



International Journal of Research in Academic World



Received: 10/September/2024

IJRAW: 2024; 3(10):104-113

Accepted: 17/October/2024

Biodiversity Conservation and Indigenous People Involvement in the Park Benefits-sharing: A Case of Batwa of Mikeno Sector around Virunga National Park, DR Congo

*¹Bakole Y Eliode, ²Twinamatsiko Medard, ³Clementia Neema and ⁴Denyse Snelder

¹Ph.D. Student, Department of Law, Economics and Governance, Utrecht University, Utrecht, Netherlands.

²Lecturer and Project Director, Centre for International Cooperation, Vrije Universiteit, Amsterdam, Netherlands.

³Director of Innovation and Technology Transfer (CITT), Graduate Studies Coordinator in the Faculty of Interdisciplinary Studies, Mbarara University of Science and Technology, Mbarara, Uganda.

⁴Senior Lecturer, Department of Human Development and Relational Sciences, Mbarara University of Science and Technology, Mbarara, Uganda.

Abstract

This study examined the Involvement of Indigenous People Batwa of the Mikeno sector in the Virunga National Park benefits-sharing, in DR Congo. Despite efforts to conserve biodiversity, there has been a decrease of species in the ViNP and little attention is paid to involve local communities including indigenous Batwa people. These communities express concerns over their lack of participation in the nomination, declaration, and management of world heritage sites. The study used a mixed-method approach in which descriptive and exploratory research designs were utilized. Results revealed that the ViNP benefit-sharing with Batwa is in terms of community projects. However, the Batwa are still living in poverty, their involvement in the benefit-sharing and access to jobs in the park are limited due to their low level of education. The sharing of revenues linked to the benefit of the Park is not yet well defined. According to the draft of the Virunga National Park's management plan, 30% of revenue from tourism must go to the communities. The study recommends first improve their level of education, implement the Batwa employment strategic plan, urgently approve and implement the ViNP management plan, implement a proposed park benefit-sharing scheme and a compensation plan.

Keywords: Biodiversity conservation, indigenous people, involvement, benefit-sharing.

1. Introduction

The unique and extraordinary feature of the earth is its biodiversity (Rands, 2010) [22]. Biodiversity is known as the variety of genes, species, and ecosystems that constitute life on earth by providing numerous essential services including material goods (for example, food, timber, medicines, and fiber), underpinning functions (flood control, climate regulation, and nutrient cycling), and nonmaterial benefits such as recreation (Rands, 2010) [22]. Today scientists have described approximately 9 million species (plants, animals, etc.) (Cardinale *et al.*, 2012) [3]. New species appear on daily basis but existing species go extinct at a rate 1,000 times that of species formation (Husain, Vishwakarma, & Rathore, 2018) [10]. Even though the conservation paradigms, practices, and policies have been variably successful, the loss of biodiversity is still permanent (Rands, 2010) [22]. This loss is the result of overexploitation, pollution, and invasion of alien species, global climate change, and inappropriate policies of

biodiversity conservation which sometimes do not take into consideration the needs of local communities (Hens, 2015) [7]. Despite the continuous loss of biodiversity, 350 million of the world's poorest people depend almost entirely on forests for their survival (Husain, Vishwakarma, & Rathore, 2018) [10]. In India for instance, the involvement of the local community living in and around the forest areas is an imperative need for the conservation and development of forests. The Joint Forest Management is that involving local communities in the management of forests, has led to more effective biodiversity conservation and poverty alleviation in the country (Husain *et al.*, 2018) [10]. A total of 14.5 million families are involved all over India (Husain *et al.*, 2018) [10].

Indigenous people and other communities living in and around forests and depending on them are approaching 60 million people worldwide (Husain *et al.*, 2018) [10]. Indigenous people are those having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories; consider themselves distinct from other

sectors of the societies now prevailing in those territories, or parts of them. (UNDG, 2009) ^[27]. However, the majority of national parks, forests, reserves, and protected areas throughout the world have been established in the customary territories of Indigenous peoples (Stevens, Stan, 2014) ^[24]. Priority has been given to animals, trees, and other resources and Indigenous Peoples have found themselves denied, evicted, and forcibly removed from their traditional land. Indigenous people have seen their cultures and practices not taken into account, their livelihood was taken away, while opportunities to benefit from their knowledge, values, and practices have been squandered (Stevens, Stan, 2014) ^[24]. Despite their world-given legitimate rights recognized by the United Nations Declaration on the Rights of Indigenous Peoples adopted in 2007 by the United Nations General assembly, (rights to self-determination, to autonomy, self-government the right to participate in decision-making, Cultural rights and identity, access to land...), people around protected areas are in one way and the other considered as a mere threat to biodiversity conservation efforts, instead of being welcomed as an opportunity, whose involvement is *prima facie* essential for sustainable biodiversity conservation. The involvement of the Indigenous peoples in the benefit-sharing is done by recognizing their rights, investing in sustainable livelihoods for forest people as it is a case for the Indigenous People of the Amazon. The latter was awarded budgetary outlays for social services such as healthcare and education and in the end, by developing and implementing national protected area management plans and application of national policies that are participative and favouring Indigenous People for better management of Protected areas which depends on the strength and stability of the economies surrounding them (PA) as well. Even less represented, the recognition of the contribution of Indigenous People to biodiversity conservation has helped preserve biodiversity as requested by the national parks. This recognition of indigenous rights is resulting in success in many countries worldwide. In Nepal for instance, as in many other parts of the world, Indigenous people are protecting sacred natural sites for their worships, they collectively manage forest, parks and maintain sustainable land-use practices even after their territories have been expropriated and made state-administered protected areas. In Africa, Indigenous people have specific cultures and modes of production that are distinct from the groups that dominate political, economic, and social power (Mukasa, 2014) ^[16]. The term “indigenous peoples” is a human rights construct, which has been contextualized for Africa by the regional human rights body, known as the African Commission on Human and Peoples’ Rights. These are mostly hunter-gatherers and nomadic pastoralist communities. In its conceptual Report of 2005, the African Commission concludes that the term indigenous peoples is a concept through which those groups among the variety of ethnic groups within a state who experience particular forms of systematic discrimination, subordination, and marginalization because of their particular cultures and ways of life and mode of production. However, in the Great Lakes region of Africa, the severe inter and intra-state conflicts of the past decade have undermined

