# LOCAL FOREST MANAGEMENT IN TANZANIA-ACASE STUDY FROM LUSHOTO DISTRICT, USAMBARA MOUNTAIN

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## INTRODUCTION

Forest management has been activity of national government and its various agencies, established through constitutions and regulations that reject local claims to forest resources. Primarily, administrative and political lead these activities, which have been based on economic, scientific and planning criteria. Frequently, local people heard about planning arrangements and new management regulations only after decisions were already affecting their lives directly. Over the past few decades, fundamental perceptions regarding the role, rights and responsibilities of communities in forest management have begun to change. The shift emerged from past failing policies and growing recognition of the limits of centralised decision-making systems. The idea of Community-based Forest Management (CBFM) itself is not clearly defined in government policies in Africa. Recent decade's forest management in Africa has passed through these three phases: (1) management for the forest and against people; (2) forest management for and by the people; (3) forest management with the people and other actors. Particularly in Africa, due to its different historical stages, such as, pre-colonial, colonial time, and after independence, the forest policy was so changeable that local people could have followed.

The policy for forest management has been moved towards 'community-based'; it is suspicious that how far these concepts have penetrated into rural area and into local people. Even though there have been increased the documents concerning about local forest management related to the governments in Africa, most of them show the concepts and ideas

explaining the importance of community-based forest management but not present any concrete approaches or systems 'how to manage it'. Political negotiation related to CBFM, is an advanced approach allowing local people's involvement in administrative and decision-making processes. This approach focuses on the identification and roles of stakeholders in forest management. Identifying stakeholders can tackle the ambiguity of CBFM practices in Africa, giving clear responsibilities and rights to each stakeholder. Especially concerning the case of forest management, it always takes time for local people to get economic incentives until forests become stable. How can people sustain the forest management if they are lacking any financial resources or benefits? Consequently, this study investigates the recent condition of CBFM in Lushoto, Tanzania, as well as the people's incentives and activities to sustain it. Since little research on recent CBFM in Africa, it is significant to examine its feasibility and practicability. Further aspects to be addressed include the question whether it can be sustainable and the analysis of how it can be sustainable.

**Description of study site**

Tanzania is 945.000 $km^2$ with 42 % of the total land being forest and woodland. Their forest policy is considered one of the most advanced ones in Africa. Therefore, further research can significantly contribute to this topic. Specifically, a first so-called Village Forest Reserve (VFR) was set up in the study site in 1998. VFR is one of the practices of community-based forest management, which is entirely owned and managed by a local community. Within the forest area, different forms and legal status of forest exist. More than half of all forests is non-reserved and 12 % of non-reserved areas are cultivated with a certain management practice, leaving most part of the forests in Tanzania as public land. There is a constant danger of 'free-riding' of forest resources. Considering the fact that 90 % of energy source in Tanzania comes from fuel woods,

the development of appropriate measures for CBFM is required in order to protect the forests as well as people's livelihood. According to National Forest Policy (UNITED REPUBLIC OF TANZANIA 1998), a policy statement (5) exists to *"enable sustainable management of forest on public lands, clear ownership for all forests and trees on those lands will be defined. The allocation of forests and their management responsibility will be promoted"*. Related to this policy statement, the government tried to do allocation of open forests to villages and private individuals. Since then, the number of local forest management practices (JFM and CBFM) has been constantly increasing and there are 1,530 reserves. The Village Forest Reserve focused on this study had been also settled with this policy statement in 1998, as one of the model cases of CBFM, however no specific research or evaluation on how it actually works had not been carried out.

