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Alliance of Sahel States' Agricultural Policy Challenges and Food Security: Insights from an Intra-Regional Perspective

Sahel Devletleri İttifakı'nın Tarım Politikası Zorlukları ve Gıda Güvenliği: Bölgeler Arası Perspektiften İçgörüler

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Abstract

This study investigates the agricultural policy challenges facing the Sahel States Mali, Niger, and Burkina Faso and their implications for food security and regional development. It assesses the contributions of the Alliance of Sahel States to sustainable agriculture and rural development through political, economic, environmental, and social perspectives. Despite the region's considerable agricultural potential, obstacles such as low productivity, limited technological advancements, inadequate infrastructure, insufficient training, and the impacts of climate change continue to hinder progress. The study underscores the necessity for policies that enhance productivity, promote sustainable practices, and provide support for small-scale farmers. These initiatives are vital for unlocking the region's agricultural potential and ensuring long-term resilience and food security.

Keywords: Sahel Alliance, agricultural policy, Food security, Assessment, Regional

Özet

Bu çalışma, Sahel Devletlerindeki (Mali, Nijer ve Burkina Faso) tarım politikası zorluklarını ve bunların gıda güvenliği ve bölgesel kalkınma üzerindeki etkilerini incelemektedir. Çalışma, Sahel Devletleri İttifakı'nın sürdürülebilir tarım ve kırsal kalkınmaya katkılarını siyasi, ekonomik, çevresel ve sosyal merceklerden değerlendirmektedir. İttifakın önemli tarımsal potansiyele rağmen düşük verimlilik, sınırlı teknoloji, zayıf altyapı, yetersiz eğitim ve iklim değişikliği gibi sorunlar devam etmektedir. Çalışma, verimliliği artıran, sürdürülebilir uygulamaları teşvik eden ve küçük ölçekli çiftçileri destekleyen politikalara duyulan ihtiyacı

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vurgulamaktadır. Bu çabalar, bölgenin tarımsal potansiyelinin ortaya çıkarılması ve uzun vadeli dayanıklılık ve gıda güvenliğinin sağlanması için son derece önemlidir.

Anahtar Kelimeler: Sahel İttifakı, Tarım politikası, Gıda güvenliği, Politika analizi, Bölgesel

Introduction

The Alliance of Sahel States (ASS) comprises a group of countries in the Sahel region (Mali, Niger, Burkina Faso) facing shared challenges, including agricultural policy issues and food security concerns. This alliance represents a collaborative effort among its member states to collectively address these challenges. An exploration of the agricultural policy challenges and food security within the Alliance of Sahel States would likely touch upon the region's significance in agriculture, given its largely agrarian economies. It would likely highlight the importance of agriculture as a primary source of livelihood for a significant portion of the population within these states.

Moreover, the introduction would outline the unique agricultural policy challenges faced by these nations, which could encompass issues related to land degradation, climate change impacts, limited access to technology and resources, inefficient farming practices, and inadequate infrastructure. These challenges often hinder agricultural productivity and contribute to food insecurity within the region.

The Sahel region faces significant agricultural policy challenges that have a direct impact on food security. The region's vulnerability to climate variability, particularly droughts and extreme temperatures, poses a significant threat to agricultural productivity (Sheen et al., 2017; Walther, 2016; Sarr, 2017). In addition, the region's heavy reliance on rain-fed agriculture and pastoralism makes it particularly vulnerable to climate-sensitive livelihoods, further worsening food security issues (Cepero et al., 2021). The unprecedented droughts of the early 1970s led to the establishment of early warning systems, underlining the essential role of agrometeorological information in predicting crop failure (Traoré et al., 2010). In addition, the Sahel's economy is heavily dependent on agriculture, underscoring the sector's central role in the region's overall food security (Sarr et al., 2018).

Considering these challenges, addressing the complex interactions among land use, climate change, agricultural security, and growth is essential to ensure food security in the Sahel. The impact of climate variability on agriculture in the Sahel also has wider implications for the region's security and development. The effects of drought on agricultural yields and yield variability have economic ramifications, as the Sahel relies heavily on food imports despite a large farming population (Boubacar, 2012). In addition, the region's vulnerability to climate change, armed conflict, and environmental insecurity may lead to increased political instability and further deterioration in food security (Al-Saidi et al., 2022).

From this perspective, it is essential to address the challenges of agricultural policy in the Sahel to ensure food security and sustainable development in the region. This requires a comprehensive approach that integrates sustainable agricultural management practices, early warning systems for climate-related risks, and efforts to mitigate the wider impacts of climate variability on agriculture and food security.

Agricultural development in the Sahel region is a crucial issue because of the challenges posed by low and erratic rainfall, poor soil quality, and vulnerability to droughts (Nicholson, 2013). Agricultural systems in the region are highly dependent on rainfall, making them particularly sensitive to climate variability, as evidenced by the severe droughts of the 1970s and 1980s

(Sheen et al., 2017; Garnot et al., 2018). The lack of agricultural technologies, such as irrigation, further intensifies the vulnerability of agricultural production in the Sahel (Herrmann et al., 2014). The rapid growth of the rural population in the Sahel is also putting increasing pressure on the region's limited natural resources, further impacting the sustainability of agriculture (Yengoh, 2012).

Given the importance of agriculture to the region's economy, rainfall and temperature variability significantly affect agricultural production and, consequently, GDP (Sarr, 2017; Mertz et al., 2011). The vulnerability of Sahelian agriculture to climate variability highlights the need for strong support for agricultural development and the adaptive capacity of rural areas (Kuyah et al., 2019). The sustainable intensification of smallholder agriculture has been recognized as a crucial element of the strategy to increase food production in the region.

In addition, the region's vulnerability to climate variability and increasing pressure on natural resources require the development and implementation of adaptation strategies to strengthen the resilience of agricultural systems in the Sahel (Kuyah et al., 2019). This includes practices targeting soil fertility, farmland rehabilitation, and agroforestry, which have been identified as potential solutions for improving cozy stem services and increasing food production in the region (Nicholson, 2013).

Addressing these challenges requires a multifaceted approach that integrates sustainable agricultural practices, adaptation strategies, and support for the adaptive capacity of rural areas to improve the resilience of farming systems in the Sahel with agricultural policies that respond to the realities of the area and the environment.

Difficulties in establishing common agricultural policies for the alliance of Sahel states to ensure sustainable agricultural production and food security of the region; largely determined by the adaptation capacity, which consists of economic, social, and political capacity, as well as infrastructure and technological potential. In this study, the possible contributions of the Sahel States Alliance to the sustainability of agricultural production, food security, and rural and economic development at the regional level have been examined, evaluated, and discussed with their political, governance, economic, environmental, and social dimensions. In the study, the planning and implementation of agricultural policies in the Sahel region and the difficulties, limitations, and potential opportunities that will be experienced in this process have been revealed.

