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RURAL MUTATIONS IN MEZAM AND AGRICULTURAL SUSTAINABILITY
(North West Region of Cameroon)

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ABSTRACT

Rural mutation in Mezam have largely affected agricultural production. Agricultural yields have been declining as reflected by the rising prices of food items in the markets in Mezam. Our objective in this study is to examine how rural mutation have affected agricultural production in Mezam and to suggest some strategies to meet up with sustainable production.

The study exploited both secondary and primary sources like questionnaires, interviews and focus group discussions. A sample size of 2% was drawn from 26167 households in the rural areas of Bafut, Bali, Santa and Tubah to administer the questionnaires for the study.

Findings revealed that rural mutations have caused the emergence of non agricultural activities at the expense of agricultural production. A greater proportion of the population is engaged in motor bike transport (32%) followed by trade (24%) and agriculture coming the third position(23%). However, 11% are involved in non agricultural primary activities , 7% are involved in industrial and 3% in other activities like hair dressing, money transfer services and so on. Secondly, the mutations in the rural areas of Mezam have reduced agricultural land as confirmed 68% of the respondents against 8.1% who held that mutations have increased cultivable land. Over 23.9% are of the view that agricultural land have not changed. Lastly, the mutations have affected agricultural labour as 71% of the respondents confirms a reduction. On the other hand, 24.1% holds that there is no change while 4.9% says that farm labour has increased. All these have accounted for the declining agricultural production in Mezam. Given that this activity is the backbone of most rural areas, some recommendations are advanced in this study in order to adapt the mutations in meeting up with food security and improving living conditions in the rural areas of Mezam.

KEY WORDS: *Rural Mutation, Agricultural Production, Agricultural Sustainability.*

1. INTRODUCTION

Many rural areas in sub-Saharan Africa have experienced remarkable mutations over the past decades due to rapid trends in globalization and the urge by countries to achieve economic emergence. Rural areas are very important as they harbor more than half of the population of sub-Saharan Africa. In 2015, sub-Saharan Africa had almost 1.2 billion inhabitants with 700 million of them living in rural areas (UN, 2015). Agriculture is the backbone of the economies of these countries and employs over 70% of the active population (FAO, 2016). The mutations which vary from one rural area to another obviously have impacts on rural productivity, infrastructure, landscape and living standards in general (ADB, 2010). These rural areas are described as the agricultural workshops which supply the food needs of the countries found in this region. Mutations in these rural areas have consequences on agricultural production especially in Mezam where a greater proportion of the population are farmers.

Rural mutations are the changes or alternations that occur in the rural landscape over time. These changes concerns the techniques of production, commercialization of products and in the lifestyle of village dwellers (Idowu, 2005). Over the years, changes have occurred in the rural areas of Mezam due to the magnitude of development activities such as agriculture, non-agricultural projects and other activities which defines land use management (Amungwa, 2014). The rate of rural mutation in the grass fields of Cameroon in particular have been accelerated by a lot of factors some of which are increase in rural population, urban sprawl, modern industrial activities, role of elite, development of transport, government initiatives amongst others (Ngwa, 1990). Rural mutations are caused by primary and secondary land uses leaving major challenges to food security in our rural areas today (Roseline, 2015). Agriculture in rural Mezam therefore needs support in overcoming constraints faced by farmers in saving and accumulating assets and in coping with the uncertainty and risk that are intrinsic to farming (FAO, 2016). Food security is high on global agenda of Mezam as food demand, population growth and competition over land as well as challenges to climate change into food production process are on the increase (Chan et al, 2004).

Institutional and framework for local development in Mezam is rich in strategies that identifies and transforms the physical and human resources available to improve on the local economy. Rural Mezam is made up of potentials for agricultural production due to its location which provides ideal conditions for the cultivation of vegetables, food crops, fruits, cash crops, tubers as well as

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livestock. This area is hit by many problems and development efforts are out to improve on living conditions. This has brought in social and structural changes which have affected agricultural production immensely. These rural areas of Mezam have diverse environments which is controlled by biophysical and human activities in place (Abireche, 2022). Understanding rural mutation especially in Mezam Division requires taking both components into consideration (Protus, 2020).

