

VALORISING DEVELOPMENT POTENTIALS IN
MOUNTAINOUS LANDSCAPES: THE CASE OF THE KOM
HIGHLANDS IN THE NORTH WEST REGION OF CAMEROON

By

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ABSTRACT

This study identifies and analyses the development potentials of the Kom highlands. The extent to which the physical and economic potentials of the Kom-highlands have been valorised to serve as a springboard for socio-economic development and poverty alleviation constitutes the main focus of this paper. To gather data for this study, ground verification was done through field visits to clearly identify the development potentials of the area. Interviews, field observations and focus group discussions were the main sources of primary data. Complementary data was obtained from secondary sources through the consultation of records obtained from the municipal councils of Belo, Njinikom and Fundong Subdivisions. Data obtained was analysed quantitatively and qualitatively and presented using cartographic and graphical techniques. The findings revealed that the Kom-highlands though mountainous are a haven of potentials for development. The physical landscape of the study area is in itself a huge touristic potential that is yet to be exploited. It therefore takes only proper adaptation strategies and the enhancement of indigenous knowledge for the huge potentials of the Kom-highlands to be harnessed for a better livelihood and for the sustainability of the mountain ecosystem. The climate and soils remain assets for agricultural development. The cultural diversity and the indigenous knowledge of the inhabitants are great assets for economic development which have not yet been fully exploited for the betterment of livelihoods. Valorising the rich physical and economic potentials of this study area through sustainable exploitation and improving on living standards and lifestyles is what this paper strongly recommends to the stakeholders of development in this area and in areas with similar characteristics and potentials for development.

Key words: *Development Potentials, Valorization, Sustainability, Poverty Alleviation*

1. Introduction

Despite the difficult and inhospitable nature of mountain environments, they remain a home for some hardy populations around the world who have no option than to adapt their activities to such environments. Mountains cover 39 million km², or 27 percent, of the world's land surface (Romeo et al 2020). In 2017, the global mountain population reached nearly 1.1 billion, which is 15

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percent of the world's population, with an increase of 89 million people since 2012. The increase added almost entirely (86 million people) to the mountain population in developing countries, which reached one billion people in 2017 surface (Romeo et al 2020). The population has increased in all the regions of the developing world. However the areas at the highest mountain altitudes (above 3 500 m) continued to experience a depopulation trend in the last 17 years, while at all other elevations population increased. More than 600 million people of the mountain population live in developing countries and 75 percent of them live in rural areas and mainly practice subsistence agriculture. About half of the world's mountain people live in Asia and the Pacific regions. Three other developing regions, namely Latin America and the Caribbean, the Middle East, North Africa, and Sub-Saharan Africa, each have about 100 million mountain people (Huddleston et al. 2003). In all African sub regions, in South America and in Central and Western Asia, the population density is higher in the mountains than in the lowlands. In developing countries, 648 million people (65 percent of the total mountain population) live in rural areas. Half of them – 346 million – were estimated to be vulnerable to food insecurity in 2017. In other words, one in two rural mountain dwellers in developing countries live in areas where the daily availability of calories and protein was estimated to be below the minimum threshold needed for a healthy life (Romeo, et al 2020).

Highlands have ecological significance in that they are sources of water, food, timber and minerals. Mountainous areas also provide many opportunities for recreation and tourism. They are also centres of biological and cultural diversity and religious significance. They are, in fact, representatives of virtually every terrestrial ecosystem, as well as many examples of unique communities in mountainous areas. There are several unique species of plants and animals in the mountains, which are sometimes the last surviving members of species extinct elsewhere.

In addition to more or less complex arrays of distinctive habitats, ecological features reflect comparative isolation for many species, problems of movement or colonization within, into and between mountain massifs and their role as refugia during quaternary climatic changes (Hewitt, K. 1997). Mountains are repositories of biological and cultural diversity and provide vital services with a tangible economic value such as water, power, tourism, minerals, medicinal plants and fibre to mountain communities and even more importantly, to the often heavily populated lowlands (Millennium Ecosystem Assessment ,2005).

