

ROLE AND STATUS OF RAG PICKERS IN WASTE SEGREGATION FOR ENVIRONMENTAL UPGRADATION: A CASE STUDY IN SEONI (MP)

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ABSTRACT :- Solid waste generation in India has increased tremendously in the last few decades due to increasing population and rapid economic development. Effective waste management plays an important role in solving the problems of a healthy environment. Waste was an unavoidable by-product of human activities. Economic development, urbanization and improved living standards in cities contribute to increase in the quantity and complexity of generated solid waste. If accumulated, it leads to degradation of urban environment, stresses natural resources and leads to health problems. Solid waste management has become a major environmental issue in India. Waste management, however, remains a major challenge for any society, since all natural processes generate waste. Rag pickers play an important, but usually unrecognized role in the waste management system of Indian cities. They collect garbage in search of recyclable items that can be sold to scrap merchant like paper, plastic, tin, etc. These activities require no skills and are a source of income for a growing number of urban poor people. Recently the Government of India has given a boost to this sector through Swachh Bharat abhiyan and as a result of this, solid waste management market in India is expected to grow CAGR of 7.5% during the period (2021-2026). Present study aims to identify role of rag pickers in solid waste management of Seoni town with focus on the socio-economic and occupational health aspects. The paper makes use of a database, parenting to the socio-economic profile of the rag pickers including the working conditions, and their problems and expectations. This information has been developed through literature review, questionnaire survey and open-ended interviews conducted to generate data on rag pickers in Seoni town.

KEYWORDS:- Rag pickers, self - employment, health risks, public attitude, 3-R, waste management, garbage, rapid urbanization Swachh Bharat abhiyan.

INTRODUCTION:-

Waste management in India falls under the jurisdiction of the Union Ministry of Environment, Forests and Climate Change. This Ministry framed some rules for solid waste management in the year 2016. Accordingly, Municipalities, Municipal Councils are working on solid waste management in their respective jurisdictions. The industrial revolution and economic development have completely improved the standard of living of the people. People's preferences and the consumption patterns of life goods are changing. As a result, the types of waste generated are also becoming complex.

A deeper study of solid waste reveals that all countries in the world are taking serious steps towards solid waste management. Yet some countries are failing to find effective solutions. Some of the developed countries have started implementing some effective and advance systems for solid waste management process. Germany, Italy, Canada, Australia have really focused on it seriously. If the solid waste management process in India is implemented in a modern and effective manner, it is believed to be a model for the entire world. As per the year 2023, the estimated population of India is 14,286,27663 and India represents approximately 17.76 percent of the world population.

The amount of solid waste in the municipal sector is increasing day by day. Therefore, it is necessary to find a solution to this serious problem of waste management. Moreover Waste management is very important in terms of environment and human health. In fact, increasing population and rapid changes in industrialization have led to a huge increase in waste generation. If the waste management system is to be kept under control, it is necessary to implement efficient and sustainable waste management practices.

Most worrying thing about plastic waste is that India generates 3.4 MT of plastic waste every year and out of which only 30 percent is recycled. In India, solid waste management (SWM) process is generally carried out by traditional way in maximum municipalities. Very few local municipal authorities or urban local bodies (ULBs) have proper set up for disposal of collected waste. In the year 2014, the Government of India launched Swachh Bharat Abhiyan in collaboration with the State Governments and Union Territories. And as part of that, around 100 smart city development projects were launched across the country in 2015. The Ministry of Environment, Forests and Climate Change revised India's SWM regulations in 2016 with proper use of the 3-R system.

Rag picking is probably one of the most dangerous and dehumanizing activity in India. Child rag pickers are working in filthy environments, surrounded by crows or dogs under any weather conditions and have to search through hazardous waste without gloves or shoes. They often eat the filthy food remnants they find in the garbage bins or in the dumping ground. Using the dumping ground as a playing field the children run the risk to come upon needles, syringes, used condoms, saline bottles, soiled gloves and other hospital wastes as well as ample of plastic and iron items. They suffer from many diseases, such as respiratory problems, worms, anemia, fever and other problems which include cuts, rashes, dog bites. (Syamala, 2013). On a global level, approximately two-thirds of a kilogram of waste per person per day was generated. Yet, the difference between high and low income countries was considerable, especially in terms of composition. This was a particular problem with waste from hospitals located within the city area, which is often found mixed with municipal waste in open dumps and landfills. (Jin et al., 2006, Siddiqui, 2003, Bal Kumar 2001, Mustafa and Omkara, 2008).

