

An Assessment of Urban Waste Disposal Management Challenges in Dibrugarh Municipality, Assam: A Structural Functional Study

Dr. Lini Baruah

PH. D Dibrugarh University

DOI: <https://doi.org/10.51244/IJRSI.2026.1304000029>

Received: 02 April 2026; Accepted: 07 April 2026; Published: 29 April 2026

ABSTRACT

The waste disposal management is a burning social problem in many cities. The concentration of waste in different parts of city damages environment of surrounding areas. The wastes disposal management of Dibrugarh city Municipality faces many challenges. The Dibrugarh city municipality collects garbage from different parts of the city in a daily basis. People get employment in Municipality Board for collection, transfer and disposal of waste in Dibrugarh city Municipality Board. At morning 6:00 AM all roads are clean by Municipality employee and garbage are transfer to designated areas. People's habits of throwing trash in roadside areas enlarge landfill areas due to single use plastics. The garbage collection, transfer and recycle need proper monitoring which many time lacking by disposal management. There are lots of causes because of that garbage disposal problem is alarming such as people's habits, improper treatment, and natural calamities. **Methodology of the study:** The state of Assam is geographically situated in North Eastern part of India. The study is conducted in Dibrugarh city which is, situated in Dibrugarh district of Assam. The concerned research is conducted with the support of structural functional perspective. The exploratory research design is adopted to conduct an empirical research in Dibrugarh city. The research is conducted with assistance of probability sampling method. The methodology of the study contains that primary data are collected with the support of observation and interview method. The primary data are collected from 387 respondents of different categories such as migrant labor, daily wage earner, vegetable vendor, road side stall owner, small shop owner, company official, employee, unemployed, retired and small business owner. The secondary data are collected from books, journal, articles, internet sources and websites. The objective of the study is such as- (i) to analysis causes and consequences of improper waste disposal. (ii) to examine challenges society faces due to waste. (iii) to study industries responsibility towards pollution control and waste disposal. (iv) to know is waste create hamper to industrial development. (v) to assess possibility of reduce waste with alternative solution.

Key Words: Waste Disposal, Environment, Pollution, Treatment, Industry, Management.

INTRODUCTION

Waste disposal management is an important issue for discussion in current environmental condition. Urban areas are naturally over populated. The concentration of population in urban areas grows waste disposal management a challenge for civil society. Population grows and side by side urban waste also continuously growing. Problem of waste disposal management is in alarming situation in almost every city. Urban waste destroys water, soil, air and grows landfill areas and management of it is necessary to reduce environment degradation. The regulation of landfill areas is necessary to overcome from many diseases. Improper waste disposal not only effect environment it takes many lives. The daily activities of human increases waste material and the proper disposal management plan is required for minimization of environment pollution.

The waste disposal required efficient plan to get ride from further degradation of environment. The waste disposal process start with collection of waste to its transportation, dumping, regulation, treatment and recycle for human use. Waste disposal management system includes not only its collection but also involves proper process, recycle, reuse and dumped it in landfill areas. Waste disposal required its burning, discharge and buried in landfill areas which leads to air, water and soil pollution. The burial of waste in landfill degrade soil of that areas, it become died place. The waste such as liquid, solid and gases need distinct method to dispose. Many times due to inefficient disposal management landfill areas waste disposal challenging for local authorities. The

inefficient waste disposal lead to climate change, melt ice caps, raise sea level and landfill areas are become breeding ground for many diseases.

The concentration of people in Dibrugarh city is high, due to facilities like well connected road, higher education centre, medical college, good quality housing, electricity and waste disposal management. In Dibrugarh there is a municipality board, to manage municipality waste of the city. The road are clean regularly by the municipality worker, the garbage are transport into landfill areas. The high concentration of people in the city creates the problem of waste, and garbage alarming. The growth of roadside food carts increases single use plastics. The dispose waste in landfill areas creates environment pollution. In the city garbage's are collected in trucks with no definite time, mostly in morning, but sometime in afternoons. Sometime garbage's are not collected for two, three days. Until the garbage is not clear, the place is not only health hazard, it smalls, scattered waste, creates problem to use that road. People faced difficulties to find another road because everywhere the condition is similar. The garbage's are transport to landfill areas but due to overpopulation there is another problem arises that is, shortage of landfill areas. The untreated waste or garbage's are harmful to not only human but also for animal. The wastes are burn in the landfill areas which pollute the air of that place. The place where wastes are dumped, that place lost its productivity. The boundaries of landfill areas are continuously increasing which is again a cause of concern. Due to overpopulation, poverty, lack of employment people are living in nearby landfill areas finds food in there, searching material for reuse. People are bound to live in poverty, in nearby landfill areas because they not have enough income to find another place for living. People income is low, government tries to provide employment but growing population create problem.

Methodology of the Study: The research is conducted in Dibrugarh city situated in Dibrugarh district of Assam. The primary data are collected from Municipality affected area of Dibrugarh city. The total population of Dibrugarh Metropolitan area is 154,296, among them 79,757 are male population and 74,539 are female population. Primary data are collected with the assistance of interview and observation method. Secondary data are collected with the help of books, journal, internet sources and website etc. The primary data are collected by interviewing a total of 387 respondents that is (0.5%) per cent of total population, among them 200 (0.25%) per cent are male population and 187 (0.25%) per cent are female population. The respondent of the study is divided into 10 sub-categories. The data are collected from migrant labor, daily wage earner, vegetable vendor, road side stall owner, small shop owner, company official, employee, unemployed, retired and small business owner. The research is conducted with assistance of probability sampling method. The exploratory research design is adopted to conduct an empirical research in Dibrugarh city. The structural functional perspective is used for the concern research. The objective of the research is such as- (i) to analysis causes and consequences of improper waste disposal. (ii) to examine challenges society faces due to waste. (iii) to study industries responsibility towards pollution control and waste disposal. (iv) to know is waste create hamper to industrial development. (v) to assess possibility of reduce waste with alternative solution.

