

Higher and University Education
Kindu Higher Institute of Rural Development
ISDR-Kindu

BP:40

Impact of the Management of a Protected Area on the Living Conditions of the Local Population: Case of LOMAMI National Park in the Territory of KAILO / Maniema / DRC

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Abstract:- Our research subject is focused on “The impact of the management of a protected area on the living conditions of the local population in the case of the Lomami National Park in the territory of KAILO / Maniema / DRC”.

As part of our research, we wanted to assess the standard of living of the local population of the Lomami National Park who formerly depended on this forest for their survival, which has become totally protected; as well as the biological diversity that it abounds considering Anthropic activities as a disruptive element, if it is not controlled.

In developing this research, we used the structural-functional method of TALCOTT Parsons, which considers that every social fact plays a function in a social (ecological) system.

Our investigations have shown that the management method of the LNP is not rational and sustainable due to the fact that it does not respect the procedure provided for in the legal texts governing the management of natural resources in the DRC. To the extent that it does not take into account the involvement of the local and/or indigenous community in the process of creating and managing this protected area.

This mode discourages local and/or indigenous communities who are excluded from the management of their natural resources, a mode which violates the regulatory provisions governing legal texts on the management of natural resources; this is the reason why we notice the phenomenon of poaching which arises.

Keywords:- Incidence, Management, Protected Area, Local Community, Local Population and National Park.

I. INTRODUCTION

The history of protected area management dates back to colonial times. It was in 1925 that Albert Park, now Virunga National Park, was created; first park to be created in Africa and second park in the world after Yellowstone Park in the United States of America.¹

It is now established that sustainable management of natural resources cannot be conceived without the participation of populations given that the exclusive intervention strategies recommended since the creation of protected areas in Africa have not produced the expected effects. For several years, different countries have irritated the participatory approach in the management of natural resources : Zimbabwe, Tanzania, Senegal, Mali, etc. and even the Democratic Republic of Congo (and this since 1985).

The participatory approach is not an end in itself, but a set of methodology, using a series of tools which aim to ensure as a priority the conditions necessary for the protection of natural resources and subsequently to contribute to socio-economic development. communities.

Taking into account the importance of protected areas in the DRC and ICCN's overall vision relating to their management, the threats due to demographic and other

¹LOKOMBE D. course notes on Management of protected areas and peripheral zones, 2011.p22

pressures (conflicts, wars, unemployment, etc.), ICCN has resolved to adopt a national strategy for the conservation of biodiversity in protected areas, which expresses its determination to play a major role in the preservation and rational and sustainable use of natural and cultural resources for the benefit of present and future generations and the entire humanity. Among the programs on which this strategy is based, there is the promotion of the involvement of the local community (community conservation). This program can only be achieved through strategic planning which justifies the socio-economic improvement of the living conditions of the local population.

The Maniema in question for the Lomami National Park is its installation in relation to the socio-economic development of the population, always in search of forest areas with forestry possibilities. Added to this is the concept of sustainable management of protected areas as well as biological diversity, flagship species of the DRC and species specific to Maniema.

In relation to the socio-economic development of the environment which is required, this creates a paradox where the sustainable management of biological diversity should not be a fashionable discourse, but it is a way of conceiving human activity, on the three principles (precautionary principle, principle of double solidarity: present and future generation, principle of democracy and transparency (participatory management).

➤ *Considering all of the above, it is then up to us to ask a certain number of questions such as:*

- What would then be the impact of the installation of the Lomami National Park on the local population in the Kailo territory?
- What could be the benefits expected by this population?
- What would be the ICCN's strategies to maintain harmony with this local population of the Lomami National Park ?

➤ *Referring to the questions asked and taking into account the living conditions of the local population of the PNL, we formulate our hypotheses as follows:*

- The creation of the PNL would have more ecological than socio-economic impact on the entire local population;
- The local population expected their socio-economic living conditions to improve by creating the PNL;
- The ICCN's strategies would be to involve this population in a management of this protected area.

