

HOUSING CONDITIONS – WATER MANAGEMENT AND HEALTH OUTCOMES IN SLUMS: THE CASE STUDY OF MELEN-BLOCK 4 - IN YAOUNDE

NGAYI MVEHE ALIMA*

Senior Lecturer at the Department of Sociology and Anthropology, University of Buea, Cameroon

<p>Corresponding Author NGAYI MVEHE ALIMA</p> <p>Senior Lecturer at the Department of Sociology and Anthropology, University of Buea, Cameroon</p> <p>Article History</p> <p>Received: 30 / 03 / 2025</p> <p>Accepted: 15 / 04 / 2025</p> <p>Published: 18 / 04 / 2025</p>	<p>Abstract: The aim of this research is to demonstrate that the negligence of spatial planning in a town can lead to a major public health problem. The exploitation of water as resource, in poor housing conditions generates health issues within the community. When considering the capacity of various environments to support human life, the quantity and the quality of natural resources like water should be taken into account. The ignorance of that fact has caused the management of water resources, to become a major problem in the world today. The study is qualitative and focused on the examination of the role of environment in shaping health problems and how they spray. Primary data has been gathered from Direct Observation and Interviews sustained by a questionnaire containing open-ended questions to 73 Men and 86 Women, between 16 and 70 Years old, in Melen block 4 in Yaounde, in February 2024. Secondary data were provided by a Documentary research. The field of this study is Environmental Anthropology. It demonstrates how an endemic is linked to ecology and how, what first appear to be an efficient cultural adaptation, (housing condition), to a particular environment, can raise health challenges. The Ecological/ Epidemiological Approach has been exploited to examine structural factors and also the underlying cause of health issues; also by examining how water as an aspect of the natural environment interact with culture to cause Diseases and influence their spread within the population. According to this approach, research should focus on gathering information concerning urbanization, as a significant environmental factor that has important effects on health and also about the environmental context and social patterns that cause health challenge, such as food production and distribution, poor housing conditions, the quest for potable water, sexual practices, hygiene, and populations interactions, etc. The results of this study reveal that Melen 4 quarter is a slum, characterized by overcrowding, a very poor spatial planning, poor building, insanitary conditions, absence of basic facilities such as potable water, lack of worn water drainage systems, inadequate access to sanitation, etc. As consequences, populations living in Melen slum are exposed to a range of epidemic problems, as air and water-borne Diseases and other infections that has become endemic. Considering water management in Melen 4 slum, the opportunity to address the relationship between poor housing conditions, water and health outcomes is imposing: a water born disease from Melen-slum can become a national health challenge or a pandemic. A collaboration between the State and the Civil Society for an intervention concerning a well-studied spatial planning, education and sensitization of populations for a proper Spatial planning, sanitary conditions through a hygienic management of latrines, wells, worn water, streams, domestic wastes, etc, is required.</p> <p>Keywords: Melen Slum – Housing conditions - Water – Endemic- Health Outcomes.</p>
<p>How to Cite: Ngayi, M. A., (2025). HOUSING CONDITIONS – WATER MANAGEMENT AND HEALTH OUTCOMES IN SLUMS: THE CASE STUDY OF MELEN-BLOCK 4 - IN YAOUNDE. <i>IRASS Journal of Arts, Humanities and Social Sciences</i>,2(4)40-43.</p>	

Introduction

Culture and Nature are closely interlinked; they influence mutually. The environment of a human population includes both physical and social aspects; Culture is the adaptation to environment by people. It is within their surrounding environment that people find elements which contribute to satisfy their basic needs. Usually, the environment dictates some adaptive technics. Vital resources such as water are among the physical aspect of the environment. Water, Housing and Health appear among the basic needs of individuals. Those variables are interlinked; because a

human population and its environment form an interacting ecosystem, (Nanda, S.:2006). Water is a natural element necessary for human survival. The quality of water, whether used for drinking, domestic purposes, food production or recreation has an important impact on health. Poor quality of water can cause illness and diseases. The proliferation of Diseases depends on cultural and natural factors; they multiply, spray and become endemic, where conditions are favorable. In this context, urbanization is a significant environmental factor that has important effects on health when environmental context and social patterns lead to

health challenges. This article examines structural factors underlying health issues in Melen 4; also how water as a natural element, interact with cultural adaptive mechanisms, as housing conditions, to cause Diseases and their spray within the population.