The world's mountains are vital regions for all of humanity, providing a wide range of services to their inhabitants, to those living nearby or downstream, and to the hundreds of millions who visit them. The UN General Assembly in 1998 re-emphasized the importance of the world's mountains by declaring the year 2002, the International Year of Mountains. During the June 1992 Earth Summit in Rio de Janeiro the United Nations Conference on Environment and Development (UNCED) adopted "Agenda 21" the blueprint for sustainable development. Chapter 13 of *Agenda 21* focuses on mountain regions and states that:

"Mountain environments are essential to the survival of the global system but many of them are experiencing degradation in terms of accelerated soil erosion, landslides and rapid loss of habitat and genetic diversity. Hence

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proper management of mountain resources and socio economic development deserves immediate attention”.

Valorising the physical and human resources of mountainous landscapes, through the development of these resources for touristic attractions, is not only vital for income generation but provide a base for economic development, growth and employment. According to Simpson, (2008) the importance of sustainable tourism practice in mountain regions will result to social, economic and environmental development (Table 1). The tourism industry generates substantial economic benefits to host countries. In developing countries, one of the primary motivations for a region to promote itself as a tourism destination is the expected economic improvement.

Vlatko, (2014) noted that mountains in developed countries (particularly in Western Europe) are destinations for mass tourism, in which high volume and high output are the norm. For example, in Austria, tourism contributes more than 4 % of the GDP and annual per capita income from tourism is EUR 1731 (2011), more than 75 % of the total sales in tourism is generated by the alpine tourism industry.

Table 1: Positive effects of mountain tourism

Economic		Ecological	Socio Cultural
Direct opportunities	Employment	-Improves environment	Provides and stimulates infrastructure development
-Indirect opportunities	employment	-Encourages awareness and appreciation by the community of natural assets and the environment and other resources on which tourism relies	increases safety and security
-Supports the development of multi-sector or mono-sector non-profit enterprises		-Enhances management and stewardship of natural resources	-Fosters civic pride
-Provides invigoration and development to local economies			-Facilitates workforce development
-Provides alternatives to changing or fading traditional industries			-Mutually beneficial
-Increases land values, thus rates payable to council for community services			-Creates opportunities
			-Promotes cultural understanding
			-Supports and preserve local and unique crafts and skills
			- Creates a sense of well-being
			-Promotes greater cross-institutional understanding
			-Appreciation of cross-stakeholder goals and agendas

Source: Simpson, 2008

Tourism can generate positive impacts as it can serve as a supportive force for peace, foster pride in cultural traditions and help avoid urban relocation by creating local jobs.

Tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance. The role sustainable eco-tourism can play in the socio- economic development of the

Kom highland as an alternative form of adaptation that reduces over reliance on agriculture and a source of livelihood is examined in this study.

In every mountain region, there is potential for high-quality, high-value products to increase the incomes and improve the livelihoods of mountain farmers and to be a motor for local development. The globalization of markets offers important new opportunities for the producers of such products as coffee, cocoa, honey, herbs, spices and handicrafts, at the national, regional and

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international levels. This study will therefore identify the mountain resource potential and examine how their exploitation and commercialization can improve on livelihoods and living standards.

The Kom-highlands though mountainous are a haven of potentials for development. The physical landscape of the study area is in itself a huge touristic potential that is yet to be exploited. The climate and soils remain assets for agricultural development. The cultural diversity and the indigenous knowledge of the inhabitants are great assets for economic development which have not yet been fully exploited for the betterment of livelihoods. The extent to which the physical and economic potentials of the Kom-highlands have been exploited to serve as a springboard for socio-economic development and poverty alleviation is an issue of great concern. This is evidenced by the fact that many inhabitants of the study area continue to live in abject poverty, massive rural exodus, declining agricultural productivity and a continuous increase in environmental degradation. This is characterised by a loss of biodiversity, climate change, excessive deforestation all of which can be linked to the unsustainable exploitation of the mountain resources.

The deep gorge-like valleys record population densities of over 350 inhabitants/km² while most of the region accommodate about 80 inhabitants per km² (Fogwe, & Tchotsoua, 2010). Such high densities are largely responsible for the high rates of environmental degradation because the inhabitants are involved in vegetal degrading economic activities such as logging for handicraft activities, carving, and fuel wood, hunting, and overgrazing.

