

# Estimating the Value and Benefits of Revenue Sharing Projects and Their Contribution to Community Development Around Nyungwe National Park

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**ABSTRACT:** *This study aimed at estimating the value and benefits of the projects that were funded by the Rwanda Development Board (RDB) through the revenue sharing program around Nyungwe National Park (NNP) for its conservation. To achieve the study objectives, a cross sectional research design was used, combined with a qualitative and quantitative approach. Primary data was collected from community members living around Nyungwe National Park, community leaders and RDB staff through questionnaires and interviews. Microsoft Excel was used for the data analysis. Results showed that the revenues contributed to community development through the construction of infrastructures that are used by communities around NNP. But, lack of regular monitoring has also resulted in the failure of some projects. We realized that the value of revenue sharing (RS) projects plus the value of ecosystem services from Nyungwe are a golden opportunity for local communities to have access to finance and improved livelihoods. We realized that through Revenue Sharing Program RwF 649,186,778 were invested in infrastructures around (NNP) since 2005. Looking at their impact value after one year, we realized that actual net profit provided by them is valued to RwF 66,789,571. The impact value in 20 years from those infrastructures was estimated to RwF 14,319,526,980. It is recommended that RDB increase the revenue sharing funding and include a special guarantee fund to support a framework for integrated biodiversity conservation and human well-being.*

**KEY WORDS:** human security issues, indicators, livelihoods

## INTRODUCTION

Estimating the value of ecosystem services and community based conservation projects to people helps to realistically understand the extent to which biodiversity contributes to the community

development (Hughes & Flintan, 2001). According to Anderson and James (2007), measuring the development in all societies requires developing relevant and sensitive indicators. Community-level indicators (CLI) measure aspects of the community, rather than individuals and can indicate what is taking place at the community level. CLI provide objective measures of outcomes and can indicate if interventions bring positive or negative change to communities, and contribute to common goods and goals (United Nations, 2010). However, CLI need to accurately reflect the reality on the ground (Berkowitz, 1982).

Community development is a process where communities can effect change in their community, such as increase human, financial, natural, or social capital and improve opportunities for livelihoods (Blanke and Walzer, 2013). A number of factors, such as, gross domestic product (GDP) and human development index (HDI), are considered when measuring community development, but the factors to be considered differs according to the culture of a society, and some researchers have started to challenge those measuring styles (NISR, 2015).

Local development relies on the inputs from community members and stakeholders and area-based strategies and the outputs of desired results of local economic growth and sustainable livelihoods (Byrd, 2007). Through local economic development, communities strive to achieve ownership over the improvement of socio-economic living conditions through using the available natural resources. They use approaches such as building partnerships between public and private stakeholders and establish some enterprises that help them to become economically stable (MINICOM, 2013).

The United Nations Development Program has created the Human Development Index (HDI) to measure the levels of economic development of a country in the areas of education, health and per capita income (NISR, 2011). Measurement of economic development and its expression in definite index is a very difficult task in economics, because so many opinions are needed to indicate levels of economic development of a nation (United Nations, 2010). Common and popular indicators used to measure development are volume of per capita income, rise in factor productivity, and rise in living standards, physical quality of life index, human development index, poverty alleviation and inequality reduction (NISR, 2015).

In many rural communities, local development depends on the use of, and access to, natural resources and biodiversity (Colchester, 2003). Most of the basic needs for human wellbeing come from nature and contribute to the development of local communities (Farrington, 2006). Through biodiversity, people get cash and food but the estimation of where people get money is calculated by considering the prices at the current market and the perceptions of the local communities (Hughes & Flintan, 2001). Balancing poverty alleviation with biodiversity conservation is one of the most serious challenges that developing communities face, explaining why these issues have been linked to the millennium development goals (MDGs), sustainable development goals (SDGs), and at the individual project level (United Nations, 2010).