Contextual and Geopolitical Framework

Review of the existing literature on agricultural policies and food security in Sahelian regions

A review of existing literature on agricultural policies and food security in the Sahelian region (Mali, Niger, and Burkina Faso) reveals a diverse body of research addressing several crucial aspects of this issue. Previous studies have examined the agricultural policies implemented in the three countries and their impact on the food security of local populations. More specifically, this research has analyzed government policies aimed at promoting agriculture, increasing crop productivity, and improving rural infrastructure in these regions.

Existing studies have also assessed the food security challenges facing Sahelian farmers, including harsh climatic conditions, soil degradation, fluctuations in agricultural commodity prices, and armed conflict (MAFAP 2013; INSTAT 2019; Mirzabaev, et al.,2021; Coulibaly, 2021; MAFAP 2022). These factors have a significant impact on food availability and accessibility in the Sahelian regions, contributing to food insecurity and malnutrition.

Between 2004 and 2010, the total budget allocated to Mali's agricultural sector increased significantly by 72% in nominal terms, to reach 198 billion FCFA (1 FCFA = 0.0016 USD Dollar). Over the same period, total real expenditure rose by 82% to 132.3 billion FCFA (Komorowska et al. 2013; FAO 2014). However, despite this increase in nominal terms, the relative share of the budget devoted to agriculture fell from approximately 15% of public spending in 2004 to approximately 12% in 2009. On the other hand, real expenditure remained stable at around 11% in both 2004 and 2009 (Komorowska et al. 2013; FAO 2014). Despite the slight decline in the relative importance of agriculture in Mali's total government budget, current spending remains in line with the recommendations of the Comprehensive Africa Agriculture Development Program (CAADP), developed in the 2003 Maputo Declaration. This declaration called for at least 10% of the total budget to be allocated to agriculture and rural development (FAO 2014). Thus, even if the relative share of the budget dedicated to agriculture has fallen slightly, it remains in line with the regional and international objectives aimed at promoting agricultural and rural development within the CAADP framework.

The sharp drop in Mali's total state budget is largely explained by the suspension of direct support to the state budget from development partners in 2012, as well as the country's instability caused by the war in northern Mali and insecurity problems perpetrated by terrorist groups, attributed to the destabilization of Libya by Westerners, notably NATO (FAO 2013; Nkuingoua and Pernechele. 2022). This destabilization led to the suspension of development aid by many donors during the last three quarters of 2012, a situation that persists to this day. Against this backdrop, Mali reallocated a significant part of its budget to the defense of the national territory, leading to the recovery of the country's territorial integrity in 2023.

An examination of Burkina Faso's approved agricultural budget over the period 2006-2015 reveals significant growth, with an average annual growth rate of 8.1% (Yameogo et al.2014; Yameogo et al. 2017). At the same time, real public spending in this area increased by 65% over the same period (Yameogo et al.2017). However, despite these substantial budgetary commitments, actual spending in support of agriculture and food has generally fallen short of forecasts, with an average difference of 3.7 points per year.

The years 2011, 2014, and 2015 recorded the lowest levels of budget disbursement, with 10%, 9%, and 7% of the overall budget. The challenges faced by Burkina Faso are similar to those faced by Mali and Niger, creating an alliance between these states. These difficulties have led to a significant reduction in the share of the budget allocated to the agriculture and food sector, from 22.4% in 2014 to 10.5% in 2015. We continue today with the accentuation of the budget on the defense sector (FAO, 2014; Yameogo et al.2017).

There are no exhaustive data specific to Niger; however, the country's agricultural characteristics and economic aspects share similarities with those of other countries. The current situation in Niger reveals the persistent challenges facing the country in terms of food security, despite the efforts made, notably through the 3 N (Nigeriens Nourishing Nigeriens) Initiative (Boureima, 2006). The worsening climate crisis and lagging technology have made it even more difficult to build a resilient agricultural system. Despite considerable investment, with over 2,500 billion FCFA allocated to the 3 N Initiative over the past 10 years, the results remain mixed. The persistent dependence of over 2 million Nigeriens on food aid underscores the scale of the challenge. However, there are signs of hope with the Nigerien government's commitment to devote more resources to agriculture, even exceeding the recommendations of the Maputo Commitment by allocating 15% of the national budget to this vital sector. These ambitious measures, as underlined by outgoing President Mohamed Bazoum, could be a significant step toward building a more resilient agricultural system and reducing Niger's food

dependency (Ahlijah, 2021). However, further efforts are needed to ensure effective implementation and judicious use of these resources to achieve long-term food security and sustainable development objectives.

The Review of Food and Agricultural Policies in Mali 2005-2011 offers a comprehensive analysis of the impact of food and agricultural policies in Mali over a crucial period. Based on in-depth technical notes, the review examines eight major agricultural products (Cotton, Rice, Maize, Sorghum, Millet ,Onion ,Arabic gum) in detail, which together account for a significant 65% of the total value of agricultural production in the country (MAFAP,2013).

This study sheds light on the effectiveness of agricultural policies in place and their implications, providing essential information for policymakers and stakeholders in Mali's agricultural sector. By providing an in-depth analysis of food and agricultural policies over a defined period, this review helps inform discussions on the future orientations of agricultural policies in the country, aimed at strengthening food security, promoting sustainable rural development, and stimulating economic growth.

The FAO report on Burkina Faso provides an in-depth analysis of the country's socioeconomic situation, highlighting aspects such as macroeconomic performance, agricultural progress, and rural development. By examining input markets and the development of agricultural value chains, the report identifies challenges and opportunities for Burkina Faso's agricultural sector. Particular attention has been paid to the interaction between the environment and agriculture, highlighting the importance of sustainable agricultural practices and the preservation of natural resources (MAFAP,2013).

On the socioeconomic front, the report highlights the challenges facing Burkina Faso, notably poverty, inequality, and unemployment. It also highlights the crucial role of the population in the development of the agricultural sector, both as key economic players and as beneficiaries of rural development policies and programs (MAFAP,2013). By integrating a holistic analysis of the socioeconomic context with agricultural performance, the report offers essential insights to guide policies and interventions aimed at promoting inclusive economic growth, reducing rural poverty, and strengthening food security in Burkina Faso.

