COOPERATION BETWEEN UKRAINE AND AFRICAN COUNTRIES IN AGRICULTURE: SOUTH AFRICA

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INTRODUCTION

The report is aimed to outline the directions of partnership between Ukraine and South African countries in agri-food sector. In this report, we analyse three most-populated countries in Southern Africa (Republic of South Africa, Botswana, and Namibia) to unveil their potential of partnership with Ukraine in agricultural and food processing industries. First, we analyse food security profiles of the observed countries and compare them with regional benchmarks. Second, we examine agri-food trade patterns and the level of food self-sufficiency for the selected countries. Third, the local agricultural sector is analysed to understand the potential of food production in Southern Africa. Then, it is followed by the overview of current challenges of local agricultural producers. Finally, we provide the overview of the national agri-food policy and its effect on local production in each of the three countries.

EXECUTIVE SUMMARY:

Agriculture in Southern Africa, particularly in the Republic of South Africa, Botswana, and Namibia, plays a varied role in supporting economic growth, food security, and rural livelihoods. While the Republic of South Africa (RSA) stands out for its more developed and commercialized agricultural sector, Botswanan and Namibian agricultural sector are relatively small and subsistence-oriented, with a much higher emphasis on livestock production.

Food security in the region remains a key concern. In RSA, undernourishment has doubled over the past two decades, rising from 4 to 8% of the population, though it remains below the regional average. Botswana and Namibia face more pronounced food insecurity, with approximately 23% and 17% of the population undernourished, as of 2022, respectively. Despite this, dietary energy supply in all three countries is gradually improving, and the diversity of diets is increasing as reliance on staple crops like cereals, roots, and tubers declines.

Agri-food trade is critical to all three countries, with imports of cereals, vegetable oils, and beverages dominating. RSA is the most significant player in food exports, primarily shipping edible fruits, nuts, and beverages (notably wine) to markets like the Netherlands, the UK, and China. Botswana and Namibia are far more reliant on imports, with RSA being a key supplier for both. Namibia's exports are mainly concentrated in fish, which accounts for over half of its food exports. Trade relations with Ukraine remain minimal across the region, with only small volumes of processed food imports from Ukraine.

Agricultural production shows notable differences across the three countries. In RSA, the agricultural sector accounts for 3% of GDP and employs roughly 20% of the labor force. The country's crop production is diverse and commercialized, with key outputs including sugarcane, maize, and grapes, and a significant rise in soybean cultivation over recent years. Botswana's agricultural sector is much smaller, contributing only 1.6% to GDP, and is primarily centered around subsistence farming and livestock production. In Namibia, agriculture contributes around 10% of GDP, with livestock farming playing a central role, while crop production remains limited, focusing mainly on roots, tubers, maize, and table grapes.

Challenges facing agriculture in Southern Africa are significant. Climate change, particularly droughts, poses a major threat, with all three countries struggling with water scarcity and erratic rainfall. Poor soil fertility, especially in Botswana and Namibia, further limits agricultural productivity. Infrastructure deficits, including inadequate irrigation systems and poor market access, exacerbate these challenges, hindering growth and export potential. RSA, despite having more developed infrastructure, faces additional hurdles related to political corruption, income inequality, and energy supply disruptions, which also impact the agricultural sector.

Agricultural policies in the region emphasize increasing productivity, improving food security, and addressing rural poverty. RSA's policies, outlined in the National

Development Plan and the Agricultural and Agro-processing Master Plan, focus on export growth, rural development, and land reform. Botswana's Vision 2036 and the Temo Letlotlo program aim to boost productivity through targeted subsidies and climate-smart agriculture. Namibia's National Development Plan and National Agriculture Policy focus on improving irrigation, mechanization, and resilience to climate change, with a particular emphasis on addressing poverty in rural areas. Despite these efforts, public investment in agriculture remains low across the region, with international donors and credit financing playing a crucial role in supporting sectoral growth.

The **cooperation between Ukraine and South African states in agriculture** should be shaped in respect to the regional specifics. The potential options are:

1. Facilitation of exporting value-added products such as seeds, fertilizers, wheat flour, livestock products.

2. Agronomic services for crops more common in subtropical and temperate climate zones (wheat, corn, sunflower, soybeans).

3. Transfer of technologies of automatization, minimum tillage systems, precision agriculture.

4. Common projects in veterinary and cattle farming.

1. REPUBLIC OF SOUTH AFRICA

1.1. FOOD SECURITY

The Republic of South Africa has the highest population in the region and is the sixth most populated on the continent. Over the last two decades, the population increased by a quarter, reaching almost 60 million people as of 2022 (Figure 1).