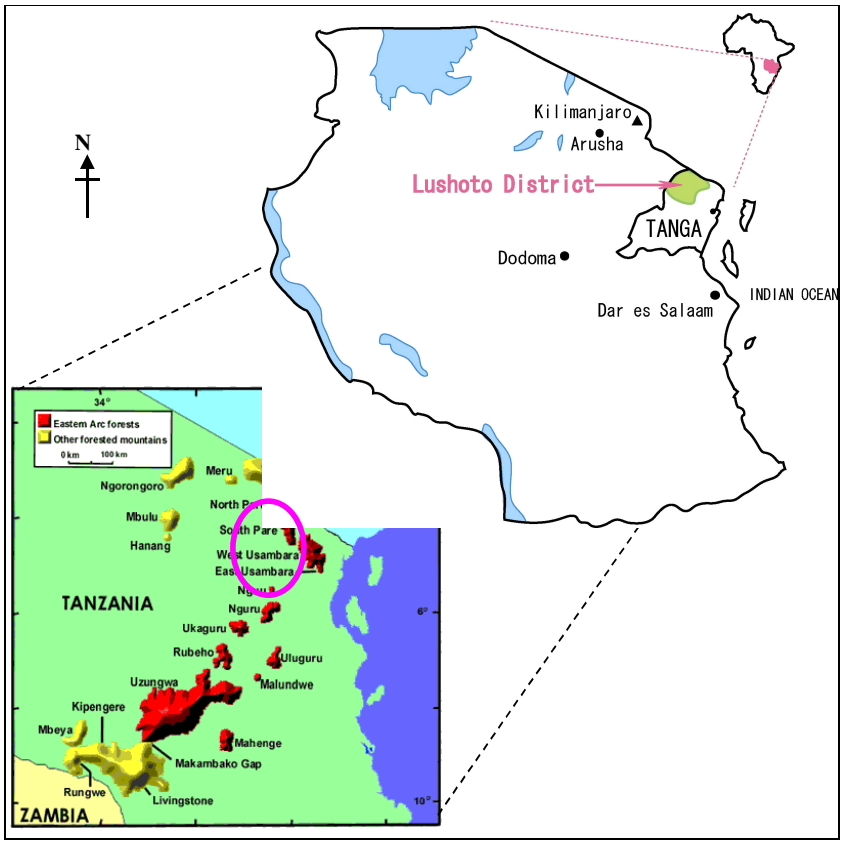


**Fig.** : Location of study site

The West Usambara Mountain is situated in northern part of isolated and table mountain and relief structure is characterised by rugged mountain blocks. All the landscapes have been heavily altered by human disturbance. The climate is highland temperate climate with annual temperature 16-22 °C and annual rainfall between 600-1200 mm. Half of total rainfall occurs during March and April, the main rainy season is during September and November. Due to humid climate, the mountains have been covered by evergreen forest. Due to stable climate, highly divere forests are left in this area, regarded important biological sytems of this ecoregion. According to soil classification of FAO (2000), the main soil of West Usambara is Eutoric Nitosol, considered to be one of the most fertile soils among tropic ones. Consequently, the area has high potential for agriculture attracting many people since the beginning of 19C. As a result, most of the forests have been deforested and turned into farm land. The severe deforestation caused by excessive human pressure have lead to serious soil erosion (EZAZA 1990), as well as decrease in amounts and reliability of rainfall and river run-off (HUWE 1988; HAMILTON & BENSTED-SMITH 1989; JOHANSSON 2001).

In *Ujamaa* period during 1961-1981, most of villagers in rural area were forced to move into new settled villages to collectively intensivy agriculture. However, villages in the West Usambara mountains had not been effected by this movement because the government considered these villages as already 'intensive' agriculture. Another reason was lying in the circumstance that there were many senior officials from the *Sambaa* group were members of central government and, thus, forcing the decision to leave this region out of *Ujamaa* (FEIERMAN 1990). In Lushoto District, there were already too many people living to do compulsive immigration and also their agriculture had developed.

## OBJECTIVES AND METHODOLOGY

The study objectives are:(i)identifying underlying causes and influencing factors of community-based forest management; (ii) analysing people's perception of and incentives for forest management; (iii) assessing social capital regarding aspects of sustainability, and (iv) recommending specific policies for improved community-based forest management feasible without external assistant. In order to achieve these objectives, an analysis of historical changes in forest landscapes, their management practices, and of general environmental surroundings has to be carried out to understand recent conditions of CBFM. In order to achieve useful results, a case study approach with multidisciplinary technique is applied, combining three components: secondary data analysis, participatory method, and questionnaire analysis.

