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Research Article

The Wild Garbage Dump of Area 14 of Almadies in the Commune of Ngor / Dakar / Senegal

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Abstract

The lack of waste transfer centers in municipal areas contributes to the creation of illegal dumps and increased unsanitary conditions. Illegal dumps are a major source of environmental impacts. Their presence leads to the proliferation of flies, mosquitoes, insects, and other pests. This article aims to illustrate the rapid development of illegal dumps in Sector 14 of Almadies. The methodology employed is based on GPS surveys conducted in the field. Fieldwork focused on direct interviews and the distribution of a questionnaire, thus enabling the collection of socio-environmental data. The processing and analysis of this data, using GIS tools and techniques, revealed the rapid growth of waste deposits forming an illegal dump, the presence of various activities, and the environmental impact of this dump on the living conditions of neighboring populations. The analysis of the results highlights the lack of waste management in the municipality of Ngor (Dakar, Senegal). The illegal dump in Zone 14 of Almadies has multiple environmental impacts: soil and water pollution, proliferation of pests, degradation of the living environment, increased health risks, and a lack of effective waste management. These concrete examples demonstrate the urgent need for intervention to protect public health and the environment.

Keywords

Wild Deposit, Garbage, Environment, Recycling, Ngor, Senegal

1. Introduction

The city of Dakar is one of the municipalities that are facing serious problems in the management of municipal solid waste [1-4]. The Urban Community of Dakar and the Agglomeration Community of Rufisque [5] now provide the garbage; [6]. Despite numerous management efforts made by the Senegalese government and some other institutions, many places of our cities and surrounding areas are still under the weight of waste [7-12].

In Dakar, more than 600 wild garbage dumps have been identified by the actors in charge of solid waste management [13-17]. Of these garbage quantities, 40% of the waste consists of sand. This revelation was made, this Thursday, January 28, 2016, during the meeting of presentation to the local actors of the call for projects "neighborhood zero waste" by Ibrahima Diagne, national coordinator of the Unit of coordination of the waste management Solids (UCG) [18]. The plethora of wild garbage dumps and garbage dumps is the work of the waste depots resulting from the weeding of some large thoroughfares and households, the desensitization of roads, the unloading of carters in the area of 14 of “Almadies” [8].

The Almadies Zone 14 landfill consisted of small piles of garbage that grew larger over time. The small dumps of 2011 have formed a vast dump in the image of Mbeubeuss [8]. The

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Almadies dump is located in the municipality of Ngor. It runs along the wall of the Leopold Sedar Senghor Airport on the base of the classified section. The opening of this dump, unknown to the municipal authorities, was preceded by no technical study or planning measure in compliance with environmental laws [8].

Thus, the article shows the facts and the consequences of this discharge.

2. Material and Method

To reach the objective, the methodological approach is articulated around the cartography of the zone and the collection of the quantitative and qualitative data:

It was first necessary to carry out GPS surveys in the field, the first step which highlighted the waste management practices in the municipality of Ngor. Then, the acquisition of quantitative data relating to the number of actors operating in waste management (Commune, concessionaire, garbage collectors, GIEs, NGOs, carters, etc.), led to sampling 1/4 concessions at Ngor. This operation led to the development of a questionnaire administered to 203 people at random (only one household was interviewed by concession).

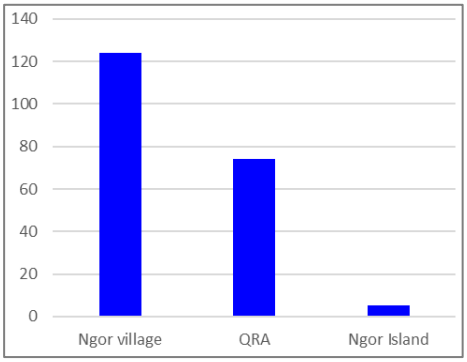

Figure 1. *Distribution of populations to be interviewed in Ngor.*

The second step was to collect qualitative data (interview guides from the managers of the household waste management with the populations, the municipality and the different actors). It was a question of trying to understand the actions carried out by the Common in the management of household waste. This approach has produced data and information related to household solid waste management, the adoption of various methods of treatment and analysis of learning.

