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INNOVATING CLIMATE CHANGE AT THE GRASSROOTS: THE CASE OF BUEA SUB-DIVISION OF CAMEROON

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Abstract: *The natural environmental milieu has always been considered by man as an unlimited reserve of natural resources. This has led to his continuous exploitation of nature for food and other livelihood options, a practice which continues to have an unintended but damaging effect on the environment. The study suggests strategies for integrating community participation in Non-Governmental Organizations (NGOs) and Climate Action in Buea Sub-Division: The experience of the International Centre for Environmental Education and Community Development (ICENECDEV). Findings shows that NGOs concerned with management of environment have failed in their policies and activities with their target communities in environmental conservation making them ineffective in the introduction and follow-up of other income-generating activities. Findings also reveals that Local communities have signed Conservation Development Agreements with Park Service and are now actively collaborating in the protection and management of Parks, at the same time receiving development support in agriculture and infrastructure. Findings also shows that ICENEDEV uses various strategies and mechanisms in managing environmental resources in Buea Sub Division to combat climate change like promoting ecotourism, enhancing self-employment and the introduction of alternative income generating activities. Community members were however generally not very satisfied with these strategies as only 66 (40.0 percent) of them assessed them to be adequate. The local population considered NGOs as important partners as they are generally very receptive towards them 144 (89.4 percent). It is therefore recommended that participation should be taken as a two-way learning process of dialogue, negotiation and decision-making between NGOs and Local Communities concerning activities of environmental/ forest management.*

Key words: Climate *Change, Climate Action,* Livelihood Strategies, Livelihood, *Sustainable Development*, Local Communities

Introduction

Global environmental and climate policies have gained a lot of precedence since the World Commission on Sustainable Development published its report in 1987 on sustainable development: that define sustainable development as “development that meets the need of the present without compromising the ability of the future generations to meet their own needs” (World Council on Sustainable Development 1987). The creation of the Intergovernmental Panel on Climate Change (IPCC) and United Nation Framework Convention on Climate Change (UNFCCC), also brought to the fore environmental and climate related issues to the spotlight and moved the agenda from science to policy making, because the scientific evidence has been presented showing how anthropogenic activities have affected the global climate and future scenarios have made it possible for science and policy makers to look for a way forward to revert climate change (Laukkonen et al. 2009). The effects of climate change continue to affect the different sectors of human civilizations. Even though caused by natural and anthropogenic forces, recent studies have proven that anthropogenic or human factors are largely responsible for recent changes in climate (IPCC 2007). Mitigating the impacts of climate change is very important for the socio-economic development of African countries.

According to UNEP (2009) climate change presents particular risks for developing countries even if average temperatures are stabilised at 2.5 degrees above pre-industrial level and it is further argued that 75–250 million people in Africa would experience water stress as early as 2020 as a consequence of climate change. This present a huge challenge for the African continent given that very little adaptation and mitigations measures are being put in place to combat or reduced the consequences of climate change. The worst of it is, Africa is said to bear greater consequences of climate change. The IPCC Fourth Assessment Report (IPCC 2007) has established the nexus between climate change and anthropogenic activities and the IPCC believes that climate change will have profound effects on the productive base on the economic activities on which developing countries rely as their source of livelihood and income such as agriculture, biodiversity and fishing.

