

**Research Article** 

# Paving Paradise: India's Diminishing Wetlands Ref to Bengaluru's Garbage Disposal Issue

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# Abstract

Sustainable development is that terminology that is being widely used and that has high debating concept that leads to a boarder acceptance along with the diverse interpretations. The specific ambiguity pertaining to the specific definition of the term and its typical myriad approaches makes it more complex and flexibly multi-dimensional in nature. The Pivotal formula and passcodes to Sustainable development lie in the basic rooting and inculcation of new set of values, principles and fundamental ethics for vision of brighter mother earth. And also, how Preventive Principle and Ramsar Convention Rules are linked.

The critical abysmal challenges in garbage disposal and incorrect disposal method in wetlands available in urban India is the motivation of the present study. Urbanization has contributed enhanced solid waste generation and unusual handling of the same degrades the urban environment and causes health hazards. In this paper, an attempt is made to evaluate the major parameters of garbage disposal, in addition to a comprehensive view of diminishing wetlands in Bengaluru, its characterization, collection, and treatment options as practiced in specific area of study.

The active community participation has a striking effect on garbage disposal. Intense investigation on the specific community attitude, perception and willingness towards garbage disposal was carried out in Bengaluru city. Empirical data was collected based on their period of residence in Bengaluru. It is noticed that a Greater level of community engagement and literacy in garbage disposal is needed. This paper discusses the empirical study of why sustainable development is inevitable and how the wetlands are diminishing due to incorrect process of garbage disposal at the Garden City- Bengaluru. It also entrails how the diminishing wetlands due to incorrect disposal of garbage has affected the SDG's of United Nation.

**Keywords:** Sustainable Development; Garbage Disposal; Diminishing Wetlands; Bengaluru; Segregation Waste; SDG's

#### Introduction

In the recent years, Bengaluru has seemed like a gorgeous painting deteriorating slowly thanks to lack of proper preservation. It used to be a scenic place with amazing environment and weather, but now due to improper planning and the recent developments taking place, the scenic beauty of Bengaluru is depleting along with its proper maintenance. Streets in Bengaluru are strewn with waste, garbage spilling out of dumpsters may be a common sight and dumping of garbage in lakes and ponds has become the new way of garbage disposal. What was once wont to be called the Garden city features a new moniker, the "Garbage City". These pathetic living conditions of most of the town dwellers has become a standard eyesore.

Bengaluru was an unobtrusive city at the outset. However, the progressive development has left it reeling and afterward is the unmanageable measures of strong waste that is created each day which is disposed off in wetlands without treatment. For each cutting-edge advancement, the trash has created increments. To manage this trash emergency, certain guidelines have been set down, yet obviously not being executed in a legitimate manner. This paper will discuss the techniques that are regularly utilized for Garbage removal from wetlands in the city. Under a similar theme, it will talk about the Municipal Solid Waste Management Rules of 2013 [1]. It will likewise address the best waste administration techniques rehearsed on the world over and their materialness in Bengaluru.

Strong waste as a rule alludes to the trash that is gathered from the general public is a great threat to environment. As indicated by the Municipal Solid Wastes (Management and Handling) Rules, 2000, "metropolitan strong waste" incorporates business and private Garbage produced in a city or informed regions in either strong or semi-strong structure barring mechanical dangerous Garbage yet including treated bio-restorative Garbage [2]. Civil strong waste (MSW) is produced from family units, workplaces, lodgings, shops, schools and different establishments. The significant segments are nourishment Garbage, paper, plastic, clothes, metal and glass, despite the fact that destruction and development flotsam and jetsam is regularly remembered for gathered waste, as are little amounts of risky waste, for example, electric lights, batteries, car parts and disposed of medicines and synthetic concoctions directly to the wetlands. The waste which is produced consistently in the city must be routinely discarded to forestall aggregation of the equivalent method of disposal. It is a regularly hyped up issue that must be figured out how to forestall amassing of trash in a destructive manner. In this way, it is basic that one needs to think of approaches to discard the waste in proper manner in order not to hurt the personal satisfaction of individuals or demonstrate a risk in the condition that we live in.

Strong waste administration is that where trash is efficiently isolated, gathered, put away, shipped, prepared, treated and discarded. It is an experimentally considered procedure which mulls over realities like the measure of waste delivered, isolation units, development of waste administration offices, decentralization of intensity under this domain and such others.