the livelihoods and culture of Batwa. In Uganda for instance the 2002 census registered less than 7,000 Batwa or 0.03 percent of the population but the situation of the Batwa discredits Uganda since their eviction in the early 1990s (Mukasa, 2014) ^[17]. Called the Twa: a singular form of Batwa (plural), Mbuti, or Bayanda in the Democratic Republic of Congo, the question of whether they are real actors of the forest management in the Congo basin is still pending. At the same time, community participation has been in the past century requested to address the loss of biodiversity without increasing the precarious state of the population often entirely dependent on natural resources. This situation is still affecting Indigenous people despite the implementation of mechanisms of involvement of local communities in forest management through a proper park benefit-sharing model but also in the advances to secure and enjoy their rights on the ground. Nevertheless, only 37.1% of the Indigenous Batwa people understand the importance of the Park and show the need for their involvement in its management and biodiversity conservation (RAAD, 2012) ^[21]. However this involvement of the Batwa in the park benefit-sharing by the Park manager is proven at a lower proportion as well (RAAD, 2012) ^[21]. The above situation of Batwa is still raising many questions even though the United Nations has committed its steadfast support to a better future where all indigenous peoples will enjoy peace by being at the forefront of the management of the protected area, where they will enjoy human rights, well-being, where they will be recognized and be welcomed as partners but their situation on the ground is still alarming (Mcneely, 2005) ^[15]. The Indigenous People’s requests transcend and go beyond conservation and aspire to integrated wellbeing encompassing a healthy ecosystem (Alcorn, 2010) ^[1]. Therefore, this context gives the rationale for this study to examine the involvement of indigenous Batwa of the Mikeno Sector in the Virunga National Park’s benefit sharing for sustainable biodiversity conservation.

2. Study Area and Methods

a) Study Area

This research was conducted in the Mikeno sector which is part of the Southern sector of the Virunga National park (Mikeno and Nyamulagira Mountains), 29° 21’ E-29°36’ E and 1° 20’ S-1° 31’ S, and forms a set of the non-active Congo DR volcanoes. The Mikeno sector is contiguous to the Volcano National Park in Rwanda and the Mgahinga Gorilla National Park in Uganda. This sector corresponds to the Virunga Massif that shares borders with Rwanda and Uganda, three of which are listed as World Heritage sites with more vertebrates than any other single set of contiguous protected areas in Africa. This sector is within the North-Kivu province in the Eastern Democratic Republic of Congo. It is the Greater Virunga Landscape (GVL) in Rutshuru and Nyiragongo territories; in the Bwisha and Bukumu chiefdoms. The 5 *Groupments* where the research was conducted are *Kibumba, Rugari, Kisigari, Bukoma, and Jomba* all in the Mikeno sector. These Groupments were the targets of this study because of the number of Batwa living in, their proximity to the ViNP but also their appurtenance to the GVL.



Source: Primary data, 2020

Fig 1: Map of the Mikeno Sector of the Virunga National Park and Batwa villages

b) Methods

This study examined the involvement of indigenous Batwa of the Mikeno sector in the Virunga National Park benefit-sharing, in the Democratic Republic of Congo. The study used a mixed-method approach in which descriptive and exploratory research designs were utilized. The study had four types of respondents, the Indigenous Batwa households, and the key informants inter alia the Protected Area Authorities, the Civil Society Organizations (CSOs), and the local leaders. Qualitative survey data was analysed using atlas ti8. This software helped generate the codes, the themes, the meanings, and the network of the transcripts. For the quantitative survey data, SPSS-22 was employed and the latter helped generate the frequency tables, the means, and standard deviation. This study targeted the indigenous people Batwa living in the 5 *groupements* that were selected because of their proximity to the Virunga National Park in the Mikeno sector and the presence of the Indigenous People Batwa. The population also involved the Virunga National Park managers (ICCN, the WWF/Goma), the local leaders and the CSOs.

The total households of Batwa found within the 11 villages (*Hehu, Nyesisi, Sesero, Kashwa II, Nyarubande, Maya, Biruma, Ruhimbi, Bunagana, Kagenda I, and Munanira*) that are comprised within the 5 *groupements* were estimated to be approximately 130 after a verbal conversation with local leaders and CSOs. The final sample was then drawn out of the 130 households. From the 5 *groupements* the total sample size was then 87 households on the side of Batwa, 7 local leaders were purposively selected because of the usefulness of the information they possess and their position in the community. Seven representatives of CSOs working with the Batwa and 3 Protected Areas Authorities. The selection of these key informants was intended to be based on the gender differences; unfortunately, 16 keys informants out of 17 were found to be male. The simplified formula for proportions of Taro Yamane (1967) used by (Polonia, 2013) helped to determine the final sample size of the batwa households. Two key informants from ICCN was interviewed, 1 from the WWF/Goma, 7 local leaders from each *groupement* and 7 Civil Society Organizations working with Batwa. The

purposive sampling was used to select these key informants but also the simple random sampling to select the Batwa and give the chance to every individual to be a respondent in this study.

The five *groupements* are inter alia: Kibumba, Bukoma, Kisigari, Rugari and Jomba. These *groupements* was chosen because of their appurtenance to the Mikeno sector, their proximity to the Virunga National Park and because of the presence of Batwa as it was mentioned earlier. The probability sampling was applied, simple random sampling where every member of the population aged 18 years and above had equal chance of being selected as participants in this research. It referred to the semi-structured questionnaires (including closed-ended and open-ended questions for broad explanations), targeting the Batwa. The study involved the ethnographic method, such as observation. Observation method helped interpret and discover some unspecified useful information. In the end it focused on the secondary data mainly from existing research and other documents that include articles, websites and books, reports on Indigenous Peoples (IPs). Before the collection of the final data, a pilot study was conducted and the remarked differences were adjusted in the data collection tools. This research utilized 7 research field assistants who were selected based on the field experience and the appurtenance to the Mikeno sector.

Results

Indigenous People Involvement in the ViNP's Benefit-Sharing (ViNPBS)

Based on the interview realized with the WWF/Goma key informant on 1 September 2020 in Goma, it is estimated that 30% of the revenue from the park's activities is meant to be shared with the local communities who reside in the surroundings of the protected areas for a sustainable conservation. The revenue can be shared in many forms. It can be in terms of cash or in-kind, employment, local infrastructures, and livelihoods. All in all, this section tries to understand how the park revenue is channeled to local communities especially to the Batwa.

Regarding job opportunities in the park, it is noted that 76(87.4%) (n=87) of Batwa have never worked for the Virunga National Park. Only 11(12.6%) have got a job opportunity in the park. The possibility for the Batwa to have a job in the park depends on many factors as mentioned by some of the key informants in this study.

The main factor is education. This would help the Batwa to have knowledge that can help them face the highly competitive job opportunities in the park. It also depends on the courage, straightforwardness, and willingness of the Batwa to work as it was emphasized by a male key informant in Bukoma.

