



The Kitulo National Park Transformation and the Implications on Sustainable Livelihoods to Adjacent Local Communities in Makete District, Tanzania

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Aims: The study investigates the process of change of the Kitulo plateau to Kitulo national park status and the implications on sustainable livelihoods to adjacent local communities in Makete District.

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Study Design: The study adopted a mixed research design which allows for the triangulation of qualitative and quantitative methods to gain a better understanding of the studied subject matter.

Methodology: Simple random and purposive sampling was used to select respondents for the study. Household survey, in-depth interviews, observation and document review methods were used to collect data. The household survey included 114 heads of households. Qualitative data were subjected to content analysis and statistical analysis using Statistical Package for Social Sciences (SPSS) used for quantitative data. Land use changes were captured and presented using Geographical Information System (GIS).

Results: The establishment of the Kitulo National Park from Kitulo plateau was not participatory as 82.5% of local communities were not involved in the process and even during the gazettement of the Kitulo National Park. The main actors in the process of change were government leaders and NGOs (87.7%), TANAPA (8.7%) and local communities (3.6%). These results implies that majority of the people were not involved which may affect in supporting conservation activities. Also, the justifications for the establishment of the park were to improve conservation of water catchment sources and high value of biodiversity. Furthermore, livelihoods benefits were constructing development projects and enhancing livelihoods of neighbouring communities.

Conclusion: The transformation of Kitulo plateau to the Kitulo national park was not bottom up participatory approach which made negative perception and attitude from local community towards the establishment of the park. Therefore, because the park has led to loss of major livelihoods activities to local communities, this paper thus seeks to recommend to increase more livelihood supports benefits and launching of sensitization programme for clear understanding on the purpose of the park and its benefits which will ensure the park sustainability.

Keywords: Kitulo plateau; Kitulo National Park; livelihoods sustainability; chikanda; Bustani ya Mungu; displacement.

1. INTRODUCTION

National parks and other forms of protected areas such as nature reserves, wildlife sanctuaries, biosphere and game reserves continue to be promoted worldwide because of their potentials for national and regional development (International Union for the Conservation of Nature [1,2]. The protected areas in the world have grown and doubled from 1993 to 2004 [3] hence, by 2005, 100000 protected areas covered more than ten million km² which is 12% of the planet earth [4]. National parks around the world have remained the most restrictive compared to other protected areas and are solely for the purpose of biodiversity conservation and protection of endangered species [5].

Studies have attempted to calculate the economic value of protected areas and the costs and benefits incurred by people living in the vicinity of such areas [6]. These studies argue that, the costs and benefits associated with establishing protected areas should be used to decide how much the winners should compensate the losers. Concurrently, the mission of protected areas has expanded from biodiversity conservation to improving human welfare. The result is a shift in favor of protected

areas allowing local resource use [7]. It is therefore widely argued within the conservation context that where people around PAs face economic costs due to the park establishment, they should clearly be fully compensated [8] and the rights and needs of many people residing in or around these parks should not be ignored. Consequently, another discourse emerged to counter the traditional conservation narrative it stresses that local communities, should not be excluded, either physically from PAs or politically from the conservation policy process. Nature and wildlife conservation policies have therefore shifted towards attempting to reconcile conservation with development needs, with more inclusive values and ethical frameworks being incorporated into conservation [9].

Although National parks provide important ecosystem services at the global, national and local scales, concerns have been raised that the costs of their creation are mostly incurred by the local people who rely heavily on natural resources for their livelihoods [10,11]. In particular, the establishment of national parks restricts people from using resources, which communities have been using and depending on for a long time. As a result communities are left without alternatives, which in long run cause encroachments and poaching [3]. Hence there is

a direct relationship between protected areas creation, their sustainability and local people's livelihoods. The costs associated with protected areas on local scales have included changes in land tenure and community structures, limited employment opportunities and increased human wildlife conflicts as well as boundary conflicts [12]. There is an overwhelming emphasis on the importance of integrating human dimensions into biodiversity conservation programmes [13]. The critical role of local communities in the management of protected areas has been broadly acknowledged by the conservation community with the recognition that local communities must be involved, and their needs and aspirations should be considered if biodiversity conservation is to succeed [14,9].

In the recent years, there has been an increasing realization that in order to manage existing PAs effectively and to create new ones, there needs to be an emphasis on working collaboratively with local communities and other actors through partnerships. According to Nathan and Philip [15] point out that, protected areas can no longer be managed in isolation but must be seen in the context of overall land use. A number of terms (stakeholders, interest groups and actors) are used when assessing different groups of people involved in the use and management of biological diversity and its components. Such actors among others can include individuals, families and households, community-based groups, local traditional authorities, businesses and commercial enterprises, non-governmental bodies, local governance structures, national governments, international agencies and others. Different stakeholders generally possess different interests, different ways of perceiving problems and opportunities about natural resources, and different approaches to conservation. Hence, people will protect what they perceive to be of value to them. It is therefore important for the institutional framework of protected area management that govern the relationships among and between stakeholders and their uses and relations with natural resources, to recognize the complexity and coherence of existing institutions and the diversity of interests of various people. Today, the most basic actors in the conservation of a given area or set of natural resources are considered those people who live within or close to PAs, usually grouped under the term local community (or communities) [16]. In many situations these people are directly and strongly dependent on the local resources for their

livelihoods, cultural identity and wellbeing. For the purposes of this study, however, an actor is considered to be any individual, group or institution with an actual or potential interest in economic, social, cultural, political and environmental interest in the use of resources, or whose interests affect or is affected by the processes of managing the resources.

The negative impacts associated with creation of protected areas include changes in land tenure and community structures, restricted employment opportunities, the commercialization of forest products and services, and human-wildlife conflicts. Notably, the denial of access to resources by the local communities as a result of PAs creation is often linked with the debate of power and the role of the state [17]. Local communities, especially indigenous groups have not always been consulted or involved during the establishment of the PAs, thus losing their traditional land and resource rights, [18,13]. Other costs of PAs have often included displacement that leads to many socio-economic implications including landlessness, joblessness, homelessness, marginalization, food insecurity, increased morbidity and mortality, loss of access to common property and social disarticulation [19]. Displacement may include either physical or from resources, of shelter or access to assets without community involvement [20].

Critics of national parks model have generally argued that the creation and expansion of parks in the world has reproduced unequal power relations, unequal cost-benefit sharing among its different actors, and it has strengthened the central role of the state in managing and controlling protected areas hence leading to social, economic, and psychological effect on the lives of local communities [21,22]. Tanzania like other African countries has been establishing and expanding its protected areas [23,24]. Currently, Tanzania has expanded its PAs network and about 36 % of the total land surface is devoted to PAs such as about 15 national parks which are managed by TANAPA, Game Reserves, Ngorongoro Conservation Area and Game Controlled Areas [25,26]. The establishment of PAs involve setting aside large tracts of land which affects the land based livelihoods and other social-cultural assets. Due to the sustained antagonism between local communities and park management authorities, the government of Tanzania sought to use conservation as a means of improving livelihoods of local communities around national parks [27-29].

However, the expansion and creation of new parks such as the Kitulo National Park has continued to leave the majority of communities with little or no access to livelihood resources such as forest and land for agriculture and grazing, these people have been relocated and their land use pattern and tenure systems changed [30,31]. Recently, however TANAPA put more emphasis on environmental protection and conservation for sustainable development with the aim of making wildlife an important engine of local socio-economic development [25,32].