Amadou et al. (2018) examined the underlying reasons why food policies, influenced by mainstream economic thinking and supported by international donors, have failed to address the persistent problem of hunger in Niger for several decades. This article questions the credibility of national food strategies, highlighting their lack of clear vision and strategic direction, as well as the ambiguous and often controversial role played by actors such as food vendors and international organizations. In addition, this article analyzes the relevance of the new "3 N Initiative" and examines its ability to address the country's food challenges. The author raises the possibility that this initiative may be perceived as a nationalist response to international pressures and social unrest, but also recognizes its potential to alleviate hunger and food insecurity in Niger.

Analysis of the geopolitical context and specific challenges facing agriculture in the Sahel region

Analysis of the situation in the Sahel, particularly in the countries of the Sahel and Sahara Association (SSA), is complex and difficult, marked by the convergence of various factors (Raleigh et al., 2020). These factors include the destabilization of Libya by NATO, which was followed by the emergence of multiple violent armed groups from that country, as well as the weakening of state authority in the region, the militarization of neighboring countries, and the exploitation of opportunities for violence (Melly, 2020). The Sahel region, which encompasses

Mali, Burkina Faso, and Niger, has seen an upsurge in armed clashes and civilian deaths over the past decade. This has led to increased conflict and instability, posing a serious threat to peace and security in the region (Raleigh et al., 2020).

In addition, the situation in the Sahel is further exacerbated by environmental challenges such as climate change, which aggravates the already difficult arid conditions and puts additional pressure on the population (Melly, 2020). In addition, the Sahel region faces high levels of poverty and limited economic opportunities, making it particularly vulnerable to various forms of instability (Raleigh et al., 2020).

The Sahel region, located in the semi-arid zone of Africa, faces a myriad of challenges that have significantly impeded agricultural development. Political instability, fueled by internal conflicts and external interventions, has created an environment fraught with uncertainty, making it difficult for farmers to plan. These conflicts have also led to the displacement of communities, disrupting traditional farming practices, and further worsening food insecurity (Cepero et al., 2021). Furthermore, climate change has disproportionately affected the Sahel region, with increased temperatures, irregular rainfall patterns, and prolonged droughts negatively affecting agricultural production (Sissoko et al., 2010). These climate-related challenges have led to crop failures, loss of livestock, and reduced land productivity, further worsening food insecurity in the region (Mbaye, 2020).

To address these challenges, it is crucial to implement a multifaceted approach that combines political stability, conflict resolution, and climate change adaptation strategies (Melly, 2020). By addressing the underlying geopolitical issues and promoting peace and stability in the region, governments can create an enabling environment for agricultural development (Mirzabaev, et al., 2021). Additionally, investing in climate-smart agriculture practices such as agroforestry, conservation agriculture, and improved irrigation systems can help farmers adapt to changing climate conditions and increase their resilience to climate shocks (Mbaye, 2020). This will require collaboration among local communities, governments, international organizations, and NGOs to provide the support, resources, and technical expertise needed for sustainable agricultural development in the Sahel region. In addition to these strategies, it is important to recognize and leverage the cultural knowledge and practices of the communities in the Sahel region.

Therefore, addressing the geopolitical context and these specific challenges is crucial for promoting sustainable agriculture and enhancing food security in the Sahel region (Al-Saidi et al., 2022). Furthermore, the Sahel region faces additional challenges in terms of access to markets and limited infrastructure, which can impede agricultural development (Melly, 2020).To overcome these challenges, it is important to prioritize investments in improving agricultural technologies and infrastructure, strengthening institutions and governance, promoting sustainable land management practices, and facilitating regional cooperation and coordination. By addressing the geopolitical context and implementing targeted solutions, including agricultural interventions and investments, we can work toward improving food security and resilience in the Sahel region and ultimately create a more stable and prosperous future for the people living in Mali, Burkina Faso, and Niger (Melly, 2020). The Sahel region's agricultural challenges are deeply intertwined with its geopolitical context, posing complex obstacles to sustainable development. The region's susceptibility to political instability, conflict, and insecurity undermines agricultural productivity, worsening food security and livelihood issues. Moreover, the harsh arid environment of the Sahel, coupled with increasing climate change impacts, intensifies water scarcity and the risk of droughts and desertification, further challenging agricultural sustainability.

One of the major challenges facing agriculture in the Sahel states, including Mali, Burkina Faso, and Niger, is low agricultural productivity and unsustainable farming practices. This is due to various factors such as inadequate rainfall, limited access to modern agricultural technologies, and poor soil fertility. As a result, crop yields are often low, leading to food insecurity and limited income for farmers. In addition, farming practices in the Sahel states are mostly traditional and rely heavily on rained agriculture, which makes them vulnerable to climate variability and drought (Defrance et al., 2020).

Efforts are being made by these states to meet these challenges and improve the agricultural situation in the Sahel states. These efforts include the promotion of sustainable agricultural practices, such as conservation agriculture and agroforestry, which improve soil fertility and water management. In addition, initiatives are underway to provide farmers with access to high-yield seeds, improved irrigation systems, and training in modern farming techniques.

Current Agricultural and Food Situation in The Alliance of Sahel States

Analysis of the current state of agriculture in the Sahel states (yields, farming practices, production)

Agriculture plays a vital role in the economies of Mali, Niger, and Burkina Faso and in the food security of their populations. Located in the Sahel region of West Africa, these countries share semi-arid climatic conditions and often poor soils, which present major challenges for agriculture. Despite these difficulties, agriculture remains the main economic pillar and source of livelihood for many rural communities.

In Mali, agriculture is essential, employing most of the working population 80% and contributing significantly to GDP (Word Bank 2010; Traoré, et al. 2019; FAO,2023, word bank 2023). Major crops include millet, sorghum, rice, corn, cotton, and peanuts. Although facing challenges such as drought and food insecurity, Mali has significant agricultural potential, particularly in the southern regions where climatic conditions are more favorable.

In Niger, agriculture is also crucial, providing the main source of income for the population and making a significant contribution to export earnings 16% (FAO,2023). The main crops include millet, sorghum, maize, rice, and legumes. Despite climatic and environmental challenges, traditional farming practices, such as off-season cultivation, strengthen the resilience of rural communities.

In Burkina Faso, agriculture is the main economic driver, employing most of the working population 80% and providing a vital source of livelihood for many rural families. Major crops include millet, sorghum, maize, rice, cotton, and peanuts (MAFAP,2013). Despite similar challenges, the Burkinabe government is implementing policies to promote sustainable agriculture, notably through the promotion of soil conservation practices and the adoption of agricultural technologies adapted to local conditions.