3. Results

3.1. Presentation of the Zone 14 Landfill

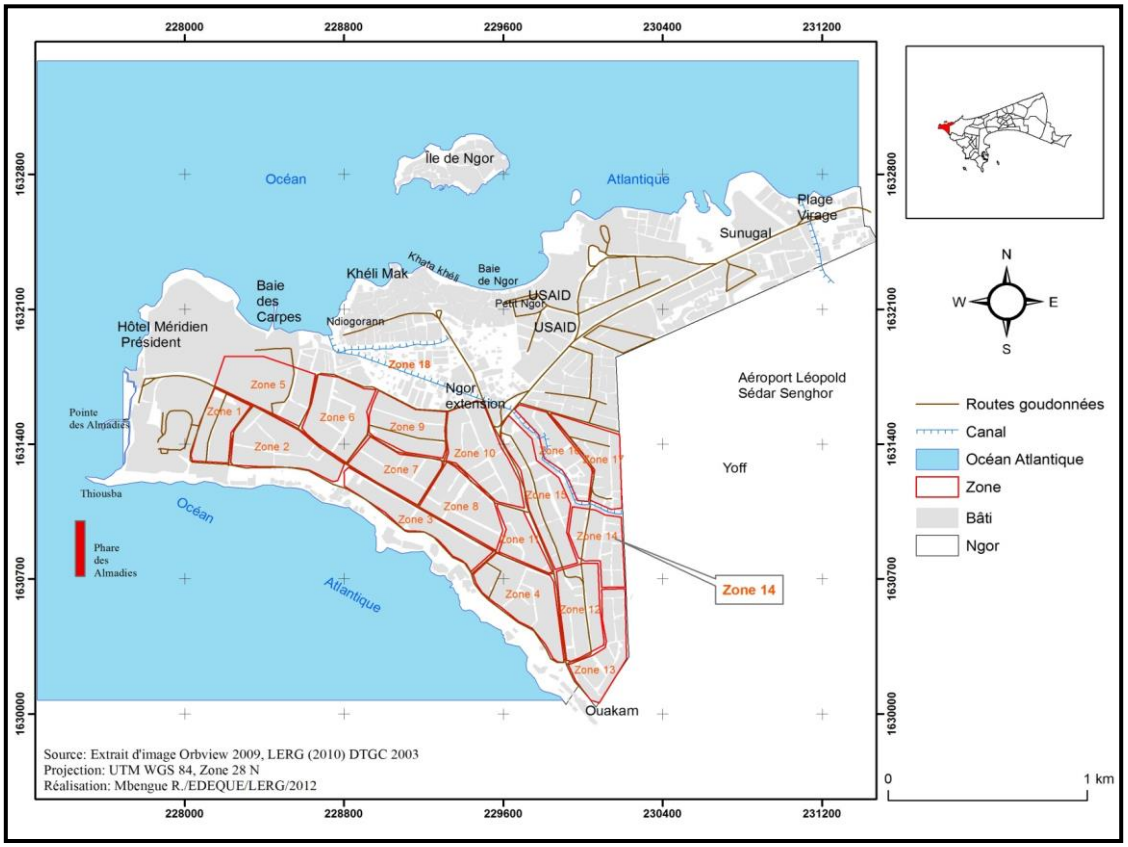

Figure 2. *The dump fed by the carters.*

Figure 3. *View of the interior of the Almadies Zone 14 landfill.*

The zone 14 dump of Almadies is located in the southeastern part of Ngor Commune (Figure 2). The dump is in an area that is difficult to access for collection vehicles. It is powered by users and carts that act as a vehicle for transporting garbage. The spontaneity of its implementation and the lack of means of the municipality of Ngor make it an important environmental problem. Its position next to the airport and the fumes escaping from it also make it a source of public danger, especially with flying over aircraft. Indeed, the carters can not transport the waste to the Mbeubeuss landfill, so they have created a spontaneous and unplanned wild landfill. In addition to the carters, households who live in houses under construction, come throw their waste.

The dump is arranged by the carters and its inhabitants. There is an organized for the deposits and for the activities that develop there.

3.2. Recovery

During field surveys, a number of activities within the landfill (Figure 4). There are various activities such as recovery. The collectors organized themselves according to the types of waste to be taken. The interview the waste collector informs that they earn at least between 5000 and 6000 CFA francs per day. This sum is not exhaustive.

