

Implication of Upgrading Conservation Areas on Community's Livelihoods: Lessons from Saadani National Park in Tanzania

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Abstract

This paper addresses the implication of upgrading conservation areas in Tanzania on the livelihoods of communities abutting them. It draws on lessons from the Saadani National Park (SANAPA) in Tanzania. The area was upgraded in 2003 from a Game Reserve (GR) to a National Park (NP) status. Unlike Game Reserves where licensed human consumptive uses are permitted, National Parks allows only controlled non consumptive uses such as walking safaris, game driving and photographic tourism. The paper uses the findings of the study which was conducted in 2008 in four villages that are adjacent to Saadani NP to assess the implication of changing conservation area status. Mixture of research methods were employed in the study. These included key informant interview, Focus Group Discussions using Participatory Rural Appraisal (PRA) tools, site visits, observation and interview of heads of households in the villages surrounding SANAPA. The issues gauged in detail were the before and after NP status situation and changes in people's welfare. The findings show that general community benefits such as social services have improved after the upgrading. However, individual benefits including income have decreased. The conclusion drawn is that survival of the park depends much on good relations with the people adjacent to it.

Keywords: *Saadani National Park, Upgrading, Community services and conservation.*

Introduction and Background

Tanzania is a country endowed with natural resources that are under various forms of protection. About 30 percent of its land is designated for protection purposes; of which 4.4 percent comprises of 16 national parks, 5.5 percent of game reserves, and 1 percent is the Ngorongoro Conservation Area. While all areas are meant for protection and conservation of biodiversity, they differ in the level of human interactions. In Tanzania, national parks (NPs) and game reserves (GRs) are administered under different authorities. While NPs are under the direct jurisdiction of the Tanzania National Parks Authority (TANAPA) which is autonomous, GRs are under a semi-autonomous Division of Wildlife of the Ministry of Natural Resources and Tourism.

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Over centuries, local people living adjacent to protected areas have derived their livelihoods from natural resources in those areas. In line with this, and as part of the poverty alleviation strategy, the country's conservation policy has evolved a strategy of conservation with development to support people's livelihoods, and to avoid the pitfalls of the fences and fines model as the former usually have negative impact on both sides: the local community and the conservation area. National parks (NPs) are strictly for conservation, game viewing and photographic tourism. No human encroachment or entry for farming, grazing livestock, collection of firewood or any other human activity is allowed. Villagers that live adjacent to NPs are not supposed to hunt animals, even if they spill over into their areas.

National parks are known to have maintained viable population of large predators such as lions, leopards, hyenas, etc.; and maintain critical ecological functions over long periods of time. Under the present conservation with development (CWD) strategic policy of the country, villagers adjacent to NPs are supported by a contribution of 10% of hotel bed fees per day to finance development in adjacent villages. However, not all NPs have embarked into this strategy. Even if game animals destroy crops and kill domesticated animals and human beings, people are not compensated for it. In contrast, licensed and controlled human activities such as hunting and photographic tourism in game reserves are allowed. Some GR and protected forests have started to allow villagers to collect deadwood, edible non-timber forest products, and to fix beehives in some areas under a supervised controlled system. This is done to reduce negative impacts on people's livelihoods as some of the resources were theirs before they were gazetted; and they were dependent on them for their survival (Wollenberg, 2000; Western, 1994; Baghwati, 1997). The main idea here is that allowing sustainable use by local communities will reduce illegal and destructive resource harvesting and vengeance attitudes towards protected areas that are managed under the fence and fines conventional model.

Baldul (1999) indicates that although game reserves in Tanzania are home to thousands of exceptional natural resources, they face problems ranging from forest destruction through logging and charcoal, poaching of indigenous grazing mammals such as buffalos, reedbuck and great kudu, inadequate government resources, weak management capacities, inadequate manpower for patrol, and ineffective legal systems.

In an effort to conserve the existing biological diversities in game reserves, the Tanzanian National Parks Authority (TANAPA), working together with the Ministry of Natural Resource and Tourism, undertook studies on the importance and need to upgrade some game reserves to national parks (IRA, 2002). It was on such an endeavour that the Mkomazi, Kitulo and Saadani Game Reserves were upgraded to NP status.

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Changes on the management status from game reserve (GR) to NP have implications on biodiversity and local people's livelihoods. Theoretically, NPs intend to support community development by integrating conservation with development (Fisher, 2004; Roe & Elliot, 2004). However, in practice the situation has been to the contrary. Experience shows that communities neighbouring NPs suffer from displacement, inadequate access to resources that they formerly depended on for livelihood, frequent harassment by game scouts, attack by wildlife, and the lack of freedom of movement (Brockington & Schmidt-Soltau, 2004; Homewood et al., 1997).