Historically, the local communities adjacent to the Kitulo National Park occupied and lived where the park is today. The costs of the park establishment to these communities have included physical displacement from resources, loss of shelter and other assets as well as the associated socio-economic implications including landlessness; joblessness; homelessness; marginalization; food insecurity; increased morbidity and mortality; loss of common property rights and social disarticulation [33-37]. Hence, the process that established the Kitulo National Park has different types of impacts to the adjacent communities. These impacts influence

the perceptions of people towards the park and its relationship with local livelihoods and conservation issues in general. Yet, little empirical studies have been conducted to investigate the process of its establishment and how it influenced sustained antagonism between local communities and the park management authorities with changes on their livelihoods before after the park. Therefore, this study was conducted to uncover this knowledge gap: it explores the process on transforming Kitulo plateau to Kitulo National Park, how was carried out and the involvement of different actors during the establishment of the park with the implications to the surrounding communities' livelihoods.

2. THEORETICAL LITERATURE REVIEW

This study was guided by political ecology approach. The approach was useful in assessing roles played by different actors in the transformation of the Kitulo plateau to national park and how these changes affected the adjacent local communities. The use of political ecology approach aimed to make a critical analysis of the root causes of the process of

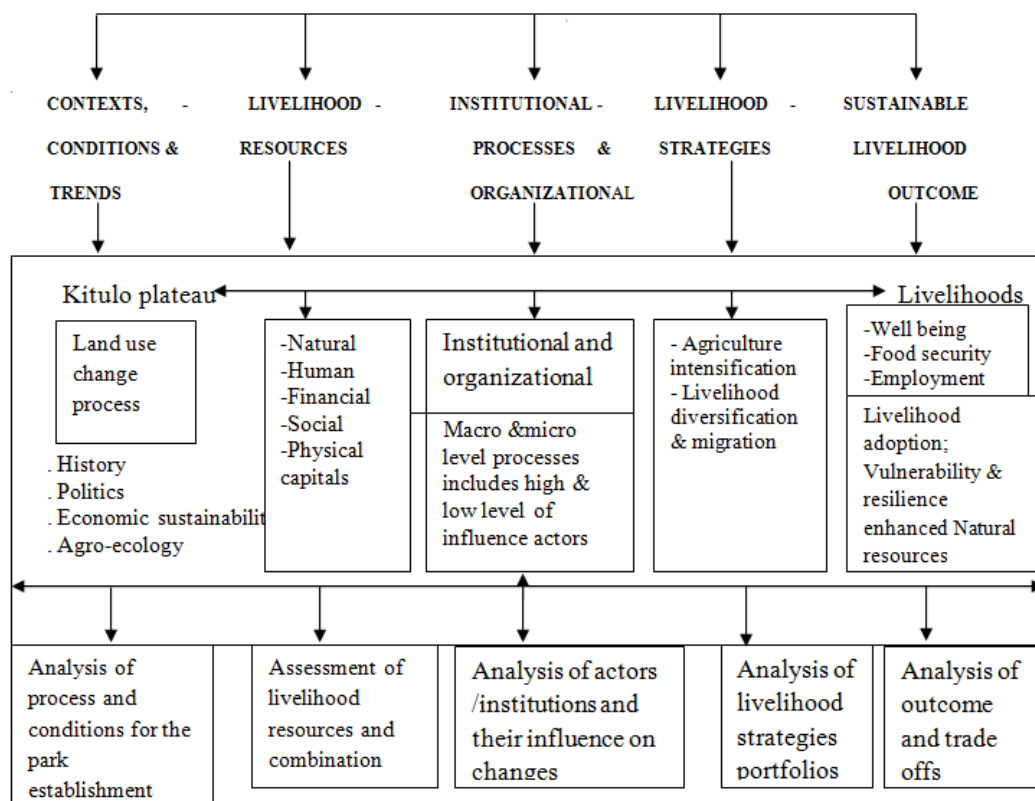


Fig. 1. The sustainable livelihood framework for Kitulo national park transformation
 Source: Adopted and modified from DFID (2002)

change from the Kitulo plateau to a national park and to provide the grounds for comparing the past and present livelihood scenarios. Also the approach provides the ground for analysing interests of different actors at different levels and their way of shaping conservation issues and changes. As the rest of this study will demonstrate, political ecology approach helped to realize the complex relation of actors and their negotiations in the land use changes. Overall, the use of political ecology was useful in this study because the community sustainability are linked to the ecology since nature supports different livelihood activities of the people while at the same time the sustainability of resources depend on institution.

3. MATERIALS AND METHODS

3.1 Study Area

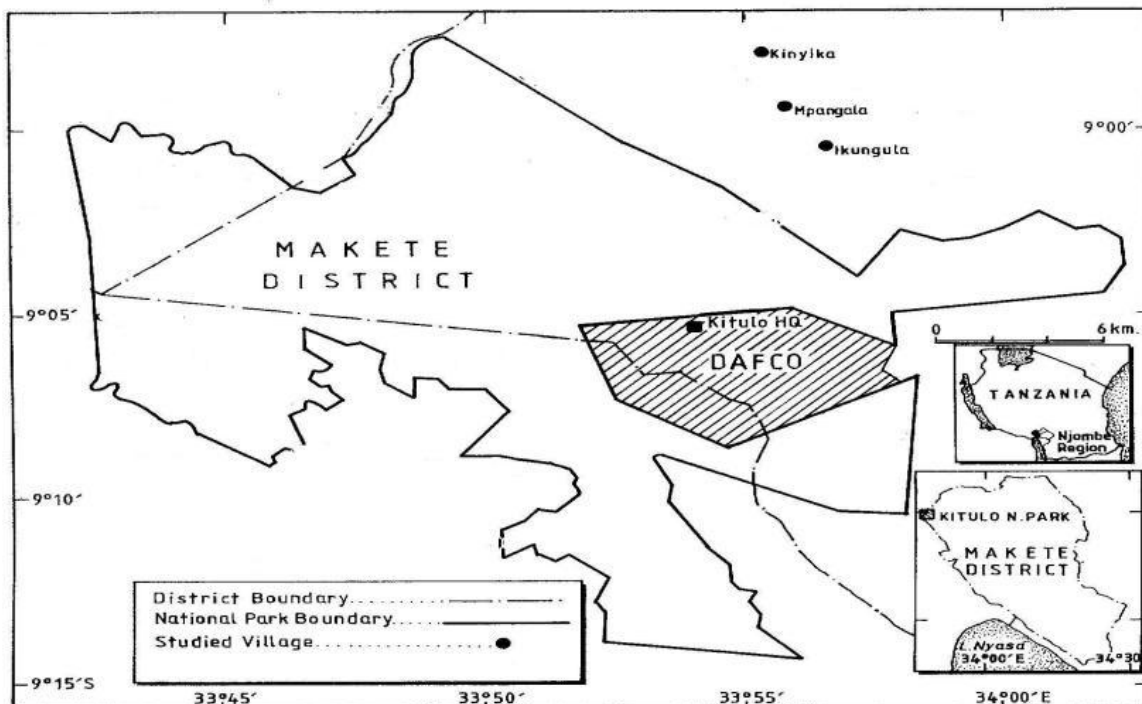
The study was carried out at Makete district between February and March 2022, in Njombe Region, located in the southern highlands of Tanzania. The study area consists of three (3) villages whereby the total population of Ikungula is 986, Mpangala is 530 and Kinyika is 764 [38]. It is located between 08°45' and 09°40' degrees Longitude and Latitude respectively south of the Equator and between 34°00' and 34°30' degrees

East of the Greenwich, covering the surface area of 5800 kilometer square.