<p>Box 1: Park Authority’s point of view on the discrimination of Batwa when it comes to job opportunities</p> <p><i>...peut être ils ne sont pas informé par exemple, mais quand même quand un Mutwa se présente ici et qu’il ya l’opportunité de travailler, on doit l’accueillir...</i></p> <p>Translated as: <i>... maybe they are not informed for example, but still, when a Mutwa shows up here and there is the opportunity to work, we must welcome them...</i></p> <p>(A male key informant and ViNP staff interviewed in Rumangabo/Kisigari, August 2020.)</p>

From Box 1, it is showed that the willingness of Batwa to work, their courage, and the availability of the opportunities that fit their qualifications are key elements for them to be employed.

Furthermore, another Mutwa who was interviewed stated: We don't have park rangers among us in this moment, maybe the ICCN-Congolese Wildlife Authority-will recruit some of us this time around. We currently have a very few number of guides (trackers), they are between two and three, but I would like the Batwa to be many among the guides, I also want them to show their interest in applying because I know that ICCN cannot refuse and that is the wish of each one. Being a guide does not require a high level of education, even being a park ranger... if for example I am taken since I have a level of education, I can help my brothers in case they have questions I intervene and guide them and we escort the rangers together. We recognize the values of the park, we respect the park. A Mutwa male key informant interviewed in Bukoma, August 2020.

The statement above shows the hidden skills that the Batwa possess. Even without being educated, some are able to work with the park. This is based on their traditional knowledge. Also, this expresses the willingness to work.

Looking at the numbers of the trackers and rangers who are currently employed by the park, here is the opinion of the key informant:

...for the trackers I'm not sure but I think around 85 trackers, but the rangers I think 500 I don't have details. We don't have any ranger who is a Mutwa. But I think for the next recruitment if they want, and if they come forward they can be selected I think. In any case, we will lobby for some to be the rangers. A Male key informant, interviewed in Rumangabo, August 2020.

Furthermore, the results show that the highest number of Batwa who have worked for the park is composed of casual workers 9(10.3%) (n=87). The rest are trackers and data collectors whose frequency shows 1(1.1%) for each. In total, 11(12.6%) out of 87 Batwa interviewed have stood a chance to work with the Park and 76(87.4%) have never worked for the park. One of the main requirements to work for the ViNP

is to know at least how to write and speak French. The position currently held by the Batwa fit their qualification. However, some local leaders showed that some Batwa are always given jobs, especially as casual workers. Batwa are people who know the forest well, and most of them already work as trackers in Bukima, so that's it,... and when there are building sites available, others come to work as daily workers, as ordinary workers, as I mentioned earlier, they are people who did not have chances like everyone else, they didn't have the chance to study, which means that they still have a scanty fringe of people who are skilled in such or such field. The reason why, especially for work, they always find themselves working as ordinary workers. A male key informant, Local leader interviewed in Kabaya, August 2020. The statement above shows that education remains the key for Batwa to have good jobs. Otherwise, they will remain casual workers/daily workers. In this regard, Batwa themselves and all the potential donors around have to emphasize on the education of Batwa to give them more chances to be competitive for good jobs. The main reason for the Batwa not having the opportunity to work for the ViNP is that they lack required level of education. This was confirmed by 34(39.1%) out of 87 respondents. In the second position, 22(25.3%) (n=87) of the respondents show that it is because they have never seen the opportunity that fits well for them to apply, 14(16.1%) claim that it is maybe because they are Batwa and this informs clearly that some Batwa are still marginalizing themselves. This is because the park opens the opportunity to everyone without any complex of inferiority based on the culture or appurtenance to such or such community or social group. 11(12, 6%) do not have any idea on what can be the reasons for not working for the park. Lastly, 6(6.9%) of Batwa declared that they do not have the required skills to work for the park. These skills according to Batwa were the physical and health conditions. Some key informants argued that the fact that the Batwa are still less represented among the Park’ staff is their ignorance, backward mindset, illiteracy, lack of self-confidence, shyness and self-exclusion. They use to degrade themselves and like to live a solitary and self-ruling life. Also sometimes they are not considered by the Protected Area Authorities. However, most of the respondents Batwa said that they are not informed of any job opportunity in the park (50(57.5%) out of 87 respondents.

Table 1: Batwa working for the park

Number of Employed Batwa	Frequency	Percentage	Descriptive statistics N=37	
1-3	34	39.1	Minimum	1
4-5	3	3.4	Minimum	4
Total	37	42.5	Mean	1,65
Not aware	50	57.5	SD	.789
Total	87	100.0		

Source: Primary Data, 2020

From table 1, the number of Batwa who are currently working for the park varies between 1-3 and 4-5. These are estimated at 34(39.1%) and 3(3.4%) respondents out of 87. The rest of the respondents 50(57.5%) don't have a single idea on the number of Batwa who work for the ViNP. In this regard, a male Community Conservation Officer of the ViNP interviewed in Rumangabo/Kisigari in August 2020 declared: "...to be very precise, right now we have three Batwa that we use as trackers here in the Virunga National Park but among them, there is no woman. They are all men. Last time before

the breakout of COVID-19, we were looking for servants at the lodge, three more Batwa had applied to work in tourism, unfortunately, we had stopped tourism because of COVID yet they had passed the test..."

From the quote above, it is noted that there are gender imbalances but also the number of Batwa who are currently hired by the Park is too small.

In the same angle, the questions about the fear or attitude of PAAs-Protected Area Authority-in case 60% of their staff is composed of Batwa was asked and below are their opinions:

"...their current level of education does not allow it. Also in relation to their diet, their custom, they can also become dangerous when it comes to food consumption itself for example the consumption of meat. But it can also be positive if they are in conservation with a knowledge focused on the prohibitions, they understand that it is forbidden because they say, we cannot prohibit them to eat meat while the Congolese law gives instructions on fully protected animals. The need is to strengthen them, to raise more awareness. But the fear may be there in relation to what I have said earlier, also the ignorance related to the protection of the environment and the incompetence of some Batwa" (A male PAAs key informant, Goma, September 2020)

It is observed that the PAA do not put much attention on the traditional knowledge that the Batwa possess but the academic degrees when it comes to the staffing process. The fear also can rise if 60% of Batwa are park' staff. This is because of their diet. Batwa prefer meat and the wildlife may not be secured at all.