We are focusing this research on the impact of the management of a protected area on the living conditions of the local population; case of Lomami national park ; globally, we want to assess the standard of living of the population bordering the Lomami national park who once depended on this forest for their survival, which has become totally protected; as well as the biological diversity that it

abounds considering Anthropoc activities as a disruptive element, if it is not controlled.

➤ *Specifically, this research aims to:*

- Determine the links between the PNL and the surrounding population;
- Determine the impact of the creation of this protected area on improving the living conditions of the local population;
- Identify the areas in which we can carry out actions and/or provide support with a view to creating new sources of income and thus reducing pressure on the natural resources of the LNP.

The choice of the theme was not a coincidence. It was of course motivated by several reasons including scientific and social reasons.

For scientific reasons, we must note that in this century when the DRC signs several regional and international agreements and/or treaties on the management of natural resources, as an informed ecologist should look into the question of the different assistance received in order to check their sustainability and rationality during management.

Ultimately socially, the poverty of the local and/or indigenous population of the PNL is only getting worse while large sums are paid throughout the day to improve their living conditions.

➤ *The problem of managing protected areas in the DRC on improving the living conditions of its local and/or indigenous population is very relevant and worthy of being the subject of our study. We want to enlighten public opinion on the consequences of excluding the population from the enjoyment of their forest which has become Lomami national park . Thus the importance of this study has a double interest, namely:*

- On a scientific level: we believe we have provided our institution with such an important document which will serve as a source of inspiration and reference for other researchers who will come after us and who will have to work on a subject similar to ours.
- On a practical level: study can allow the ICCN to establish strategies to involve the local community in the management of protected areas in order to combat any attempts to disrupt rational and sustainable management of protected areas.

To be precise and finding it impossible to carry out our research from the beginning of time to the present day and in all corners of the planet, we delimited our study on the spatial level, the Lomami National Park , territory of Kailo, province of Maniema because the park itself is located in their province in the province of Tshopo in the territories of Ubundu and Opala and in the province of Maniema in the territory of Kailo;

- In terms of time 2016-2017, already one or existence because the Lomami National Park was created by Decree No. 16/024 of July 19, 2016.

II. ENVIRONMENT, MATERIAL AND METHOD

A. Presentation of NLP

Nature conservation in the DRC dates back to the colonial era when Albert Park (currently Virunga National Park) was built on April 21, 1925, the first National Park in Congo and Africa.

In 1934, the Institute of National Parks of Congo-Belgium (IPNCB) was created to manage protected areas during the colonial period²

In 1967, the IPNCB was renamed “National Institute for Nature Conservation” INCN and subsequently “Zairian Institute for Nature Conservation” (IZCN) by Ordinance – Law No. 75-023 of July 22 1975. Its status was modified and supplemented by law no. 078-190 of May 5, 1978 establishing the status of a public enterprise called the Zairian Institute for Nature Conservation (IZCN) and governed by law order no. 78-002 of February 6, 1978 laying down general provisions applicable to public companies. As such, the IZCN enjoyed its own legal personality with financial and administrative management autonomy.

It was only in 1997, when the Republic of Zaire became the Democratic Republic of Congo, that the Institute took its current name of Congolese Institute for Nature Conservation, acronym ICCN.

Since 2010, the ICCN has been transformed into a public establishment under Decree No. 10/15/of April 10, 2010 which established its statutes and defined its corporate purpose. Thus, it is also governed by Law No. 08/009 of July 7, 2008 laying down general provisions applicable to public establishments.

And as in the past, the ICCN has its own legal personality with financial and administrative management autonomy.

B. Legal Status of Nlp

Decree No. 16/024 of July 19, 2016 creating the Lomami National Park, “PNL” in acronym; considering the conclusions of the reports of ecological and socio-economic studies motivating the classification of the species of this forest which abounds several floral and faunal species, in particular certain endemic species threatened with extinction such as the forest elephant (*Loxodonta adriana cyclotis*), the Bonobo (*Pan paniscus*), the Congolese peacock (*Afropavo congensis*), Okapi (*Okapia janstoni*), and a species of cercopithecus monkey lomamiensis (*Lesula* in local language), recently discovered and endemic to the forests between the Tshuapa and Lomami basins.

