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The Balance between Nutritional Self-Sufficiency and Agricultural Development on the African Continent

African Union (AU)

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Introduction

One of the most basic human needs is nutrition. Unfortunately, this privilege is often taken for granted, and it should not be, because in some areas of the world, being well fed is a daily struggle. Specifically, there is a dynamic between nutritional self-sufficiency and agricultural development, two concepts that will be visited time and time again in this research report. On one hand, it is imperative to achieve a healthy and balanced diet for all. On the other, this is not always attainable due to economic considerations. For instance, many countries in the African Union have vast and extensive fertile lands for agriculture. 97% of the world's yams come from Africa, and two-thirds of the continent's population works in agriculture. However, rather than being provided for local communities, many of these crops are often exported and sold for profit that only benefits a small part of the population.

Also, it is much more profitable to grow and specialise in one single crop and produce it on a large scale than to grow a variety of plants. Firstly, each crop has different needs to grow. Different levels of sunlight, different quantities of water, and different times of year in which it can be harvested. Secondly, when growing a multitude of crops, it becomes unfeasible to export them, as importers overseas will rely on large quantities of a single crop from a single destination. Therefore, many communities end up growing only one crop, which harms their chances of reaching a nutritionally balanced diet and prevents them from doing so in a self-sufficient manner.

Nevertheless, at first glance, it seems like these two factors should be two sides of one coin. It is intuitive to think that if a farmer grows a certain number of plants in one year and then uses more advanced tools the next, the farmer will yield more plants, have more food, and be closer to nutritional self-sufficiency. However, this is not how it often plays out in the real world. In addition to the fact that a single crop is insufficient in reaching a sustainable diet, increased production does not mean more food in most cases. Leftover yields may be difficult to store and thrown away as waste. Furthermore, when agricultural development is used in the wrong ways, it can even be harmful for the environment. Phenomena like soil degradation from planting more than the capacity of the environment, loss of biodiversity due to methods of monocultured crops, and general mismanagement of resources can all take place.

But despite these issues with balancing the two concepts in the present, the African Union should still strive to do so in the future. This is also in line with the UN mission for 2030 and the 17 Sustainable Development Goals that were recognised in 2015. In particular, the second goal, zero hunger, cannot be achieved without balancing development with nutrition self-sufficiency. Other relevant goals are the 9th goal regarding innovation and infrastructures, the 15th goal regarding life on land, and the 17th goal calling for a worldwide partnership in the mission. All these should be kept in mind when African Union delegates are working towards balancing development and food security. In short, as this research report will cover, nutritional self-sufficiency is the goal, while agricultural development is one tool potentially required to achieve it and, like any other tool, can be harmful when used in the wrong ways. It is the role of the African Union to ensure that does not happen and that nutritional self-sufficiency is reached on as wide a scale as possible, for as many people as possible, leaving no one behind.

Definition of key terms

Agricultural development

This term pertains to any technological developments that help to improve, develop or support agricultural methods. Agricultural development allows for the yielding of increased outputs of crops or livestock and can be thought of as an investment, financing agricultural development, and profiting from the sales of the increased outputs. In a modern setting, agricultural development can also include improvements in the sustainability of production, in addition to its productivity and efficiency. Note that agriculture includes both plants and animals.

Less Economically Developed Countries (LEDC's) & Least Developed Countries (LDC's)

An LEDC is a nation that is less developed compared to the rest of the world, often having a lower quality of living, a weaker economy, and a lesser ability to provide nutritional self-sufficiency for its citizens. This should not be confused with an LDC, which is a country registered by the UN as one of the countries with the lowest socioeconomic development, due to an evaluation of poverty, resources, and the national economy. Of the current 44 LDC's, 32 are on the African continent.

Monocultured crops

As suggested by the prefix "mono", this is a method of agriculture in which only one individual crop is grown over large areas. In the development of agricultural methods, monocultured crops are becoming more and more common to allow for exports, though this has negative effects on nutritional self-sufficiency.