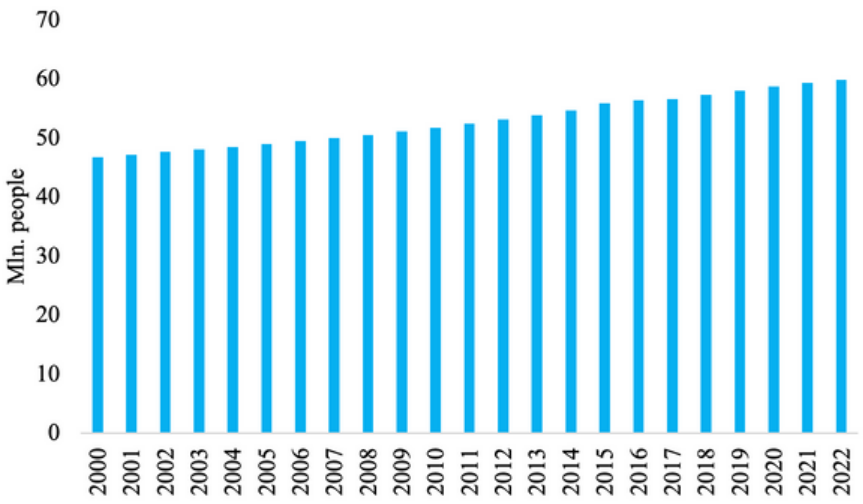

Figure 1. Total population in Republic of South Africa

Source: World Bank

The national economy of RSA showed rapid growth in 2000s, but turned to recession since 2011, and stagnated shortly after. Due to this recession, GDP per capita became approximately equal to the one of Botswana and remained on similar level, as of 2014 (Figure 2). The main challenges for RSA's economy are high income and wealth inequality, political corruption, and unreliable energy supply.

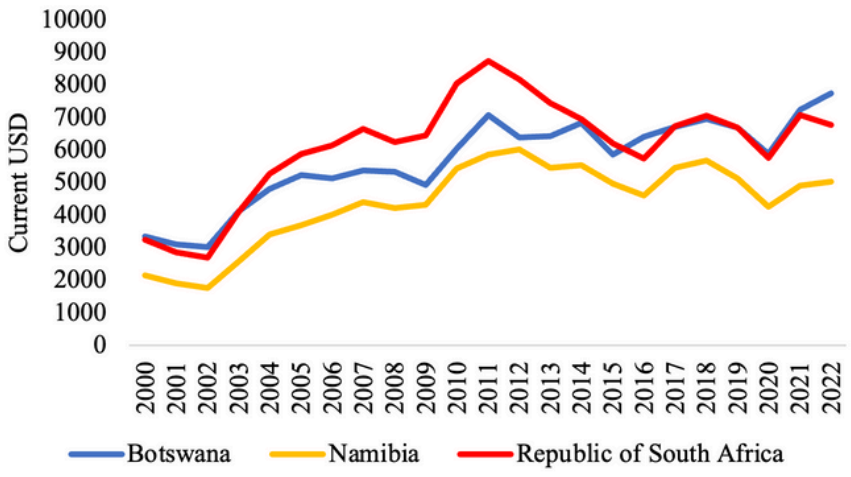

Figure 2. GDP per capita in Republic of South Africa

Source: World Bank

With the demographic growth and economic stagnation, the prevalence of undernourishment in RSA gradually increased. Since 2000, the proportion of population facing food insecurity increased from 4 to 8%. However, throughout the 2000-2022, it remained approximately 2 percentage points lower than the regional average (Figure 3).

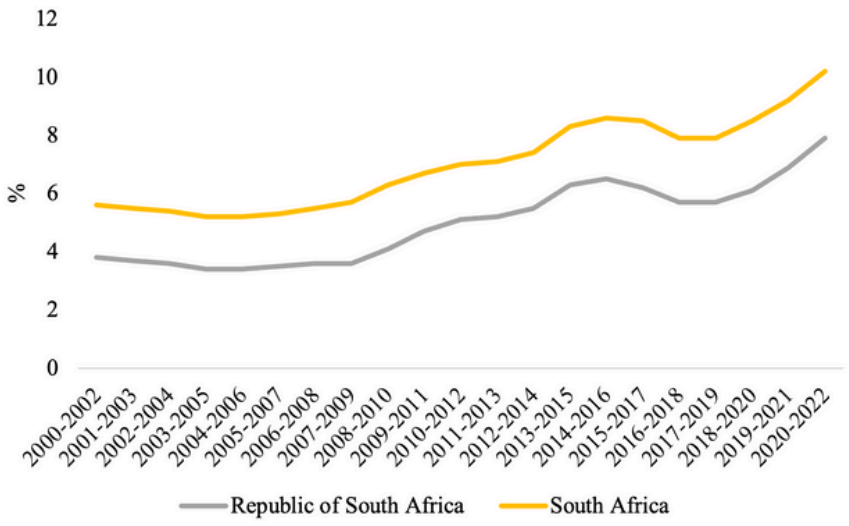

Figure 3. Prevalence of undernourishment in Republic of South Africa

Source: FAOSTAT

The number of undernourished persons shows the same pace of growth as its proportion in total population. Since 2000, this number increased by almost 3 times (Figure 4)

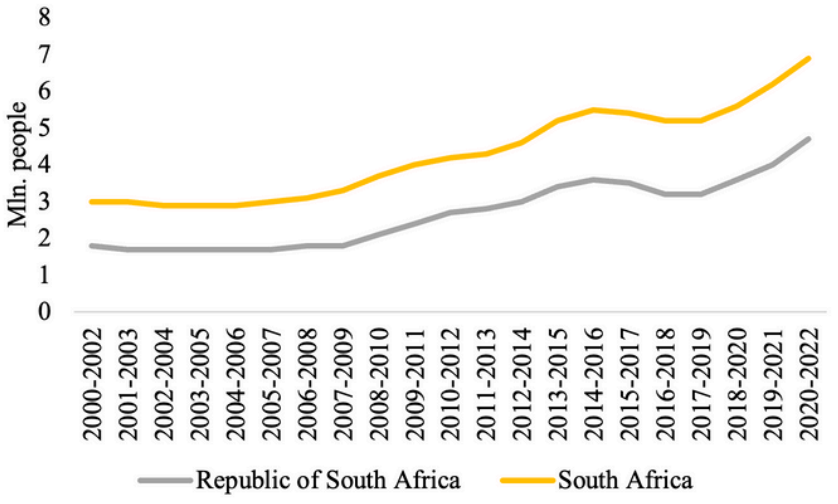

Figure 4. The number of undernourished persons in Republic of South Africa

Source: FAOSTAT

Meanwhile, the average dietary energy supply adequacy remained higher than the regional average, and demonstrated gradual decrease throughout 2000-2022, except for 2015-2018 (Figure 5).