"There is no fear because they are not only the Batwa who live here; there are other tribes that must also participate. There is no fear as long as they are able to work" (A male PAAs key informant, Rumangabo, August 2020)

"...no, I don't think so. If they are hired with us for example, I do not fear that we have 60% of Batwa as our staff because before we hire them, they have to pass the test. They have to be successful to be hired and before signing a contract..." A male PAAs key informant, Rumangabo, August 2020)

Talking about the field of work, the biggest numbers of Batwa who work for the park are trackers. This was confirmed by 30(34.5%) out of 87, respondents. Only 7(8.0%) respondents declared that Batwa are casual workers. The rest of the respondents 50(57.5%) did not share any information about the areas of work. Being a tracker or a casual worker is the job that currently fits Batwa of the Mikeno sector. This has a link to their level of low education but also to the indigenous knowledge they have in the park.

The mean of the Batwa working for the ViNP was found to be 1.65 and the standard deviation (.789) is there scattered below the mean. It therefore tells that, the numbers of the Batwa who work for the Park is always below the average.

Support Received from the Park in the Past 5 Years

Table 2: Support from the Park to the Batwa in the past 5 years

Support in the past 5 years	Frequency	Percentage
School fees for children	5	5.7
Seeds and ploughing tools	2	2.3
Livestock	5	5.7
Houses	14	16.1
Tarpaulins	5	5.7
Nothing	56	64.4
Total	87	100.0

Source: Primary Data, 2020

From the table (2) above, respondents were asked to mention everything (money/in-kind) they received from the Park's Authorities in the last 5 years. From that query, it is observed that 56(64.4%) of the households interviewed received nothing in the past five years. However, it was revealed that 14(16.1%) of the respondents received houses. These houses were built under the PREPAN projects funded by the World Bank Group (WBG) and ICCN. 5(5.7%) received money/school fees for their children, Tarpaulins, and livestock. The rest have received seeds and ploughing tools 2(2.3%). From the Protected Areas Authorities' point of view, many items were given to Batwa in terms of community development activities. From the Batwa's view, the items they received were not enough. This informs us that all the parties pit one to another. This requires a deep assessment.

"In fact, the sharing of revenues linked to the benefit of the Park is not yet well defined, they always talk about 30% of revenue from the tourism of the park which must go to the communities. It is done indirectly through development activities; therefore, the park's income returns to the communities in that way. We support development activities by building schools around the park, hospitals, health centers,... In the Mikeno sector, I think, we have two schools; there is one in Rumangabo and another one in Kibumba. Batwa are also used as labor force, also as trackers...they have 47 ha of land given to them by the customary leader (Mwami of Bwisha), to be sedentary and settle down. Now we have to legally secure this concession of land, even those of Mwenda. It is a process. They must have land titles" A WWF male key informant, Goma/Nord-Kivu, September 2020.

From the statement above, the uncertainties about how the park revenue should be shared with local communities are still persistent. Also, the park management plan is not yet approved. It is still lagging in the bureaucracy limbo. Also, the sedentary style of Batwa is obvious in this regard because of the lifestyle of Batwa.

"In terms of park's incomes, well, they are the incomes that come from tourism, but there is a percentage that the park gives to the local communities. If I remember correctly, before the coming of De merode (current Director of the ViNP), the percentage was given to the local authorities, and to the customary chiefs as well, they are the ones who managed that percentage. Well, there was a problem; they were saying that they did not see any importance for ICCN-Congolese Wildlife Authority-to manage that percentage of the park's income; they had requested the park to give it to them for self-management. Afterward, when De merode arrived, the mismanagement of that money was observed and the park decided to manage it through community development activities." A male Community Conservation Officer ViNP, Rumangabo/Kisigari, August 2020.

Despite the management of the benefits by the PAA itself, complaints of the local communities are persistent. Besides, there is mistrust in the management of the benefits by the local leaders.

"...to the local communities, I don't have any details, but I think they receive 20% to 30% because there is 50% that goes to Kinshasa, 20% support other parks that do not have the means for their own management. Out of that money, the park had built so many schools, starting at the PNvi center, there is the Ishasha primary school, at the ViNP south here at home, there is Jomba primary school, Bugana primary school, Nkokwe primary school, EP PNvi here in Rumangabo, EP Kanombe, EP Rwaza, Kibumba primary school, Tongo

Primary school, so there are a lot of them... I try to list what I remember,... but also the water supply from Kiwera spring to Rugari, in any case, I don't remember well but the actions are there..." A male Community Conservation Officer ViNP, Rumangabo/Kisigari, August 2020.

The statement above depicts the benefits from the park which is channeled to the community through the Community development projects. Despite these projects, the level of education of Batwa is still low, the access to healthcare facilities and other services.

Other key informants in this study came up with their observations on the benefits the Batwa receive from the park.

BOX 2: Key Informant's Observations towards Park's Benefit Sharing with Batwa
<p>"There is no significant help but at least there was the clean water supply project from Kamira water source and the program manager was asked to recruit them as trackers, daily workers but... the authorities no longer help them. The electric fence around the park has made also their life harder..."</p> <p>(A male key Informants, Interview in Jomba, August 2020)</p>
<p>"Let's say that the park does community conservation, that it draws special attention to it, it could easily integrate the Batwa since they have good knowledge of the park, in addition to this they know a lot of medicinal and traditional herbs that heal a lot of diseases, once they are put together and followed, I believe that it would allow as much as possible to be able to integrate them and through that, they will also be receiving something from the park for their development by the way."</p> <p>(A male key Informants, Kibumba, August 2020)</p>
<p>"In my opinion, they are not benefiting if we look at their current conditions of living. They have nothing."</p> <p>(A male key Informants, Interview in Rugari August 2020)</p>
<p>"The Park supports them but some are very sly..."</p> <p>(A male key Informants, Interview in Bukoma, August 2020)</p>
<p>"In any case, there is no intervention so far. They don't give them anything, so can we say that they really benefit? In any case, I don't think they have much from the park but they always receive a lot of promises from the Park managers."</p> <p>(A male key Informants, Interview in Biruma, August 2020)</p>
<p>"Some benefit from the park because their life depends on the trade of charcoal and firewood. And the Park's authorities has built them houses."</p> <p>(A male key Informants, Interview in Nyabirehe, August 2020)</p>

From the statements above, it is realized that there are still uncertainties about what the local communities should benefit from the Park's revenues. This is due to the delay in the approval of the Park Management Plan (PMP). The draft of the PMP is not open to the community and different stakeholders. Also, research data is limited in the Virunga (UICN-PACO, 2010). This could help understand different parameters around. It is also observed that despite controversies from local leaders, CSOs, PAA, and Batwa on Park's Revenue Sharing, despite the insufficiency of the support (stated by 31(35.6%) in Table 17 below) the Batwa received in order to address some of their vital needs; there is a lack of gratefulness and dissimulation of the previous support in some Batwa.