C. The Geographical Coordinates of the P.NI

Balanga sector, in the Province of Maniema, as well as in the territories of OPALA in the YAWENDE Loolo and Balinga sectors Lindja and UBUNDU in Walengala sectors Wabira, Mituru basikate, Mituka bamoya, Walengala Lowa in Tshapa Province, a fully protected forest area called “Lomami National Park” The PNL thus created as an area of 8,874 km². The limits are as follows:

➤ Part of Maniema Province

• 1° In the West :

In the territory of Kailo: the territory of kailo : the Lomami river, from its confluence with the Lohambo river, downstream, to its confluence with the MAMBU river, which constitutes the limit between the Maniema Province and the Tshopo Province on the right bank east of the Lomami River .

• 2 ° To the North:

In the territory of Kailo: the limit between the Province of Maniema, territory of Kailo and the Province of Tshopo, territory of Ubundu, from the confluence of the Mambu river with the Lomami river, bers l East following the provincial boundary to the confluence of the Okopo and Babiye rivers.

• 3 ° In the East:

✓ In the Territory of Kailo:

From the confluence of the Okopo and Bobiye rivers, the Okopo river, to its source. From the source of the Okopo River, a straight line southwards to the northern source of the Liseke River until its confluence with the Bopete River. From this confluence, the Bopete River to its source. From this source a straight line southwards to the source of the Luidjo River upstream to its source. From the source of the Luidjo River, a straight line south to the source of the Omundju River.

• 4 ° In the South:

✓ In the Territory of Kailo:

From the source of the Omundju river, a straight line towards the southwest to the eastern source of the Lodja river, also called, Djongo. From its eastern source, a straight line westwards to its southern source. From the southern source of the Lodja river, a straight line towards the North-West to the source of the Touvandje river. From this source, a line towards the North-West to the source of the Ndjidi river. From this source, a straight line towards the North-West to the source of the Okamba River. From this source, a straight line northwestwards to the source of the Lohambo River. From its source, the Lomami River.

D. Brief Overview on NLP Biodiversity

By addressing this point here we want to show the intention which led to the creation of Lomami Park, taking into account its biodiversity.

² Royal Denet of 11/26/1934

To this we explain the term “BIODIVERSITY”. It is the totality of all variations of all living things. According to scientists, biodiversity is the dynamics of interactions in changing environments.

It is divided into “economic diversity (environments) and genetic diversity.

➤ *This Definition Highlights Two Essential Notions:*

• *Biodiversity:*

It is all living things, of which man is a part, where man who is endowed with intelligence is at the center of the management of preservation or degradation, deforestation, its development;

• *Biodiversity:*

It is the dynamics of interactions. If we now talk so much about biodiversity, it is because of essential interactions including those caused by anthropological activities.

This definition leads us to understand that protecting nature means protecting the ability of living things to adapt. To this, by a species which will disappear, many interactions disappear. Deleting a species is therefore changing the course of things, an attack on the maintenance of biophysical (ecological) balance.

E. Wildlife Species

In the PNL forest, biodiversity is abundant, the fauna particularly abundant and diverse. A large evergreen forest crossed by streams and the Lomami River.

With its abundance and serious diversity of flagship and specific species of the park, the park constitutes a major wildlife center of the country; hence the importance of its classification as a protected area.

➤ *There We Find in Particular:*

- Forest elephants (*Loxodonta africana*)
- Forest buffalo (*Syncerus coffer*)
- Chimpanzees (*Plan troglodites*)
- Leopards (*Pautère pardus*)
- Hippos (*Aquatic Hypopotamus*)
- Warthog (*Phacoerus acthiopicus*)
- Small and large duikers (*Cephalophus sp*)
- Red Pond Pig (*Patamocherus sp*)
- Etc...