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#### Data analysis

The primary data has been collected by way of google form survey amongst various time period od residence in Bengaluru. All participants are residents of Bengaluru and hence, have a first-hand experience of the problem related to garbage disposal and its effect on Wetlands. The sample size is 50.

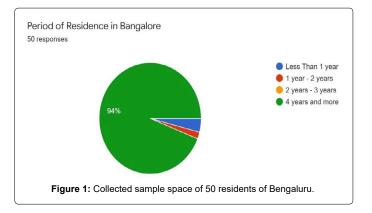
# Survey

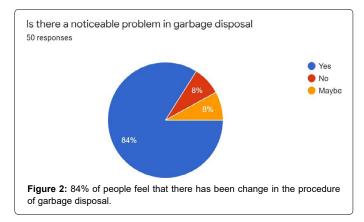
Figure 1 depicts the collected sample space of 50 residents of Bengaluru in which 94% of them are staying more than 4 years in Bengaluru and have seen pertinent issues being raised meanwhile. Hence the taken sample space is able to give the fair analysis about the issue raised.

The sample space taken which has residents staying more than 4 years are perfect analyzers to state whether there has been considerable change in the garbage disposed in their vicinity/area or not. As per response received and referring to the Figure 2, it is found that 84% of people feel that there has been change in the procedure of garbage disposal in the area and equal number of residents i.e 8% of them feel that there may be either a change or no change at all. For the reason of voice of populi, the greater response has been considered.

It is found that there has been more than 50% of residents who know about the initiatives taken by the government to overcome the problem of garbage disposal. Figure 3 leads us to ponder on the fact that the awareness of the schemes taken by the government with respect to environmental developments is not to fullest capacity and steps have to be taken in order to reach the populi about the same.

On an average 8% of the households are willing to participate for the better management, but 92.5% of the households have preferred to

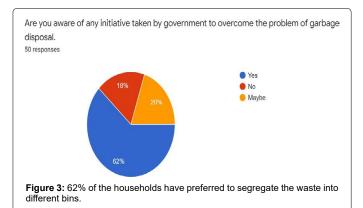


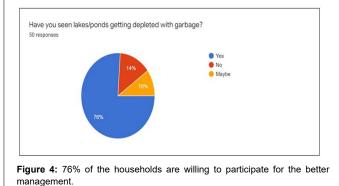


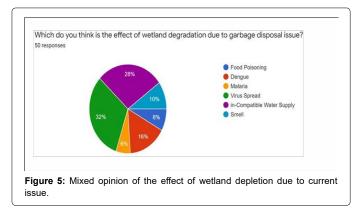
segregate the waste into different bins in order to overcome the present issue of the garbage disposal. Figure 4 infers that the residents are ready to support the government schemes for better environment.

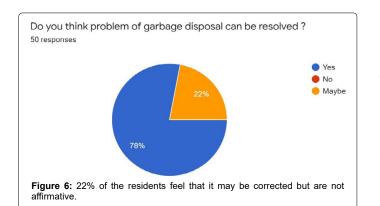
Figure 5 replicates that the residents have given a mixed opinion of the effect of wetland depletion due to current issue. The majority feel that the incorrect disposal of garbage into wetlands has resulted in virus spread and incompatible water supply to house hold. The vectors which breed on the same shall have subsequent disease spread which shall hamper the Sustainable development goals set i.e the health and well-being of the residents.

It is inferred that more than 75% of the residents feel that the issue can be resolved with corrective measures that can be taken from time to time. But meantime 20% of the residents feel that it may be corrected but are not affirmative for the same. The act of responsibility is seen the positive assertion of the same. Residents are actively ready for a revolutionary turn in environmental development as shown in Figure 6.











# Pertinent literature review

# Sustainable development: an earnest hope - ms. Sangeeta singh

The paper discusses about the intergenerational equity, Paradigm and Sustainable Development. It provides the mantra and the roadmap to the 14 SDG and details how the environmental development is inevitable. It also includes the conceptual framework of how environment has been depleted by human blunders

# Green federalism: A Historic Leap Towards Sustainable Human Development- Ms. Indira Dutta & Ms. Jiya Shahani

The paper discusses about how India does not have legally binding rules and regulation on environmental degradation and nature depletion. It also details few policy interventions that have been taken to outcome the depletion of the environment.

