

Study of solid waste management in India

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ABSTRACT:

In India, around 72,000 million liters of sewage are produced daily, but installed capacity is only 32,000 million liters, and only 20,000 million liters are processed. In a nutshell, just 28 percent of swage created in India is actually handled on a daily basis. The Swachh Bharat program was established to minimize open defecation, enhance cleanliness, and eliminate manual scavenging. A bigger urban population has resulted. Is an unparalleled growth in garbage output in recent years. In 2016, the globe litres created two billion tones of municipal solid waste, which is expected to increase to 3.4 billion tones by 2050.

KEY WORDS: swage, treated, open defecation eradicate, waste generation solid Waste

INTRODUCTION:

The Indian government has started a number of programs to improve and sustain waste management in the country. SLWM (Solid and Liquid Waste Management) is the collection, transportation, processing, recycling, treatment, and disposal of materials in a scientific manner. It is geared specifically for district administrators to assist in focusing on SLWM along with open defecation free (ODF) activities. Common examples of liquid waste are human animal excreta household waste water cooking oil fats and grease all the other types of liquid waste required bylaw must be properly disposed of most of the time by licensed water hauler. Eight main sources of solid waste municipal solid wastes these are solid waste from houses ,offices, stores, schools, hotels etc. industrial solid wastes, mining solid wastes,fertilizers,pesticides and biocides, excretory products of humans and Livestock electronic wastes , hospital wastes. Improper discharge of waste has severe social and environmental implications the world health organisation (WHO) has deserved that 22 types diseases are associated with improper management of municipal solid waste this leads to formation of leach ate is the ground and contaminates the ground water which subsequently accentuates the water crisis in the country. The primary goal of solid waste liquid management is reducing eliminating adverse impacts waste.

Materials an human health and the environment to support economic development and superior quality life this is to be love is the most efficient human possible to keep Costs low and prevent waste paid up 21 Oct 2020 fifty five percent of the global population currently lives in urban areas and this is expected to increase to sixty eight percent by 2050,a higher urban population has resulted in an unprecedented increase in waste generation in recent years . In 2016 the world cities generated two billion tones of municipal solid waste, which is projected to increase to 34 billion tones by year 2050.Rapid economic growth has been instrumental in reducing poverty and unemployment across the world along with a significant improvement in standards of living there has also been a substantial increase in global economic output coupled with acrider availability of goods and services to consumers such a gigantic quantity of waste a threat to the global system which is already reading under the adverse effects of climate change around 400 million people living in India urban areas generate 62 million tonnes of municipal solid waste a roundly.

Swachh bharat mission (SBM) is to ensure door-to-door garbage collection and proper disposal of municipal solid waste in all the 83000 wards in urban areas by 2019.SBM focuses and generating awareness and providing community managed sanitation systems to

implement SLWM innovative economically and efficiently ownership at glass root level and community investments' at all stages in critical information education and communications (IEC) Intervention should focus on SLWM to create a demand for a sustainable system this must lead to setting up systems for waste disposal in such a way that it has tangible impact on the population the community gram panchayat(GP) has to be encouraged to come forward and demand such a system which they can subsequently operate and maintain the Swachh bharat mission was launched in to 2014 to eliminate open defecation improve cleanliness eradicate manual scavenging establish modern and scientific management of municipal solid waste and hence achieve universal sanitation coverage in the country initiative has two thrust areas –SBM (URBAN) and SBM (RURAL) a number of workshops have leave conducted for urban local.

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NEED OF STUDY

The swachh bharth mission (SBM) was launched in 2014 to eliminated open defecation, improve cleanliness eradicate manual scavenging establish mode run and scientific management of municipal solid waste and achieve universal sanitations coverage in the country. The on nature has to thrust areas (urban) and SBM (Rural).A number of workshops have been conducted for urban bodies (URBs)by natural institute urban affairs the purpose is to enable ULB officials to understand solid waste management rules and recognize issues , challenges and constraints waste mgt govt of india also revamped the municipal solid waste rules 2008 and notified the new solid waste mgt rules 2016 ,the new rules stipulate that all the ULB are responsible for proper collection storage , transportation processing and disposal of municipal waste swachh-survekashna is an annual survey of cleanliness

