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Scavenging: is it a new path for farming families in Amazonia?

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Abstract

In the middle of the 70's the introduction of large industrial and agricultural projects in the Brazilian Amazonia, created a situation of violence and loss of land used by farming families. In this sense, seeking for a better quality of life the process of migration for the Metropolitan Region of Belém (MRB), mainly from the interior of the State of Para was intensified. Completely excluded by formal labor market, these families started to collect disposed material as scavengers. The material collected is found in sanitary landfills, streets or open dumping areas as well. The purpose of this paper is to investigate the social relations established between scavengers and trash dealers in the emerging recycling market in the city of Belém. This research is being supported by Project MEGAM at the Nucleus of Higher Amazonian Studies of the Federal University of Pará, and has the main purpose of grasping to the understand the social and environmental relations inherent to collection and recycling activities in the Amazon Region.

Keywords: scavengers, farming families, social relations, environmental relations, collecting.

Introduction

The city of Belém, capital of the State of Para, as an Amazon city has its own peculiarity. The scavenger, main actor in the dynamics of recycling material in this city, looks for aluminum cans as these have a better price per kilogram compared to other types of material. With this study, we wish to contribute as a tool for the policy makers by helping them to improve the income and the quality of life of these families.

The recycling material market is formed by a great number of people and millions of thousands of Reais (*Brazilian currency*) that needs to be better assessed through a thorough field research. Besides that, equally important are the qualitative researches to know the complex array of social relations involving scavengers, trash dealers and metallurgic entrepreneurs.

The economical crisis of the city of Belém is directly related to the public policies set by the government to occupy the Amazon region, implemented during the 60's and 70's by the military government, which stimulated big farming, forestry and mining companies. The result of these occupation policies was a great inequality to access natural

resources, mainly land, agrarian conflicts, alienation of native populations and environmental degradation.

In a research conducted by MITSCHHEIN (1989: 62-72), about the survival conditions of the population in the outskirts of Belém, it was found out that 60.5% of the interviewees came from other parts of the State, mainly people coming from farm working families, who came to Belém in search of better life, work, income and public services.

Therefore, most of the peasant families who lost their lands in the Amazon Region, were attracted to the Metropolitan Region of Belém (MRB), which includes the cities of Belém, Ananindeua, Marituba, Benevides and Santa Barbara.

Investigation Methodology

As we abovementioned the empirical universe of the research is the city of Belém. The case study on the recycling material scavengers was conducted between the months of February and March, 2000, through interviews and questionnaires handed to 122 scavengers, 10 trash dealers, the Coordinator of the *Projeto Latinha* (Can Project), and the technical staff of the Sanitation Secretariats of the municipalities of Belém and Ananindeua.

The operational procedures to collect data were targeted to scavengers in their working and residential places. Therefore, interviews were carried out on the streets and neighborhoods, shopping malls, and the downtown area of Belém. In Ananindeua, the interviews were conducted in the *Aura* sanitary landfill and in the neighborhood called Águas Lindas, where many scavengers live. It is worth mentioning that the research activities carried out *in situ* were extremely important for a better understanding of the scavengers way of life and work.

The Current Recycling Market in the City of Belém

The recycling material market, based on the work of the scavengers, was structured during the economic crisis of the 80's, functioning as an alternate income means for the people who were excluded from the formal economy. It is mainly formed by scavengers coming from rural workers families who migrated to the Metropolitan Region of Belém (MRB) during the 70's. During the last decade, this market has increased as well as the number of people and material involved in the recycling material business.

Regarding the generation of solid waste in the MRB, the cities of Belém and Ananindeua show the greater quantity of daily generated of solid waste (see **Table 1**).