The rag pickers live in rows of huts a little away from the dumping yard. Their life begins and ends only and only in an atmosphere surrounded by garbage and stench. The term rag picker currently refers to people who collect rags or recyclable materials that can be sold for money. Rag picking entails sorting, collecting and

selling of waste materials that can be found at dumpsites, river banks, street corners, or in residential areas. The waste materials, primarily consists of plastics, bottles, cardboard, tin, aluminum, iron, brass, and copper. Plastic, tin and aluminum products are highly sought after while paper goods rank low on the list. As the market for recyclable materials has increased, many street children have turned to rag picking as a means for their survival (Rehman and Mehartaj, 2002, Shandilya and Khan, 2006).

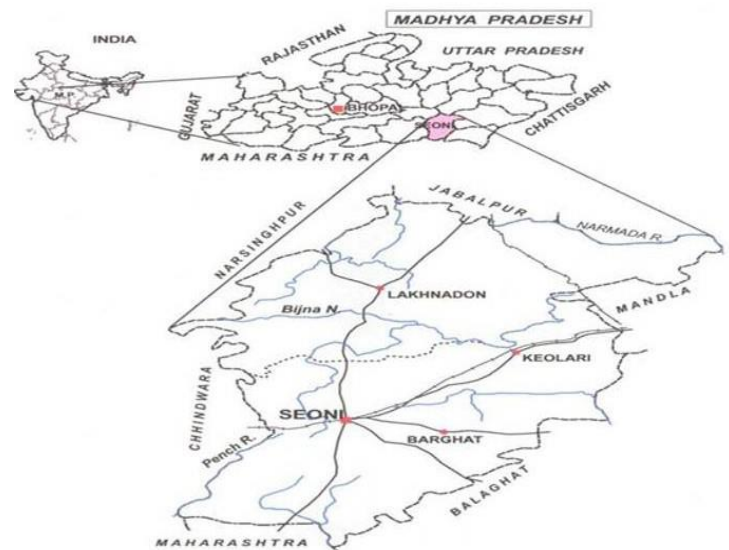


Figure: Map of District Seoni (MP)

MATERIALS AND METHODS:-

For the present study Seoni town a drought prone city in M.P. was selected. The field research was conducted in different areas of Seoni town. The present study is basically empirical in nature. The secondary sources like books, journals, government manuals, websites and published and unpublished works related to the subject were also used. The primary data is collected with the help of structured questionnaire along with interview method. In the present study qualitative information is obtained during the interviews, using a pre-coded questionnaire. Quantities information obtained from the structured interview schedule was edited carefully.

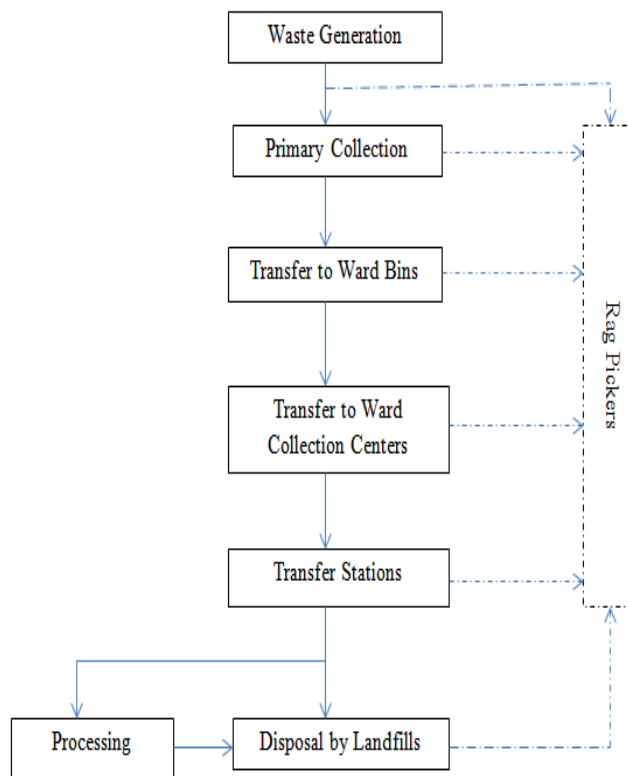


Figure 1 Role of rag pickers at different stages in MSW management (Source: Yedla (2005))

The present study is carried out in the areas of Seoni town, a drought prone District in Madhya Pradesh state. It is an exploratory study. The study explores the

problems of child rag pickers in the 24 wards of Seoni town.