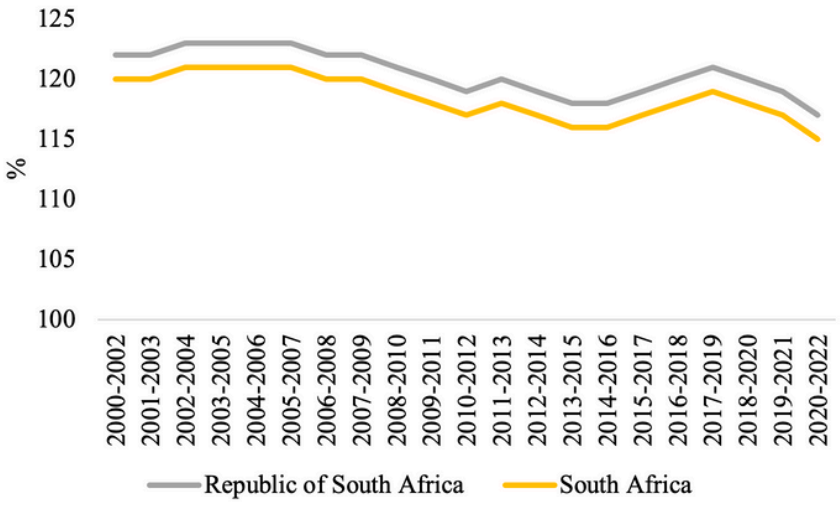

Figure 5. Average dietary energy supply adequacy in Republic of South Africa

Source: FAOSTAT

As Figure 6 shows, the share of dietary energy supply derived from cereals, roots and tubers has been gradually decreasing during 2000-2011 from 57 to 51% and remained relatively unchanged since then.

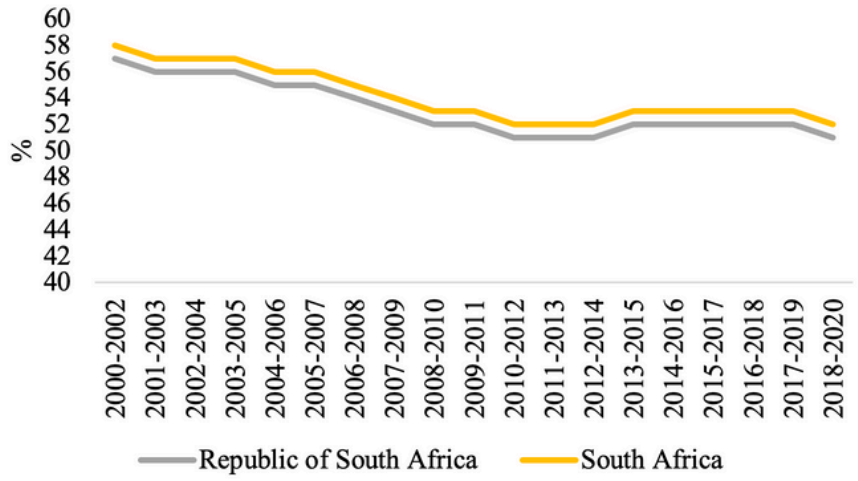

Figure 6. Share of dietary energy supply derived from cereals, roots and tubers in Republic of South Africa

Source: FAOSTAT

At the same time, the average protein supply remained quite high at approximately 80 grams per person per day since 2007 (Figure 7).

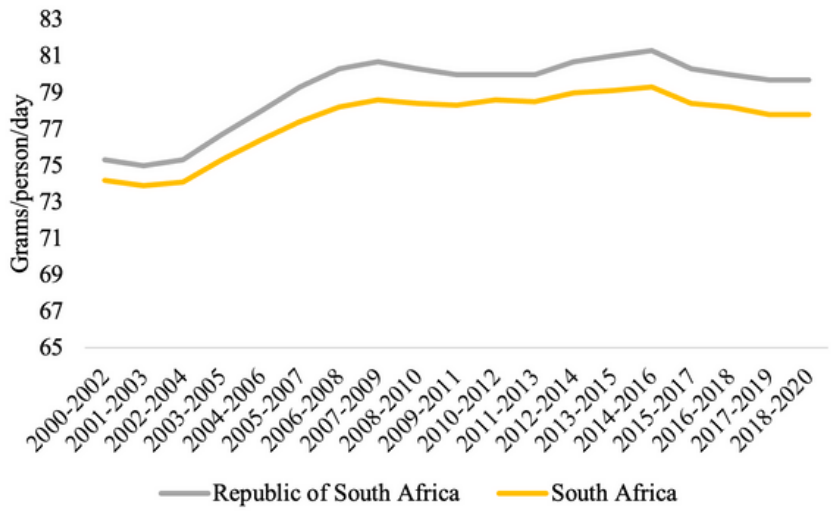

Figure 7. Average protein supply in Republic of South Africa

Source: FAOSTAT

Regarding the role of international organizations in coping with food insecurity, RSA is one of the few countries on the continent where the UN World Food Programme (WFP) is not operating. Therefore, the priorities of maintaining food security are not clearly defined by the WFP methodology.