Conversely, individual benefits such as charcoal-making, hunting for income and for the pot have decreased as the NP status has imposed restrictions to access resources such as deadwood, plant medicine, edible wild fruits and vegetables that used to contribute to diet, health, occupation and income. Human-wildlife conflicts have also increased due to increased number of game animals that sometimes spill over into farms, destroy crops, kill domesticated animals and harm human beings. There are also conflicts over park-village boundaries.

This paper points out to the importance of building a consensus over boundaries before up-grading of conservation areas; agreements over community and individual benefits as people have to survive and need cash to meet other needs. Very important is drawing-up of CWP plan prior to changing of a protected area (PA) status, and have it approved and signed by representatives of both parties.

The Problem

The impact of upgrading NPs on local community livelihoods is inconclusive. The intention of PAs is to support community development by integrating conservation with development. However, experience shows that most of the protected areas that have been dedicated for conservation have caused suffering to neighbouring communities.

In Tanzania, like in other countries, NPs have more restrictive regulations and laws over natural resources usage than game reserves. Thus, they potentially have negative socio-economic impacts on local community livelihoods. The transition and upgrading from GR to NP status, the impact on community livelihoods, their attitudes and perceptions around the Saadani National Park (SANAPA) have not been adequately studied. This paper attempts to address the issues of community benefits and perceptions on conservation. It further establishes how policy can help to improve community benefits and enhance sustainable management of national parks.

Objectives of the Study

The main objective of this study was to assess community-park interaction around NPs, their implications on the livelihood of surrounding communities, and local perceptions of national park conservation. The specific objectives were to: (i) Establish the nature of interactions between local communities and NPs before and after its upgrading; (ii) Assess how upgrading of national park has impacted community livelihood; and (iii) Assess community attitudes and perceptions on the conservation of the national parks.

The Study Area

The study was conducted in Saadani National Park (SANAPA), which is found in two regions: Coast and Tanga between 5°55' and 6°14' south of the equator, and 38°43' and 38°48' east coordinates (Fig. 1). Specifically, the study included four villages adjoining the park: Matipwili and Saadani from Coast region, and Mikocheni and Mkwaja villages of Pangani District in Tanga region.

