

You said "Bingerville, unhealthy commune"? Explanatory and analytical elements

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Summary: *Unsafe which designates the character of what is unhealthy, what is "bad" and harmful to health and social interaction is a real public health and environmental problems. It is all the more important in our country it has now become the focal point of much debate, seminars and numerous conferences nationally and internationally. This unhealthy affects most vulnerable residents especially those in urban areas.*

In Côte d'Ivoire, the populations of cities including those of the common Bingerville live in unsanitary daily despite the actions of the Mayor of the commune. Indeed, garbage fill the streets, gutters and around houses that contribute to the occurrence of serious diseases. It is on this basis that this article attempts to provide answers to persistent unsanitary conditions in the city of Bingerville second historic capital of Côte d'Ivoire.

The results suggest that persistent unsanitary conditions in the town is due at least in two main levels: first, the persistence of unhealthy food is explained by the behavior associated with the weakness of communal action (collection); secondly, it is explained by the low level of health awareness of the population reinforced by rapid population growth experienced by the town since the end of the post-crisis Electorale of 2010. In terms of methodology, the article is based on a qualitative study based on semi structured interviews and focus groups.

Keywords: *health, unhealthy, Bingerville, Town Hall, Population*

Problem of the study

Unsafe is a problematic issue that raises questions particularly in impoverished social environments. This question has made a fortune and returns to all major national and international debates. For example, In 1972, the environmental concerns had caused àStockholm Sweden the holding of a conference of the United Nations (UN), which initiated the United Nations Environment Program (UNEP).

Recognizing the pace of advanced degradation of the environment and the adverse effects on the sustainable well-being, UNEP established after the Rio conference in 1992, a number of related

projects including the ozone layer, climate, transportation, urban environment, housing, demographic issues, health, toxic chemicals and waste removal, etc.

Among these projects, waste management is now a major concern for the public authorities of several African countries Saharan generally and specifically Ivorian authorities in that municipal services in charge of the management remain powerless against the magnitude of the waste.

In the recent past, the total production of household and similar waste in all municipalities of the Côte d'Ivoire was estimated at about 2 million tonnes¹. To better manage this situation, public authorities carried out the adoption of a regulatory and institutional framework that legitimizes both the actions of state structures (CIAPOL, ANDE, CNDD, local authorities) and private organizations such as NGOs and umbrella NGO of the environment in waste management. This concerted action meets the need of local authorities to clean up the living environment of people.

In Bingerville, second historic capital of Ivory Coast, the high population growth rate coupled with a high rate of urbanization caused by the post-election crisis, resulted in increased quantities of domestic and industrial waste. Emanating from various sources of different types (solid, liquid and gas), and different characteristics in terms of harmfulness this waste pollutes both the environment (air, water, soil), animal life and the population of the municipality.

Piles of garbage which are sometimes called dumps, filled and clogged with waste gutters, puddles blocked overflowing, this is the kind face of the common Bingerville in general and particularly the neighborhoods " Berlin ", " Bagba " et " Harris ".

In Bingerville the fight against unhealthy is the field of action of many actors as these waste grow with changing demographics. These are among others the municipality and non-governmental

¹Ministry of Planning and Development, National Development based on the achievement of the Millennium Goals Development Strategy, GTT 5, working paper 2007

actors or NGOs that constitute the expression ratio between the governed and the governors.

In the opinion of the interviewees, the municipality in collaboration with some private actors provides daily garbage collection and cleaning of the main arteries of the city.

Apart from steps of the municipality, there is the symbolic involvement of local communities in the management of waste that threaten their way of life. Indeed, during the investigation, it was not uncommon to see on the walls of the types of posters: "it is forbidden to throw garbage here under penalty of fine, 10,000 FCFA "; "You piss, you pay 5,000 FCFA," as many speeches that aim to keep the environment clean. In addition, there are youth associations and women sometimes supported by the municipality that have no other means of action their commitment to quarterly clean main roads, gutters and streets of their neighborhoods.

