

Agro-ecological evidence of climate change in the Lebialem Highlands of Cameroon

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“In the beginning, as the story is told, God was making his final touches to the creation of the world when he arrived tired and weary to Nsoko, a Bangwa village just over the river that separates the Bayang and Bangwa countries. By this time, it was getting dark. He asked the people for a lamp, so he might see what he was doing. Somewhat wary of a stranger in the night who wanted to borrow their possessions, they refused. God’s tired labours in the darkness, spiced perhaps with a hint of revenge, resulted in a landscape that looks hastily made, magnificently uneven and difficult to inhabit¹.”

There is hardly any region in the world where there is no fret about environmental changes, especially the issue of climate change. The Lebialem highlands have experienced a fair bit of environmental changes. What is distressing is that these changes could be attributed to climatic changes and they have a vital impact on rural livelihoods. For a community with very little to fall back on in the event of a drought, there is need for concern as well as to make an appeal for more local actions following large global talks.

Located in the north-eastern part of the South West province in Cameroon, Lebialem is composed of Nweh (Bangwa) and Mundani clans and is a hilly region that covers a surface of about 617 km² with an estimated 144,560 inhabitants. Lebialem is one of six administrative divisions in the South West Province. It is made up of three subdivisions: Alou, Menji and Wabane. The Lebialem highlands rise to about 8,000 sq. feet forming part of the Banboutous highlands in Western Cameroon. The area is inhabited by the Bangwa, Mock and Mundani peoples who have a rich and unique culture, which is a result of their highland savannah and lowland forest environment. This alternating landscape fascinated early European explorers. It was described by Gustav Conrau, a German trader and colonial plantation labour recruiting agent in 1898, to be “an awe-inspiring mountain scenery with its accompanying steep, sometimes perilous paths, crossed by rushing torrents even in the dry season; high tumbling waterfalls with isolated compounds behind plantain groves and hedges”². In this small geographic region that is inhabited by several ethnic groups with only a few hours of climbing you will suddenly find a change in altitude, accompanied by a complete change in topography, ecological and climate change³. The climatic condition varies from a moist and warm lowland forest to a cold, open country highland.

Agro-ecology of the Lebialem highlands

Due to the fact that climate and ecology vary from lowland forest to grassy highland, agricultural changes are visible in the different crops grown in these regions. Earlier accounts, such as those from Robert Brain in the 1960s or even oral accounts from the plus fifty year old generations are interesting portrayals of vast changes, not only in the society, but also in the environment. Agriculture is the central element in the socio-economic life of the Lebialem people and each region complements the other. While the lowlands produce cocoa as the main export crop and other forest goods - such as palm oil, dried fish and bush meat - the highlands main export crop produced is coffee and other products like groundnuts, maize, potatoes and

raffia palm wine. Other permanent crops - none of which are of special commercial interest - are kola, avocado pears, plums, Indian bamboo, the date palms and raffia palms.

Two seasons determine farming activities: the wet season from April to November - December with maximum rainfalls in September and October; followed by a short dry season from December to April, which is never completely rain free³. Maximum rainfalls in the region - noted as little above 900 mm - were recorded in August 1982 falling to slightly above 500 mm in August 1992¹. In the highlands, lesser dense forests have been cleared for intensive agriculture and some areas of grassland provide grazing land for cattle and horses. Often farms were cultivated from three to four years and then left to revert to bush for up to ten years³. However, with population growth and increasing emphasises on the economic importance of agriculture, crop rotation was established, which also helps alleviate the poor soil condition, particularly in the upper region.

It is impossible to discuss agriculture in the Lebialem region without mentioning the staple crop, cocoyam. Until a few years ago, this remained the main staple meal of the region. Yet, there has been wide spread complaint of the decline and, in some areas, complete disappearance of this crop. The decline in cocoyam production has been gradually replaced by cassava cultivation. Cassava, which was actually near to non-existent as recently back as the 1970s, was hardly consumed by the Labiallem people. People recall that early traders brought cassava products, especially 'garri' (cassava flour) to Lebialem from the Bayang country (neighbours to the west). Vincent Lockhar, a Catholic priest in the area from 1982 to 1993, notes in his writing that cassava cultivation took place along side that of the cocoyam¹. This means that a few decades were required for a dramatic agro-ecological change to take place.