Despite the available support, 31(35.6%) respondents who received the support from the park stated that it was not enough for the assigned task. 56(64.4%) of the respondents are not sure whether the support they receive is sufficient or

not. This is because that support may not be enough to them. From Batwa's side, many reasons supported these figures. It is also observed that no Mutwa among the 31(35.6%) has confirmed that what they received previously was enough. This shows discontentedness and endless needs in the Batwa of Mikeno sector. On the other side, 56(64.4%) of the respondents have negated to have received something from the Park. Some reasons are explained in box 3 below:

Box 3: Batwa' Statements on the Insufficiency of the Support Received from the Park
<p>"ICCN ilikwaka na lipiya batoto yetu masimo lakini haiku endeleyaka ku lipa. leo sasa bana anzaka shinda mu ku nyumba na ku zunguruka, bengine balisha kuwa ba maibobo"</p> <p>Translated as: "ICCN was paying school fees for our children but it stopped. Today they are now staying at home, they have become beggars and others are now streets children"</p> <p>(A 49-year Mutwa woman in Bukoma, August 2020)</p>
<p>"... ni kweli tuli pataka manyumba za ICCN, lakini hazina amo kitu. Ikosa balikuyaka tu tupa mu iyi pori. Ata ba bandits banaweza kuya tu chinjiya apa na akuna mwenye ata juwa. Hakuna maji apa, hakuna moto ya umeme, bulongo hatuezi lima ju ni majiwe ya volcan, hatuna ata matelas. Nazani njo mana benzetu bali rudiyaka kule Nyesisi. Samoya tuna lalaka ku ciment chini kisha na tko baridi saana. Malaria njo ingine shida uku. Kwa kweli tuna teseka apa..."</p> <p>Translated as: "...of course we received houses from ICCN but they are not equipped. It is like they only came to throw us in this bush. Thugs can even slaughter us from here and no one will be aware. There is no water here, no electricity, we cannot dig because there are volcanic rocks here, we don't have even mattresses. I think that is why some of our members went back to Nyesisi. Sometimes we sleep on the floor but it is too cold. Malaria is another big problem here. We really suffer here..."</p> <p>(A 56 year Mutwa man in Biruma/Kisigari, August 2020)</p>

The statements in box 3 show the discontentment of Batwa but also the formation of the illiteracy cycle of Batwa children. The Batwa also seems to be focused on donations only. This shows awkwardness in Batwa's life style.

However, some NGOs are supporting structures to the Park in the implementation of community projects that benefits the local communities. In this regards, 58(66.7%) of the respondents received the support in the past five years. The location of a given village, its appurtenance to the zone of intervention of the organization can influence the accessibility to the support.

The Support Received from them Civil Society Organisations

Table 3: Support from CSOs

Support from CSOs	Frequency	Percentage
Beehives, ploughing tools, and seeds	10	11.5
Tarpaulin, saucepans, and dishes	6	6.9
Livestock/Breeding	10	11.5
Training (Carpentry, Joinery, Tailoring, etc.)	16	18.4
Pieces of Advice, moral support, and raising awareness	13	14.9
Cabbages' seeds	4	4.6
Sub Total	59	67.8
Not aware	28	32.2
Total	87	100.0

Source: Primary Data, 2020

The records in table 3 give the differences in support that the Batwa have received from CSOs, MPs, and people of goodwill. The majority 16(18.4%) of them have received trainings. 13(14%) have received only moral support and awareness-raising, 10(11.5%) recognize that they had received beehives, ploughing tools, and seeds, 10(11.5%) more have received livestock for breeding; Six of the respondents (6.9%) got tarpaulins, saucepans, and dishes. The remaining 4(4.6%) insisted on the Cabbages' seeds as the support they have received in the past 5 years. 28(32.2%) of Batwa are not aware of any kind of support. Despite the support, complaints of Batwa persist and some always overlook the support they receive. The support received is occasionally and circumstantial.

Box 4: Observation of the Batwa on the kind of support

...sikiliza, balitupatiyaka ma sungura, ona ata bima nyumba bile pale habina amo kitu. Zote zili kufaka. Uta sema ile ni musaada kabisa...

Translated as:

...listen, they gave us rabbits for breeding but all of them died. You can see the cages are there empty. Can you really say that one is a support...

(A 43 year old Mutwa woman, Interview in Bukoma, August 2020)

... bana zoweyaka kuya bana tupatiya bima shauri, aseme tusi kuwa na ingiya mu parc, aseme tu vumiliye, banatu haidiya bya mingi... ndiyo ni muzuri. Lakini sasa tuta kuwa na kula bile bima shauri by kila siku?...

Translated as:

...they always come here and advise us not to enter in the park that we keep hoping and endure, with so many promises... of course it is okay. But are we going to eat their pieces advise?

(A 49-year-old Mutwa man, Interview in Kisigari, August 2020)

The results from Box 4 above show the lack of capabilities to rear livestock. This may be linked to their culture but also the lack of sufficient training. It is also observed the lack of follow-up from the donors. Raising awareness on conserving biodiversity seems to be their main priority and the community needs come at the second place. These have to go together.

From the key informants' side, different views came out.

For the moment we had supported all the Batwa by distributing tarpaulins, blankets, you can see the photos, Nyesisisi and Sesero. For now, we have 24 Batwa including 20 men who are learning carpentry, and 4 women who do tailoring (sewing).

A male key informant, Interview in Rumangabo, August 2020.

There is PIDP, PREPAN project, NRC... the aim is to help Batwa children in their education, give them kits for school, help with the seeds, digging items..."

A male key informant in Rugari, August 2020.

Despite unlimited complaints of the Batwa, some organizations support them. But this support is seen by the Batwa as not enough, and not sustainable.

We give beehives, hutches, rabbits, seeds, we advocate for them to the government, there is an edict that we submitted to the provincial parliament which promotes the rights of indigenous peoples but also gives them the chance to compete for elections...

A male key Informant, Interview in Goma, August 2020.

Non-Government and Local Organizations supporting the Batwa in the Mikeno Sector

Among these organizations, one is an international organization (WWF/DR Congo), two are national organizations (PIDP and APN) and the remaining organizations are known at the grassroots level. Other organizations are: APDEV/asbl, ADABI, DYPADERU/asbl, ADPAV/asbl, and in the end some Members of the Parliament and People of goodwill.

However, some of the above organizations are also supported by a multitude of donors like ICCN, WWF/Goma. The kind of support that is given to Batwa is composed of seeds for agriculture and many other items.

One of the respondents said:

"The MPs gave us Tarpaulins and that was done during the electoral campaigns" statement of a Male Old Mutwa of Hehu/August 2020

From the above statement, it is realized that there can be a hidden purpose behind support that is in the interests of the donor.

The majority of local leaders recognize the support from ICCN and other NGOs to the Batwa. Others had divergent views.