Despite this synergistic action, unsanitary conditions in the municipality of Bingerville is acute. In other words, this concern is far from being general, since the facts and attitudes required to observe evidence of a real sanitary negligence in Bingerville. It would have been thought that this unsanitary situation has nothing to do with the quality of life of production. In reality, it is not so. The garbage is as a threat to the quality of life of the population of the municipality of Bingerville, in this case in the raised areas.

The interview with the Urban Health Center (CSU) in the Bagba district and serving the neighborhoods " Bagba " " Berlin " and " Harris " suggests that the population of these districts (Bagba, Berlin,Harris) are exposed to vector and parasite-borne diseases such as malaria, diarrhea and typhoid.A healthcare professional met says the same thing when he says, "one of the consequences of poor sanitation is an increased incidence of severe forms of malaria, diarrhea and typhoid fever, which strike all ages in case the children are the most vulnerable class of unhealthy neighborhoods. "

For example, in the opinion of consulted CSU data, malaria, diarrhea and typhoid fever are the primary reasons for consultation in the health center.To this end, for the year 2018, the consultation rate for malaria has increased from 97.48% in January to 97.75 in February. Then from 95.44% in March 2018 to 97% in June 2018 to reach 98.70% in October 2018. The conclusion here is that rates are well above 50% throughout 2018.Regarding the consultation rates for diarrhea, the survey lets glimpse that this rate increased from 0.71% in January 2019 to 0.72% in February to 0.94% in October 2018. For typhoid fever, the rate increased from 1.50% in January 2018 to 1.04% to 2.60% in February 2018.Then

1.67% in May 2018 the rate increased to 1.71% in October 2018.

Note that the variations observed a month of the year 2018 to the other do not detract from the generality of the observation that often tell the medical professionals, Bingerville, especially among the ruling circles of the town it's time to solve waste management of the municipality to preserve the health of the population car, the raised conditions are related to poor sanitation. This unhealthy that threatens the health of the population therefore increases the importance of this analysis.

Thus, the analysis and explanation of the unhealthy situation observed in the town of Bingerville will be organized around the following research question: Why, unhealthy persists in the municipality of Bingerville despite the actions of the municipality and non-governmental actors?

Study Methodology

A. Collection of data

The approach was essentially qualitative with the achievement of individual interviews, focus groups and participant observation. The interview guides were developed.Prior to administration, a small monograph of survey area served as support to the knowledge of the environment.

The interviews were structured around the popular behaviors and their implications on the unhealthy situation of the city. These interviews were reinforced by participant observation.The study made use of secondary data include: basic project indicators such as rates of consultation of diseases related to poor sanitation and hygiene of the living environment in Bingerville and departmental reports in charge of the matter.

In terms of survey areas, the study included all major areas of poor sanitation in the municipality. These are neighborhoods Bagba, Berlin and Harris.

B. Sequence and choice of actors to study

The practical stage course was structured in three intervals: first,a phase préparatoire here consisted in the construction of the revue documentaire sur l'objet de l'étude,tool preparation and the actual survey (contacts with local authorities, interviews with target).

To this end, the theoretical orientation axes of the documentary exploration had as disciplinary vectors, scientific articles, conference reports, symposia, etc. As the main tool of investigation, the literature search was conducted throughout the long work and covered a diverse and varied literature.

Note that field surveys were conducted as part of a qualitative approach based on grounded or rooted

theory². Then a phase of counting and analyzing data and finally phase of writing paper.

C. Technical and quality of the actors under consideration

After institutional interviews (actors from the municipality and health care professional), will access to the target population, network technology has been the main approach of the study. The study areas are organized into neighborhood leader, youth leaders, women and neighborhood associations. Given the proximity of each actor, we relied on the organization to conduct our interviews.