## RESULTS

### Historical Changes in West Usambara

One-third of the natural forest in West Usambara was cut between 1954 and 1976 by the Tanga Regional Development Programme (UNITED REPUBLIC OF TANZANIA 1998) under the British Governance. Forest had been even used as backhanders of local governments. Moreover, there is evidence of corruption that around 13.000 ha of the *Shume* forest reserve was handed out to people by a local political leader in 1964 and was soon deforested (JOHANSSON 2001). The forest policy in Usambara Mountains changed according to changes in national governments. During the colonial period, local people were completely excluded from forest management and governors settled forest reserves in order to remove people from forest (ROBERTS 1982; YLHAISI 1998). There was no negotiation between local people and governors and people tried to go into forest reserve and get their own lands as soon as it became anarchic, for example during World War I and II. However, positive effects occurring from the colonial period include the forest reserves that the German colonizers first settled between 1905 and 1910. At the end of 1980, participation of local people in forest management started in

Usambara and was further pushed in the 90ties by the 'Participatory' concept of foreign donors. By examination of documents and articles written about that time, people in Usambara considered to be highly motivated to practise forest management and planting trees in 90ties (KERKHOF 1990; GTZ 1999; MONELA et al. 1999; SECAP 2000; MSOKA et al. 2001; JOHANSSON 2001). However, activities were completely undertaken with external donor's fund, representing almost 60% of the forestry budget in Lushoto District (MONELA et al. 1999). Consequently, after the donor's aid was over, it must have been the real beginning of 'community-based forest management' that should be sustained independently by local government and local people. In the following chapter, the results of the analysis of recent conditions of CBFM from Chambogo Village Forest Reserve are presented.

**Table:** Historical changes in forest and land policy in Tanzania and in Usambara

| Factors / Era | Pre-Colonial | German Colony 1890-1914 | British Governance 1918-61 | Independence Socialism 1961~ | Structural Adjustment 1980~ | Market Liberalization 1990~ |
|---|---|---|---|---|---|---|
| **Tanzania** | | | | | | |
| **People's Livelihood** | Pastoral, shifting cultivation, subsistence | Half-settled agriculture plantation, food and cash crops | More settled agriculture plantation, food and cash crops | Mass settlement (Ujamaa), intensive agriculture, social bond | Cessation of *Ujamaa*, new settlement and migration | Market role become larger, preference for cash crops |
| **Land Law** | Customary law | Imperial Decree (1985); land is regarded to be free and, therefore, all land belongs to the German Empire | Land Ordinance(1923); all land except freehold or leasehold are public land | Freehold Titles and Government Leases Act & Right Occupancy Act (1963); no private estate | | Land Act (1999) |
| **Natural Conservation Policies** | Forest is sacred place. Natural resource use and function had been handed down orally. Each clan has its custom to preserve and use nature | Local people were regarded to be ignored. Rulers set the Forest Reserve (1904). Customary law of each clan was neglected. | Nature Reserves remained as they were. Any proper right for natural resource use was not given to local people. Customary law had already begun to collapse | Nature Reserves managed by central government. Customary law became less effective because of the compelling mass settlement | Nature Reserves regarded as economic property of nation. Local people don't have rights to negotiate for natural resource use. Foreign donors recommend participatory practice | Local nature should be managed by local people. Community-based natural resource management and stakeholders' role are focal points |
| **Usambara** | | | | | | |
| **Main Forest Management** | Local and Customary (1740-1892) | Technocratic (1892-1989) | Technocratic | Technocratic | Participatory (1989-1998) | Political Negotiation (since 1998) |
| **Relationship between people and forest** | Forest management for the people by customary leaders | Management for the forest by rulers and against local people | Management for the forest by rulers and against local people | Management for the forest by the government | Forest management for and by the people (participatory) | Forest management with people and other actors (collaborative) |
| **Intervention strategies** | Customary rules defining access and use of forest | Forest Reserve, plantation, timber export | Forest Reserve, plantation, timber export | Forest reserve, national park | Farm, forestry, multiple resource use, buffer zone | JFM, CBFM |

Source: Ayako Toko,2005

**Recent conditions in Chambogo Village Forest Reserve**

Chambogo forest became a Village Forest Reserve in 1998 and is now managed by seven communities: *Longoi, Makose, Manolo, Malindi, Mgwashi, Lukozi, Viti*. As a result of the study, Fig. 10 shows the remaining forest patches in Lushoto District showing production and protected zones in Chambogo VRR. It is one of the first village forests in Tanzania, covering 605 ha, divided into two zones: a production zone in lower reach and a protected zone in upper reach prohibited to enter. In the production zone trees have been planted for exploitation and personal use, where as the protected zone is mainly indigenous forest survived from long termed deforestation.