Information on the changes in the rural areas of Mezam is either lacking or unavailable due to small scale nature of the areas which makes generalizations extremely difficult. However, the deep and rapid transformations are in techniques of production, communication and also the changes in lifestyle. Agricultural land have greatly been reduced by the mutations on the landscape in Mezam. The transformation of rural areas is produced by human activities where people use the land in various ways and its reflection is seen in the rural space and agricultural output (FAO, 2016). Many non agricultural activities have emerged in these rural areas of Mezam and diverting agricultural labour. The rural space cannot be separated from agriculture. It is on these basis that the mutations in the rural areas of Mezam are examined with the impacts on agricultural production.

Agricultural development projects are highlighted as the major actors in rural mutation for they serve as the framework for sharing information, coordinating activities and making collective decisions and creating opportunities for farmers to get involved in value added activities such as input supply, credit, processing, marketing and distribution on one hand and create awareness in view of defending farmers interest on the other hand (Alain, 2009). Agricultural activities in Cameroon are drifting towards projects within the context of Second-Generation Agriculture whose main objective is on agricultural improvement, mechanization and transformation of products.

Diverting agricultural labour to other sectors of production and a reduction of cultivable land due to the mutations in the rural areas of Mezam largely affects agricultural production. This is reflected by the fall in yields and rising prices for agricultural produce. The mutations in the rural areas of Mezam and sub Saharan Africa in general have greatly raised a lot of challenges such as food insecurity, climate change and debt sustainability (ADB, 2020). Amongst these challenges, food crises stands out significant as sub Saharan Africa depends on Russia and Ukrain for 41% of its wheat and 31% of maize inputs (ADB, 2020). Despite efforts by the ADB to set out the "High 5" priority areas intended to support African countries to achieve the Sustainable Development Goals, many rural areas still have food insecurity. The "High 5" are projects by the ADB to feed Africa, light up Africa, industrialise Africa, integrate Africa for development and improve on the quality of life for the people of Africa.

The ambitions and needs of the SDGs is to "leave no one behind" (FAO, 2016). The implication is that we must urgently revitalize rural areas especially in Africa, south of the Sahara where majority of the poor lives (Shenggen et al, 2019). The global poverty in this area is over 17% as compared to over 7% in urban areas. The rural areas found in Sub-Saharan Africa habours over 82% of the poor who often lack basic needs, infrastructures and basic services (Shenggen et al, 2019). Rural areas are exposed to dwindling resources and climatic failure exacerbating the challenges. It is important to revitalize these areas in order to make them more productive, sustainable, climate resilient, healthier and a more attractive place to live.

The United Nation's effort through the Sustainable Development Goals (SDGs) is to improve on the economies of rural areas which are backward by improving on agriculture. This is in line with SDG 2 which states that "end hunger, achieve food security improve nutrition and promote sustainable agriculture" (FAO, 2016). This has remained a major impetus in agricultural development through which many rural areas are gradually being transformed. The case of rural areas in Mezam is very unique where social and structural mutations occurred impacting rural production and agricultural production in particular.