RESULT AND DISCUSSION:-

Seoni is a developing town. Many new colonies are being raised around the main township, as a result of which the garbage is found to be spread at more than one place in each colony. The sense of civilization is not high enough and, therefore, people are not habitual of proper disposal of the garbage produce by them. At present town’s solid waste is collected and disposed by Seoni municipality. The total waste generated is estimated to be 34.284 quintals per day. There is no integrated solid waste collection, storage, transportation, treatment or disposal system in the town. Solid waste generated from households is being dumped in open areas. Most of these sites create environmental hazards due to spilling and cause risk to human health. Trucks, trolleys and handcarts in the outskirts transport solid waste from these open storage areas. Solid waste is lifted manually using shovels, thus increasing health risks to the sweepers. However, due to inadequate infrastructure facilities, the solid waste is not disposed off properly. There is no system for the segregation of decomposable and non-decomposable household wastes.

Table- 1. Solid waste generation per day in Seoni town (Quintals)

| Source of waste | Solid waste generation | | | Percentage |
|-------------------------|------------------------|---|-------|------------|
| Domestic waste | 23.388 | ± | 3.227 | 68.22 |
| Vegetable market waste | 3.248 | ± | 0.619 | 9.47 |
| Fruit market waste | 2.579 | ± | 0.581 | 7.52 |
| Meat market waste | 0.157 | ± | 0.064 | 0.46 |
| Hospital waste | 0.252 | ± | 0.069 | 0.74 |
| Hotel/ restaurant waste | 0.752 | ± | 0.156 | 2.19 |
| Market waste | 1.517 | ± | 0.264 | 4.42 |
| Slaughter house waste | 0.265 | ± | 0.053 | 0.77 |
| Building material waste | 2.126 | ± | 0.587 | 6.20 |
| Total | 34.284 | | | |

Problems of Rag pickers:

Solid waste includes many wastes, which includes household waste, construction waste, street waste, waste generated from commercial complexes, municipal parks and gardens, waste from different industrial estates,

agricultural waste, bio-medical waste, plastic waste, e-waste, etc. Considering all the above solid waste, it is observed that the role of Rag pickers is central. Although they are not directly involved in the solid waste process, their importance cannot be denied. Rag pickers really

plays important role in waste management process by collecting and separating recyclable materials from garbage. For environment sustainability rag pickers role is important. There are so many problems of rag pickers which arrive in workplace or in daily life includes: Negligence of the Municipal Corporation, Lack of facilities in workplace, Problem of waste segregation, Lack of social security, Bad treatment from society (Social Exclusion), Lack of savings habit, Low health awareness, Low awareness about diet, Lack of information about government schemes, Child Labour, Irregularities in yield, Lack of education and skill development, Environmental issues. All the above problems are frequently faced by these rag pickers. As a result, if we consider the overall situation of rag pickers, it can be seen that they are treated as inferior in the society, the economic and social life of their family is affected by this occupation. Serious health problems arise. Depression is seen in the education of children in the family. Along with this, rag pickers do not get proper information about various schemes of the government on time. Municipal employees do not cooperate properly while rag pickers work in the municipal area, as a result of which rag pickers face problems in the work.

Role of rag pickers in solid waste Management:

Various surveys show that, rag pickers around the world tend to be poor, less educated, from rural areas, or from lower castes. All these rag pickers are working in the informal sector. Although they are deprived of society, their contribution in the process of solid waste management is valuable. The contribution of rag pickers in the waste management process is evident from the following points.

- The role of rag pickers is very important in the solid waste management process. The sector of waste collection as a whole is known as the informal sector. The role of rag pickers in this area is also known as kabaddi system.
- Rag pickers are part of the Kabaddi system, which is generally part of the solid waste management process, and they are contributing to waste management by recycling about 70 to 75 percent of the waste generated from the informal sector, domestic consumption, or commercial activities.