2. The Study Area, Material and Methods

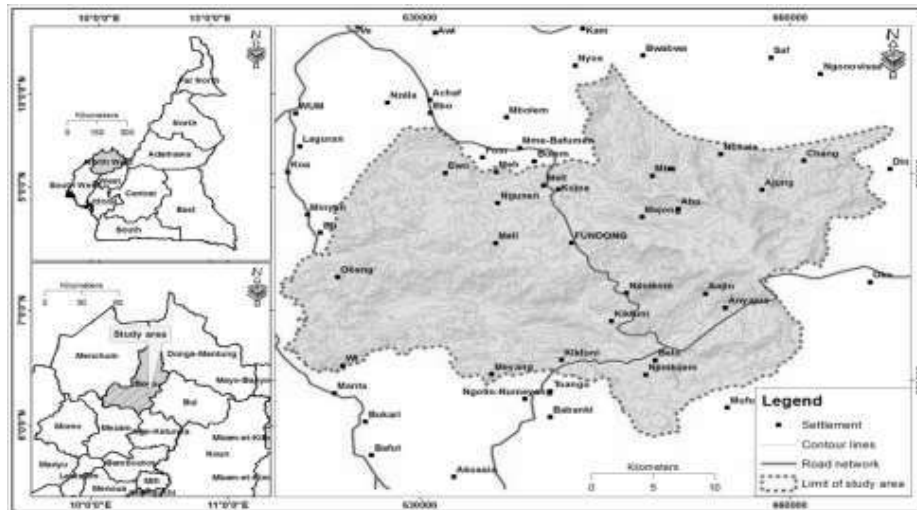
The Kom highland is a continuation of the Bamenda highlands which forms part of the western highlands of Cameroon. The Kom-highlands are a cluster of mountainous blocks whose topography is a succession of deep valleys and volcanic peaks. The terrain is deeply dissected by a dense network of streams, which follow the dendritic pattern. The study area constitutes a unique geomorphic unit where the dissected relief, and slope gradients combine with the seasonal torrential rainfall (2200 to 3000 mm) to trigger rapid geomorphic changes (Fogwe, & Tchotsoua, 2010). In several ways, the topographic configuration of the Kom-highlands appears to influence the pace of socio-economic development. The cultural landscape is dominated by small parcels of subsistent farms on steep slopes.

Administratively, it consists of three of the four Sub-Divisions that make up Boyo Division (Belo, Njinikom and Fundong). The study area is limited to three of the four subdivisions that make up Boyo Division (Belo, Njinikom and Fundong Sub-Divisions). The study covers the three Subdivisions of Boyo which span over an area of 1,592km². The ethnographic characteristic of the study population was considered in delimiting the study area. The Kom-highlands lie between latitudes 6° 7'6° 24' N and longitudes 10° 41'10° 31' E. It shares territorial limits with Menchum and Bum Sub-Divisions to the West and North West, Noni Sub-Division to the North East and Tubah Sub-Division to the South West (figure 1). The highland has a total surface area of 1,592 km² with an estimated population density of 67.2 inhabitants/km² unevenly distributed across the entire surface area (BUCREP, 2010).

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Figure 1: Location of the Study Area



Source: Tosam, H, 2019

3. Primary Sources of Data

Data on the development potentials of the study area was gathered primarily through field observation. A structured observation guide was used to identify the physical development potentials of the study area. This observation phase was accompanied by the taking of GPS co-ordinates for specific resource potentials and relevant pictures so as to provide clarity to data collected from other primary sources like questionnaires, interviews and focus group discussion. The elements of the physical environment such as the relief, drainage, soil types slope gradients were observed and correlated with secondary data that had earlier been established on such aspects by previous studies.

Interviews were used to capture data that could not be gathered by way of observation and or questionnaires. This involved information with a technical and professional character that could be provided only by specialized institutions or organizations. In this connection major stakeholders like the administrative authorities, Divisional Delegates of environment, Forestry and nature protection mayors, NGOs and community leaders were interviewed in order to obtain first-hand information on how the resource potentials of the study area are exploited and valorised.

4. Secondary Sources

Secondary data was collected through the consultation of the council development reports in the three municipalities of the Kom highlands (Belo, Njinikom and Fundong Council reports). The internet, books, journals and articles were also consulted and compared with field evidence.

A triangulation process was followed in analysing the data by combining qualitative and quantitative approaches in the analysis and interpretation of results as well as three different statistical packages. Data was entered using Epi Data Version 3.1 (EpiData Association, Odense Denmark, 2008) and analysed using the Statistical Package for the Social Sciences (SPSS) Standard

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version, Release 17.0 (SPSS Inc. 2008). The analysed dated was presented using cartographic and statistical techniques.