➤ *Reptiles: lizards, crocodiles, snakes, turtles , verans , etc.*

➤ *Primates: Cercopithecus sp , Colobus sp , Lesula Lomami ;*

➤ *Fish, bacteria, rodents small and large.*

According to field surveys, 59 species of large mammals were counted, apart from the Salonga National Park (Ecuador), the Lomami National Park hibenge the second largest population of forest elephant (*Loxodonta Africana cyclotis*) in the central bowl.

Bonobos (*Pan paniscus*) and chimpazes (*Pan troglodites*) are distributed across the two banks of the Lomami River, the park appears to be a large center of primates with less than ten species on these two banks and these subspecies including the center Lesula newly discovered appears endemic and is found only in forests between the Tshopo and Lomami rivers .

To this species is added the less elegant sign (*Ercopithecus elegaus*) having an ecological valence limited to the Kasuku River basin, the Lomami colobus (*Piliocolobus australi parmentière*) and many other species in the East and the Tshuapa gnawing colobus (*piliocolobus tholloni*) west of the Lomami .

A population of hippopotamus (*hipopotamus amphibus*) is represented in the Luidjo and Lomami rivers.

The results of available studies count 24 species of birds to date, such as parrots (*Psilacus africanum*), the Congolese peacock (*Pavo congensis*), the black guinea fowl (*Niger phasi*), etc...

F. Floristic Species

The PNL is covered by the great equatorial forest teeming with several floristic species interspersed by mixed forests dotted with predominant species from the recognized upper and middle strata such as:

- *Chlorophora excelsa* ,
- *Entandrophragma cylindricum* ,
- *Pericopsis elata* ,
- *Alstonia boonei* , (*Mutondo*)
- *Picnatus angolensis* ,
- *Rilcinodendron heudelotii* ,
- *Millicia excelsa* (iroko)
- *Khaya anthothena*
- *Gilbertiodendro dewevrei* (*Limbalu*)
- *Scordophleus Zenkiri*.

This forest massif is one of the rare ones that has not yet been anthropized . In the Maniema forest zone dominated by vast expanses of dense forests tilting to varied dominance forests and different biotopes, Fabaceae species are represented in variety, significant expanses of flooded forests of the Alps of small sizes surrounding the savannas. The existence of grassy savannas is probably linked to edapho -climatic conditions , particularly in the south-eastern part at the limit with the Sankuru reserve. In an ecosystem where several biotopes are represented and this favors a wide range of flora and fauna species.

However, it is important to emphasize that until now in-depth studies on the fauna and flora of the LNP have not been initiated.

G. Hydrography of Lomami National Park

The hydrography of the Lomami National Park is more exceptional in the country, includes several rivers which feed four major rivers including the Congo River and the Lomami, Tshuapa and Luidjo rivers. These main rivers are fed by some small rivers such as : the Likese , Tekolo , Oteketo , Njidi , Omundju , Djongo , Towandje , Okamba , etc. rivers.

The relief is made up of low plateaus and plains often flooded in the rainy season. This relief is marked by chains of hills which separate the Lomami basin and that of the Tshwapa in the western part, latitude of the large part of the

site varies between 450 and 500 m and reaches 700m in the hills.

As for the climate, it is equatorial in the North and West in the province of Maniema and humid tropical in the equatorial zone of the eastern province. This climate in the province of Maniema is characterized by a long rainy season which goes from August to May.

H. Population

Our study is centered on the territory of Kailo, precisely the part occupied by the Lomami national park including the Balanga sector and the chiefdom of Bangengele.

Table 1 Identification of Entities Affected by Classification (Maniema).

Sector/Chiefdom	Name of the Group	Residents
- Bangengele Chiefdom	- Tshadi Group	4800
	- Tshambi Group	15,450
	- Kori Group	7,832
	S/Total Bangengele	28,082
- Balanga sector	- Basikamba Group	3,600
	- Basibwamba Group	9,280
	- Bakuti Group	11,010
	S/Total Balanga	23,890
Total: 51,972 inhabitants.		
Source: provincial interior division, 2017 report.		

III. METHOD

To carry out this scientific study, we based ourselves on a methodological approach which announces the principles to be respected in the presentation, collection and interpretation of the results. In other words, the methodology to be adopted must guarantee the alternation of the most reliable data possible taking into account financial constraints, the time allocated, the personnel and the equipment available.

