



Stakeholders' Interaction and Sustainable Rural Development Implementation Challenges in Kom, Western Highlands of Cameroon

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Authors' contributions

This work was carried out in collaboration among all authors. Authors ZNF and ENA designed the study and developed the draft manuscript. Author ENA performed the statistical analysis. Author JNK reviewed the manuscript and developed the discussion. All authors read and approved the final manuscript.

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ABSTRACT

Rural development stakeholder support is an essential strategy for the initiation, operation, and implementation of sustainable development interventions, especially in geographically-biased highland regions, characterised by diverse stakeholder development interests. This paper sought to analyze the interaction of rural development stakeholders and the challenges linked to the implementation of sustainable rural development initiatives in the Kom Highlands of Cameroon. Primary data was obtained through semi-structured, in-depth interviews. The data was analysed using content analysis, while a spatial picture, based on slope gradient was presented. Results showed that rural development is strongly determined by slope gradients of this highland community, with an array of diverse rural development experts (organizations, local councils,

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government ministries and development-oriented non-governmental organizations) operating mainly with local communities and organizations. The use of stakeholder theory thus appeared significant in understanding stakeholders' goals for implementing of sustainable rural development.

Keywords: Belo; highlands; rural development; stakes; stakeholder.

1. INTRODUCTION

Rural development remains a major challenge for developing countries especially in Africa [1,2] as World Bank estimates that 75 percent of the world's poor are living in rural areas practicing farming [3]. Africa that was rated as the second poorest continent in 2003, [4] continues to grapple with development challenges including the adverse effects of population pressure on land, water and other resources, threats to the environment, climate change, and the yawning income disparity between rural and urban areas [5]. Governments and international development agencies increased emphasis on rural and agricultural development to reduce poverty and achieve the Sustainable Development Goals (SDGs), one of which targeted community development actions and initiatives to improve the standard of living. Such rural development encompasses environmental, economic and socio-cultural dimensions in the Kom Highlands focusing on the disadvantaged rural poor, and promoting broad-based rural growth and service provision with all stakeholders. Despite the difficult topography, this landscape, like other parts of the North West Region, demonstrate significant potentials for tourism [6,7].

Central to this paper is the need to analyse rural development stakeholder interactions in complex landscapes such as the Kom Highlands which begs for major development interventions. Rural development interventions, through community initiatives have been recurrent in this landscape [5]. The objective of this article is to suggest a coherent cross-sectoral approach for the sustained reduction of rural poverty in which rural development stakeholders overcome the shortcomings of earlier top-down, non-inclusive approaches and thus reduce the short-term and sector-by-sector approaches. This article considers stakeholders as any group or individual who can affect or are affected by the achievement of the organization's objectives [7]. In this case, they include private individuals, government, civil society groups, donors, academics, development agencies, international organizations and leaders, and the business community that form broad-based global coalition

to make the reduction of rural poverty a corporate social responsibility. It equally highlights the social and environmental concerns of this highland community in consonance with the stakeholder approach popularised since the mid-1980s by Richard Edward Freeman [7].

This study revolves around the stakeholder theory [9]. Stakeholders' knowledge and experience in development management, participation in development planning and development processes and long-term community involvement have played an important role in rural area management. Though some stakeholders are more important than others in determining the outcome of development activities [10] in the Belo community of the Kom Highlands, Freeman [7] contends that it is necessary to evaluate all persons or groups who have interests in development planning. Sustainable rural development therefore involves both personal and contextual components, meaning what is perceived as sustainable practices in one location may well differ significantly when compared to another. As such, identifying the key stakeholders in implementing sustainable rural development and understanding of how each group of stakeholders exert their interests in Kom is our main objective in this study. Specifically, it would be important to diagnose current and potential stakeholders, determine their interests/rights, and investigate the process through which each stakeholder affects community development in Belo. This article thus assessed the rural development sustainability using the normative, descriptive and instrumental dimensions of the stakeholder theory.

2. METHODS AND TECHNIQUES

Mainly qualitative methods were used in data collection because of its empirical procedures designed to describe and interpret the experiences of research participants in a context-specific setting. Data were collected via semi-structured, in-depth interviews with community and common initiative leaders. In order to ensure a wide variety of local, regional and national standpoints on the implementation of rural

development in Belo, the study used a significant proportion of local residents, governmental, non-governmental and research stakeholders with emphasis on their involvement in the rural development planning and decision-making process. A systematic sampling strategy was devised to ensure that participating residents be significantly represented in the social, economic and infrastructural development facets of this highland community. The rural residents sampled were therefore those either directly or indirectly involved with and/or are affected by development activities at local and community level and also sought to appreciate the land pressure and terrain determinants to varied aspects of rural development. Convenience sampling as a nonprobability technique was chosen for it appeared less expensive and less time-consuming compared with other sampling techniques. Governmental institutions were contacted to assist in establishing a snowball sample of other respondents for local formal or informal 'network connections' [11]. Local council decision-making bodies were chosen to include the Belo, Njinikom and Fundong Councils, as well as Sub-Divisional delegations that have a part to play with community development.

Interview questions were developed based on sub-sectorial themes related to the sustainable rural development concept and stakeholders. These questions were pilot-tested with five local residents in July 2014. Full interviews were done in December 2014 and January 2015 that permitted further insights into community member perception of stakeholder types and relative incidence on rural development. Interviews of leading development experts and community development leaders were recorded, transcribed and organized according to community categories of topographic unit (valley and inter-montane as well as hillslope) communities. Content analysis of the interviews transcripts was employed according to the techniques of Ruhanen [12]. A comparative analysis was then used to compare and contrast data and build on existing knowledge in the field.