Waste from recovery is heavy and light plastic, metals such as iron (tin, can, etc.).

Figure 4. *Different types of recyclable object.*

The photo shows the different types of recyclable waste. They come from depots of carters and those of the surrounding households. The household deposits garbage anywhere. As for the carters they choose the place of deposit. They sell their load to the collectors. The latter sell them retail. Inside this landfill, housing was developed as well as market gardening activities. Indeed the soil acquires a certain fertility with the decomposition of the organic waste which favors good yields. Also, the populations of the landfill also use wastewater from the Léopold Sedar Senghor Airport for watering plots.

3.3. The Different Survival Activities Inside the Landfill

Although used to store household waste and everyday consumer goods, garbage dumps also have other uses. They are the center of several activities, some of which are beneficial to a segment of the population.

3.3.1. Market Gardening

Market gardening is a supplementary activity for a large part of the population that engages in it. It mostly serves to provide additional income and remains confined to certain areas. In these photos of the Almadies illegal dump, we see the different types of waste. They come either from nearby homes or from a little further away. In one of the photos, we see a cart driver unloading his cargo. The various groups of waste pickers take the waste in order to resell it according to their needs or their clientele. Inside this landfill, homes have developed, as well as market gardening activities. Indeed, the soil gains a certain fertility with the decomposition of organic waste, which promotes good yields. Furthermore, the people living near the landfill also use wastewater from Leopold Sedar Senghor Airport to irrigate their plots in specific areas. They generally produce vegetables such as tomatoes, eggplants, sweet potatoes, okra, corn, mint leaves, and chili peppers (Figure 5).

Figure 5. *Market Gardening Products.*

These photos show a sample of market garden produce harvested from the Almadies illegal dump. The vigor of the plants is evident, indicating the high fertility of the soil. This activity allows the often impoverished local population to earn some money and improve their daily lives.

Figure 6 shows the water source used for irrigating the produce.

Figure 6. *Water used for irrigation at the Zone 14 landfill in Almadies.*

The photos show the flow of wastewater from Dakar Airport. This water fills the stormwater drainage canal in the Ngor district. It is used by market gardeners in Zone 14 of Almadies throughout the year to irrigate their crops of various varieties.

3.3.2. Sales

At the Zone 14 landfill, produce from the market gardens is sold on-site between residents, or women may take the produce to the market each morning.

3.4. Human Occupation

Since time immemorial, the human installation or occupation of space by man is conditioned by access to resources essential to his survival. However, some factors such as security can also be taken into account. In the so-called modern world, another factor is to take into account, the financial or material resource. In today's world, access to land, especially to decent housing, is strongly linked to financial power.

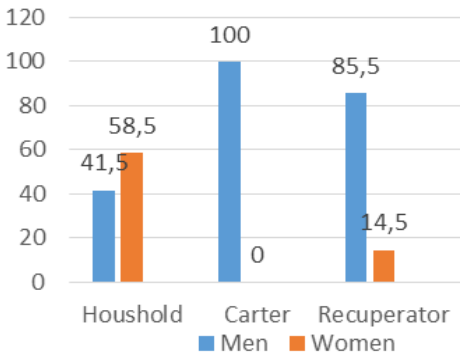

Figure 7. *Percentage of occupants of the landfill.*

As a result, some sections of the population are confined to deprived areas (Figure 7). Due to the strong growth of the Da-

kar population, habitat has become a major problem. For example, populations of predominantly rural origin and foreigners find themselves squatting in areas that are unfit for habitation (Figure 8). The wild dump of zone 14 of Almadies is an example. The dwellings are generally precarious in the form of barracks. People live there in deplorable conditions digging in the stored waste to find the means of their subsistence.

Figure 8. *Type of habitat inside the Almadies Zone 14 landfill.*

The graph shows the percentage of men and women who frequent the wild depot. There are 40 percent of respondents who live indoors. The rest is made up of children who come to play, carters and salvagers.

The first photo shows the types of dwellings in the landfill. The second shows the toilets in use. Finally, the last photo shows traces of soap in the water, indicating that someone was either bathing or doing laundry. Living in this kind of place exposes one to all sorts of risks. The mixture of water and garbage creates conditions favorable to the growth of pathogens.