Structural factors and Health Outcome in Melen 4

An insufficient and poor housing, an acute shortage in water supply, a poor spatial planning, poor building, insanitary conditions, absence of basic facilities such as potable water, lack of worn water drainage systems, inadequate access to sanitation, etc., that expose Population in Melen 4 to a range of epidemic problems can be considered as a structural violence.

Structural Violence is the political or the psychological harm including repression, environmental destruction, poverty, hunger, illness and premature death caused by impersonal exploitative and unjust social, political and economic system. In that context, communities are compelled to operate in vulnerability and dependence, because of the unequal distribution of wealth, health and power. Structural Violence is a violence exerted by situations, Institutions, and social, political and economic structures, (Havilland, W. and al.:2002). Health challenges in Melen 4 can also been called structural suffering or structural afflictions, because they are caused by economic and political situation of the country that generates poverty, (Miller, B. :2006).

Research among the Community in Melen 4 and in neighboring Health Centers reveals that people are suffering from water, because of lack of warn- water drain, pollution of the stream, lack of hygiene, poor sanitation and poor housing, Stagnant water maintain. mosquitos and malaria, typhoid and other water borne Diseases around. They are common health problems among the population, because suffering from water is a general issue in the quarter. Women and children are exposed the most, since, according to the repartition of task related to cultures in Cameroon, they are in charge of drinking water, cooking and washing. As water from the tape is scare in the quarter, they use the one available around their household. This insecurity usually caused women to be anxious and in the state of nervous tensions. That situation can explain why always couple have problems.

The poor housing condition, lack of potable water, poor sanitation, lack of warn-water drain, pollution of the neighboring stream and other factors, also means that the population are at high risk of Malaria, cholera, skin and eye infections, and other biophysical problems, (Ennis-McMillan: 2001). The structural power undermines the wellbeing of the majority of people. Broad distinctions exist between the most common health problems among the wealthy and the poor, (Farmer:2005).

Social inequality leads to income and health disparities within the population; structural violence has a lot of consequences in the wide spray poverty, (Havilland, W. and Al.: 2008).

Social inequalities and Access to potable water

According to Karl Marx, in every society, the relationship to the means of production is important in determining power, prestige and chance to survive. The basic principle of social organization is the system by which resources are produced and allocated to provide for the satisfaction of basic human needs. Marxism approach demonstrates that political and social changes are driven by class struggle. An unequal distribution of resources sustains social inequalities and discriminations.

In Melen 4, as it is generally the case in urban areas, the development of piped water systems bypasses low-income populations in favor of serving wealthier urban neighborhoods and supply water to companies. A Direct observation by the researcher shows that nearly 99 % of the Melen 4 population has inadequate access to potable water in terms of quality and quantity, (Direct Observation and Interview, in 2024 in Melen Yaounde).

Social stratification is among the major factors contributing to unequal access to resources. The centralization of power causes inequality in life conditions. As the population increases, different groups begin to compete for access to power and resources. The dominant group protect privilege and its superiority, (Fried, M.: 1970)

The availability of potable water in an urban zone depends on the social status of individuals living there. According to the United Nations Development Program: 1995), within the poor populations, tuberculosis, Malaria, HIV/AIDS, Water borne diseases are major leading causes of death. Substantial evidence indicates that poverty is the primary cause of morbidity and mortality, (United Nations Development Program: 1995).

