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THE RISING WATERS OF LAKE TANGANYIKA AND THEIR IMPACT ON SOCIO-ECONOMIC DEVELOPMENT: THE CASE OF THE TOWN OF KALEMIE, TANGANYIKA PROVINCE, DEMOCRATIC REPUBLIC OF THE CONGO

AMSINI MUTUZA Fidele

MSc in Development Studies, Assistant at Institute Superior Pedagogique de Lubutu (ISP Lubutu), Department of Geography and Environmental Management (GGE), Lubutu Territory, Maniema Province, Democratic Republic of Congo

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ABSTRACT

Lake Tanganyika is one of the lakes in the African Great Lakes region. It stretches over 4 countries: the Democratic Republic of Congo (DRC), Burundi, Tanzania and Zambia. Goods and people move through these 4 countries via ports, the most important of which are: Kalemie in the DRC, Bujumbura in Burundi, Kigoma in Tanzania and Mpulungu in Zambia.

In terms of surface area, Lake Tanganyika is the second largest lake in Africa after Lake Victoria; in terms of depth, it is the second deepest in the world after Lake Baikal in Russia; and in terms of length, it is the longest freshwater lake in the world at 677 km.

From March 2024 to October 2024, the waters of Lake Tanganyika began to rise to alarming levels, becoming very harmful to the population. Many houses, beaches, nightclubs, schools, churches and businesses were swallowed up by the waters of the lake, a real natural calamity, a complex phenomenon with serious consequences for the lives of the people living along its shores. The causes of this rise are multiple, including climate change (39%), persistent heavy rains (20%) followed by human activities (19%), waste dumped in the lake (9%), and others even speak of God's wrath (13%). All these factors combined are gradually raising the waters of Lake Tanganyika to alarming and dangerous levels. The extent of the socio-economic and humanitarian damage caused by the rising waters of Lake Tanganyika is clear for all to see. Among the many consequences are: destruction of infrastructure (67%), massive population displacement (16%), housing problems (7%), slowdown of economic activities (6%) and job losses (4%).

Keywords: Lake Tanganyika, Socio-economic development, Kalemie, rising waters.

1. INTRODUCTION

In Nigeria, flood is one of the natural disasters that many at times resulted in direct loss of social and economic properties, physical injuries, to the extent of psychological injuries. Natural disasters threaten lives thus causing a lot of anxieties and fear in an individual as observed by R. G. Awopetu and al (2013). Over the past hundred years, the consequences of flooding have struck with varying intensity and in different places (Viau, R. 1987). Kalemie, formerly Albertville (or Albertstad in Dutch) is a town in the Democratic Republic of the Congo, capital of Tanganyika province. Tanganyika is a province of the Democratic Republic of the Congo created in 2015 following the breakup of the province of ex-Grand Katanga. It is located on the shores of Lake Tanganyika with an area of 134,940 km2.The province has six subdivisions into

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six territories: Kabalo, Kongolo, Manono, Moba, Nyunzu and Kalemie. (Blaise N'sandji Mwangala, 2024)

It is estimated that Lake Tanganyika was formed some 12 to 13 million years ago during the Miocene. It is the result of a complex geological process linked to tectonic activity and the formation of the Great African Rift Valley. The lake lies along the border between Tanzania (to the east) and the Democratic Republic of Congo (to the west). Its northern end separates these two countries from Burundi, while its southern end separates them from Zambia (Ekongo Lofalanga, 2024). Millions of people depend on the Lake for transport, food security and subsistence. Lake Tanganyika is also a critical area for biological diversity. It is an essential part of the transport and trade corridor between Central and East Africa. People and goods are transported between the lake's four major ports (Kalemie in the DRC, Kigoma in Tanzania, Bujumbura in Burundi and Mpulungu in Zambia) and hundreds of smaller ports. 90% of Burundi's exports and 70% of its imports cross the Lake.

On a regional level, Lake Tanganyika is managed by the Lake Tanganyika Authority (LTA), an intergovernmental organization created following ratification of the Convention on the Sustainable Management of Lake Tanganyika in 2005. Its main mission is to ensure the protection and conservation of the biological diversity and sustainable use of the natural resources of Lake Tanganyika and its basin, based on integrated management and cooperation between the contracting states: Burundi, Democratic Republic of Congo (DRC), Tanzania and Zambia.