1.2. AGRI-FOOD TRADE

RSA's food imports remained relatively unchanged over the past decade. The main imported food products are cereals, vegetable oils, and beverages (Figure 8).

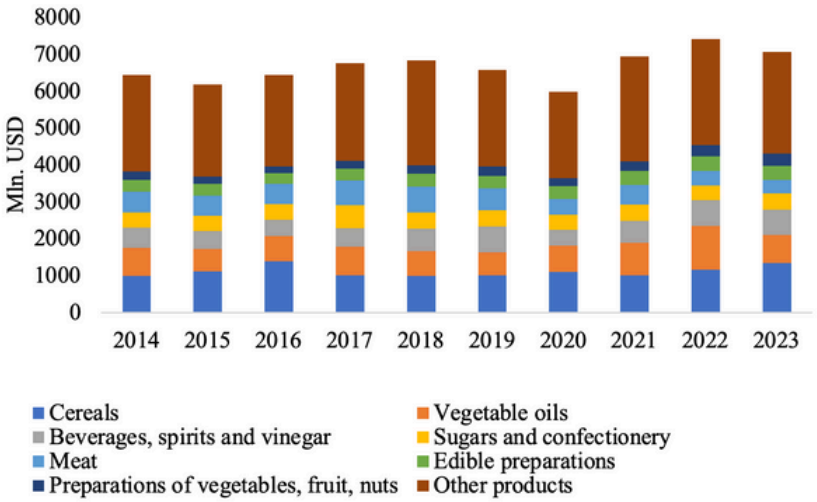

Figure 8. Product structure of food import to Republic of South Africa

Source: ITC Trade Map

The geographical structure of import is very diversified. The main food importers to the Republic of South Africa are Thailand, China, Indonesia, Brazil, and France (Figure 9).

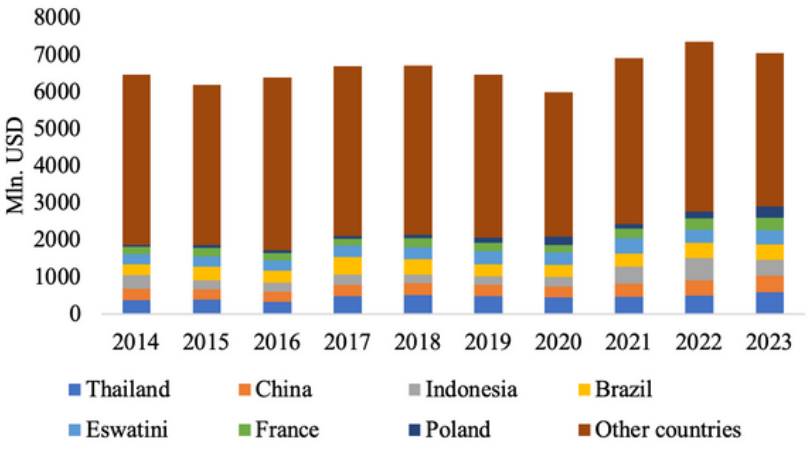

Figure 9. Geographical structure of food import to Republic of South Africa

Source: ITC Trade Map

Ukraine's share in RSA's food imports is quite low. In recent years, import of Ukrainian unprocessed cereals has come to a halt. As of 2023, main categories of import were preparations of cereals, sugars, and confectionery (Figure 10)

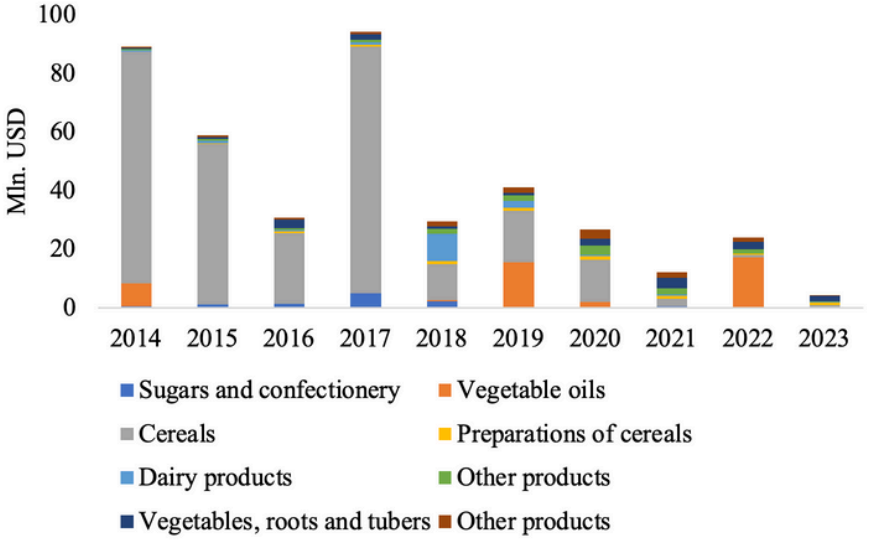

Figure 10. Food import from Ukraine to the Republic of South Africa

Source: ITC Trade Map

Food exports from RSA were gradually growing over the last decade. The primary export commodities are edible fruit and nuts, cereals, and beverages (primarily wine) (Figure 11).