Agriculture's share of GDP in the countries of the ASS significantly exceeds that of the Economic Community of West African States (ECOWAS) as a whole, at 22.2%. For Mali, Burkina Faso, and Niger, the figures are 36.4%, 35.6%, and 42.5%, respectively (World Bank 2023). These figures highlight the preponderance of agriculture in the economies of ASS countries, indicating a relative lack of economic diversification compared with ECOWAS. However, the high contribution of agriculture to GDP also reveals its strategic importance in these economies, although it is less dominant than in ECOWAS. This underscores the need for these countries to diversify their economies and strengthen other sectors to reduce their excessive dependence on agriculture and promote more balanced, resilient economic growth.

The notable difference between the total arable land area of the member countries of the ASS and that of the Economic Community of West African States (ECOWAS) highlights the significant variations in agricultural capacity and resources available in the ASS. With a total arable land area of 71 million hectares for the three ASS countries, this represents a significant agricultural base compared with that of the 12 ECOWAS countries, which have 125 million hectares of arable land (Atewamba, et al.,2020).

The member countries of the ASS present a significant opportunity in the agricultural sector, given the potential market of 71.5 million people, mainly young, and a GDP per capita of $749.5. This combination offers a dynamic domestic market and a growing consumer base, with a young population likely to have growing food and consumption needs. Opportunities in the agricultural sector can take many forms, such as food production to meet local demand, processing of agricultural products to create added value and boost employment, and exporting to other regional or international markets. Moreover, with a young population, there are opportunities for innovation and technology in agriculture, such as the use of sustainable farming practices, the adoption of advanced agricultural technologies, and the development of efficient supply chains to meet market needs. By exploiting these opportunities, ASS countries can not only boost their economic development through the agricultural sector but also contribute to food security and job creation for their young and dynamic populations.

Some key socioeconomic characteristics of the ASS countries have given in Table 1. Niger has the highest growth rate among the member countries of the ASS, with an economic growth rate of 11.5% in 2023. This high growth rate reflects increased economic dynamism in the country, with potential opportunities for development and investment. In contrast, Mali's economic growth rate is slightly lower, but still significant, at 3.7% in 2023. This figure reflects sustained growth in the Malian economy, albeit at a slower pace than that in Niger.

Burkina Faso, on the other hand, has the lowest growth rate among ASS countries, at just 1.8% in 2023. This more modest rate of economic growth can be attributed to various factors, such as structural economic challenges, unfavorable climate conditions, or problems related to governance and political stability (Bloomfield Investment,2023).

These different economic performances within the Alliance of Sahel States underline the importance of economic policies and strategies tailored to each national context, as well as the need for regional cooperation to promote sustainable and inclusive economic growth across the region.

***Table 1**. Key socioeconomic characteristics of the (ASS) countries*

Country	Population (2023, in millions)	GDP per capita (2023, current USD)	GDP growth (annual %)	Share of agriculture, forestry, and fishing in GDP (%, 2023)	Cultivable land area (millions hectare)
Mali	22,593,590	833,3	3,7	36,4	43,7
Burkina Faso	22,673,762	830	1,8	35,6	11,8
Niger	26,207,977	585,4	11,5	42.5	15,4
Total	71,475,329	749.5(Means)	-	-	71,6

Source: Own calculations

This table highlights the key socioeconomic features of Mali, Burkina Faso, and Niger, including population size, GDP per capita, GDP growth rate, the agricultural sector's share in GDP, and cultivable land area. Niger shows the highest GDP growth (11.5%) and the largest population (26.2 million), while Mali leads in cultivable land area (43.7 million hectares). The average GDP per capita across the three countries is $749.50, reflecting economic challenges despite significant reliance on agriculture.

Cereal production is of crucial importance to the agricultural and economic sectors of Mali, Burkina Faso, and Niger. These nations rely heavily on cereal crops to sustain their populations, generate income, and guarantee food security (Sanders et al., 2019). Furthermore, cereal production contributes to the overall economic stability of these countries and alleviates the effects of poverty and hunger. Thus, cereal production is of strategic importance in Mali, Burkina Faso, and Niger because it is a fundamental pillar of food security, income generation, and overall economic development (Birhanu, 2016). Indeed, cereal cultivation goes beyond the simple aspect of subsistence and income generation; it also embodies traditional agricultural practices and indigenous knowledge passed down from generation to generation. This characteristic confers a significant advantage on the countries of the ASS, both in economic terms and in terms of food sovereignty. Total cereal production amounts to 25 million tons, further consolidating the strategic importance of this sector in these countries.

Important crops produced and their share by ASS member states have given in Table 2. Among the Sahel countries, Mali ranks first with a share in Cotton production (51.5%), Rice production (87.0%), Maize production (66.6%), Sorghum production (37.4%) and Arabic Gum production (100%). Niger ranks first with a share in Millet production (57.1%) and Onion production (67.8%) (Table 2). Mali was the second largest producer in the ECOWAS, just behind Nigeria. This position demonstrates the vital importance of the country's agricultural sector in the West African region. It also highlights the central role of Mali in the sub-region's food and economic production. This highlights Mali's agricultural potential and its essential contribution to regional food security. Cereal production in the ASS countries represents 33.76% of the total production of ECOWAS.

Gum Arabic is widely used as an additive in both the food and non-food industries. However, there is a notable imbalance between supply and demand at international level. The three countries have enormous potential and the ability to develop this sector to meet growing global demand (Mujawamariya, et al.2013). By effectively exploiting their natural resources and implementing sustainable production practices, Mali, Niger and Burkina Faso could play a significant role in the global gum arabic market. This could not only boost their local economies by creating jobs and generating income, but also help reduce the imbalance between supply and demand on the international market. However, this would require investment in research, technology development and capacity building for local producers to ensure efficient, high-quality production.