# Community attitude, perception and willingness towards solid waste management in Bengaluru city, Karnataka, India-Mr. Kumar. M and Ms. Nandini. N

The paper discusses about the effective maintenance of the city's environment in terms of provided infrastructure, critical traffic management, cleanliness, efficient sanitation and waste management.

# Green Buildings: Opportunities at Challenges-Mr. R.R.Singh and Mr. Suhail Sharma

The Paper discusses the rapid growth of industries and its contrary effect on environment. It also details about effect of the disposal of affluent directly into the mass nature. It narrates how the present scenario finds opportunity in environmental challenges. This paper has entailed the following questions:

Whether there is extreme effect of Garbage disposal mechanism on wetlands

Whether there is effect of diminishing wetlands have effect of 14 Sustainable development Goals

Is there a requirement of certain steps to overcome the pertinent issue.

How is Precautionary Principle Applicable in current issue raised.

# **Research Objectives**

This paper is to explore the connection of Sustainable Development being in downpour due to incorrect garbage disposal in wetlands which are leading to its diminution. To also crave out how the improper mechanism have led to environmental degradation. Bengaluru has been the home of the main exertion to change strategy on waste administration. Today there are no progressing endeavors at different levels inside Bengaluru city to distinguish operational issues of its waste administration frameworks. In this manner while the assortment of disposal of waste in wetlands has commonly improved, its removal is as yet lacking from multiple points of view. The essential objective of this paper has been to decide whether there is still any suitable treatment and removal of this pertinent issue in and around Bengaluru.

# Research Methodology

It represents the actual operationalization of a specific research question along with the updated search strategy. The information has been clustered and critically analysed from various Law Review Journals published by International Law Schools, Published Research Papers and well drafted books those which are published by eminent publishers like EBC, Lexis Nexis, Oxford and Pearson. The consolidated data is also collected from the working documents, manuals, procedures, law reports, policies, regulations and recent judgements or order delivered by expert jurists. The researcher has chosen empirical form of research where primary data has been collected by the researcher himself, through google form survey conducted. The research is a combination of qualitative as well as quantitative data. The researcher has focused on the residents of Bengaluru as the sample, since the issue being considered and analysed is at its peak in Bengaluru. The researcher wants to understand the plight of the residents as well as the outlook of those people towards environment protection.

#### **Inferential Analysis**

Strong waste administration is especially troublesome and exorbitant in today's era because of the expanding volumes of waste generated and the need to control the potential, genuinely natural and well-being impacts of threats. India has been making arrangements for strong waste administration which is important for the improvement and usage of a long haul and dependable sustainable activity with respect to environment. A report on waste disposal on wetlands were arranged for the Government of India (1998) by a sub-council of the Supreme Court which relates to 'pitiful circumstance' in India [3]. The metropolitan bodies in India have not been able to conform to the quick changes that have prompted both expansion amounts and the changes in the arrangement of the waste stream in which there has been prompting of over-stacking of the administration. It is assessed that in excess of a fourth, the waste produced is greatly harmful if it's not disposed in correct manner [4]. The flow of circumstances is that in which it offers ascend to the aimless dumping of Garbage, that seriously affects the quality of environment meanwhile land and water contamination which causes an emotional increment in wellbeing perils in the urban condition. A report arranged by the World Bank (1994) supported a move towards privatization of the administration, and this has been begun in certain urban communities, however association of common society associations could give elective arrangements. In numerous urban communities, non-governmental and network based associations (NGOs and CBOs) there had been a beginning of creation of neighbourhood garbage assortment benefits just as, fertilizing the soil, reusing exercises, etc [5]. These moves were upheld by new city waste administration policy that had implementation of rules by Ministry of Environment and Forests through GOI 2000.