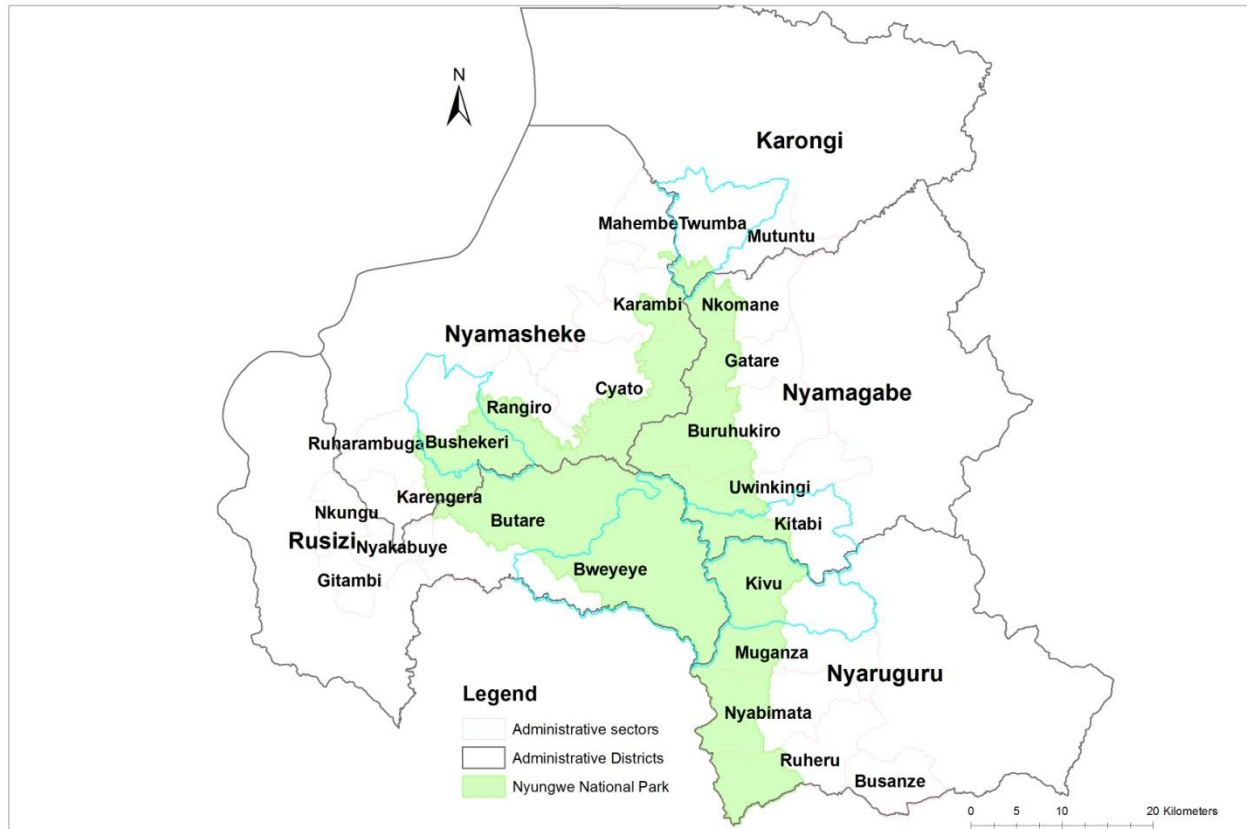
The need to engage communities in conservation was heightened by the realization that biodiversity resources are both subject to, and depend upon processes and policies, which act at a national and global scale (Folke et al., 2005). Consequently, an approach which can reconcile the needs of biodiversity conservation and economic development is a vital tool, particularly in developing nations (Hughes & Flintan, 2001).

In the 1980s, community-based conservation, integrated conservation and development, and community-based natural resource management, rose to prominence as tools through which win-win outcomes for conservation and development were thought to be achievable (Hayes, 2006). Though the Rwanda Development Board has funded a number of projects around Nyungwe National Park aiming to increase its conservation, the impact of those projects is not well documented. Therefore, this research aimed at estimating the value of the impact of the projects funded through revenue sharing programmes (RSP) and calculating the contribution of these programs to the community development.