The cassava is generally associated with poor farmers who live in marginal areas that have adverse climatic and soil conditions. The crop has an exceptional tolerance to drought and to acid, infertile soils. Therefore, cassava is often grown on sloping land, which is a result of its minimal requirement for land preparation and its ability to produce reasonably good yields on eroded and degraded soils, where other crops would fail⁴. It is easy to visualize the changes that have taken place here in the last few decades. With other crops failing and the savannah land encroaching into what was originally a rain forest land, there has been a significant shift from the water loving cocoyam plants to the highly resilient cassava.

Some other significant changes have been noticed in the Lebialem region. Towards the beginning of the dry season, the women form parties to hunt for tadpoles and frogs, because there are no fish in most Bangwa rivers¹. However, in recent years tadpoles and frogs - which have remained a delicacy - are increasingly difficult to find. Perhaps these occurrences are due to the fact that the rivers and larger streams have become warmer and have an increased amount of fish; an area they never inhabited before. Undulating landscape of the highlands was once crossed by rushing torrents even in the dry season. Now this is an occurrence that can only be rarely witnessed and several of these rushing streams are simply non existent. Due to climate change and human activities, the rivers Bechuo, Bejie, Efrue, Begeu, Ntchembe along with other upland streams have lost much of their water and vitality. Moreover, in the lowlands many fast flowing streams once required cane bridges, yet today it is safe cross these even during the raining season, which is previously when water levels were frightful and prohibitive.

On a positive note some lowland areas in Essoh - Attah and Lebang chiefdoms - in the past too cold for cocoa pods to ripen - are now warm enough to enjoy the benefits of cocoa trade. Also in the region as a whole there has been a noticeable increase in palm oil, with noticeable increase in beans, carrots and garlic cultivation in the highlands of the Alou and Wabane areas. Additionally, there has been an increase in the production of potatoes, beans and cabbage in the Mock highland regions although there is an increasing need for irrigation in order to cope with the fast recession of water in what were once highland farming communities, such as Mock Ngie and Mock Letegh.

Fortunately, the difficult terrain of the Lebialem highlands has meant that the forest can not be exploited rapidly due to the fact that in some places it has remains inaccessible. The tradition of chiefs owning sacred forests, called 'lefem', means that even in high grounds - where most forests were replaced by farms - patches of intact forests still remain containing the region's original biodiversity. Hunting and bush fires have pushed back most primates, elephants and other animals that were common some fifty years ago. However, people still report sightings of these animals or have evidence of them causing crop destruction in farmlands near large forest tracts, such as the Mark forest. Changes are obviously occurring and the changes of climatic conditions most probably play a huge role. The main concern and Lebialem people's prayer is that these changes will not cause the entire system to a permanent drought stricken area. In a predominantly low-income population having a high dependence on agriculture there are very few safety nets for people to resort to. Often, in the area, changes have resulted in high emigration trends. Most families, therefore, currently rely highly on remittance from families who have moved to more agriculturally favourable areas, such as large Lebialem communities based in the fertile volcanic regions of Muea, Muyuka, Muyenge, Mbanga and Kumba.

References:

¹ Lockhart V, 1994. "A Social-Historical Study of Social Change among the Bangwa of Cameroon". Centre of African Studies, University of Edinburgh, Occasional Paper No. 52.

² Brain R, 1967. "The Bangwa of West Cameroon a brief account of their history and culture". University College London

³ Ibid

⁴ Howeler R. H, 2002. Cassava mineral Nutrition and Fertilization. Cassava: Biology, Production and Utilization. CAB International.

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