3.5. Impact of the Wild Dump on the Living Environment of Local Populations

The landfill has an environmental impact as it hosts different types of waste. The presence of birds is a danger for the takeoff of planes. There are also other animals that come for their food. The filth is the favorite place of dog, rat, worms, ants and pigs (Figure 9).

Figure 9. *Illegal dumping and animals.*

Scavengers and cows come for their food. Garbage dumps contain all kinds of things. The proximity of the houses makes it possible to find food leftovers in abundance.

The discharge of zone 14 of the Almadies has haunted the conscience of the local populations of this dump; they do not want to continue to suffer the inconvenience of this discharge.

To prevent the spread of odors, insects, flies and mosquitoes in the vicinity, the young inhabitants near this landfill were armed with all kinds of weapons to expel the inhabitants of the landfill. They even expressed the need for support from the municipality in logistics to make disappear the discharge after expulsion of the occupants.

3.6. Public Perception of the Environment in Relation to This Illegal Dump

The illegal dump in Zone 14, in the Almadies section of the Ngor commune, is neither authorized nor accepted by the surrounding communities (Figure 10). More than half (65%) of those interviewed expressed their dismay at the presence of the illegal dump near their homes. The majority of households live close to the dump. According to them, this illegal dump contributes to the presence of pests and diseases in their homes, such as flies, rats, and worms.

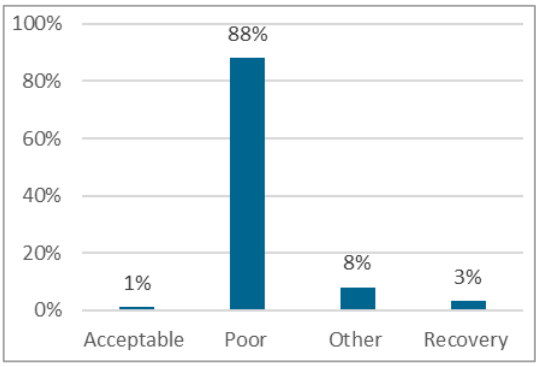

Figure 10. *Perception of the presence of the illegal dump.*

The dump is frequented by cart drivers who supply it, scavengers, children, and all sorts of other people. It also leads to the spread of foul odors and noise from the quarrels observed among those who frequent it (Figure 11).

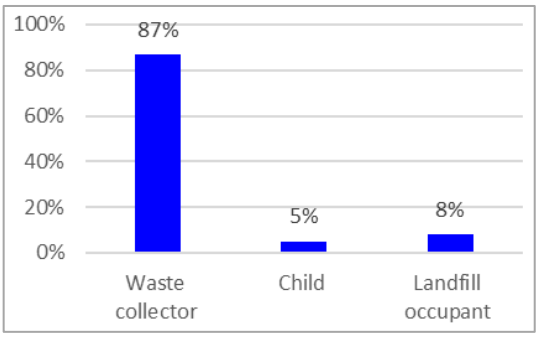

Figure 11. *Use of the illegal dump.*

The Figure 11 shows that this site is also frequented by children living in the Ngor village and Yoff neighborhoods who come to find items to resell. The children most often come looking for aluminum items (empty cans, empty food containers, utensils, etc.). In addition to children, there are also scavengers who used to scour the entire municipality for recyclable items. Finally, there are the residents of the illegal dump who are organized and set aside all the recyclable waste that the cart drivers leave before the arrival of the children and scavengers. 20% of those surveyed complained about fights between local residents, cart drivers, scavengers, and children. The rest, living further from the dump, are sometimes unaware of the tensions there. However, those interviewed believe the municipality must eliminate this illegal practice and resolve the problem. The dump is perceived as an environmental and health hazard in an inhabited area. The majority of the waste comes from households within the municipality. Opinions are largely divided regarding the elimination of the landfill (Figure 12).

