



## CONTRIBUTION OF RAG-PICKER TO SUSTAINABLE DEVELOPMENT

**Kamal Dudave**

Research scholar

Department of Economics

University of Allahabad

Under the supervision of Prof. S.K. Chaturvedi

Email id: [dudavekamal@gmail.com](mailto:dudavekamal@gmail.com)

### ABSTRACT:

Waste is 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 waste. If accumulated, it leads to degradation of urban environment, stresses natural resources and leads to health problems. The intend of this study was to analyze the contribution of rag pickers to sustainable development. Research Methodology; the study was conduct from October to January 2015 in Allahabad at three slums areas. By purposive sampling 30 rag pickers were selected. Out of them 5 were child rag picker, 9 female rag picker and 16 were male rag picker. The data was analyzed by using STATA and other tools. Results; the rag pickers collects huge amount of waste in a year. The contribution of rag picker to sustainable development was too much. The social, health and economic condition of rag picker were too poor.

**Keywords:** Rag Picker, Sustainable Development, Recycling, Environment,

### Introduction:

Millions of people worldwide make a living from searching, collecting and processing materials that someone else throw away. The term rag picker used or someone who made a living by rummaging through refuse in the streets to collect material of salvage. Rag-Picker did not recycle materials

themselves, they would collect plastic bottle, paper, card board, scrap metal, glass etc. And turn it over to master rag picker or businesses or transform waste into new products. They are too poor, illiterate and belong to rural area or scheduled caste. Rag picking is a job for the lowest of the working classes. Rag pickers are working in informal sectors. They live at the bottom of economic pyramid but they play an important role in sustainable development.

### Sustainable development:

Sustainable development was first mentioned in the Brundtland Report (1987) as a strategy mankind must desire to preserve and inherit a sustainable Earth. It means “meeting the needs of the present without compromising the ability of future generation to meet their needs.” The definitions mention the necessity of development within the limits of the environment. It means development restricted by environment.” Thus we must intercept sustainable development as a



ELK

Asia Pacific Journals

*ELK Asia Pacific Journals – Special Issue*  
*ISBN : 978-93-855370-1-1*

concept that considers nature over progress.<sup>1</sup> The present study will attempt to examine the contribution of Rag pickers to Sustainable Development and access their income and health aspect. The paper intends to present a vulnerability study of the rag pickers of Baxi Bandh, Minto Park and Parade Ground areas of Allahabad Municipal Corporation of Allahabad District of Uttar Pradesh.

### **Objectives:**

#### **General Objectives:**

1. To examine the contribution of rag pickers to Sustainable Development.
2. To examine the income aspect of the rag pickers.
3. To examine the health aspect of the rag pickers.

#### **Specific Objectives:**

1. To examine the amount & nature of waste collected by the rag pickers monthly.
2. To examine the contribution of this waste collected to sustainable development.
3. To examine the monthly income of rag pickers as a result of rag picking.
4. To examine rag picking as means of livelihood of the rag pickers.

5. To examine the health problems of rag pickers as a result of rag picking.

### **Research Questions:**

1. How rag picking contributes to sustainable development?
2. What is their income as a result of rag picking?
3. Is rag picking the only means of livelihood of the rag pickers?
4. What kind of health problems rag pickers confront as a result of rag picking?

### **Scope and Coverage of the study:**

The scope of the study is that it will examine the contribution of the rag pickers of Baxi bandh and Parade Ground area of Allahabad district to sustainable development and it will also examine their income and health aspect as a result of rag picking. The study will cover the rag pickers of Baxi bandh and Parade Ground area of Allahabad district.

### **Methodology:**

#### **Research Method:**

The data would be collected by conducting a primary survey by the help of a Schedule.



