iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 7 **Issue:** I **Month of publication:** January 2019

DOI: http://doi.org/10.22214/ijraset.2019.1024

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 7 Issue I, Jan 2019- Available at www.ijraset.com

Environmental Impacts of the Sugar Industry: A Review

Jaydeep S. Kumbhar[1], S. M. Bhosale[2]
[1]*M-Tech Scholar, Environment science and technology, Department of Technology, Shivaji university, Kolhapur, Maharashtra, India*
[2]*Assistant Professor, Environment science and technology, Department of Technology, Shivaji university, Kolhapur, Maharashtra, India*

Abstract: ***The writer proposes that environmental impact assessment (EIA) foremost environmental protection regime should be modified to give effect to the precautionary principle. A three-stages by which this could be achieved is presented. First one stat by, the EIA trigger of environmental 'significance' must be broadened second, uncertainties must be assessed; and last one that is third one is environmental uncertainty must have greater influence in decision-making. Environment impact assessment is very effective management technic which provide information of both positive and negative result for developing present and future requirement and there need and impact on environment. The challenges of sugar industry pollution and waste generation is leading to degradation of its quality.Environmental pollution has a great impact on human being as well as over the society. It adversely effects on the human health or public health, animals and plants,so to minimize the impact and pollution by controlling and applying plane, policy, waste management technic like recycle and reuse of waste which is generated in sugar industry and reducing waste (EIA) is needed.Also the costs of a project so that development duly considers environmental preservation besides economic and other factors.***
Keyword: Environment impact, Reduction of wastes generated by sugar industry.

I. INTRODUCTION

Environmental impact assessment (EIA) is a process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions on proposed environmental projects are made based on the findings of an EIA study. These studies absolute gives the environmental concerns of developmental to improve in to the process of decision-making. The EIA plan in India was made mandatory gives a legislative status through a notification issued by the ministry of environment and forests in January 1994. The knowledge generated from the EIA is supplied to suitable decision-makers who incorporate such considerations into decisions regarding the proposal. The way, EIA can inform development and reduces environmental lesion, all while increasing plan and scheme benefits. Waste reuse and its recycling as a soil conditioner/agricultural purpose is the best method for the management of industrial wastes. India is the top ten-largest producer of world's sugar and largest consumer of the world.The sugar industry stores these wastes in open fields, which is harm to the natural environment of that area. Vermicomposting is one of best alternative technology for converting sugar industry wastes into valuable manure. The increasing renewable energy can contribute to energy security, fuel contrast and rural development, as well as mitigate environmental problems related to exploitation, processing and transport of fossil fuels. Environmental Impact Assessment is a key aspect of many large scale planning improvement changes in applications. That meant to help us understand the potential environmental impacts of major development proposals.These impacts depend on the process stage, the size and type of operation, the technology employed, the nature and sensitivity of the surrounding techniques adopted.The overall objective of the EIA study is to carry out a systematic examination of the present social and environmental situation.The intent would be to establish a clean unit whose waste, if any, can be recycled / reused to the maximum extent feasible. Practicability of reuse and disposal of liquid and solid wastes develop from the project would be find clearly. Overview of Green Belt Development Plan would be prepared to enhance the natural quality of the environment. The plan also concentrateon measures that will be helpful in attenuating air as well as noise pollution levels from the project.Industrial mischance result in great personal and financial loss.

Managing these mischance or accidental risks in today's environment is the concern of every industrial unit and their various sector, because either real or perceived incidents can quickly jeopardize the financial viability of a business. Many more facilities involve various manufacturing and developing processes that have the potential for accidents which may be catastrophic to the plant, work force, environment& public. For that thing the risk assessment study is to propose a comprehensive but simple beg to carry out risk analysis and conducting feasibility studies for industries and progress, planning and management of industrial prototype hazard analysis study in Indian context.