With an expected populace of 9.4 million, Bengaluru is among the biggest five urban areas of India. The strong waste administration practice in Bengaluru is extremely intriguing. The garbage produced per individual every day is about 0.5 - 1kg. It produces in excess of 4,500 tons of Urban Solid Waste a day, which the Bhruhat Bengaluru Mahanagara Palike (BBMP) is clearing around 60% of same. The essentiality of optional assortment and transportation have been sensibly agreeable to empower the city to stay clean. Therefore, there is a gigantic excess of un-cleared waste jumbling the city's properties that are under questionlake beds, storm water channels, traffic intersections and so forth. The current waste treatment framework in the city isn't exceptionally successful. Between the 1970s and 1990s a critical division of the fermentable Garbage was legitimately utilized in the fields [6]. Despite fast development in Urban Solid Waste creation throughout the years, the limit of fertilizer plants has not expanded. Different types of waste in reusable forms are as of now working in Bengaluru (arriving at an expected 67% of all out recyclable substance). This level is insufficient and it brings about the creation of non-fermentable Garbage to be landfilled/lake-filled.

A huge part of the absolute Urban Solid Waste is likewise dumped in and around 60 moving steam water lakes, open dump destinations that postures ecological issues. The Municipal Solid Waste produced in Bengaluru city has expanded from 650 tons for every day (1988) to 1450 tons for every day (2000) and today it has become 4500 tons for every day. From 1988 to 2000 there is sensible change in Garbage arrangement: fermentable, paper and plastic that has expanded by 7%, 3% and 0.2%, separately.

Numerous techniques have been introduced to discard Garbage in specific condition of amicable manners. The standard techniques that have come to be utilized are that of dumping waste in open locales, landfill strategies, bio-mining, burning, and so forth. Zones utilized for open dumping might be effectively available to individuals, particularly kids, who are powerless against the physical (distending nails or sharp edges) and substance (unsafe liquids or residue) risks presented by Garbage. The rain water or flowing water peeps into these heaps and flow towards the available lakes and streams nearby. Dump destinations with scrap tires give a perfect rearing ground to mosquitoes, which can increase multiple times of quicker than typical in the warm stale water remaining in scrap tire causing a few ailments. Harmful and synthetic consumes with quantities of perilous amount, substantiate the garbage to blend in with general waste during assortment and transportation.

Aside from this, ecological contamination is caused. Likewise, because of aimless and enormous amounts of dumping, the dirt at the open site is defiled. This sort of dumping influences the earth as well as utilizes the space that could have an increasingly business and The landfill method that is utilized ends up being of a genuine hamper to the ecological equalization. It discharges lethal vapor and furthermore, the leachate that falls off the waste streams into the closest water body, tainting it. More than 3000 tons of waste is produced in Bengaluru consistently, a great extent of which is horribly dumped in the peri-urban zones of the city, with farmlands and wetlands turning out to be ideal objectives. The renting out of land for dumping Garbage to neighborhood organization bodies additionally turns into a pain free income spinner for certain land-proprietors and the dumping goes on ignorant of the indecent maltreatment of characteristic assets and unavoidable effects on the wellbeing of nearby networks. Along these lines, it tends to be seen that there are not kidding impediments to the idea of landfills.

As a response to the issues of landfills, the technique for bio-mining is utilized. Bio-mining is the procedure used to uncover, process and arrange existing trash. It is a very eco- accommodating procedure in which the waste that has been dumped in the locales is isolated and later prepared. The innovation utilizes any appropriate mechanical sieving machine or some other hardware. Through this technique, the plastic will be reused and the trash handled can be utilized as excrement.

#### Vartur zone

In the Varathur zone, the degrees of strong Garbage dumped was around five piles which is more than 100 m2. Be that as it may, as the populace moved to urbanization, the dumps turned out to be less visited yet the size was bigger as the locals burrowed a typical pit which they all utilized and afterward secured those with mud when it was full.

Additionally, there was a lot of consumed Garbage in the urban zones while the provincial territories had mostly used natural Garbage which was likely the remaining's behind a higher faunal populace. The plastic substance was higher in this zone of wetland. The trash appeared to be unsorted as there was a blend of a wide range of Garbage and no plastic had been recuperated in the initial two networks. Additionally, in these frameworks, the metal substance of the Garbage was 1-4%. The region presents a wellbeing danger to all creatures because of the nearness of plastic convey sacks and depletion of underground water due to seepage. With a populace of 218005, Surrounding of Varathur is gradually reaching out into the rural zone. Furthermore, as this development doesn't seem, by all accounts, to be BBMP-agreeable, there is by all accounts no strong waste administration framework is set up. When inquired, the locals conceded that each a few houses just burrowed a typical pit and covered all their junk there. When it topped off they would cover it and burrow another pit. This may have worked a couple of decades prior, yet now with the sum of plastic and other nonbiodegradable material, this can be a perilous practice.