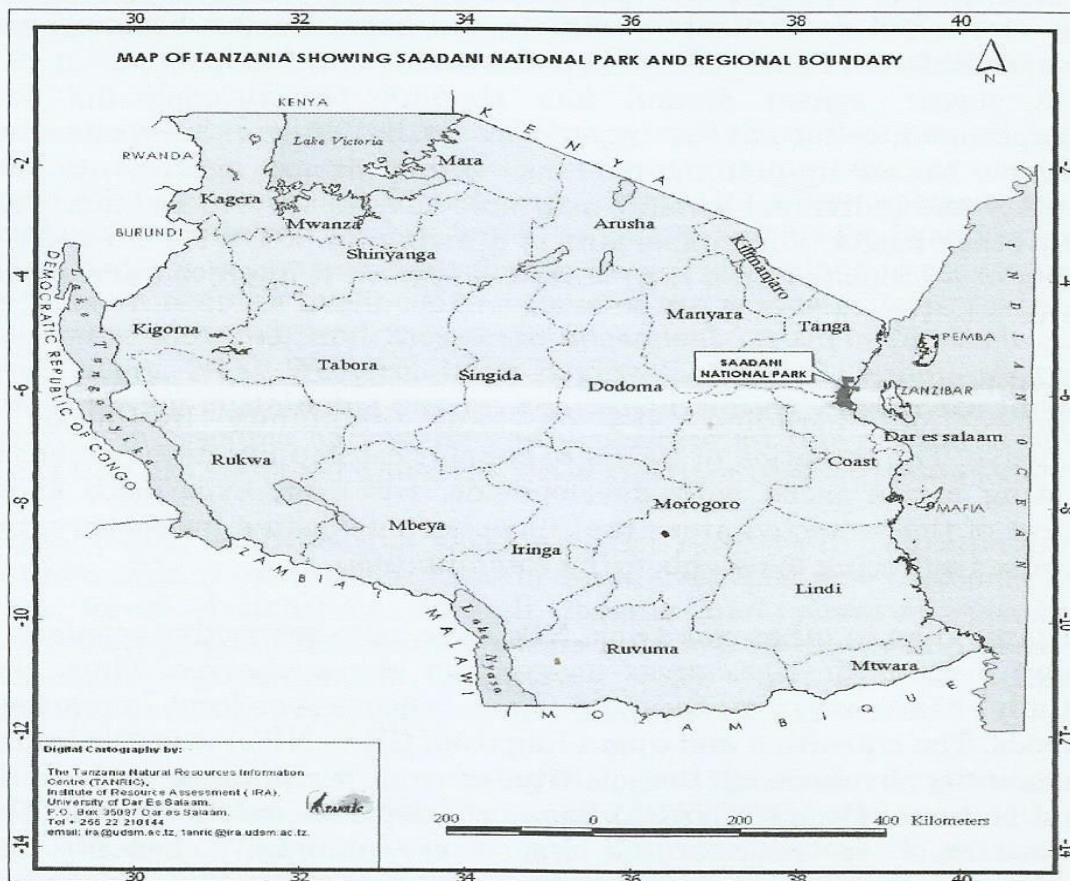


Figure 1: Saadani National Park and Regional Boundaries
Source: Milewski, 1993

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Methodology

The study used a sample composed of key informants such as wildlife officials at the National Park, district staff, and village authorities who were knowledgeable of the area and were selected due to their position of power. A total of 112 households were randomly selected by the virtue of their location from the national park. This sample of households is about 8 percent of all the households in the selected villages (see Table 1). The aim was to interview about 10 percent of households that are in the area but poor roads to Mkwaja and Matipwili villages forced the researchers to interview only 5 percent and 8 percent of the households, respectively, in the two villages. However, this did not affect the quality of the data collected as much of it was on socio-economic aspects and perceptions about the NP. Views were also collected through focus group discussions (FGDs). One FGD was held per village with a representative of villagers who had lived in the area for many years and were knowledgeable about the villages' history.

Table1: Number of Households interviewed

Villages	Regions	District	Number of household	Households interviewed N = 112	Percentages of households interviewed (%)
Matipwili	Coast	Bagamoyo	526	29	5
Saadani			335	33	10
Mikocheni	Tanga	Pangani	280	30	10.7
Mkwaja			240	20	8.3
Total			1381	112	8.1

As can be seen in Table 1, the study villages are distributed in two districts, mainly Bagamoyo in Coast Region, and Pangani in Tanga Region, respectively. This provided an opportunity to learn about coordination of CWD activities between the districts that fall in different administrative regions.

Data Collection Methods

Multiple data collection methods or triangulations were used to capture different information from the study area during field work. Key informant interviews were conducted using semi-structured questionnaires, focus group discussions were used to collect qualitative data and household questionnaire was used to collect quantitative data at the household level. Direct observations were also utilized.

The household questionnaire covered demographic characteristics (sex, education, age, marital status, family size, occupation, income). It also addressed key issues of livelihoods before and after the transition from the GR to a NP, villagers' perception of the before and after transition situation in terms of access to natural resources, support received from conservation

authorities and change in their welfare. The information was important for the study because it helped gauging the real before-after Park and communities' interaction around Saadani National Park. Site visits and observation helped as eye witness of areas of community-wildlife conflict, boundary problems, housing and farm conditions, nature of tourism and livelihood activities going on in the area and type of community public social service facilities including those provided by the NP.

Protected Areas and Local Communities

The establishment of PA has no doubt contributed to biodiversity conservation (WPC, 2003a). However, many gaps exist in the current PA network. Unsustainable exploitation, habitat loss, inappropriate policies, inappropriate incentives and inequitable distribution of costs and benefits are threatening existing PAs. It has been noted that the underlying and accelerating forces that threaten PA include poverty, globalization, security and global change. It has been revealed that most problems facing PAs have a human component: human settlements on adjacent lands and unauthorized harvesting of resources within PAs being among the most common issues in many conservation areas (Newmark et al., 1993).

In the past, conservation was regarded as a fortress whereby conservation areas were created and left people aside. Such practice was dubbed 'fortress management' (Wells & Brandon, 1992; Neumann, 1998; Brockington, 2002). Recently, a strong consensus has developed that PAs need to make a solid contribution to poverty alleviation; going far beyond simply doing no harm since PAs are linked to the community (McNeely & Miller, 1984). However, it has been realized that to attain such conservation objectives there is need to effectively manage the relationship between NPs and local communities (Kramer et al., 1997). The trend in international conservation has been to manage such a relationship through integrated conservation and development projects (ICDP).

The World Park Congress (2003b) suggests that the establishment of PAs and management should not exacerbate poverty. The main idea of this approach is to examine provision of benefits to neighbouring communities so as to enhance local respect and acceptance of NPs (Newmark et al., 1993; Neumann, 1998; Wells & Brandon, 1992). Building local community acceptance and appreciation of NPs could be accomplished through creation of local employment, provision of social services such as health centres, water supply and other infrastructural developments to neighbouring communities (Zube & Brush, 1990 cited in Shelhas et al., 2002).