In Cameroon, the main contributor to climate change is due to deforestation and degradation caused by poor agricultural land use for farming, cutting down of forest for both forestry and non-forestry products and urbanisation. This has resulted in exposing the country to climatic impacts and vulnerability to climate variation and change (Amungwa, F. A. 2011). As a result of continued anthropogenic greenhouse gas emissions, “climate change manifests itself on different timescales affecting both short-term extreme weather events, as well as causing gradual, long-term changes, including sea level rise, melting of glaciers and ice sheets, and changes in biodiversity (IPCC, 2018). Given these multiple shocks of climate change on human endeavours, there has been growing global commitment to address the climate problem through climate change mitigation and adaptation measures. Concerns about the welfare of the environment began in the 1960s among international organisations as well as non-governmental organisations Jasanoff (1997). Indeed, NGOs have had more visible relevance in environmental issues given the varied effects of global warming. As highlighted by Jasanoff (1997), NGOs are more recognized as essential contributors to environmental protection globally by the United Nation system. ICENECDEV, is a non-governmental organization in Buea Sub Division Cameroon combating climate change through alternative means like; implementing development projects, involving communities in the production of organic manure and bio fertiliser with women Farmers in collaboration with Earth Rising Foundation USA for small holder women farmers in building capacity on agro ecology and natural farming practices to promote climate change adaptation, sustainable food system and improving the sustainable livelihood of the smallholder women farmers (Celestine Nana, 2012).

ICENECDEV has also been in Partnership with The Ministry of Environment, Nature Protection and Sustainable Development MINEPDED, Government of Cameroon, United Nations Environment and the Global Environment Facility (GEF) and the Stockholm Secretariat in implementing Projects in Cameroon and Stockholm Convention of polychlorinated biphenyls (PCBS) Reduction in Cameroon through the use of local expertise and the development of national capacities. This is to raise awareness among populations

exposed to PCBs on the environmentally sound management of polychlorinated biphenyls (PCBs) (Charles, A., Loucks, L., Berkes, F., Armitage, D. 2020). The rate of deforestation in Cameroon and the Congo Basin has grown significantly because of the lack of capacity to successfully manage the forest and its resources (Lambi, C. 2001). The lack of proper forest management is leading to deforestation and to the emission of greenhouse gases. Climate change effects are more pronounced in developing countries since they are more vulnerable inherent in their geographical location and lower economic status (Pettit 2004). As a result, climate change creates other social problems like poverty, trade, and globalisation leaving developing countries with fewer resources to respond to its effects as its impacts affects human health, development, and economic growth. As time passes with not much done to ameliorate the effects of climate change, it is predicted that worse occurrences on effects of climate change will happen in the future and countries will be affected differently, of which developing countries will still experience worse conditions (Lambi, C. 2001).

Material and Methods

This research is qualitative ethnographic research that made use of qualitative techniques like; in-depth-interviews, observations and the focused group discussion as tools for data collection. It is an activity that attempts to understand another way of life, another culture, whether it be corporate culture or culture of an ethnic group. An ethnographer seeks out ordinary people with ordinary knowledge and builds on their common experience. Such is the purpose of the ethnographic case study. The ethnographic case study provides a deep insight into an individual and his/her work environment, through a series of interviews and field observations. This method of obtaining data is important because it allows for the examination of the phenomenon in depth using various kinds of evidence obtained from interviews with those involved, direct observation of events and analysis of documents and artifacts. In order to obtain information of the research study, both primary and secondary sources of data collection were employed, the convenient sampling technique was used to choose the sampling population and a purposive sampling approach was adopted as the main sampling method for the study. The population of the study is the *Tole, Muea, Dibanda (Mile 15), Bolifamba (Mile 16), Great Soppo* in Buea Sub Division of the Bakweri ethnic groups that stretch from the foot of Mt Fako down to the Mungo River and the creeks that feed into it, and Limbe. In order to facilitate this study and get appropriate results, the study was narrowed down to Bakwerians in Fako Division.