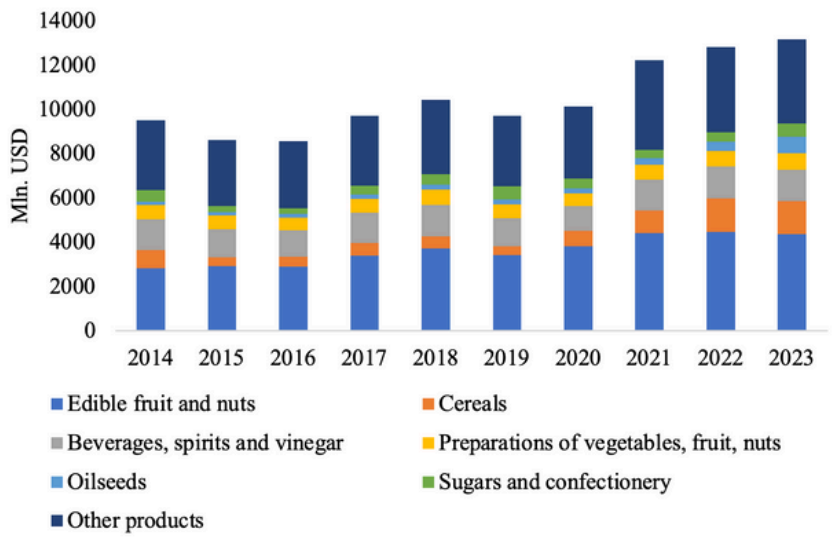

Figure 11. Product structure of food export from Republic of South Africa

Source: ITC Trade Map

The geographic structure of RSA's food exports is quite diversified. Main destinations are Netherlands, United Kingdom, Botswana, and China (Figure 12).

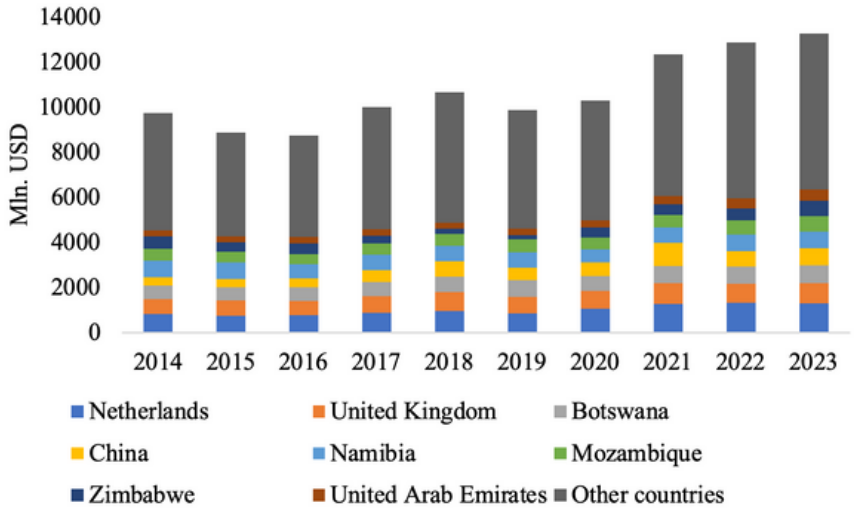

Figure 12. Geographical structure of food export from Republic of South Africa

Source: ITC Trade Map

Food exports from RSA to Ukraine remained low throughout the past decade, not exceeding 12 million USD in its value. Primary commodities were edible fruit and nuts (Figure 13).

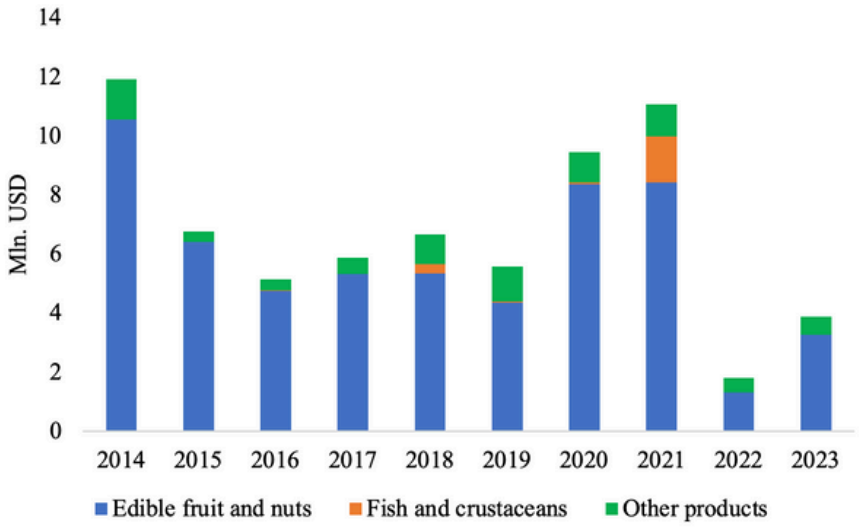

Figure 13. Food export from Republic of South Africa to Ukraine

Source: ITC Trade Map

1.3. LOCAL AGRICULTURAL SECTOR

Agriculture does not play a quintessential role in South Africa, but still is a relatively large and important sector of it. It's share in GDP has been relatively unchanged over the last three decades, fluctuating around 2-3%. On the other hand, the share of working population, engaged in agricultural production has been decreasing until mid-2010s, from 24% in 1991, down to 14% in 2014. After this, it rolled back to 19-21% in 2022-2023 (Figure 14).