II. RESEARCH CARRIED OUT BY RESEARCHERS

Dr. Gunjan Gupta (2009) study on environmental impact assessment and explain the Environmental pollution has a great impact on men and society. It effects on the human health as well as, animals and plants growth. Environmental pollution decreases the efficiency which performing capacities of living beings and it increases the mental depression and decreases the average age of level of men and animals. Environmental Impacts may be have both result either it will get beneficial or adverse. Impacts are found on health, recreation, water quality, air quality etc. These impacts are to be valued by using certain market prices using techniques such as 'change in productivity', loss of earnings' etc. At other hand intangible impacts are related to bechange, bio-diversity loss and these are to be valued market techniques such as Hedonic prices or travel cost methods etc. In this paper effort has been made to analysis environmental impacts and applicable valuation techniques.

Department of environmental biotechnology, Bharathidasan (2008) Sugar industries play a pivotal role to improve the economy of our country. For the management of sugar industry solid waste (press mud and bagasse) an effort was taken. The press mud and bagasse with garden waste which is mixed cow dung subjected to the process of a composting (anaerobic decomposition) for reuse in 1:1:2 Ratio. There are two set of component , One set of component was moistened with water and another one was moistened with spent wash . As cost/ spent wash is characterized with their high BOD and COD along with high nitrate, phosphate, potassium and other minerals, it was selected for moistening the organic waste. After the experimental period (95 days) the decrease of organic matter and C:N ratio was considerable. The amount of N.P.K. in compost a was found to be 2.4%, 0.71% and 2.14% respectively. The N.P.K. value of compost b was establish to be 2.8%, 0.85% and 3.59% respectively. All these nutrients are considerably increased in compost spent wash than compost water. The C:N ratio of both the composts was around 11:1, which has been reduced from the initial of 25:1 ratio. The identified organisms pseudomonas sp., streptococcus sp., bacillus sp. And Klebsiella sp. Were involved in the composting process of a. Besides these organisms, compost spent wash also has seratia sp. Hence, from these observations, it is clear that the press mud and bagasse in combination with garden waste and cow dung may be utilized for the production of compost successfully. This technique further minimizes the environmental hazards that could have been caused by press mud and spent wash if they were disposed off as such in the environment.

Jaswindersingh et al., (2009) Discusses the role of earthworms in recycling of sugar industrial wastes.The wastes generated from sugar industry are press mud, bagasse, bagasse fly ash, sugar cane trash, sugar beet mud, sugar beet pulp, molasses etc. These wastes are mixed with other organic substrates become ideal mixtures for growth/ increases of earthworms. These wastes if stored in open fields causes contamination in the environment and may cause several diseases in public health. The governments have been unable to tackle the menace of solid waste pollution due to dearth of appropriate technologies, finance and space. Therefore, environment friendly and cost effective technologies for nutrient recycling or remediation of wastes are alternative means for conserving and replenishing natural resources of the ecosystems. Vermicomposting is one such technology that synergies, microbial degradation with earthworms activity for reducing, reusing and recycling waste materials in a shorter span of time. Earthworm technology can convert sugar industrial wastes into valuable fertilizing as reuse material for agricultural use. The final product (vermicomposting) produced during the process of vermicomposting is nutrient rich organic fertilizer with plant available nutrients such as nitrogen, potassium, calcium and phosphorus. The present study an attempt has been made the role of earthworms in reuse of sugar industry.

III. METHODOLOGY

After analysis and case study the data and its literatures are collected from different secondary sources with various research papers and Environmental Impact Assessment report for the distillery project of Sugar industry have been studied. The Maharashtra Pollution Control Board guidelines for sugar industry are being analyzed for implementation. Also information is collected by environmental officer and different officials of various sections like biogas plant, distillery unit, cogeneration plant etc.

IV. CONCLUSIONS

Environmental pollution has a great impact on men , society and overall surrounding area . It adversely effects on the public health, animals and plants.Environmental pollution decreases the efficiency and performing capacities they relate to the protection and improvement of the human environment and the prevention of hazards to human and other living creatures, plants and property.Occupational Safety Healthand is one of the thing allotted to Ministry of Labor& Employment under the Government of India Allocation of Business Rules.