For around five years (from 2019 to the present day), persistent heavy rains followed by flooding, landslides, waste dumped in the lake and various human activities, have gradually raised the waters of Lake Tanganyika to alarming and dangerous levels. These waters have engulfed entire roads (Uvira-Kalemie), markets, schoolyards, churches, office buildings and homes (towns of Gatumba in Burundi, Kalemie, Uvira in the DRC...).

The aim of this work is to discover the underlying causes of these spectacular rises in the waters of Lake Tanganyika, and to propose possible solutions to avoid or mitigate them.

According to Olivier Martin (2009), sociologists have two strategies for conducting their studies: either they carry out an exhaustive survey of all the individuals in the population of interest, or they are content to examine "pieces", "subsets" or "fractions", known as samples, of this population, that interests him; or he is content to examine "pieces", "subsets" or "fractions", called samples, of this population. In the latter case, he conducts a survey. For our study, we have used a poll.

Moreover, most of the time decisions about sample size are affected by considerations of time and cost. So, we decided to work with a sample of 100 people.

With a sample of 100 people, divided into 62 men and 38 women, each aged between 20 and 68 and employed in 22 different sectors or professions. We were able to gather opinions and considerations on our topic, which we will share in the following lines. It is important to point out that the 100 people interviewed were selected at random from the three communes of the town of Kalemie (Kalemie, Lac and Lukuga). Our subject does not appear to be new to the field. Other researchers have already carried out studies related to the rising waters of Lake Tanganyika. These include:

(1) Ekongo Lofalanga (2024) : Comprendre la montée des eaux du Lac Tanganyika pour assurer la mitigation des risques (Unpublished) (2). Paulin Munanga (2024) : Kalemie : la crue du lac

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Tanganyika impacte les activités économiques (Unpublished) and (3) Kapalay Kabemba Jean Pierre (2024) : Les inondations du lac Tanganyika menacent la ville de Kalemie (Unpublished)
In view of the conclusions of these studies, it is clear that the rising waters of Lake Tanganyika constitute a threat, a natural calamity, to the town of Kalemie and the population of Kalemie and its surroundings.

2. MATERIALS AND METHODS

A research method is simply a technique for collecting data. It can involve a specific instrument, such as a self-completion questionnaire or a structured interview schedule, or participant observation whereby the researcher listens to and watches others (Alan Bryman 2012).
Data were collected by using self-administered questionnaires and interview and documentary. Qualitative research has a comprehensive focus. It is characterized by two things: it seeks to understand how actors think, speak and act, and it does so in relation to a context or situation (Hervé Dumez, 2011). It is used to understand concepts, thoughts or experiences. This type of research enables you to gather in-depth insights on topics that are not well understood. Common qualitative methods include interviews with open-ended questions, observations described in words, and literature reviews that explore concepts and theories.
Given the nature of our subject, and while referring to the tools used for data collection (questionnaire, interview, use of existing documents, etc.), our study is more qualitative than quantitative.

Data processing

At the end of the survey, the information relating to the different variables studied was extracted and encoded in the form of an Excel file (Brown, M.J., 2006). Data Entry errors have been corrected to avoid any bias. The processing was done using Microsoft Excel 2010 (O'Neil, M., 2017). The qualitative and quantitative data were summarized in the form of tables and frequency distribution histograms. Percentages by modality were calculated from absolute frequencies (ni) (Moore and al., 2020). The inferential analysis consisted of the use of Karl Pearson's chi-square test of independence which made it possible to make the connection between the qualitative variables taken two by two (Agresti, A. 2018). The association between the two variables was considered significant when the p-value was below the threshold of 0.05. The chi-square test was performed using SPSS software (Gray, P. H. 2019).

3. RESULTS AND DISCUSSION

Presentation of results

1. Age of respondents

Parameter	Age
Max	68
Mean ± Std	35±10,33
Min	20

During our surveys, we took into account the adult age for being interviewed, i.e. being at least 18 years old. As shown in the table above, the age of our respondents ranged from 20 to 68.