The research is an ethnography that made use of qualitative techniques like; in-depth interviews, observations and the focused group discussion as tools for data collection. The study targets youths, men, women and stake holders of these community only. Data was collected using two (2) methods; primary and secondary. Primary data was gathered from fieldwork through interviews, key informants with the help of a focused group discussion, in-depth interview, and observations of the studied population(s). Secondary sources include, review of documents and books. It should be noted that none of these sources has dominance over the other; they are complementary. The secondary data was extracted from various published and unpublished materials whereby information was gotten from various websites, online publications and online books. Public libraries were also consulted, together with archive centres to get books and publications relevant for this study. The researcher went to the field with instruments like the Camera, a recorder, Paper and pen so as to collect and store information gotten from the field. The researcher organized interviews with various stakeholders of the study (village notables, youths, women and men directly or indirectly involved in the dance). Content analysis was the main technique used in analysing data gotten for this study, as articles, books and other relevant materials were reviewed profoundly to get relevant findings for the work. Data analysis was based on the research questions and objectives of the work. Research was strictly qualitative in nature; hence the researcher made use of research techniques likes observation, focused group discussions and interviews. To facilitate the interviews and discussions, the researcher went to the field with a series of questions to guide discussions on the field. Data gotten from there was recorded and brought back for analysis. The ethnographic data was transcribed through a process called ethnographic transcription. Data was made essentially of categorical variables and were

analysed using frequency and proportions and Multiple Responses Analysis for the grounding of concepts that emerged from open-ended questions. Data was presented using frequency table, charts and conceptual diagram. All statistics was presented at the 95 percent Confidence Level (CL), Alpha=0.05.

Results and Discussion

Results of the study reveal that, amongst the 165 respondents sampled who use the forest resources or products for livelihood, 43.0 percent earn less than 30000FCFA, 40.6 percent 30000-100000 FCFA and only 16.4 percent earn above 100000 FCFA. The income is relatively low and indicates the poverty level of the respondents. A few factors account for this situation. German colonial rule expropriated vast lands from the Bakeries for plantation agriculture. The fertile, volcanic soils around Mt. Cameroon proved suitable for large scale plantation agriculture, especially for crops like banana, rubber, tea, coffee, cocoa and palms. More than 100,000ha of Bakweri land were thus expropriated. In 1964 these lands were leased by the British Trust Authority to the then newly-created CDC. This act led to the loss of the Bakweri ancestral lands (Ardener, 1996). Bakweri chiefs felt betrayed and even angered as they were totally ignored in the deal. The original occupants of the lands (the Bakweris), were expelled and sent to restrictive native reserves as German companies rushed to the area in a bid to get the best tracts of land (Konings, 1993). In protest, the Bakweris showed little enthusiasm in working on the plantations; at least not for menial jobs as semi-slave labourers in the plantations, and on their native land which was seized. They saw it as double exploitation by the Germans (Konings, 2001). Reasons why the people turned to the forest for livelihood.

Findings equally revealed that malaria 61.2 percent is the major health problem faced by the communities. However, ill health is linked to poverty and environmental degradation. The absence of reliable and affordable healthcare has caused a high proportion of the population especially members of the local community to rely on medicinal plants. Population pressure on a fragile resource base for medicinal purposes like *Prunus African* in the forest area in Buea Sub-division has paved the way for environmental degradation. The continued reliance of the local populations on traditional medicines is partly attributable to the economic situation of the populations which places modern health facilities, services and pharmaceuticals out of the reach of the majority of the local population. Medicinal plants are of critical importance especially in poor communities where even relatively cheap western medicines remain prohibitively expensive. Despite the efforts of NGOs and Government in conserving the forest resources for sustainability, the local people still turn a blind eye to the efforts which poses significant implications on climate change mitigation.