Nutritional self-sufficiency

Self-sufficiency regards one's ability to take care of oneself independently. Nutritional self-sufficiency hence refers to the ability to independently supply oneself with all the relevant nutrients required for a healthy diet. This includes proteins, healthy sources of fats, sugars and sodium, other minerals, vitamins, water and more. Please refer to appendix 1 for the UN's definition of a healthy diet.

Smallholder farmers

These are farmers who live by what they grow. Smallholders are local farmers who supply for their families on a small scale, in small areas, and often in rural regions. Though this does not sound impressive, there are approximately 33 million smallholder farmers on the continent.

General Overview

In order to evaluate this issue objectively, the concept of nutritional self-sufficiency is examined, which defines the ability of a person (or a country) to provide a healthy and balanced diet for itself independently. At the moment, many countries do not achieve this. According to a study at the University of Leiden, half of the world's population lives in a country which cannot provide nutritional self-sufficiency on its own. The Netherlands, for instance, would require 120% of its land in order to do this. Belgium, Switzerland and Norway fare similarly. Nonetheless, these nations are able to compensate for this with trade.

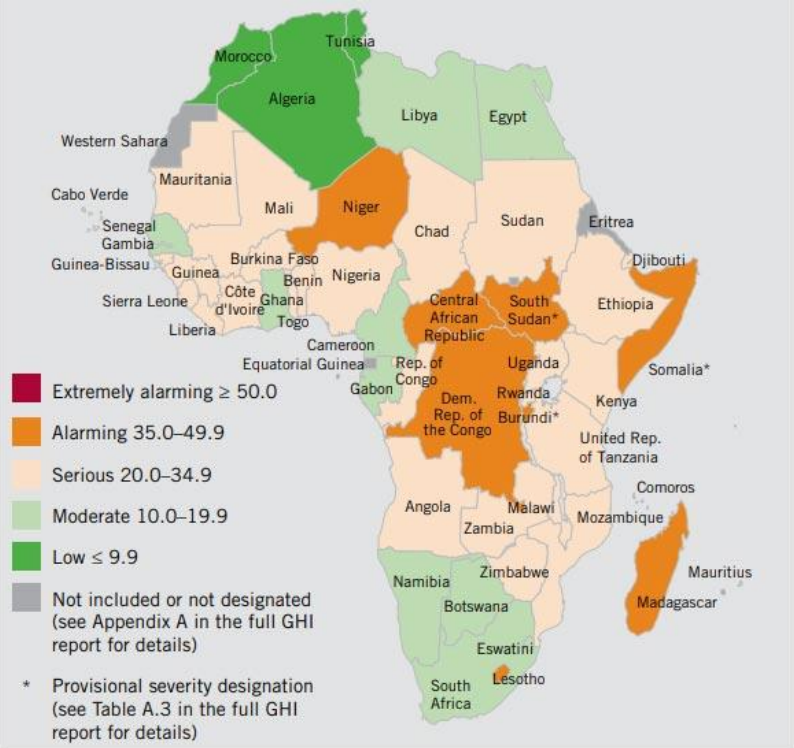
However, this does not always apply for LEDCs, for instance, countries in Africa, where the situation is also significantly worse. Ethiopia needs 181% of its land to reach self-sufficiency. For Nigeria the figure is 241%, for the Democratic Republic of the Congo it stands at 434% and for Egypt it soars to 734%, over 7 times its current land size. These handful of nations, all of which are part of the African Union, exemplify the urgency of the need for nutritional self-sufficiency. Therefore, the problem is that nutritional self-sufficiency is not easy to achieve in the first place, and even more difficult when environmental, economic and humanitarian considerations are factored in through the idea of agricultural development.

Roadblocks on the path to realising nutritional self-sufficiency

First, there is the environmental factor. In order for a nation to independently produce all the nutrients its citizens need, it must have the necessary resources. Climate plays a major role in this, as some crops simply cannot be grown in certain areas. Many African nations do not have enough fertile land and do not have the environment needed to grow some of the most important nutrients. Most of Northern Africa is covered by the Sahara Desert, and the Sahel region below it has suffered numerous droughts in the past three centuries. In such circumstances, nutritional self-sufficiency can be seen as nothing but a distant hope.