2. CONCEPTUAL FRAMEWORK

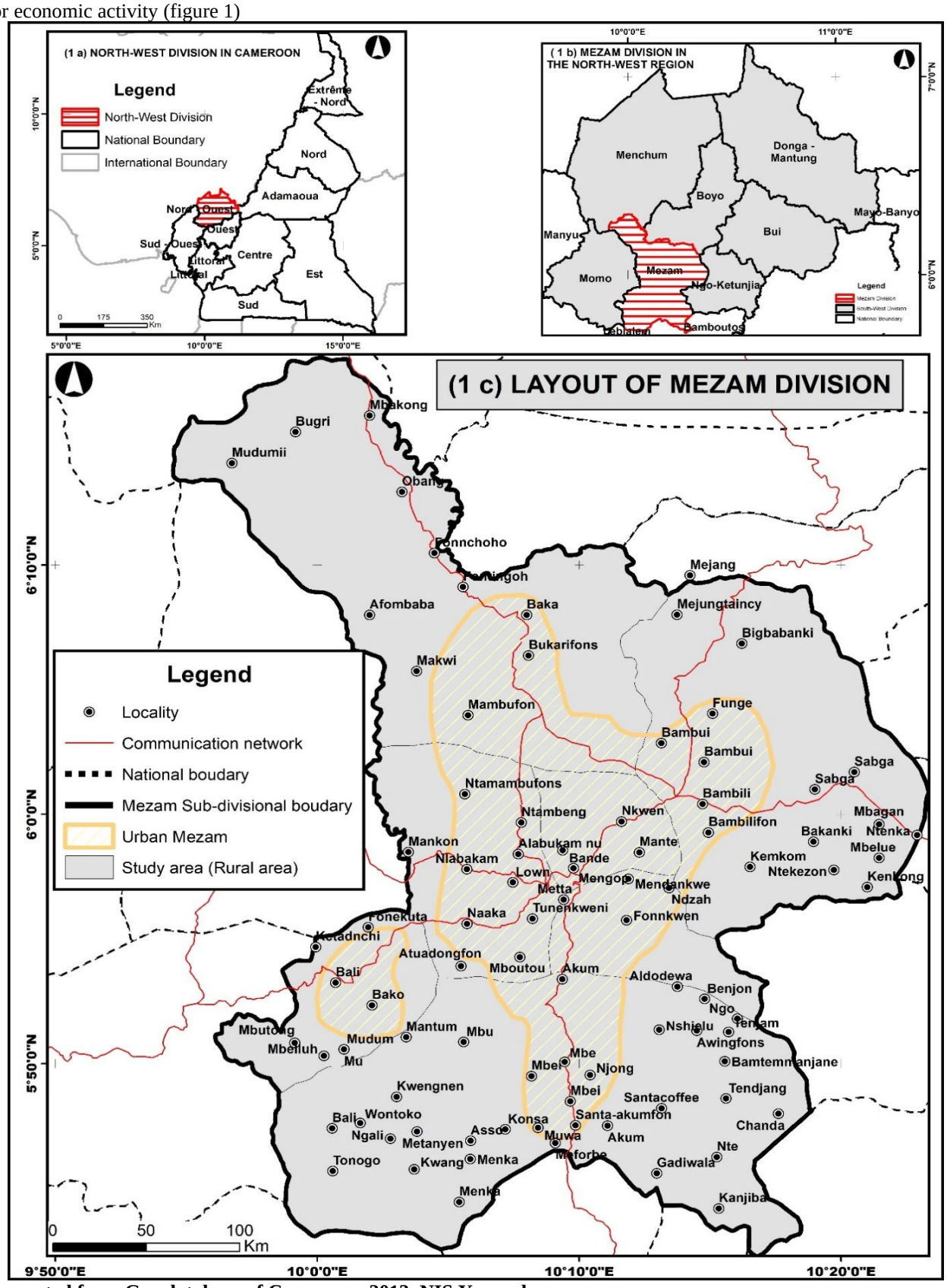
The concept of rural dynamics and that of rural sustainability are used to explain the relationship between rural mutation and agricultural production in this study. The increase in rural population and the emergence of diversed activities to serve the needs of the growing population in the rural areas brings about mutations or transformations of the rural areas in terms of social, economic and environmental. This however brings in the degradation of the rural areas which affects overall rural production. One of the domains which is seriously affected is agriculture whose production largely depends on the natural environment. The mutations have therefore resulted in declining agricultural labour, reduction in agricultural land as well as food insecurity. The concept of rural sustainability illustrates the ability of the area to meet up with the needs of the present without compromising the future generation. There is therefore the need to ensure the ecological equilibruim and improve rural production especially in agriculture which is the major activity employing the rural population in Mezam.

3. STUDY AREA

The study is carried out on the rural areas of Mezam Division in the North West Region of Cameroon where agriculture is the major economic activity. Mezam is one of the seven divisions and the headquater of the North West Region of Cameroon which was created in 1972. The Division lies between longitude $9^0 7'$ and $10^0 21'$ east of the Greenwich meridian and between latitude $5^0 20'$ and $6^0 15'$ North of the equator. It has a surface area of about $1841 km^2$ and a population of 524127 inhabitants (BUCREP, 2010).