Table 2. *Important crops produced by ASS member states(tons)*

Countrys	Cotton		Rice		Maize		Sorghum		Millet		Onion		Arabic gum	
	tons	%	tons	%	tons	%	tons	%	tons	%	tons	%	tons	%
Mali	690.000	51,5	3.904.687	87	3.624.950	66,6	2.459.000	37	1.840.321	28,7	693.974	31,4	60.000	100
Burkina Faso	649.494	48,5	438.982	9,8	1.810.276	33,2	2.013.868	31	907.744	14,2	17.816	0,8	-	-
Niger	588.105	43,9	144.000	3,2	9.332	0,2	2.100.697	32	3.656.958	57,1	1.496.545	67,8	-	-
Total	**1.339.494**	**100**	**4.487.669**	**100**	**5.444.559**	**100**	**6.573.566**	**100**	**6.405.023**	**100**	**2.208.336**	**100**	**60.000**	**100**

Source: Own calculations

This table presents the production volumes and percentages of key crops (cotton, rice, maize, sorghum, millet, onion, and Arabic gum) in Mali, Burkina Faso, and Niger. Highlights include Mali's dominance in rice and Arabic gum production, Burkina Faso's significant maize and sorghum contributions, and Niger's lead in millet and onion production. The data reflect total crop outputs and their distribution percentages across ASS member states

Number of Livestocks of the ASS countries have given in Table 3. In the current geostrategic context, with the configuration of Mali, Niger, and Burkina Faso, this area is poised to become the agricultural breadbasket of West Africa. Mali is already the second largest agricultural producer in the ECOWAS, after Nigeria. With a combined population of approximately 40 million cattle, 50 million sheep, and 101 million heads of poultry, this region is rich in agricultural and livestock potential. This abundance of livestock represents an important source of animal protein and a vital economic resource for the region's inhabitants. In addition, it offers a comparative advantage in terms of competition with ECOWAS countries and considerable opportunities to strengthen food security in the ASS states and contribute to their sustainable economic and social development.

Table 3. *Number of Livestock of the ASS countries (heads)*

Country	Cattle	%	Sheep	%	Pigs	%	Camels	%	Poultry	%
Mali	14.111.128	36,11	25.183.500	51,21	86.182	5,74	1.241.093	97,77	65.617.572	64,70
Burkina Faso	9.720.615	24,88	10.750.406	21,86	1.416.342	94,26	28 365	2,23	35.803.843	35,30
Niger	15.245.434	39,01	13.245.564	21,86	-		-		-	
Total	**39.077.087**		**49.179.470**		**1.502.524**		**1.269.458**		**101.421.415**	

Source: Own calculations

Distribution of Livestock in ASS Countries (Heads). Highlights include cattle, sheep, pigs, camels, and poultry numbers across Mali, Burkina Faso, and Niger, emphasizing regional disparities and livestock trends. Data reflect total livestock counts per category.

Analysis of the Current Agricultural Policies of ASS Countries

The agricultural sector plays a crucial role in the economies of African countries, including Mali, Burkina Faso, and Niger. In Mali, the government has implemented several agricultural policies to enhance productivity and food security. These policies include: providing subsidies for agricultural inputs, such as seeds and fertilizers; promoting the use of improved farming techniques and technologies; developing irrigation systems to combat drought and improve water management; and supporting the creation of agricultural cooperatives to strengthen small-scale farmers' bargaining power (De Graaff et al., 2011). In Burkina Faso, the government has

also implemented various agricultural policies to address the challenges faced by the sector. These policies include the promotion of sustainable agricultural practices, such as agroecology and conservation agriculture, to enhance soil fertility and reduce environmental degradation (Nyamekye et al., 2018).

In addition, Burkina Faso has focused on improving access to credit and financial services for farmers, implementing measures to strengthen agricultural value chains, and investing in the development of agricultural infrastructure, such as irrigation systems and storage facilities (Graaff et al., 2011). Similarly, in Niger, agricultural policies have been implemented to support the sector's growth and productivity. These policies include the promotion of climate-smart agriculture techniques, such as drought-resistant crop varieties and water harvesting methods, to mitigate the effects of climate change and enhance resilience (Zougmoré et al., 2016). Moreover, the government prioritized investments in rural infrastructure, such as roads and markets, to improve market access for farmers. Furthermore, Niger has taken steps to improve the availability and accessibility of agricultural inputs, such as seeds and fertilizers, through various subsidy programs.

The implementation of these comprehensive agricultural policies is crucial for enhancing the resilience of small-scale farmers and ensuring the long-term sustainability and viability of the agricultural sector in Mali, Burkina Faso, and Niger. These policies recognize the interconnectedness of agricultural development, food security, sustainability, and resilience. They acknowledge the need for an integrated approach that simultaneously addresses multiple challenges, including access to inputs, market opportunities, infrastructure, and climate resilience. By adopting such comprehensive agricultural policies, these countries are taking a holistic approach to address the challenges faced by their agricultural sectors and foster their development and resilience (Andrieu et al., 2017). By focusing on increasing agricultural productivity, improving food security, promoting sustainable practices, enhancing livelihoods, and strengthening the resilience of small-scale farmers, Mali, Burkina Faso, and Niger are laying the foundation for a sustainable and resilient agricultural sector.

Assessment of agricultural policies in terms of effectiveness, inclusiveness, and impact on food security

Agricultural policy assessment criteria have shown in Figure 1. Evaluation of agricultural policies in ASS member states must focus on several key aspects. First, it is crucial to determine whether these policies are effective in achieving their stated objectives, particularly in improving food security and reducing vulnerability to climate change. In addition, it is important to analyze whether these policies promote an equitable distribution of benefits for all stakeholders, especially small-scale farmers.

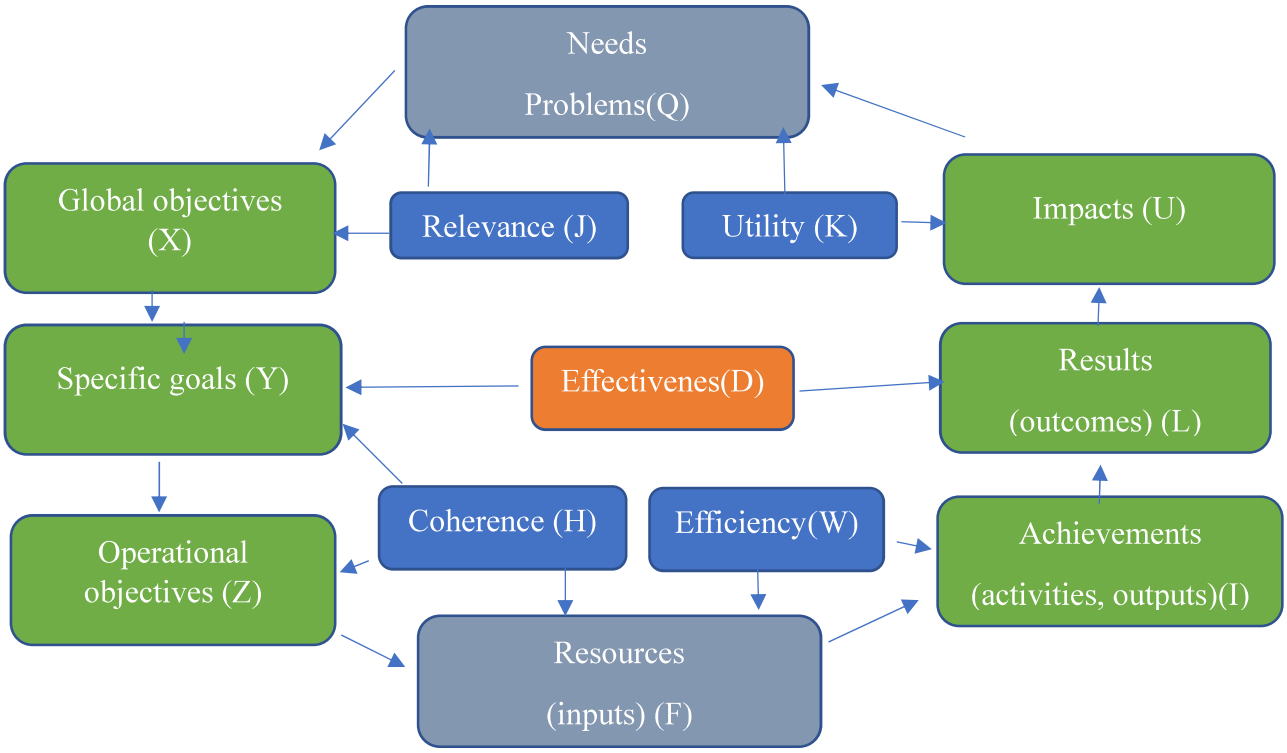
It is also essential to assess the extent to which member countries' agricultural policies have increased agricultural productivity, improved access to inputs and markets, and strengthened the livelihoods of smallholders. In addition, it is important to determine whether stakeholders in the agricultural sector are effectively involved in the development and implementation of these policies, as well as their perception of the impact of these policies on their food security and general well-being. It is crucial to assess the sustainability of these policies, particularly in terms of their impact on the use of natural resources, on the environment, and their long-term viability (Adeyemi, 2011).