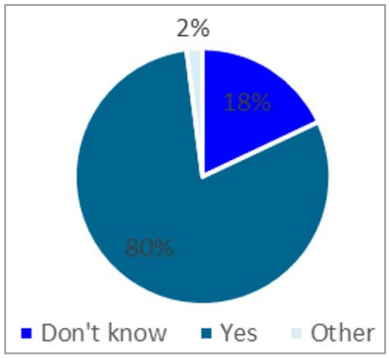

Figure 12. *Opinion on the resolution of the destruction of the illegal dump in Zone 14.*

The figure shows that 80% of people are in favor of destroying the illegal dump. 18% are unaware of its presence, and the remaining 2% did not provide an answer.

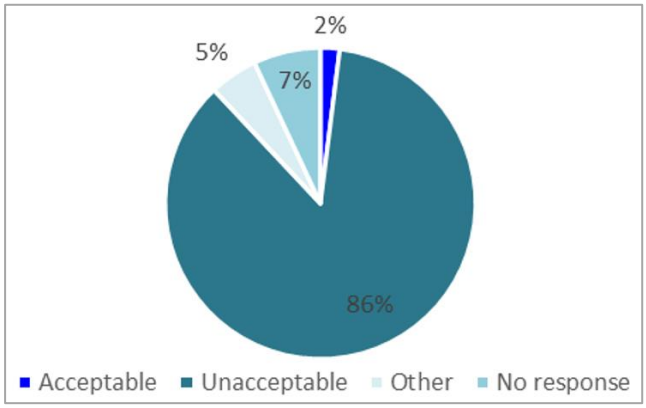

Figure 13. *The acceptability of the presence of the illegal dump.*

The Figure 13 shows that the majority find the presence of the illegal dump unacceptable. The 2% who support it disagree with the practice but say it is the responsibility of the state authorities. They point out that waste collection does not follow a regular, daily system. Households subscribe to a daily collection service provided by cart drivers. The lack of collection is a negative factor that encourages this practice.

3.7. Insufficient Collection Points for Waste Produced in Ngor

This field study reveals that the Ngor municipality lacks a central waste transfer station. Surveys showed that only standardized collection points exist. These points are most visible in the residential neighborhoods of Almadies. The map (Figure 14) illustrates the concentration of these standardized points in areas with a higher concentration of businesses (hotels, restaurants, supermarkets). In the absence of a scheduled waste collection day for the households surveyed, the waste produced ends up in gutters (in the villages of Ngor), vacant lots, and abandoned houses under construction.