ELK

Asia Pacific Journals

*ELK Asia Pacific Journals – Special Issue*  
*ISBN : 978-93-855370-1-1*

### **Survey Design:**

The survey would be conducted on the Rag pickers of Baxi bandh area and Parade ground area of Allahabad for accessing their contribution to Sustainable Development, their Income and Health aspect as a result of rag picking. The areas are chosen on the basis of Purposive Sampling as significant majority of rag pickers reside in the chosen areas. The Rag pickers collect waste materials from various locations all over Allahabad. The Sample Size will be 30. The sample size is small as the survey has to be done within a short period of time. The data will be collected with the help of a Schedule constructed by the group. On the basis of the data collected by the schedule the objectives proposed will be examined and the proposed research questions will be answered. The approach of the study will be Qualitative in nature. The present paper intends to present the contribution of rag picker to sustainable development. The main objective of this study is to present the contribution of rag picker to sustainable development and also study the impact of waste on human.

### **Survey report:**

The survey was conducted in three slums, **Baxi Band, Pared ground and Minto**

**Park** of Allahabad district of Utter Pradesh where majority of these people lives. A total 30 sample of rag picker (10 in each area) was taken for study to achieve the set objective. The survey used both primary and secondary data. The primary data was collected by well design schedule. Beside schedule, personal interview method was also used for collection the desired information. The secondary data was collected from the published reports, magazines, books and journals and from various official sources. For analyzing of data, we used table, graph and statistical tool STATA.

### **Results and discussion:**

There is no doubt about any of the role of rag picker in sustainable development. They are playing very importance role in sustainable development and also making essential contribution to our health, our cities and our environment. They also protect us from waste hazards. Collection of waste is an important step in the solid waste management and recycling. They collected waste and delivered almost all recyclable waste to the recycling chain. It means they are providing raw material to manufacturing factories for new products. The Survey usedk 30 samples of rag



ELK

Asia Pacific Journals

*ELK Asia Pacific Journals – Special Issue*  
*ISBN : 978-93-855370-1-1*

pickers. Out of them 5 rag picker are below 14 years. The average waste collection by 25 rag pickers is 320 kg in one month and 3400 kg in one year. The average waste collection by 5 rag pickers is 320 kg in one month and 3400 kg in one year. The average waste collection by all rag picker (including child rag picker) in one year is 1233 kg. The total waste collection by all rag picker in one year is 10122322kg. The huge amount of waste collected by rag picker from variance source and delivered it almost all recyclable waste for recycling. The process of recycling is shown in following diagram. **(Refer Fig.1)**

The above figure indicates that the waste collected by formal agencies directly goes to the landfill. The recyclable items collected from dhalaos by the rag packers are used for recycling.

The rag picker is key factor of recycling chain. Without rag picker the recycling chain is incomplete. The contribution of rag picker in sustainable development is directly related to recycling. We manufacture new product by using recyclable waste. In the recycling process we used recyclable waste as a raw material therefore this whole process saves energy, natural resources, environment, capital etc.

### **Recycling saves energy:**

The recycling process saves energy because in the recycling process, waste is used as raw material which consumes less energy to manufacture a new product than to manufacture from raw material directly. The energy saved in recycling process explains in following points.

- Energy used to recycle paper is 70% less than when paper is prepared using wood and raw materials.
- The one Aluminum can save enough energy to run TV for 3 hours.
- Recycling one ton of plastic saves 1000-2000 gallons of gasoline.
- Recycling a pound of steel saves enough energy to run a 60 Walt bulb for 26 hours.
- Recycling one ton of paper saved 225 kilovolt hours.
- Percentage of energy saved by recycling compared with raw material usage. **(Refer Table No.1)**

### **Recycling prevents pollution:**

Recycling is a tool to protect our environment. An environment damage is less when recycle material is used in place of raw material during manufacturing new