Table 1 – Percentage of the Generation of Solid Waste Management in the MRB in 1998

Cities	Amount Generated (ton/day)	Percentage (%)
Belém	1200	75
Ananindeua	359	22
Benevides	25	1.5
Marituba	20	1.2
Santa Bárbara	5	0.3
Total	1609	100

Source: Data collected by the authors from COHAB/IPEA

Analyzing **Table 1**, the cities of Belém and Ananindeua shows respectively 75% and 22% of the total amount of waste generated in the MRB. Whereas, the other cities of the MRB demonstrate a small part of the total amount of waste produced, these cities also need a more accurate solid waste management system in order to improve the quality of the collection, transportation and final disposal.

Concerning the final treatment given to the solid waste, the cities of the metropolitan region of Belém used the Aura controlled landfill, located in the vicinity of the neighborhood of Santana do Aura, county of Ananindeua, 14 km from the city of Belém. Since the early 90's, the *Aterro do Aura* (Aura Controlled Landfill) has been used for the final disposal of solid waste generated in the metropolitan region of Belém. It has a total area of 1.18 sq km and a volume capacity of 2,117,000 cu m. According to the records in the city hall of Belém, the *Aterro do Aura* receives 5,100 cu m volume of solid waste, daily. Therefore, the biggest challenge for those county officers is to solve the problem of the final disposal of solid waste. This is a common problem in the largest Brazilian public administrations, due to the cost of implementing and maintaining a selective collection and recycling system, as well as the involvement of the local population. The collection of the recycling material is performed by the scavengers. The material more often collected is: aluminum, plastic, paper, cardboards, glass, copper, and iron. The material is then sold to the trash dealers and from them to the metallurgic companies. In our study, we were able to come up with a typology for the scavengers, with four profiles, based on information obtained from the field research (see **Table 2**).

Table 2 – Scavenger Profiles in the City of Belém

SCAVENGER PROFILES	NR. OF INTERVIEWEES	GENDER		DAILY WORKING HOURS		DAILY INCOME (R\$ 1.00)	
		M	F	3- 6 hours	7-12 hours	3-5.00	6-8.00
STREETS	66	60	6	18	48	20	46
BIO-REMEDIATION PROJECT	9	2	7	9	0	9	0
AURÁ LANDFILL	42	14	28	8	34	26	16
CAN PROJECT	5	1	4	5	0	0	0
TOTAL	122	77	45	40	82	55	62

Source: Elaborated by the authors.

Analyzing the data on **Table 2**, once can see that the majority of the scavengers on the streets are male, while the scavengers of the Aura, Bio-remediation Project and Can Project are female. The street scavengers and the Aura scavengers have a daily working load between 7 and 12 hours and have a daily average income ranging from R\$ 6.00 to 8.00.

Regarding their original place, from the total of 122 scavengers, 63.8% are originally from the North Region and 8.6% from the Northeast Region. The scavengers' schooling rate shows that 11.5% reached high school; 70% attended elementary school and 10% were illiterate. Our data show that 'scavenging' activities are performed not only by illiterate people, but also by people who attend or have attended school.

The scavenger named M.A. (34 years old) informed in her interview that she finished high school and worked as an independent sales person downtown Belém and began to be a scavenger because commuting from home to work using the public transportation system was very expensive and took her a long time.

Regarding the time in the business, there were scavengers with more than ten years in the scavenging 'profession'. However, the majority of the scavengers has less than five years of activity. The greater number of scavengers in the last five years may be related to the consequences of the "Real Plan" ("Real Plan" is the name of the monetary debasing and currency change made by the Brazilian government in the early 90's). In the working market, as well as may be related to the evolution of the recycling material market and the greater number of trash dealers, which increase the trading alternatives of the 'goods'.

Below are the main characteristics identified for each scavenger's profile:

- *Street and downtown area scavengers*

This scavenger specializes in collecting aluminum cans (soft drinks and beer), works as an individual worker on the city streets, parks, and bars, with a route that implies in covering long walking distances, a daily work load of 8 hours, at night, beginning at 6 p.m. and lasting until 3 a.m. The quantity of material collected every night range from 2 to 5 kg of aluminum cans, depending on the scavenger's route. Because of the low daily income, the family needs are supplied by additional income originated from day work such as small services or construction work. The scavenging on the streets is an individual work and it is not common that members of the same family work together. The reason for this may be the great distances covered by the scavenger from his home and the collecting place.