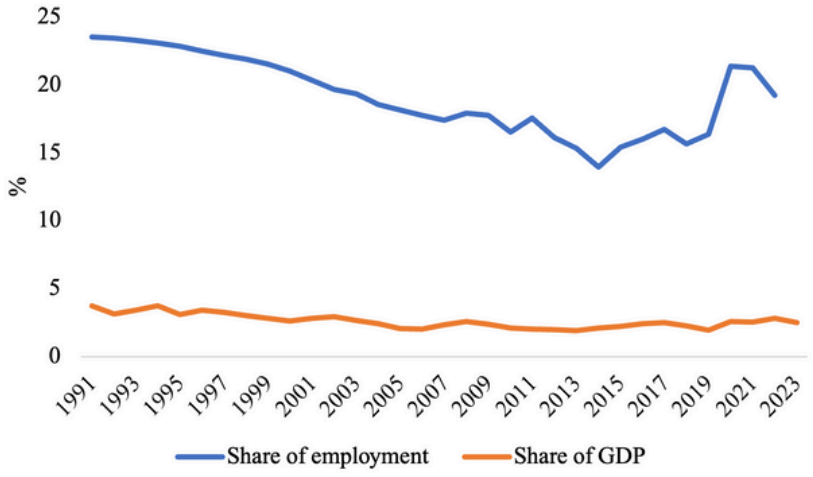

Figure 14. Share of agriculture in GDP and total employment in RSA

Source: World Bank

Over the past three decades, value of agricultural production has been volatile, with alternating years of growth and decrease. However, despite the volatility, the overall trend has been positive throughout the whole observed period, with an average year-to-year growth rate of 2.7% in the last two decades (Figure 15).

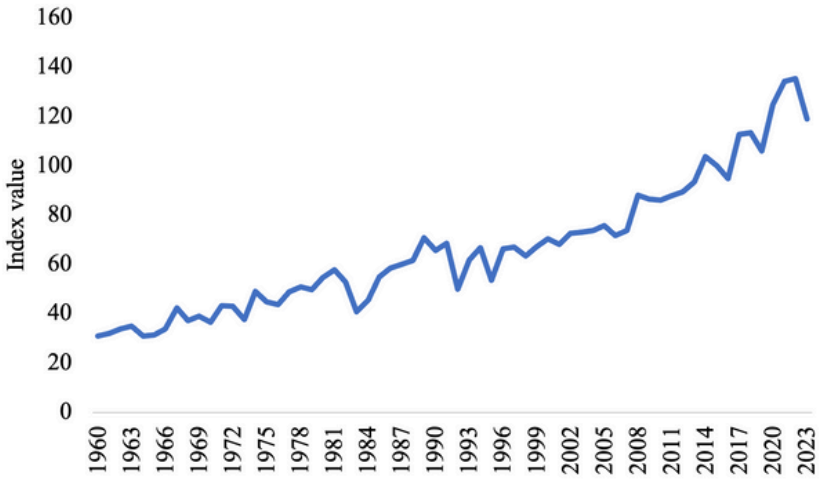

Figure 15. Agricultural production value index in RSA, constant 2015 USD. Baseline: 2015

Source: World Bank

Crop production

Crop structure of RSA is diversified, with variety of cereals, oilseeds, fruits and vegetables produced. The 3 most-produced crops in South Africa are sugar cane and maze. They are followed by potatoes, wheat, and grapes. Other commonly produced crops include apples, oranges, soya beans, and sunflower.

Production of sugar cane, wheat, and sunflower has been gradually declining over the observed period. On the other hand, the most rapid growth in production was observed for soybeans, with a more that 5 times increase in 2002-2022. Production of maize, potatoes, and grapes has been growing as well, but at a more moderate pace. In 2022, amounts of respective crops production constituted 160%, 163%, and 136% of the 2002 amounts (Figure 16).

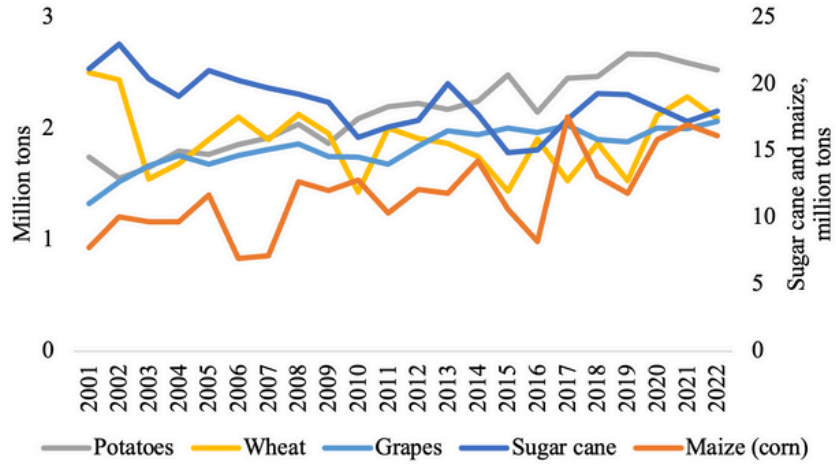

Figure 16. Production amounts of the 4 most-produced crops in RSA, 2001-2022

Source: FAOSTAT

Land use and sown areas

As of 2021, there were 963 thousand square kilometers of agricultural land in South Africa, which is approx. 79% of the total country's area. Similar to Botswana and Namibia, as of 2021, only 13% of it was cultivated (120 thousand square km), with the rest being devoted to permanent meadows and pastures. Amount of agricultural land remained relatively unchanged through 1991-2021 (Figure 17).