3. RESULTS AND DISCUSSION

3.1 Physical Environmental Stakes on Farm-based Rural Development

The dominant rural development targets of the Kom Highlands are farmers who ordinarily are compelled to follow the dictates imposed by topographic variation on highland farming,

erosion and accessibility to production basins. The Oku-Kom highland slopes have been noted [13,14] to be victims of high rates of soil erosion which lowers their agricultural productivity and thus the farmer income. The Belo steep slopes of Sowi and Njuambum records highest erosion at the beginning of the rainy season when soil tillage for planting has been done. There is accompanying mass movement that is high in July, August and September when the weathered soil layer is saturated by annual rainfall of between 2300 to 3200mm per annum. Such occurred and ravaged farmland in 1997 and 1998 on the hillslopes of Sho and Baingo. Contrary to these calamities, the month of August witnesses much alluvium being deposited in topographic low-lying Mejang, Baicham and Mbueni which offers good potential grounds for rice production.

Community development and management of the highlands has often taken into consideration its endemic resource and watershed conservation status, most especially the spring water, endemic flora and fauna and other ecological imprint. It is observed that the microclimate issuant of its altitudinal range (1100 m at Mbisa to 3011m at Mount Oku) permits the cultivation of fast emerging community income crops like Irish potatoes. In order to broaden their rural subsistence and new alternative sources of income crop farmers embracing Irish potato production expand previous and new arable land beyond the confines of this unique mountain ecosystem. Ecological and landscape degradation becomes rapidly replicated even beyond Belo in the Kom Highlands as Fogwe [13] estimated a 70% destruction and consequent endemic biodiversity loss of the climax natural forest between 1963 and 1997 stemming from mainly from community subsistent extensive agricultural innovation. Topographic variation and extremely varied altitudinal ranges inhibit farm mechanisation to operate on slope gradient of over 15% in practically all rural communities except Ndawara where its gently rolling highland summit topography is the haven of capitalist tea plantations of the Cameroon Tea Estate. The rest of the community area is for the over 95% disadvantaged farmers that toil on erosion-ridden and impoverished slope soils of less than a hectare each for subsistence. Resultant low yields exacerbated the dearth of community savings, rural development extension services, government control, transportation and marketing of agricultural products. Food crop production in

most of the areas has been reverted to cash crop. This is the case of the now Ndawara Highland tea plantations that were initially a rural community vegetables paradise on a plateau surface that offered superb climatic and hydrological physical conditions. At this previous vegetable production territory, over 2000 hectares of land have become totally converted to tea plantations and whose precincts are exclusively reserved for Ndawara intensive and extensive Fulani cattle grazing. Cattle trespass into nearby farms destroy the food and crops of the Belo rural community amplifying the rural poverty gap (Fig. 1).

This highland slope erodibility increases down slope which unfortunately is where farmers produce *Colocacia esculenta*. Classical examples are found in Anyajua, Anjin and Mbessa zones where some farms erosional gully's average of depth 40 cm at Kitchu, Jinkfuin and Anyajua zones while it is about 30 cm in AkuniNkwain, Tumuku, Matsin, Tumuku and Abohas a function of their arable land use history, cropping and land management practices. A typical highland landscape sampled in Belo community in 2016 reveals that of some 374 Km² area, about 50% is not cultivable (left to the mercy of very steep slopes, cliffs, escarpments, forest and water bodies), 25% is

cultivable for tea plantation and livestock grazing at Ndawara,17% is used for community subsistence and income crop cultivation while 8% remains for settlement and infrastructural development. These variations in land uses are for a population that the Fundong Health District Service in 2011 estimates at 80,795 inhabitants of which close to half (38,000 inhabitants) subsistent crop farmers. This makes crop farming acreage to be staggeringly less than 0.17 hectares per farmer except in Mejang area with vast farm land. Farmers who afford a hectare of farmland are those who dare cultivate at far-off no go zones especially on steep slopes. The farmers there earn practically little or no output since erosional processes took eminence over crop growth from March (with heavy torrential rains) to August. Crop farmers on such slopes unsustainably adopt on-farm structural techniques like terracing which succumbs on steep gradient slopes and the high maintenance energy required.

Such farmer energy input requirement is worsened by long and ascending/descending distance journeys and inaccessibility imposed by extremely topography even at short distance with no motorable farm to market road infrastructure (Fig. 2).