Poor spatial planning in Melen slum

Urbanism refers to the Art of construction, of transformation and spatial planning of a town with commodity, according to esthetical rules and hygiene. Failure in space organization for human activities, equipment and communication conditions has led to an Anarchy in building. Melen 4 slum is characterized by roughly constructed dwellings inhabited by poor people. Due to rampant corruption, Social housing in yaounde, that are supposed to settle the poor, are occupied by wealthy people. There is little space between Houses. They are separated by small alleys that also permit to move within the quarter. Building material, in some houses, are made with old zin and stuff recovery, insecure tenure leaving the specter of forced eviction. Graves, wells, latrines, worn water, polluted stream and households coexist, (Interview and Direct Observation in Yaounde, 2024).

The lack of technology is the determining factor in the utilization of a particular environment. Overpopulation increases the scale of poverty which manifests through poor housing conditions, hunger, pollution and diseases, (Havilland, W. and Al.: 2008).

Water management in Melen slum

The $\frac{3}{4}$ parts of soil in Melen 4, is a marsh or a shallow. In some part of the quarter, water is emerging from the soil. Population have no choice to undergo absence of basic facilities such as potable water, lack of worn water drainage systems, inadequate access to sanitation that cause people to dig Wells which border upon latrines, worn water and polluted stream. In some areas, in natives' compounds, one can see graves. Wells as Latrines are not deep because of the marshy condition of the soil. Water used for domestic activities is polluted. Activities like cooking foods, lye, crockery cleaning, bath and housekeeping are made with water from Well. Populations should go far from their houses to look for drinkable water. During raining season, water flood inundates the surrounding habitations with dirty water and wastes from houses and latrine which are full of excrements, in some cases. The phreatic nappe is infected. Many wells are not secured, everybody can use a bucket to carry water, so they are

scarily sterilized and not covered, (Interview and Direct Observation, in Yaounde 2024).

Habitations alongside the stream, canalize their latrine in the bed of that very stream where worn water and other domestic wastes are thrown. In some households closer to stream, poultrys and pigsties were constructed such a way that, excrements can be evacuated directly in the bed of the stream. Regularly, some individuals collect plastic bottles floating on the water stream, recycle them and resell them; the condition of disinfection is unknown, but those bottles serve in market to contain palm oil, locally made yoghurt and drinks (cold water, kossam, folere, ndjinja, lollipop, etc, (local names of various drinks), that people buy and consume, in the in streets, in city, in Travelling Station, etc. (Interview and Direct Observation, in Yaounde 2024).

During dry season, between November and March, people practiced farming in the flooded area of Melen-slum, where vegetables are cultivated and watered with liquid from the polluted stream. The crops and vegetables from there are consumed in many households and the rest is sold in the market, (Interview and Direct Observation, in Yaounde 2024).

The anthropic activities directly threaten health through water management. Agricultural activities will contaminate the stream and the phreatic nap with nitrates, phosphorus, pesticides, salts and pathogen. Agriculture has severely damage all freshwater systems in their pristine state, (Moss, 2008) (Parris,2011). Pesticides have an adverse impact on health through drinking water. They are heavy metal pollution threatening food safety and human health, (Wu and Al.: 1999), (Lu and Al.: 2015).

A comparative study has shown that tap water, purified water, and bottled water was an essential source of gastrointestinal disease, (Payment and Al.:1997). Unsafe drinking water and poor environmental hygiene can lead to gastrointestinal illness, inhibiting nutrient absorption and malnutrition. These effects are mainly pronounced for children, (Li Lin and Al.:2022). Data from studies in developing countries show a clear relationship between cholera and contaminated water and household water treatment and storage in the alleviation of cholera, (Grundry and Al.: 2004).

Health issues related to water in Melen block 4

Contaminated water can threaten human health. Dirty water and poor sanitation are linked to transmission of diseases such as cholera, diarrhea, hepatitis, typhoid and polio. Absent, inadequate or inappropriately managed water and sanitation services expose individual to preventable health risks; The most common diseases caused by water pollution is diarrhea, which is mainly transmitted by enterovirus in the aquatic environment, (Li Lin and al.:2022).