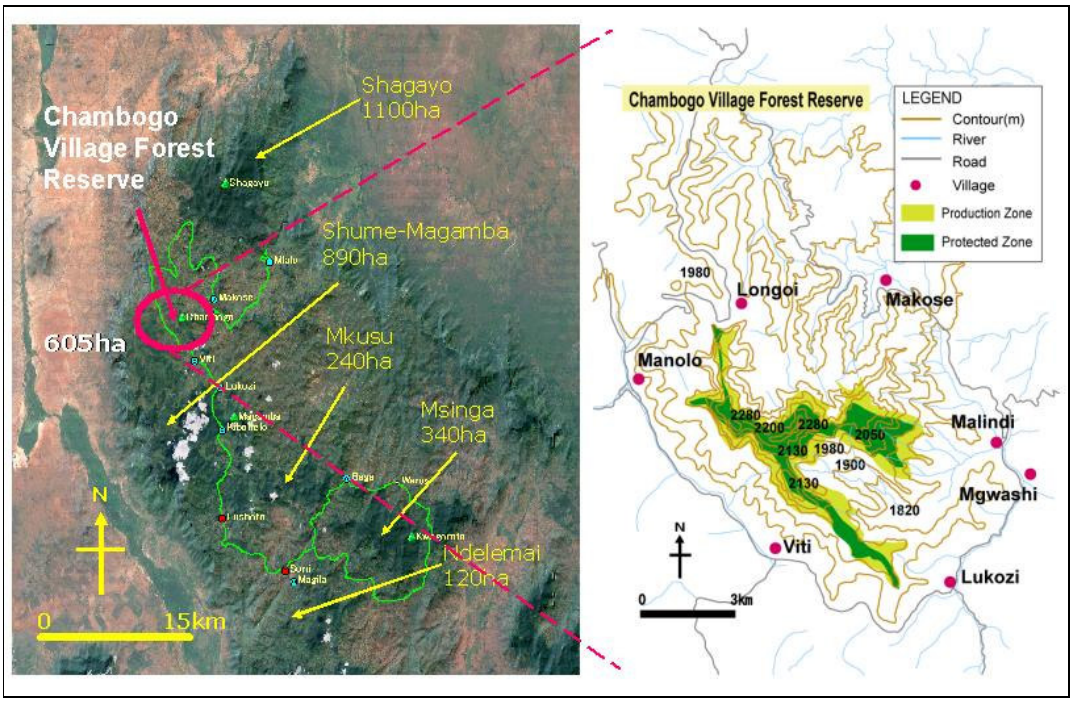


**Fig.** : Forest patches in Lushoto District
Source: Created with Landsat ETM image (1982), SRTM* DEM data, Kashmir 3D

**Fig.** : Map of Chambogo VFR
Source: Created with 1:50000 map from UK Directorate of Colonial Surveys (1957), own data

**Local governance and forest management**

Village Forest Reserve (VFR) is defined as a forest owned and managed by a village

government and "*village forest reserves will be managed by village governments or other entities designed by village governments for this purpose"* (National Forest Policy 1998, policy statement 6). VFR is an advanced approach of CBFM since it is administrated by local government and people. According to a regional forest officer in Tanga, the central government simply presents some kind of a policy statement. However, there are rarely any kinds of practical orders or concrete guidelines given. Since the forestry budget is only 1% of the total state budget (UNITED REPUBLIC OF TANZANIA 2002), it can be doubted that the government can financially support the local administration for forest management activities. Forest management is poorly financed and forest officer receive a poor salary. According to the District Forest Officer in Lushoto, they cannot afford to pay foresters and village foresters have little motivation to continue forest management practices. Considering the fact that the villagers would have to cut off their time from daily farming labour to do forest management, clearly they would lose incentives without any financial payback.

SECAP (Soil Erosion Control and Agroforesty Project) activities were undertaken with funding from the central government and the German donor. After project finished in 1997, NGO didn't receive further financial support neither from external funds nor from the central government. SECAP played a key role in carrying out afforestation in Chambogo forest. Nevertheless, lack of financial sources gradually forced them to stop their activities in Chambogo. As a result, the Chambogo VFR is managed by Village Forest Committees with decreased financial budget primarily coming from local tax. According to the National Forest Policy, 90% of the total costs of forestry sector have been covered by external donors. The case of Chambogo is not an exception. This trend of dependency on donor support has not changed since the 80ties. Moreover, beside citing definitions and concepts in forest policy documents there have not been concrete legal guidelines for community-based forest management practices by the government yet. Considering this fact, how can CBFM be

sustainable? Although the government often mentioned that the lack of knowledge hamper CBFM (UNITED REPUBLIC OF TANZANIA 1998), the case of Chambogo demonstrates that it is rather the lack of financial source and of concrete guidance that hinder sustainable local forest management.