Evaluating ICENEDEV Activities of In Promoting Climate Mitigation in Buea

Community Contribution to Climate Change

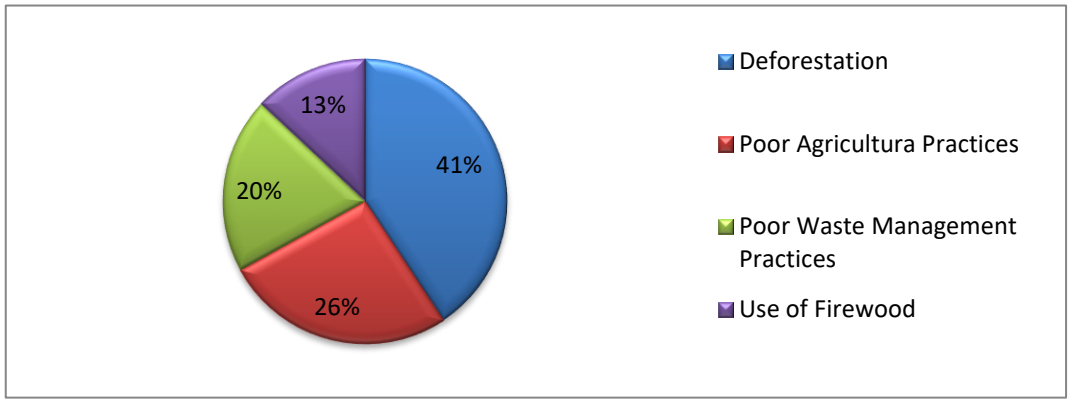
According to figure1, deforestation(40.7 percent), is the most common activity communities carry out by exploiting resources from the forest through harvesting of firewood and charcoal, food, medicine, animals, timber or other wood, and honey, followed by Poor agricultural practices (26.3 percent), Poor waste Management Practices (20 percent) and the use of Firewood (13 percent). The forest serves as a milieu for forest products for income generation and increased living standard. The forest also provides the communities with timber and non-timber products and some class C animals and food like vegetables, pears, fruits, plantain, cocoyam to alleviate poverty and increase their living standard. Therefore, these communities are bound to depend on the forest for livelihood, since the forest resources contribute greatly in transforming their lives.

ICENEDEV Activities in Mitigating Climate Change in Buea

Figure 2 illustrates the dominant activities used by ICENEDEV in promoting climate mitigation in Buea. From findings, majority of the respondents asserted that their community has benefited from such initiatives and believed it has impacted life or wellbeing in the community (see Fig. 2). According to community members, ICENEDEV participates highly in the management of environmental resources through financial support, provision of material like wheel barrows, cutlasses, hoes, pipes to connect community water, school equipment, building

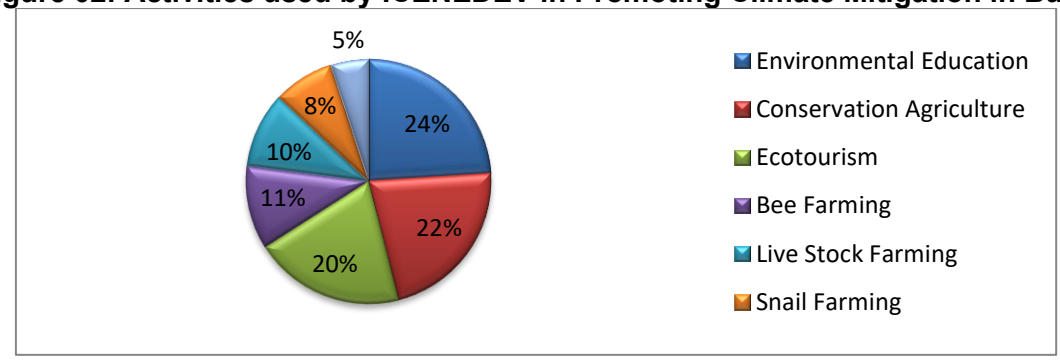
materials for community halls, scholarships, and capacity building through alternative income-generating activities and young breeds to divert their attention from environmental exploitation to environmental conservation which today stand out as having been very beneficial to the communities in and around Buea Sub-Division

Figure 01: Community Activities in Promoting Climate Change



Source: Field Work (2025)