Secondly, each choice has economic repercussions behind it. Some members of the African Union are of the world's least economically stable countries and on the list of LDCs. In such a situation, due to the limited capital available, the implementation of any strategy becomes very difficult. Moreover, as mentioned in the introduction, it is more financially viable to invest in monocultured crops and export them.

Finally, there is a humanitarian point of view to consider. Behind each crop that is yielded are hours upon hours of manual labour. In addition, though agriculture takes time to come to fruition, humans need to be fed day in and day out. With crops, there is a harvest season, and smallholder farmers often rely only on storages from the harvest to last until the next one, the next year. Without any imported food, it is enough for a small pesticide to take down an entire crop and lead to a rise in hunger. Thus, nutritional self-sufficiency is not only difficult to reach but also to maintain. The current situation, therefore, is alarming and worrying, as seen in the following figure, which is a map of Africa with the global hunger index of each nation.



Role of agricultural development

The roadblocks above are explained due to considerations of agricultural development. Yes, it is important for nations to feed their citizens. But, unfortunately, governments have bigger priorities for which to use their money, and the most convenient way to earn it is via exports. If more land and resources are used for exports, then less money will eventually be channelled back to the farmers themselves. Additionally, there is oftentimes pressure from other powerful countries abroad for the smallholder farmers to continue exporting their yield. For instance, if Africa, which is currently responsible for mass production of crops like yams and coffee, begins to focus on nutritional diversity, the nations who import those crops will become unsettled and demand that they be exported once again. Ultimately, in the search for money amongst some African leaders and in the search for certain crops from Western countries, it is the smallholder farmers who are exploited more often than not, under the facade of agricultural development.

However, it does not have to be this way. Agricultural development is a tool and does not need to be used to expand already monocultured cropping habits but also towards spreading yields from one corner of the continent to another and growing new crops, even if only in smaller quantities. On top of that, agricultural development is not limited to the breadth of the yields but also to their quality. Modern tools of agriculture can allow for a higher quality of crops to be produced, meaning they are richer in nutrients. And, even when the harsh reality of the previous paragraph is taken into account, the balance between nutritional self-sufficiency and agricultural development still calls for the former to be achieved, and this can go hand-in-hand with agricultural development or in addition to it. The main goal is that hunger is avoided, and citizens across the African Union can experience food security. This is already a clear effort of the African Union, particularly under the CAADP (Comprehensive Africa Agriculture Development Programme), which has called for each member nation to commit 10% of its annual budget to agricultural development, to be used for food security. The programme aims to achieve 6% annual agricultural growth on average, which would be a major milestone on the way to finally providing citizens with the nutrition they so deserve.

Major parties involved

Alliance for a Green Revolution in Africa (AGRA)

Founded in 2006, this is a non-profit organisation aimed at improving agricultural practices, as well as increasing the income of farmers and ultimately their quality of life. AGRA has already provided over 140 million dollars in investments and attempts to transform current agricultural practices to effectively support nutritional self-sufficiency. AGRA, however, only operates in 11 African nations.

Angola

Angola is a major producer and exporter of many crops, including beans, yams and more, being a fertile region. However, its production rarely meets local needs, and Angola is an example of the struggle to balance agricultural development with nutritional self-sufficiency. Still, Angola is a leader in solutions such as international partnerships and can use its fertile lands to implement further ideas for agricultural development that the African Union may offer.

Brazil

As a country that finds itself in a similar situation to many places in Africa, Brazil has cooperated greatly with the African Union regarding agriculture. Together, Brazil and the African Union work against hunger and towards nutritional self-sufficiency. Brazil is aiming to conduct agricultural exchanges and has already met with multiple African leaders to achieve this.

China

China is invested economically in agricultural development on the African continent and is one of the non-African countries most relevant to this issue. China has been involved in multiple projects for development in various nations. In 2015, South Africa hosted the Forum for China-Africa Co-operation, with almost all African nations present.