Is the relevance of countries' current agricultural policies examined in terms of their ability to respond to the specific needs and challenges of vulnerable groups, such as women, young people, and marginalized communities? The effectiveness of these policies in resolving the

problems faced by these groups is essential, particularly in guaranteeing their access to agricultural resources, opportunities, and services.

Furthermore, what are the roles of public authorities and institutional frameworks in implementing and monitoring these agricultural policies? Ultimately, the evaluation of agricultural policies in Mali, Burkina Faso, and Niger will provide crucial insights into their effectiveness, inclusiveness, and impact on food security, as well as their alignment with sustainable development goals. The assessment will identify potential gaps and areas for improvement to ensure that these policies effectively address the needs of agricultural populations, particularly the most vulnerable groups.

Figure 1. *Agricultural policy assessment criteria*



The general objectives of agricultural policies in ASS member countries should be aimed at identifying and solving specific needs or problems encountered in the agricultural sector. This approach ensures that the policies developed adequately address the real needs and challenges of farmers and rural communities. Thus, the match between overall objectives and identified needs enables us to assess the relevance of the agricultural policies implemented within the ASS.

The relevance, coherence, impact, achievements, and social usefulness of agricultural policies in countries such as Mali, Burkina Faso, and Niger still need to be strengthened. These countries must strive to improve the relevance of their policies by aligning them more closely with the real needs of farmers and rural communities. Coherence between these policies and national agricultural development objectives is also essential to ensure a harmonized and effective approach (Traore, et al.,2019).

Agricultural policy assessments of ASS member countries have given in Table 4. Regarding impacts and achievements, it is crucial to assess the extent to which these policies have succeeded in improving agricultural productivity, enhancing food security, reducing rural poverty, and fostering the economic development of rural areas. In addition, we need to closely examine their social usefulness, assessing the extent to which these policies have improved the living conditions of agricultural populations, particularly the most vulnerable groups such as women and young people (MAFAP,2013).

Consolidating the relevance, coherence, impact, achievements, and social utility of agricultural policies in ASS member countries is a major challenge for ensuring sustainable and inclusive development of the agricultural sector in the region. This requires the ongoing commitment of governments, development actors, and civil society to design, implement, and evaluate agricultural policies in an effective and participatory manner.

Table 4. *Agricultural policy assessment of ASS member countries*

	X	Z	U	Y	F	H	D	J	K	L	I	Q
Mali	+ +	+ +	- +	++	- +	- +	- -	++	- +	- +	- +	+
Burkina Faso	+ +	+ +	- +	++	- +	- +	- -	++	- +	- +	- +	+
Niger	+ +	+ +	- +	++	- +	- +	- -	++	- +	- +	- +	+

Source: Own calculations

(-) Negative; (+) positive; (-+) mitigate; (--) No result

(+) Very positive: Denotes an agricultural policy that has an extremely beneficial impact on producers, contributing significantly to their economic and social well-being.(-) Harmful: Denotes a policy that has a very negative effect on producers, worsening their situation or leading to significant losses.(--) Unknown/ No results: Denotes a policy for which there are as yet no reliable data or evaluations to judge its impact. **Needs Problems(Q), Impacts (U), Global objectives (X), Relevance (J), Utility (K), Effectivenes(D), Results (outcomes) (L), Specific goals (Y), Efficiency(W), Coherence (H), Achievements (activities, outputs) (I), Operational objectives (Z), Resources (inputs) (F)**

Environmental Challenges and Adaptation

Adaptation measures in Sahelian agriculture should focus on improving water management, promoting sustainable land management practices, diversifying crop varieties, and enhancing farmer access to meteorological information and early warning systems. These measures are essential for mitigating the adverse impacts of climate change and desertification on agricultural production and food security in the ASS. Implementing these adaptation measures requires strong commitment and collaboration among decision makers at all levels, and adequate capacity building for food producers. Furthermore, it is important to engage local communities and individuals in the implementation of adaptation measures to ensure their ownership and effectiveness in addressing the environmental challenges faced by Sahelian agriculture (Diallo et al., 2020).

The impacts of climate change, such as increased temperatures and changing precipitation patterns, can have profound effects on agricultural systems in the ASS region. These impacts

include reduced crop yields, increased pest and disease incidence, and changes in water availability. To address these challenges, adaptation measures are required. These adaptation measures should be tailored to the specific needs and conditions of ASS countries agriculture (Singh, 2019). Additionally, addressing desertification is crucial for maintaining and restoring the productive capacity of agricultural land in ASS countries. Implementing measures such as agroforestry, conservation agriculture, and land restoration can help mitigate the effects of desertification and improve soil health. Without effective adaptation measures, Sahelian agriculture will continue to face significant challenges and may become increasingly unsustainable.

These challenges call for integrated approaches that consider the social, economic, and ecological dimensions of agriculture in the Sahel. By implementing sustainable land management practices, improving water management, and promoting agroecological approaches, farmers in the Sahel can enhance the resilience of their agricultural systems and livelihood.