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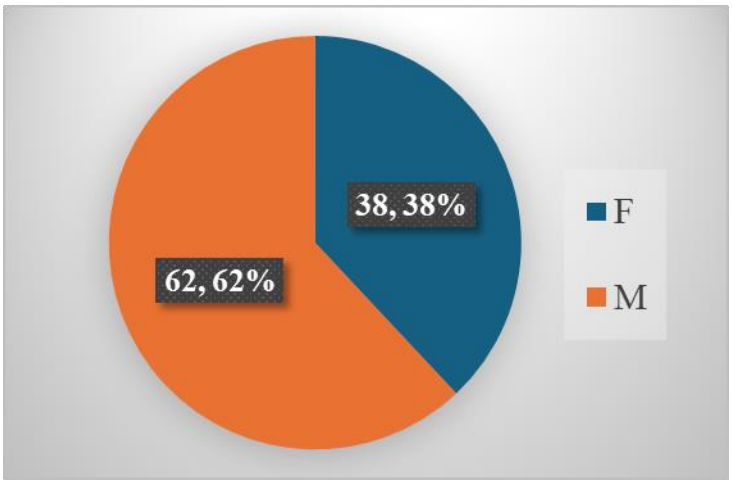
2. Distribution of respondents according to their gender



The term gender refers to the social roles of men and women and boys and girls as well as relationship between and among them in a particular society at a specific time and place. It refers to the performance of the roles, identities and ideas surrounding masculine and feminine (Janvier Indoha, 2022).

Gender was taken into account during our investigations in order to have their opinion about how the rising waters of Lake Tanganyika affect both men and women.

3. Distribution of respondents according to their profession

Profession of respondents	Frequency	Percent
Security guard	4	4,00%
Farmer	3	3,00%
Banker	1	1,00%
Volunteer	6	6,00%
Driver	2	2,00%
Hairdresser	2	2,00%
Trader	25	25,00%
Teacher	4	4,00%
Student	6	6,00%
Civil servant	4	4,00%

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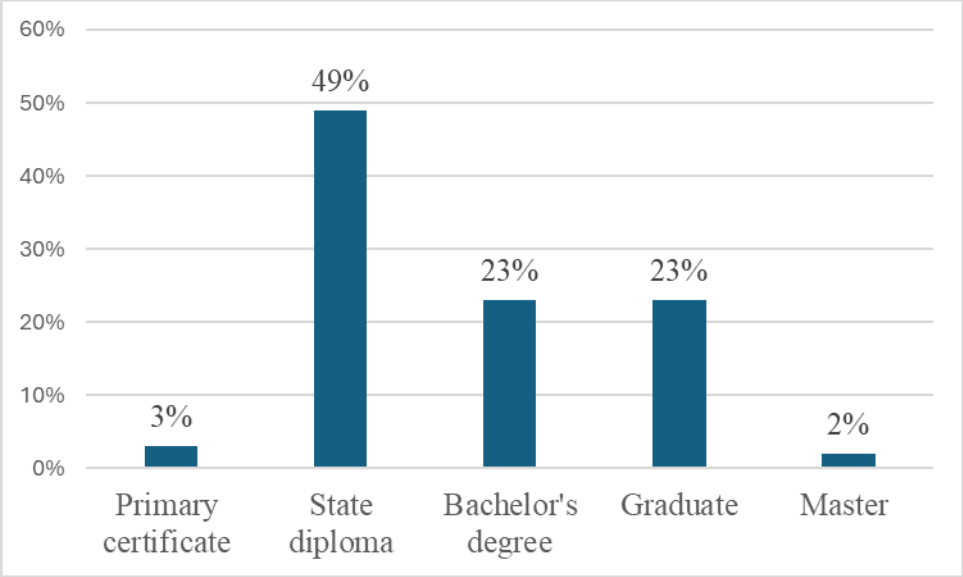
Hotelier	3	3,00%
Humanitarian	6	6,00%
Nurse	2	2,00%
Computer scientist	5	5,00%
Agronomist	1	1,00%
Mechanic	1	1,00%
Doctor	2	2,00%
Homemaker	2	2,00%
Carpenter	2	2,00%
Fisherman	2	2,00%
Police officer	1	1,00%
Unemployed	16	16,00%
Total	**100**	**100,00%**

It's true that the rising waters of Lake Tanganyika affect all sections of the population. However, we focused more on traders, as the impact is socio-economic. For the purposes of this study, 22 population segments were consulted, as shown in the table above.