#### The Bannerghatta Zone

In the Bannerghatta territory, a large portion of the dumps were progressively an instance of absence of metro sense; there were dustbins in the greater part of the located territories however the junk appeared to be spread for two feet in the canister. Moving into the second two lattices, the degrees of trash was meager. One explanation behind this could be the intense drop in populace between the two arrangements of networks. The primary arrangement of frameworks was predominantly along Bannerghatta street where there were numerous shops – accommodation and the second arrangement of networks was along the Bannerghatta-Anekal street which has not however been completely populated. The populaces were reflected in the rubbish; the primary arrangement of networks had mostly private and residential trash. At the extraordinary finish of the second arrangement of frameworks, the Jigani modern territory starts. This territory appeared to be moderate in keeping up the issue regarding the trash.

The Municipal Solid Waste Management Rules of 2000, state that it is the duty of the residents to isolate their garbage at home [7]. To store isolated waste, places are chosen in each ward and arrangement is made for assortment of dry waste and expulsion of dry waste once in three days and transportation of the equivalent. This was put down in the arrangements of the Municipal Solid Waste (Management and Handling) Rules of 2000. The city creates around 5000 tons of strong waste every day. Quite a bit of this waste is natural and can and ought to be treated in the soil. Commanding isolation of waste at source is obviously conceivable under the current lawful system. Numerous groups over the city are rehearsing this for a considerable length of time, exhibiting its achievability.

When waste is isolated at source, all the natural rejections from sources can be promptly treated in the soil and the recyclable material can become asset inside the area. Just electronic and bio- therapeutic Garbage should be uncommonly treated according to material standards. Such a methodology will contribute monstrous reserve funds in fuel and trucking costs, cut down expense of HR required to oversee Garbage, forestall the requirement for landfilling and ensure general wellbeing and condition.

At the family unit level, isolation is imperative. It doesn't require some investment for a person to put biodegradable and nonbiodegradable waste in two separate receptacles. This activity spares a great deal of exertion at the landfill site. About 93.8% of the family units are not reusing the waste and are straightforwardly arranging into the network receptacles without isolation. Numerous techniques were thoroughly considered and appropriately written in the Municipal Solid Waste (Management and Handling) Rules of 2000. This Rule was decided to be revised and a Draft of Municipal Solid Waste Management Rules of 2013 was distributed. These changes by the Indian condition Ministry were broadly viewed as backward. A PIL was recorded in the High Court of Karnataka. This PIL incorporated the matter of isolation at source. This entrenched arrangement of isolating waste at the source, was inquisitively, in the 2013 Rules, Schedule-II erased giving a feeling that it isn't required anything else to isolate the loss at source.

To stop this sort of unsystematic dumping and to make the lakes of Bengaluru cleaner, strategies must be executed that are reasonable and yields results. This requires a coordinated effort between the experts in control and furthermore the residents of Bengaluru. The privilege to clean condition goes under the Right to life that has been given to the residents by the Constitution [8]. Be that as it may, it is additionally our obligation to add to keep the conditions of Bengaluru clean. There are no natural laws in the Karnataka Municipal Corporation Acts explicitly relating to waste/garbage management. Strong waste administration practices can never arrive at the ideal degree of productivity until general society takes an interest and releases its commitment strictly. So as to improve strong administration rehearses in urban regions, it is important to fuse reasonable arrangements in the state law to guarantee open cooperation and accommodating least degree of strong waste administration.

To Solid waste administration that is typically one of the most work and cost-escalated administrations which is given by current governments are to create healthier nation and neighborhood government authorities are often place time blockades by organizations selling strong waste administration advances. A significant number of these advancements may not be proper and authorities may have constrained facility for surveying an organization's cases and mechanical suitability. Off base suppositions and lack of arrangements by venture authorities have brought about numerous frameworks being assembled, just to close the mere not expensive beginning up but tasks and supports. Helping current governments in picking fitting strong waste administration techniques and advances is subsequently of basic importance.

"Help Us in garbage collection, says BBMP"- "A workshop had been organised on Urban Eco-friendly movements for healthier living and the Health Officer C H Nagarabetta speaking on the occasion said that surveys indicated that nearly 80% of the citizens cooperated. Among those who did not cooperate were mainly working couples and those who were reluctant to dispose the garbage themselves and instead waited for their maidservants" [9].