South Africa

South Africa is a relatively food-secure nation. While it has not reached full nutritional self-sufficiency, it holds a leadership position in intra-African relations, and that applies to both its comparatively strong economy and its agricultural technology.

Sudan

Sudan is a nation currently undergoing a brutal civil war, which has caused a famine to be declared by the UN in the country. As such, it is one of the least food-secure countries in the world. In 2021, following the start of the war, the African Union had suspended Sudan's membership, causing the circumstances for its civilians to be all the more fragile.

Timeline of events

1974 November	World Food Conference held in Rome. Constituted a global promise and commitment to act against hunger and opened the door for future efforts towards food security.
1996 November	Food security is declared to be a fundamental right.
2002 July 9th	The African Union was founded, able to coordinate the effort towards nutritional self-sufficiency on the continental scale for the first time.
2003	The newly founded African Union launches the CAADP (Comprehensive Africa Agriculture Development Programme).
2006	AGRA launched.
2008	The global food crisis causes extensive impacts in Africa, including sharp rises in food prices due to dependence on imports, hence highlighting the need for nutritional self-sufficiency.
2015 September	Sustainable Development Goals published, including goal 2: zero hunger. Aim to achieve by 2030.
2021-2025	UN Food Systems Summits, calling for the transformation of current practices into ones that will promise nutritional self-sufficiency and balance it with agricultural development.

Possible solutions

Supporting and subsidising smallholder farmers

It is estimated that of the entire continent's food supply, 70-80% is produced by smallholder farmers. However, up to 90% of impoverished people in areas such as sub-Saharan Africa live in rural areas and are, in most cases, smallholder farmers themselves. The disparity between how much Africa relies on these farmers and how little they profit is one of the most blatant impacts that are occurring due to nutritional self-sufficiency not being prioritised enough. To balance it with agricultural growth and development, a key solution would be to bridge this inequitable disparity. To do this, various economic policies could be suggested and enforced, whether related to providing fertilisers, economically protecting their lands or profiting them for the crops produced. After all, independently producing the necessary means for a nutritious diet is very, very expensive. And, in realising the commitments of the CAADP for 10% of national budgets being reserved for agriculture, African countries could use their funding for this purpose.

Diversifying agriculture to meet nutritional needs

Once the African Union has financially supported farmers in producing crops in the first place, it is imperative to guarantee that these are diverse enough to meet the nutritional needs of a balanced diet. Africa is so vast; some countries are deserts, some are savannas, some are jungles and some are coastal. Different crops will be optimal in each of these areas. By diversifying the agricultural output of the continent, crops of all kinds would be grown, and less would need to be imported.

Collaborating to reach the necessities of a healthy diet

As previously mentioned, and further explained in the appendix below, nutritional self-sufficiency is not considered to be achieved without a healthy, balanced diet that is consumed, with all the nutrients our body requires. Notably, an underdiscussed resource is clean water, which is scarce in many places, but with strong systems of collaboration, more and more farmers could have access to it. Nevertheless, it can be an unfeasible task for smallholder farmers to grow dozens of different crops, even with governmental support. Instead, the African Union can opt to take advantage of the current situation, in which farmers specialise in one crop, and simply use trade mechanisms to ensure each farmer consumes their own yields and the rest of the necessary nutrients from other farmers nearby. In other words, rather than importing from overseas, trade cheaply within the country or region, in a system where each farmer does their part for the greater good.

Strengthening agricultural infrastructures

One type of agricultural development is agricultural infrastructure. By investing in this, countries could hit two birds with one stone. On one hand, the country will record agricultural development, since the new infrastructures (rural roads, irrigation systems, and digital tools) would increase production and support economic growth. Simultaneously, the proposed solution of trading with other local farmers can become a reality. This principle also applies to any solution that requires the mobilisation of food or other goods across the continent.

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Appendix

1. UN Definition for a healthy diet

The following source defines a healthy diet according to the UN World Health Organisation, referring separately to adults, children and infants. Please use this information for any resolutions regarding the obtaining of a healthy diet and nutritional self-sufficiency.

Source: https://www.who.int/news-room/fact-sheets/detail/healthy-diet