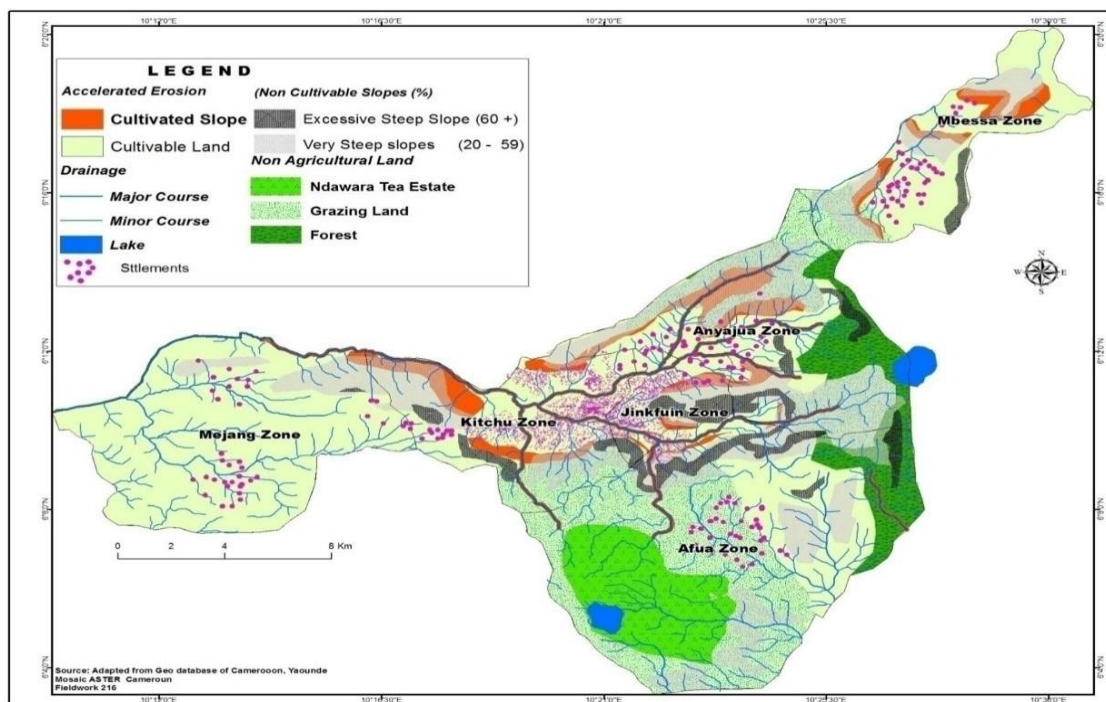


Fig. 1. Community activity pressure on arable land in Belo, Kom Highlands

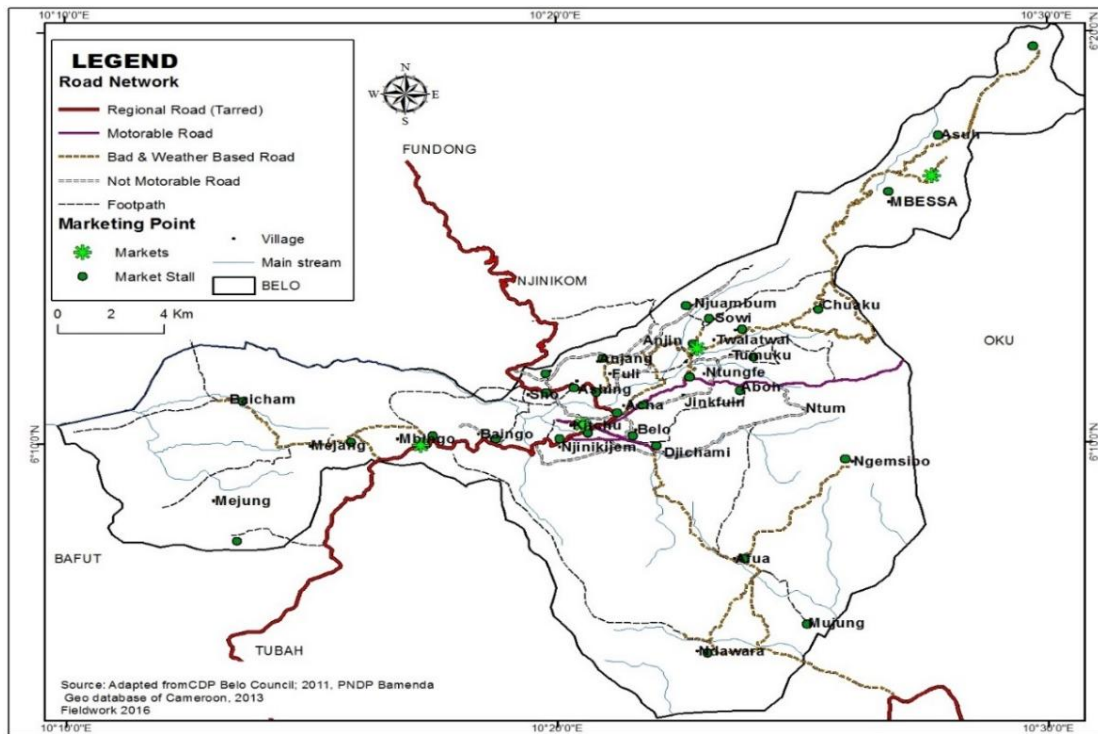


Fig. 2. Road network and local markets of farm products in Belo subdivision

This infrastructural paucity inhibits farming activities from extending into fertile areas. Where such occurs, farmers find themselves compelled to make negative deviations to reach such farms. At Aboh, for example, the straight line distance to the cultivable lands of Moghom and Ntum is just one kilometre but because of this physical barrier of the Ntum hill, farmers find themselves obliged to cover more than 4 Km deviation to reach their farms. Same with the escarpment at Tumukuthat encamps farmers at Isaiboh, rather than going towards the fertile Atuboh.