Thus, the study involved the leaders of each survey area, community leaders, youth associations and women in each neighborhood.

Sampling:

The issue of the article, the objective and the delimitation of the scope of the survey are the bases on which will have to meet the elements of the sample. In view of this particular orientation two orders of questions arise: what population size to hold *présenteétude*? These issues have therefore led us down a two-stage survey.

The first relates to the choice of neighborhoods and the second related to the sampling rate. The first stage of the operation is mainly guided by the criterion " easy access to neighborhoods " and " the level of unhealthy rate based on personal observation. "This means that we preferred to retain easy access neighborhoods and characterized by a high rate of unhealthiness.

It is based on the above criteria that the aforementioned investigations neighborhoods *étéchoisis* (Bagba, Berlin and Harris). But how should we choose respondents in the districts selected for the survey.

To do this, we needed a number that could allow us to conduct our survey within acceptable material conditions. At this stage of our reflection, an arithmetic operation was necessary. Recall that the districts selected for the study are organized into neighborhood leader, youth leader, woman leader and neighborhood associations.

We decided to use this category of persons with regard to their connection with the subject of the study. In fact, the study counted in the three

districts 3 neighborhood leaders, 3 associations and 3 young women leaders. At head quarters, based on the above criteria, the study in question a district chief and two notables. This brings the number to 9 players interviewed in the chiefdoms of the three survey areas.

Failing to unavailability of a member, it is replaced by another. At the three associations counted (one per district), we decided to ask the President and five members of their structure. This brings the number to 45. They must always be household heads (male or female) and have at least two children. The focus group was conducted joint composed of community leaders (men and women). The issue of unhealthy is often presented as a result of weak management authorities of the commune, we focused on the sample of the town authorities. To this end the institutional interviews mobilized 7 because all people do not have time to respond to an interview that lasts more than 25 minutes.

Thus, we determined the number of actors in question in the various districts. The talks were set to this number due to data saturation. Ultimately, these are 7 local authorities, 45 actors from civil society and 9 members of the leadership of the survey areas were interviewed, a total of 61 people.

D. Method of analysis

Let's say that the analysis of qualitative data is an inductive process consists of round-trip data collection that represents the reality of the study participants and theoretical or empirical conceptualizations that emerge from this reality. This process involves fracturing, examine, compare, categorize and conceptualize data (Strauss and Corbin, 2008). That said, specify that the analysis of survey data from this study was done using the method of social analysis and social analysis which revolved around the diversity of opinants, institutions, norms and behaviors. Like think Patton (2002), the challenge of qualitative analysis is to make sense of the mass of data collected.

This involves reducing the volume of raw information, eliminate changing data, identify significant trends and build a framework that communicates the essence of what the data show. The persistence of the unhealthy in the town of Bingerville is implemented very vigorously, not only through the "captivating" approaches' sociological *wébérisme* " but also through the interactionist theory.

This last theoretical approach "analysis in terms of behavior of actors or groups of actors strategies considering that these strategies value the margins *manœuvre*, however small they may be, that has all social actor, even dominated, in its relations with the institutions and other actors "(Chauveau,

²The grounded theory, also called Grounded Theory, is a method from the social sciences that the theory is created from the research data. This theory is widely used in qualitative research but can also apply in quantitative research. Instead of starting with the assumption, the search begins with the collection of data. From the data collected, the key elements are identified through a series of codes or themes

1994). This theory is close to the strategic approach of Crozier and Friedberg (1977), which structure the behavior of agents are always rational, sometimes limited. We therefore seek to explain the social construct in unsanitary from acting to study.

Thus, persistent unsanitary conditions in the city of Bingerville was entry through the comments, speeches and behavior directly and indirectly involved in the study. To produce full and rich data, transcription has often been made verbatim.