## **METHODS**

### **Study area**

This research took place in five districts (Rusizi, Nyamasheke, Karongi, Nyamagabe and Nyaruguru; Fig. 1) surrounding Nyungwe National Park (NNP) located in southwestern Rwanda (2°15' - 2°55'S and 29°00' - 29°30'E). NNP is one of the most biologically and ecologically important mountain rainforests in Central and East Africa (Plumptre et al., 2002) that ranges at the elevation of 1,600 to 2,950 m. NNP is a unique ecosystem that represents a key area for rainforest conservation and protection in central Africa. This forest is very rich in biological diversity and has both plant and animal species which are endemic to the Albertine Rift (Plumptre et al., 2002). The forest is contiguous with Kibira National Park in Burundi (Budowski 1975) forming one of the largest blocks of montane forest in Africa (Dowsett, 1990).



**Fig. 1.** Map of study area of the research around Nyungwe National Park (Adapted from Rwanda Development Board).

### Data Collection

Field data collection was conducted in 5 districts around NNP where one sector was chosen from each district: Twumba of Karongi District, Kitabi of Nyamagabe District, Bushekeri of Nyamasheke District, Kivu of Nyaruguru District, and Bweyeye of Rusizi District. The field data collection took place over 35 days in 2018 and 2019, one hundred people were interviewed from each sector, for a total of five hundred respondents from five sectors. The team was trained on the research methodology and approach on interviews and focus group discussion guide, potentialities ranking method and the reporting format to ensure consistency in reporting. Visited sectors were selected purposively, following the desk review of the district data information and based on an initial meeting with district and sector officials to identify how conservation contributes to community development and measure the value of accomplished infrastructural projects through revenue sharing program.

### Questionnaire Survey

This technique was more important for allowing a mass of information to be collected quickly and uniformly, between May, 2018 and March, 2019. The questionnaire, which was developed originally in English, was translated into the local language (Ikinyarwanda) and administered

orally for interviewees outside of the population of study to test for its validity, clear understanding and clarity of questions before starting proper interviews (NISR, 2015). The questionnaire had three main sections: questions exploring the benefits that local people obtain from the infrastructural projects funded through revenue sharing, questions exploring the value of money for those projects, and the questions on the contribution of these projects to the community development.

### **Focus group discussion guide (FGD)**

The survey questions were also used in focus group discussions, where seven focus groups, each composed of eight people were selected by local leaders to represent others in the FGD. The FGD took place at the office of the cell. Before starting the discussion, participants were requested to choose the FGD representative volunteer who was able to report to the researcher at the end of the discussion.

### **Data analysis**

Collected data were analyzed by using Microsoft excel and SPSS for calculations. As we were comparing data collected many years before, the analysis of variance (ANOVA) was applied to assess the change in the impact of CBCs that are still on ground. Correlations were calculated between benefits of RS projects and community development indicators. Tables were used to compare the results while percentages were calculated to show the frequency of the situation and the perceptions of interviewed people.

## **RESULTS**

The results of this study indicated that the revenue sharing contributed to the construction of new schools, renovating old schools, and constructing other students' facilities such as dormitories, water tanks, gardening, and health centers for local communities. About 80% of the constructed schools were primary schools and 20% were nursery and secondary schools. Around 30% of RS funded programs are education projects including school construction and other infrastructures were funded, and around 117 teachers obtained jobs while 75,000 students benefited from those facilities in 12 years.

Eleven health facilities were supported through RS program and 37 health professionals obtained jobs including nurses and other health professionals, and around 57,000 patients have visited these health facilities in 10 years. In 2010 there was a national campaign to remove whole building roofed with herbs and the RS program supported 60 poor families in Nyamagabe, Rusizi, and Nyamasheke to get good housing. These families have met basic needs at household level. The RS funded water supply projects in two districts surrounding NNP, and around 15,000 people in Nyaruguru district and 16,100 people in Rusizi district have accessed water supply as a result of RS program. Given that we have around 2 million people living around Nyungwe National Park, RS contributed to only 1.5% in water supply and other government initiatives such as Vision Umurenge Program (VUP) and ordinary districts' budgets contributed at 51.5% of the water

infrastructures. The Non-Governmental Organizations have also financed water supply projects but it is considered not yet enough and that is why 85.1% of our respondents suggested that RS should focus on water infrastructures. The RS program invested around 13 million in the water projects, and 500 people obtained part time jobs with a salary of one thousand Rwandan francs per day.