The below table 1.1 shows respondents of the study.

Table: 1.1 – The table represents total respondents of the study

Sl. No.	Respondents of the research	Total population of the Dibrugarh city	Total percentage obtained for research	Total respondents of the research
1.	Male population	79,757	0.25%	200
2.	Female population	74,539	0.25%	187
Total		1,54,296	0.5%	387

Source- Census report 2011.

The table 1.1 explains total respondents of the research. It shows that, total population of the Dibrugarh city is 1, 54,296 among them 79,757 are male and 74,539 are female respectively. The researcher obtains 0.5% per cent respondents from each category of respondents to conduct an empirical research in Dibrugarh city. The total

male respondent of the research is 200 which is 0.25% per cent of total male respondents and 187 which is 0.25% per cent of total female respondents distributively. The total respondent for the concern research is 387 respondents which is 0.5% per cent of total population of the city.

The below table: 1.2 shows distribution of respondents of the study.

Table: 1.2 - The table shows the respondents categories for the research.

Sl. No.	Respondents categories for the propose study.	Male respondents %		Female respondents %		Total respondents %	
1.	Migrant labor	20	10%	19	10.16%	39	10.8%
2.	Daily wage earner	20	10%	19	10.16%	39	10.08%
3.	Vegetable vendor	20	10%	19	10.16%	39	10.08%
4.	Road side stall owner	20	10%	19	10.16%	39	10.08%
5.	Small shop owner	20	10%	19	10.16%	39	10.08%
6.	Company official	20	10%	19	10.16%	39	10.08%
7.	Employee	20	10%	19	10.16%	39	10.08%
8.	Unemployed	20	10%	19	10.16%	39	10.08%
9.	Retired	20	10%	19	10.16%	39	10.08%
10.	Small business owner	20	10%	16	8.56%	36	9.30 %
	Total respondents	200	100%	187	100%	387	100.02%

Source- Interview.

The above table 1.2 depicts distribution of respondents for the concern research. It is divided into 10 categories of respondents such as migrant labor, daily wage earner, vegetable vendor, road side stall, small shop owner, company official, employee, unemployed, retired and small business owner where male respondents are divided into 20 (10%) per cent respondents for each category. Similarly, female respondents are also divided into 10 categories which is divided into 19 (10.16%) per cent respondents for each category and 16 (8.56%) per cent for small business owner. Total respondents for all categories 39 (10.08%) per cent and 36 (9.30%) per cent respondents respectively.

Finding of the study: The waste disposal management local authorities of Dibrugarh city municipality board dumped waste product in to landfill. If waste are not dispose onsite it is break down to liquid that pollute soil, ground water and water ways of nearby areas. These places become breeding ground for diseases. Due to lack of proper separation of trashes recyclable items with perishable food items leads risk to human health. Long term inefficient landfill management pollute environment and make garbage disposal challenging for its management authorities. Most of the toxic wastes are solid such as broken glass, plastic material, old cell phones and their batteries which take many years to decompose. Plastic waste not only enlarges landfill area but also it clogs water bodies, drains and contaminate ground water. People daily habits such as one time use plastics, electronic goods, instead of cleanliness uses of room sprays, refrigerators, air conditioner which release toxic chemical to environment.

The below table 1.3 shows respondents viewpoint towards waste disposal.

Table: 1.3- The table explain respondents viewpoint towards waste disposal management.

S.L. No.	Respondents of the Study	What are causes and consequences of Waste disposal mismatch	What challenges societies face because of lack of waste disposal management	Is industries have responsibility towards pollution control and waste disposal	Is waste create hamper to industrial development	Is any possibility of waste reduction by finding alternative solution to minimize waste
1.	Migrant labor	10 (8.33%)	4 (3.51%)	15 (11.81%)	3 (2.29%)	7 (5.74%)
2.	Daily wage earner	16 (13.33%)	15 (13.16%)	11 (8.66%)	15 (11.45%)	16 (13.11%)
3.	Vegetable vendor	12 (10%)	18 (15.79%)	13 (10.24%)	14 (10.69%)	12 (9.84%)
4.	Roadside stall owner	14 (11.67%)	16 (14.04%)	11 (8.66%)	19 (14.50%)	17 (13.93%)
5.	Small shop owner	17(14.17%)	10 (8.77%)	12 (9.45%)	11 (8.40%)	13 (10.66%)
6.	Company official	11 (9.17%)	8 (7.02%)	16 (12.60%)	16 (12.22%)	10 (8.20%)
7.	Employee	10 (8.33%)	6 (5.26%)	18 (14.17%)	13 (9.92%)	8 (6.56%)
8.	Unemployed	8 (6.67%)	7 (6.14%)	10 (7.87%)	12 (9.16%)	16 (13.11%)
9.	Retired	9 (7.5%)	13 (11.40%)	9 (7.09%)	10 (7.63%)	11 (9.01%)
10.	Small business owner	13 (10.83%)	17 (14.91%)	12 (9.45%)	18 (13.74%)	12 (9.84%)
11.	Total	120 (100%)	114 (100%)	127 (100%)	131 (100%)	122 (100%)

Source- Interview

The above table 1.3 explain respondents point of view regarding different parameter of waste disposal which are considered to collect data. The above table 1.3 shows that the respondent categories such as migrant labor 10 (8.33%) per cent, daily wage earner 16 (13.33%) per cent, vegetable vendor 12 (10%) per cent, roadside stall owner 14 (11.67%) per cent, small shop owner, 17 (14.17%) per cent, company official 11 (9.17%) per cent, employee 10 (8.33%) per cent, unemployed 8 (6.67%) per cent, retired 9 (7.5%) per cent, and small business owner 13 (10.83%) per cent respondents opine about causes and consequences of mismatch of waste disposal. The wastes are generated due to people habit of throwing garbage in roadside areas, single use plastics, people habit of fast-food intake as daily meal and increase population in Dibrugarh city. Due to lack of employment in government office as regular employee people are engaged in small stalls as part time tea seller, roadside vegetable vendor etc. The small stalls of roadside areas increases garbage in city. The waste disposal management local authorities of Dibrugarh city municipality board contractual or permanent employee sweep the road starting at 6:00 AM and till 8:00 AM roads are clean. The Dibrugarh municipality garbage collector

truck collected garbage from roadside as well as from nearby colonies. In colonies garbage truck are come around 12:00 noon and sometime it comes in alternative days.