Topographically, Makete district is surrounded by peaks of Kipengere, Uporoto and Livingstone Mountains around 2,600 meters (8,500 ft). The area is featured by cold and foggy and has a single rainy season which starts in December to April with annual rainfall range of 1500mm to 2900mm per year [39,40].

3.2 Study Approaches and Design

The study adopted a mixed research design which allows for the triangulation of methods for a better understanding of the transformation of Kitulo plateau to National park status. This research design was adopted because the study needed both qualitative and quantitative data. Qualitative data included involvement of local communities on establishment of the park, livelihoods sustainability that were collected through in-depth interviews with purposefully selected adjacent respondents to the park. Quantitative data included spatial analysis of the land resources on the process of the changes to a park and the effects posed to livelihood activities. Thus, the mixed research design was helpful in realizing the objectives of this study.



Map 1. Location of the study area

Source: Cartographic Unit, Department of Geography - UDSM, 2022

3.3 Sample Size and Sampling Procedures

A pilot study was conducted to identify the villages which were adjacent to the former Kitulo plateau and the current park which were Mpangala, Ikingula and Kinyika. A sample of 114 heads of household was selected for the study, and these were involved in a household survey. This was because, in most cases, they were the decision-makers at the household level; and was believed to be more knowledgeable about the study theme. In this study simple random sampling technique was used for household survey. The procedures used to obtain households sample in the study villages, where by 10% of households were selected randomly from total number of households (N) in each villages. The total number of households (N) in each village was divided by 10% in order to obtain a sample of a village.

3.4 Data Types and Data Collection Methods

The study used both primary and secondary data sources. Secondary data was collected from reading different published and unpublished literatures, obtained from different sources of information. The sources comprised of papers published online by scientific and reputable journals, books, and unpublished documents from local government offices. Also, visits were made to the main library of the institute of accountancy Arusha and the Ministry of tourism and natural resources, government documents for various institutions including reports and official documents for TANAPA, District council, wards, and village records were reviewed. Primary data was collected through a household survey, in-depth interviews, focus group discussions (FDGs) and field observation.

A household survey was used to collect quantitative data from heads of household using a semi-structured questionnaire, which had both open-ended and close-ended questions. The information collected was like the process of the

Kitulo National Park establishment, perceptions and attitudes local communities have towards the KNP. In-depth semi structured interviews were conducted with informants such as the officials of the park, district, villages as well as individuals villagers to acquire data on the establishment of the KNP and the main actors involved and how livelihoods activities were affected. Focus group discussions (FGDs) generated a wide range of opinions from participants which contributed to the understanding of the complex power relations that influenced decision making process during the upgrading of the Kitulo plateau to a national park. Three FGDs were conducted one in each village. About 6-10 individuals were involved and participated in the discussions in each village and the participants were selected purposively including village chairperson and executive office.

3.5 Data Analysis Techniques

Qualitative data from key informants, interviews and FGDs were analysed through content analysis and presented through descriptive statements and direct quotations. Quantitative data collected from the household survey was coded, processed and analysed using the Statistical Package for Social Sciences (SPSS IBM, version 23) and Microsoft excel version 2016. The procedure involved checking the data for consistency, preparation of a coded template in IBM SPSS, data entry, and analysis of descriptive statistics.

The type of data analyzed included perceptions and attitudes towards upgrading the Kitulo plateau to a park, level of community involvement and suggestions for an effective sustainable conservation strategy of the park. Results for quantitative data were presented by using figures and tables. Spatial data analysis Geographical Information System (GIS) was used to determine the land use changes over time. GIS was used to determine and analyze the land use changes before and after upgrading the Kitulo plateau to the Kitulo National Park status.

Table 1. Shows the sample size in the study villages

Study village	Total population	Total households	Sample size=N/10	Sample sizes
Mpangala	530	290	290/10=29	29
Ikingula	986	530	530/10=53	53
Kinyika	764	320	320/10=32	32
Total	2280	1140	114	114

Source: Field survey, 2022

The plateau map before and after the park was used to make comparison. Thus, the nature and extent of each land use category was obtained through overlying of these maps aimed to understand the impacts of land use changes caused by the establishment of the Kitulo National Park on adjacent communities' livelihoods.

4. RESULTS AND DISCUSSION

4.1 The Process of Change of the Kitulo Plateau to a National Park Status

The history of the Kitulo National park goes back to 1870 when Fredrick Elton, an explorer from Europe, visited the area [23]. It was then renamed Elton plateau to replace the local name which was the "Bustani ya Mungu" (translated as the Garden of God). The findings from key informants and FGDs revealed that there were only 27 people residing in the Kitulo plateau between 1960 and 1965. These people engaged in crop farming mainly of potatoes, pyrethrum and maize. In early 1960s the president of Tanzania, late Mwalimu J.K Nyerere visited the people of the landscape and found that the area was good for livestock keeping. He then ordered that the area should be put under the government as part of the National Agriculture Ranching Company (NARCO). With this order people were registered and relocated from the Igofi village. In the letter sent to the District Land Development Officer of Njombe in January 31st 1978, the government ordered to pay 22,052 Tanzanian shillings as compensation to all 27 people who were residents of the Igofi village (letter ref. No.NJF/783/99/SKM). With this letter, the list of names of the compensated people was attached (see Appendix 1).

Between 1965 and 1968 a large area of the Kitulo (about 18500 acres) were allocated to the United Nations Development Programme (UNDP) and it was used for agricultural trial programs on wheat, ranching and sheep for wool production. Also between 1968 and 1975 the Kitulo was officially put under the NARCO which was used to produce wheat, milk, beef and wool [25]. In 1976 to 2000 the area was turned into a Dairy Farm Company (DAFCO) which remains active to date. Before the park DAFCO owned 18500 acres of land but after the park it remained with only 5500 acres (see Table 1). About 13000 acres were taken and included in the Kitulo National Park. According to the key informants and the village government statistics, there was

poor management of the DAFCO linked to corruption which contributed to the invasion of the dairy farm by different people. Evidently, there were only 27 people in 1965 but in 1974-1978 and 2000 the number increased to 1850 (Regional Consultative Committee -Iringa report, [41]). This is also confirmed in the interview and discussions which revealed that people invaded a total area of about 7500 acres some of which were part of Numbe and Katenga forests. Most of these people were migrants from different parts of the country like Mbeya, Iringa, Ruvuma, Singida and Kilimanjaro.

According to Brockington [41] reported that, the Kitulo area was used by the Kitulo DAFCO and the adjacent communities continued to use it illegally for various activities including cultivation and grazing (mainly cattle, sheep, wool sheep, goats and horses), lumbering (timber production), logging and charcoal burning. Other activities include collection of edible orchid tuber (locally known as chikanda) for consumption and served as one of the key produce for commercial purposes. The produces were exported to nearby countries of Malawi and Zambia [42].