Twenty-five cooperatives composed of 3500 people involved in Agriculture in Karongi, Nyaruguru, and Rusizi received a funding of RwF 124,000,000 from RS in 2012 and 2017. Those funds helped to produce elephant grasses (*Pennisetum purpureum*) for promoting livestock and increase milk production which would contribute to fight against malnutrition in Karongi District. The funding resulted in the creation of part time jobs to 5000 people that were paid 700 Rwandan francs per day. In Nyaruguru District, there was a construction of maize and wheat processing factory in 2012 to ensure the value chain of agriculture and livestock promotion. The factory is worth 25,000,000 RwF and started with 5 permanent staff that were paid a monthly salary of RwF 50,000. Unfortunately, due to the lack of regular follow up of beneficiaries, the factory has only 3 permanent staff and their monthly salary is not easily issued. With Girinka Program, Rusizi district obtained a funding in 2017 to build a milk collection center. The RS program supports projects in the effort to reduce poverty among people surrounding NNP in Nyamagabe and Nyamasheke because they appear among the poorest districts in Rwanda. In 2017, Gatare sector in Nyamagabe District has obtained a support to build 15 houses for poor families whose settlements were in the high risk zones. Kitabi sector in the same district was funded in 2014 to relocate 10 families of Mushabarara who were settled very close to the Park and were causing a lot of threats to NNP biodiversity. Nyamasheke District was funded to build 17 houses (12 in Karegera and 5 in Karambi) to poorest and marginalized people.

Data showed that around 86.5% of the respondents are not satisfied with the poor services at health posts, centers, and hospitals. For example, around 67.2% reported that they get delayed services at health centers and hospitals which can also result in delayed development. Around 75.1% of the respondents said that they need a help of ambulance but it is obtained too late. Local people around NNP still consider agriculture as the only profession to help them to have access to food, education, and health. Only 3% of their total land is used for construction and doing business. Rare are the people who have been trained in architecture, design, sculptures, and engineering, that can bring changes in the society. This study realized that only 0.4% of the respondents completed Technical Vocational Education Trainings (TVETs), and most of the youth who completed their formal education don't stay in their communities. By our assessment and observation of assets on ground, we realized that the local communities don't have capital that can result in innovation and creativity to explore a number of resources surrounding NNP. The funded projects contributed to the economic development as per the perceptions of the infrastructures that were put in place.

### **Land Use around NNP**

About 10,000,000 ha of the Land around NNP is used for domestic agriculture. The Government of Rwanda has encouraged the local community around NNP to grow tea as a cash crop and it was



also a strategy to set a buffer zone and reduce the human wildlife conflicts. The tea plantation area has increased to about 300% in 30 years ago. Now the local communities own 850 hectares of tea while 800 ha are for the tea company. In 500 households that we studied, 99.6% of households use the land for agriculture including domestic crops, industrial crops, and forests; 19.8% of households reported that most of their land is used for tea and around 43.4% use most of their land for forest plantations.

### **Banking situation for local communities around NNP**

While measuring the economic development, the factor of financial situation is important. We realized that among our respondents, 51.2% have their own bank accounts in Umurenge Sacco, Popular Bank, and other commercial banks due to the job opportunities they have and income from crop yields. Around 48.8% don't have accounts. Findings indicated that around 30% of the respondents in those without accounts don't save at the banks not because they don't have money but because of the low mindsets on financial education. The overall assessment indicated that only 25.1% are capable to do self-saving without relying on a job or have someone to deposit money on their accounts. The total savings of the people who have accounts was estimated to 178,751,688 Rwandan francs while the money of people without accounts was estimated to 71,516,871 Rwandan francs.

### **Social-Economic categories for local communities around NNP**

The government of Rwanda has set the socio-economic categories for Rwandans. In our survey, none of the participants was in category four (richest). Around 19% were in category 1, 41.6% were in category 2, around 37.6% were in category 3, and around 1.8% didn't know their socio-economic categories. These data showed that extreme poverty and poverty are still a problem in the community around NNP. Even if there is high presence of poverty for the people around Nyungwe, revenue sharing contribute in poverty reduction to people surrounding Nyungwe by supporting different services like schools, hospital and funding different projects.