Conversely, farmers increase and intensify mixed cropping with fruit tree agroforestry in compounds with increasingly shortened fallows. The rapid exhaustion of soil nutrients thereof causes a fall in crop output especially in areas hardest hit by ineffectiveness of agricultural extension services and dearth of farmer education. The Agricultural Chief of Post of Anyajua in January 2016 admitted that there are many areas within his functional jurisdictions that his staff has never been for reasons of relief inaccessibility. Equally 80% of farmers spend 3-5 hours transporting their farm produce by headload (any other means excluded by the rugged terrain) on distances averaging 4 km (Fig. 3).

Except few areas at Chuaku along the Belo-Mbessa, over 90% of the farms are not accessible. The wear and tear on the farmer health situation is enormous especially during harvest time at the heart of the rainy season as in the Anyajua, Mbessa and Afua zones when the dark clay soils are very slippery. This triggers a negative multiplier effect as some crops are abandoned unharvested in the farms by as many as 90% of farmers. Most roads are in bad state and so transportation is mainly by head from farms to homes and to the markets (at Belo, Mbingo Mbessa and Anyajua). Community market price differentials strongly occur for the same crop produce as a reflection of the environment-induced cost of transportation as the price of an average bunch of plantains whose cost of transportation triples between the farm and Mbingo market (Table 1).

From a farm in Baichama, a bunch of plantain is sold at 500 FCFA due to a 4kilometre poor road network. This is sold at Baicham village square for 750 FCFA being a 50% increase in price. From Baichan village square to Mejang on a 7 km bad road that is attempted by courageous car driver and motor bike drivers the same bunch costs 1000 FCFA. By the time it gets to the Mbingo and Belo markets the bunch is sold for

2000 FCFA being a 200% increase in the price. Banana cultivated in Ntum, Aboh, Tumuku, Elemighong Sowi Njuambum and Anjang, Kitchu and Jinkfuin record a 250% price increase as it gets to Belo market (Fig. 4).

increase by the time the potatoes from the farm in Mbessa gets to the Belo market. Cabbages that are 80% cultivated at Afua, 15% at Djichami and 5% for the rest of the area witnesses a price increase of 100% at Djichami, 333% at Belo market and 400% at Mbingo on averagely 6km road distance each. Conversely, the beans that is produced mainly in Mbessa is transported on close to 35km to the Belo market records only a 6.94% in price. The major stakes of the rural farm stakeholders in this upland farming area is thus erosion and inaccessibility.

The rural farmer thus remains poor while inaccessible road links imposed by the natural environment churns away what ought to cater for rural stakeholder wellbeing. The same scenario goes for *Solanum potatoes* with 90% cultivated in Anyajua and Mbessa zones. It gets a 50%



Fig. 3. Head load evacuation of farm produce along steep slopes in the Kom highlands
 Source: Fieldwork, 2016

Table 1. Progressive cost of plantains at sales points from farms to the market in Belo

Trajectory of bunch	State of road	Distance (Km)	Price (FCFA)	Price increase (FCFA)	Percentage increase
Baicham to Belo	Very Bad	4	500		
Baicham to Mejang	Bad	7	750	250	50
Mejang to Mbingo	Moderate	3	1000	500	100
Mbingo market	Good	-	2000	1000	150
Belo Market	Good	-	2000	1000	0

Source: Fieldwork (2016)



Ashing banana sales point

Belo market banana sales point

Fig. 4. Marketing of plantain and banana crops in Belo area

3.2 Stakeholder Response Perceptions to Mitigate Milieu Imposed Stakes of Development

The local stakeholders have not remained indifferent to natural constraints imposed on the upland crop farming and stakeholder activities especially in mechanical erosion countering measures. Such measure is contour ploughing aimed at breaking water flow speeds on the slopes thereby curbing of rill and gully morphodynamics under the promotion of aced politicians in the like of S. N. Endeley and Late A. N. Jua that championed the campaign to end to slope-wise ridging. Contour farming has thus gained grounds progressing even unto steep slopes for beans, maize, groundnuts and Irish potatoes.

Such places have witnessed a steady introduction of agroforestry of tree crops like coffee, pears, plums and plantain/banana to serve as a crop canopy, as well as to intercept and curtail the impact of rain drops. In compound farms tree cash crops belong to male

stakeholder but further away from human dwellings female stakeholder dominate mixed cropping as indigenous means to combat surface erosion. They use compound leaf crops in combination with groundnuts that curb splash erosion with remarkable efficacy. Such mixed farming stakeholder strategy is strengthened in far-off farms by stone lining on stony steep slopes reinforced with rock boulders that permits overland flow to filter through. These indigenous strategies create an archetypical landscape of farming techniques of combined contour ploughing, simple clearing and simple clearing and tillage (Fig. 5).

Traditional soil tillage is carried out where slopes are too steep for ridging as on the slopes of Ngvanghaku in Tumuku and the fringes of Ijim mountain forest with a blend of cash and food crops like maize, cocoyam and beans. Some 108 farmers sampled in Belo main villages reveal that a majority 87 percent being (96 households) also own coffee crops as a counter erosion strategy (Fig. 6) which has but a relative effectiveness.