4. Distribution of surveys according to their level of study



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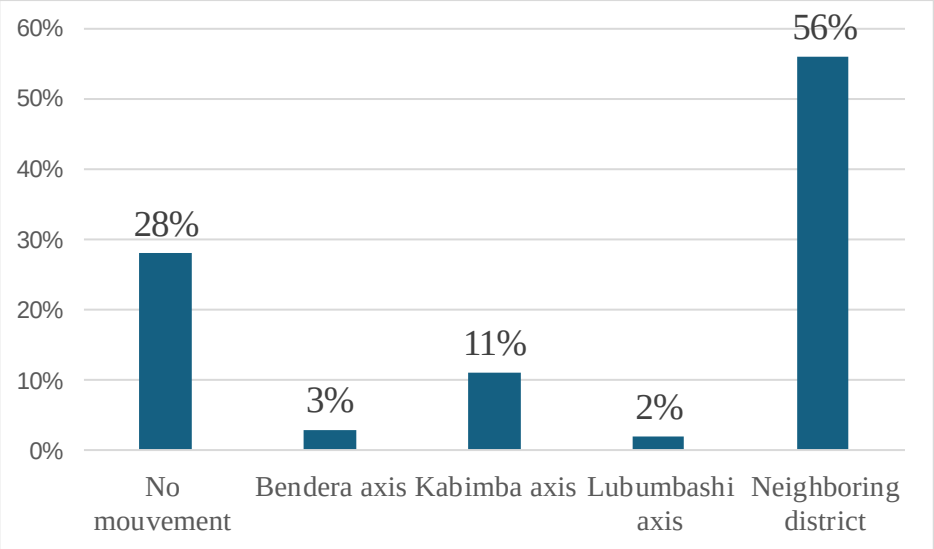
Our respondents' level of education had an impact on their reasoning. On the one hand, a well-educated person can easily understand and interpret facts, but on the other hand, a well-educated person can make a good judgment on any reality presented to him or her. . According to the table above, 3% of our respondents were at primary level, 49% at secondary level and 48% at university level (i.e. 23% of graduates, 23% of bachelors and 2% of masters).

5. After the overflow of Lake Tanganyika, you escaped in which direction?



During this study, we also looked at population movements. The table below shows the preferences of our respondents

From the table above, it is clear that the majority of our respondents (56%) had decided to leave their neighborhoods for neighboring, supposedly safe, areas. However, 28% had decided to stay in their neighborhoods or houses, whatever the conditions. While 11% had taken the Kabimba axis, 3% the Bendera axis and finally 2% the Lubumbashi axis.

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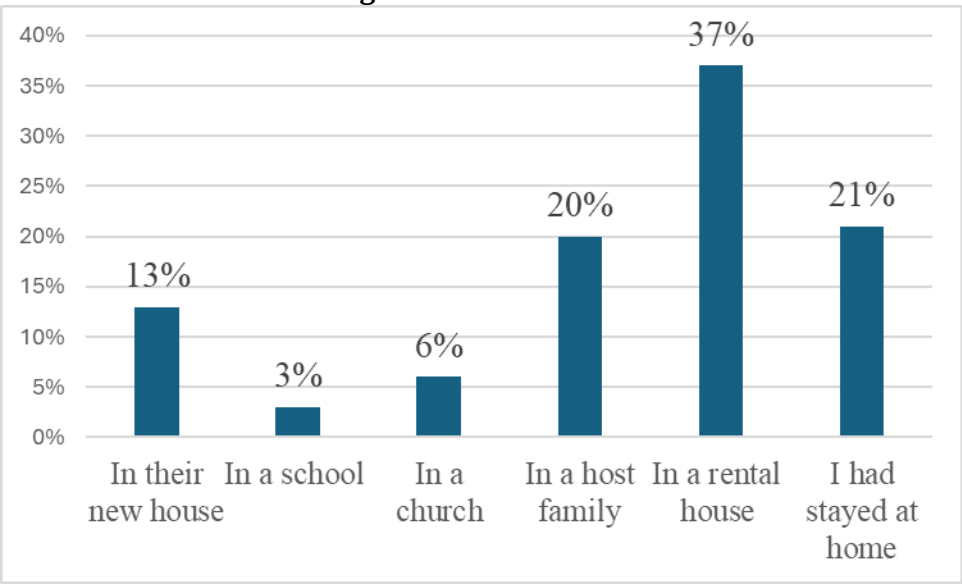
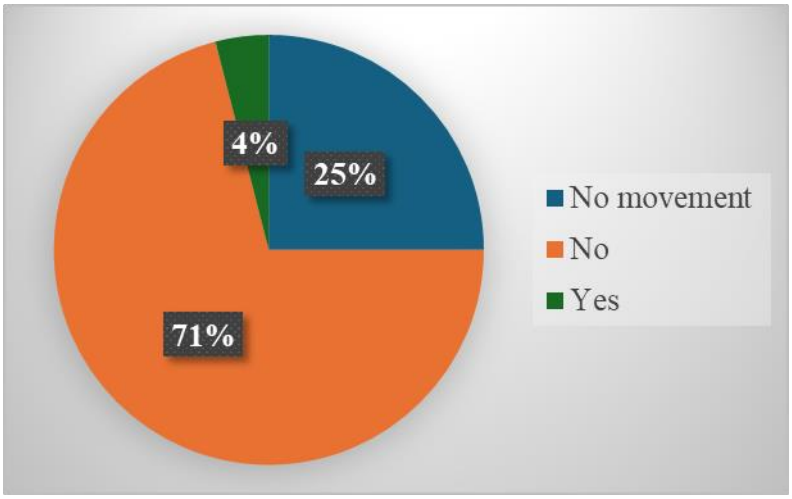
6. Place of residence during relocation