Prospects and Recommendations

Agricultural policy-making plays a vital role in ensuring the sustainability and success of agricultural systems (Bullock et al., 1999). It involves the development and implementation of policies that address issues such as market access, environmental stewardship, resilience to climate change, and risk management (Melchior and Newig, 2021). These policies aim to create a favorable environment for small-scale farmers, promote sustainable practices, protect the environment, and mitigate the impacts of climate change on agriculture (Aryal et al., 2020). Furthermore, agricultural policy-making also focuses on addressing social and economic equity in the agricultural sector, ensuring that smallholder farmers have equal opportunities and access to resources to thrive and contribute to poverty reduction and food security.

Implementing an effective agricultural policy in ASS member states requires a comprehensive and integrated approach that considers the specific challenges facing the agricultural sector. It is essential to implement measures to strengthen food security, promote sustainable agricultural practices, improve rural infrastructure, and support small-scale farmers. In addition, investment in agricultural research, farmer training, and access to finance are key elements in ensuring the success of agricultural policy. Agricultural policy should also support crop diversification and encourage the adoption of new agricultural technologies to increase the productivity and resilience of the agricultural sector (Haïdara, 2020). It is also crucial to involve local stakeholders, including farmers themselves, in the development and implementation of agricultural policy. This participatory approach will not only ensure that farmers' specific needs are considered but also strengthen their commitment to the implementation of agricultural policies.

Formulation of policy recommendations to improve food security and promote agricultural development

ASS member states can draw on the successes and failures of the European Union's Common Agricultural Policy (CAP) to improve their regional agricultural policies. By analyzing European experiences in depth, these states can discern advantageous practices as well as mistakes to be avoided when designing and implementing their respective agricultural policies, considering the cultural particularities of each country. This process will make it possible to avoid repeating past mistakes in the development of agricultural policies and encourage approaches that are better adapted to local contexts, thus contributing to more effective and sustainable management of the agricultural sector in the ASS region.

However, it is equally important to analyze the failures and challenges encountered by the CAP. For example, policies of over subsidization have sometimes led to distortions in agricultural markets, while certain intensive farming practices have had harmful consequences for the environment (Anderson et al.2008; 2013). By learning from these failures, ASS member states can develop more sustainable and resilient agricultural policies that are adapted to the specific realities and needs of the Sahel region.

Alliance of Sahel States Common Agricultural Policy (CAP)

From independence to this day, ASS member countries have experienced a varied evolution in their agricultural performance. Although some progress has been made, such as increased production in certain agricultural sectors and improved basic infrastructure, results in the agricultural sector remain mixed. This situation calls for the creation of a common agricultural policy, with a thorough review of current agricultural policies to overcome persistent challenges and take advantage of emerging opportunities.

It is essential for ASS countries to develop common agricultural policies adapted to their specific realities and needs, avoiding simply reproducing models inherited from colonial times with their own funds. These common agricultural policies must be rooted in a thorough understanding of local conditions, including the socioeconomic, cultural, and environmental characteristics of member countries (Saraceno, 2003; Rizov, 2006). The ASS's common agricultural policy must take several aspects into account. First, it is crucial to promote a participatory and inclusive approach that involves farmers, civil society organizations, researchers, and policymakers in the policy formulation and implementation process. This will ensure that the needs and priorities of stakeholders in the agricultural sector are better considered.

The Common Agricultural Policy (CAP) of the ASS must prioritize promoting environmental sustainability and climate resilience. This means implementing strategies to preserve natural resources, encourage environmentally friendly farming practices, and strengthen farmers' ability to adapt to climate change. Productivism" encompasses the notion of agriculture as a sector marked by continuous, self-reinforcing improvements in overall productivity through research and organizational modernization of farms and agribusiness (Buttel, 1994). This approach emphasizes the efficiency and maximization of agricultural production through modern technologies, intensive practices, and judicious resource management. Nevertheless, productivity also raises apprehensions, particularly with regard to its impact on the environment, its long-term sustainability, and its social implications for rural communities.

Furthermore, it is imperative for ASS countries to invest in technical capacity-building, facilitate access to quality and environmentally-friendly agricultural inputs, and encourage agricultural extension and research and development to foster innovation and improve agricultural productivity. The main objective of the ASS's Common Agricultural Policy (CAP) is to promote agricultural productivity, with particular emphasis on the processing of agricultural products. This implies developing the secondary sector to add value to agricultural production. During the life of the common policy, it is crucial to protect farmers from unfair competition from developed countries by imposing taxes on agricultural products imported from these countries outside Africa (UE,USA, China, Brazil, India..).

Competition may also arise between ESA producers and those of the Economic Community of West African States (ECOWAS). Therefore, it is essential to adopt protective measures and support mechanisms to ensure the competitiveness and viability of farms in the region. In addition, the ASS CAP should encourage cooperation and complementarity between member

states to strengthen their position in regional and international markets while promoting sustainable and inclusive agricultural development.

First, the objectives of the ASS's Common Agricultural Policy must not be geared toward exports outside the sub-region, and more specifically to developed countries, as these exports present certain disadvantages, particularly for developing economies. The main problem is that agricultural exports are vulnerable to large price fluctuations, and there is a risk of deterioration in an economy's terms of trade if it depends on crops whose prices are experiencing a secular decline. This problem will be more acute for ASSs due to the lack of economic diversification and dependence mainly on the agriculture sector of economy (Johnston, and Mellor,1961; Mamba, and Ali,2022).

It is essential to question the economic approach that favors the substitution of imports to the detriment of exports, as this approach is detrimental to the local economies of these countries. This is particularly true of colonial cultures, which are dragging these countries along in an abstract and distorted form of development. What's needed is genuine processing of agricultural products to create added value for the well-being of the population, and to increase producers' farm incomes. By promoting local processing of agricultural products, these countries can not only generate jobs and stimulate their economies, but also reduce their dependence on imports and strengthen their food sovereignty. This requires investment in infrastructure, technology and training, as well as policies to promote agro-industry and value-added in the agricultural sector (Goswami, and Chatterjee, 2009). By adopting this approach, countries can achieve more sustainable and inclusive economic development, benefiting the entire population, and local agricultural producers in particular.