- *Aura controlled landfill scavengers*

The data obtained from the interviews conducted in the Aurá controlled landfill show that they collect several types of material: plastic, paper, cardboards, aluminum cans and heavy metal (copper and iron).

The great majority of scavengers in the landfill is female (66.6%). There is a clear gender division of work according to the type of material collected. Therefore, females prefer lighter material such as plastic, aluminum cans and, in less quantity, glass. Plastic bottles of chemical cleaning products are particularly sought for as they yield higher profit per unit when compared to other plastic bottles.

The male scavengers working in the landfill collect cardboards and heavier material that yield higher profit per working day. In order to secure a higher daily income, the scavenging activity often involves several members of the same family. The proximity of the landfill with the workers' home is advantageous, encouraging the members of the family to engage in the scavenging activity, with greater profit, and reducing the time consumed in commuting from home to work. A remarkable feature of the landfill work is that the scavengers schedule their activity according to the arrival time of the collecting trucks and, as a consequence, they schedule their trading activity, or the sale of the *bagulho*, which is what they call the collected trash, accordingly.

The landfill working time is an average of 12 hours. The day shift begins at 6 a.m. and ends at 6 p.m. In general, those who begin working at 6 p.m. go on until 6 a.m. in the next day. Regarding the night shift, M. S. (39 years old) sees some advantages:

“At night, there are no flies nor vultures, it's cooler and more comfortable than the day shift. At night, we use a poronga (oil lamp), made with a small can of powder milk, a gadanho (similar to a javelin), used to reach material that is difficult to reach otherwise, and a plastic bag”.

The trash dealer does not provide any working equipment for the scavenger, such as bags to store the material, etc. The scavenger must separate and store away the material collected in the landfill. The product is sold nearby. In general, each scavenger is connected with one trash dealer, who usually makes it difficult for scavengers to monitor the weighing of the collected material.

- *Bio-remediation Project scavengers*

In 1997, after the conclusion of the researches conducted by the Municipal Secretariat for Sanitation (SESAN) on the Aura Sanitary Landfill, linked to the city hall of Belem, a technical and functional re-structuring of the landfill was voted. The Bio-remediation Project was created. It is a course of joint actions aiming at the welfare of the families involved in the scavenging activity, such as: environmental education, distribution of 51 scholarship allowances for children working in the scavenging activity; and income generation after the implementation of a separation and compost facility in the area of the Aura landfill, capable to produce 20 ton/day of organic compost, and a recycling facility for waste, still to be installed in the island of Mosqueiro, within the limits of the county of Belem.

In 1999, the Bio-remediation Project implemented a selective collection system for aluminum cans, paper, cardboards, and plastic, involving twelve scavengers of the Aura Sanitary Landfill. The collection is made from Mondays to Fridays, from 7 to 10 a.m., in the shopping malls (Iguatemi and Castanheira); on Fridays at the Souza Cruz company and Clinica dos Acidentados hospital; every fifteen days at JUCEPA, FUMBEL, BELEMTUR and in the city events: Carnabelém, Parafolia, and Carnival, when SESAN selects around 20 scavengers to assist its team, as the recycling material generation is bigger during those events. The collection and recycling of material in Belem will tend to change in short and mid terms. In August 2000, the Project will initiate the operation of a selection and compost facility in the area of the landfill. The Municipal Secretariat for Sanitation of Belem (SESAN) will increase the services offered by the sanitary landfill, including a selective collection system. This system begins in the landfill and will spread throughout several city neighborhoods in the next two years.