Figure 02: Activities used by ICENEDEV in Promoting Climate Mitigation in Buea

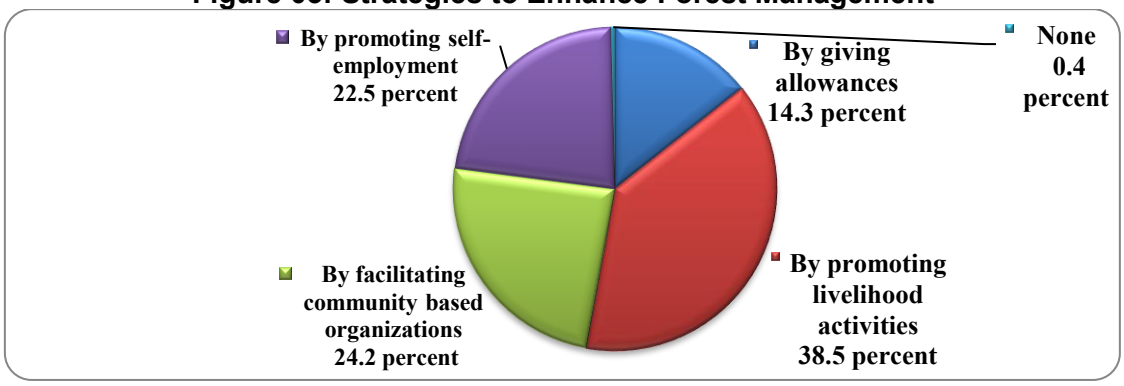


Source: Field Work (2025)

Strategies used by ICENEDEV to manage the Environment and mitigate Climate Change in the Buea Sub Division, Cameroon

Government, ICENEDEV and other environmental NGOs used the above-mentioned strategies to conserve biodiversity, alleviate poverty 98 (36.3 percent), conserve the environment 99 (36.7 percent), enhance self-employment 41 (15.2 percent), and increase standard of living 32 (11.9 percent) all in a bit to fight against climate action caused by the community. Community members were generally not very satisfied with these strategies as only 66 (40.0 percent) assessed them to be adequate. The local population considered ICENEDEV and other environmental NGOs as important partners as they are generally very receptive to them 144 (89.4 percent).

Figure 03: Strategies to Enhance Forest Management



Source: Field Work (2025) N=165

Conclusion

The natural forest milieu however, has always been considered by man as an unlimited reserve of natural resources. This has led to man's continuous exploitation of nature for food and other livelihood options, which continue to have an unintended but negative or damaging effect on the environment. It takes humanity a long time to realize the scope of environmental changes, the related social, economic and ecological consequences, and the dangers that they pose to us and to the upcoming generations. But, man's activities such as changing agricultural practices, deforestation along forest areas, afforestation and the damaging of tree species like Prunus Africana, Eucalyptus and Cypress, grazing, urbanization and infrastructural development, bushfires, quarrying and the application of chemicals, all these threats, coupled with the almost exponential growth of the population, have acted as a hindering factor to environmental management. Achieving sustainable climate action in Buea Sub-Division relies on our capacity to address in an integrated manner, major environmental issues that include choice of governance systems and policies, population management system, and the choice of technology and education. The cost-effectiveness of such integrated policy is its ability of considering the policy linkages among environmental issues, social issues and the link between ecological, social and economic issues (Nana, 2007). The study reveals clearly that forest resources are of great economic, medicinal, religious, social and cultural importance to humanity. But due to poor awareness of this importance, the natural habitat is constantly being destroyed.

The high demands for forest fauna and flora for livelihood has resulted in the over-exploitation of forest resources. Paving way to climate change. Thus, if adequate policies are not put in place by Government, NGOs and the local communities, then there is bound to be no future for some forest species, especially those in great demand in the markets. That is, the interest of the communities around Buea whose livelihood depends solely on the environment should be given adequate considerations by the forest law. Only by sharing power with local communities can over-burdened national forest departments ensure the health and equitable development of national forest resources. Evolving procedures that enable all actors to participate in the development, implementation and appraisal of natural resource policies, particularly forest-dependent communities, is critical for sustainable forest management and rural livelihoods. Without such effective mechanisms and strategies to ensure local-level participation in forest policy dialogue, development and implementation, there cannot be long-term commitment to survival of forest resources. While new approaches and tools for participatory forest management have been developed, genuine participation with real benefits for local populations is yet to be realized.

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