Table 2. Shows land use and ownership of the Kitulo plateau over time

Year	Land ownerships	Land area (acres)
1960-1965	27 villagers	500
1965-1968	UNDP	18,500
1968-1975	NARCO	18500
1976-2000	DAFCO	18,500
2000-2001	PSRC	18500
2002-to date	TANAPA	320,000
2005-todate	DAFCO	5,500

Source: Vice President Office report (2022)

In 2001, there was an attempt by the Parastatal Sector Reform Commission (PSRC) to privatize the whole of the Kitulo plateau. However, this move failed due to the poor transport infrastructure and market problems for products such as beef and milk. Nevertheless, the area remained under PSRC. Key informants in Makete district council confirmed that in 2002, the government realized that the PSRC had failed to manage the area which influenced the government to hand Kitulo over to TANAPA to manage it under the protected areas network because of its ecological importance at local, regional, national and international levels. Hence, Kitulo was officially launched as a national park on the September 16th of 2005 [43]. As Table 2

Shows land use and ownership of the Kitulo plateau changed significantly.

After the declaration of the Kitulo National park, TANAPA prepared the map which indicates the boundaries of the park and its neighboring villages. Later on the government shown the boundaries between the park and surrounding villages with strong support from Makete district council specifically District Commissioner (DC), KNP officials, village leaders of the communities surrounding the park and villagers. According to the government documents the main objective of showing the boundaries was to avoid conflict between the local community and the park authority because the boundaries were not well defined and known among the local communities and other villagers wanted to know if are in or outside the park. Hence, the process of showing the boundary was directed by DC of Makete between February 26th 2006 and February 27th 2006 as indicated in the letter No. MK/DC/N.10/814 and MK/DC/N.10/8/15 of 21st February 2006. When the boundaries were already shown people who were still residing in the park about 784 people were required to vacate on June 1st 2006 after harvesting their crops. Finally the government demanded that the local community's surrounding the park should respect the boundaries of the park in order to avoid further disputes between the park authorities (see Appendices 2, 3 and 4)

4.2 Justifications for the Change of the Kitulo Plateau to Kitulo National Park Status

4.2.1 Socio-economic arguments

According to the key informants and FGDs the findings revealed that different land use changes in the Kitulo plateau started in 1960s but the process of changing to a national park started between 1998 and 1999 when the country for first time experienced a remarkable electricity problem (entered in the dark period) due to the decrease of volume of water in Great Ruaha river the government under the Ministry of Natural Resources and Tourism ordered different stakeholders to conduct research on the causes for the decrease of the volume of water in the Great Ruaha River. The findings from researchers revealed that many sources/catchment of water of the river are found at Kitulo plateau namely Misi and Numbe rivers.

The Numbe River is one of the main tributary of the Great Ruaha River. Also this area is occupied by different human socio-economic activities for instance crop farming, livestock keeping and lumbering practiced locally which contributes to the destruction of the catchment area and resulting into the decrease of flow of water in the Great Ruaha river. Hence, the experts commented that if Kitulo plateau will not be protected the Great Ruaha river would dry because the plateau is a source of the most important watersheds for the river, which drives two hydroelectric power stations namely Kidatu and Mtera. These stations supply over half of Tanzania's electricity [44]. Also findings from key informants in Makete district and KNP officials revealed that another reason of the change of the plateau was to promote the development of adjacent communities after the establishment of the park. This objective concurred with the policy of TANAPA of using wildlife conservation to enhance the communities living around PAs in order to promote sustainable conservation of the parks.

4.2.2 Ecological arguments

Key informants in the KNP and District officials reported that different ecological studies were conducted in the Kitulo plateau and their results revealed that the area is an important bird area with wintering site for various bird species from as far as South Africa, Australia, Europe as well as North Africa [45], (see Plate 2). It is reported further that the plateau is a home of breeding colonies of blue swallow and denhams bustard and other endemic birds species including: lesser kestrel, pallid harrier, Njombe cristicola, Kipengere seed eater and uhehe fiscal supported the creation of the KNP for the purpose of conserving these bird's habitats and migration routes. More importantly, an Africa's first new species of monkey for over 20 years was discovered in the Kitulo area in 2005. The species name is *Rungwecebus kipunji* which reflects its discovery in Rungwe Mountains in the Kitulo plateau (see Plate 4). Kitulo plateau is also rich in vegetation with 350 species of high plants recorded, including 45 species of terrestrial orchids, of which 31 species are endemic to Tanzania, 16 are endemic to Kitulo and Poroto mountains and 3 species are endemic to Kitulo plateau namely *impatiens gomphophylla*, *brachystelma kituloensis* and *pterygodium ukingense* (see Plate 1).



Plate 1



Plate 2



Plate 3



Plate 4

Plates 1-4. Species diversity of Rungwe mountains in the Kitulo national park

After these scientific findings about biodiversity value of the Kitulo plateau, the Ministry of Natural Resources and Tourism discussed widely the scientific research concerning the Kitulo plateau and decided that the plateau be upgraded to a national park. This decision was also supported by various conservation organization and various stakeholders including DAFCO, Livingstone and Numbe Forest Reserves.

The findings from Makete District and KNP officials reveal that three districts participated in the process of establishing the KNP (Makete, Rungwe and Mbeya rural district). The Regional Natural Resources committee that involved three districts and members of Parliament was formed for the purpose of collecting opinions from the people including the adjacent communities of the three wards of Kitulo, Matamba and Mlondwe (see the composition of the committee in Appendix 2).

Key informants from Makete district council revealed also that the committee was required to observe the following areas: DAFCO, Livingstone Forest, Numbe Forest and communities around

the Kitulo plateau because these areas were the targeted areas for a national park. The district and park officials reported also that the committee collected opinions concerning the change of Kitulo plateau to national park status from different people especially those who were living around and in the Kitulo plateau. According to the committee, it is reported that all adjacent communities were involved in the process of the establishment of the KNP through different village meetings and seminars and people were informed by village government leaders. Examples of villages where meetings were held includes Ikungula, Mpangala, Kinyika and Kikondo (on 30 April, 15th May, 27th May and 2nd June 2001 respectively) and majority of people agreed to upgrade the Kitulo plateau to a national park.

4.3 Local Community Involvement during the Process and the Gazettement of the Kitulo National Park

As Table 3 indicates the community involvement during the gazettement of the KNP 82.5% of the interviewed villagers revealed that they were not

involved in the process. As such, they were neither involved nor informed about what was going to happen. It is only 17.5 % of the respondents who reported to have been involved in the process through invitations and participation in seminars and workshops. This implies that the majority of the people bordering the KNP were not involved even though the committee reported to the Regional Consultative Committee that local communities were involved in the whole process of establishing the KNP. Also the National Land Policy of 1999 of Tanzania requires villagers to be involved in planning land use because if they are not involved they may not effectively participate in proper land management (URT, 1999). The involvement of community should be from the phase of planning stage to implementation and monitoring of the new land use. The result in the three study villages revealed that the change of the land use of the Kitulo plateau villagers were not involved even though National Land Policy of 1999 and the village Land Act of 1999 requires villagers to be involved [43]. Hence, most of the community members were not fully involved in the process and most of them were not aware of what was going to happen. One of the interviewee in Kinyika village reported that;

“We were just told to leave the place and what was going to happen; we were not involved in the establishment of the KNP. They told us that we want to relocate; but they didn't tell us here are the benefit and losses so that we may judge and give our opinion. I am not sure you know when the government wants something from you they will only tell you one side of the story, the positive one without telling you what are the benefits and the losses” (17/03/2022).