The collected waste dumped in landfill areas behind the municipality office. In many time in landfill areas don't have onsite waste disposal mechanism. The waste breaking down into liquid garbage which becomes breeding ground for diseases, it spoiled soil, ground water and water ways of nearby areas. The dependency on quick solution of garbage burning, inefficient use of technology leads to garbage disposal challenging and garbage spread in dumping areas without proper treatment of it.

The parameter what challenges societies face because of lack of waste disposal management, the respondents categories of the study such as migrant labor 4 (3.51%) per cent, daily wage earner 15 (13.16%) per cent, vegetable vendor 18 (15.79%) per cent, roadside stall owner 16 (14.04%) per cent, small shop owner 10 (8.77%) per cent, company official 8 (7.02%) per cent, employee 6 (5.26%) per cent, unemployed 7 (6.14%) per cent, retired 13 (11.40%) per cent, small business owner 17 (14.91%) per cent respondents says that if waste are not properly manage, roads are dirty unable to use, increase roadside small landfill areas and people infected with hazardous diseases. The city Dibrugarh is congested due to increase of population in a daily basis. People are migrated in city for work, for treatment and for study in higher educational institutions. The increasing population increase single use plastics and increase garbage. If municipality authority do not engaged employee for sweep the road regularly it leads to chaotic situation. The roads may block due to pile of garbage. The garbage collection truck needs to come in a regular basis in nearby colonies. It is not only authority's responsibility to clean landfill but also the inhabitant of areas required to work on cleanliness. The need of awareness towards cleanliness of nearby inhabitant is essential to reduce waste disposal problem.

The parameter is industries have responsibility towards pollution control and waste disposal, the respondent categories of the study such as- migrant labor 15 (11.81%) per cent, daily wage earner 11 (8.66%) per cent, vegetable vendor 13 (10.24%) per cent, roadside stall owner 11 (8.66%) per cent, small shop owner 12 (9.45%) per cent, company official 16 (12.60%) per cent, employee 18 (14.17%) per cent, unemployed 10 (7.87%) per cent, retired 9 (7.09%) per cent, and small business owner 12 (9.45%) per cent respondents speak on industries responsibility towards waste disposal and pollution control because people are come to work in industries and increase garbage like household garbage, single use plastics, and liquid municipality waste. The concentration of people in industrial area grows highly developed urban areas and slum areas as well in society. These urban areas produce large amount of municipality waste, create environmental pollution and landfill areas. The establishment of industries develops the surrounding of it into urban areas. The growth of cities carries urban social problems with it such as congested areas, over population, crowd areas, noise pollution, unemployment, poverty, crime like prostitution, drug addiction, and problems of slum etc.

The industrial organization has needed to develop proper waste disposal mechanism. The industrial organization has responsibility to clean the surrounding area of industrial installment. There are local markets growing due to industrial development. These markets leftover garbage are cleaned in a regular basis but need to be regulated in such a way so that the growing of landfill areas can be minimize. The processing of garbage is required, instate of dispose in landfill areas. The establishment of waste processing industries is essential to reduce environment pollution. The industries responsibility is not only need to transport the garbage to landfill areas but also take some necessary steps so that the environment can be save from further degradation.

The industries can collect vegetable leftover house hold garbage for processing to produce bio gas like methane, ethanol. The methane gas in further refinement can produce rocket fuel. The ethanol is used as fuel for vehicle. The bio manure from vegetable leftover can use as bio fertilizer. The bio fertilizer can use in organic farming; it will reduce the cost of organic produce. The industries can take initiative to establish plastic good producing industries because plastic is also extracts when oil and gas extracts from wells. There are lots of plastic goods come to dumping zones as waste in a daily basis. The establishment of plastic producing industries will not only generate employment but also reduce the problem of environmental pollution. In cities tones of glass waste are generates in daily basis, it is responsibility of the government to establish glass producing industries to recycle the glass waste. There are lots of daily use products which generate waste in bulk number. There are tons of waste plastics, broken glasses and old unused cloths generate in one year term in an area. The country India produce 9.3 to 10.2 million tones of plastic waste annually, 3 million tones of glass waste, 7.8 million tons of

textile waste annually, agricultural waste 350 million, and biomedical waste 226,000-283,000 tons annually. There is need to be establishment of industries so that textiles waste can be utilize in productive work like in wall hanging production, mop for mop stick, and in doormat production. The government can take initiative to establish industries to produce from glass waste, textiles waste, paper waste with assistance from public private partnership basis. These will not only generate employment in industrial sector it will increase market for all these good in low cost. The employment generation will increase people purchasing capacity. The cost of daily use good will reduce, government can utilize its income in development schemes. In Dibrugarh city because of shortage of land and lack of development of proper drainage pattern people suffer during annual flood. The conversion of drain from roadside to middle of the road will reduce drainage loads. The drains can be utilized as divider in roads. The earlier roadside big drains loads will reduce with one another drain in the middle of the road. The roadside big drain can alter into smaller one and middle of the road drain need to be big to avoid accident and annual artificial flood of Dibrugarh city.