# The finances

The Swacha Bengaluru initiative and Solid Waste Management (SWM) in the city are now fully funded by the BBMP. Some of the finance for the programme is made available by the Infrastructure Cess and Waste Management Cess levied on the citizens of Bengaluru by the BBMP. A budget allocation has been made for this purpose. The budget allocation for 2003-04 was Rs 32 crore for garbage cleaning under revenue expenditure. This excluded the salaries paid for the BBMP staff which was involved in waste management. However, Rs. 31.73 crore was spent out of the allocated fund, which has been 17.20% higher than the previous financial year. Under Capital expenditure, Rs 12.70 crore was assigned for solid waste management, which was broken up as follows:

- 1. Infrastructure- Rs 10.65 crore
- 2. Scientific sanitary landfill- Rs 2.05 crore
- 3. Solid waste transportation- Rs 1 crore

Not even a single paise was spent for this purpose in 2003-04. The BBMP claims to have acquired land and completed the fencing of the boundary of lakes, under the allocation of the Estates Dept. A private entrepreneur has been awarded the work of development and maintenance of scientific landfill on a principle of tipping fee. The BBMP expects the work to commence once the landfill is ready. The payment of a tipping fee is yet pending.

# Policy of Segregation of Waste

The BBMP has actualized the best possibzl;le instrument for assortment however the procedure of isolation of waste into natural, plastic and metal and the correct removal has not been taken up. The previous Mayor of Bengaluru, Prema Cariappa had professed to realize a logical methodology towards eco-accommodating waste administration however the plan has not been actualized up until this point. The medical clinics and nursing homes in the city are additionally expected to keep up insinuators for treatment of restorative waste, however little advancement has been made in this front. It is amusing to take note of that isolation of strong waste was begun with incredible power and conveyed out well in the underlying time frame. The trash pickers were prepared to utilize the plastic containers in the carts and are tormented in various hues for simple distinguishing proof and isolation. The inhabitants knew and functioning admirably. It helped the Poura Karmikas in return as they would sell the paper, plastic and containers for reusing and add to their month to month salary. Be that as it may, the transportation of isolated trash flopped as the vans were not outfitted to manage it. They didn't have various compartments, so what use in isolation when everything arrived up together.

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#### **Facility of Bins For Segregation**

The BBMP has handed over specifically yellow-coloured bins under the Swacha Bengaluru scheme to dispose dry wastes available at source like paper, plastic, glass and metal waste to be collected in intervals of every fifteen days under the first phase of the scheme in June 2003 in some of the areas. The bins were donated under CSR of Reliance Infocomm Limited. The collection happened only once and was not implemented further. The wet Debris management, Clinico biomedical waste, Factory waste and segregation of wet and dry waste are the new initiatives under Swacha Bengaluru Scheme. This procedure of segregation has only been started on a pilot basis and is expected to be completed in a few years' time. These techniques and others if appropriately executed will bring about Bengaluru coming back to its Garden City status. Appropriate administration of strong waste will lessen contamination and increment the stylish estimation of the city. Aside from this it will likewise go about as an optional wellspring of crude materials. As a general public we should satisfy the aphorism of 'Tidiness is beside Godliness.' Thus techniques must be actualized in a stark way. Along these lines, Bengaluru will be a pioneer in the field of strong waste administration and be a model city for different places in India.

## **Reference to Ramsar Convention**

Perceiving and understanding the grave significance of ensuring such water bodies, the Government of India turned into a Contracting Party to the worldwide bargain essentially centered around securing Wetlands "Ramsar Convention". The Convention on Wetlands of International Importance was received on 2nd February 1971 and came into effect in 1975. The fundamental precepts of the settlement content have been created and deciphered by the Conference of the Contracting Parties on insurance of wetlands. The advancements and changes are made thinking about the natural effect that those changes/ improvements would deliver in the contracting nations. Part Countries are required to report and assess any antagonistic human- initiated changes in a Ramsar site and take important activities to re-establish these wetlands to their previous state. Ramsar destinations, which are of universal significance, like clockwork, the Contracting Parties meet at the "Gathering of the Contracting Parties" (COCP). After exhaustive conversations, they embraced choices to oversee the Convention [10].