Protected Areas Management Approaches in the World

Generally, natural resources management takes a very complex form. Various decisions on conservation for the purpose of management of natural resources

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may affect different stakeholders in different ways, especially when natural resources are scarce and touch people's welfare. As suggested by Ashby (2003) there is a need to move from theory to practice of resolving conflicts through democratizing natural resources management by including all stakeholders.

In this regard, the link between conservation and people becomes important, especially after the international congress on NPs and people (IUCN, 2003), whose main objective was to discuss the linkages between PAs and the communities around them. Similarly, in the third world park congress held in Bali in 1982, the role of PAs in sustaining society was recognized. Following that congress, it was realized that conservation organizations have been implementing approaches that share economic benefits of PAs with community members and supports their livelihoods (Nguyen & Tran, 2002; IUCN, 2003).

Such initiatives help in compensating local people for lack of access to PA resources and in providing them with alternative income sources that allow people to benefit economically from conservation while restraining environmental destructive practices. The fourth congress held in Caracas in 1992 strengthened the need for local people's participation in supporting conservation of NPs (IUCN, 2003). In the fifth congress, held in 2002 in Durban, participants recognized the interconnectedness of PAs and people; but the conference took a step further by affirming that PAs should strive to contribute to poverty reduction, and at the very least they should not increase poverty (IUCN, 2003; IISD, 2003). PAs are vital for safeguarding species but conservation by exclusion solely has some weakness such as increasing poaching incidences and bush fire (Newmark et al., 1993; Neuman, 1998). In addition, indigenous people residing in PAs may increase hostility and lack of public support in conservation (ibid).

According to the mainstreaming narrative, the creation of PAs is considered as a way of impoverishing the local population through evictions and denial of access to natural resources (Rahman, 2003; WPC, 2003b). Taking into consideration the linkages between PAs and the well-being of people living in or around PAs, Scherl et al. (2004), suggested that it is a practical and ethical necessity to link people and PAs. This idea was initially acknowledged and put forward by McNeely in 1986 and 1989, who proposed the ideal complex parks. Thus, there is a growing realization for the need to establish mechanisms for sharing benefits between NPs and the surrounding communities where NPs are created.

In addition, following the international congresses on people and parks, a series of people-oriented management approaches were initiated in this endeavour, namely community-based management (CBM), integrated

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Moreover, in recent years conservation has viewed local people's support as an important management element for biodiversity conservation of PAs (Walpole & Goodwin, 2001). This is linked with direct benefits that local communities get from PAs in the form of biomass resources, park funds diverted to local villages by state agencies and revenue from wildlife tourism (Parry & Campbell, 1992). Furthermore, Shekhar (1998) suggested that benefits obtained by local people from wildlife tourism and other sources have impacts towards positive attitudes to conservation.

Some studies have suggested that socio-demographic characteristics—such as population, education levels and affluence—can determine local responses to parks (Fiallo & Jacobson, 1995; Infield, 1988; Mehta & Kellert, 1998; Parry & Campbell, 1992; Newmark et al., 1993). A study in South Africa by Newmark et al., (1993) and Infield (1998) noted that positive attitudes increased with increasing household affluence and respondents' education levels. Furthermore, they establishes that households experiencing direct benefits from conservation area were more positive on Pas than those that did not.

In Tanzania, TANAPA set up community conservation services (CCSs), a philosophy that enables communities to develop sustainable land use practices and harness sustainability of natural resources for poverty alleviation and socio-economic development (Honey, 1999). It also enables communities to understand that the preservation of critical wildlife routes was in their best interests (TANAPA, 1998).

For example, from 2000 to 2005, Tarangire National Park CCS contributed a total of TZS329,669,189 to community development projects in six districts adjacent to the park (Sachediana, 2006). Also in the Selous Game Reserve, GTZ helped communities to establish community-based tourism. By 1993, 31 villages were involved in the project, and were receiving both employment and revenue from development projects (Honey, 1999). Also between 1996 and 2002, SNV Tanzania, in close cooperation with the Tanzania Tourist Board, assisted Arusha and Kilimanjaro regions to establish and manage small-scale tourism enterprises that could benefit local communities around the parks. Eighteen cultural tourism projects were established and operational by the end of 2002.

Discussion of Findings from the Study in Saadani National Park ***Respondent's Characteristics***

Most of the people who were interviewed were adults between 20-63 years of age. Of the 112 respondents, 89 (80%) were males, and 23 (20%) were females. Of the respondents, 71% were married, 8% single, 8% widows and

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13% divorced. Originality of households showed that 61% were born from within the area, and 39% were from outside who had immigrated into the area. A majority of the respondents had lived in the area for more than three years. At least 81% had lived there for more than 15 years and were considered knowledgeable about the situations in the area (Table 2).