The parameter, is waste create hamper to industrial development, the respondents categories such as migrant labor 3 (2.29%) per cent, daily wage earner 15 (11.45%) per cent, vegetable vendor 14 (10.69%) per cent, roadside stall owner 19 (14.50%) per cent, small shop owner 11 (8.40%) per cent, company official 16 (12.22%) per cent, employee 13 (9.92%) per cent, unemployed 12 (9.16%) per cent, retired 10 (7.63%) per cent, and small business owner 18 (13.74%) per cent explain that due to environment degradation people are concern about industrial development. Sometime people protest against industrial development activities. It leads to uncertainty within youth not only in economic perspective, it also develop difficulties in social life, mental health and marital life. Economy is a base for development in personal as well as for society's development. The country faces problem of poverty, illiteracy, slow growth of large or small scale industries, population growth and unemployment since independence. Industrial development not only generates household garbage, plastic waste, glass waste, it also releases toxic gas, petroleum waste to environment. If roads are dirty, people unable to breathe, increases health hazards, and chronic diseases. The consciousness about environment degradation is naturally grows among conscious citizen. In that situation if government and other entrepreneur try to establish new industries people naturally protest against it. The problem of waste disposal is challenging in the city because of shortages of land to use as landfill. The industrial areas are over crowded and congested. The people habit of consumption of fast food in cities increase single use plastics. The growing of slum areas due to higher number of low income groups in cities creates problem in development planning. The establishment of industries increases density of population which increase air pollution. The shortage of land to establish recycle industries again a cause of concern. The problem of waste disposal is a serious issue in city Dibrugarh.

The parameter is any possibility of waste reduction by finding alternative solution to minimize waste. The respondents of the study such as- migrant labor 7 (5.74%) per cent, daily wage earner 16 (13.11%) per cent, vegetable vendor 12 (9.84%) per cent, roadside stall owner 17 (13.93%) per cent, small shop owner 13 (10.66%) per cent, company official 10 (8.20%) per cent, employee 8 (6.56%) per cent, unemployed 16 (13.11%) per cent, retired 11 (9.01%) per cent and small business owner 12 (9.84%) per cent respondent opine that the problem of waste disposal can be solve by effective use of its disposal methods. It needs proper strategies such as separate bins for solid and liquid waste in areas gap of 1 km to reduce environmental degradation. The rules and guidance to separate waste should write in simple language in hoarding so that people can easily understand. New and affordable technologies can be arranges with the support of responsible authorities. The efficient management is necessary to ensure less contamination in landfill areas. The process of garbage collection, transfer, dumping, treatment and recycle for reuse can be manage efficiently. It is not only authority's responsibility to clean landfill but also the inhabitant of areas required to work on cleanliness. The need of awareness towards cleanliness of nearby inhabitant is essential to reduce waste disposal problem. The recyclable items saves environment from further degradation, keep human health safe, reduce landfills areas.

The laws and regulation to waste disposal can be made stick with required guidance toward it. Local authorities can encourage entrepreneurs to establish composting stations for different waste. The householder of the area can establish their own small composting station to reduce household garbage. People can use composting bag to transfer waste to dumping zone or own composite pile. The local business man instead of dump construction material in dumping ground can creatively use them in other projects. People can change their mindset to dump garbage in roadside areas. Local authorities can charges little amount to efficiently handle garbage disposal. It

is inhabitant responsibility to reduce one time use product by using eco-friendly, reusable products. Landfill areas can be managed by enterprises. People can provide necessary suggestion to local authorities to solve garbage disposal problem together.

The proper management of waste is essential to minimize air pollution, water pollution and soil pollution to protect public health. There are different type of waste generate from household and industries such as vegetable peel, paper, plastic, manufacturing waste from small scale industries, like leftover material, discarded mobile phone and damage computer parts. The efficient waste disposal management can be achieved with awareness, right choices of people and authorities to dispose it. The development of required waste diversion plan, by using eco-friendly product, by adopting efficient waste disposal method, the problem of waste disposal can minimize. The polluter payment can alter into income generating tool by establishing waste collecting station. It will save environment from further degradation. The establishment of waste disposal management as industry can, not only save environment but also it will generate income.

There is need of establishing bio-industries for bio-waste and other waste requirement of other necessary industries such as glass, plastic, textile recycle industries. The government takes necessary steps to solve the problem of poverty by providing subsidies in daily use food items. The government increases the number of universities by upgrading colleges into universities and also establishing new industries. These will increase literacy rate and highly educated people. The government required to increase employment. The establishment of educational institution increases employment in education sector. The development of society not only considered on basis of educational level, the development of industrial sector is also necessary. In some cases, the growing of educational institution increases highly educated unemployment rate. The growth of society depends on development of technical education. The lack of technical education increase unemployment among highly educated. The government needs to work on aware people regarding separation of waste in household. So the waste can utilize in recycle industries to manufacture product which can reduce cost and generate employment.

The recyclable waste product if properly channelize for reproduction it will increase employment. The recycle textile waste, glass waste, paper waste, after convert into productive material can generate employment among women. The carpet, doormat, glass bangle, manufacturing industries generate employment among lower level educated women. Due to poverty, family issue women are many time lagging behind in education. These low level educated women can work in recycle based manufacturing industries. These will also increase employment for highly educated personnel in marketing, managing, and service sector. The establishment of recycle based industries generates employment not only among women, less educated; it will generate employment for every level of educational background women. Women are generally considered for household work if family income comparatively less. The women are representing half of human resource which can engage in employment with proper planning. There are other household cottage industries also can be established to generate employment with required strategies.