### **Health situation for the local communities around NNP**

While measuring the community development, the aspect of human wellbeing has to be considered. The Government of Rwanda has established the health insurance scheme to help all Rwandans to have access to medical services. Our research assessed the health insurance situation around NNP and realized that around 77.2% of the respondents were insured through mutual health scheme, 2.8% in La Rwandaise Assurance Maladie (RAMA) while 20% didn't have any health insurance.

### **New businesses born because of Nyungwe National Park**

Results indicated that 52 companies were born and depend directly to Nyungwe National Park. Among them we mention 3 hotels, 3 ecolodges, 15 tour companies, 5 honey processing projects, 1 forestry management company, 1 IPRC Kitabi, 10 Small Enterprises, and 3 handcraft projects. Those projects employ around 2000 people around Nyungwe and pay them around Rwf

300,000,000 per month equivalent to RwF 3,600,000,000 per year. The average of income per person per month is RwF 150,000 and this is greater than what 150 people said they get from the Park. This indicates that creating more job opportunities can result in effective and efficient protection of Nyungwe National Park.

### Local people savings from infrastructural projects of RS program.

Around 78.1% mentioned that they save RwF 30,000 per year because of the health centers that were built through RS Scheme. For schooling, 85% mentioned that they save RwF 80,000 per year in transport because schools were built nearer than before. Around 86.8% mentioned that they save RwF 60,000 per year due to the maintained road that made the transport smooth. Only 5.1% mentioned that the RS Scheme has constructed water facilities closer to them. The 11.5% mentioned that they benefited on agro processing projects around NNP. About 68.2% mentioned that they save RwF 300,000 resulting from job opportunities in the new infrastructures around Nyungwe National Park.

### Table 1. Value of the impact of Infrastructural CBCs

From the respondents perceived value and the impact of implemented projects through the revenue sharing, we calculated the impact in 20 years to understand the real contribution of the CBCs to community development. Table 1 illustrates the comparison of invested fund in cash and the valuation of the project impact per year during 20 years. The impact value in one year was calculated considering both the local community perceptions and the observations of infrastructure on ground and we compared them to the market of nowadays to get the monetary value. We did an estimate of the value of those infrastructures by taking the impact value per year times 20. We estimate that in 2039, the actual projects supported by revenue sharing will have the value of around 14 billion Rwandan Francs and will help Rwanda to perform the sustainable development goals (SDGs) and will help us to have a good grade in Africa Agenda 2063.

Infrastructure	Invested Fund through RS	The impact value per year (RwF)	Net profits in one year (RwF)	Impact value in 20 years (RwF)
Schools	293,793,391	356,170,531	62,377,140	7,123,410,620
Health posts/centers	92,498,654	110,050,000	17,551,346	2,201,000,000
Water Facilities	13,000,000	11,000,000	-2,000,000	220,000,000
Roads	13,866,200	35,000,000	21,133,800	700,000,000
Agriculture	124,202,129	56,515,000	-67,687,129	1,130,300,000
Agro processing projects	56,555,216	15,000,012	-41,555,204	300,000,240
Constructed houses for poor families	30,000,000	57,123,501	27,123,501	1,142,470,020
Planted trees for climate change mitigation	25,271,188	75,117,305	49,846,117	1,502,346,100
<b>Total</b>	<b>649,186,778</b>	<b>715,976,349</b>	<b>66,789,571</b>	<b>14,319,526,980</b>

Source: Primary data

NNP provides a lot of ecosystem services that contribute to the socio-economic development of the surrounding people (Table 2). For measuring the impact of biodiversity conservation to



community development, it made sense to assess the value of those ecosystem services and analyze how they contribute to the livelihoods improvement of the community around the Park.

**Table 2. Value of Ecosystem Services Provided by Nyungwe National Park (Adapted from the Article of Masozera (2008))**

This table shows the economic value of ecosystem services provided by NNP and their beneficiaries. There is a direct linkage between ecosystem service and revenue sharing scheme because RS is founded on the fact that we have the biodiversity in the park and other natural resources that attract tourists to come and visit, pay money, then a certain percentage is shared to the communities around those potential ecosystems.