**Role of stakeholders**

Identification of stakeholders is important for CBFM since political negotiation between these stakeholders is determines the practical success of CBFM. However, there was no clear identification of stakeholders in Lushoto. Therefore, stakeholders and evaluated their degree of entitlement by using the specific criteria of the '4Rs'. Among the variety of stakeholders, villagers and local NGOs are supporting CBFM activities in Chambogo VFR. In order to evaluate the importance of a stakeholder, the degree of entitlements – i.e., the rights, responsibilities, relationships and returns (4Rs) – of each stakeholder has been assessed. These results have been achieved by means of unpublished secondary data and interviews with SECAP, the Village Forest Committee, Regional Forest Officer, District Natural Resource Officer, and individual farmers.

**Table** : Stakeholders, their rank, roles and entitlements in Chambogo VFR

| Stakeholder and its rank | Respective rights | Responsibilities | Returns from forest | Relationship to forest |
|---|---|---|---|---|
| 1. Village leaders & individual villagers | -Frequent use of production zone<br>-Obtaining forest products | -Decision making for practical measures for forest management<br>-Maintenance | -Resources for daily livelihoods,<br>-Water conservation | -Daily relationship<br>-Long historical & cultural relationship<br>-Direct impacts on forest resources |
| 2. Village Forest Committee | -Frequent use of production zone<br>-Obtaining forest products | -Continuous monitoring<br>-Decision making for CBFM practices | -Payment for working in forest management<br>-Resources for daily livelihoods | -Continuous, frequent relationship<br>-Cultural, temporal relationship |
| 3. Local NGO (SECAP) | -Frequent use of production zone<br>-Obtaining forest products | -Facilitate political negotiation between stakeholders<br>-Capacity building for forest management | -Payment for working in forest management<br>-Resources for daily livelihoods - | -Frequent but temporal relationship<br>-Being rather manager than user |
| 4. District Natural Resource Office | -Protect and use forest as economic resources | -Inform and practice CBFM with local people | -Timbers or other economic secondary products<br>-Water conservation | -Sometimes visiting<br>-Economic, political relationship |
| 5. Regional Forest Office | -Protect and use forest as regional property | -Financial aid for CBFM from local revenue | -Timbers or other economic secondary products<br>-Water conservation | -Rarely visiting<br>-Economic, political relationship |
| 6. Ministry of Natural Resource & Tourism | -All land property right including forest under CBFM<br>-Protect forest as national property | -Distribution of practical forest management approaches<br>-Assessments and monitoring of forest<br>-Policy making | -Biodiversity value<br>-Water conservation | -Rarely visiting<br>-Political, Biological relationship |
| 7. International NGOs (e.g. IUCN, WWF) | -Conduction of research | -Survey and protect forest as source of biodiversity | -Biological data, socio-economic data<br>-Biodiversity | -Outsider<br>-Sometimes visiting<br>-Long term or short term stay |
| 8. Universities | -Conduction of research | -Survey and protect forest as source of biodiversity and socio-economic capital | -Biological data, socio-economic data<br>-Biodiversity | -Outsider<br>-Sometimes visiting<br>-Long term or short term stay |
| 9. Tourists | -Enjoyments and learning from forest itself | -Payments | -Biodiversity<br>-Amenity | -Outsider<br>-Rarely visiting |

**Benefits for and incentives of local people**

The correlation trend between representative factors supposed to effect local people's perception and incentives for forest management. Although there is no strong correlation between the variables, the assessment indicates some relationships between aspects. The factor 'number of irrigation plots' that represents the economic status of a household is related to people's perception of the benefits of forest, as well as to incentive for participation in forest activities. After identification of such relationships, a more detailed analysis has been carried out. Concerning what people mostly obtain from the forest, there is no big difference between villages. In order to obtain these products, there are no concrete regulations or a payment system since it is regarded as community property. The products, such as timbers, that can be economic sources for local communities are rarely harvested. This result indicates that Chambogo VFR does not offer financial benefits for local communities but it supports daily subsistence with direct use products. People who have more irrigation plots tend to have more motivation for participating in forest activities since they are wealthier than the average farmers. However, there are a few people participating in forest activities even though they don't have irrigation plots.