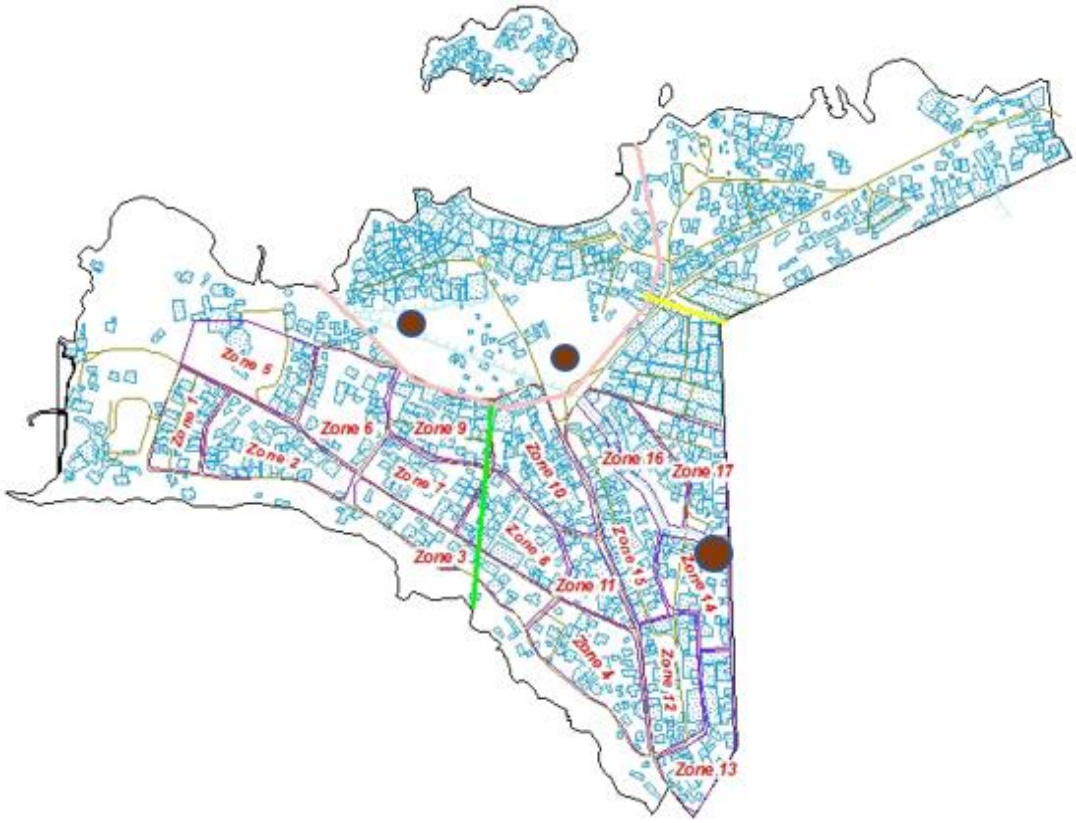

Figure 14. *Concentric point of illegal garbage dumps in the commune of Ngor.*

4. Discussion

The presentation on the illegal dump in Zone 14 of Almadies caught the attention of the Dakar official in charge of urban management, who was present at the event. The mayor of Ngor was the first to be informed of the situation. He cannot intervene without the assistance of the municipal authority responsible for urban management throughout the Dakar region.

The limitations of this study include the lack of bacteriological analysis of the wastewater. In the future, further studies based on wastewater analysis could be conducted if funding becomes available. Furthermore, it was not possible to analyze crops grown and irrigated with wastewater from Dakar Airport.

According to several authors, the recovery of urban solid waste is crucial for better sustainable and efficient management. According to Prevot (2000), this importance is essentially evident on two levels:

- From an economic perspective, he notes firstly a financial saving, insofar as recovery allows for the attribution of financial value to used materials. Secondly, recovery also allows for savings in raw materials (wood for paper) or energy (recycling of glass or aluminum);

- From an overall technical perspective, one can expect a qualitative improvement in overall waste treatment (by separating glass, it is prevented from ending up inert in incineration or composting rejects) or simply a quantitative improvement (by recycling everything possible, the amount of waste requiring more expensive processing is reduced).

Referring to the case of France, waste recovery plays a significant role. According to Vernier, in 2007, in France, 71% of glass was recovered for reuse and recycling; 54% of paper and cardboard packaging; and 15% of textiles. 19% of plastic bottles, 100% of steel packaging, and 27% of aluminum packaging are also recovered and recycled. To collect this waste under the conditions required for recovery, almost the entire

French population is now served by selective collection, compared to only 20% in 1997.

It should be noted, however, that while in countries like France, the organizational and technological level has enabled high rates of selective collection and recovery, this is not the case in developing countries such as Senegal. Currently, there is increasing discussion about the recovery of household waste from two perspectives: optimizing management and preserving the environment. Therefore, it is important to highlight the role of composting in urban and rural agriculture. Compost helps reduce the proportion of organic waste and fine particles collected. However, shops need to be set up to allow people to sell recyclable waste such as glass, plastic, aluminum and even rubble.

5. Conclusion

Ultimately, it appears that landfilling, despite its environmental drawbacks, is currently an essential component of a centralized waste disposal system. In the Ngor district and in Senegal in general, it is currently the only means of waste treatment. Eliminating the illegal dump in Zone 14 achieves the overall objective of improving the living conditions of the population. The dump had grown considerably and encouraged the establishment of waste pickers and various other activities, as mentioned previously. The case of the Almadies illegal dump should encourage authorities with the necessary expertise to manage urban space. This could prevent the recurrence of such situations in the Ngor district and elsewhere. The garbage had enormous impacts on the environment of the residents of Zone 14. They were buried under piles of trash. Households must be informed about opportunities to earn money from the waste they produce.

Abbreviations

GIS	Geographic Information System
GIEs	Economic Interest Group
NGOs	Non-Governmental Organization
QRA	Almadies Residential Area
UCAD	Cheikh Anta Diop University of Dakar

Author Contributions

Ramatoulaye Mbengue: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing

Data Availability Statement

The data is available from the corresponding author upon reasonable request.

Conflicts of Interest

The author declares no conflicts of interest.