<b>Ecosystem Service</b>	<b>Economic value(RwF/Year)</b>	<b>Beneficiaries</b>
Watershed protection	105,981,824,700	Local communities, Tea factories, Rwanda Energy Group, Global Community
Biodiversity protection	1,800,000,000	Farmers, Beekeepers, Global Community
Carbon sequestration and storage	145,872,000,000	Global Community
Recreation and Tourism	3,035,081,700	Global Community
<b>Total</b>	<b>256,688,906,400</b>	

## DISCUSSION

New projects and businesses were created as a result of funding by RS program and the presence of NNP which resulted in job creation, tax payment, investments, infrastructures, and cultural exchange because of many foreigners visiting this ecosystem (RDB, 2015). While doing this research we found that the indicators of community development provide information about the effects of community projects and initiatives to the societal good change in different domain like health and social domains. We found the contribution of Community Based Conservation (CBC) projects according to the perceptions of people but scientifically to confirm if a community is developed; people should not only consider the facilities that are available but also the good use of those assets to satisfy the community needs. For instance, If there is a hospital that is worth thousands of dollars and fails to provide good and quick services to the community; at the end of the day we realize that instead of contributing to community development, that hospital can delay the development (Fetterman, 1996).

The levels of economic prosperity around NNP were measured by looking at Human Development Indicators like job creation situation, average wage for workers, quality and quantity of service, safety, food security, access to housing, etc. This study realized that community-level development indicators are moderate and some are related to the low mindset not because of lack of resources (Pietrzak et al., 1990). The results showed that CBCs around NNP didn't focus on all levels of community development. Looking at our results and after making analysis of Human Development

Indicators for people living around Nyungwe, it is hard to confirm that the community around NNP is developed; they are still missing the basic needs that can qualify them a developed community but the RS program contributed in this development process (Berkowitz, 1982).

The infrastructures in education contributed in community development by reducing the walking distance for the students and teachers, from home to the school. This contributed to household improvement because when students leave or arrive home in good time, they work and move forward their families. The increase in classrooms helped in increasing the number of teachers and students in that area. The fact that more people have access to school, they grow and continue their studies and contribute to the country development in many domains (Umuziranenge et al., 2017). For health infrastructures, the people appreciated access to health because of tourism revenues. Mothers appreciated how they can go for consultation and delivering in nearby health posts while they were used to walk, take motorbikes, or taxi to reach the health post or centers. They valued this service and many have saved money because of this contribution from the revenue sharing program. It is understandable that health infrastructures constructed through revenue sharing helped also in job creation for private sector empowerment through what they supply, etc. What has been achieved has to be supported with good human resource and quality quick service to speed up the community development around Nyungwe (RDB, 2015).

For Agriculture, we realized that the beneficiaries were not consistent and even those who approve projects didn't have skills in modern Agriculture as evidenced by usage of traditional agricultural methods. This caused the lack of sustainability in agricultural and livestock promotion around Nyungwe while the soil is acidic and about 86% of the community there depend on Agriculture for subsistence (EICV5).

For human mindset, the research has shown that the poor mindset is still challenging the community development. Some households didn't have toilets while they have good houses. The RS supported in building houses for extremely poor people but most of them are still doing illegal activities in Nyungwe (MINICOM, 2013). People in Mushabarara were given houses to relocate from the proximity of the forest and some of them didn't want to leave as they wanted to continue illegal activities of poaching. These real scenarios show that the development starts from the mind, heart, person, and reaches the environment (Hoffer & Levy, 2010).

The overall contribution of RS to community development shows that money was disbursed but 60.1% didn't do what it was supposed to do. This was detected through checking the RDB documents, the field observation, and the perceptions from the beneficiaries. This delayed the community development around the Park not because money was there but because of corruption, bias, mismanagement, lack of follow up, etc. The perceptions of the people on RS investment is different from that of the community conservation staff as for them, they don't accept existence of corruption and strongly agree that RS has contributed very much to the community development around Nyungwe National Park. Looking at the indicators of community development and considering the primary data from field research, I realized that money from RS scheme contributed only at a quarter of the overall development they have now by comparing work

expectation and the real work. The remaining large percentage includes other development programs that the Government put in place (NISR, 2016).

The contribution of RS is good but the question was to wonder why do that community get that additional funding and don't develop more than the communities far from Nyungwe National Park? To get the answer, we asked local communities and realized that this is related to historical background where people around the Park were used to get resources from the forest without thinking on self-reliance or work on their land for household development and that others were used to work in tea plantations without focusing on personal growth and development in terms of education (MINICOM, 2013).