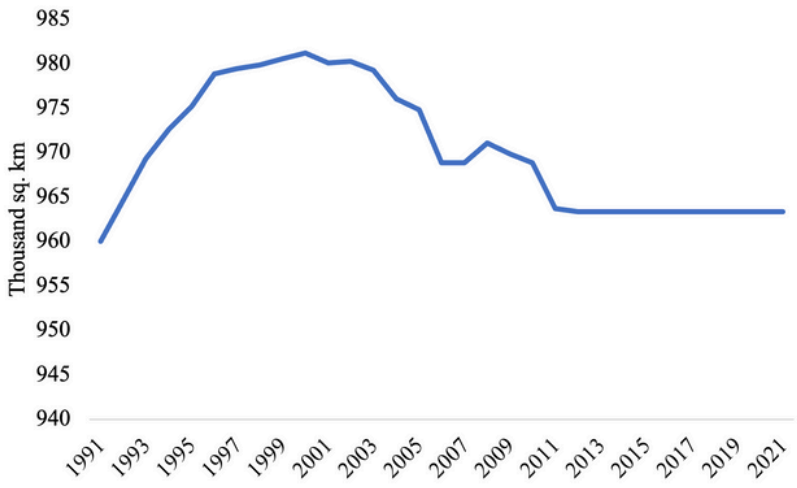

Figure 17. Agricultural land in South Africa

Source: World Bank

According to FAO's AQUASTAT, as of 2021, 18% of cultivated land in South Africa has been equipped for irrigation, which is approx. 2.2 million hectares. This number has been gradually increasing since the 1990s, with especially intensified growth in the past decade. In by 7 percentage points throughout 2001-2021 (11% to 18%).

Livestock production

Livestock production is an important element of South African agriculture. Milk of cattle is the most produced livestock commodity. As of 2022, 3.7 million tons of it has been produced. Milk is followed by meat, in particular cattle, pig, and chicken meat. 1.0, 0.4, and 2.0 million tons of them were produced in 2022, respectively. Another commonly produced commodity is chicken eggs (562 thousand tons in 2022).

In general, livestock sector has been steadily growing throughout 2002-2022. The fastest growing livestock commodity in South Africa was meat of pigs. Over this period, production amount of it increased by 200%. Chicken meat production has been growing as well. In 2022, produced amount of it accounted for 211% of the 2002 value. Production of other livestock commodities has been increasing as well, however, at a slightly moderate pace. Throughout the past two decades, output of cattle milk, meat, and chicken eggs increased by 50%, 74%, and 65%, respectively (Figure 18).

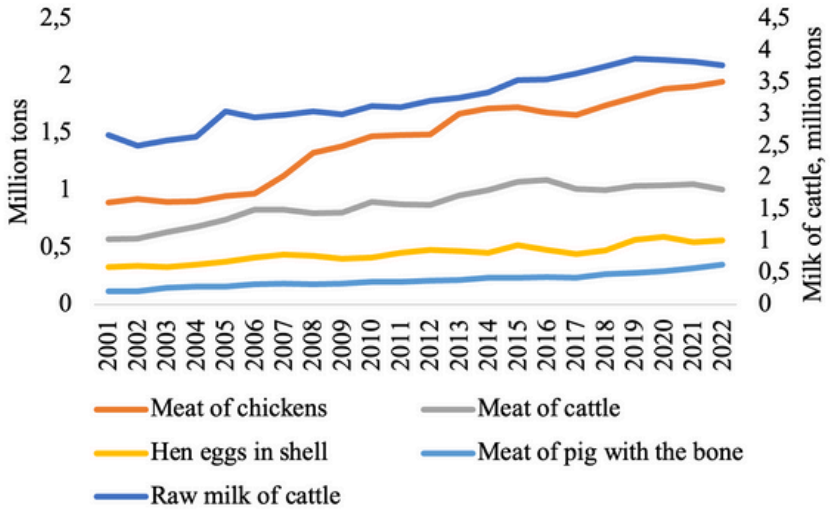

Figure 18. Livestock commodities production in South Africa, 2001-2022

Source: FAOSTAT

Despite of production growth, population of main animals has been gradually decreasing in the past two decades, except for chickens. Their population exhibited a steady growth in 2005-2011, a drop in 2013, and a return to moderate increasing trend since 2014. As a result, 2022 population of chickens constituted 115% of the 2002 value. Populations of cattle, pigs, goats, and sheep decreased by 11%, 20%, 20%, and 18% throughout 2002-2022, respectively (Figure 19).