Among various subsistence strategies to increase survival in slums, people adapt to the environment and life conditions by regulating the population. Because of the low income safe and reliable methods of artificial contraception are unknown. abortion and infanticide are used to limit population growth, (Nanda, S.:2004). Other culturally determined practices and beliefs are also used to limit population. Postpartum taboos on sexual intercourse regulate population by spacing birth, (Nanda, S.:2004). Those practices affect the reproduction health.

Within the poor populations, tuberculosis, Malaria, HIV/AIDS, Water borne diseases are major leading causes of death. Substantial evidence indicates that poverty is the primary

cause of morbidity and mortality, (Interview, Direct observation: 1995).

Water pollution results both from human and natural factors. Various anthropic activities directly affect water quality, including urbanization, population growth, etc. (Halder and Islam:2015).

Improper disposal of solid waste, sand and gravel is also one reason for decreasing water quality, (Ustaoglua and Al.:2020)

Diseases proliferate where conditions are favorable. In fact, the permanent presence of stagnant and polluted water, wastes, polluted stream, insanitary and poor aeration and swampy area around habitations, maintain germs and vectors of diseases within the community. Open-air Latrines and Wells are close to houses and the permanent presence of mosquitos and worn water around the habitations favor Malaria, Typhoid, Diarrhea, Cholera, Asthmas, Tuberculosis, etc., which are among common diseases in Melen 4 slum.

The relevance of the intervention of the Government and the Civil Society at the grassroots level

The responsibility of the civil society is to alleviate social inequalities by encouraging government to ensure equitable access to crucial resources, in order to enhance the ability of poor to provide or to satisfy their needs. The Civil society can pressure the government to improve conditions of life, by providing basic commodities, creation of roads within the quarter, potable water, clean and healthy housing conditions, sanitation and disinfection of in and around the quarter and households, proper domestic wastes and healthy worn water management, etc., in Melen 4. The Civil society should attract the attention of the Government to poor housing conditions and poor water management caused by the negligence of spatial planning in Melen slum, that can lead to a public health problem and became a pandemic, if some measures are not taken.

Government should strengthen water intervention management and carry out intervention measures to improve water quality and reduce water pollution's impact on human health, (Li Lin and Al.: (2022). A collaboration between the government and the Civil Society is required in order to perform a variety of services and humanitarian functions by educating populations on Hygiene and sanitation rules.

The grassroots approach of intervention can be supported by the local participation, self-help movements and social capital; because of the intangible resources of social ties, trust and cooperation that exist within the population. The social capital can provide needs in the desperately poor situations. Part of that success is due to the fact that people will be able to pursue alternatives or new strategies to overcome challenges they face, (Miller, B.: 2004)

Conclusion

This study is the demonstration of the reality that poor spatial planning in a town can become to a major public health problem. The exploitation of water as resource, in poor housing conditions generates health issues within the community. When considering the capacity of various environments to support human life, the quantity and the quality of natural resources like water should be taken into account. Based on the Environmental Anthropology knowledge, the research has demonstrated how an