One explanation is that women do not own irrigation plots since it is rather a privilege for men. However, it is also assumed that women can have incentives for forest activities since 80% of collecting fuel woods labour is performed by women which is historically one of their day-to-day duties (MNZAVA 1983). People perceiving 'water conservation' as benefit from forest are highly motivated to participate in forest activities. Considering the statements given by farmers during the interviews, their incentives arise out of their experience that they can have more water when afforesting and conserving Chambogo VFR. Since this forest is situated in Chambogo forest, the effect is easily visible for farmers, especially for irrigation plots holders. Irrigation plots holders consider forest benefits such as water conservation,

whereas people without or few irrigation plots perceive forests as a source of fuel woods or soil protector. In this area, few people expect the benefit of timber from forest. Subsequently, how do local people think about forest management itself? People's perception of the factors 'to whom forest belongs to' and 'by whom it should be managed'. The number of people who regard Chambogo forest belongs to their own village is the highest. Even these people think that the best way to maintain the forest is by local government not by themselves. From the interview results it is assumed that people have difficulties to sustain forest management by themselves because they lack financial sources and it takes their time from farming, for which they are not compensated.

According to our survey, people who think they draw any benefits from CBFM mostly participate in forest activities. There are more people participating in CBFM even though they don't see any specific benefits. This can be interpreted that the recognition of benefit is not a strong incentive for participation. People do not see any benefits from actively participating in CBFM, but after participation they did. Another interesting aspect is that those who think they do not draw any benefits from CBFM answered that they obtain some products from Chambogo forest. It seems that people harvest products without recognising CBFM. People knowing CBFM answered that they draw benefits from CBFM, although all participants answered that they obtain products from Chambogo forest. Knowledge for CBFM is not transferred to local people. 18% of all participants answered that they are aware of CBFM. This underlines the lack of information resulting in low participation of local people in forest management. The willingness of people paying for forest management. The possession of irrigation plots is strongly influential. Many irrigation plot holders are willing to pay whereas people without irrigation plot hardly have motivation. This is reasonable since people owning 4-8 irrigation plots are much wealthier than the average farmers. Furthermore, farmers possesing irrigation plots consider the forest as important water source, thus, water demand is another motivation for paying for forest activities. The total ratio is 58% of non-willing people

compared to 42% of willing people. People without irrigation plots are willing to pay. This is considered a positive aspect of sustaining the village forest.

**Social capital and its effects**

Following NARAYAN et al. (2003), social bands, trust, and information are focal points to examine the effects on people's motivation for forest management. The study area is dominated by *Sambaa* ethnic group, representing 78 % of the total population – and 96% of the participants have been *Sambaa*. This high ratio of homogenous ethnicity surely contributes to strengthen social capital. This is a positive aspect since in the interviews some respondents mentioned signs of conflicts between wealthier and poorer farmers, as well as between participants and non-participants in forest activities. This is supported by the study result: those without irrigation plots stated more often that trust in their village became worse and that they are excluded from the community. Moreover, people who don't participate in forest activities perceive inequity and exclusion from the community, while at the same time many people perceive that the quality of trust has declined.