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With a growth rate of 2.6%, the population is estimated at 755786 inhabitants by 2023. Four sub divisions have been choosen in this study, which are Bafut, Bali, Santa and Tubah. This is because these sub divisions are typically rural landscape with agriculture as the major economic activity (figure 1)



Source: Generated from Geo database of Cameroon, 2013, NIS Yaounde

Figure 1: Location of the study area

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4.RESEARCH METHODOLOGY

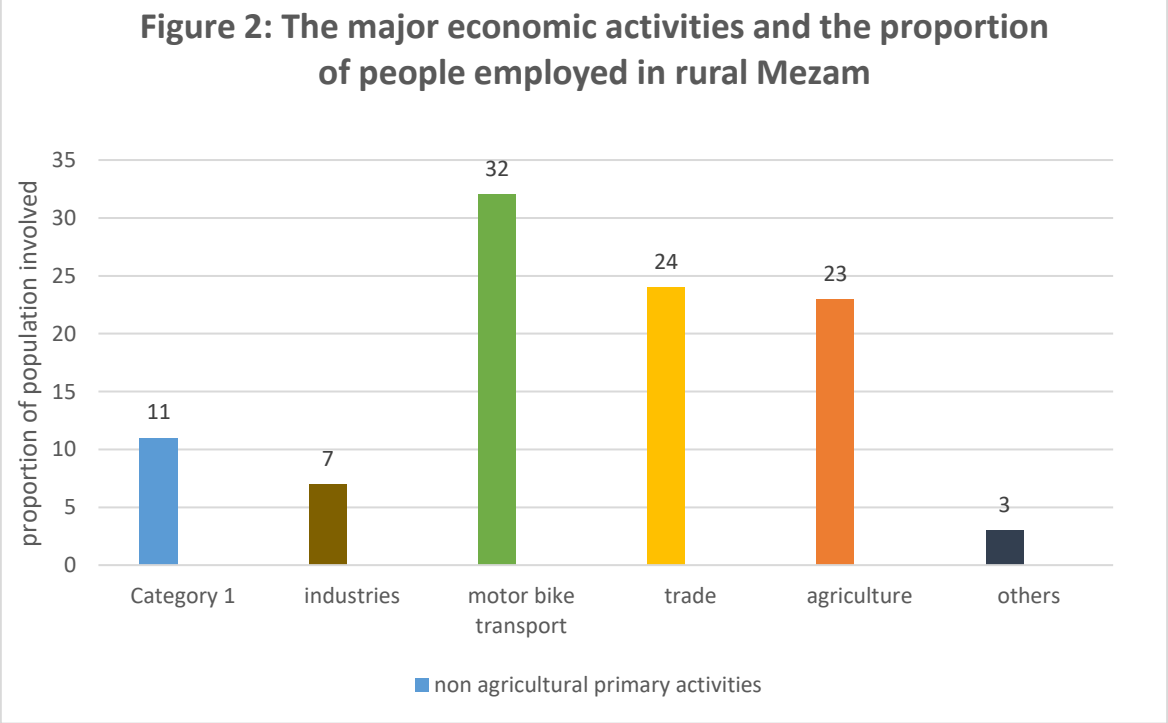
Secondary and primary sources were exploited for data in this research. The litereture from international scientific journals, agricultural production reports from MINADER, MIDENO, ACEFA and other stakeholders gave useful data on the effects of rural mutation on agricultural production and challenges of sustainability. The primary sources made use of questionnaires, interviews and focus group discussions. The sample population was drawn from four sub- divisions of mezam being Bafut, Bali, Santa and Tubah sub divisions where agriculture is the major economic activity. Using a sample size of 2% from 26167 households in these sub divisions (BUCREP, 2010), 523 questionnaires were taken to the field with 493 effectively administered for analyses. In these sub- divisions, a systemmatic random sampling technique was used where a copy of questionnaire was administered for every 50 households. Two focus group discussions were conducted to obtain data on the effects of rural mutation on agricultural production. These groups were from Bali and Tubah where the mutations are remarkable on the rural landscape. Interviews were also conducted with heads of agricultural stakeholders, traditional authorities, municipal authorities and other resource persons in the four sub-divisions of the study area.

5.RESULTS

The findings in this study reveals that rural mutation results in declining agricultural production. The mutations brings about the emergence of non agricultural activities which diverts agricultural labour, reduces cultivable land as well outputs. Food insecurity is a common feature in most rural communities in Mezam where the population highly depends on imported food items especially rice.

5.1 Emergence of non Agricultural activities and production

Rural mutation in mezam have seen the emergence of many economic activities which tend to compete with agriculture that has been the backbone activity in the area. With the activities employing the population in these rural areas, findings revealed that the most important sector is motor bike transport with 32% and followed by trade with 24%. Agriculture which is supposed to be the major activity takes 23%. The non- agricultural primary activities take 11%, indusrial employs 7% and others 3% **(**figure 2).