The government needs to work on more public private partnership model so that employment can generate to reduce poverty and people purchasing power parity. The growing population of the country India increases the risk of shortage of natural resources. The population explosion increases the problem of waste, unemployment, poverty and crime. The government needs to generate employment with assistance of public private partnership like need to lunch new schemes so that willing entrepreneur get necessary assistance with government initiative. The establishment of industries required lots of resources, to reduce the problem of resource shortage, government required to lunch scheme so that monetary assistance can acquired from other countries also. The problem of waste disposal can alter and can generate employment from it with proper recycle mechanism. The recycle industries can be run with less technical educational qualification individual also. The unemployment among women with lower educational level will reduce. The problem of poverty will reduce. The generations of employment in recycle industries eliminate not only waste, it will eliminate problem of beggar. Those who are living in bagging in streets they will get employment. The employment of individual will increase people interest for children's higher education, will increase literacy rate, it will reduce problem of over population. People are begging in streets, that free vibes reduce the productive capacity of the individual. All member of family living in street, living with government nutrition support, free meal, and minimum support price reduce people productivity. People never hesitate to produce more children because their life will continue by bagging.

The government nutrition support increase school going children. The establishment of educational institution increases highly educated people but similarly employment not increasing due to over population. The generation of employment reduces lots of problem like, poverty, beggar, crime, prostitution, low literacy, over population and waste disposal.

The industries are the basis of urban development and society growth. The urban societies are developed where industries established. The industries generate employment, it increase people income, develop road communications, help in develop world class education centre, and global food in local market. Industries provide opportunities to develop tourism. The concentration of people is high in industrial areas which generate income like roadside food cart generate employment, income of people, and it help to increase market area. The industries have responsibility in pollution control, because the industrial growth increase concentration of people and naturally that place are polluted. The organization responsibility is not only installed different garbage bins for liquid, solid waste in definite areas and transport waste to dumping ground. The organization need to arrange the collection of vegetable waste in regular basis. The industrial organization need to be processes waste material, need to produce bio gas and bio manure. The bio-manure can utilize in different food items production. The reduce cost will increase people's purchasing power for other goods.

Possible solution: The below figure explain possible solution to the problem of waste disposal management.

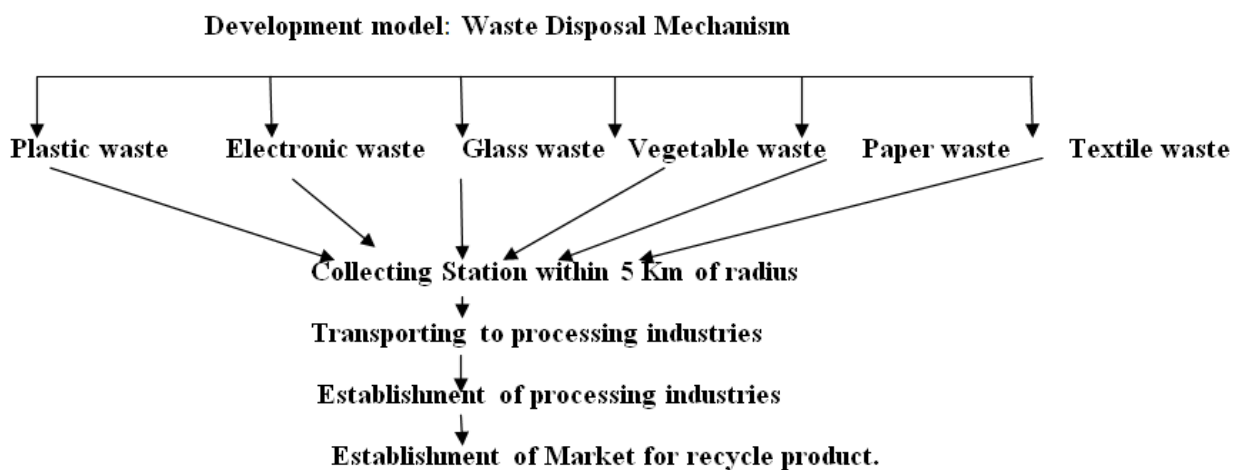


Figure-1: The above figure-1 contains waste disposal mechanism.

Source- The above figure-1 explains waste disposal mechanism after interview respondents and observation in research field.

The above figure-1 shows the probable solution to the problem of waste disposal management. The above figure-1 indicate waste disposal mechanism such as plastic waste, electronic waste, glass waste, vegetable waste, paper waste and textile waste need to be separate in household. There is requirement of establishing waste collecting stations within 5 kilo meter of radius. The collected raw material needs to transfer to processing and manufacturing industries. There is requirement of establishing of manufacturing industries to recycle the waste product for production of usable product. There is need of a market for bought and sold of recycle product. The above figure shows that the separation of waste in initial stage and transfer them to specified installment for recycle will generate employment in recycle industries which are earlier harmful to environment. The establishment of manufacturing industries will provide opportunities to grow new market for consumption. These industries will generate employment, it will reduce problem of waste and will reduce people cost of living.

The government responsible authorities such as municipality boards and corporations established separate garbage bins in specified areas to separate waste in initial stage. These waste are collected, transport to landfill areas to recycle, and maximum waste are burn which create environment pollution, pollute air, water and soil. The figure tries to explain the waste can collect separately by establishing separate collecting stations for waste products such as plastic waste, electronic waste, glass waste, vegetable waste, paper waste and textile waste

within the radius of 5 km. There is a concept of those who pollute they should pay for it. There are environment forum like Conference of Parties, Earth Summits to reduce environment pollution. Environmentalist and the United nations have planned to dispose waste in Mariana trench the world deepest trench to get rid of large amount of waste.

The establishment of collecting station to collect waste separately and consider waste as raw material for manufacturing industries like plastic manufacturing industries, glass manufacturing industries, paper manufacturing industries, bio-fertilizer producing industries and textile manufacturing industries will generate employment. The collection of waste involves lots of people right from cleaning of road by large number of municipality employee to collect garbage and transport it to landfill areas. The establishment of manufacturing industries will generate large number of employment. If the waste consider as raw material and people received money on the basis of their raw material like broken glass, waste plastic, leftover paper, textile waste, old unused cloth people will motivate to provide raw material instead of throwing it at roadside areas. There is needed to be establishment of collecting station and manufacturing station to get rid of landfill areas. It will reduce environment pollution because people receive money out of their waste product which is usually goes to dumping zones which generate dirty areas.