Table 2: Years Lived in Saadani NP Area by Household Respondents

Years Lived	Single		Married		Widow		Divorced & Separated		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Total	%
5-15	4	0	10	0	0	0	0	7	21	19
16-30	1	1	32	0	3	2	0	6	45	40
31-45	1	0	16	5	1	0	0	1	24	21
46+years	2	0	17	0	2	1	0	0	22	20
Total	8	1	75	5	6	3	0	14	112	100

Occupational Activities

Agriculture is the most important livelihood activity in the area, followed by fishing and small business such as shop-keeping, tea-rooms and outdoor vending of agricultural and industrial products.

Table 3: Occupational Activities of Households

Activity	Name Village				Total	
	Saadani	Matipwili	Mikocheni	Mkwaja	Total	%
Agriculture	0	22	25	9	56	50
Fishing	18	0	0	11	29	26
Small business	11	3	4	0	18	16
Formal employment	2	2	1	0	5	4
Paid manual work	2	0	0	0	2	2
Livestock keeping	0	2	0	0	2	2
Total	33	29	30	20	112	100

In assessing income earned by households, it showed that generally it had improved as over half of households (59%) reported an annual mean income of TZS300,000 per year, while when it was a PA this percentage was 35%. Hence, 24% of households moved from a lower income enclave to middle income. This situation was better for other households for 57% had a mean earnings of TZS310,000 to 600,000; and one person (1%) had an annual mean income of above TZS1m per year (Fig. 3).

Villagers reported doing more business after change of the GR status than before as there are more visitors at present than in the past.

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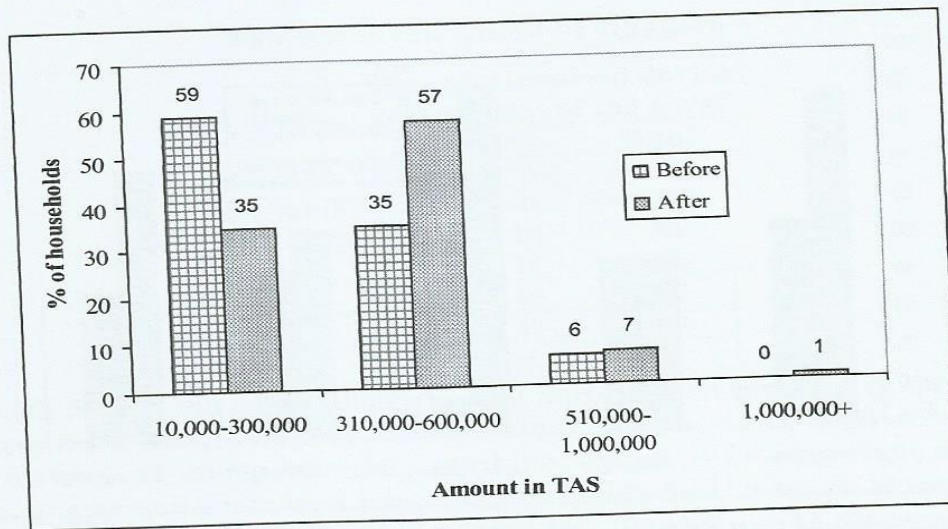


Figure 3: *Income Earned By Households Prior and After Change of GR Status*

Community Interactions Before and After Upgrading of the Park

Research elsewhere has shown that where majority of populations are natural resources dependent (for food and income), any prohibition to extract resources would affect their livelihoods (Jodha, 1992; Beck & Nesmith, 2001; Adhikari, 2005; Pimbert & Pretty, 1995). This study found that the households are dependent on natural resources for their livelihoods, and had more access to the resources inside the PA when it was a game reserve than when it became a national park. 90% of the household respondents reported having access then to various products including edible NTFPs and building materials, access to fishing in the rivers and the Indian Ocean, which is now a part of the park. At the time of the study in 2007, these people had limited access to resources in the PA as was expressed by 97% of the household respondents. Villager leaders and FGD participants also expressed the same problem. The aspect of having access to natural resources was seen to be taken as a measure of good interaction and public relations by villagers, and was seen as better (interaction) before the change of the GR status to a NP. When asked about the problem faced due to the existence of the NP, villagers first mentioned animal spill-overs into farms and crop destruction, followed by boundary conflicts and the entry restrictions into the NP (Fig. 4). Thus, they complained that while they are restricted from entering the NP, their crops are eaten by game animals and birds without compensation. Moreover, they added, livestock and human beings were also being attacked by dangerous wild game. To some extent these problems were reported to strain community-park relations.