From this point of view, we are part of the perspective of methodological individualism as intellectual approach focused understanding of the attitudes and behaviors act Social owners (Olivier de Sardan 2000). Just because we agree with Chauveau (1997: 195) to say that social actors always have reasons, good or bad, to act as they do. On this basis, the use of data from the interviews was made according to the following steps:

- The extraction for each theme such key information expressed by the participants;
- The hierarchy of this information according to their frequency of occurrence in each type of maintenance;
- Comparison between sources of information in order to identify the differences and similarities;
- The illustration (verbatim) lessons and key messages that reflect the possible perception expressed by participants in group interviews.

a) Brief presentation of the study site: common Bingerville

Bingerville is a town in the autonomous district of Abidjan, Côte d'Ivoire. It has 91,319 inhabitants (RGPH, 2014). Built in full function joint by Law No. 85-1085 of 16 October 1985, the law gives it the establishment of a Mayor. According to this law, the town hall is a local authority whose main mission is to mobilize all human resources, material to promote local development. In this sense, the Mayor of Bingerville contributes to improving the living environment of the population; fight against poverty by the insertion of the population in the circuit économique, promotes and implementation of local development, etc...

However, according to Law No. 80-1180 of 17 October 1980 amended by Act No. 85-578 of 29 July 1985 on municipal organization, the hall Bingerville has three (3) organs and five (5) directions fueling operation. Under the organs, we have:

- City Council ;
- the municipality ;
- the mayor.

For directions, those are :

- the direction of Administrative Services,
- the direction of the Finance Department,
- the direction of Technical Services,
- the direction of the Socio-Cultural Services and Human Promotion,
- the direction of the General Secretariat.

So, as part of this study local initiatives related to the fight against unhealthy policy are initiated by management Bingerville technical services through its health service, environment and civil protection and that of roads and other networks in collaboration with private actors (business ECOTI SA, population locale, etc...).

- The Environment service, hygiene and civil defense aims to nurture and ensure a healthy environment.

The various environmental missions consist in the application of good management of sanitation and improving the living environment of the community. It is therefore important for the environmental officer to ensure the proper functioning of this sector:

- the cleaning of gutters
- control of waste water treatment plants
- preventing the connection of individual sewerage systems to ducts
- raising public awareness of the problems caused by sewage
- the management of household waste and waste from the marketing of products
- the regulation of road

- The service road and utilities aims to track maintenance and street by:

- Scanning
- Weeding
- the garbage collection
- maintenance markets

- The company ECOTI SA is responsible to achieve in Bingerville town the following services:

- collecting and transporting household and similar solid waste from the production areas to the Kossihouen Valuation and Landfill Center through grouping stations and transfer centers
- sweeping roads and cleaning of gutters.

However, in view of all control device against unsanitary, garbage still littering the streets of this town. We then interested in this common for this study from the perspective of understanding the

factors that explain the persistence of unhealthy despite these local initiatives.

Results of the study

A. The persistence of the unhealthy in the town is due to the behavior people food

Current Ivorian companies are divided between consumption and pollution of living and stagnant. At a time when the health of the study population is becoming more precarious, or women and children are the first victims of this voracious life style it becomes important that we provide a scientific explanation for this. At this stage of the first point of analysis of field data, The study identified two major players unhealthy: feeding behavior of households and the commercial behavior of traders and / or suppliers.

At the first group of players, the study found that the increase in unhealthy conditions in the municipality of Bingerville will absolutely hand in hand with eating behavior of households, behavior stripped of basic hygiene. So that more clear-cut relationships seem to emerge between the nutritional properties of households and unhealthy. In fact, the foods that consumes the majority of households in the study produce enough waste whose management is difficult to master by the population. To this end, people were asked about the food they consume more in the week. The graph below gives us the opinions of the respondents.

Figure 1: frequency of food consumed by households in the study



Source: author study, 2019

The data in the chart above suggests that the majority of the study subjects consume attiéké based on cassava at a rate of 22.95%. After attiéké comes banana (21.31%), yam (19.03%) and rice (16.39%).