Table 3. Community involvement during the gazettelement of the KNP

Responses	Frequency (N=114)	Percent (%)
Involved	20	17.5
Not involved	94	82.5
Total	114	100

Source: Field survey December (2022)

4.4 The Main Actors and Their Roles on the Establishment of the Kitulo National Park

The study showed that 87.7 % of the respondents perceive the main actors in the

process of establishing the KNP as the government leaders from national to village levels. It is reported that the leaders put pressure on villagers through meetings, workshops and seminars. Their interest was clearly to conserve water sources such as Misi and Numbe rivers that drain water to the Great Ruaha River. The FGDs and key informants revealed that villagers were represented by village leaders in the process. This was due to the low level of education of the local communities. The majority of local communities thought that the park is something which was imposed to them from high authorities without their willingness and clear understanding of the purpose of upgrading the Kitulo plateau to the KNP.

During the initial stage of the establishing the Kitulo National Park the findings revealed that about 82.5% of the villagers who responded to the questionnaire in the study villages reported that they were not involved in the decision to establish the Kitulo National Park while only 17.5 % of the respondents acknowledged their involvement through seminars, meetings and workshops during the planning and gazettelement of the park. These results signifies that the majority of the people were not involved which may affect adjacent communities in supporting conservation activities. Also the study found that the level of community participation in the process of establishing the Kitulo National Park shapes people's attitudes and perception towards conservation. Generally, the establishment of the park seemed to have been imposed to them by higher authorities, and local communities were required to accept the decision without questioning it. This represents the top down approach. Their complaints were not heard due to their minority power over the government, as one of the farmers in Kinyika village explained;

“When we complain about the establishment of the Kitulo National Park the reasons were.....all the potential areas for livelihood activities have been taken for conservation activities as a result we have been affected economically and we were not involved in establishing the park, we were just told not to go in the Kitulo plateau with no further explanation and that it was the government decision and not community agreement. Are we not part of it? But because they are in the cutting edge, there is nothing we can do” (20/03/2022)

This complain direct signifies that the state continues to use its political powers to establish PAs. According to Geldmann et al. [13] argues, conservation has become a powerful political force, at least in the rural districts of poor developing countries where large international NGOs wield considerable influence with governments and donor organizations. Despite the fact that the majority of the adjacent communities complained that were not involved in the process of upgrading the Kitulo plateau to a national park. Findings from the Kitulo National Park as well as government officials revealed that the process involved people at all levels though their participation in seminars, meetings and also some of villages were represented by their leaders. One of the officials from the Kitulo National Park (Outreach Programs Warden) interviewed commented that;

“.....the committee that was formed collected opinions from different people through conducting meetings, workshops and seminars in the villages such as Ikungula, Mpangala and Kinyika and others. Majority of them agreed to the idea of protecting the Kitulo area” (19/03/2022).

Hence, involving the communities living around the park in the management of a national park would help to increase acceptance and support conservation initiative of the PAs. Therefore, this will help in determining the successful management of the park that will meet the objectives of the Tanzanian Wildlife Policy which emphasizes to strengthen the cooperation between communities and PAs [25].

5. REFLECTIONS ON LOCAL COMMUNITY LIVELIHOODS BEFORE AND AFTER THE KITULO NATIONAL PARK ESTABLISHMENT

5.1 Reflections on Local Community Livelihoods before Kitulo National Park Establishment

The process of change of the Kitulo plateau to the Kitulo National Park had many positive impacts but those impacts are limited because the park is new and is not yet famous. Livelihood activities that were conducted before and after the establishment of the KNP remained the same, though with little diversification and intensification after the park.

5.1.1 Land tenure and ownership

According to the results on land ownership, about 93 % of respondents in the study area responded that they own land while the family occupies and 7% of respondents did not own the land. This implies that the majority of the adjacent local communities own the land. The land tenure systems in the study area are characterized as private, communal (customary), public (state) and open access. The mode of acquiring land, the findings from households survey revealed that 84.5% of respondents in the study area inherited the land, 13.5% purchased and 2.0 % were given land by the village government (Table 4). Furthermore, the results of the study indicated that 91.2% of the respondents utilizes land for crop farming includes round potatoes and maize, 2.9% used land for livestock keeping (grazing) and 5.9% for afforestation (planting trees). In addition to land tenure and ownership, findings from key informants in the three study village revealed that before the Kitulo National Park land was not a problem but after the park majority of people experience shortage of land for crop farming and grazing because the land that was owned by the communities around the Kitulo plateau and DAFCO was taken for the establishment of the park resulting to landless as well as reduction of land sizes.

Table 4. The main actors on the establishment of the Kitulo national park

Main actors	Frequency	Percent (%) of actors
Local people	4	3.6
Government leaders and NGOs	100	87.7
TANAPA	10	8.7
Total	114	100

Source: Field survey May (2022)

5.2 Land and Resources Use before the Establishment of the Kitulo National Park

The findings from this study revealed that before the upgrading of the Kitulo plateau to a national park status, adjacent communities (1850 people) who resided illegally in Kikondo, Mwakipembo, Mwatumbo and Ilala villages had accessed and utilized land for farming in the area of the park. Hence, most of these communities' livelihoods and sources of household incomes were heavily dependent on the resources found in the area particularly land for farming and grazing,

thatching grasses, fuel wood, poles and timber for building and business, wild fruits, bush meat and honey for food, medicinal plants for treatment, water for domestic and agriculture activities. About 92.1 % of the respondents reported that before 2005 they utilized resources from the Kitulo plateau as their engine for different socioeconomic activities for their survival. Such activities included crop cultivation; grazing (mainly cattle, sheep, wool sheep, goats and horses), lumbering, logging and charcoal burning while 8% of the respondents were engaged in other economic activities such as petty business and fishing activities in Misi and Numbe rivers, while 7.9% of the respondents were involved in other socio-economic activities such as small businesses and formal employment. In addition, the area was traditionally believed to be a source of rain hence people were not allowed to live or do any activity in some area of the plateau. One of the responded communities elder in Kinyika village narrated that;

“.....We used the area for traditional rituals and people respected it very much...the clan leader had the mandate to control all the activities such as hunting and fishing and people believed if they go against it they would be cursed. Now the area is controlled by TANAPA” (16/03/2022).

5.3 Reflections on Local Community Livelihoods after Park Establishment

The study found that after upgrading the Kitulo plateau to the National Park, natural resources were under full control of TANAPA. This was accompanied by the imposition of restrictive regulations which denied local communities access to the resources. New livelihood options have evolved such as petty business and productivity has been stimulated through increased extension services and introduction of development projects (for example building of school and dispensaries, introduction of improved varieties of cattle and pigs also maintenance of roads) spearheaded by the park. For instance, after the establishment of the Kitulo National Park, farms and grazing areas were reduced, livestock numbers especially for cattle were reduced which led to a significant reduction in productivity.

5.3.1 Displacement of the local community

Displacement of the people due to the establishment and expansion of protected areas

is a common phenomenon in different parts of the world. Displacement can be in form of involuntary and voluntary relocations. The study shows that about 98% of the respondents who were residing in the area were forced to leave their homes to pave way for the establishment of the Kitulo National Park. This contributed to negative attitudes and perceptions toward the park. The results from key informants revealed that people in the Kitulo National Park were removed by force after objecting to leave the area peaceful in order to pave the way for the establishment of the park. Although people were residing illegally since 1978, their removal by force took place on the July 3rd 2007. These people engaged in different socio economic activities in the Kitulo plateau and buffer zones of DAFCO illegally during the time of poor management of the farm [44]. However, the Makete District Executive Director revealed that people who were living in the plateau particularly at Kikondo were there illegally and those who lived there since 1960s were compensated by the government on June 31st 1978. The findings have revealed further that about 68% of the displaced people strongly indicated that there is no any support from TANAPA.