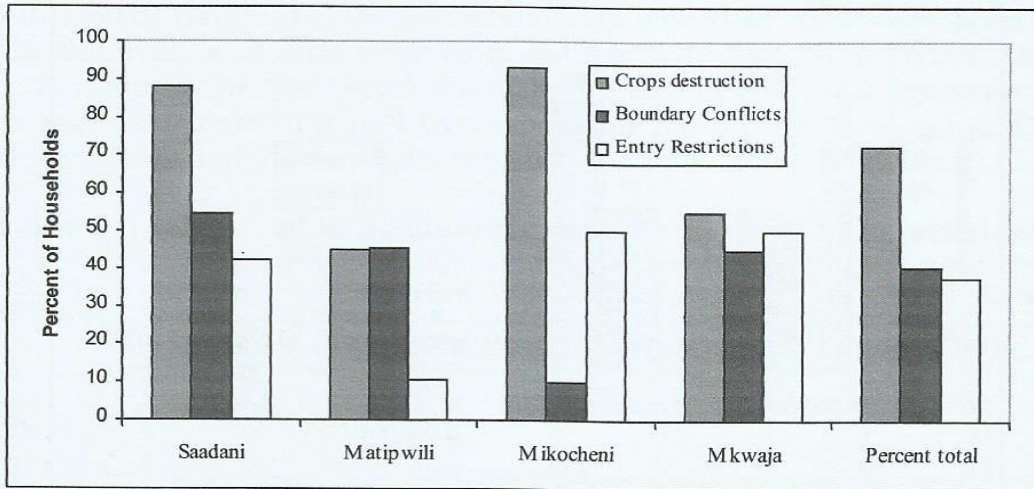


Figure 4: Causes of Strains in Park-Community Relationship

However, the restrictions imposed were meant to control unsustainable resource extraction including logging, poaching and bush fires that tend to damage the park ecosystem. The same type of restrictions is reported in Homewood et al., (1997) about Mkomazi Game Reserve when it was gazetted in 1951. When Mkomazi was gazetted it allowed pastoralists to live inside it. The people grazed livestock, collected NTFPs and undertook limited cultivation. Over-extraction of resources and degradation occurred as a result of total eviction of all residents who were living inside the reserve in 1988, and trespassing or collection of natural resources was also curtailed. In 2008 the status of Mkomazi GR changed to NP, and more strict measures were imposed. The imposition of strict laws and regulations, plus the eviction of pastoralists in 1988 exacerbated conflicts that in 1995 resulted into a court case that failed to reinstate pastoralists back into MGR. Also, more loss of livelihoods occurred with the creation of MNP. Kiwasila (2009) notes that there are increasing farmer-pastoralists conflicts outside the reserve due to the concentration of incompatible land uses, and between them and MNP authorities. A frequent incursion into the MNP for NTFPs, fuel wood, poaching, grazing and vengeance bushfire has been reported as people are contesting against their loss of livelihoods.

Involvement of Villagers in the Establishment of the NP

As villagers expressed crop destruction, boundary conflicts and entry restrictions as their major problems, they were asked if they were involved in any way during the process of upgrading the GR to a NP about 43% households reported to have been involved.

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Table 4: Involvement of villagers

Villages	Were you involved during gazettement of the park?		Total
	Yes	No	
Saadani	24	9	33
Matipwili	20	9	29
Mikocheni	14	16	30
Mkwaja	6	14	20
Total	64	48	112
%	57	43	100

Although 57% of the households reported to have been involved in the change of status from GR to NP, only 6% reported to have been involved in boundary demarcations. It seems boundary marking—which is an important aspect of land management—involved less villagers (Table 5). Hence, its occurrence as the second most important problem faced by villagers due to extension of the NP boundary into villagers' land. Most villagers were involved at general level of receiving information regarding the change of status that in the actual decision-making about the change of status. No wonder there are conflicts over boundaries and people complain about restrictions as if the function of a NP was not clearly explained.

Table 5: Level of Involvement in Decision Making

State of Involvement	Saadani	Matipwili	Mikocheni	Mkwaja	Total	%
Village meeting	22	15	14	6	57	51
Boundary marking	2	5	0	0	7	6
Not involved	9	9	16	14	48	43
Total	33	29	30	20	112	100

Naimani and Ngomuo (2008) argue that community involvement in the decisions of any undertaking in their neighbourhoods ensures sustainability of such undertakings.