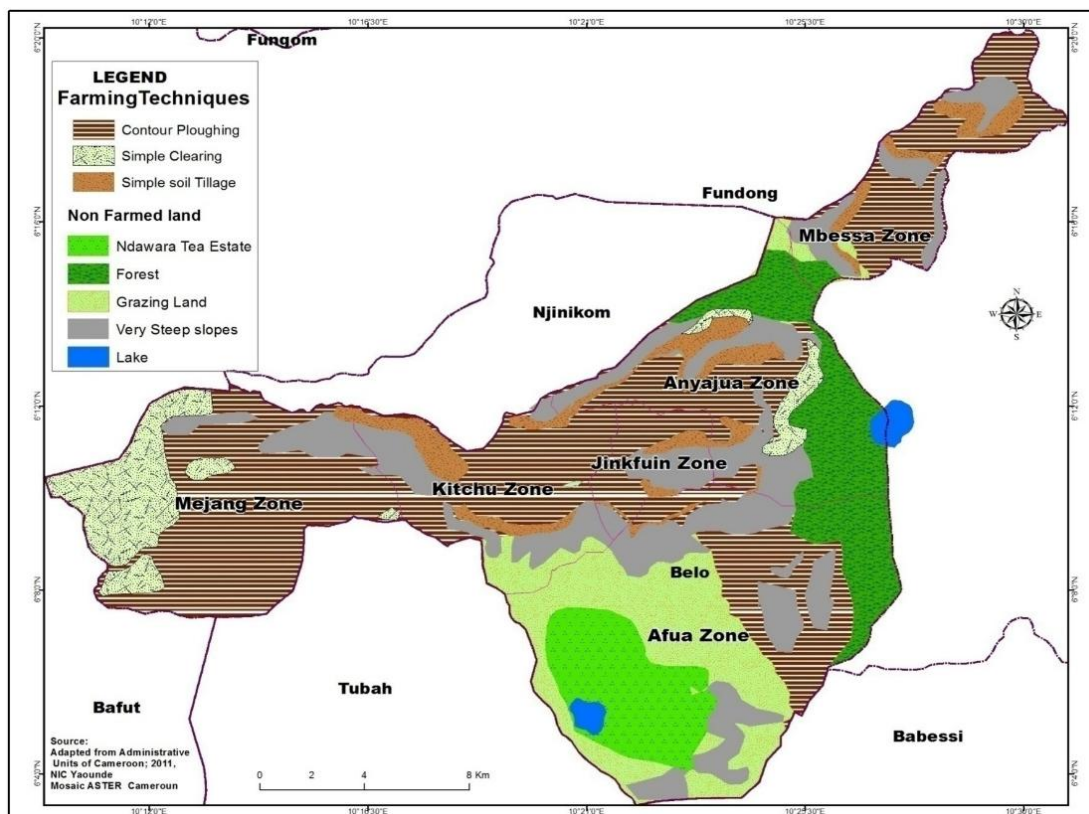


Fig. 5. Mechanical farming techniques adapted by stakeholders against erosion in Belo

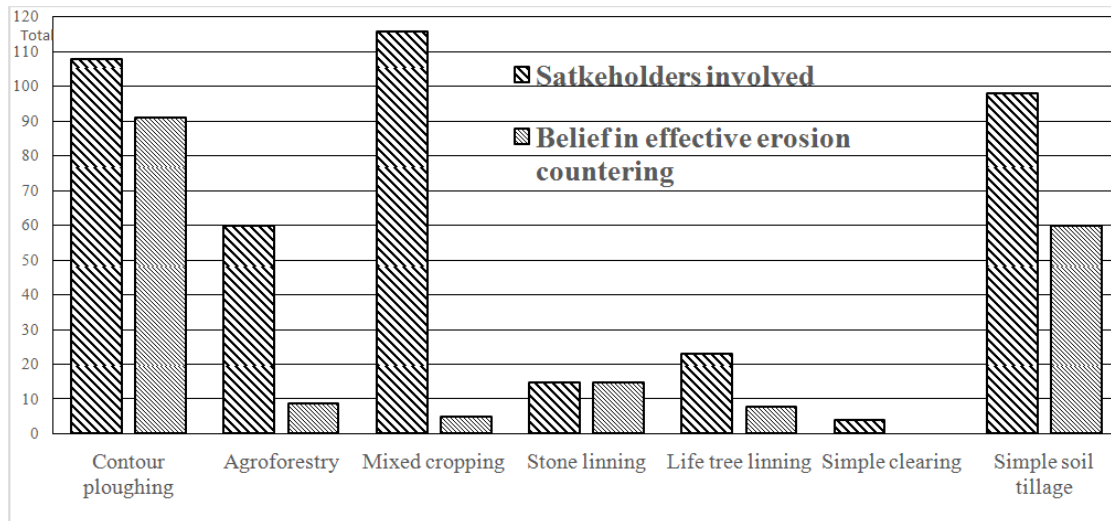


Fig. 6. Community perception of the effectiveness of anti-erosional systems in Kom
 Source: Fieldwork, 2016

There is a near total belief in stone lining for its efficiency in erosion control but unfortunately it is not as stable and widely practiced like vetiver grass as a vegetative barrier against erosion though mostly by male stakeholders, most of whom have very little to do with farming. This technique has thus been mainly in coffee farms where men have but a limited knowledge of its primordial function.

Perceptions of sustainable rural development in Kom depend on the values of the stakeholders concerned. As Wall [15] noted, what is considered sustainable at a given moment may not be sustainable at another due to population changes, emerging technologies and changing tastes. Different management regimes and personalities have in Belo community of Kom affected who the stakeholders are perceived to be, and how their needs are perceived to affect the goals and directions of rural management [16].