➤ *In developing this work, we used the structural-functional method of TALCOTT Parsons, which considers that every social fact plays a function in a social (ecological) system. Tolcott 's structural-functional method is based on the following general postulates:*

- Any society, community, organization is an integrated system of elements, that is to say stable and permanent;
- Each element assumes its function in maintaining the system;
- Any functioning social system is based on the consensus of its members around fundamental values and norms.

➤ *Techniques*

As for the techniques as data collection tools, our method used was supported by the following techniques:

- *Documentary Technique :*
it is centered on the family and results from the useful information that the archives contain. Among these documents, we have works, journals, articles, ordinances, treaties, decrees, the official journal, etc.

We have given pride of place to the archives of ICCN, GIZ, TL2 and the Provincial Coordination of Environment and Sustainable Development which constitute for us indicators in the context of carrying out this work.

- *Questionnaire Technique :*
We used the questionnaire technique to which the interviews and/or surveys were supposed to respond orally or in writing.
- ✓ *The questionnaires were aimed at two categories of people: populations living near the PNL and ICCN agents.*

IV. PRESENTATION OF THE RESULTS

This part focuses on the presentation of data.

Table 2 Activities Carried Out by the River Communities of the LNP

QUESTION	ANSWERS	EFF	%
What types of activities do you carry out	Hunting	26	43.3
	Substantial fishing	04	40
	Agriculture	24	6.6
	Fish farming	02	3.3
	Carbonization	02	3.3
	Small businesses	02	3.3
TOTAL		60	99.9

This table shows that out of 60 surveys, 26 people, 43.3% of respondents practice the class on a large scale following a high biological diversity of fauna and the failure to take this community into account in the management of this protected area, in second place, it is mainly itinerant agriculture on palus which used by 24 respondents or 40% of respondents which remains the main activity surrounding the park,; the choice to place their different fields comes down to its importance, the culture then the expected yield and the objective sought.

Fishing, especially substantial, is practiced by 4 people of our respondents, i.e. 6.6% of those surveyed are done in surrounding rivers or streams for fish farming, carbonization as well as small business remain activities carried out by some of our respondents.

It appears from this table that class and agriculture are two activities which have repercussions with different influences, all the influences combined negatively exert the natural forest possibility; if these activities are not controlled.

Table 3 Hunting Practiced by the River Populations of the LNP

QUESTION	ANSWERS	EFF	%
What types of hunting do you do?	Rifle hunting	28	46.6
	Hunting by trapping	18	30
	Hunting by dog	08	13.3
	Bushfire hunting	06	10
	Others	0	0
TOTAL		60	99.9

Analysis of this table tells us that 46.6 % of hunters use firearms for hunting, the reason given remains the high productivity of a firearm. Compared to other types of hunting, on the other hand, 30% estimate that they use the trapping technique given their tradition and the ease of setting traps compared to the purchase of a firearm and its ammunition, although a trap can take too long to capture game and other traps require monitoring and maintenance until capture,

Finally, the result of this table shows us that 10% of our respondents use other types of hunting, which are among others bush fire, poisoning of hunting areas, for animals of greater economic interest. that is to say animals with ivory horns or multiple uses, skin, urine...

This is to signify that this last practice contributes negatively to the destruction of biological species because any species which passes through it and grazes on these poisoned plants will only have a limited lifespan with various consequences on the faunal and floristic structure and the influence of this poison on water, pedagogy, structure, composition and texture of the soil.

Table 4 Anthropic Effects in the Forest Environment

QUESTION	ANSWERS	EFF	%
What are the anthropogenic effects in the forest environment?	Deforestation	12	20
	Degradation	12	20
	Fragmentation	12	20
	Loss of productivity	08	13.3
	Pollution of certain watercourses	04	6.6
	Reduction in allowable forestry	12	20
TOTAL		60	99.9

We note from this table that the anthropogenic effects, fruits of itinerant slash-and-burn agriculture, creation of villages, cutting of construction timber, heating, illegal hunting or poaching have a negative impact on renewable natural resources through deforestation, degradation, fragmentation of the forest estimated at 60% because these are combined changes and this reduces forest wealth to 20% in the environment.