This table shows the type of shelter used by those displaced by the rising waters of Lake Tanganyika. It shows that 37% of our respondents had rented houses in neighboring districts. This situation has caused rent prices to soar, a good deal for real estate agents. However, 21% of our respondents had decided to stay at home despite the water conditions. A further 20% were staying with host families, 13% in their new homes or on building sites, 6% in churches and 3% in schools.

7. Government support for the victims of the rising waters of Lake Tanganyika

On the subject of the Provincial Government's assistance to the displaced, here we have witnessed contradictions as shown in the diagram below:



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While 25% of our respondents were staying at home, i.e. knew nothing about the Provincial Government's assistance to the displaced, 4% of them claimed to have received assistance, while 71% of the displaced confirmed that they had received nothing from the Provincial Government.

8. Negative social consequences of overflowing Lake Tanganyika waters on the population of Kalemie and its surroundings

The rising waters of Lake Tanganyika are always accompanied by social problems, as shown in the table below:

Negative social consequences	Frequency	Percent
Deaths of people	9	9,00%
Involuntary move	48	48,00%
Interruption of school activities	5	5,00%
Rising prices of basic products (food, water and electricity)	16	16,00%
Presence of harmful animals in the city (Case of Crocodiles, Hippos, Snakes, etc.)	10	10,00%
Health problems	12	12,00%
Total	100	100,00%

According to our respondents, involuntary relocation (population movements) is the most crucial problem (48%) facing the population. This is followed by rising commodity prices (16%), then health problems (12%) due to water-borne and other diseases. Finally, the presence of vermin in the middle of town (10%), crocodiles, hippopotamuses, snakes…followed by deaths of people (9%) and the interruption of school activities (5%). According to the flood report produced by Blaise Nsandji Mwangala (2024), some 289,142 people or 56,992 households are affected by flooding in several Tanganyika territories. The territories most affected, in descending order, are: Manono with 106,785 people (21,357 households); Kongolo with 48,020 people (9,604 households); Kabalo with 36,395 people (7,279 households), Moba: 35,580 people (7,116 households), Kalemie ville 36,250 people (7,250 households), Kalemie Territoire 15,125 people (3,025) and Nyunzu with 10,987 people (1,361 households). These people lost their homes, essential household items and food stocks; 11 people died and 18 were injured. And yet, the Constitution of the Democratic Republic of Congo of February 18, 2006, in its article 16, paragraph 1, it is stipulated that the human person is sacred. The State has the obligation to respect and protect it. Every person has the right to life, to physical integrity, as well as to the free development of his personality in the respect of the law, of public order, of the rights of others and of good morals (Journal Officiel de la RDC, Law N°11 of 2011). The above assessment corroborates the results found in Nigeria by Abubakar et al (2020) when he said, and I quote :'' Flooding has a significant impacts on the socio-economic lives the inhabitants of the floodable areas in the selected communities and Adamawa State in general. Infrastructure and services such as public and private buildings, Road Networks and Electricity supply facilities are destroyed by flooding. In the after math of the 2019 floods in Adamawa State, an estimated 381

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houses damaged,493 houses are partially damaged, with over 365 water and sanitation facilities destroyed affecting over 12,000 individuals. Most of farmlands were submerged leading to heavy crop and livestock lost and an estimated figure of about 12,000 persons were displaced from the selected communities for this study'' End of quote.