3.3 Rural Spatio-temporal Sustainable Development by Stakeholders

Development stakeholders portray significant but varied know-how in alternating the cultivation of different crops in different highland areas and seasons. This incorporates physical conditions of Kom highlands with two farming season calendar activities involving different crops. The rainy season farming runs from March (planting) to June, July August and even September (harvesting) depending on the type of crop and

area cultivated. Dry season farming starts with planting in August and September and harvesting in December and January. The farming seasons present near opposing variables in the course of cultivation according to stakeholder perception (Table 2).

The choice of spatial and seasonal alternation between types of crops and areas cultivated was observed to show strong environmental determinism. During the rainy farming season, all crops flourish across the whole area (Fig. 7) producing a cereal/vegetable belt in the central western part of the community while the east and south east constitute domains of uniform land use of either tea at Ndawara or parts of the Ijim protected community forest.

Farming characteristics in the rainy season are overly positive in output and variety. Cultivation does not run throughout in some areas as they are cultivated only in the second phase of cultivation. These areas are inaccessible and dangerous since in July and August stream volumes increase beyond foot-crossing levels in Baicham and Mbueni with shallow valleys forming headstreams of River Menchum. In the dry season, some remote areas prone to mass wasting especially landslides are cultivated as the second farming season. Crops grow and produce well in such areas because of high soil moisture and fertile nutrients not washed by erosion from the slopes and deposited in the valleys. Accessibility is increased as most footpaths are manageable by motorbikes and

used to evacuate their produce reducing the stress involved that comes with head load from Kikfuini (Fig. 8). There is the introduction of rice cereals west of Mejang being a low-lying area that benefits from a lot of alluvial sediments.

There is a drop in the types of crops cultivated as in Jikfuin and Kitchu zones that are left idle to fallow since the length of the growing season reduces with increase in altitude (Fig. 9).

Some farms are created far from places of residence implying loss of much time by farmers who do not have cultivable land in their villages yet because of socio-cultural requirements farmers have to diversify their food needs and variety. Farmers from Kitchu and Jinkfuin zones go to Mejang, Baicham and Mejung to cultivate maize, cassava, plantains where the production is more than double what normally obtains in their place of origin.

Table 2. Seasonal sustainability indicator contrasts of crop farming in the Kom Highlands

Indicator	Rainy season	Dry season
Accessibility	A major problem	A minor problem
State of crops	Destroyed in farms by heavy rains and resultant mass wasting and insect invasion	Destroyed by sunshine and bird invasion
Farm season output	High and varied	Low and mainly cereals
Dominant crop type	Dominance of tubers over cereals	Dominance of cereals over tubers

Source: Fieldwork, 2016

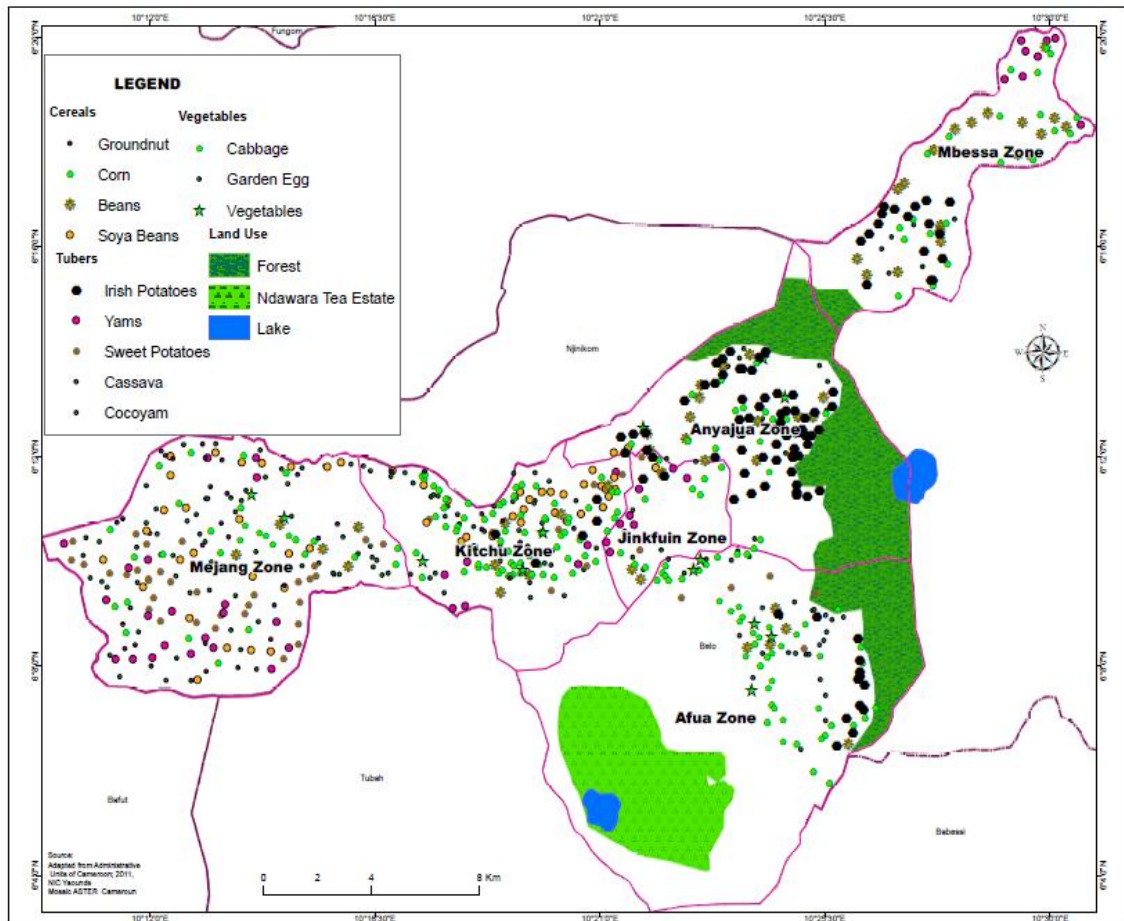


Fig. 7. Unequal distribution of crop types and crop production basins in in Kom during the rainy season