- Rag pickers collect recyclable waste from the streets, dumping grounds, or in parks within municipal jurisdictions. Near about 15 percent of the total waste in the municipal sector is picked up by rag pickers in India. So we can see that the pressure on solid waste management is reducing considerably.
- There are so many methods of solid waste disposal and management as well. Out of which solid waste open burning, sea dumping process, solid waste sanitary landfills, incineration method, composting process, salvaging procedure, fermentation or biological digestion are important disposal methods. Rag pickers on their own risk separate the biodegradable and non-biodegradable wastes which is helpful for solid waste management.
- As per as the 3-R technique (Reduce, Reuse and Recycle) is concerned, every step has proper meaning. Reduce means to create less waste. It is the most powerful and useful strategy which is required to keep environment clean. So by reducing waste, we can stop problem at its source. In short, creating less waste in first place means less waste to clean up later. In short Reduce means to cut back on the amount of trash we generate. Reuse is another way to find purpose for outdated or unwanted items that would otherwise be discarded. We can reuse the products in variety of ways to help reducing waste. The third and most well-known R stands for recycling. Actually recycling is the process of remanufacturing a product to be marketed as new. Recycling is the process of converting waste entities into new original forms to reduce the use of more virgin resources. According to the 3-R technique, the role of rag pickers is primary as they collect useful items from garbage and sell them to wholesalers in the market for recycling.
- The rag picker can inspect the accumulated waste in the area under the jurisdiction of the municipality and eliminate disease-causing insects like mosquitoes, flies etc by taking proper guidance from municipalities employee.
- Rag pickers clean municipal roads, public parks, food lanes, etc. Therefore, the role of rag pickers has been important to keep the municipal area clean. From all above discussion, it is clearly understood

importance of rag pickers in solid waste management.

India's booming urbanization brings along with it, the problem of waste management. As more and more people are migrating towards the cities, the amount of waste is increasing at a high pace. Thus, waste management is likely to become a critical issue in the coming years. Rag pickers play an important but usually unrecognized role in the waste management system of Indian cities. They collect garbage in search of recyclable items that can be sold to scrap merchants (paper, plastic, tin, etc.). This activity requires no skills. However it is a source of income for a growing number of urban poor. Rag picking is one of the inferior economic activities in the urban informal sector, largely undertaken by children belonging to weaker sections of the society for their survival and for supplementing their family income and is the profession mostly dominated by children aging 6 to 15 years who do not have any other skill and thus by way of refuse collection contribute to household income or own survival. These are mainly children of slum dwellers and poor people. Some of them are abandoned or runaway children. The continuous exposure to the common garbage and the hospital waste has led to various diseases.

Many of them smoke beedi and cigarettes and some are also addicted to drugs and indulge in prostitution and homosexuality, robbery and gambling. All this has affected their lives in several ways and shortened their life spans considerably (Saxena, 2012). Street children usually get arrested by the police because of their stay on pavements and involvement in gambling in public places. These children mainly have their activities, whether social or anti-social, in crowded areas. Their chances of coming in to contact with the police are frequent. Street children are also subject to harassment and eviction by the municipal authorities because of their unauthorized occupation of city roads and vacant places. Drug abuse among street children is rampant. Young children normally consume cheap intoxicants such as solvents, alcohol, tobacco and ganja. Abuse of solvents is widely reported, glue sniffing is common as it is a cheap substitute for food. Street children usually undergo deep psychological trauma due to lack of parental love,

diseases related malnutrition, sex abuse by peers and older people and violence in several forms. He reveals that, the street children for the survival are involved in collecting rags, scavenging on rubbish dumps, shoe shining etc, for their very survival (Ashoka, 2006).

“Rag pickers of India” reveals child Rag pickers health related problems. Rag pickers are subjected to chemical poisons and infections. Because of malnutrition they suffer from retarded growth and anemia. The rag pickers are very susceptible to diseases like tuberculosis and cancer due to their exposure to hazardous materials and addicted to chewing and smoking tobacco. Soon they become addicted to alcohols and then they switch to hard liquors. They even do not refrain from taking the drugs. They have free sex with street walkers and hence become victims of AIDS (Kamat, 1999). The parents and other family members fast lose the control nay even the moral authority, over the child labour that soon begins to imitate his adult fellow workers, mistaking them to be their ideals. The illiterate child, having freed himself from the family ties, becomes susceptible to all sorts of evil influences which may turn him into a heavy smoker, a drug-addict, a gambler, a smuggling operator, a film addict, a thief, a pick pocket, or even a hard criminal. Such children are often seen to be in the habit of using filthy and abusive language (Rai, 2002). Economic freedom at an early age, particularly among boys encourages them to develop bad habits. The attraction towards an urban life style results in extravagant expenditure. Sometimes these extravagant expenditures lead to delinquent activities (Misra, 2004).