Types of Conflicts

a) Human-Wildlife Conflicts

In the interviews with the local people, 40.1 percent felt that the trend of damage is increasing in Mikocheni, Mkwaja and Buyuni Kitopeni villages. Wild animals such as elephants, buffaloes, baboons and wild pigs were reported as destroying coconut farms around SANAPA. Villagers in Mkwaja village stated bluntly that wild animals destroy their crops, attack animals and human beings. These finding concur with those of Baldul (2000) who reported that wild animals from SANAPA move around the villages, causing negative impacts. The park office confirmed that these incidences had increased due to an increase in wildlife numbers. The upgrading of the area from GR to a NP and the resulting control of entry and human activities into the park had improved habitats, and thus increased wildlife populations. If

the negative impacts of this situation is not controlled, it will have negative implications to the SANAPA and may lead to some negative attitudes and lack of support for conservation of the park.

b) Village-Park Boundary Conflicts

Villagers in Matipwili reported that initially the park was given 30 acres of village land to construct headquarters' offices, but they took an extra 20 acres to total 50 acres. Grabbing of indigenous customary land to give room to wildlife conservation areas is highly pronounced in the country. It has occurred in Grumeti areas of Serengeti District when the Grumeti Game Conservation area was changed to GR. Conflict erupted and villagers fought against the government and the investor with grave results. In Kilombero district people had to be resettled to give way for the Udzungwa National Park. In SANAPA, incidences of poaching and bushfires were experienced along the borders of Mikocheni and Mkwaja villages; which was a sign of hostile relationship between the community and park as not all the people had a positive attitude towards it.

c) Restriction to Access Forest Resources

The upgrading of the reserve to park status posed a problem over access to forest resources (such as firewood, building poles, thatching grasses, medicines, spiritual sites, etc.) due to the imposition of regulations. Similar poor access to forest resources is reported by Falconer and Arnold (1988) to have negative impact on community health, wealth, food security, income and other livelihood opportunities in general.

d) Restriction to Trespass across the Park .

The imposition of laws that restrict local people to cross the park was pointed as another problem. Before the upgrading of the park, locals could walk from Mkalamo and Kwamsisi villages within Handeni district crossing the park within a very short time to access social service Others could also access shops, markets and other services that are in Mkalamo and Kwamsisi villages. Thus, the restrictions made it difficult for people between villages to communicate.

Perception on the Value of a National Park on Land

FGD participants were asked on their perceptions about the NP: whether having a national park was a waste of land. All FGD participants said 'No'. However, in the household interviews, 79% said 'No', i.e., it was not a waste of land; but 21% said 'Yes', i.e., it was a waste of land (Table 6). The differentials in responses were statistically significant different for household index value was NP ($\chi^2=7.14$, $df=3$, $p<0.05$).¹

¹ For the calculated value of chi-square to be significant, it must be equal or exceed the table (critical) value for significance at the P level shown.

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Table 6: Value of having a National Park on Land

Study Villages	Is having a conservation area is it wasted of land?		
	Yes	No	Total
Saadani	10	23	33
Matipwili	4	25	29
Mikocheni	7	23	30
Mkwaja	3	17	20
Total	24	88	112
Total	21	79	100

Households were also asked their opinion about having or not having the NP: in particular if the NP should be de-gazetted (Table 7).

Table 7: If the Park Should be De-gazetted

Villages	What if the park would be de-gazetted?		
	Yes	No	Total
Saadani	10	23	33
Matipwili	4	25	29
Mikocheni	11	19	30
Mkwaja	2	18	20
Total	27	85	112
%	24	76	100

As it can be seen in Table 7, despite the problems that villagers were experiencing, 76% of the households interviewed were against de-gazetting of the NP. The respondents were then asked if they get any form of benefits from the park. 78% said they benefitted from the NP, while 22% said they did not. Also 63% reported to have experienced improvements in life due to the existence of the NP. Those who reported benefiting from the park were asked to list the type of benefits. Fig. 5 summarised the benefits.