9. Positive social consequences of overflowing Lake Tanganyika waters on the population of Kalemie and its surroundings

The rising waters of Lake Tanganyika have not only negative social consequences. There are also some positive, albeit negligible, consequences

Positive social consequences	**Frequency**	**Percent**
No positive consequences	61	61,00%
Give jobs to the swashbucklers	25	25,00%
water is permanent at the taps, even during the dry season when water was always in short supply	3	3,00%
Waves and winds from Lake Tanganyika ease the heat in the town of Kalemie and its surroundings	5	5,00%
Husbands are permanent at home, many bars, beaches and nightclubs swallowed up by water	6	6,00%
Total	**100**	100,00%

Our respondents' answers on the positive consequences of the rising waters of Lake Tanganyika show that this rise gives work to young paddlers (25%). As all travel is by pirogue, pirogue owners make money. Most of the married women interviewed confirmed that during the rising waters, their husbands are permanently at home, as many of the beaches, bars and nightclubs are swallowed up by the waters (6%). According to our respondents, on the one hand, the rising waters of the lake bring waves and winds, which in turn reduce the heat in Kalemie and the surrounding area (5%), but on the other hand, water is always available from the taps (5%), whatever the period, given that during the dry season, water is often scarce from the taps. Nevertheless, for 61% of our respondents, there are no positive social consequences from the rising waters of Lake Tanganyika.

10. Negative economic consequences of the overflow of Lake Tanganyika waters on the population

According to our respondents, the rising waters of Lake Tanganyika are having more negative than positive economic consequences. The two tables below demonstrate this.

Negative economic consequences	**Frequency**	**Percent**
Massive population displacements	16	16,00%

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Destruction of infrastructure (roads, schools, dispensaries, bars, nightclubs, beaches, ports, etc.)	67	67,00%
Loss of jobs for some people	4	4,00%
Housing problem	7	7,00%
Slowdown in economic activities	6	6,00%
Total	100	100,00%

The table above shows that the destruction of infrastructure (roads, schools, clinics, bars, nightclubs, harbors, beaches) remains the greatest negative consequence of the rising waters of Lake Tanganyika (67%), while massive population displacement (16%), housing problems (7%), the slowdown of economic activities (6%) and the loss of jobs for some people (4%) are among the negative consequences of the rising waters of Lake Tanganyika. As Paulin Munanga confirms (2024), The economic operators affected by this situation have either relocated their activities or closed their shops. They include pharmacies, hardware stores, food shops, boutiques, bakeries, supermarkets, hairdressers and others...Job losses include teachers whose schools have been swallowed up, and nurses whose health centers have been invaded by the waters. Job losses also affect waiters and waitresses in bars and nightclubs destroyed by the waters. Although not mentioned by our respondents, our direct observations in the field also reveal agricultural losses: entire fields of crops have been destroyed, swallowed up by the waters of Lake Tanganyika, representing a significant loss for the people of Kalemie and the surrounding area. Based on these findings, a food shortage is looming on the horizon. The results found and contained in Table N° 10 above are consistent with the results found in Nigeria in 2015 by Joshua Williams and al. These researchers revealed that the floods of 2012 had a major impact on socioeconomic life for days, weeks and even months in some areas. Roads and buildings were submerged and victims were trapped due to blockage of road and damaged bridges. Children couldn't go to school, workers couldn't go to work and traders couldn't open their stores at the markets. These automatically took its toll on the economy as businesses were being affected. But also and as confirmed by Maura Allaire (2018), business interruption includes foregone and delayed production of goods and services.

11. Positive economic consequences of the overflow of Lake Tanganyika waters on the population

The rising waters of Lake Tanganyika have not only negative economic consequences. There are also some positive, albeit negligible, consequences.

Positive economic consequences	**Frequency**	**Percent**
Reduction in State Taxes, brief reduction in harassment, devastated environment	4	4,00%
Real estate investors have many clients	7	7,00%
Rise in urban transport prices	40	40,00%

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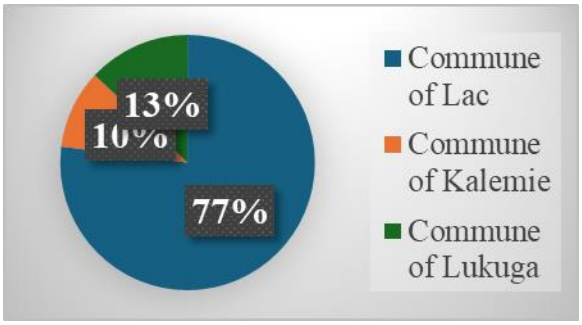
Skyrocketing rental prices	42	42,00%
Fish in abundance on the market	7	7,00%
Total	100	100,00%

In the light of this picture, it's clear that soaring rent prices (42%) and rising urban transport prices (40%) represent a good economic deal for Real Estate and Transport companies. The abundance of fish on the markets (7%) and the high number of tenants looking for houses (7%) are economic opportunities for fishermen and house lessors. As the area is flooded by water, it is becoming a disaster area, and as a result, state taxes are down (4%), which is good for the economy of those subject to them, i.e. merchants and others.