Source: Own field work, structured questionnaires

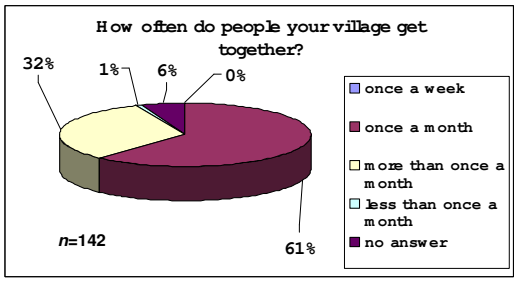


**Fig.29:** Community assemblies

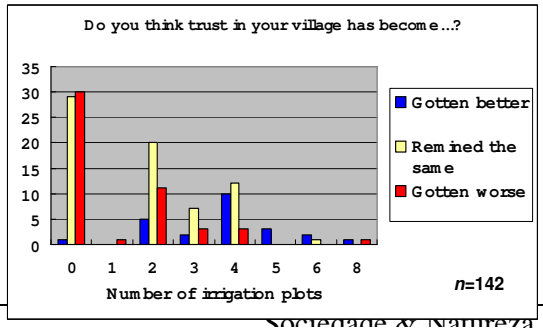


**Fig. 29:** Relation between perception of trust and number of irrigation plots

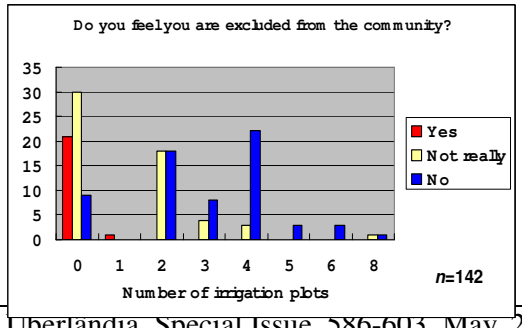


**Fig.30:** Relation between sense of exclusion and number of irrigation plots

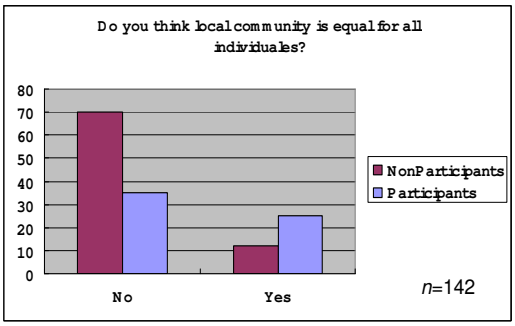


**Fig.31:** Relation between sense of equity and participation in forest activities

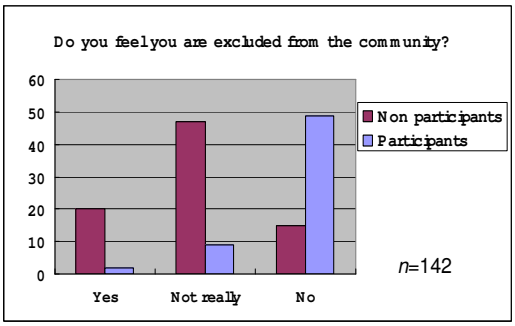


**Fig.32:** Relation between sense of exclusion and participation in forest activities

Based on the results of the structured questionnaires, the relation between five factors that affect each other. It also shows the differences of each village. Obviously, wealth, information, and distance from the Chambogo VFR to the village affect the degree of participation in CBFM. However, there is no specific correlation between wealth and trust. Only in the villages of Lukozi and Viti both factors significantly correlate higher than in other communities. Among all villages, in the village of Lukozi all factors strongly correlate with each other. This is due to the fact that community has one of the most active village forest committees.

## CONCLUSION

According to the results achieved, 1) Forest policy of the central government concerning CBFM is not well informed and does not spread into local communities. Local people are hardly aware of CBFM and, thus, it is difficult to motivate them for active participation. The lack of practical guidelines, approaches, and information provided by the government is a critical issue since it hinders sustainability of CBFM. 2) Since CBFM activities started, people's perceptions of forest and forest management have partially improved. Especially some village forest committees were showing enthusiasm for CBFM activities, which will

positively affect other local communities and their learning process. Nevertheless, there are still farmers being not fully aware of the effects of CBFM and perception refers only to day-to-day activities. 3) People draw only few economic benefits from the VFR and, therefore, motivation is low for sustainable CBFM. However, people obtain material resources from forests.

It is assumed that existence of a practical system for collecting these products would promote and thus increase people's participation in CBFM. 4) CBFM clearly encourages the exchange of bands and information between people through joint activities. However, negative effects on social capital exist since disparity in wealth became larger due to unequal distribution of the benefits arising CBFM. For example, farmers possessing irrigation plots directly draw benefits from the forest and become wealthier, whereas poorer non-plot holders cannot draw these benefits. Consequently, existing social capital is jeopardised by this disparity. 5) Local governments are not well prepared for and organised in CBFM due to a lack of an elaborated system. This deficit is surely an obstacle for sustainability of CBFM.6) All stakeholders are not clearly identified, resulting in obscure rights, responsibilities, relationships to and returns from forests (4Rs). Above all, there is no identification of the responsibilities of each stakeholder which is absolutely required for sustaining CBFM. 7) Upon completion of financial support from external donors and central government the lack of financial sources became a crucial aspect. No new measures have been elaborated to obtain the costs for CBFM. Therefore, the VFR can hardly be sustainable in the future.

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