"...there are no NGOs helping them. Some NGOs pretend but don't normally assist them as it should be. Neither the government nor individuals. There is no help". Male key informant in Jomba, August 2020.

From the quote above, it is observed the lack of appreciation of what is being done on the ground in order to empower the local community. Also, Batwa seem to be the milking cow for NGOs towards the donors.

"There is a grassroots association called APDV, which has its headquarters in Rumangabo and which trains the Batwa in small trades. There is a group of young Batwa currently following the training in carpentry and another group of about ten women who are doing tailoring and sewing training in Rumangabo" Male key informant in Kisigari, August 2020.

Despite their low level of education, the Batwa adults and the youth are willing to learn so that to fill the educational gaps. This is also a way to contribute to their empowerment.

"I only know ICCN here that support the Batwa. They had built a hospital for them but it is not operating well because [hahaha...] they are weak and lazy..." Male key informant in Bukoma, August 2020.

The statement above shows that the Batwa have got a hospital but they are not ready to maintain and manage it. This refers also to their level of education which is low. According to the researcher's analysis, the laugh [hahaha] within the above statement expresses contempt and lack of trust in the Batwa's capabilities.

Advocacy towards the Batwa is being made but there is always delay in the approval of the legal documents that protect their rights. The typical example is the Park Management Plan which is not yet approved.

Number of Batwa Supported by the Civil Society Organisations within the Past 5 Years

In this regards, 4(57.1%) out of 7 CSOs interviewed stated that they have supported 100 Batwa and beyond within the past five years. 3(42.9%) of CSOs have supported only 1 to 50 Batwa. The majority of the CSOs that have responded showed that they are also supported by other individuals and NGOs. Other CSOs rely on self-support and efforts.

...it is through Self-help, we do agriculture and breeding here, and if we can have a gift or a donation from someone it is

fine... I cannot testify any support received from the park, nothing received so far. Maybe the park will help us one day. A male key informant, Interview in Kisigari, August 2020. Some of these CSOs are for the Batwa and were created by them. Others are headed by the Batwa and employ Batwa. It is then realized that the local organizations supporting the Batwa rely on donations for their functioning.

Views of Batwa on How the Park's Incomes Should be Shared

Table 4: Sharing of park's incomes

Sharing of Park's Incomes	Frequency	Percentage
Giving us half of what they get because the park is ours,	13	14.9
Giving us the land, seeds, ploughing tools, and livestock	10	11.5
Giving us jobs	42	48.3
Paying school fees for our children	22	25.3
Total	87	100.0

Source: Primary Data, 2020

The results show that giving the job to Batwa is a suitable way of sharing the park's income. This was revealed by 42 respondents out of 87 who are represented by 48.3%. In the second position, 22(25, 3%) showed that the best way to share the revenues from the park is by paying school fees to their children. 13(14.9%) or the 87 respondents declared that the PAA should give them half of the park's income since the park is theirs. In the end, 10(11.5%) stated that the better ways of sharing the park's income are by giving them land, seeds, livestock, digging materials, etc. However, it is important to know that the question about the park's revenue sharing is mentioned in the 'draft of the ViNP management plan' which is not yet open to the general public. It was also stated by the PAA as key informants in this study that the local communities have the right to 30% of the park's income.

3. Discussion of the Results

The data from this study were collected based on the Virunga National Park Benefits Sharing process with the Batwa. In order to give a strong explanation to the resulted of this study, a set of variables were discussed and answered by the Batwa households that participated in this study. Variables such as the benefits that the Batwa have received from the park (Cash or In-kind), support from other organizations around, the suggestions of the Batwa on how the revenue from the park should be shared, the number of Batwa working with the park, etc. The revenue can be shared in different ways based on the context of this study. It can be in terms of cash or in-kind, employment, local infrastructures, land, livelihoods, etc. Employment or working for the park was revealed as one of the main ways of sharing the ViNP revenues with the Indigenous Batwa. This appeared several times in the recommendations the Batwa addressed to the PAAs of the ViNP. The possibility for the Batwa to have a job in the park depends on many factors as mentioned by some of the key informants in this study. The main factor is *education*. This would help the Batwa to have knowledge that can help them face the highly competitive job opportunities in the park. It also depends on the courage, straightforwardness, and willingness of the Batwa to work.

The requirement to be selected as a ranger or trackers, or any other job in the park according to Batwa is having a good

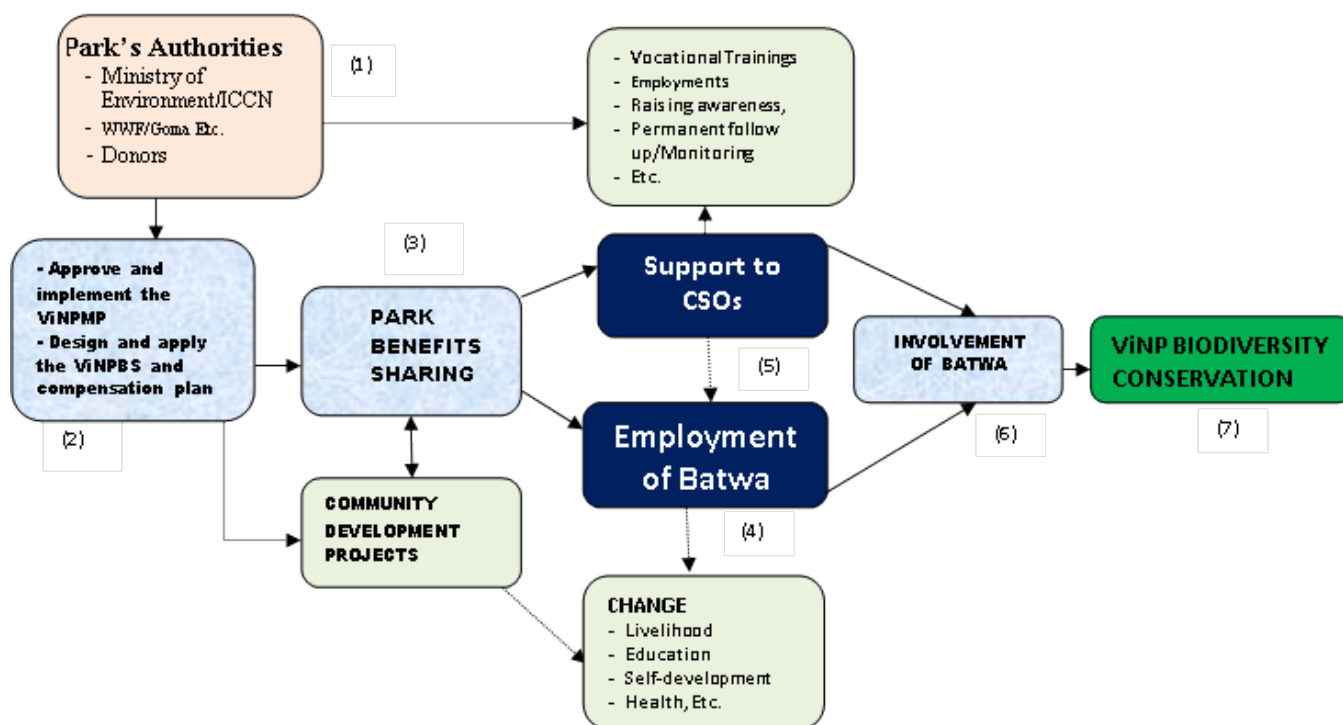
level of education (secondary and/university), physically fit and good health conditions. In this regard, this study concluded that the fact that the Batwa are still less represented among the Park' staff depends on their ignorance, backward mindset, illiteracy, lack of self-confidence, shyness, self-exclusion, etc. Naturally, the Batwa are short in size. In case this remains one of the rejection requirements in order to be employed, chances seem minuscule.