Conducted by the ministry of housing and urban affairs to foster sprite of healthy competition among towns and cities and to improve services delivery to there citizens the swachata hai sewa campaigns are organized at regular intervials in the country to spread awareness but efficient mgt of waste among the masses, swachhta pakh wadas are also organized in different parts of india to ensure mass

Participation of citizens in cleanliness activities govt launched the waste segregation Campaign in 2017 to spread awareness about the importants waste at source the Ministry of urban develop launched compost Banao, compost apnao scheme to convert biodegradable waste into compost the total estimated energy generation potential from urban and industrial organize waste in Indian is approximately 56900

MW9 G15 waste mapping tool has also been developed under the MNRE-GEF UNIDO project the gobardan scheme was launched under swachh bharat mission rural to convert biodegradable waste such has cattle waste kitchen leftovers crop residue and market waste into biogas to be used for domestic industrial purposes in rural areas at the time of lunch of the swachh bharat mission the combined waste treatment capacity across process such as composting biomethanians and waste to energy palnts way 95,00,080 tonnes premium(TPA) also a number of employment opportunities have been provided to various informed workers in this sector through sustained efforts these cities have become free of industries dump yards land fills

Cities like drug and Ambica kapoor have achived 100 percent door to door collection of waste through mass awareness compgains up a strong system baked by technology to address the problem waste problem of waste generated by bulk waste generators (BWG).BWG have to carry out in site management of organic waste and hand over dry waste electronic waste and sanitary waste separately to Bruhat bengaluru mahanagara palike(BBMP) the state of

Maharashtra introduced a policy of reusing treated waste water for cooling thermal power plants Gujarat has also launched its waste water treatment and reuse of its treated water policy in 2018

Facal sludge treatment plants (FSTPS) are also being run in the country like In Deavanhalli Karnataka through founding from bill and Melinda gates foundation Green sole is an organization which collects discarded footwear in Navi Mumbai and refreshers then to provide recycled footwear the lesser privileged sections of society the state of Maharashtra generates the highest quantity of municipal solid waste followed by UP,TN, Delhi and Gujarat .however Chandigarh , Chhattisgarh, and telagana process significant quantities of waste.

CONCLUSION: The number of operational sewage treatment plants doubled from 522 in year 2014 to 1093 in year 2020 , treatment and installed capacity of sewage in the country remains way below the requisite plants. The states of Maharashtra, U.P,TN, WB and Gujarat generate the highest quantities of sewage country Chandigarh treats 100 percent its of sewage while Delhi ,Punjab ,Haryana also treat a significant portion of their liquid waste sewage treatment almost conform to the general standards prescribed under the environmental (protection) rules for discharge into streams as per the CPCB'S survey report. Around 72000 millions liters of sewage is generated in india on a daily basis but installed capacity exists for only 32000 million liters and out of which only 20000million liter is treated the concept of PPP (public private partnership) in waste mgt is mgt new to india cities like Nagpur and Indore have successfully roped in private players for efficient mgt of solid and liquid waste in their cities in Indore a private company has invested 30 crores under the PPP model and pays 1.50 crore perimum from its profits to the Indore municipal corporation (IMC)construction demolition waste is being turned into bricks, tiles, under and other stuff, which fetches civic today 2.5 crore annually Nagpur municipal corporation (NMC) has privatized collection and transportation of solid waste NIT, AYOGA introduced the concept of hybrid annually model (HAM) to

Promote PPP's prepared to agreements facilitate in the mgt process we get know how innovating ideas and solitary can sensitive people and bring a parading shift their behaviour towards waste minimization efficient waste management helps in attaining the sustainable development goals(SDG's) the 3 Rs reduce,reuse and recycle minimize the use and consumption of resources on the plant help is achieving the goals of circular economy in the words of Mahatma Gandhi a strong country can only be built on the shoulder of cleanliness he belived that cleanliness is next only to godliness and made santiation an integral part of the Gandhian way of living.

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