These same consequences of these anthropogenic effects cause a loss of soil productivity estimated at 13.3% on the other hand the population of certain watercourses estimated at 6.6% because illegal fishing practiced in certain watercourses by some poachers.

Table 5 The Living Conditions of the Populations Linked to the Implementation of NLP

QUESTION	ANSWERS	EFF	%
What are the socio-economic impacts linked to the implementation of the PNL on the local population?	School	06	10
	Sanitary	06	10
	Document specifications	06	10
	Surrounding Ed.	05	8.3
	Road infrastructure	02	3.3
	Job creation for the local population (daily)	25	41.6
	Economy	02	3.3
	None.	08	13.3
TOTAL		60	99.8

It appears from this table that the opinions of the local and/or indigenous population are negative in relation to the implementation of the PNL, this is reflected in 80% of respondents believing that they do not enjoy their forest, that is to say i.e. Lomami Park. Access is reserved, seeing the location, its impact on schooling, environmental, health and economic education is not visible and this is less than 10%.

In the creation of employment by the local community is not real except by certain local residents who are used as workers for all work and paid daily, while the local communities do not benefit from this protected area, although the park also has a role for the living conditions of the populations of an environment, and consequently poaching can only be supported by this same population.

Table 6 Areas in Which New Sources of Revenue Have Been Created

QUESTION	ANSWERS	EFF	%
What are the areas in which new sources of income have been created?	Fish farming	12	20
	Breeding of small livestock (pigsty, etc.)	08	13.3
	Poultry breeding (chicken coops, etc.)	05	8.3
	Market gardening	13	21.6
	Microcredit	10	16.6
	None	12	20
TOTAL		60	99.8

The analysis of this table shows us that out of 60 respondents, 13 people or 21.6% practice market gardening learned by the park managers, 12 respondents or 20% practice udder cultivation using learned fish farming techniques.

population, while 16.6% of our respondents do small businesses thanks to training learned from microcredits.

Raising small livestock, especially pigsty and raising poultry (chicken coops), is practiced by a minority of the

However, 12 of our respondents, or 20%, are of unfavorable opinion and do not see any area in which new sources of income can be created; this is explained by the fact that they are too attached to custom while considering that the forests belong to the ancestors. They are negative to any development project.

Table 7 The Importance of LNP in The Province of Maniema, in the DRC and on an International Level

No.	QUESTIONS	ANSWERS
1	What justifies the creation of the PNL or the importance of the PNL in Maniema in the DRC and on the international scale?	<ul style="list-style-type: none"> - Living environment of various species (endemic, endangered) - Air purification source - Tourist environment - Scientific laboratories and pharmacopoeias; - Sites presenting biodiversity useful for humanity (Okapi, lesula, bonobo)
2	Wasthe local and/or indigenous population involved in the process of creating the PNL?	- The local and/or indigenous population is involved in the process of creating this park because the PNL was created using the CCIP method process, i.e. the free and prior informed consent of local communities.

3	What measures should be taken to ensure that the local population takes ownership or actively participates in the management of the LNP?	<ul style="list-style-type: none"> - Involvement of local communities in the management and protection of protected areas, - Improved relations between local communities and LNP managers; - Compliance with specifications signed between local communities and park managers, - Fair sharing of income.
4	Among the measures taken, what are the projects (executed or in progress) to support this community bordering the PNL?	<ul style="list-style-type: none"> - Projects executed: <ul style="list-style-type: none"> • Training of local populations in fish farming with 5 pilot fish ponds; • Training in poultry breeding, • Popularization of adapted cultural techniques, - Projects currently being executed: <ul style="list-style-type: none"> • Opening of agricultural service roads along the Dingi axis , • Construction of a reference health center in...

V. DISCUSSIONS

The objective of this work was to analyze the effects of the implementation of the PNL on the living conditions of local residents. This work highlighted a protected area as a natural resource with its various roles: scientific, ecological or environmental laboratories and in addition, among others, as sources of foreign exchange and therefore; change in living conditions.