12. Communes affected by the overflow of Lake Tanganyika waters in 2024

The town of Kalemie is administratively made up of three communes: Commune du Lac, Commune de Kalemie and Commune Lukuga. Of these three communes, the Commune du Lac has been most affected by the rising waters of the lake. This is shown in the diagram below.



According to our respondents, and in relation to the commune most affected by the rising waters of Lake Tanganyika, it emerges that the commune of Lac is the most affected with 77% of responses. The communes of Lukuga and Kalemie received scores of 13% and 10% respectively, as shown in the diagram above. It's important to note that Commune du Lac was the commune most affected by the floods, given its proximity to Lake Tanganyika.

13. The origin of the increase in the water level of Lake Tanganyika according to respondents

The aim of our work was to discover the root causes of the spectacular rise in water levels in Lake Tanganyika and to propose possible solutions to avoid or mitigate them. The two tables below will tell us more.

Cause of water overflow	**Frequency**	**Percent**
Caused by God	13	13,00%
Climate change	39	39,00%

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human activities	19	19,00%
Lots of trash thrown into the lake	9	9,00%
heavy rains	20	20,00%
Total	**100**	100,00%

Trusting our respondents, and based on existing literature, it emerges that the rising waters of Lake Tanganyika are caused by climate change (39%), heavy rains (20%), human activities (19%), God's wrath (13%) and the dumping of a lot of waste in the lake (9%).

14. How to avoid the increase in the water level of Lake Tanganyika

Means of combating the increase in lake water	**Frequency**	**percent**
Widening the bed of the Lukuga river	18	18,00%
Avoid throwing waste (all categories) into Lake Tanganyika	11	11,00%
Stop cutting drills	43	43,00%
Carry out cleaning to increase the depth of the Lukuga River	17	17,00%
pray a lot to God	11	11,00%
Total	**100**	100,00%

To avoid the rising waters of Lake Tanganyika, our respondents each gave their point of view. Many put forward the argument that cutting down the forest should be stopped to mitigate the impact of climate change (43%). For others, the bed of the Lukuga River should be widened to encourage the rapid flow of water from Lake Tanganyika into the Congo River (18%). However, for others, the Lukuga River should be drained to increase its depth (17%). For others, waste should not be dumped in Lake Tanganyika, as the lake is not a dustbin (11%). The last category asks the people living on the shores of Lake Tanganyika to pray a lot to God to rid us of these kinds of natural disasters (11%). However, in addition to cutting down forests, the Lukuga River is set to play a significant role in the water level of Lake Tanganyika. According to Benjamin Kuriyo (2024), as the Lukuga River is the only outlet for Lake Tanganyika, any change in the riverbed could potentially affect the water level of the lake. In addition to the statements made by our respondents, we also agree with Kapalay Kabemba Jean Pierre (2024) when he proposes the construction of a retaining wall on the Congolese side from the port of Kalemie to the Lukuga bridge, in order to halt the worrying advance of the waters of Lake Tanganyika towards the mainland, which has already caused considerable damage, with the risk of seeing the DAV district (DAV means Dépôt Armement et Vivre), the Société Nationale de Chemin des Fer du Congo (SNCC) hospital, Avenue Kalemie and part of the railroad linking Kalemie to Kindu,

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Lubumbashi and the two former Kasai provinces disappear one day from the geographical map of the city of Kalemie

