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Northern Rural Ghana: Analyzation of Characteristics in Human Population and its Effect on Food Security

It is crucial that families and individuals have the ability to easily access the opportunity to provide nutritious foods and meals for themselves. There are a sufficient amount of resources to aid and ensure that no individual should go hungry. Unfortunately, low-socioeconomic households in developing countries typically struggle to live an advantageous and sufficient lifestyle. This is the harsh reality many Ghanaian rural households endure. Ghanaians, especially northern Ghanaians, are subjected to the vulnerability of food insecurity due to limiting factors that restrict them from being financially and socially stable. Poor climate conditions and infrastructure, lack of economic diversification, and socioeconomic inequalities and limitations have led to an increase in food insecurity and vulnerability in rural Ghanaian populations.

To generalize, in sub-Saharan Africa, more than one in every four people is undernourished (Ghana: World, 2023). At a national level, the Republic of Ghana has made improvements over the last two decades in minimizing its issues regarding poverty and hunger (Ghana: World, 2023). Despite these improvements, the disparity between the progress of Northern and Southern Ghana continues to be prevalent in modern Ghana. Due to limiting factors and underinvestment during British colonial rule before the country's independence, Northern Ghana struggles with economic stagnation and slow economic growth (Kambala, 2022). Northern Ghana and rural communities across the country continue to struggle and are undernourished, and impoverished.

Due to the disadvantaged rural areas, the northern region has higher poverty rates in comparison to southern Ghana. Iddrisu Kambala, a Ph.D. student in economics at the Darla Moore School of Business at the University of South Carolina, states, "More than 70% of the northern population live in disadvantaged rural areas" (Kambala, 2022). In northern Ghana, the majority of families rely on agriculture sectors for their income. Although, families struggle to profit from northern Ghana's geographical and climate conditions. With unsuitable geographical and climate conditions, Ghanainas' heavy reliance on cultivation for stable and adequate income is unreliable. Due to an insufficient and unsteady income from agricultural-based salaries, these small household farms encounter financial difficulties and impoverishment.

The lack of economic diversification in rural household farms has led to unstable food sources and irregular income. Prince Adjei, with a Ph.D. in Geography from Kwame Nkrumah University of Science and Technology, reports, that in the Asante Akim South District, 75% of the total labor force derives from

agriculture, which substantially contributes to the district's population's revenue (Obodai et al., 2018)). He states, "Majority of the people in the district are peasant farmers growing food and cash crops with limited opportunities to engage in other viable employment opportunities" (Obodai et al., 2018). Corresponding to the people of the Asante Akim South District, rural communities throughout the nation struggle with viable employment opportunities. Additionally, the northern region has one rainy season, leaving peasant farmers a short period for ideal farming conditions. The cultivation of traditional crops for income is unreliable; the dry seasons are unsuited for growing cash crops and food, and the soil lacks vital minerals for successful growth. Northern Ghana's underdevelopment indicates its economy's heavy reliance on agriculture despite its restrictive climate and geographical conditions. Rural households' income is highly dependent on rain-fed subsistence agriculture and livestock rearing, revealing a low degree of economic diversification (Rademacher-Schulz et al., 2014.). With the lack of economic diversification the economy is unstable, and employment and revenue streams are niche; forcing individuals to migrate to provide food for their families during the dry and rainy seasons.

Northern Ghanaians are seasonally or permanently migrating to the south in response to restricting climate conditions, food insecurity, and lack of employment. Dr. Christina Rademacher-Schulz, a social anthropologist consultant in the Global Programme on Sustainable Management of Human Mobility, reports research in 2011 revealed that the majority of migrants were forced to migrate during the rainy season to feed the household members due to poor crop yield (Rademacher-Schulz et al., 2014). Change in domestic migration patterns regarding rural farmers' migration during the rainy seasons displays the adaptation to climate change and socio-economic disadvantages. Migrant farmers from the Northern region typically rely on rental or sharecropping agreements for new farming opportunities; which they obtain through locals in Southern Ghanaian communities (Sward, 2017). Additionally, Ann Cassiman, an associate professor of anthropology at the Institute for Anthropological Research, states, "An increasing number of young men and women move towards the southern cities in response to harsh economic and climatic conditions in the northern regions" (Cassiman, 2008). Despite migrating for economic opportunity, seasonal migration during the rainy season and permanent migration may have further negative effects on the state of Northern Ghana. With fewer agricultural workers, local food production will decrease, which may further increase food insecurity or inflate food costs. While some have the opportunity to seasonally migrate, those without viable alternatives endure the disadvantages.