## Implementation in Bengaluru

Ever since the commencement of this Convention, states around the country have initiated numerous conservation efforts. However, at least in the case of Bengaluru, it would be accurate to say that not much has been done to protect the wetlands and such issues have received minimum attention by the specific decision makers in the whole country.

# What have been the greatest difficulties in implementing the convention?

One of the greatest difficulties is changing the mindset of the executers. It is taking time to go in for vegetative treatment for catchment then for hardcore engineering interventions some of the States are facing problems of Infrastructure, Expertise and Man power. Government has taken up new programmes to help people in making better Management Plans, train them for various wetland conservation processes for better execution and implementation. Steps have also been taken to strengthen baseline information on various research parameters and involve communities in a more user-friendly manner for executing conservation aspects in a better designed manner. Process

is on for better monitoring and review mechanisms at National, State and District levels. Financial constraint is another handicap, the concerned ministries should focus on allocation of funds. Very little international assistance is providing by the Ramsar Sector. For the implementation of various conservation measures because of its meagre financial resource. There is need for proper mechanism for assessing impacts of ecological interventions at the national and international level and there is a lack of stringent rules for upkeep of designated Bengaluru sites. It was suggested by India in a theme paper for Asian Regional Meeting held in Jakarta (Indonesia) to have a team of two to three experts and strategist from the neighboring countries to assess management interventions in newly identified Ramsar sites so that they are not put under Montreux record. In taking midterm corrective measures to use appropriate technologies for wetland conservation, it is believed that the government can come up with specific schemes and policy for the same.

#### **Reference To Principle Of Prevention**

The interaction between the preventive principle and the responsibility not to cause damage to the environment of the other states or to areas beyond national jurisdiction. The principle of 'no appreciable harm' was reproduced mutatis mutandis in Principle 21 of the 1972 Stockholm declaration on the human environment, a principle that most legal analysis considers a rule of customary international law:

"Sates have, in accordance with the Charter of the UN and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and the responsibility to ensure that the activities within their territory or control do not cause any damage to the environment of the other states or of areas beyond the limit of national jurisdiction."

While retaining the idea of prevention, the 1992 Rio Declaration on Environment and Development set the terms of this obligation in a more restrictive mould, in form of Principle 2 which states that States henceforth have: 'the responsibility to ensure that the activities within their jurisdiction or control do not cause damage to the environment of the other states or of areas beyond the limits. Clearly, not all instances of transboundary damage resulting from the activities within the state's jurisdiction are unlawful. States are not required to guarantee the appreciable harm is prevented, they must merely exert due care or due diligence to prevent that harm.

As a result, the preventive principle is in fact an external element of the general obligation to "due diligence" or "due care" with respect to the environment and natural wealth. Nonetheless, it is not without certain consequences for the liability. By introducing an element of consistency for the general obligations for due diligence, the preventive principle should serve to strengthen the core of that obligation. In addition, the preventive principle is implicitly or explicitly endorsed by an extensive body of international treaties and related instrumentalities, subjects of which include:

- The marine environment
- Waste managements
- Clime
- Ozone depletion
- Biodiversity
- Protection of rivers
- Toxic substances

In present issue, The problem of garbage disposal in Bengaluru shall have a indefinable difference in the interstate environmental development where the wetlands of Bengaluru is of great use for sharing states and if any changes/alterations to it, shall have equivalent impact on states . In turn, 29 states of India who are in loop with each other shall share the responsibility and obligation in equal which shall effect the sustainable development of the country which in continuous shall hamper the global developments. Henceforth, the principle of prevention has to be mandatorily followed by the respective government to not foresee the negative circumstances.

#### Connectivity to sustainable development

Sustainable development can draw support from a range of principles, among them the preventive principle is vital one. The clearest recognition of the preventive principle and the sustainable development can be seen in the Gabcikovo-Nagymaros Case in which the line of distinction has been fairly laid down. Closely related to the preventive principle, the principle of rectification of environmental damage at source at a priority plays an important role in the control of transboundary movements of wastes indeed for disposals. Bengaluru's step towards waste segregation at source is a typical example of rectification of damage that would be overseen.