Attiéké is the most consumed because it is the least expensive and easily accessible food. Indeed, food products with a relatively higher price are most often over-consumed in affluent areas and under-consumed conversely in popular circles.

It should distinguish the different facets of food consumed by people in the study, their nutritional properties and their waste production material

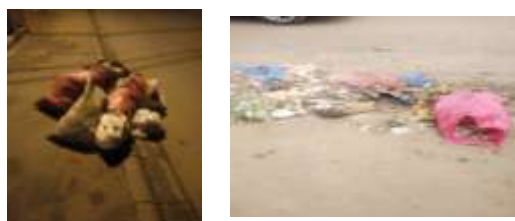
condition. The yam, banana and cassava are reserved for foods such as foutou, fufu, attiéké, banana / braised yam commonly called the "BLISSI".

The demographic explosion after the 2010 post-election crises resulted in a sharp rise in poverty and high consumption. As a reminder, the first poverty measurement survey, conducted in 1985, revealed a poverty index of 10%. Six poverty and household living standards assessments conducted in 1993, 1995, 1998, 2002, 2008 and 2015 identified the poverty index at 32.3%, 36.8%, 33.6% and 38.4%, 48.9% and 46.3% respectively. Combris (2006), says the same thing when they say that the poorest households can spend up to half their budget on food expenditures.

The consumption of attiéké, banana and yam requires the production of household waste, but production attiéké produces more waste than other consumer foods.

Let's say that the problem does not exist in the production of waste, but in the management of waste that exceeds mostly households competence and / or traders. The observation also found individuals who after buying and drinking a bag of water, juice " gnamacoudji " and / or " Hibiscus " throw it on the floor, on the main track and around houses. Households consumption after filing all this garbage in bags, bowls along the tracks as shown by the image below and it malgré l'existence dump center in each district.

Image 1: (Left) trash bags deposited along the way by households; (Right) garbage bags discharged by the population.



Source: our photographs, 2019

In the collective consciousness of opinants is for mayor to organize the collection of such waste. This way of thinking has become a form of education that families transmit to their children. So, in the popular imagination, the unhealthiness of a district rests solely for mayor as say respondents.

Therefore arises under these conditions the waste management issue in households and also pick up by the structures shown. So after several days, this garbage asphyxiate void where spilled into the gutters by the mentally ill, chickens, the goats and / or sheep in search of subsistence placed along the path.

Thus Given this state of unhealthy neighborhoods, households, whatever they are an integral part are married.

This is what emerges in this respondent about when he says "the town never comes here, he does there's no bin to dump household garbage, we are forced to drop them on the edge of the road, are the sheep that come reversing buckets and trash bags for food banana peels, yam and attiéké sheet. "On analysis, this is inappropriate behavior of households after consumption and low and / or no junk collection which is the reason for the persistence of the unhealthy in Town Bingerville. At the second group of players, the study found that, traders and suppliers (Shop, producing and Attiéké sales women, fish, stationery, ranked watermini supermarché etc ...) are a priori major players in unsanitary conditions in the municipality of Bingerville. Broadly, the different providers include supply stores, traditional or modern restaurants, women selling foods takeaway etc. Physical access or acquisition mode of the population is food source of manageable waste by the population.

Here the problem arises in the behavior of the population against the use of plastic packaging produced by traders. Analysis of the results showed that these are the habits of individuals facing the bags are: the absence of a healthy reflex, a national treatment policy plastics that cause the proliferation of waste in the city. These wastes are mostly packaging (plastic bag, cardboard, container, wood, metal, etc.) consumer products. After use, these packages are abandoned in the streets, in the market or in the neighborhood. Lack of rubbish bins and daily collection, the garbage flooding the streets, markets and common areas. All these above mentioned elements are also related to health awareness.