Table 3. Material Collected by the Bio-remediation Project in 1999

COLLECTED MATERIAL	QUANTITY (Kg)	PRICE PER UNIT	R \$ 1.00 TOTAL
ALUMINUM CANS	2,157	0.05	2,210.80
CARDBOARDS	21,127	0.04	1,084.60
MIX PAPER	4,391	0.10	284.00
PLASTIC	5,829	1.02	574.00
TOTAL	33,504	-	4,153.40

Source: PMB/SESAN/Bio-remediation Project

Table 3 shows the quantity of material collected in the year 1999. The total amount collected was R\$ 4,153.40. The most profitable material was aluminum. Cardboards, on the other hand, was collected in greater quantity when compared with other materials. However, it yielded less profit when compared to aluminum.

- *Can Project scavengers*

It is a scavenger group formed by five volunteers, coordinated by Mr. Paulo Mardock, an employee at the State Congress house. The Can Project was created in 1989 and is a philanthropic organization devoted to welfare, which distributes 300 free basic food baskets to the families of needing elderly people, registered in the project; it also distributes 1,500 free snack trays to poor children and teenagers, weekly.

The material collected is aluminum cans and cardboards. The aluminum can collection is made daily, between 8 p.m. and 3 a.m., in bars, restaurants, shopping malls and supermarkets that support the project. The collected material is transported by a van that belongs to the project. Mr. Mardock informed in his interview that there are some companies supporting the project: COMPAR, representative of Coca-Cola™, which gives around 500 and 600 kg of cans damaged in the softdrink making process, plus 2 tons of cardboard, monthly; the YAMADA supermarkets installed 42 containers to collect softdrink cans consumed in the company's outlets; the brewers CERPA and ANTARCTICA also support the project.

The monthly collection through the project is around 3 to 3.5 tons of cans which are sold at R\$ 1.50/kg to Mr. Gregorio, who is a trash dealer. After compressing the material, Gregorio sells the material at R\$ 2.50/kg to the metallurgy company SOINCO. Mr. Mardock's short term perspective is to create a cooperative for scavengers and buy, through leasing system, a hydraulic compressor in the amount of R\$ 13,000 and sell directly to the metallurgy companies. The importance of aluminum cans in the recycling material market in Belem can be evaluated from the information in the interview with trash dealer R.S., who informed that he buys 800 kg of aluminum cans per month from the scavengers that work in the downtown area, at R\$ 0.80 per kilogram, and re-sells it to J.P. metallurgy at R\$ 1.10. J.P. then re-sells the material to recycling industries outside the State of Para.

M.B., another trash dealer, informed that she deals with 4,000 to 5,000 kg of aluminum cans per month, paying R\$ 1.10 or R\$ 1.20 per kilogram and re-sells it for R\$ 1.50 or R\$ 1.60/kg. Therefore, one can see that the trash dealers' prices vary; they establish a competition between themselves in order to control the scavengers. This competition for the control of the scavengers was also noticed during the field research in the Aura Sanitary Landfill, where eight trash dealers were identified.

Table 4 shows the price range for the recycling material in the Aura Landfill.

Table 4 – Price Range for the Recycling Materials

Type of Material	Price Range (R\$ 1.00 /kg)
Plastic	0.03 ~ 0.05
Cleaning material plastic bottles*	0.10
Softdrink plastic bottles *	0.10
Paper	0.03 ~ 0.05
Cardboards	0.10 ~ 0.15
Glass*	0.01 ~ 0.05
Copper	1.00 ~ 1.90
Aluminum cans	1.00 ~ 1.30

- Product sold per unit.

Source: The authors

According the data on **Table 4**, plastic, copper and aluminum are the materials showing greater price range. Softdrink plastic bottles are sold to independent salespeople who sell *tucupi* (a sauce made from manioc juice) in market fairs. These materials have a higher value and that's why they are not found in great quantities in the landfill.

Trash dealer R.S. (20 years old), who operates at the landfill entrance, buys an average of 750 kg of material weekly: 500 kg of paper, 100 kg of plastic, 100 kg glass and 50 kg of aluminum. Compared with other materials, the quantity of aluminum cans bought by trash dealers operating in the landfill is significantly minor when compared with the quantities traded by the other dealers. Therefore, the trash dealers operating in the Aura landfill yield less profit and that's why they tend to over exploit the scavengers.