15. Level of study and reason for the increase in the waters of Lake Tanganyika

Level of study of the interviewee		What is causing the increase in the water level of Lake Tanganyika?					Total
		Lots of trash thrown into the lake	Caused by god	Climate change	human activities	heavy rains	
Primary certificate	Frequency	0	1	0	1	1	3
	%	0,0%	33,3%	0,0%	33,3%	33,3%	100,0%
State diploma	Frequency	6	9	14	8	12	49
	%	12,2%	18,4%	28,6%	16,3%	24,5%	100,0%
Bachelor's degree	Frequency	2	2	9	7	3	23
	%	8,7%	8,7%	39,1%	30,4%	13,0%	100,0%
Graduate	Frequency	1	1	14	3	4	23
	%	4,3%	4,3%	60,9%	13,0%	17,4%	100,0%
Master's degree	Frequency	0	0	2	0	0	2
	%	0,0%	0,0%	100,0%	0,0%	0,0%	100,0%
Total	Frequency	9	13	39	19	20	100
	%	9,0%	13,0%	39,0%	19,0%	20,0%	100,0%

In this study, we found that the quality of the answers was related to the level of education. For this reason, and in the table above, we have tried to match responses to level of study. Thus, and in relation to the causes of the rising waters of Lake Tanganyika, we noticed that the answers of university graduates were in the direction of climate change (Graduates i.e. BAC + 3 for 39%, BAC + 5 for 60.9% and Masters for 100%) while people without a high level of education spoke of the wrath of God as the cause of the rising waters of Lake Tanganyika.

4. CONCLUSION AND RECOMMENDATIONS

This last part of our work presents the summary of our study in the light of the questions put to the respondents and the conclusions drawn from their statements about the rising waters of Lake Tanganyika. It also presents suggestions on the positive and negative effects of the rising waters of Lake Tanganyika on the socio-economic situation of the inhabitants of Kalemie and the surrounding area.

4. 1. General Conclusion

The starting point for this study was the question of the real causes of the rising waters of Lake Tanganyika, its socio-economic consequences for the population of Kalemie and the surrounding area, and how these consequences can be mitigated or reduced.

After analysis of the data collected from 100 people, and as an answer to this question, we found that the rising waters of Lake Tanganyika are caused by climate change (39%), heavy rains (20%), human activities (19%), God's wrath (13%) and the dumping of a lot of waste in the lake (9%).

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The socio-economic consequences of rising water levels include the destruction of infrastructure such as roads, schools, clinics, bars, nightclubs, ports and beaches (67%), massive population displacement (16%), housing problems (7%), the slowdown of economic activities (6%) and the loss of jobs for some people (4%). On the social front, other consequences such as involuntary relocation, in short population movements (48%). This is followed by rising commodity prices (16%) and health problems (12%) due to water-borne and other diseases. Finally, the presence of vermin in the middle of town (10%), such as crocodiles, hippopotamuses, snakes, etc., the death of men (9%) and the interruption of school activities (5%). To carry out this study, we used the following techniques: interviews, survey questionnaires, documentation and direct observations, being present in the field ourselves. A series of recommendations are made on how to mitigate or reduce these consequences.

4.2. Recommendations

In view of the above, and in order to mitigate or reduce the consequences of the rising waters of Lake Tanganyika on the population of Kalemie and the surrounding area, it is therefore essential to adopt a whole range of measures locally, in order to act quickly, decisively and collectively to combat all the consequences of flooding. Any preventive strategy requires motivation at all levels according to Fatma Zohra Haridi (2013). This means, we recommend the following:

1. Stop cutting down forests to mitigate the impact of climate change. Once mankind is threatened by the effects of climate change, it takes its toll on natural resources, including Lake Tanganyika. The practice of activities incompatible with the proper management of these natural resources affects the lake. The cutting of forests by man can lead to erosion and landslides, which play a significant role in the rising waters of Lake Tanganyika,
2. Widen the bed of the Lukuga River to encourage the rapid flow of water from Lake Tanganyika into the Congo River. The higher the water level in the lake, the greater the flow of water down the Lukuga. When the water level in the Lake approaches the level of the Lukuga outlet, the flows become very small and stop when the water level in the Lake is below the Lukuga threshold.
3. Dredge the Lukuga River to increase its depth. The silting-up of the Lukuga River due to erosion and other human activities obstructs the flow of water from the Lukuga, thus playing a role in the rising waters of Lake Tanganyika,
4. Avoid throwing garbage into Lake Tanganyika, as the lake is not a dustbin. With the “plastic bottle” phenomenon and other domestic waste being thrown into the lake, it's obvious that all this waste slows down the rate at which the lake's waters flow,
5. The population of the town of Kalemie being predominantly Christian, a large section of the population believes that prayer can play a role. It will be a question of imploring divine grace to spare the population on the shores of Lake Tanganyika from these kinds of natural disasters.

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