The solution to waste disposal management is not only establish manufacturing industries and generate employment but also there is needed to establishment of market areas where people can buy recycle product in comparatively low price. The installations of market areas also generate employment. There is need of development of proper planning where to establish manufacturing industries for plastic goods, glass industries to manufacture glass bangle, utensil, decorative pieces, bio-fertilizer manufacturing industries to produce manure for organic farming, and old cloth can be reuse to produce doormats, moping cloth, wall decorative pieces, sofa cushion etc. The problem of waste disposal can be altering into an employment generating mechanism; it will reduce cost of various products because not only people but also government income will increase. The facilities which can afford by rich that can be utilize by common people also. The alteration cost and urban planning will cost high in initial stage but in long run it will generate employment and income to people. The problem of waste disposal management can alter as tool to generate employment.

CONCLUSION

The inappropriate management of garbage cleaning leads to concentration of waste product in local areas and make alarming situation for environment. The efficient waste disposal management can be achieved with awareness and right choices of people and authorities to dispose it. The use of required waste diversion plan, by using eco-friendly product, by adopting efficient waste disposal method and polluter payment can save environment from further degradation. The establishment of waste disposal management as industry can, not only save environment but also it will generate income.

The problem of environment pollution naturally develops with development of industries. The industries grows, cities and urban areas also increases, it has positive as well as negative consequences, such as city develop overpopulation, crowd areas, and also landfill areas. The establishment of industries is necessary for countries economic growth, development and employment generation. But, industrial waste create problem of environment degradation and develop landfill areas due to industrial, household waste and grows health hazard areas. The industrial areas are naturally over populated, naturally creates slam and landfill areas. The absence of proper waste disposal management is a burning environment issue in third world countries which hamper to further growth of employment and industries. People protest against establishment of new industries because of environment pollution. But, the problem of waste disposal problem can be turn into a profitable business with proper channelization.

In general, the solution to the problem of waste disposal is hanging hoarding to make people aware about negative impact of waste. Landfill areas which further degrade environment and risk to human life. But it is not the solution to waste disposal by separating liquid and solid waste only, proper disposal is also required. The proper waste disposal management requires separation of waste in to liquid and solid with different color waste bean for disposal. The removal of waste on a daily basis is required for clean and green environment. The first

stage of waste disposal is finding the landfill areas and second step is to make a road channel to collect garbage from different areas.

The municipality board collects garbage and dispose in specified areas for disposal. It generates employment for a few people. But, if people of the area or government responsible person or entrepreneur take some necessary step to engage some people to collect garbage to use them as raw material for plastic industries, glass manufacturing industries, textile industries, so that some people may get employment from waste disposal mechanism. The waste disposal management requires money for that purpose, so the waste disposal collector should be paid on monthly basis. The other problem is the collected waste where to dispose. In this purpose, there are needs of some small scale industries which can reduce the problem of joblessness up to a certain extent. As for example, solid household waste like broken glass, plastics which can be re circle in different industries like glass bangle making, marble making industries, similarly broken plastic can be re circle in making of different plastic goods. The liquid or household waste can be use in production of bio-gas like methane which is a land fill gas. The land fill gas can be use in production of electricity and can upgrade to natural gas also because it compose of carbon dioxide and methane. The methane gas is used in production process of chemical and fertilizer industries. Ethanol can also produce from municipality waste and agricultural waste. So that by proper use of land fill gas can make it as profitable establishment of chemical industry and can generate employment. The establishment of industries required lots of capital so government should take some necessary steps to establish some industries which not only solve unemployment problem but also safe environment from further degradation.

The process of waste disposal management start with collecting garbage from definite beans, transporting to landfill areas for recycling, and dispose waste material such as household waste, industrial waste etc. The dumping of waste in landfill areas increases the area of landfill which again creates environment pollution. Due to over population, the size of landfill area growing rapidly, and number of small landfill areas also growing in small distance like less than one kilometer area. The waste disposal management mechanism collects waste and transport to processing unit and recycle product for reuse. The plastic waste, glass waste and agricultural waste recycle to new product. The organic nutrient extracts from house hold vegetable wastes are use as manure in organic farming. The bio-waste produce methane can use in electricity generation. The municipal waste burn in landfill areas damage environment and pollute air. So, there is requirement of take some necessary steps to get rid from waste.

BIBLIOGRAPHY

1. Abraham Francis and Morgan John H. (1989), "Sociological Thought", Published by -Wyndham Hall Pr, ISBN-13 978-1556051043.
2. Abraham, K. G. and Lawrence F. Katz (1986), Cyclical Unemployment: Sectoral Shifts or Aggregate Disturbances? *Journal of political Economy* -4 (3): 507-22.
3. Abraham Vinoj (2009), Employment Growth in Rural India: Distress-Driven?, *Economic and Political Weekly*, 44 (16), 97-104.
4. Aggarwal V. (2010) "Environmental Studies" Publisher Sports publication, ISBN: 978-1618205841.
5. Ahuja Ram (2021) *Social Problems in India*, Fourth edition, Rawat Publication, ISBN: 978-8131611739.
6. Ajay, Parveen, A. Kumar, R. K. Mittal, R. Goal (2023), *Waste Recovery and Management An Approach Taward Sustainable Development Goals*, First edition, Published by CRC Press, ISBN-13: 978-1032281933.
7. Allen Robert C. (2017), "The Industrial Revolution a very short introduction", Oxford
8. University Press, United Kingdom, ISBN: 9780198706786.
9. Anderson W. A. And Parker F. B. (1964), "Society Its Organization and Operation", D. Van Nostrand Company, New Jersey.
10. Anawar H. M., V. Strezov, Abhilash (2019), *Sustainable and Economic Waste Management resource Recovery Techniques*, Published by CRC Pr I Lic, ISBN-13: 978-0367232559.
11. Arvanitoyannis I. S. (2007), *Waste Management for food Industries*, Published by Academic Press Inc., ISBN-13: 978-0123736544.