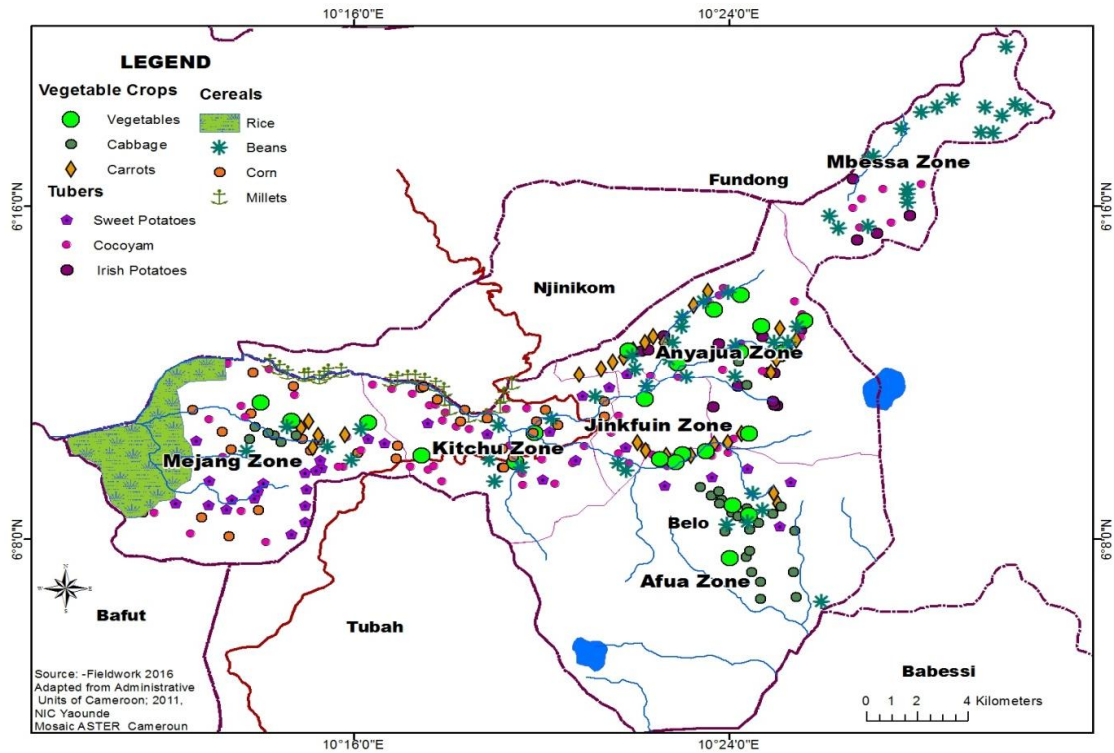


Fig. 8. Dominance of cereal crop production Kom during the dry farming season

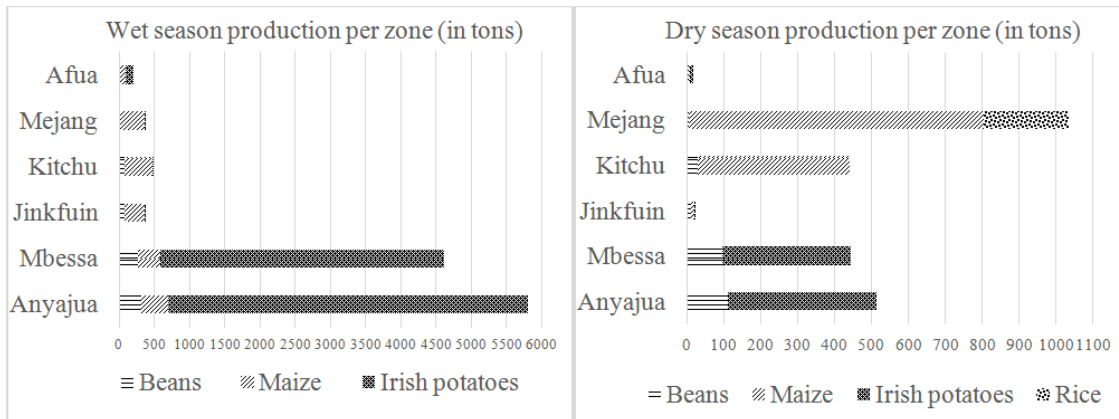


Fig. 9. Relative production of main crops in Kom according to seasons
 Source: Sub-Divisional Delegation, Ministry of Agriculture and Rural Development, Belo

3.4 Community Stakeholder Domains of Sustainable Development Participation

Belo highland community rural development encompasses the improvement of economic and social infrastructure as well as agrarian transformation to increase production, improve sustainable use of natural resources, strengthen rural livelihood and food security. Mindful of the definition of Freeman [8] and following Aas et al. [17], Belo rural development stakeholders are

engaged in domains that appear to reduce potential conflicts between the development and Belo community by involving the Belo people in shaping the way their community develops [18]. The Belo people gain self-confidence and improve their self-esteem to take on new tasks and become active participants in project activities. In general, the Kom community becomes empowered, have access to information and participate as decision makers. Chitmis (2005) established this as the only

condition to improve and sustainably develop rural families and communities. Kom rural development stakeholders have direct interest, involvement or investment in agriculture and other forms of development being individuals, groups and institutions in Belo to improve the rural Kom highland environment. Some stakeholders deal with issues around land redistribution, land tenure reform and land restitution claims which in Kom lineage is culturally matrilineal.