Despite of these results Kitulo National Park through the Ministry of Natural Resources and Tourism provided money for the construction of social services infrastructures such as health centres, schools and water services at Mwalusa, a sub-village of Ipele. Moreover the study revealed that the assistance provided for the evicted people was at the public and not the household level. Therefore the observation made in the study area indicated that the support of the national park considered more at group level rather than at household level while local communities preferred more at household and individual level. Despite of that argument by local community, it was not in the interest of TANAPA to support individuals who were evicted because they resided there illegally. Spatial data in Fig. 3 indicates how settlements and farms have been replaced. This implies why 97% of the respondents complained that the change of the Kitulo plateau status brought more problems than benefits. For stance they complained that the presence of the Kitulo National Park affected badly their livelihoods because the park caused landlessness, joblessness, homelessness, marginalization, increased morbidity and loss of common property rights.

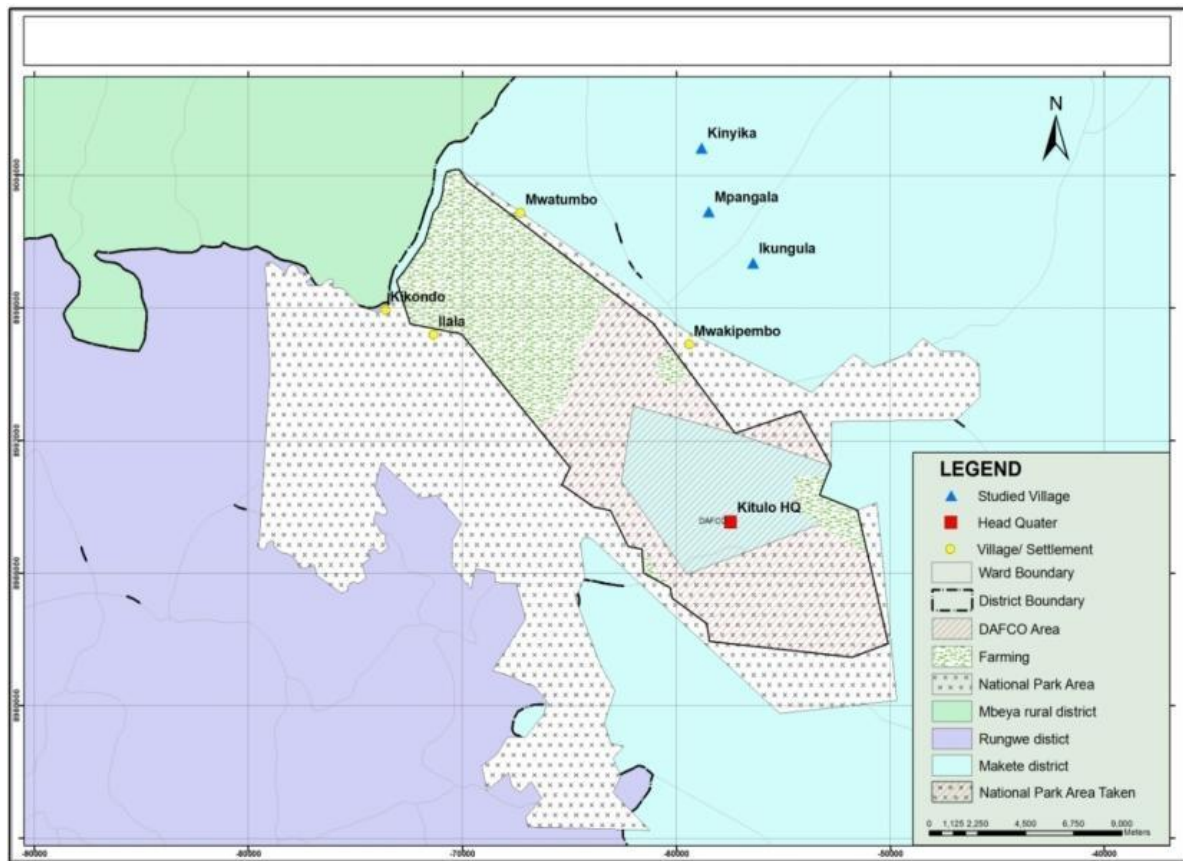


Fig. 2. The land use types before the park
 Sources: National Bureau of Statistics (NBS)

This situation has affected the natural capital of the livelihood assets (such as firewood, building poles, medicine, wild fruits, thatched grasses, timber, charcoal and spiritual values) among adjacent communities to the Kitulo National Park. These findings concurred with Stoldt et al. [9] and Mziya [46] who maintain that wildlife conservation imposes significant costs on these people around through restriction of access to natural resources and crop damage, livestock predation and human deaths. The result of the study implies that, low benefits from the Kitulo National Park have low positive impacts to adjacent communities particularly on livelihood portfolios and capital assets. In this regard, the adjacent communities may not support conservation of the Kitulo National Park hence threatening the sustainability of the park as well as its potentials for supporting livelihoods.

5.3.2 The Kitulo national park and good neighborliness

There are some benefits that emanates from the establishment of the Kitulo National Park such as

improved social services, infrastructure and income generating activities to the adjacent communities. These have also included introduction of improved varieties of cattle and pigs, considerable environmental conservation which ensured reliable availability of environmental services such as water and improved energy technologies such as for solar power accessories. Only 3 % of the respondents had views that the creation of the park brought significant changes in terms of development related to Income Generating Projects (IGPS) and improvement of socio-economic infrastructures. For example villages like Ikungula about 14 dairy cattle were allocated, maintenance of roads, construction of dispensary and secondary school infrastructures. Respondents in the three study villages complained about the undermined traditional rituals and legal rights for the common property after creation of the Kitulo National Park. The TANAPA report of 2010 indicates that there are several projects in the study areas which were constructed by the Kitulo National Park through community conservation services program

(see Table 5). This aims to reduce conflicts between communities around the park and enhancing support for conservation as one of the main objectives of the park. The TANAPA uses its good neighborliness policy commonly known as *Ujirani Mwema* to get villagers around the national parks to support conservation initiatives [47].

Table 5. Land tenure systems

Methods of acquiring land	Frequency (N)	Percentage (%)
Inherited	96	84.9
Purchased	15	13.5
Given by village government	3	2.0
Total	114	100

Source: Field data, 2022

On one hand findings from the informants from Kitulo National Park and village leaders revealed that TANAPA provided entrepreneur skills to the adjacent communities and established income Generating Projects (IGPs) aimed at reducing poverty of the local communities. In addition, the study found that the park authority provided

capital (financially or materially) for various groups involved in conservation activities such groups includes Ikungula Linda Mazingira (ILIMA), Kinyika Linda Mazingira (KILIMA) and Mpangala Linda Mazingira (MLIMA). Hence, findings from FGDs showed that the national park supported several projects as alternative sources of income for the communities surrounding the park. Precisely, the park had provided 14 dairy cattle for ILIMA, 20 pigs for MLIMA and 13 dairy cattle for KILIMA as well as training on solar energy and entrepreneur skills. Also the park provided various equipments used for undertaking the projects such as gumboots, spades, rain coats and capitals for establishment of the projects.