The above attached flow chart depicts all the seventeen sustainable development goals in which most of them shall be hindered at the apex level due to the garbage disposal on wetlands in Bengaluru. Though the Government seeks for achieving, the practical circumstances shows a negative response. Likely,

- The disposal of garbage in the available wetlands shall spread numerous diseases among the residents which may lead to the circumstance of extensive expenditure on medical treatment. The reason that the diseases are communicable; it links all the citizens on its way path. The poor shall become poorer by this expenditure. Hence the goal of no poverty would not be achieved.
- 2. With respect to the extensive expenditure, the citizens find no allocation for satisfying their hunger. Hence the goal of zero hunger would not be achieved.
- 3. The inference drawn shows the spread of diseases and un healthiness among the citizens. Hence good health and well-being of the citizens are not achieved.
- 4. When extensive expenditure is made on medical treatments, citizens find it difficult to allocate the income for the quality education and hence the goal to achieve the same is not achieved.
- When the garbage filled wetlands lead to depletion of ground water, the supply of clean water is farsighted and hence the goal regarding the same will not be achieved.
- 6. The extensive expenditure and tightness of monetary recovery shall lead to lesser economic growth which in turn shall have a impact on the goals kept for achievement.
- 7. When pivotal facilities are hampered in the city, there is no sustainable development at city level.
- 8. The Rainwater cycle shall be hampered on the deposition of garbage on wetlands which shall have serious effect on the climate.
- 9. The due reason of water depletion, it can't be ensured that the life below water shall be of high comfort or liveable. Hence the goal to achieve the same will not be possible.

10. Environment is a correlation of the land and water organisms which shall affect the well-being of the life on land. Hence the goal to reach the same shall not be achieved.

#### Imperative judicial decisions

The Karnataka High Court in a request gave the judgement during the court hearing on November 10th, 2017, which said that strong waste ought to be overseen at the ward level in the city of Bengaluru and preventive measures has to be immediately taken for its disposal. This judgment was given by Karnataka High Court in the continuous case of WP 46523/2012, Environment Support Group and Ors v. Bruhat Bengaluru Mahanagara Palike and Ors associated with WP 24739/2012 and other Public Interest Litigations that are being heard by the Court since July 2012 in attaching the strong waste administration emergencies [11]. In Dr. B.L. Wadhera Vs. Union of India and Ors [12]. It was stated that the waste disposal is a alarming issue in the city of Bengaluru and the Segregation of wastes are must and should for the residents and BBMP has to take relevant measures to ensure the same. In BBMP vs K.V. Shramik Sangh And Ors., t was stated that the wetlands are of great importance and any harm made to it shall have direct consequences on the country's development. In Radhey Mohan Misra v. State of Uttar Pradesh & Ors, it is seen that the State authority submitted a detailed report of identified wetlands in the state and hon'ble tribunal directed the municipal corporation to take further action regarding the conservation of those wetlands as per the provisions of Rule 7 of Wetland (Conservation and Management) Rules, 2017. The Supreme Court of India is still hearing a matter M.K. Balakrishana & Ors. Vs. Union of India & Ors. the High Court of Delhi in which there have been several orders of consequence [13-15].

#### **Conclusion and Recommendations**

We can infer that incorrect waste administration situation perseveres in Bengaluru, which is obvious from the nature of ground water received by the residents and by looking to the information on the blended waste aggregated in the dumpsites or wetlands, it can be observed that the garbage disposal has an eminent harm on environment. The explanations behind this pitiable condition are many, yet the assortment framework assumes a significant job in choosing the destiny of the removal schemes and steps. Assortment of waste popularly known as segregation of waste is of great importance.

#### The particular strategy to be implemented are:

The following problems need a re-examination:

- The effective Usage of appropriate techno for differentiated processes
- Infrastructural facility and manpower requisites that are much suitable
- The efficient means to meet the fast-growing financial requisites
- Environmental problems in urban/sub urban space

# Requirement of legal stand

Some of the recommended legal provisions are as follows:

- i.Strict Prohibition and sanction for littering and waste disposal on wetlands etc.
- ii. Duty of residents not to mix recyclable wastes, non-biodegradable wastes & hazardous waste with organic waste.
- iii. Duty of local body to provide and maintain 'available wetlands."

- iv. Duty of local bodies to clean all wetlands.
- v.Duty of local bodies to transport waste regularly to waste storage depots if disposed in wetlands.

# Other suggestions

Effective segregation of waste at source is the primary step for a bigger vision of sustainable development.

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