste, and wet waste, Land contamination, water conservation, gardening, etc. Students can write essays, perform debates, conduct a skit, sing songs, conduct plantation activities, deliver speeches, etc with a motive to educate people about the meaning and benefits of going green activities. Students and teachers should do good research on environmental projects that can save water, energy and scarce resources (3). Thinking out of the box can give birth to new ideas for sustainable environment.

Environmental studies as a mandatory subject at institutions: To educate students about the challenges of climate change and global warming, environmental studies must be made mandatory for all the students. The concepts should not be limited to books and copies. Teachers should conduct practical environmental projects at Institutions to make them learn about organic cultivation, rainwater harvesting, control of pollution, segregating dry waste and wet waste, compose and decompose, gardening, etc.

Certain Institutions have already started to educate their students about zero waste and recycling methods by making them practically perform these methods. An education program not only imparts knowledge to the students but also their families and friends. Teachers and staff also learn about the importance of environment-friendly living standards.

RESULT

With such efforts, Tamil Nadu can become the first state to implement a giant sustainability program to achieve a balanced environment. The efforts made by the school can change the lives of the students, families and the overall society. These methods if implemented would be very beneficial for the society by recycling and waste management. We urge the government of Tamil Nadu to support the zero-waste program to be implemented in Institutions and educate students.

REFERENCE

1. Hyunsoo Moon, In Seop, Chang, Byung and Hong Kim (2006), 'Continuous Electricity Production From Artificial Waste Water Using A Mediator Less Microbial Fuel Cell', Bio Resource Technology, pp. 621-627.

- 2. Aelterman.P, Rabaey.K, Clauwaert.P and Verstraete.W (2006), 'Microbial Fuel Cells For Waste Water Treatment'. Water Science and Technology, Vol.54 No.8, pp9-15.
- 3. Liu H., Ramnarayanan R. Logan B. E (2004), 'Production of Bio-Electricity during Wastewater Treatment Using a Single Chamber Microbial Fuel Cell,' Environmental Science and Technology, Vol.3, pp.2281-2285.