Source: Field work, August 2024.

Figure 2 shows the emerging activities in rural mezam and the proportion of population employed. The motor bike transport and trade dominates with 32% and 24% respectively. Industrial activities have also emerged and employing over 7% at the expence of agriculture and other primary activities. These emerging activities have greatly reduced agricultural production.

5.2 Reduction in Agricultural Land and production.

The mutation in rural mezam either in the social, economic and environmental domain have largely reduced agricultural land as well as prooduction. Findings revealed that mutation has reduced agricultural land as shown by 68% of the population in rural mezam as against 8.1% who held that mutation has increased farmlands. However 23.9% are of the view that mutation have not had any impact on agricultural space (Table 1).

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Table 1: The impact of rural mutation on agricultural land

Sub Division	Effective Respondents			
		Increased agricultural land	Reduced agricultural land	Agricultural land is same
Bafut	148	12	101	35
Bali	39	3	26	10
Santa	209	17	142	50
Tubah	97	8	66	23
TOTAL	493	40	335	118
Percentage		**8.1%**	**68%**	**23.9%**

Source: field work, August 2024

Table 1 shows that mutation has reduced agricultural space (68%) while 24% hold that the land is not affected by mutation while 8% hold that it has increased.

5.3 Agricultural Labour and sustainability in Production.

Rural mutation in mezam have reduced agricultural labour and resulting in low production. Results revealed that agricultural labour has drastically dropped as confirmed by 71% of the respondents as against 4.9% who said that labour has increased. Not withstanding, 24.1% holds that the mutation has not affected agricultural labour (Table 2).

Table 2: The effects of rural mutation on agricultural labour

Sub Division	Effective Respondents			
		Increased agricultural labour	Reduced agricultural labour	Agricultural labour is same
Bafut	148	7	105	36
Bali	39	2	28	9
Santa	209	10	148	51
Tubah	97	5	69	23
TOTAL	493	24	350	119
percentage		**4.9%**	**71%**	**24.1%**

Source: Field work, August 2024

Table 2 shows the effect of rural mutation on agricultural labour in rural Mezam. It is confirmed by 71% of the respondents that agricultural labour has dropped. This proportion is outstanding when compared with 4.9% who talks of an increase in farm labour. Hoever, 24.1% holds that agricultural labour has not changed.

6. DISCUSSION

The emerging economic activities in rural mezam are motor bike transport (32%) and trade (24%). This is due to the fact that these activities are less strainous and yields more income than agriculture. According to the respondents, agriculture is a 'dirty job' and it is regarded as an activity for the poor which goes a long way to discourage the youths who are the productive force. Rural mutations brings a lot of activities which modifies the rural landscape (FAO, 2016). This however confirms the view that mutations causes the emergence of non agricultural activities in the rural areas which reduces production. The non- agricultural primary activities like palm wine taping and quarrying equally employs many youths (11%) which receive better income than being farmers. Industrial activities are fast emerging such as transformation of cassava to garri, potatoes to flour, maize + kernel to animal feed to join craft works which have been well established.

Other activites that employ over 3% include money transfer services, hair dressing, call box and so on. These activities employ some of the youths who are more educated and reject agriculture as a low class activity. This view is shared by Kimengsi et al (2017) who examined the impacts of emerging activities on agricultural production in Mezam due to the mutations taking place. In the final analysis, the 23% of those in agriculture are mostly old people above 50 years who are less energetic and conservative. They mostly practice subsistence agriculture with traditional techniques which are less productive and resulting in low yields. The few youths involed are mostly in commercial systems like truck farming and plantation agriculture with low yields in food crops which causes food insecurity in the area.

In our second result, 68% of the respondents affirmed that rural mutation reduces agricultural land which affect production. The emergence of social and economic infrastructures like schools, hospitals, play grounds, recreational grounds, factories amongst others takes over agricultural land. The incraese of population in these rural areas also necessitates more land for construction of residents which has reduced farmlands as well as yields. This view has been affirmed by ACEFA in her production report of 2021 where the reduction of agro pastoral family land has witness declining yields. The 23.9% of farmers who do not appreciate any change in farmland are mostly those who are ignorant of the negative effects of the mutation on the community. The land tenure

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practices are still highly respected which maintains the family land for cultivation. However, 8.1% of the farmers with the view that farm land have been increased are those who have been abandoned in the rural areas following the crises. The out movement of most people and the switch from farming to other sectors of production allows more farmland for the few who are still in the sector. This gives an impression that over all farmland has increased which is not the case.