ELK

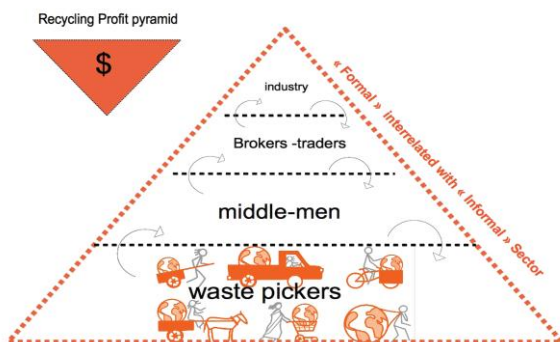
Asia Pacific Journals

ELK Asia Pacific Journals – Special Issue  
ISBN : 978-93-855370-1-1

product. Recycling is an important way of reducing greenhouse gas. Rag picker also contribute to resource recovery in and greenhouse gas saving cities. Recycling one ton of paper saved 17-31 trees, 3.3 cubic yard of land and 60 pounds of air pollutants. Using to make aluminum can recycle is produce 95% less air pollution and 97% less water pollution.

**Recycling creates Jobs:**

Recycling is a largest informal sector. There are a lot of people involved in the rag picking, recycling and remanufacturing process. An estimated 34 million people worldwide are engages in this job. In India over 1 million people engaged in these jobs. The recycling profit pyramid is as follows:



**Recycling Labour vs Recycling Profit Pyramid**

Source: Elaborated by Lucia Fernandez, WIEGO/MIT, 2012.

**Recycling saved resource:**

Recycling is a process of saving or minimizing uses of resource. The recycling process is manufacturing new good/products by using recyclable waste. It saves labour, capital, water and land.

- Recycling one ton of plastic saves 1000-2000 gallons of gasoline.
- Recycling one ton of paper saves 7,000 gallons of water and 3.3 cubic yards of landfill space.

**From recycling process we got:**

Glass bottle become new glass bottle.

- Aluminum cans are turning back into aluminum cans. And can be recycling again and again.
- Steels can are used in other steel product and it is also recycling again and again.
- Plastic bottles are recycled into carpet clothing .auto parts and new bottles.
- Paper is recycled into new paper in 3-4 times.

The total waste collection by 30 rag pickers in one month is showing in the following table. (Refer Table No.2)



ELK

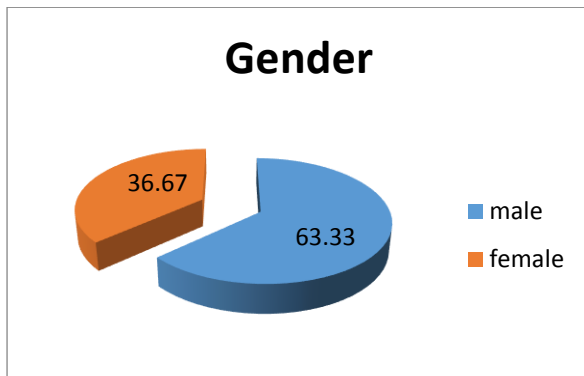
Asia Pacific Journals

ELK Asia Pacific Journals – Special Issue  
ISBN : 978-93-855370-1-1

### Gender dimension in rag picking-

In the survey report we find that out of 30 rag pickers, 11(36.66%) are female and 19(63.33%) are male. The female rag pickers are less participating in the waste collection because they are working in Municipal Corporation but male rag pickers do not want to work in Municipal Corporation because they got irregular and low income rather than rag picking. (Refer Table No.3)

**Pie chart no.1: Rag Picker Genderwise Proportions**



### Number of hours spends for collection of waste in a day:

Rag pickers have spends sometime in the collection of waste from differences places. In the study ,it was found that 46.66% (14) rag pickers spend more than 8 hours in a day for the collection of waste, 40%(12) rag pickers spend 5-8 hours and 13.33%(4) rag pickers spend less than 5 hours in a day. In

the study it was found that, female rag pickers were spend less hours than male rag pickers in collection of waste in a day. (Refer Table No.4)

### Quality of different types of waste collection by the Rag Picker:

Rag pickers collected many types of waste such as plastic bottle, glass bottle, paper cartoon, copper, electric part etc. which are shown in the following graph. (Refer Fig.2)

### Monthly income:

For most of rag picker, rag picking was only one source of income. Due to collection and selling waste they are earning money.13.33% rag picker earned less than 5000 rupees, 30% earned between 5000-5500 rupees and 56.67% earned more than 5,500 rupees in a month.