Source of ASS's Common Agricultural Policy Funding

The source of funding for the ASS's Common Agricultural Policy (CAP) should come from member countries' own funds. Indeed, the three ASS countries have abundant natural resources that could be used to finance this common agricultural policy. By mobilizing their own financial resources, member countries demonstrate their commitment to regional agricultural development and strengthen their sovereignty in the design and implementation of agricultural policy. Moreover, by using their own resources, member countries can better control and manage the funds allocated to the CAP, directing them toward priority and strategic initiatives for sustainable agricultural development in the region. Ultimately, the use of member countries' own resources would help to ensure the sustainability and effectiveness of the CAP, while promoting greater autonomy and responsibility in the management of regional agricultural policies.

In 2007, Mali was Africa's third-largest gold producer, second only to South Africa and Ghana, and ahead of Tanzania. Worldwide, Mali ranked thirteenth among gold producers, between Brazil and Armenia in terms of gold production (Mainguy, 2011). The combined gold production of Mali, Burkina Faso, and Niger, reaching approximately 120 tons, underlines the growing importance of these countries in the gold mining industry within the ASS member states. In 2015, Niger ranked as the world's fourth-largest uranium producer, contributing 7.2% of total world production, or 4,057 tons. The Société des Mines de l'Air (SOMAIR) in Niger is ranked as the world's fifth largest uranium mine in terms of production, accounting for 5% of total world uranium production (Volberding, and Warner, 2018).

This production represents a considerable asset for financing these countries' agricultural policies. The revenues generated by gold and uranium mining can be mobilized to invest in agricultural development, improve rural infrastructure, develop rural industry, build farmers'

capacities, and promote food security. This diversification of funding sources offers a strategic opportunity to support economic growth and the well-being of farming populations in the ASS region. However, it is essential to ensure that these resources are used transparently, equitably, and sustainably to maximize their positive impact on the agricultural sector and society as a whole.

Financing the common agricultural policies of the Sahelian states through natural resources is a potential solution to address the challenges faced by the agricultural sector in this region. By leveraging the abundant natural resources present in the Sahel, such as mineral deposits and vast agricultural land, these states can generate revenue that can be allocated toward funding agricultural policies and initiatives. This approach not only ensures a sustainable source of financing but also promotes the conservation and responsible use of natural resources (Mbow et al., 2021). Additionally, investing in the sustainable management of natural resources can lead to job creation and livelihood protection for local communities, particularly for the youth and women. Implementing such a financing strategy would require strong governance and equitable distribution of resources to ensure that the benefits reach all stakeholders, particularly those in vulnerable and marginalized communities.

Creation of a common currency for the ASS

The creation of a common currency for the Common Agricultural Policy has been a topic of much discussion and debate among member states of the ASS region. This initiative provides a unified financial system that can effectively support agricultural activities and initiatives within the region.

The establishment of a common currency for the ASS region holds significant promise for financing the Common Agricultural Policy (CAP) and unlocking various opportunities. A unified currency would bolster economic integration and intra-regional trade, simplifying collaboration on agricultural initiatives and investments (Tavlas, 2009; Seck, 2016). Moreover, it would instill stability and credibility in the agricultural sector through the implementation of a fixed exchange rate regime that mitigates uncertainties, encourages long-term financing avenues, and attracts foreign investment (Rusuhuzwa and Paul, 2013).

Additionally, a currency union in ASS would facilitate the roll-out of social protection schemes targeting rural households, thereby alleviating poverty and vulnerability in agricultural areas, ultimately advancing sectoral development. Furthermore, it would streamline economic policies and reinforce fiscal discipline among member states (Karras, 2015), fostering an environment conducive to sustainable agricultural growth and ensuring efficient allocation of funds for the CAP to benefit farmers and rural communities.

To fully harness the potential advantages of a unified ASS currency for financing the CAP, refining and tailoring existing social protection and productive support programs is paramount (Tavlas, 2009). Moreover, robust collaboration and coordination among member states are imperative to address the specific challenges of rural poverty and vulnerability. Furthermore, linking social protection initiatives with agricultural best practices such as agroecology and climate-smart agriculture would yield synergistic benefits, amplifying the impact of both types of support.

Ultimately, the implementation of a unified ASS currency would fortify regional cooperation and spur sustainable economic expansion in the agricultural sector. These concerted efforts would not only benefit farmers and rural communities but also bolster food security, reduce poverty, and foster overall sustainable development across ASS countries.

Previous studies have highlighted the benefits of a common currency in promoting trade and strengthening economic credibility within a region. It indicates that the adoption of a common currency can stimulate trade between member countries by reducing the transaction costs associated with currency conversion and exchange rate fluctuations. In addition, a common currency can promote price stability by eliminating exchange rate volatility and establishing a unified monetary policy framework, thereby strengthening regional economic cooperation and attracting foreign direct investment (Montanari, 2021).

Conclusion

Only a comprehensive and integrated strategy will enable us to effectively address the agricultural challenges in ASS member countries and create sustainable solutions for food security, poverty reduction and economic development. Addressing agricultural challenges in ASS countries requires a comprehensive and integrated approach (Vermeulen, et al., 2012) that includes political stability, conflict resolution, sustainable agricultural practices, improved infrastructure, the creation of a common currency and regional cooperation. Furthermore, it is imperative for the Alliance of Sahel States to establish a common agricultural policy tailored to their specific needs and driven by African initiatives. This will help ensure effective governance of agricultural policies in the region, promote sustainable agricultural practices, and ultimately improve food security for the people of the Alliance of Sahel States.

In addition, it is essential to address the specific challenges faced by pastoralists and agro-pastoralists in the Sahel, such as climate-related shocks and limited access to resources and services, to guarantee their food security and livelihoods. By addressing these challenges and implementing targeted interventions, we can work towards creating a more resilient and sustainable agricultural sector in the Sahel region. By taking a systems approach, investing in conservation agriculture and integrated systems approaches, and promoting resource conservation practices, we can address household livelihood strategies and production issues in a sustainable, farmer-based way.

In addition, a focus on social protection policies and the integration of social protection with agricultural development can contribute to breaking the cycle of rural poverty and enhancing household resilience. By strengthening social protection programs and linking them with agricultural initiatives such as agroecology and Climate-smart Agriculture (CSA), the Alliance of Sahel States can create synergies that will lead to greater inclusiveness and resilience for vulnerable households. Overall, it is clear that improving access to food and increasing agricultural activity are critical goals for the Alliance of Sahel States. Therefore, the Alliance of Sahel States must prioritize investments in sustainable food production systems, rural development, and the empowerment of smallholder farmers and small-scale producers

Sahel Alliance agricultural policy designers and implementers should take into account that the set goal cannot be achieved by meeting only some technical issues. Agricultural policy implemented for a properly designed purpose will be effective in both achieving policy objectives and ensuring the effective use of resources. In this way, the agricultural potential of the Sahel region will be revealed and its contribution to the general economic development will be provided.

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