5. Findings

The Kom-highlands though mountainous are a haven of potentials for development some of these resources have been exploited for socio economic development .The climate and soils remain assets for agricultural development (Table2). The cultural diversity and the indigenous knowledge of the inhabitants are great assets for economic development which have not yet been fully exploited for the betterment of livelihoods.

Table 2: the physical and human development potentials of the Kom highlands and options for Valorization

Feature	Assets	Potentials	Options Valorization
Climate	-Cold tropical climate	-Has a cold tropical climate with 2 distinct seasons: dry and rainy season and existence of micro-climates in some areas.	This cold tropical climate have been exploited for the development of agro industrial plantations such as the Ndawara Tea Estate
Relief	-Topography range of 1e 40-70 % slope with undulating hills and deep valleys	Varied Geomorphological and scape characterized by (steep hills, plateaus, and deep valleys, escarpment Rolling hills Deep and narrow valleys, Ridges, Volcanic cones, caves).These features provide attractive scenery	Represents an attractive touristic scenery
Soils	-Varied soil types: Dark soils, Volcanic soils -Vast and unexploited land -Varied agro ecological zones for varied types of agriculture and livestock farming	-Availability of granitic and basaltic parent rocks often used for construction. -Availability of fertile volcanic and alluvial soils for farming	Peasant farmers taken advantage of these soils for the cultivation of Irish potatoes, beans, sweet potatoes which are suitable in mountainous areas especially in areas like Anyajua, Anjin and Tumuku
	-Waterfalls (e.g Mbingo water falls -Lakes (e.g Mbi crater -Rivers(e.g Mughom Mufua and Mejang)	-Many streams and rivers on hill sides facilitate water supply by gravity to the population	Serve as major sources of water for agriculture, the rivers provide water for irrigation during the dry seasons
Vegetation	Montane and gallery forests E.g Ijim mountain forest gallery forests at Djichami Varied savanna grassland	-The montane forest is a biodiversity reserve. -Provides non timber resources like: fruits, medicinal plants and fuel	The savanna grassland provide pastures for livestock pastoral nomadism
Protected areas	Plant and animal life sanctuary Ijim, Mbi Crater Game Reserve, Community forest reserves	Diverse protected areas; plant/animal life sanctuaries, game and forest reserves Rich wildlife species of: Birds and animals, Medicinal plants sanctuaries	The remain an essential touristic attraction

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Human potentials	-Dynamic population, -Rich culture characterized by varied ethnic groups -varied dressing styles -Varied dancing styles -Varied cultural dishes	Hospitable and welcoming population	The youthful population can provides, the needed labour for agriculture and industrial development
Infrastructure	Snakelike road pattern Varied house types	Very attractive to visiting tourists	Represent a touristic attraction

Source: field work 2019

5.1. Physical Potentials for Development

The study area is characterized by a diversity of physical features from low to high altitudes. Topographically the relief is characterized by hills, plains, valleys and escarpments. The water features include: rivers water fall, lakes, streams and marshes. The landscape of the Kom-highlands is part of the Western Highlands of Cameroon characterized by an undulating landscape marked by rolling hills and mountain outcrops, horsts, grabens, interlocking spurs and ridges. The entire landscapes portray spectacular beautiful scenery marked by picturesque peaks, rock pillars, deep narrow valleys and plains. The relief features are oriented from West, generally low-lying towards the East dominantly highlands that culminate in the Ijim Mountains (3011m) and the Ndawara plateau 2700m.

Although the Ndawara highlands have been exploited for the agro-industrial plantations and pastoral nomadism, the entire kom highlands presents a beautiful picturesque landscape that can be harnessed for tourism an activity, that can generates thousands of jobs and increase incomes and alleviate poverty. Unfortunately, over, 75% of the mountainous landscape of the study area remains unexploited due the low level of technology of the peasant inhabitants to exploit the landscape for tourism.