Most of the adults are uneducated because of that mentioned situation and that resulted in low mindset which affected the investments through RS. Adult people are decision makers in the community, while they don't have intellectual capacity and mind based development. They were supported but were not able to manage the infrastructures, hence the failure of RS at some point. But as the Government put a lot of efforts in education, we hope that educated youth will help in making RS successful in the next decade (NISR, 2016).

Some projects were located in inappropriate areas because some people with power to decide where to put funds were biased. These have had consequences to the community and that was the cause of complaints. The lack of ownership on built infrastructures has the roots in bad planning, corruption, bias, bad choice of an area, and bad implementation. The co-management style of projects funded by RS should be put in place since the beginning and have a regular validation meeting (Imanishimwe et al., 2018).

The mistake of offering a fund to non-capable cooperatives and the bad management of cooperatives were mentioned as the causes of failure to a number of projects. The fact that there is no defense or presentation in front of the sponsors on the side of people who requested fund; it shows that the projects are not chosen based on performance and competence. Although people obtain funds through this scheme, it is rare to find local leaders who mobilize people to conserve biodiversity and link it to the community development. Success will require taking risk, advocacy, synergy, partnership, and striving for common good and common goal (Imanishimwe et al., 2018).

RDB investments through RS around NNP are more than 1 billion but asking people to estimate their value, they don't agree that such huge amount has reached them.. This is not easy to confirm because the infrastructures valuation requires the qualified people but we wanted to check the perception of the people and assess their appreciation and satisfaction. The main gap was that people are not engaged in planning and implementation of RS sponsored projects, which justify a huge valuation gap between them and RDB. The low satisfaction resulted in increase of illegal activities and instead of creating a win win in conservation there were loose loose, win loose, and loose win. On the other side, the value of infrastructures as per peoples 'perceptions after setting

them in one year shows that it is clear that RS contributed to socio-economic development of the community around NNP (Table 1).

We realized that the value of CBCs funded through RS and the value of ecosystem services provided by NNP indicate that conservation can contribute a lot to the community development but issues are born at the level of implementers, beneficiaries and supervisors. Investing more than one billion Rwandan francs plus more than two hundred fifty billion Rwandan francs as the value of ecosystem services provided by NNP per year show a significant cause of conservation and justifies how biodiversity conservation is linked to community development (Table 2).

## **CONCLUSION AND RECOMMENDATION**

The biodiversity conservation contributed to community development around NNP through the RS that resulted in setting the infrastructures that serve the people. However, some gaps in poor management of RS funds were observed and this resulted in some idle projects. All the aspects of community development were not reached by RS program because of lack of knowledge in economic development science of some program decision makers and some beneficiaries. The Districts around NNP are among the poorest districts and the livelihoods of the local communities are not at good standards in project implementations. We realized that this status cannot be solved by RS scheme only but by the partnership of Public and Private Institutions. The park managers and local leaders didn't produce a joint report on why this is happening and only NISR through EICV provided the reports that showed the reality. After realizing that the impact of revenue sharing in 14 years contributed at a moderate level to the livelihoods improvement, we recommend that the Government should put more RS funds in Technical Vocational Training and construct more infrastructures that give jobs to the people instead of funding local cooperatives which failed several times to execute the projects. Efforts to establish Conservation Leadership and Education Centers can be put around the protected areas and involve children and youth at early stage in Natural Resources Management and environmental economics for sustainable biodiversity conservation and community development.

We highly recommend the establishment of co-management system in NNP through Public Private Partnership (PPP), Public Community Partnership (PCP), and Public Community Private Partnership (PCPP). There is a need to avail enough alternative solutions to the problems faced by the local community, training on co-management, strengthening sharing of benefits from NNP and compensation for damaged items. An increase in capacity building and formal education about conservation, and Community Based Organization development should be encouraged so that all stakeholders can work cooperatively toward the same goal for sustainable tourism development and co-management of NNP. There is a need of local people involvement in decision making and planning development to have strong synergy and approaches in terms of co-management of NNP for sustainable biodiversity conservation.

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