### Rag picking as means of livelihood:

While answering to a question in the schedule [Rag picking only means of livelihood: yes ( ) or no ( )],

**56.67% of Rag pickers said that rag picking is their only means of livelihood. (Refer Table no.5)**

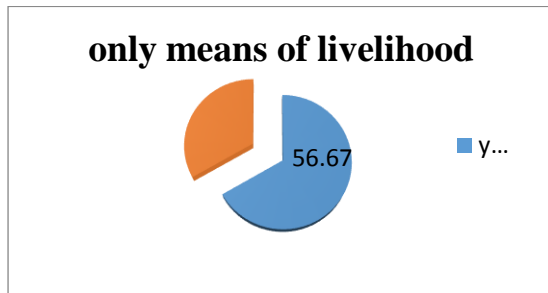
### Pie chart no.2



ELK

Asia Pacific Journals

*ELK Asia Pacific Journals – Special Issue*  
*ISBN : 978-93-855370-1-1*



### **Social and economic profile of rag pickers:**

In India a large number of people who belong to poor family and scheduled caste are engaged in this work of rag picking. They are lived in slums areas of Allahabad district of Utter Pradesh of India. They are living a group. They have no proper houses. All family member are engaged in rag picking.

### **Health condition:**

Rag picking is one of most dangerous activity in India. They are living and working in filthy environment. And they are also facing great risk during work. Therefore, there is great chance of health hazards. We found that no one used precautionary measures. They work without gloves and shoes. Because 1}.they have no any idea of self-protection during work. 2}. they are filling in-comfortable during work. 3}. they are unable to buy such as precautionary measures.

### **Summary and Conclusions:**

Rag pickers contribute significantly to the cause of sustainable development. They are deprived of their basic needs of food and shelter and educating their children. Rag picking is also done by children which is a threat to the future of a progressive society. As we can see rag picker's potential in contributing to the goal of sustainable development, their position in the society needs urgent focus so that they are uplifted from their present situation both in terms of social and economic aspects to boost their contribution further to help mitigate environmental hazards as a result of proper solid waste management. The survey has covered approximately a population of 2000 rag pickers in the three areas chosen. If all the areas are taken, it will further multiply their contribution in solid waste management. So, policies at both state and national level should be made to empower them. Industry can also help rag picker by providing precautionary measures. Rag pickers are usually not aware of health aspect while doing rag picking. The living condition of the rag pickers is too poor. Government has not provided any basic facility for them such as shelter, water, education for their children etc. It seems we are blind to their contribution for such an





ELK

Asia Pacific Journals

*ELK Asia Pacific Journals – Special Issue*  
*ISBN : 978-93-855370-1-1*

important cause. Government should launch few schemes for rag picker. Allahabad city produces million tons /day of solid waste. One of the major problems experienced by the Allahabad Municipal Corporation is inadequate collection in solid waste. Delay in waste collection leads to degradation of waste and rag picking activities which in turn reduces the waste quality for use as RDF leading less production of fuel. An overall collection of 80% has been achieved in Allahabad with collection efficiency of 60-70% for the registered households and 10% for the slums. It is suggested that daily door-to-door collection of waste should be done. The main drawback for such conditions is the location of the bins. Vehicles owned by the corporation are inadequate in number with no proper route mapping. Some of these drawbacks can be overcome using upgraded new equipment and more rational methods for managing and collection of solid waste.