The Industrial Health and Safety most impotent subject of the Ministry discharges the overall functions relating to policy decisions and laying down guidelines for countrywide adoption of legislation.The Water (Prevention and Control of Pollution) Act was enacted in 1974 to provide for the prevention and its control on water pollution for the maintaining and restoring of wholesomeness of water in the country.solid waste, sweeping, collection and transportation, processing and disposal of solid waste and maintain good sanitation.

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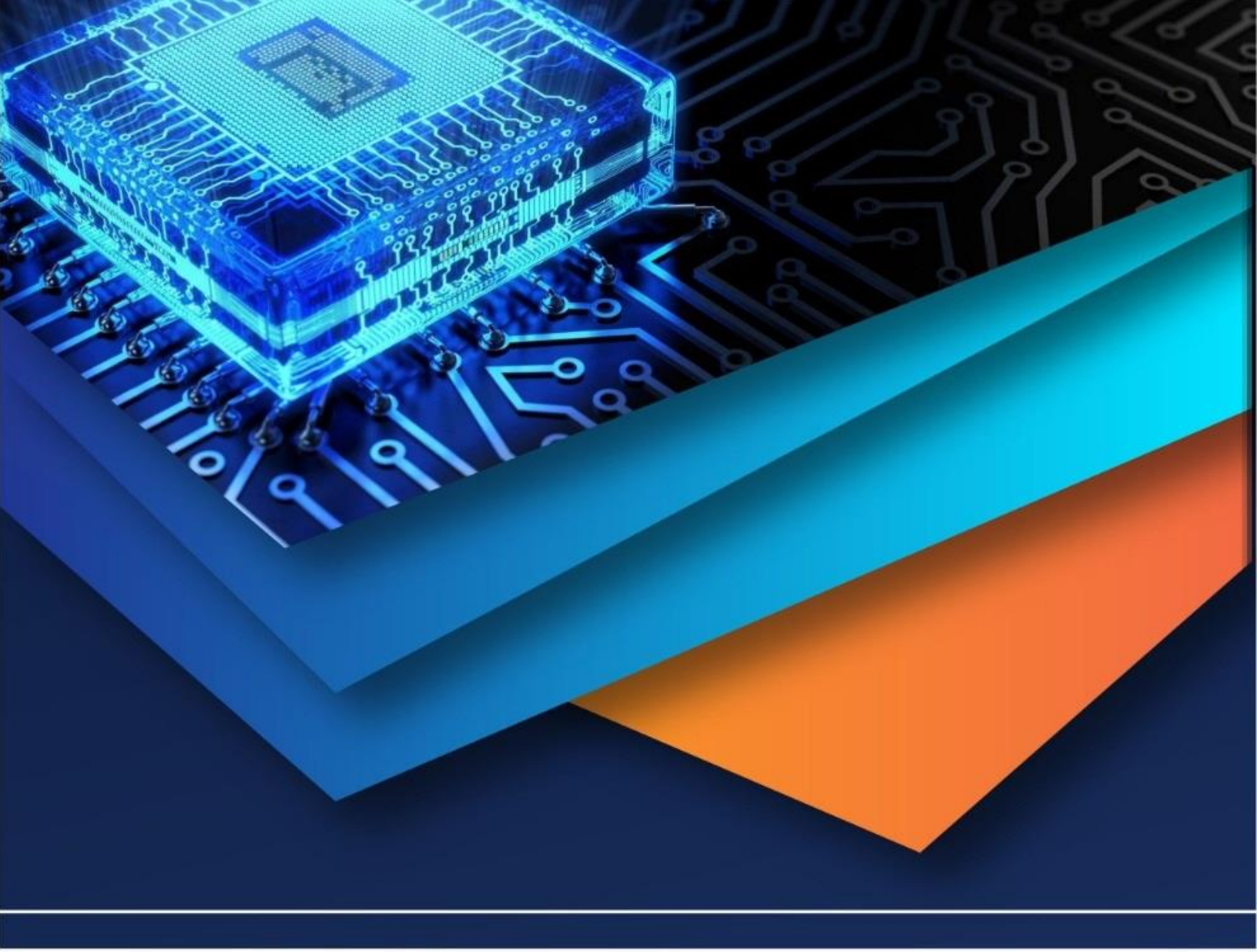

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