The first evidences show a reality where the recycling material market in Belem is characterized by poor working conditions for the scavengers, who usually work without the proper equipment and outfit (gloves, working overalls, boots, helmets) and in unhealthy places like sanitary landfills.

The trading relations in the recycling material market reproduce some patterns of the rubber extraction economy in the end of the 19th century. The trash dealer, as the dominant agent, has a strict control over the scavengers. By the end of the day, the scavengers turn their *bagulho* to the dealers and do not see the actual weight of their material, trusting the dealers' honesty. During the rainy season, the trash dealers deduct 20% per kilogram of paper or cardboard due to the humidity which adds weight to the material, causing the scavenger to increase his working hours in order to maintain the family income.

The scavenger activity represents the last alternative to survive without breaking the social rules. Here's the report made by the scavenger N.P. (33 years old):

“it is better to scavenge bagulho in the xen (landfill) than to steal”.

As per ONIBOKUN (1999: 250), the scavengers that operate in the cities or sanitary landfills are more dependent on the intermediate dealers (trash dealers) and are therefore exploited by them. Very often, scavengers are seen as thieves or jobless people and are discriminated by the society.

Because of this, scavengers claim for dignity and for recognition of their work on the part of the society. In that sense, the press media acts against them, misleading the public opinion, and is criticized by A.F. (24 years old):

“The reporters come here making a lot of questions, take pictures and change everything we say. They say we are starving and don’t work. Some people came here the other day, giving soup for free, I don’t know who they were, there was this big line. I didn’t go there because they say that we are starving.”

In the fight for survival, however, some scavengers eat leftovers (turkey, sausage, yogurt, etc.) which are out of consumable date and are discarded by supermarkets. This food is taken to the Aura Landfill by cars called by the scavengers *amarelinhos* (yellow). This food is eaten at the landfill during the scavenging activity, or is taken home.

5. Conclusions

This study achieved partial results aimed at understanding the reality of the scavengers who operate in the recycling market in Belém. According to our survey the original place of the scavengers are mainly from rural regions who migrated to MRB around 70’s and 80’s due to the process of land tenure concentration, as well as the implementation of the great industrial projects in the Amazon. However, with the economical crises faced by the country in the early 80’s the initial expectation for better quality of life were frustrated.

On the other hand, in the early 90’s with the increase of the recycling package industry in the Southeast Region of Brazil, instigated an organization of the recycling material market in the MRB, mainly formed by two actors: scavengers and trash dealers. In this sense, scavenging turns to be one of the few income alternatives for families excluded from the labor market. Due to the poor working conditions in the scavenging areas reflect a set of trading social relations where the trash dealers appropriate the income generated by the scavengers.

By collecting recycling material (paper, cardboards, plastic, glass, cans, etc.) the scavengers on the streets, the downtown area and the Aura landfill render an ecological service, which decreases the work for the final treatment of the solid waste generated in the metropolitan region of Belem. Therefore, scavengers deserve the recognition of the civil society and of the State, in the form of public policies which actually improve their quality of life and work.

Within this frame, the Bio-remediation Project of the city office of Belem aims at the institutionalization of the selective collecting system, based upon a cooperative and organized work in 4 shifts of 100 scavengers, in a total of 400 scavengers in the Aura Landfill. However, this research has not identified collective work in the “scavenging business”, which has been mostly an individual or family work. Therefore, the organization of the workers in collective working shifts, in an industrial scale, is one of the greatest challenges to be mastered by the project.

Consequently, the implementation of a selective collection system in several areas of the city, together with a selection and compost facility located in the Aura Landfill, will initially benefit only the Aura scavengers. This is the reason for the uncertainty regarding the future of the scavengers who operate on the streets and downtown area of the city of Belem.

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