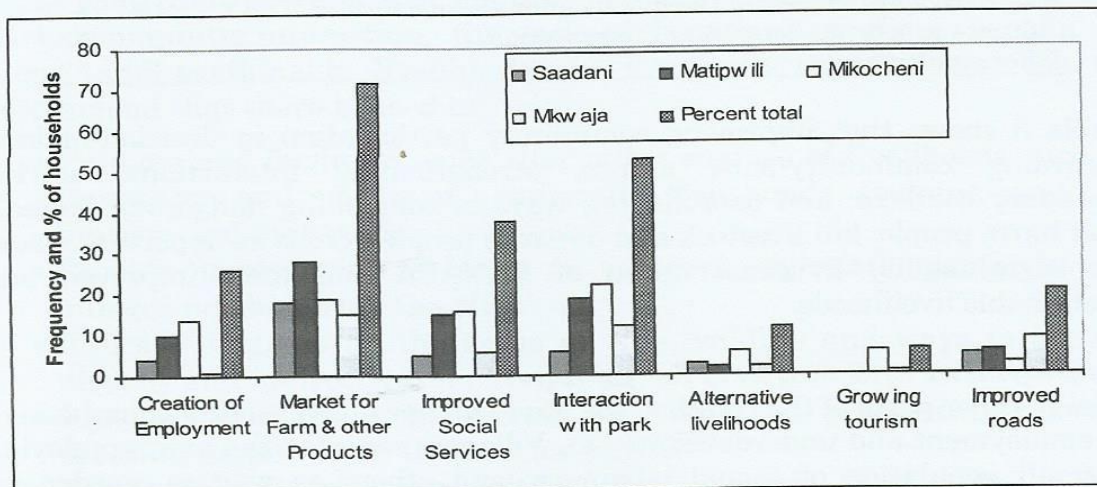


Figure 5: Benefits Accrued from SANAPA

As it can be seen in Fig. 5, improved markets for selling products (agriculture and other, e.g., fisheries, handcrafts, etc) was the first benefit (n=80 or 71%), followed by improved community-park interactions (53%), improved social services (38%), employment opportunities (21%), improved roads (21%), creation of alternative livelihoods (12%) and growing tourism that earn people income through trade and contributions from tourism revenue. Social services that were provided by SANAPA included school buildings, health centres, and water taps that were reported as improved compared to the period before SANAPA.

TANAPA's policy on conservation with development recognizes the need to support local communities surrounding a game reserve, game conservation areas and national parks. Through its outreach programme—christened 'Ujirani Mwema'—TANAPA facilitates a kind of benefit-sharing scheme for local communities living adjacent NPs to benefit from revenue accrued from tourism activities taking place in their area. In fulfilling its objectives, the agency addresses pertinent matters such as rehabilitation of schools, health centres, water supply and road improvements.. These types of benefits have motivated SANAPA adjacent communities to support conservation initiatives.

Opinion about Improvement of Livelihoods

Households were asked to propose what they would recommend for improvement in order to realize more benefits and make their NP and livelihoods sustainable. Table 8 sums up their responses.

Table 8: Proposals on how to improve SANAPA and Community Livelihoods

Community ideas	Number	%	Rank
Increase Participation in Decision making	68	61	1
Strengthen Park-Community Interactions	65	58	2
Solve boundary Conflicts	44	39	3
Establish ways to control Dangerous animals and vermin	17	15	4
Educate people out benefits of Conservation	2	2	5
Offer employment	2	2	5

Table 8 shows that improving community participation in decision-making regarding community-park affairs, strengthening interactions, solving boundary conflicts; and establishing ways of controlling dangerous animals that harm people, kill livestock and destroys people's crops as important issues for sustainability in conservation of SANAPA and their improved and sustainable livelihoods.

Employment and markets for products

Like in other parts of the country, the study villages have a chronic problem of unemployment and underdevelopment. Villagers reported the park employing a small population of casual labourers; and others as waiters, gardeners, cleaners and guards. Although these are least-paid jobs, something is better

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than nothing. Low educational attainment of the local communities and the lack of skills in tourism was reported to be a constraint in having individuals from the local community securing high-paying posts.

Conclusion and Recommendations

This study has established that there was closer interaction between the then game reserves and adjacent communities. The community acknowledged that before change of status from GR to NP, villagers had access to forest products such as poles for construction, deadwoods as source of fuel, bush meat, wild vegetables, etc. Inadequate or lack of alternative cooking energy, medicinal herbs as well as grasses for thatching houses imposed constraints in life, and bred a negative attitude against the NPs. Crop raiding, dangerous game animals attacking human beings and livestock were part of the negative aspects of SANAPA reported by villagers. However, despite these problems, villagers were very positive about the national park as the change of status life was reported to have improved. Villagers reported improved social infrastructure that was supported by SANAPA (schools, dispensaries and facilities, safe water and roads). Job opportunities, expanded market for their farm and non-farm goods were some of the positive aspect of SANAPA that had had an input in improved livelihoods and welfare.

Finally, although there are problem that have to be resolved, we can conclude from the findings of the study that people's livelihood after change of status from a game reserve to a national park has been more positive than a negative. SANAPA seem to be a notable success in conservation with development strategy in protection of flora and fauna, and in supporting livelihoods of the communities living adjacent to it. However, signs show that there is still more to be done to ensure a well-embraced park-community interaction, the lack of boundary conflicts, vermin on crops, and sustainable livelihoods. In line with the findings, the we recommend that there is need to:

- Promote and facilitate more alternative sources of livelihoods such as production and selling of handicrafts, fish ponds, training youth in tourism and tour guides.
- Provide employment to locals or villagers, especially youth, in the villages neighbouring the NPs.
- Educate villagers on the value of NPs, wildlife and ways to benefit directly and indirectly from the parks.
- Provide training in handicraft for locals to produce handicraft, dressing materials for tourism for income
- Facilitate curio shops or cultural *bomas* where handicrafts will be displayed and sold.

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