#### **References:**

- Chikarmani Poornima {2010}, The World of Waste Picker, EPW, June 5, vol.XLV No.23.
- Choudhary kumar Bikramaditya {2015}, Waste and Waste Picker, EPW December 2015
- Ghosh Sanchari{2011}, Electronic waste recycling for developing countries, EPW,Dec.3, 2011 VOL.XLVI No.49.
- Goswami U & Sharma, H.P. (2007), study of ground water contamination due to municipal solid waste dumping in guwahati city. Pollution Research, 26, 211-214
- Jha M.K., Sondhi, O.A.K. and Kansal A(2003), Solid Waste management – a case study. Indian Journal Of Environment Protection, 23, 1153-1160
- Kim Kieun (2006), “effect of waste recycling on Sustainable Development” Hankuk Academy of Foreign Studies, Korea.
- Reschovsky J. D. and Stone S. E.(1994), Market Incentives to Encourage Household Waste Recycling ,paying for what you throw away.”, Journal of Policy Analysis and Management,Vol.13, no. 1, pp 120-39
- Sharma Vinit & Sharma Anurangi{1995}, Electronic waste recycling for developing countries ,Journal of Adolescent Health ,17:66-67.





ELK

Asia Pacific Journals

ELK Asia Pacific Journals – Special Issue  
ISBN : 978-93-855370-1-1

- WIEGO {2015}, 102 session of the International labour conference, June, 2015.
- Yhdego, M.(1991): ‘Scavenging Solid Wastes in Dares Salaam, Tanzania’, Waste Management Research, Vol. 9, page- 263.

**Web sites:**

- [www.chintan-india.org](http://www.chintan-india.org)
- [www.factmonster.com/science/environment/recycling-facts.html](http://www.factmonster.com/science/environment/recycling-facts.html)
- [www.recycling-guide.org.uk/facts.html](http://www.recycling-guide.org.uk/facts.html)
- <https://openknowledge>

**Schedule:**

A Survey on Contribution of Rag pickers to Sustainable Development and accessing their Income and Health Aspect

**Schedule**

1. Residential Area: Baxi bandh, Parade Ground (Allahabad)
2. Name:
3. Age:
4. Working Days (in a week):
5. Duration:
6. Quantity/ Income of collected wastes (in week):

S. No	Waste Material	Quantity (kg/no.)	Income (₹)
1.	Plastic Bottles		
2.	Glass bottles		
3.	General Plastic		
4.	Metals		
5.	Paper Carton		
6.	..... .... (Specify)		

7. Medical Ailments:

- 1.
- 2.
- 3.

8. Rag picking only means of livelihood: yes ( ) or no ( )

9. General Remark:.....

Collected by .....



**Data table:**

Type of waste collected (Quantity and Income)																		
S. No.	Name	Area	Age/ Sex	Duration (hrs)	Paper carton		Plastic and Plastic bottles		Raw metals		Glass Bottles		Electronic Items		Metals (Copper etc.)		Total Income	Only means of Livelihood?
					Quantity (kg)	Income (Rs)	Quantity (kg)	Income (Rs)	Quantity (kg)	Income (Rs)	Quantity (pcs)	Income (Rs)	Quantity (kg)	Income (Rs)	Quantity (kg)	Income (Rs)		
1	Rajoo	Baxi Bandh	38/ M	6	90	1170	90	900	60	1080	50	50	60	60	30	60	4850	yes
2	Darbari lal	Baxi Bandh	36/ M	7	80	1040	95	950	65	1170	50	50	67	67	20	40	4731	yes
3	Dinesh	Baxi Bandh	30/ M	10	85	1105	92	920	79	1422	49	49	70	70	30	60	5237	no
4	Kamal	Baxi Bandh	18/ M	6	80	1040	98	980	77	1386	50	50	72	72	40	80	5430	yes
5	Chhedila l	Baxi Bandh	40/ M	11	88	1144	97	970	78	1404	50	50	75	75	30	60	5374	yes