Socio-economic inequalities and limitations such as wealth gap, age, and gender inequality affect food security in Northern Ghana. Kilian Atuoye, with a Ph.D. in Health Geography, and an Assistant Professor at Queen's University for Global Development Studies, states, "Women undertake multiple extra livelihood activities to sustain the family". For instance, women in rural areas adjacent to urban centers sell firewood and charcoal in addition to working other occupations. (Atuoye et al., 2019). Despite undertaking multiple jobs, female-headed households continue to have lower household incomes than male-headed households. Their male counterparts also obtain more land, have a lower dependency ratio, and face lower food insecurity (Rademacher-Schulz et al., 2014). Like gender, elderly age may also be a factor in increasing vulnerability to food insecurity. An article from *Social Indicators Research*, regarded as the leading journal for the publication of results dealing with measurements of the quality of life, hypothesizes that aged household heads may work less than their younger counterparts to improve

subsistence agriculture and food security. As smallholder farmers' age increases their vulnerability to food insecurity does (Addai et al., 2022). While gender and age discrepancies may cause income inequality and instabilities, wealthy households provide the biggest discrepancy in economic and food security in comparison to low-socioeconomic households. Wealthy households have the ability to work in the new non-farm sector; however, households with low socio-economic status typically remain in the farm sector due to the extensive capital requirements of the new sector. (Atuoye et al., 2019).

Low economic diversification, migrating populations, and socioeconomic inequalities in Northern Ghana should be addressed effectively through government intervention and policies to increase economic diversification in rural communities. These policies include the intervention of foreign aid, in which foreign countries collaborate with Ghana's national government to improve the livelihoods of people concerning economic and health stability within Northern Ghana.

Agricultural practices and conditions can improve through government intervention and policy. To exemplify, the Ghanaian government policy, One Village, One Dam, has been implemented since 2017. This project aims to make irrigation accessible to small-scale farmers by using its \$379,215 funding from USAID (Amoatey et al., n.d.). This national-scale investment provides dams that supply water for irrigation to increase agricultural productivity, especially during the dry seasons when water for cultivation is scarce. These small-scale irrigation dams will reduce Ghana's dependence on rain-fed agriculture. The One Village, One Dam project intends to develop a total of 570 dams in multiple communities across 5 regions in Northern Ghana to support dry-season gardening and livestock rearing (Amoatey et al., n.d.). To increase the efficiency of these dams, instructors should inform the residents on how to maintain and optimize the usage of these irrigation systems. These dam irrigation systems will lead to enhanced food security, an increase in productivity, rural household incomes, and health.

Increasing economic diversification in the job field in rural communities can be addressed through foreign aid. In particular, Feed the Future is the U.S. government's global hunger and food security initiative. Some of this initiative's strategies are: increasing the incomes of smallholder farmers, boosting nutrition, especially among women and children, driving private sector investment in agriculture, strengthening the resilience in vulnerable populations, improving the marketability of targeted value chains and management of marine fisheries (*Feed the Futures'*, n.d.). Feed the Future efforts are successfully improving and promoting economic growth and development in efforts to provide food security, reduce poverty, and combat malnutrition, by unlocking loans for businesses and smallholder farmers. In 2020, the initiative facilitated over \$19 million in sales for a multitude of smallholder farmers and a multitude of sized businesses (*Feed the Futures'*, n.d.). These sales will enable businesses and farmers to sell and promote their products and purchase agricultural inputs to increase production and economic growth, allowing new job opportunities to emerge through diversification.

With the strive and successful efforts of the One Village, One Dam project and the Feed the Future initiative, Northern rural Ghana now has the opportunity to combat food insecurity by providing

agricultural and economic guidance and supporting financial aid and implementation. The One Village, One Dam project will continue to be implemented in rural communities throughout 2023. The U.S. government initiative, Feed the Future, will continue to provide a diversity of efforts. It is essential that initiatives like One Village, One Dam project and Feed the Future, are implemented to promote and support global equality within northern and rural Ghana. With the aid from these programs and other various initiatives like these, Northern Ghanaians have a brighter future.

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