Specific institutional stakeholders are the Belo Council, Ministry of Agriculture and Rural Development extending to village agricultural posts and technicians that blend with local NGOs like Belo Rural Development Association (BERUDA), Mixed Farming Common Initiative Group (MIFACIG) and at times parliamentarians. Government involvement is limited to directing integrated rural development, but new models are increasingly showing the need for local populations to be central agencies of their own development [19] through local planning and decision-making. This ensure that rural development becomes participatory, sustainable, decentralised, and integrated in varied domains. BERUDA operates in all socio-economic sectors such as helping farmers with hybrid seeds, sponsoring some farmers' children in schools. MIFACIG works with international agents acting like the channel through which innovations in terms of seeds and chemicals are channelled to farmers, focuses on research and the development of innovations that blends with the local Belo environment. Parliamentarians encourage the creation of farmer cooperatives, Common Initiative Groups and savings groups ('*njangis*') through which they receive assistance in the form of farm inputs as much as 50% assistance per bag of fertilizer.

This is thus a sustainable livelihoods approach that strengthens development institutions at the local level as suggested by Johnson, [20] for:

- strengthening of government and private sector interaction to allow local development to be market driven
- improving NGOs' capacity to implement developmental programmes
- strengthening decentralised government institutions as a way of enhancing development.

Robson and Robson [20] asserted that the involvement of stakeholders in rural development

has the potential to provide a framework within which sustainable rural development can be delivered.

3.5 Farming Innovation Activities to Improve Output of Rural Farmers

Observations show that new techniques, hybrid seeds and chemicals are increasingly being introduced to avert pitfalls of crops cultivated on difficult terrain and those emanating from indigenous farming techniques. Such chemicals step up farmer stakeholder output even when it was done on small cultivable land thereby reducing pressure on land. The production of most farmers in Anyajua who adhered to such innovation diffusion and used chemical fertilizer showed significant increase production of Irish potatoes and beans (Table 3).

The Ministry of Agriculture and Rural Development through its Program to Strengthen *Solanum potatoes* Sub-sector. Its activities are centred on providing training, hybrid seeds, and farm chemical inputs all aimed at increasing the production of the crop. They operate through farmer Common Initiative Groups of farmers which they encouraged farmers to create. The innovations in this sector, is almost felt all over the Irish potatoes areas of Anyajua and Mbessa. They have constructed a warehouse at Belo where farmers store their produce under good conditions for potential buyers.

3.6 Provision of Social Infrastructure

Farmer stakeholders have created and renovated farms to market roads with the aid of agricultural technicians. The Elemighong Women Farmers Group have braved the topographic odds and dared into road maintenance creating new roads into new farm heavens. Cases in point are the rehabilitation of the Mbingo Baicham road stretching on 15 km in partnership with the Ministry of Economic and Regional Planning. Same is the rehabilitation of farm road in Njinikijem. Village development associations have also constructed culverts and bridges along some farms to market roads. The Belo weekly market has been renovated and expanded just like the Mbingo food market has been improved upon by the Council. In the villages, sales points have been constructed so that farmers can sell their produce Cameroon's best and choicest hospitals being the Mbingo Baptist Hospitals is in the Kom Highlands; especially the market gardening crops like vegetable. One of the North West Region of alongside other health posts.

Table 3. Increase in yield resulting from chemical fertilizer in the Kom Highlands

Crops	Before using fertilizer	After using fertilizer in 2015	Percentage increase
Irish Potatoes (200 kg bags)	8	21	162.5
Beans: hybrid specie (200 kg bags)	2	3.5	75
Maize (20 litter tins)	9	9	0

Fieldwork, 2016

4. CONCLUSION

Rural development stakeholders in Kom are making clear efforts to alleviate the rural poverty status through internal and external measures. However, the results appear slow to be seen despite agrarian innovations and improvement of socio-economic infrastructures by both the government and local authorities, due to the hilly landscape. The living standards of the rural community of the Kom Highlands agro-zones remains conditioned by topographic variation on cultivating activities as slope gradients encourage soil erosion and mass movements, thereby inhibiting the sustainable development of socio-economic infrastructure. Varied farmer stakeholder responses, both mechanical and vegetative, are only palliative and not a panacea. Highland promising agrarian havens like Mejang that offers large scale and small scale cultivation possibilities have not been put into fruition for a veritable rural development by stakeholders. Small-scale farming remains central to growth and development on this difficult topography. Yet, improved activity in small rural farming that enhances non-farm input improves overall economic activity, exchange, and consumer markets [22]. The topographic variation of Belo in Kom equally portrays an attractive scenery characterised by escarpments, hills, crater lakes and Ijim forest for a huge ecotourism industry. This can support comprehensive rural development to fight poverty, hunger, unemployment and slow rates of development in Kom.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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