The Liakom ridge and it extends down to the valleys of Yang. To the East and North East highlands dominate starting from the Mbingo hills and escarpments through the Boyo hills, Laikom ridge and the Ndawara plateau where the average height is about 2900m. These topographical features do not only represent a great asset for touristic development but the landscape is at the same time a huge agro-pastoral reserve yet to be exploited given that the volcanic cones which dominate this area are characterized by volcanic soils which require only proper exploitation methods for this area to become the “breadbasket” of the Western Highlands. Some of the physical touristic potentials of the Kom-highlands are summarized in (Figure 2)

Figure 2: The Attractive Topographic Scenery of the Kom Highlands



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C: The Mbingo ridge

D: Volcanic cones of Yang



F: Mbingo waterfall

E: Mbingo-Belo undulating landscape

Source: Field work, 2019

The Kom-highlands is captivating for its contrasting and picturesque scenery. It has a variety of relief features which range from fascinating plains such as those of Mbueni, Mbonkissu and Baicham to the hilly, undulating and mountainous landscapes, which are interspersed with deep valleys, gorges and extensive escarpments that develop into water fall where they are crossed by rivers. From the West to the East is a panorama of a real magnificent beauty with the Mbingo hills, the Ndawara plateau, the Boyo, Laikom and the Ijim mountains presenting real imposing structures. These physical touristic potentials have been summarized based on their locations in the various sub divisions that make up the Kom-highlands.

Nine caves were identified in the study area and these caves are found on the Ijim escarpment which overlooks Belo, Njinikom, and Fundong. The caves stretch from Mbingo through Baingo, Djichami, Anyajua, Anjin, Njinikom, Yang, Laikom, Ajung and Mbessa. These rocky caves vary in size, shape, length and the activities carried out in them. The Abuh cave is a very important cave in the Kom-highlands. This cave is found on the slope that separates the Ijim High Plateau and the valleys of Muteff. Its entrance is found in Abuh and indigenes say that its terminal is found at Anyajua, some 22km from Abuh.

Oral history holds that nobody has ever moved through the cave from Abuh to Anyajua. The inner part of the cave is step like and it has features like stalactites and stalagmites. It is divided into two parts from the entrance. The left side is the female and the right side is the male. Bats are hunted in this cave during the month of August each year and during hunting, hunters are advised not to go to the female side because it is muddy and stony. This part of the cave is also regarded as the part that has female bats for regeneration. Bat hunting is an interesting touristic activity sometimes carried out by the inhabitants in the neighbourhood of these caves.

5.2. Hydrological Potentials

The Ijim and the Ndawara mountains serve as the major water towers of the Kom highlands. Most of the rivers in the study area take their rise from these highlands and flow in different directions forming a radial pattern. As the rivers flow downstream some of them meet each other to form a dendritic pattern. Some of these rivers also meet downstream to form bigger rivers such as JuanGwah meeting with River Atoyne in Mbenkas to form a tributary of the Menchum and the Katsina Ala. From the South East to the North West the rivers form tributaries of the Kimbi and Nsuka rivers. Some few rivers flow to the South East direction to form the upper course of the Noun towards Ndop Plains. Some of these rivers particularly at their lower courses bring along alluvial soils which enhance the cultivation of crops like vegetables, maize and rice. However, the inhabitants are unable to take advantage of the alluvial soils brought by these rivers to increase agricultural productivity because they are limited by inadequate capital to purchase farm inputs.

However, some of the rivers such as the “Nkoyne River” is sometimes harnessed for irrigation particularly now that climate change have negatively affected agricultural productivity but with the current level of technology and given the topographic realities of the terrain the inhabitants are unable to exploit these water resources to boost agricultural productivity. In another dimension, the waterfalls could serve as energy sources for the generation of electricity given that less than 30% of the populations have access to electricity.

The Kom-highlands being a high energy environment offers possibility for the generation hydro-electrical energy. The hydro-hydrological potentials of the area however remain idle and the inhabitants depend on bush lamps for light at night while electricity belong to the privileged few particularly those in semi urban community like in Belo, Njinikom, Fundong. Away from hydroelectricity other sources of energy like solar energy provided free by nature require only good will on the part of the government to make it accessible to the millions of Cameroonians who continue to regard this basic necessity as a luxury given their low incomes and high levels of poverty.

The rivers in the Kom-highlands are fast flowing in their upper courses and their winding nature along slopes and associated features such as rapids cataracts waterfalls and flood plains on the Western lowlands are touristic assets. The surrounding mountains enhance the visual value of the valleys to the visiting tourist. The rivers are potential fishing grounds especially rivers like: Mughum, Mih, Tuanchang, Nkoyne, Atoyne, Ngwah, Bolem, Achain, Mentang, Kimbi and Munghong. These rivers are also characterized by rapids and cataracts for instance, the Mbingo rapids, the Mughongong waterfall in Belo, Bechew waterfall on river Thchangchang in Njinikom, Afua fall, the Chumni fall on river Juafeff in Fundong and Isaibo fall in Aduk.