12. Bairagya Indrajit (2018), Why is Unemployment Higher among the Educated? Economic and Political Weekly, 53(7), 43-51.
13. Baruah L. (2022), Training of Personnel in Oil India Limited: A Sociological Study, Doctoral Thesis.
14. Basu M. and Xavier S. (2017) "Environmental Studies" First edition, Publisher Cambridge University Press, ISBN-13: 978-1107536173.
15. Bharti P. K., B. Tabassum, Priya Bajaj (2015), Waste Disposal and Management, First edition, Published by Discovery Publishing House, ISBN-13: 978-9350567296.
16. Bhushan Karanam Viswa (2020) Educated Youth and Unemployment Socio-Economic Perspectives, Kalpaz Publications, ISBN: 9789353246037.
17. Boland Tom, Ray Griffin, Edited, (2015), The Sociology of Unemployment, Manchester University Press. United kingdom. ISBN: 9780719097911.
18. Bonn Victor (2016), Waste Management for Sustainable Environment, Published by Syrawood Publishing House, ISBN-13: 978-1682863190.
19. Botkin and Keller (2012) "Environmental Science" Eighth edition, Publisher Wiley, ISBN-13: 978-8126534142.
20. Chauhan A. (2019), Environment Pollution and Management, Published by Dream tech Press, ISBN-13: 978-9389307849.
21. Chen Yang, Qinzhong Feng, Zhongkui Zhang (2023), Innovative Disposal Technology and Management Practice for Medical Waste, Published by Springer Verlag, Singapore, First edition, ISBN-13: 978-9819967858.
22. Desai A. R. (1947). "Social change and Educational Policy", Published by Popular Prakashan, ISBN: 978-81-7824-250-7.
23. Doshi S. L., P. C. Jain (2020), Rural Sociology, Rawat Publication, Jaipur. ISBN: 978-81-7033-523-8.
24. Du (2017), Environment Waste Management, ebook.
25. Dubey, S. C. (1990), "Indian Society", National Book Trust, New Delhi, ISBN: 9788123710310.
26. Durkheim E. (1954). "The Elementary Forms of Religious Life". The Free Press. New York.
27. Goswami P., Mandal J., and Singh Suruchi, (2022) "A Text book on Environmental Studies" Publisher Ashok book stall, ISBN: 13 978-9393610034.
28. Esch E. D. (2018), The Color Line and The Assembly Line, Managing Race in the Ford Empire, Published by University of California Press, ISBN-13: 978-0520285385.
29. Hill Marquita K. (2020) Understanding Environmental Pollution, Fourth edition, Published by Cambridge University Press, ISBN: 9781108395021.
30. Hung Y.T., Lawrence k. Wang, Nazih K. Shammass (2012), Handbook of Environment and Waste Management Air and Water Pollution Control, Published by World Scientific Publishing, ISBN-13: 978-9814327695.
31. Hung Y. T., Lawrence K. Wang, Nazih K. Shammass (2014), Handbook of Environment and Waste Management Land and Groundwater Pollution Control, Volume 2, Published by World Scientific Publishing, ISBN-13: 978-9814449168.
32. Jahoda M. (1982), The Psychology of Social Issue, Employment and Unemployment A Social Psychological Analysis, Published by Cambridge University Press, ISBN: 978-0521242943.
33. Jain A. K., D. K. Parmar and S. N. Shah (2011), Causes of Rural Unemployment in India, Gujarat Journal of Extension Education. Bhopal.
34. Jain K. (2023), How to Get out of an Unemployment Trap, Published by Redgrab Books Pvt. Ltd, ISBN-13: 978-9395697163.
35. Jain P. (2020) Social Problems and Issues of Development in India, Lakshmi Narain Agarwal Publisher. ISBN: 9789389918885.
36. Jha, Y. M. (1995) Rural Development in India; problems and prospects, Anmol publication pvt. Limited, new Delhi, ISBN: 978-9382823957.
37. Jiang Y., X. Yuan (2020), Environmentally Sustainable Industrial Development in China, Published by Routledge, ISBN-13: 978-0367196257.
38. Kennedy S. A. (2013), Classroom at the End of the Line, Assembly Line Workers at Midwest Community and Technical Colleges, Published by Create space Independent Publisher, ISBN-13: 978-1484191088.
39. Khanna R., Y. Konyukhov, I. Burmistrov (2022), Environmental Sustainability of Current Waste Management Practices, Published by Mdpi AG, ISBN-13: 978-3036534497.