The sampling method or survey protocol was submitted to the local and/or indigenous population and to ICCN staff who are the manager of the PNL.

Generally speaking, our results showed the links uniting the local population with the LNP and the natural resources which are in the Lomami forest having been the subject of a protected area.

Indeed, the galloping poverty of the local population, the majority of whom only live from unsustainable agriculture, illegal hunting or poaching, carbonization or cutting of firewood or construction wood, and subsistent fishing have remained the only resources available . food self-sufficiency, although the population is very far from having economic, social, health, ecological or educational stability, we must emphasize the isolation of the environment where accessibility is not easy.

In relation to its influence on the living conditions of the populations, the areas of our respondents are negative, especially since the specifications in which the duties and obligations of each stakeholder are recorded are not discussed or signed with the community, that is to say

- The principles of community conservation must be put in place in order to achieve the objectives assigned to a protected area.

Taking into account anthropogenic activities, our results showed the impacts of these activities through deforestation estimated at 20% with knock-on effects including the loss of soil productivity and the population of certain local residents.

The overexploitation of natural resources by humanity following strong demographic growth and poverty has increased in recent years, leading to enormous changes in ecosystems, which also have repercussions on the climate, biodiversity and land use. (NYEMBO.A, special environmental questions course, L2 ISDR-Kindu 2018).

This rate of consumption of natural resources exceeds their rate of renewal. In fact, around 90% of the population living near protected areas essentially depends on forests for their livelihood (Berganzine , JC and Lannly , JP, 2000).

According to CLEMENT (1986), approaching in the same direction as us and finding that wood is the fuel most used by the populations of developing countries and each family depends on firewood for its substance, the poverty of the major part of the population (rural and peri-urban or urban) prohibiting them from accessing other available sources of energy.

Faced with the threats that autoerotic activities pose to the forest around protected areas in terms of its biodiversity, if the principles of low negative impact exploitation are not put in place, these activities could compromise the objectives set for a protected area and its influence on the living conditions of the environment, that is to say the State via its institution ICCN must take into account the ways and means to define the mode of access to the natural resources of a protected area by the local community both in ensuring its sustainability.

As part of improving the living conditions of the local population, the equitable sharing of income must have an impact on the rational and sustainable management of the natural resources of a protected area, which requires participatory democracy and the need to raising the level of formation of environmental and intellectual education. This is explained by the fact that John MORALE considers that the problem of the economy of environmental resources no longer arises in terms of their exploitation but rather in terms of the distribution of income resulting from this exploitation of environmental resources.

VI. CONCLUSION

We have reached the end of our research which focused on the impact of the management of a protected area on the living conditions of the local population. This study carried out in the Lomami National Park was concerned with evaluating the standard of living of the population of the PNL in the territory of Kailo in the enjoyment of their forest which has become a park in order to propose strategies to standardize rational and equitable management. to hope for sustainable development.

To achieve our objective and verify our hypotheses, we used the structural-functional method of TALCOTT and documentary techniques in order to conduct a free interview with the local populations of KAILO.

➤ *We Formulated Our Hypotheses According to which:*

- The impact of the creation of the PNL would be more on an ecological level than a socio-economic one in relation to the entire local population.
- The local population would expect their socio-economic living conditions to improve by creating the PNL; something that was not done;
- The ICCN's strategies would be to involve the local population in rational and sustainable management of this protected area.
- After analyzing the data collected, we arrived at the following main results:
- The links uniting the local population and the park managers are the mutual resources of the Lomami forest which have been the subject of a protected area;
- The galloping poverty of the population bordering the park is very difficult to have economic and social stability, and above all we must emphasize the isolation of the environment where accessibility is not easy;
- As part of improving the living conditions of local populations, the opinions of our respondents are negative, especially since the specifications in which the duties and obligations of each party are recorded are not discussed or signed with the community. This is why the projects that should support this community are not carried out and the community is unable to participate in the management of this protected area.

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