In the rainy season, floods occur along major river valleys and deposit alluvial materials that form fertile alluvial soils. This is common in the Kimbi valley in Bum, the Mughom in Mbueni and Mbenkas the Nkoyne in Baiso, Atoyne in Mbonkisu. These areas form extensive agricultural lands that also witness the cultivation of many different types of crops like oil palms, rice, cocoa, plums, plantains, beans, yams, and oranges which are not common on the upper slopes of the Ijim Mountain. Swamps, ponds and lakes are also a characteristic feature of the study area. The lakes are few especially the two that

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lie astride the boundary between Boyo and Menchum Divisions the twin lake Nyos, lake Oku the lake and Lake Mbi on the Ndawara plateau. All the three lakes are crater lakes found on the plateau or hill slopes. Although these are excellent touristic attractions, visits to these sites are sometimes affected only by students on excursions. This means that the economic gains that would have been derived from these natural features through tourism remains an issue of great concern and a challenge to policy makers in this area to accelerate the valorisation of these resources.

Lake Oku is found on an elevation of 2219m above sea level to the east of the Ijim Massif. This area is spectacularly beautiful though local guides advise visitors that the lake is sacred. Lake Mbi found on the Ndawara plateau is under serious human threats and water is found in the lake only during peak of the rainy season. The cave and the forest reserve around the lake have rare species of plants and animals. Lake Oku and Mbi are all surrounded by forest reserves.

5.3. Forest and Wildlife Potentials

The Kom- highlands have many protected areas with a high biodiversity. There are several rare species of plants and animals in the forest like crocodiles, monkeys, a multitude of birds, snakes amongst others. The Kilum- Ijim Mountain, Mbi highland Kom-Wum and Kimbi lowland forest reserves are game reserves.

The Kilum Mountain Range and the Ijim Ridge are in the part of the Western Highlands of Cameroon commonly referred to as the Bamenda Highlands. The Kilum Range (also known as Mount Oku) is situated in Bui Administrative Division in the North West Province. The Ijim Ridge stretches North West from Mount Oku, starting from Lake Oku to Kom in Boyo Division. The contiguous Kilum and Ijim Mountain Forests (now known as the Kilum-Ijim Forest) are located between latitude 6°07'N and 6°17'N and Longitude 10°20'E and 10°35' E '. The forest and wildlife resources remains a source of livelihoods in the Kom highlands as the inhabitants depend on the forest as a source of fuel wood, medicinal plants, animal proteins, vegetables and wood for house construction and for the making of household furniture.

5.4. Agro-Ecological Zones

The Kom-highlands experience a climate characterized by two distinguished seasons of varying lengths. These are a long rainy season that runs from about mid-March to about mid-November and a dry season occupying the rest of the months of the year. The heart of the dry season is experienced around February whereas the heaviest rains occur between August and September. The average annual temperatures in low altitude areas like Mbueni, Baicham, Mbonkissi are about 26°C but as one increases from the low altitude through the mid and to the high altitude zone of the study area such as in the Ndawara plateau and Ijim mountain forest regions averages annual temperatures drops progressively to about 18°C. Such variations introduced by climatic variables particularly temperature and rainfall permits that the area to be segmented into agro ecological zones (Table 3). In the low altitude areas characterized by high rainfall and higher temperatures a wide variety of crops such as: rice, maize, beans, cocoa, oil palm are grown.

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Table 3: Agro ecological zones in the Kom-highlands

Agro Ecological Zone	Locality	No of questionnaires	Returned	Sub-Division	%
<900m(Low Altitude)	Baicham	47	36	Belo	76.5
	Mbueni	47	41	Njinikom	87.2
	Mbonkissu	47	37	Fundong	82.9
901-1500(Mid Altitude)	Belo	47	44	Belo	93.6
	Njinikom	47	40	Njinikom	85.1
	Fundong	47	41	Fundong	87.2
>1500(High Altitude)	Tumuku	47	39	Belo	82.9
	Muloin	47	44	Njinikom	93
	Abuh	47	42	Fundong	89
Total		423	364		86.05

Tosam, H 2019

The low altitude ecological zones include the plains of Baicham, Mbueni Mbonkissu and Mbenkas with heights ranging from 300 to 900 metres. These areas make up about 28% the total surface area, the mid altitude ecological zone covers the localities of Belo, Njinikom, and Fundong with heights ranging between 901 to 1500metres and constituting about 58% surface and the high altitude ecological zone include areas like Tumuku, Muloin and Abuh with heights above1500 metres constituting about 13% the land surface. The low agro-ecological zones also permit large scale agricultural mechanization but currently farming activities in these area remain in the hands of small holder who cultivate crops mainly for subsistence given that they are limited by the absence of capital and appropriate technology.