6	Lodi	Baxi Bandh	32/ M	5	79	102	7	96	960	76	136	43	43	76	0	3	60	0	5147	yes
7	Moolchand	Baxi Bandh	18/ M	6	85	110	5	95	950	80	144	45	45	80	0	4	80	0	5545	no
8	Kaladevi	Baxi Bandh	20/ F	7	80	104	0	98	980	73	131	53	53	77	0	5	10	00	5638	yes
9	Dharmveer	Baxi Bandh	36/ M	7	89	115	7	90	900	70	126	54	54	89	0	4	80	0	5556	no
10	Ravi	Baxi Bandh	16/ M	6	65	845	72	720	62	111	45	45	68	68	0	5	30	0	4166	yes
11	Arti	Parade Ground	15/ F	5	55	715	61	610	52	936	42	42	58	58	0	1	20	0	3461	no
12	Master	Parade Ground	40/ M	9	83	107	9	89	890	79	142	50	50	80	0	1	20	0	4891	no
13	Narendra	Parade Ground	17/ M	7	67	871	76	760	64	115	48	48	70	70	0	5	30	0	4268	no
14	Geeta	Parade Ground	50/ F	9	87	113	1	85	850	72	129	60	60	83	0	3	60	0	5308	no
15	Kamla	Parade Ground	40/ F	10	76	988	83	830	66	118	60	60	84	84	0	3	60	0	5048	yes
16	Reeta	Parade Ground	36/ F	11	82	106	6	82	820	65	117	60	60	85	0	3	60	0	5109	yes
17	Anara	Parade Ground	55/ F	10	77	100	1	86	860	67	120	54	54	82	0	4	80	0	5227	no
18	Usha	Parade Ground	55/ F	7	76	988	80	800	65	117	45	45	85	85	0	4	80	0	5058	yes
19	Urmila	Parade Ground	60/ F	8	70	910	79	790	65	117	54	54	89	89	0	3	60	0	4900	no



20	Sita	Parade Ground	20/ F	9	77	100 1	90	900	60	108 0	53 0	53 0	85 0	4	80 0	5161	no
21	Gangade en	Minto Park	36/ M	10	90	117 0	97	970	76	136 8	54 0	54 0	84 0	2	40 0	5288	yes
22	Sanjay	Minto Park	17/ M	11	96	124 8	2	102 0	89	160 2	56 0	56 0	86 0	1	20 0	5490	yes
23	Kalu	Minto Park	20/ M	10	98	127 4	0	100 0	87	156 6	54 0	54 0	87 0	1	20 0	5450	yes
24	Vijay	Minto Park	24/ M	9	95	123 5	94	940	87	156 6	53 0	53 0	89 0	1	20 0	5361	yes
25	Ramkali	Minto Park	45/ F	8	85	110 5	95	950	86	154 8	53 0	53 0	90 0	3	60 0	5633	no
26	Sunita	Minto Park	14/ F	4	45	585	55	550	35	630	44 5	44 5	47 0	2	40 0	3080	no
27	Sunny	Minto Park	25/ M	10	91	118 3	96	960	83	149 4	49 0	49 0	81 0	4	80 0	5737	yes
28	Sajan	Minto Park	28/ M	9	79	102 7	98	980	85	153 0	45 0	45 0	84 0	2	40 0	5227	yes
29	Bansal	Minto Park	35/ M	8	90	117 0	98	980	86	154 8	48 0	48 0	87 0	5	10 00	6048	yes
30	Vikas	Minto Park	13/ M	4	35	455	5	550	51	918	43 5	43 5	47 0	1	20 0	3028	no