B. The health level of consciousness of the population participates in continuing unsanitary conditions in the commune

Based on the investigation, there appears a problem of causality between health awareness of the population and the persistence of unhealthy, first in households, then in the neighborhood and finally in the town. The consequences of this unhealthy human health after being Ala health conscience, his presence as an explicit variable is debatable. Indeed, health is the result of a dynamic process characterized by a relative equilibrium in which the individual tries to cope with his environment, to optimize well-being.

On this basis, the literature³ suggests four dimensions determine the state of health: genetics

³Study Report Moroccan Ministry of Health, 2012.

and biological dimension (i) the ownership of the living and / or the social and natural environment (ii) the medical management and (iii) self-esteem health (iv).

In this regard, observations have led to the hypothesis that the current nature of the health conscience of the study population reconfigures the fields of public health and products supports the renewed subjective unsanitary practices.

As part of this study, health awareness means health self esteem manifested in man's relationship to health and / or the items that can hinder health such as insafety, hygiene, nutrition etc. A good level of health consciousness of the population constitutes the primary means of struggle against unhealthy. Because according to an old adage African "one who was once bitten by a snake is frightened at the sight of a single vine." This wisdom suggests that the idea of health awareness relates to the life of conservation and therefore a matter of education transmits from one generation to another.

Indeed, the subject is aware of the danger of the snake, to have experienced or have heard of it does not develop the same attitudes and strategies that he who knows nothing at all. In other words, social knowledgeable about taking less risk to his life, the one who is least exposed.

Popular beliefs and security discourses type "microbe does not kill the black man"; "He must die of something" are all indicators of the level of health consciousness. So during our field work, it was not uncommon to hear speeches "we are in this garbage it there's time, if we should kill it died since childhood, since we were born into this, " 'it is God who makes you sick.' "As many discourses that justify the persistence of unhealthiness in the town. For example, testimonies collected from opinants are unanimous on the fact that the populations of districts in the study continue to not follow hand washing after use of the toilet and before and after meals. Such cases are legion in children, adolescents and adults. In addition, The study found that over 78% of households in the study neighborhoods are not sleeping under a Mosquito Steeped Insecticides Long Term Action. While the government has organized several free distribution of Mosquito Steeped Insecticides Long Term Action in households.

This health risk practice is legitimized by security discourse, saying "we are born into it"; "It does not kill the man." On analysis, these practices are imbued with the universal value of freedom but the images that accompany them and the reality they designate are sometimes confused destined à anesthésier esteem health self of respondents.

Moreover, it was also found in all districts in the study (Bagba Harris and Berlin) that people pissing around schools, behind the habitats and in

"boxes and bags" which are subsequently thrown a punch in the streets and avenues. In addition, households repress household waste, toilets, dishwashing and laundry in the street spilling around an uncomfortable smell.

Beyond the sad spectacle and foul odors that pollute the everyday, it must be remembered that this unhealthy situation is an open door to the proliferation of vermin mosquitoes and other diseases. Clearly, this situation causes an increase in the incidence of severe malaria. Recall that malaria is a disease due to the presence in human blood of a parasite called *Plasmodium falciparum*, transmitted to humans through the bite of the mosquito (*Anopheles* female) infected.

The interviews and observations confirm the continuing dumping of garbage, bags of water, packaging etc ... on the edge of the arteries and the presence of informal dumps in places scattered in neighborhoods despite the government's effort.

This leads to excessive and uncontrolled growth that exceeds the limited capacity of health facilities (an unhealthy environment, unhealthy characterized by air pollution, soil, subsoil, in short, the degradation of quality of life).

In the study areas, the appointment with difficult hygiene and sanitation is linked primarily ADES common causes such as inadequate sanitation facilities, lack latrines or formal modern landfills. But beyond these common causes, the field survey questioned attitudes and behaviors in the areas under study develop around these facilities and their management.