The Purnululu National Park in Australia is clear evidence in which only 2 indigenous staff were employed in Park maintenance on two ranger's positions. Some of Indigenous Peoples were involved in tourism management. But less representation of Aborigines in Australia was justified by the lack of education and required skills, even if the Park's Management Plan (PMP) confers them all the rights mentioned above.

Currently, the number of Batwa working for the park varies between 1-3 and 4-5 and it is important to note that currently, the ViNP employs approximately 500 rangers and 85 trackers. The unemployment of indigenous people is remarkable everywhere compared to the non-indigenous people. The Household Income and Labour Dynamics in Australia (HILDA) survey which started in 2001, provides information on labour force status by gender and Indigenous status. It was therefore realized that Indigenous unemployment rates are about 4.5 times higher than non-Indigenous rates, regardless of gender. Indigenous employment is correspondingly lower than the non-Indigenous estimates for workers employed both part-time and full-time (Howlett, Gray, Hunter, & Australian National University. Centre for Aboriginal Economic Policy Research., 2015) [8]. The highest numbers of Batwa who work for the park are trackers and casual workers. It is evident that being a tracker or a casual worker is the job that currently fits for Batwa of the Mikeno sector. This has a link to their level of low education but also the indigenous knowledge. Working as a casual worker is referred to as a part-time job. It is showed that part-time jobs have poorer employment requirements than the primary labour or full-time jobs as emphasizes (Leontaridi 1998), quoted by (Howlett *et al*, 2015) [8]. Education is a driver for exercising and enjoying economic, social, and cultural rights. Unfortunately, in most countries, there is still a gap, and progress for marginalized groups, including indigenous peoples, has not been as marked as for other groups. For instance, in Nigeria, 97% of poor Hausa-speaking girls have fewer than two years of education (IASGIP, 2014) [6]. The challenges that differentially impact indigenous peoples are not addressed so far. Despite the schooling efforts that were done by ICCN and other donors for approximately 319 Batwa children, indigenous people are still left behind in terms of educational progress and achievements. As a solution, (Hunter, 2003) [9] suggests increasing the economic independence of Indigenous people, to promote self-employment which is the effective mean of circumventing or avoiding discrimination related to employment. But with poor education and access to finance, these can indubitably be hindrances to setting up a strong, sustainable, and successful business. It is crucial to note that the revenue and benefits sharing highly and significantly influence people's livelihood improvement (Twinamatsiko, M. 2015) [26]. Evidences above imply that creating an appropriate schooling environment for Batwa is to prepare them for competing for job opportunities but also a way to involve them in biodiversity conservation. This is a way to positively impact their economies.

Despite the insufficiency of the Park’s Revenue Sharing, there is a lack of gratefulness and dissimulation of the previous support in some Batwa. Drawing from that, the Batwa seem to remain the eternal complainers. There was observed a despidal of the support they receive. The insufficiency of the support was also commented on by (Redford & Fearn, 2007) and for the authors, financial returns from Protected areas-based income sources are in most cases not sufficient to support community development. They further argued that the current Protected areas management strategies place mostly focus on the law enforcement and financial independence of responsible management authorities, leaving limited resources to support a more accommodating approach that builds a direct link between Protected area’s benefits and the surrounding community’s needs. The authors gave a case of Zambia showing that the conservation challenges facing

Luangwa Valley are diverse, complex, and often rooted in basic livelihood needs of food security and income (Redford & Fearn, 2007) [23]. However, the experience of the GEF has been of tremendous changes. The GEF emphasizes forest management projects that enhance sustainable livelihoods for indigenous and local communities. With its experience in Latin America, Asia, and Africa, totaling more than \$650 million in 137 countries, approximately 15% of these projects were directed toward indigenous peoples. In the process, it has made a significant difference in their livelihoods and environments (GEF, n.d. p.10). At the Mikeno sector level, this study has found that some projects have been implemented for the Batwa and other communities. As mentioned earlier, they focused on building houses, schools, hospitals, agricultural projects, rearing projects, etc.).



Source: Researcher’s conception based on the results of the findings collected in August and September 2020.

Fig 2: A proposed park’s benefit-sharing scheme (ViNPBS)

4. Conclusion and Recommendation

This section of conclusion focuses on the involvement of indigenous Batwa in the Virunga National Park benefits sharing. Looking at the employment of Batwa in the park, community projects, education, and livelihood in general, this study has come up to a conclusion that the level of education remains the key aspect for the Batwa to be capable of applying and competing for a job opportunity in the park. It was therefore found that the average of the Batwa who work with the park stands at 1.63. (See table 1). This is clear evidence that there is a very low representation of Indigenous Batwa People in the work realized by the ViNP. The main reasons surround this evidence was realized to be the level of education, the lack of information, etc. It was also found that the Park benefit sharing that has occurred in the Mikeno sector focused most on the community projects by building houses to some Batwa, the project implemented by ICCN and World Bank, by supporting the agricultural project (farming, beehives, breeding of rabbits, guinea pigs, etc.), which was done by the WWF and PIDP (table 3). However, this has benefited only one group of Batwa but others like Nyesisi, Sesero, Hehu, Nyarubande... did not get a chance to be

among the beneficiaries and this was judged to be insufficient (see box 3). Benefit-sharing is also done through building schools, hospitals, water, and electricity supply but this study has realized that Batwa are less represented in schools, they still lack clean water, access to healthcare, and another livelihood supports. Being in contact with tourism appears as another form of involvement but the study found that the Batwa are not allowed to display their culture outside. The main and preferred way of sharing the park’s benefits was found to be the employment of the Batwa (Table 4). This is a better way for self-development, self-sufficiency, and self-reliance.