The Warden of the Outreach Programs in the Kitulo National Park revealed that majority of the people was expecting to get assistance at the household level. Local communities accept that there were improvements in community livelihoods through improvement of infrastructure like roads maintenances, health services and education facilities. Hence, the improvement of community infrastructures increased awareness about the important of conservation initiatives

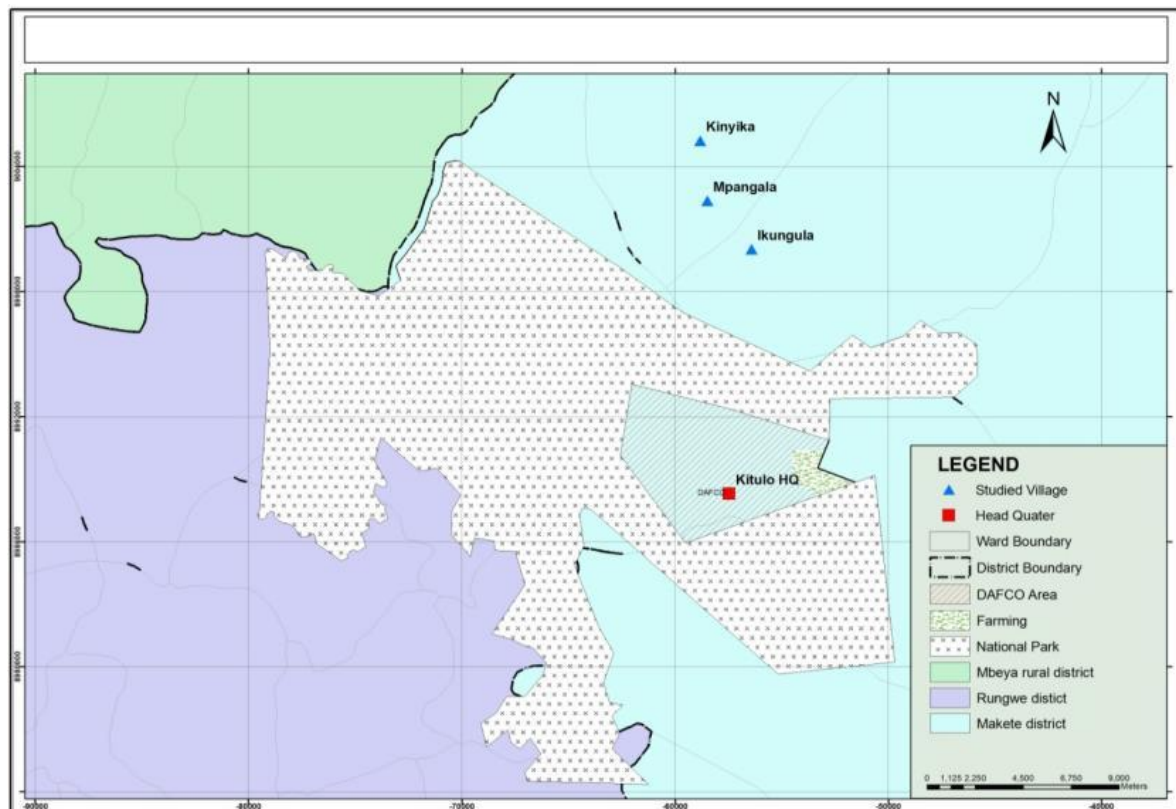


Fig. 3. The land use types after the Kitulo national park from 2005

Source: Field work (2022)

Table 6. Some of the TANAPA projects implemented in villages around the Kitulo national park

No.	Project	Year	Location	Contributions from Community	TANAPAs' contributions	Total of contributions
1	Construction of one classroom, and office Matamba secondary school	2005/2006	Matamba division	900,000 TS	9,890,000Tshs	10,790,000Tshs
2	Finishing a one hall & one classroom	2006/2007	Matamba ward	Nil	22,955,200Tshs	33,420,000Tshs
3	Construction of house for a teacher in Kitulo secondary school	2008/2009	Kitulo ward	4,361,145TS	18,167,545Tshs	22,528,690Tshs
4	Construction of one house for teacher's	2008/2009	Mlondwe ward	5,889,475TS	22,122,000Tshs	28,011,475Tshs
5	Construction of dispensary, toilets, two classrooms and a house of a teacher.	2008/2009	Malusa village	Nil	85,000,000Tshs	85,000,000Tshs
6	14dairy cattle	2009/2010	Ikungula	Nil	8,000,000Tshs	8,000,000Tshs
7	20 pigs	2009/2010	Mpangala	Nil	1,200,000Tshs	1,200,000Tshs
8	13dairy cattle	2010/2011	Kinyika	Nil	7,150,000Tshs	7,150,000Tshs
				Tsh 1,1150,620	Tsh 174,484,745Tshs	Tsh 196,100,160Tshs

Source: TANAPA report (2021)

and eventually leads to the decline of the illegal activities in the park such as poaching, collecting of orchids and lumbering activities [48]. Overall, the park has launched different projects in the villages as community services. The park has contributed to the improvement of roads, classes and worker's houses both in schools and dispensaries in the villages. However, the majority of the respondents do not seem to appreciate such projects because they prefer more support at household level rather than community level. Thus, the TANAPA should take this as a challenge towards sustainable conservation of the park as well as enhancement of the community development.

6. CONCLUSION

The study has argued that, the process of change of the Kitulo plateau to the Kitulo National park was not a bottom up participatory approach hence local community were not effectively involved from initial stages (planning stage) thus why the local community perception and attitude towards the establishment of the Kitulo National Park is relatively negative. Several reasons contributes to this situation including, inadequate awareness of the value of conservation and justification for people's relocation, absence of compensation to some of local people which led to the loss of properties such as trees, farms, crops, livestock and houses. for instance, after the establishment of the Kitulo National Park, farms and grazing areas were reduced, livestock numbers especially for cattle were reduced which led to a significant reduction in productivity all these have contributed to the poor relationship with the adjacent communities. Livelihood activities that were conducted before and after the establishment of the park remained the same, though with little diversification and intensification after the park. There are some benefits that emanates from the establishment of the park such as improved social services, infrastructure and income generating activities to the adjacent communities. These have also included introduction of improved varieties of cattle and pigs. As time goes the increased support from the Kitulo National Park has become obvious the driving force in the improvement of livelihood status of the communities. Therefore, since the majority of people around the park were not involved in the process that established the Kitulo National Park, sensitization programme should be launched to help the people to

understand the purpose of the project and its benefits, what is currently taking place and also the future benefits to the community and nation level.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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APPENDICES

KTU/DAFCO/79

23/1/78

Kitulo Dairy Farm,
P.O. Box 1114,
M B E Y A.

Afisa wa Maendeleo ya Ardhi,
S.L.P. 101,
NJOMBE.

Ndugu,

KUH: FIDIA YA MITI - SHS 22,000/-.

Nimeshauriwa na Kaimu Meneja Mkuu wa KAMTA, katika barua yake Kumbu kumbu DAFCO/ADMIN/18 ya tarhe 7.1.78 kulipa fidia kama ilivyoonyeshwa hapo juu.

Tako tayari kulipa fidia hii. Kama ujavyo ku kwamba swala hili ni la siku nyingi nami siwajui wata hao wanasadai fidia wala hiyo miti yao sijuwi iko wapi.