In this regard, the conclusion is that communities hardly take collective initiatives to equip their consolidation strategies neighborhoods. According to the words of most resource persons, it seems to have been anchored in the consciences, a wait-and-see attitude that consists of "eternally handing the hand to the public power and international organization" rather than trying to acquire, by means own, said strategies.

This approach is certainly linked to the individualistic mentality and form of education received in these areas.

And in a context of low or sometimes total lack of garbage collection by local authorities, common is converted into a real place of epidemiologic transition.

And as the reason for public health remains the qualitative transformation of risky behavior that involves building a cultural bridge between knowledge popularea and medical knowledge, promoting health awareness is perceived, in this as a challenge to successfully fight against unhealthy in our towns and cities.

Discussion :

In this study, we analyzed the factors of persistent unsanitary conditions in the municipality of Bingerville. The results confirmed our hypotheses

on the relationship between eating behavior, health awareness and persistent unsanitary conditions in the municipality of Bingerville.

First, this study confirms the role of population behavior after consumption in the persistence of unhealthy Bingerville. This result is consistent with other previously reported by other authors (Tiendrebeogo R. et al, 1999; Etiévant, F. et al, 2010.). The influence of food household behavior occurs at two levels. The food eaten (attieke, foutou yam, banana etc) in households produce enough junk (i) the management of waste beyond the competence of households (ii). This result confirms the study Chaleard (1996).

Second, and closely related to the ideas outlined above, our results confirmed the need to strengthen the promotion of health awareness of the population when we want to keep clean the communal framework. For this purpose, our results suggest a correlation between the health awareness of the population and the persistence of the unhealthy in the town of Bingerville and results are in accordance with the study by Memon and Kassoum, (2016).

A low level of health awareness in the population leads to unhealthy behaviors, by against a good level of health awareness in a population produces mostly healthy behaviors.

One might question why these two factors are related to the persistence of the unhealthy. The response follows a reasoning similar to that previously expressed: these two factors are built mainly in the context of social interactions quotidien and this context is related to the worldview of the population (Sane, 1999 Koffi, 1995; Doka, 1995).

Conclusion

The objective of this study is to provide some explanation for the persistence of the town insalubritédans Bingerville. To this end, it appears that the phenomenon of persistence of unhealthy is powered by the food habit of the population and their level of health consciousness.

Ignorance of the risks of unsafe leads to the proliferation of illegal dumps. These factors are reinforced by inefficient garbage collection services. Indeed, Results of the study show that the need for household waste collection services is actually real in the four areas identified by the study. However the results of the study call the recommendations whose implementation concerns:

- Improving the level of household satisfaction: the more households were satisfied with waste disposal, more likely they are to make a contribution of any kind. The actors involved in the garbage pickup in the city must work harder to

address permanently the needs of households;

- The involvement of households in the search for solutions for better waste management;
- Achieving environmental and social impact assessment: the completion of an environmental and social impact assessment for the municipality of Bingerville necessary. This study will aim in particular to identify appropriate sites can be used as depots for household waste. In addition, this study will generate proposals for improving the health and general welfare of the local population;
- The introduction of coercive measures for compliance of legal deposits: strengthening or empowering censorship structures responsible for controlling the dumps in the locality to lead households to comply with the rules prescribed under the management of waste and thus avoid creating illegal dumps.
- The development of a communication strategy for behavior change: It is true, a significant proportion of the population of the municipality has been sensitized on the issue of waste. However, the awareness of the population about the garbage is questionable in most areas of the study. This is why it is important to initiate communication strategies for behavior change. This is among other self-taught workshops applied to sustainability;
- Encouraging households to work for the safety and sanitation in the community in order to encourage households to work for health and sanitation in the community, it is important to establish prizes for households who have distinguished themselves in the practice of managing household waste. In this respect, the cleanest areas of the town will be awarded prizes.

So, essentially, the study results have provided answers to the central question of the study and, in doing so, validated the interest of a clear framework research approaches focused exclusively on a group of specific determinants.

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