The recommendations generate from the results presented and discussed in this study suggest that a permanent follow-up and monitoring is required for sustainability and success. This implies that incentives or a sustainable and appropriate benefit sharing of the park’s revenue should be envisioned to enhance the livelihoods of the indigenous people Batwa. This can offset potential threats to the biodiversity of the ViNP and increase the importance of the park at local, regional and international levels. For the above reasons, different recommendations were summarized in the scheme below.

References

1. Alcorn J. Indigenous Peoples and Conservation. *Macarthur Foundation conservation White PaPer series*, 2010, 2-9.
2. Bashonga G & RADD. *Pygmée du secteur Mikeno Park National de Virunga: Etude Socio-économique et plan du Développement*. Recherche et Actions pour le Développement Durable; ICCN; FZS; WB. Goma: Recherche et Actions pour le Développement Durable, 2012.
3. Cardinale BJ, Duffy JE, Gonzalez A, Hooper DU, Perring C, Venail P, Grace JB. Biodiversity loss and its impact on humanity. *Nature*. 2012; 486(7401):59-67. <https://doi.org/10.1038/nature11148>
4. Couillard V, Gilbert J & Kenrick J. Land Rights and the Forest Peoples of Africa: Historical, Legal and Anthropological Perspectives. *Forest Peoples Programme*, 2009, 11-12.
5. GEF C (n.d.). *Leaflet No. 10: Indigenous Peoples and the Environment Key words and ideas Biological diversity (or biodiversity) United Nations Conference on Environment and Development Conference of the Parties (COP)*. (10), 1-10.
6. IASGIP. *Indigenous Peoples' Issues Education and Indigenous Peoples: Priorities for Inclusive Education*. (June), 2014.
7. Hens L. *Causes of Biodiversity Loss: a Human Ecological Analysis*. (January 2005), 2015.
8. Howlett M, Gray M, Hunter B & Australian National University. Centre for Aboriginal Economic Policy Research. *Unpacking the income of Indigenous and non-Indigenous Australians: wages, government payments and other income*. 2015; (99):15.
9. Hunter B. *Thanks are due to Jon Altman, Matthew Gray, and Anne Daly who provided useful comments on earlier drafts. However, the views expressed here are those of the author alone*. (July), 2003.
10. Husain M, Vishwakarma DK & Rathore JP. *Local people strategies in biodiversity conservation and sustainable development Local people strategies in biodiversity conservation and sustainable development*. (January), 2018.
11. IUCN. *Friends for life new partners in support of protected areas*. (J. A. McNeely, Ed.) Gland, Switzerland: UK ix, 2005.
12. Jennifer SM & Susan M. Indigenous involvement and benefits from tourism in protected areas: a study of Purnululu National Park and Warmun Community, Australia, (T. a. Routledge, Ed.). 2013; 21:2-7.
13. Judi I, Paul W & Michael P. Best practice in strategic park management towards an integrated park management model, *CRC, for Sustainable Tourism Pty Ltd*, 2005, 1-3.
14. Lewis G. *Jerome Lewis the Batwa Pygmies of The Great Lakes Region*, Printed in the UK on bleach-free paper. UK: published by MRG ISSN 0305, 2000, 13.
15. Mcneely JA. *Friends for Life* (J. A. Edited by McNeely, Ed.). Retrieved from www.iucn.org/bookstore, 2005.
16. Mukasa N. *The Batwa Indigenous People of Uganda and Their Traditional Forest Land: Eviction, Non-Collaboration and Unfulfilled Needs*, 2014, XXIV, 1.
17. Mukasa N. The Batwa Indigenous People of Uganda and Their Traditional Forest Land: Eviction, Non-Collaboration and Unfulfilled Needs. *Indigenous Policy Journal*. 2014; XXIV(4)(Spring 2014) :4-6.
18. Ngoumjuen FA. Les modes de Participation et d'implication des communautés autochtones dans l'exploitation des ressources territoriales au Cameroun : Réflexion sur les voies d'un modèle de gouvernance forestière autochtone dans le bassin du Congo, 2016.
19. PIDP-KIVU SI. *Rapport de Carthographie des Peuples Autochtones Pygmées dans les différents villages des Pygmées du Territoire de: Rutshuru, Masisi, Nyiragongo et Walikale 2016-2017*. Bukavu: Pidp, 2017.
20. Pierre RA. La gestion communautaire de la faune sauvage comme facteur de la privatisation et de la marchandisation des ressources naturelles ? le cas du tourisme cynégétique en Afrique sub-saharienne. *Afrique contemporaine*, 2/n°22, 2007.
21. RAAD. *Pygmées du Mikeno sector: Parc National de Virunga. Etude socio-économique et Plan de Développement*. Retriever from Prepan-ICCN/BCECO/DG/DPM/EM/2010, 2012.
22. Rands MRW. *Biodiversity Conservation: Challenges Beyond 2010 Biodiversity Conservation: Challenges Beyond*. <https://doi.org/10.1126/science.1189138>, 2010, 2015.
23. Redford KH & Fearn E. *Protected Areas and Human Livelihoods*. 2007; (32):6-16.
24. Stevens S. " Indigenous Peoples, National Parks, and Protected Areas: A New Paradigm Linking Conservation, Culture, and Rights. b. Stevens, Stan, editor. "Indigenous Peoples' and Community Conserved Territories and Areas in the High Himalaya: Recognition and Rights in Nepal's National University of Arizona Press, JSTOR, 2014.
25. Twinamatsiko et al. *Enhancing Equity through the Establishment of Community Based Monitoring Programme for Revenue Sharing in the Conservation of Bwindi*. Technical Report, Institute of Tropical Forest Conservation, 2015.
26. Twinamatsiko. Linking Conservation to the Implementation of Revenue Sharing Policy and Livelihood Improvement of People Bordering Bwindi Impenetrable National Park, <https://utam.ac.ug/docs/research/studentresearch/phd/the ses/MedardTwinamatsiko.pdf>, 2015.
27. UNDG. Guidelines on Indigenous people issues: United Nations Development Group. *United Nations, Geneva-GE.08-45130-April 2009-2050-HR/P/PT/16*, 5-12, 2009.
28. UNIPP, ILO, & et al. (n.d): *United Nations Indigenous Peoples' Partnership Strategic Framework 2011-2015*. Geneva: Technical secretariat.
29. Walker W, Baccini A, Schwart S & Al, E. Forest Carbon in Amazonia: the unrecognized contribution of indigenous territories and protected natural areas. (F. & Taylor, Ed.), 2014.