endemic is linked to ecology and how, what first appear to be an efficient cultural adaptation, (housing condition), to a particular environment, can raise health challenges. The Ecological/Epidemiological Approach has been exploited to examine structural factors and also the underlying cause of health issues; also by examining how water as an aspect of the natural environment interact with culture to cause Diseases and influence their spread within the population. The research was focused on gathering information concerning urbanization, as a significant environmental factor that has important effects on health and also about the environmental context and social patterns that cause health challenge, such as food production and distribution, poor housing conditions, the quest for potable water. Among factors contributing to health issues in relation to Poor housing conditions in Melen slum appear structural violence because caused by unjust social, political and economic system. Another factor is a Poor spatial planning. In fact, Failure in space organization for human activities, an equipment and communication condition has led to Anarchy in building. Melen 4 slum is characterized by roughly constructed dwellings inhabited by poor people. Due to rampant corruption, Social housing in yaounde, that are supposed to settle the poor, are occupied by wealthy people. There is little space between Houses. They are separated by small alleys that also permit to move within the quarter. Building material, in some houses, are made with old zin and stuff recovery, insecure tenure leaving the specter of forced eviction. Graves, wells, latrines, worn water, polluted stream and households coexist. Also a non-hygienic Water management in Melen slum. The research has revealed that $\frac{3}{4}$ parts of soil in Melen 4, is a marsh or a shallow. In some part of the quarter, water is emerging from the soil. Population have no choice to undergo absence of basic facilities such as potable water, lack of worn water drainage systems, inadequate access to sanitation that cause people to dig Wells which border upon latrines, worn water and polluted stream. In some areas, in natives' compounds, one can see graves. Wells as Latrines are not deep because of the marshy condition of the soil. Diseases proliferate where conditions are favorable. In fact, the permanent presence of stagnant and polluted water, wastes, polluted stream, insanitary and poor aeration and swampy area around habitations, maintain germs and vectors of diseases within the community. Open-air Latrines and Wells are close to houses and the permanent presence of mosquitos and worn water around the habitations favor. The consequences on Health are endemic of Malaria, Typhoid, Diarrhea, Cholera, Asthmas, Tuberculosis, etc., which are among common diseases in Melen 4 slum.

As solution, the research has suggested the relevance of the intervention of the Government and the Civil Society at the grassroots level, through education and social capital.

References

1. Ennis-McMillan, MC, 2001, *Suffering from Water: Social Origin of Bodily Distress in Mexican Community*. Medical Anthropology Quarterly 15 (3)
2. Farmer, P. :1996, *Suffering and Structural violence, A view from below*. Daedalus
3. Grundry, S., Wright, J. and Conroy, R. 2004, *A systematic Review of Health Outcomes Related to Household Water Quality in Developing Countries*. J. Water health (1).
4. Halder, J. and Islam, N., 2015, *Water pollution and its Impact on the Human Health*. Eh.2(1) doi:10. 15764.
5. Havilland, W., Al.: 2002, *Anthropology: the human challenge*, Wards Worth Cengage Learning.
6. Lin L, Yang, H. and Xu X.: 2022, *Effects of Water pollution on Human Health and Disease Heterogeneity: A Review*. Front. Environ. Sci. 10:880246.
7. Lu, Y., Song, S., Wang, R., Liu, Z. and Al., 2015, *Impacts of Soil and Water pollution on Food Safety and Health Risks in China*. Environ. Int. 77;
8. Miller, B., 2006, *Cultural Anthropology*, George Washington University
9. Moss, B., 2008, *Water pollution by Agriculture*. Phil. Trans. R. Soc. B 363 (1491).
10. Nanda, S.:2004, *Cultural Anthropology*, Wadsworth publishing, Belmont, California.
11. Parris, K., 2011, *Impact of Agriculture on Water pollution in OECD Countries/ Recent Trends and Future Prospects*. Int. J. Water Resour. Dev. 27 (1)
12. Payment, P. Siemiatycki, J., Richardson, L; Renaud, G., Franco, E. and Prevost, M., 1997, *A prospective Epidemiological Study of Gastrointestinal Health Effects due to the Consumption of Drinking Water*. Int. J. Environ. Health Res. 7(1)
13. Ustaoglu, F., Tepe, Y., Tas, B., and Pag, N., 2020, *Assessment of stream quality and health risk in a subtropical turkey river system: A Combined Approach Using Statistical Analysis and Water Quality Index*. Ecol. Indic., 113 doi:10.1016/j. ecolind 2019.
14. Wu, C., Maurer, C. Wang, Y., Xue, S., and Davis, DL., 1999, *Water pollution and human healthy in China*. Environ. Health perspect. 107 (4).