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[1] Julien Rouyat Cecile Broutin, Virginia Rachmuhl Ahmed Gueye, Valentin, Torrasani Ibrahima Ka, STUDIES AND WORK ONLINE EDITION # 8 GRET, WWW.Org 2006: Household Waste Management in Secondary Cities of Senegal towards Policies including municipal suburbs. 91 pages.

[2] ADEME, 2000, 2nd edition Municipal waste. ADEME Editions, Paris, 11 p.

[3] Ericson, O., Carlsson Reich, M., Frostell, B., Bjorklund, A., Assefa, G., Sundqvist, J. O., Granath, J., Baky, A., Thyselius, L., 2005. Municipal solid waste management from a system perspective. Journal of Cleaner Production 13, 241-252.

[4] Kapepula, KM, 2006. Contribution to the improvement of the management ofmenagers solid fuel waste in the cities of developing countries. The Dakar Senegal case. Doctoral These, University of Liege, Belgium.

[5] APROSEN, 2006, National Strategy for integrated and sustainable solid waste management in local authorities, GES-Concil, Dakar, 87 p.

[6] CADAK-CAR, May 2007: Executive Summary on the Urban Waste Management Program Solid in the Dakar region, and IAGU CADAK-CAR, 15 p.

[7] Cisse O., 2012, garbage dumps Mbeubeuss in Africa in Dakar, Senegal, Karthala, 329 p.

[8] Mbengue R., 2010: Management And Environmental Impacts Of Municipal Solid Waste In The Municipality District Of Ngor, Master Dissertation 2 Gidel, Department Of Geography Ucad, 75 Pages.

[9] Adepoju G. O, 2001, urban waste management. Solutions for Africa, and IDRC Ed Karthala, Paris, 250 p.

[10] Bihidindi André: 2002: Sustainable Waste Management in Urban State and Perspectives for a Vietnam technology transfer in Senegal for the recycling of waste. DEA, ATEGU, ENEA Dakar, 95 pages + annex.

[11] Sidibe C., 2013, Articulate conventional and unconventional waste management in the Dakar region: a contemporary challenge. Master Thesis 2; Geography and Planning University of Maine-Le Mans-Laval, Faculty of Arts, Languages and Human Sciences, 105 p.

[12] Wane OA 1981 Contribution to the study of the environment in Senegal. Waste Materials and urban disparities in an African city: Dakar, PhD 3rd cycle, urban planning and development specialist, mention Planning and Environment, ISE, FST, UCAD, 382 p.

[13] Onibokun Ag, 1989 the Governance of Waste Africa's: The Example of Cairo, Dakar And Nairobi, Karthala, IDRC, 254 P.

[14] Wass E. 1992: Municipal waste, waste plural In introductory remarks waste and Men: Environment African. pp. 7-20 Ibid.

[15] A. Hebette: 1996 Practical Guide to the management of urban solid waste in Sub-Saharan Africa World Bank CREA-AO 151 pages.

[16] Coulibaly, GMMZ1997, Domestic Production, Recovery and Recycling of waste plastics; Cases of plastic waste in Dakar, 3rd cycle doctorate in environmental sciences, ISE, UCAD, FST, 141 p.

[17] Nouvel Horizon, 2016, http/www.Seneweb.com

[18] Brahima Diagne, UCG coordinator: "We want to significantly increase access rates to sanitation services in our municipalities". Available from: https://www.dakaractu.com/Ibrahima-Diagne-coordinateur-de-l-UCG-Nous-voulons-hisser-fortement-les-taux-d-acces-aux-services-de-proprete-de-nos_a110466.html

Biography

Ramatoulaye Mbengue is a lecturer and researcher in the Geography Department at Cheikh Anta Diop University in Dakar, Senegal. She earned her doctorate from the Doctoral School of Water, Quality, and Water Uses. She completed a program in Coastal Governance, specializing in Coastal Environment, in 2015. From her Master's degree to her doctorate, her research has focused on urban governance in general, and in particular on the issues, management, and valorization of waste in Senegal (Kaolack and Dakar). She has published extensively in peer-reviewed and indexed journals. She is a specialist in waste management and has participated in numerous training sessions, conferences, and workshops on this topic. She supervises the research projects of Master's students from the first year to the second year.