The author's observations regarding rag pickers are interesting as the rag pickers are common sight in Seoni town, who can be seen picking metal, plastics, paper and other recyclable materials from the garbage. The author has estimated that about 100-120 rag picker are at work in the town. Most of them are in the age group of 10 to 14 years. Also some ladies are involved in this activity. These children can be seen with a polyester bag picking thing from waste in early hours of the morning when other children are going to school. They can also be seen at work in noon and evening, when other children return from the school and play. People mostly consider them nuisance and sometimes charge them on the assumption

that they are involved in thefts. The question arises as to how the jobs for rag pickers are created and what service they are rendering to the society.



Fig. 02. Women and Children also involved in rag picking in trenching ground.

The jobs for rag picker originate from the incumbency of the citizens, who do not care to separate the recyclable and non-recyclable materials from their domestic waste. These rag pickers pick up the useful material and take it to the trash men, who forward it ahead to be recycled. Rag pickers make the recyclable material available to the factories at throw away price while its import could involve a lot of foreign exchange. Also the manure from the separated waste is of better quality. People consider the rag pickers a nuisance but these poor fellows are rendering great service to us by making our waste degradable.

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The recovery of metals like gold, platinum, copper and lead uses caustic soda and concentrated acids, rag pickers dip their hands in poisonous chemicals for long hours. They were also exposed to fumes of highly concentrated acid. Safety gear such as gloves, face

masks and ventilation fans are virtually unheard of, and rag pickers many of them children often have little idea of what they are handling. All the workers we surveyed were unaware of the dangers they were exposed to. They were all illiterate and desperate for employment, their choice is clear either die of hunger or of metal poisoning. In the streets of any large city in India, small groups of women (and sometimes children) around garbage skips, going through them and collecting scraps of paper, tin, plastic, and cloth. Sometimes many of them have burnt their fingers while trying to collect metal from the burning garbage. As they are migrants with no white ration cards, they have no other option but to pay up the attenders at government hospitals before we get to meet the doctors. The dump yard depends on 100 rag-pickers who forage waste for plastics, metals, broken glass and other non-biodegradable materials. They don't even have access to drinking water. Rain or shine, for these rag pickers, garbage continues as their source of living till a concrete solid waste management plan is in place along with a rehabilitation plan¹. They work, eat, sleep and spend every moment of their lives in its vicinity. From five-year-old child to elders, all members of the families move in the yard from morning to evening. Children are particularly vulnerable to toxins because they ingest more water, food and air per unit of body weight; their metabolic path ways are less developed to detoxify and excrete toxins; and any disruption during their growth years can easily disrupt development of their organ, nervous, immune, endocrine and reproductive systems. In many developing countries, waste pickers find their livelihood through sorting and recycling of secondary materials. They have high occupational health risks including risk from contact with human fecal matter, paper that may have become saturated with toxic materials, bottles with chemical residues, metal containers with residue pesticide and solvents, needles and bandages from hospitals etc.

The survey conducted among the waste collectors of Seoni town focusing on their socio - economic and health status, and involvement in waste recovery and recycling revealed their notable role played in waste management. In the corporation waste collectors belonging to both sex and almost all age groups have been found involved in scavenging work. The present,

study in Seoni own found that majority of the rag pickers opted plastics and metals because of the easiness to sell them at better price but generally they collected everything they could access. Another observation of the present study was that the rag pickers worked alone as single individual and not as groups.

Occupational Diseases

It is true that in developing countries, solid waste workers and waste pickers routinely touch the waste they collected and stepped on waste because they typically wore only sandals. Therefore, they are easily susceptible to various infectious diseases. A study on waste pickers showed that they had respiratory diseases, diarrhea, protozoa and helminthes infestation. Rag pickers in Shivpuri town had very poor health due to the consumption of unhygienic food and working in polluted environment and suffered from diarrhea, cold and scabies. They were highly exposed to tetanus and other infections caused from cuts by sharp metal pieces, broken glass and other solid wastes. Waste pickers were reported to have headache to have at many dump sites.