Source- survey, rag pickers of Allahabad

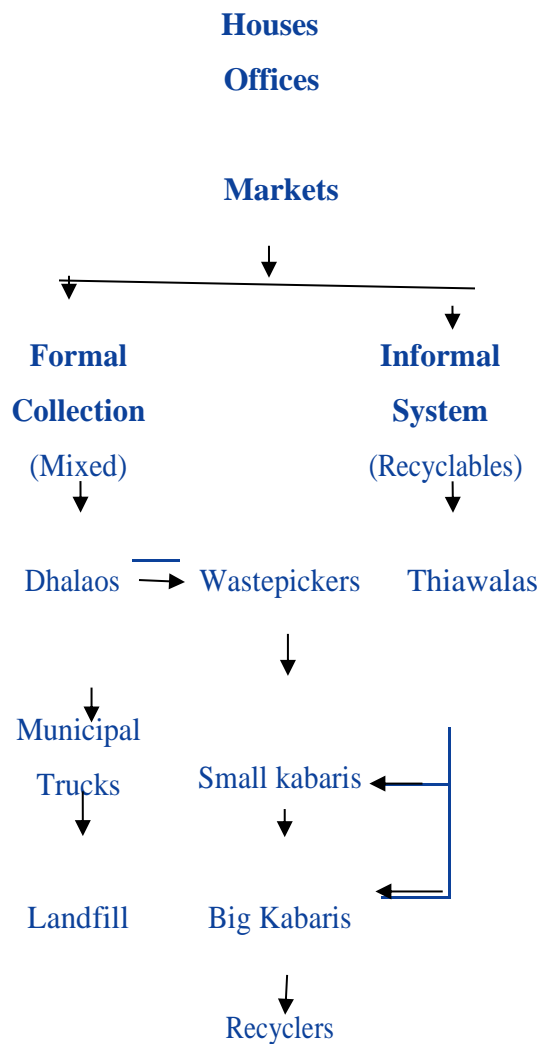


**LIST OF FIGURES:**

**Fig.1**

**The Water Processing Chain:**

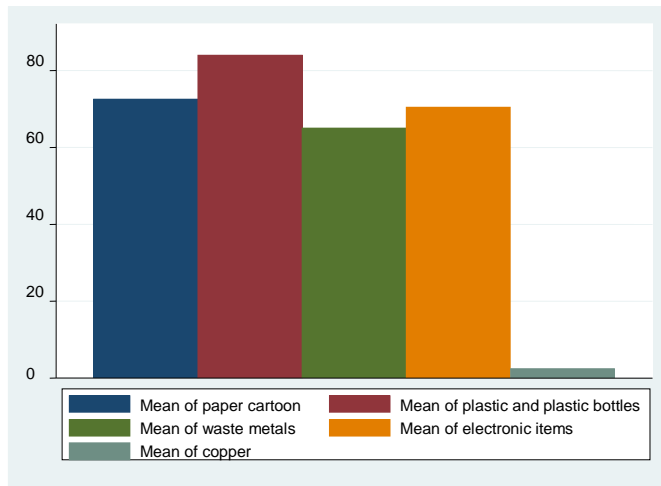
**The Waste Processing Chain**



Source: CHINTAN- Environment Research And Action Group

**Fig.2**

**Quality of different types of waste collection by the Rag Picker:**





**LIST OF TABLES:**

**Table no. 1**

**Percentage of energy saved by recycling compared with raw material usage.**

<b>Aluminum</b>	<b>95%</b>
<b>Plastics</b>	<b>75%</b>
<b>Steel</b>	<b>60%</b>
<b>Glass</b>	<b>40%</b>
<b>Newspaper</b>	<b>40%</b>





**Table no.2:**

Total Collection various waste material (in per month)					
Paper carton (in kg.)	Plastic and Plastic bottles (in kg.)	Raw metals (in kg.)	Glass bottles (in pcs.)	Electronic item (in kg.)	Copper (in kg.)
2316	2619	2142	15261	2304	70.5

**Table no. 3**

Rag picker male and female				
S.I.N.	sex	Freq.	Percent	Cum.
1	f	11	36.67	36.67
2	m	19	63.33	100
Total	-	30	100	-

**Table no. 4: Daily hours spent for Collection of Waste**

Duration of working in hrs.	4	5	6	7	8	9	10	11	Total
Number of female	1	1	0	2	2	2	2	1	11
Number of male	1	1	4	3	1	3	4	2	19



**Table no.5: Details of Rag Picking as only means of livelihood**

<b>only means of livelihood</b>	<b>Freq.</b>	<b>Percent</b>	<b>Cum.</b>
<b>no</b>	<b>13</b>	<b>43.33</b>	<b>43.33</b>
<b>yes</b>	<b>17</b>	<b>56.67</b>	<b>100</b>
<b>Total</b>	<b>30</b>	<b>100</b>	