Nakuomba, kama inawezekana, uwapelekee ujumbe wata hao wanasikusika na kisha wewe pamoja na Katibu Tarafa wa Kat'bu Kata wa Matamba ufike hapo Kitulo tarhe mtakayo tueleza mapema ili tuwalipe hao wanasikusika, majina yao:-

JINA


MAHALI ANAPOKAA.

1. Mr. Tingatinga	Matamba
2. Mr. Subulan Mahali	Matamba
3. Mr. Vakipege Selenga	Matamba
4. Mr. Mulaya Selenga	Matamba.
5. Mr. Balineli Sikupenda	Matamba.
6. Mr. Ratani Sikupenda	Matamba
7. Mr. Natum Sikupenda	Matamba
8. Mr. Wilson Sikupenda	Matamba
9. Mr. Samson Selenga	Matamba.
10. Mr. Voyambege Pasole	Matamba.
11. Mr. Nelson Malangili	Matamba.
12. Mr. Kipembe Gwambalala	Matamba.
13. Mr. Pasolo Sindano	Matamba.
14. Mr. Kasinga Pasole	Matamba.
15. Mr. Sayowile Mwangoye	Matamba.
16. Mr. Mwachowe Mwinuka	Matamba.
17. Mr. Hezekieli Adam	Matamba.
18. Mr. Jolan Joseph	Matamba.
19. Mr. Sikweya Fundi	Matamba.
20. Mr. Andrea K...	Matamba.

- 2 -

<u>JINA</u>	<u>MAHALI ANAPOKAA.</u>
21. Mr. Lusani Sukanda	Matamba
22. Mr. Afrika Masulu	Matamba
23. Mr. Gabriel Heshane	Matamba
24. Mr. Juma Magala	Matamba
25. Mr. Yalisalike Sdivave	Matamba
26. Mr. Atanas Mragiye	Matamba
27. Mr. Naftali Kwalavile	Matamba.

Wasalaam,


W.J. Mpaya

MENEJA WA SHAMBA KITULO.

Nakala:

Kaimu Meneja Mkuu,
Kampuni ya Ng'ombe wa Maziwa,
S.L.P. 1823,
DAR - ES - SALAAM.

" Meneja Mkuu,
N A R C O,
S.L.P. 9113,
DAR-ES-SALAAM.

" Katibu Mkuu,
Wizara ya Kilimo,
S.L.P. 9198,
DAR-ES-SALAAM.

" Meneja wa Kanda,
S.L.P. 335,
MBEYA.

" Katibu wa Wilaya,
S.L.P.
MJOMBE

WJM/awl.

Appendix 1. List of names of the compensated people in 1978 (Farm Trees compensation)

ZOEZI LA KUONYESHA MIPAKA YA HIFADHI
Tarehe 27 Februari 2006



Wa kwanza kushoto, Mheshimiwa Mkuu wa Wilaya ya Makete akionyesha mpaka unavyopita baada ya kusoma ramani na kuelekezwa na Mkuu wa Hifadhi. Aliyeshika kofia mkononi katikati ni aliyekuwa Mwenyekiti wa kilichokuwa kijiji cha Kikondo na nyuma yake ni Mkuu wa Hifadhi ya Kitulo.

Appendix 2. Regional consultative committee for establishing Kitulo national park

JINA	MAHALI ANAFOKAA
21. Mr. Lusani Sukunda	Katamba
22. Mr. Afrika Masulu	Katamba
23. Mr. Gabriel Heshani	Katamba
24. Mr. Juma Magala	Katamba
25. Mr. Talisaike Sidiyave	Katamba
26. Mr. Atance Mzagye	Katamba
27. Mr. Naftali Mwalivile	Katamba

Wasalaam,

[Signature]
W.J. Mpsye
MENEJA WA MIAMBA KITULO.

Makala:

Kaimu Meneja Mkuu,
Kampuni ya Ng'ombe wa Masiwa,
S.L.P- 1523,
DAR-SS- SALAAM.

" Meneja Mkuu,
N A R C O,
S.L.P- 9113,
DAR-SS- SALAAM.

" Katibu Mkuu,
Wazao ya Kilimo,
S.L.P- 9192,
DAR-SS- SALAAM.

" Meneja wa Kanda,
S.L.P- 335,
MRYA.

" Katibu wa Wilaya,
S.L.P-
MCOMBE

WJM/awl-

Appendix 3. Boundary indication

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS - WIZARA YA TAWALA ZA MIKOA NA SERIKALI ZA MILAA.

YAH: TAARIFA YA KAMATI TEULE YA KUHAKIKIKI MIPAKA YA
MPANGA/KIPENGERE KAMA GAME RESERVE NA KITULO/KATENGA
(MT. LIVINGSTONE) KAMA NATIONAL PARK.

I: UTANGULIZI

- 1.0 Kamika Kikao cha RCC (M) - Iringa kilichofika tarehe 7/6/2001 ilichipokea taarifa ya kutokana na Pori ya Mpanga/Kipengere kama Game Reserve au Kitulo katanga Borari Rasasi (Mt. Livingstone) kama National Park.
- 1.1 Kamati Teule ya Kujitambua hapa imeamua hayo ndiyo yanayotakiwa kutambua kwa kutambua Mtera, Kikao kilicho loma umuhimu wa Kikao na Kamati Teule ya Kujitambua hapa kutambua mipaka ya mipaka hapa.
- 1.2 Ni mizizi ya sasa ya mipaka hapa.
- 1.3 Ni sandokezo ya Matomo (maka) wa Budo ya Tanga (M) ya KIRUVU.
- 1.4 Kamati Teule ambayo ilikuwa na Wajumbe kama ifuatavyo:
 1. Mhe. I. Mgoda - CCM (M) - IRA - Mwenyekiti wa Kamati
 2. Mhe. I. Swai - RNRO - IRA - Katibu wa Kamati
 3. Mhe. G. Kimelo - DC - Makete - Mjumbe wa Kamati
 4. Mhe. A. Mkwana - DC Council - Makete - Mjumbe wa Kamati
 5. Mhe. V. James - Ardhi (M) - Mjumbe wa Kamati
 6. Mhe. H. Kasungu - DC - Njombe - Mjumbe wa Kamati
 7. Mhe. J. Mwandolera - DC Council - Njombe - Mjumbe wa Kamati
 8. Prof. N. Bangu - Chuo cha Tumsini - Mjumbe wa Kamati
 9. Mwakilishi - TANAPA - E. Chingula
 10. Mwakilishi - Director of Wildlife - E. Mpenba

4 Kamati Teule itekeleza agizo hilo kufuatana na "Tadida za Razi" tarehe 2001 - 6th July, 2001.

II: KUTEMBELEA NA KUSHAURIANA NA WASHIKADAU KUHUSU MPANGA/KIPENGERE KUHIFADHIWA KAMA GAME RESERVE CHINI YA USIMAMIZI WA IDARA YA WANYAMAPORI

1.0 KIJIJI CHA LUDUGA (NJOMBE)

1.1 UTANGULIZI

1. Kijiji cha Luduga ndicho Kijiji Moma kwa Kitongoji cha Mpanga.
2. Kijiji havyenye tarafa ya Waring'ombe na Kata ya Luduga.
3. Hivyo Kijiji cha Luduga ni Makao Makuu ya Kata ya Luduga.
4. Vyanzo vya Maji

Appendix 4. Boundary confirmation

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