It indicated the probability of Hepatitis B Virus infection among them. Stool samples collected from solid waste pickers have revealed widespread parasitic infection among them Tuberculosis, Bronchitis, Asthma, Pneumonia, Dysentery, Parasitic infections and Malnutrition were the most common diseases reported among waste pickers.

Hazardous work conditions

Rag picking is probably one of the most dangerous and dehumanizing activity in India. Child rag pickers are working in filthy environments, surrounded by crows or dogs under any weather conditions and have to search through hazardous waste without gloves or shoes. They often eat the filthy food remnants they find in then garbage bins or in the dumping ground. Using the dumping ground as a playing field the children run the risk to come upon needles, syringes, used condoms, saline bottles, soiled gloves and other hospital wastes as well as ample of plastic and iron items. They suffer from many diseases, such as respiratory problems, worms, anemia, fever and other problems which include cuts, rashes, dog bites.

Some improvements in their work conditions

Many NGOs are supporting the rag pickers to gain access to these basic services (health care, health insurance, education and vocational training). They also provide legal support or counseling sessions and help them form unions to speak up for their rights. In some cities, their work has been partly recognized and their situation thus improved. In Pune for example, thanks to the scrap-collectors union, the municipal corporation now issues identity cards to rag pickers and offers a limited health insurance plan, recognizing their contribution to recycling waste in the city. This acknowledgement can have a positive impact on reducing child labour by increasing the parent's income therefore reducing their dependence on the money their children earn. Rag pickers formed as union and struggling for their rights, there are always new challenges and battles to be fought to improve the lot of rag pickers, but the progress made in twenty years is truly remarkable. Probably the one of the most potent symbols of the change is that the children of the rag pickers have now been through school, rather than following their mothers to the workplace, and are being employed as the community organizers and the providers of the necessary institutional support that such a large operation requires. Despite the health hazards involved, they make their livelihood through collection indirectly contributing to resource recovery and also serving the fundamental role in the recycling process and in reducing waste at source. Many children begin working as rag pickers at the young age of five or six years. Following Services to be provided for child rag pickers.

- a. The minimum age for entry into hazardous work from ages 16 to 18 and finalize the list of hazardous work.
- b. Legally define a child as any person under age 18 years so that all children are equally protected under the law.
- c. Establish a compulsory education age for children.
- d. Increase the number of labor inspectors responsible for child labor and devote more resources to enforcement of child labor laws.
- e. Provide educational, prevocational, counseling, medical, recreation and entertainment activities.

CONCLUSION:-

Rag pickers play important role in solid waste management by handling recyclable material in their own way. Generally rag pickers collect materials like plastics and metals, due to which municipal workers get lot of help for sorting solid waste. Rag pickers run their lives by selling some saleable items from rag picking. Though rag picker plays role of a self -employment, rag picking is most dangerous and inhumane activity where without any protection they do their work honestly. But waste pickers feel that they can do better if municipalities or local bodies provide adequate protection or other facilities at the workplace. Seoni town currently is facing a municipal solid waste dilemma, for which all elements of the society are responsible. The community sensitization and public awareness is low. There is no system of segregation of organic, inorganic and recyclable wastes at household level. There is an adequate legal framework existing in the country to address municipal solid waste management. What is lacking is its implementation. In spite of a stringent legislation, open dumping is the most wide spread form of waste disposal. The possible reasons for poor implementation could be a combination of social, technical, institutional and financial issues. Public awareness, political will and public participation is essential for the successful implementation of the legal provisions and to have an integrated approach towards sustainable management of municipal solid wastes in the Seoni town. For solutions to be environmentally and economically sustainable, priorities need to be adjusted to give appropriate weight to the needs of all stakeholders in developing countries, including governments, affected landowners, and the rural and urban poor. Adopting an integrated approach using appropriate technology is a major component to ensuring that solid waste problems are addressed in a manner which provides for the greatest common benefit. From all above statements it is concluded that rag picker plays important role in solid waste management process by proper guidance and cooperation.

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