The climate and soil potentials of the study area are either poorly exploited or under exploited. For instance the cold mountain climate is favourable for the cultivation of highland crops such as tea, Irish potatoes, and beans to name just these few. The Ndawara highlands tea plantation one of the largest in West Africa, that provides over 100,000jobs to young Cameroonians and contribute greatly to the country's Gross Domestic Product, is just one example to prove that if appropriate adaptation practices are implemented in the study area, the apparently "harsh topographic landscape" which for now can be considered as a "curse" can be transformed into a "blessing" similar to the economic transformation that have taken place in other highland countries of the world such as Switzerland. The Ndawara initiative could be extended to the other parts of the Kom-highlands given that vast expanses of land have either been allowed only for cattle grazing or are simply considered as marginal land.

Cash farming such as the tea plantation; require enormous inputs in terms of capital which is far beyond the capacity of the local inhabitants to provide. However, crops like beans Irish potatoes which are adapted to cold climates and acidic soils could be cultivated on a large scale through joint ventures by small farming groups. Although data from secondary sources show that several farming groups have been form, the lack of proper coordination and mismanagement have not permitted such farming groups to achieve their target objective of food security and poverty alleviation.

5.5. Human Potentials for Development

The Kom-highlands are endowed with a huge variety of human potentials that range from diverse agricultural landscapes to a cultural diversity and indigenous knowledge that can be exploited for a better livelihood and

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improved living standards. Apart from the physical touristic potential already discussed, the Kom highland is richly blessed with a cultural diversity that is exhibited through culture and works of arts. These human touristic potentials are described as follows:

5.6.1 Works of arts and culture

The people are involved in some small craftworks. This concerns woodwork for carved stools, drums, masks, pedestal wine bowls, palm oil containers, door posts and wooden pillar masks, statues and walking sticks. The masks are made for masquerades and other decorations like in churches, doors and stools. Weaved materials include baskets, mats, bags, local dishes called 'kel' used to put corn fufu.

Wood carving and weaving in the area has produced some of the most remarkable pieces of art in the Bamenda highlands. Masquerades of the area are made of wood, feathers and fibres and they display widely in traditional ceremonies. Most of these products are found in the local markets and the rest are made only on command or found in the houses of the craftsmen. The promotion of these works of arts through the ministry of culture would not only be a boost to the tourism sector but could serve as an alternative source of income to the mountain population who heavily rely on agriculture for a livelihood.

The traditional dresses in Kom-highlands are the embroidered material made in especially white on black or with some other colours. This type is common in the rest of the North West Region. It is popularly called the *Bikom* style. Others use the embroidered gowns or jumpers. Also very common is the typical wrapper and blouse that girls and women wear. The different dresses and dressing styles can attract a good number of tourists.

The study area is also blessed with very beautiful traditional dances and ritual practices which are executed in men, women and youth groups. Traditional grassland rhythms characterise the music of the people. Every part of the Division has a particular folklore, music and dance. Masquerades of the area are made of wood, feathers and fibres. There are many dance groups like the *munang*, *akum-a-ngvifuboh*, *atinguee*, *nkoh*, *nekang*, *chong*, *njong-kom*, *fubwein*, *fubang*, *famous ndong-ibolem*, *beng* and *mbzik-beng*, *awohmbzi* and *nantangamongst* others dominated by masked people dancing in very attractive styles in their picturesque costumes as seen in the plate

The popular rhythm of the "*njang*" dance is very common and appreciated in the area as well as in other parts of the North West Region. The *njang* dance has animated cultural festivals at home and abroad. The "*ndong*" dance, "*fubwein*" "*fubang*", the "*chong*" dance and "*njong —kom*" (the army of the Kom Palace) and other special dance groups are enjoyed by the people and are good potentials for tourism events.