40. Kreith F. (1994), Handbook of Solid Waste Management, Published by McGraw-Hill, US, ISBN-13: 978-0070358768.
41. Kumar S. (2016), Municipal Solid Waste Management in Developing Countries, First edition, Published by Productivity Press, ISBN-13: 978-1498737746.
42. Layard, Richard, Stephen Nickell, and Richard Jackman. (1991), Unemployment: Macroeconomic Performance and the Labor Market. Oxford: Oxford University Press, ISBN: 978-0198284338.
43. Leaf J. H. (2025), A New Breed of Worker, Henry Ford's Perspective on Training and Education, Published by BofnjtIsqr, Kindle edition.
44. Learn Zebra (2022), The Industry Handbook How To Pick, Analyze & Win Your Industry, First edition, Published by Zebra Learn Pvt. Ltd, ISBN-13: 978-8195895038.
45. Linhart R., M. Crosland (1981), The Assembly Line, Published by University of Massachusetts Press, ISBN-13: 978-0870233227.
46. Lloyd A. (2013), Labour Markets and Identity on the Post-Industrial Assembly Line, First edition, Published by Routledge, ISBN-13: 978-1409454137.
47. McMillan Sheryl (2016), Strategies for Waste Disposal and Pollution Control, Published by Syrawood Publishing House, ISBN-13: 978-1682860120.
48. Mehta, S. R. (1984), Rural Development Policies and Programmers, Sage Publication, New Delhi, ISBN-13: 978-0-8039-9482-9.
49. Moroliya M. R., Akshay, Anjekar (2023), Waste Management, Published by Nation Press, ISBN-13 : 979-8892333153.
50. Mukherjee G., S. Dhiman (2022), Waste Management Opportunities and Challenges for Sustainable Development, First edition, Published by CRC Press, ISBN-13: 978-0367352950.
51. Mustafa N. (1993), Plastic Waste Management Disposal, Recycling and Reuse, First edition, Published by CRC Press, ISBN-13: 978-0824789206.
52. Nair Shruti, (2020), A Study on the Causes and Impact of Unemployment in India. Volume 4, Special Issue No. 1, July, ISSN: 2474-5146.
53. Nye D. E. (2015), America's Assembly Line, Published by MIT Press Ltd., ISBN: 978-0262-01871-5.
54. Parker Jeffrey (2010), Models of Unemployment, Published by Reed College, ISBN-13:978-0199279166.
55. Parray J. A., N. Shameem, A. K. Haghi (2025), Sustainable Urban Environment and Waste Management, Published by Springer, ISBN-13: 978-9819611393.
56. Peirce J. Jeffrey, P. Aarne Vesilind, Ruth F. Weiner (1997), Environment Pollution and Control, 4th edition, Published by Elsevier Science & Technology Books, ISBN: 0750698993.
57. Petersen A. C., J. T. Mortimer, (1994), Youth Unemployment and Society, Published by Cambridge University Press, ISBN: 978-0521444736.
58. Pope K. (2020), Global Waste Management Models for Tackling The International Waste Crisis, First edition, Published by Kogan Page, ISBN-13: 978-1789660791.
59. Prasad K. N. (1993) Poverty Inequality and Unemployment in India, First edition, Concept Publishing Company Pvt. Ltd. ISBN: 9788170224594.
60. Rao C. N. Shankar (2015), Indian Social Problems A Sociological Perspective, S Chand & Co Ltd. ISBN: 9789384857950.
61. Rastogi, A. K. (2002), Rural Development Strategy, Wide Vision, Jaipur.
62. Reddy P. J. (2016), Energy Recovery from Municipal Solid Waste by Thermal Conversion Technologies, First edition, Published by CRC Press, ISBN-13: 978-1138029552.
63. Reiff M. R. (2015), On Unemployment A Micro-Theory of Economic Justice, Volume I, Published by Palgrave Macmillan, ISBN-13: 978-1137549990.
64. Rosato M. A., (2017), Managing Biogas Plants A Practical Guide, First edition, Published by CRC Press, ISBN-13: 978-1138626614.
65. Roy Krishnendu, somnath Das, (2024), Social Problems in India Issues and challenges, Red Unicorn Publishing. Maharashtra, ISBN: 9789141001107.
66. Sarkar Abhijeet (2019), Unemployment Dealing with unemployment, Notion Publisher. ISBN: 9781647338886.
67. Sengupta D., B. K. Dubey, S. Goel (2022), Treatment and Disposal of Solid and Hazardous Waste, First edition, Published by Springer Nature, Switzerland, ISBN-13: 978-3030296421.

68. Shafi S. M. (2005), Environmental pollution, Published by Atlantic publishers & distributors. New Delhi. ISBN: 81-269-0366-X.
69. Shareefdeen Z. (2022), Hazardous Waste Management Advances in Chemical and Industrial Waste Treatment and Technologies, First edition, Published by Springer Nature Switzerland, ISBN-13: 978-3030952617.
70. Shukla K. (2021) The Indus Valley Civilization Story of cradle of Human Civilization, Notion Press Publisher. ISBN: 9781639743728.
71. Singh L. B. (2006), The Unemployment in India and Psychological Health, Published by Concept publishing Company Pvt. Ltd., ISBN: 978-8180692925.
72. Singhania R. R., R. A. Agarwal, R. P. Kumar, R. K. Sukumaran (2018), Waste to wealth, First edition, Published by Springer Verlag, Singapore, ISBN-13: 978-9811074301.
73. Sinha, D. (1974), Motivation and Rural Development, Minerva Associates, Calcutta.
74. Sinha B. K. (2022), Problems of the Unemployed and their Solutions, Notion Press Publisher, ISBN: 9798886842692.
75. Thomopoulos (2013), Assembly Line Planning and Control, Published by Springer, ISBN: 978-3319013992.
76. Uche N. (2024), Youth Unemployment and its Effect on the Economy, Published by Amazon Digital Services LLC-Kdp, ISBN-13: 979-8304042109.
77. Unnisa S. A., S. B. Rav (2012), Sustainable Solid Waste Management, First edition, Published by Apple Academic Press Inc., ISBN-13: 978-1926895246.
78. Walker C. R., R. H. Guest (2011), The Man on the Assembly Line, Published by Literary Licensing LLC, ISBN-13: 978-1258086411.
79. Walker C. R., R. H. Guest, A. N. Turner (2017), The Foreman on The Assembly Line, Published by Routledge Library Edition, ISBN-13: 978-1138060890.
80. Wang L. K., M. S. Wang, Y. Hung (2022), Solid Waste Engineering and Management, Volume 2, First edition, Published by Springer Nature, Switzerland, ISBN-13: 978-3030893354.
81. Wang H. P., B. Y. Ma (2012), Unemployment Issues, Trends and Perspectives, Published by Nova Science Public Inc, ISBN-13: 978-1620811726.
82. Yadav S., A. M. Negm, R. N. Yadava (2022), Wastewater Assessment, Treatment, Reuse and Development in India, First edition, Published by Springer Nature, Switzerland, ISBN-13: 978-3030957858.