The third finding confirms that rural mutation has affected agricultural labour. Most of the respondents (71%) holds that labour has reduced due to emerging activities like trade and motor bike transport which are more profitable and less strainous. Agricultural labour is usually unstable and diverts to strike a balance with better living conditions in other sectors of production (Zainab, 2023). This explains why the agricultural labour in Mezam is gradually decreasing to join more profitable sectors. From our interviews on this theme, a bike rider earns averagely 10000 frs daily which is more attractive than engaging in farming. Many people in these rural areas especially the youths have switched to these activities which are seemingly more comfortable to them. All these reduces agricultural labour as well as production. Over 24.1% of the population holds that the labour has not changed. These are obviously those who are ignorant of the mutations in their communities. The 4.9% with the increase are those respondents who are engaged in commercaial farming systems. Recently, many agricultural business men have engaged in the cultivation of vegetable, irish potatoes and cassava especially in Santa, Bali which shows an increase in labour. Unfortunately outputs are mostly sold out of mezam which still leaves the area with the problem of food insecurity.

7. RECOMMENDATIONS

Rural mutation is an inevitable phenomenon as all rural communities strive to improve on their living standards. Based on findings in this study, the rural mutations characterised by the emergence of non agricultural activities, reductuction in agricultural labour and cultivable land brings about the fall in agricultural production. Given that agriculture provides food, income and a means of lively hood to most rural dwellers in Mezam, it was nessary to handle the related challenges and improve on standards of living. This is through sustainable management strategies proposed in these rural areas to boost production. To this effect, a series of recommendations are made firstly to the Government, Non-governmental Institutions and to the Local Institutions.

Based on the fact that agricultural projects by the government do not greatly improve on yields in the rural communities of Mezam, it is suggested that the government should design agricultural policies considering the local population who are the benefitiary which will motivate them to engage in the sector. The local farmers should be integrated in the policies of agricultural development. If the resources of the local population were taken into consideration, policies will be designed to permit them benefit the local population, make the sector attractive and improve on production. In addition, the government should encourage the creation of many farmers' coorperatives in the rural areas of Mezam and encourage them to be affiliated so as to benefit from government's provisions to farmers like loans, chemicals, farm tools and so on.

In an effort to redress the problem of reduction in cultivable land, the local councils should carry out proper land use planning where agricultural land is carved out and preserved for production. This planning will design land for various activities and prevent competition between functions over farmland.

Based on the fact that development activities of some actors diverts attention of the local population away from agriculture, it is suggested that their projects should center on core sectors like agriculture which is dorminant in rural areas. This will check the rapid loss of agricultural labour to other sectors of production in Mezam. In this light, the activities of the NGOs, and CIGs be oriented to build the agricultural sector through which the other activities will emerge.

The local population which easily abandones farming into trade and motor bike transport is a major challenge to agriculture. The local population especially the youths should be adequately motivated to invest in agriculture. Based on the importance of agriculture to families and community, the local population should under take agriculture as a basic economic activity to solve the problem of food insecurity in the rural areas and build their livelihoods.

8. CONCLUSION

The rural areas of mezam are experiencing severe mutations which have affected agricultural production. These communities over the years have experienced declining agricultural production which has gone a long way to aggravate the level of poverty. Our findings in this study have revealed that the mutations have resulted in the emergence of non- agricultural activities which have diverted a lot of attention away from agriculture. The active population is getting more interested in motor bike transport and trade to the detriment of agriculture. The emergence of social and economic infrastructures amongst other forms of transformation have reduced cultivable land in the rural areas of mezam which have a negative repercution on production. Furthermore, the fall in farmers' income and the emergence of more profitable economic activities have contributed in the fall of agricultural labour in the area. Generally, the various mutations have reduced agricultural production leading to decline in yields and fall in living standards amongst farmers. It is for this reason that the study brings forth recommendations to improve on agricultural production in the rural communities of mezam.

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