Before the advent of the current Anglophone crisis, annual traditional ceremonies, to showcase the rich cultural heritage were organised by the Kom people nationwide under an umbrella association all called Kom Cultural and Development Association (KOMCUDA). Such events were not only vital for the Kom sons and daughters to come together and promote the development of their home land but provided an opportunity to expose the rich cultural heritage to the rest of the world and attract tourists from and out of Cameroon,

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Musical instruments such as drums, xylophones, flutes and rattles of various kinds are used to produce the melody in the different dance groups. The Fulanis (Bororos and Hausas) are a whole region of fantasia which is marked by decorated horsemen in painted costumes, carrying with them drums and trumpets for their “*mulimbele*” dance. They are also noted for their pastoral life and rounded grass huts which can be highly attractive to the tourists.

They are also cultural festivals in the Kom-highlands which can be attractive to the tourists. Some of them have fixed periods that they come up. This can act like a rendezvous to the tourists. Others come up at random and this makes the tourist to always come back.

The staple food of the Kom people is corn fufu, “*katikati*” (roasted chicken prepared in red oil) with huckleberry. This food is greatly enjoyed by the people. A guest knows he/she is well treated if large lumps of this foodstuff are served to him. Pounded colocasia with various soups and a small variety of other meals are introduced with the cultivation of cassava, potatoes, yams, bananas, plantains, groundnuts and beans.

Again, the tarring of the Bambui-Fundong road has facilitated the introduction of other food stuffs like water fufu and rice which have increased the menu for the tourists in the study area. A special meal and drink made from guinea corn is also a delicacy used for ceremonies. This shows the diversity in food crop production and consumption in the Kom-highlands. It allows a tourist to choose the type of meal to consume when he/she comes to the area.

Traditional housing is made up of the typical mud walls and thatched roof. The difference lies with the Fulanis who have their traditional rounded huts made with grass. Today, these traditional houses are gradually replaced by modern houses. These traditional housing styles form part of the eco-tourism resources of the study area. A few of these traditional houses still exist in Afua, Ngvinabum, Konene, Ajung, Anyajua, Mbueni, Meijang, Mbongkisu and Bwabwa. A tourist may pass a night in one of these houses to observe the real Kom, Bum and the Fulani ways of life.

5.6.2. Bee Farming as a potential source of livelihood: Valorisation options

Given the topographic realities of the landscape fish and bee farming are potentially the most productive activities that could be undertaken by the inhabitants. Unfortunately, these forms of agriculture have been neglected or are practiced only for subsistence. The low and inappropriate technologies currently used by the inhabitants for farming can barely provide them with a means of survival.

Furthermore, poultry farming and market gardening are potentially new horizons that could be exploited to generate income yet the inhabitants devote much of their energy for the cultivation of food crops like maize, beans, and yams on steep and hilly slopes. The topographic configuration of hill slope farming in the Kom-highlands work against productivity given the high rate of soil erosion and nutrient loss facilitated by gravity and inadequate fertilizer inputs.

The economic organization of the Kom-highlands is basically set on agriculture. This is confirmed by the large proportion of the population mainly depending on it for every other developmental pursuit. The agricultural set up

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is predominantly traditional and operated in small and dispersed holdings of about 0.5 hectares per farming family (MINPAT 1999). It depends very much on rudimentary tools with its principal motives being subsistence for a majority of the farmers although the tendency towards commercial motives has been gaining grounds of late.

Crop cultivation cohabits with animal rearing although in an uneasy relationship that has often resulted in heated conflicts between cultivators and graziers, especially in the face of dwindling arable as well as grazing land under the influence of increasing pressure on land from increasing farming and grazing populations. Apart from operating in smallholdings, agro-industrial activities also operate on (Ndawara plateau) for the cultivation and processing of tea.

Traditional bee farming has been in operation for a considerable number of years now and is gaining grounds among farmers who see in it a potential source of family income amelioration. The agricultural sector in the study area in general is gradually being diversified in terms of techniques, species, motivations and farm labour distribution.

6. Conclusion

It is evident that though the study area is characterized by a difficult terrain it is however richly blessed with resource potentials that require appropriate exploitation techniques and adequate technology in order to improve on livelihoods and the living standards of the entire population of the study area. Rather than rely too much on crop cultivation on the hilly slopes which is most often a cause of slope destabilisation, that frequently result to soil erosion landslides and other forms of mass movement, it is preferable to engage in activities like bee farming, fish farming, and poultry farming which have a lesser impact on the fragile ecological mountain ecosystem. Developing eco-tourism to involve indigenous environmental conservation strategies such as the preservation of shrines, agro forestry, will go a long way to conserve the ecosystem threatened by the rapid population increase.

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