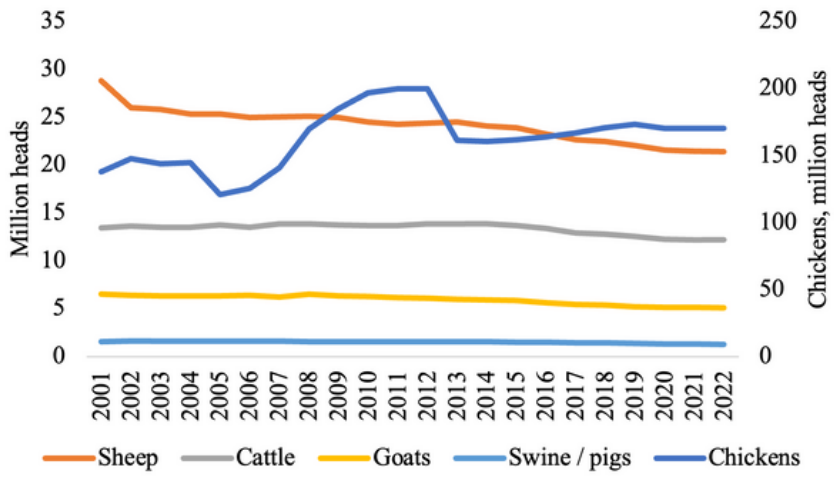

Figure 19. Live animals stock in South Africa, 2001-2022

Source: FAOSTAT

Processing sector

As of 2022, food, beverages and tobacco processing sector accounted for 2.7% of the South African GDP. In 2002, this share was 2.9%, thus remaining relatively unchanged over the past two decades.

The most produced food processing product in South Africa is cane sugar. Following the dynamics of sugar cane production, production of sugar has been gradually decreasing in 2001-2021, with a 24% decrease over this period. Other common products of food processing industry are skim milk of cows, sunflower and soybean oils, and wine. The highest growth was observed for soybean oil, with 9 times increase in 2001-2021. At the same time, amount of sunflower oil production remained relatively unchanged over the same period (+3%). One more steadily growing product is wine, production of which increased by 75% over the observed period. Among the beverages, beer of barley is leading, with 3.1 million tons produced in 2021, and a 21% increase, as compared to 2001 value (Figure 20).

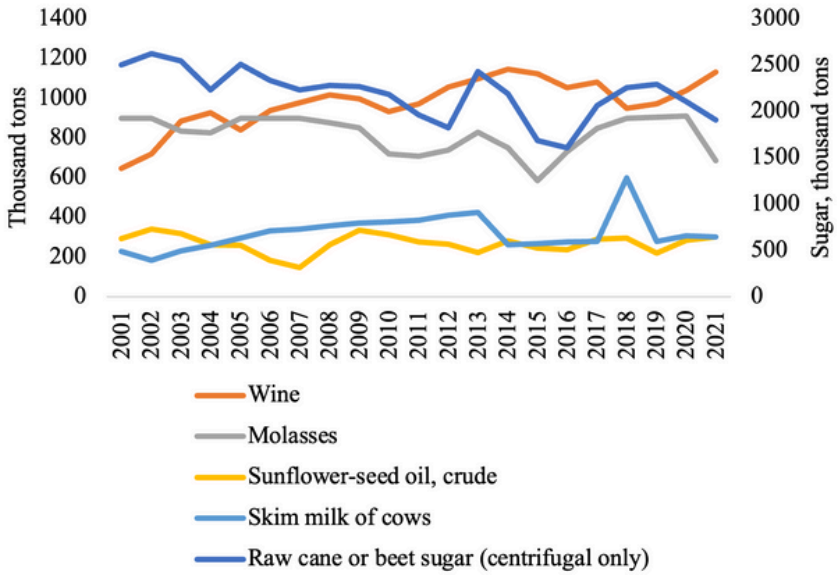

Figure 20. Processed food commodities production in South Africa, 2001-2021

Source: FAOSTAT

1.4. CHALLENGES IN AGRICULTURE

Climate change and environmental issues

Climate change is one of the most significant challenges affecting agriculture in RSA. Climate is becoming increasingly erratic, with more frequent droughts and extreme weather conditions that disrupt crop and livestock production (Middelberg, 2013). In addition, soil erosion and biodiversity loss further exacerbate the environmental difficulties. Many farming areas in RSA have poor soils with low amount of organic matter, making them particularly vulnerable to erosion and decreasing fertility (Giesel, 2023). In response, conservation agriculture practices, such as minimum tillage and the use of cover crops, are being promoted to mitigate soil degradation and improve soil health (Middelberg, 2013). However, these practices are not yet widely adopted due to concerns about the initial costs and the complexity of managing crop residues (Giesel, 2023).

Water scarcity is another critical issue. RSA's agriculture relies heavily on irrigation, particularly in regions like the Western Cape, but recurring droughts have led to water shortages. Many farmers struggle to secure reliable access to water, particularly small-scale farmers who lack the resources to invest in advanced irrigation systems (Van Rooyen, 1997).

Economic constraints and infrastructural challenges

RSA's agricultural sector also faces considerable economic and infrastructural barriers. The high cost of inputs, such as fertilizers, seeds, and machinery, places a financial burden on farmers, particularly smallholders who often operate on tight margins (Giesel, 2023). Additionally, rural infrastructure, such as roads and irrigation systems, is often underdeveloped, which limits farmers' ability to access markets and transport their produce efficiently (AgriSA, 2024). These challenges are compounded by the country's ongoing energy crisis, where load scheduled power cuts disrupt farming operations, particularly those requiring cold storage or mechanized equipment. The agricultural sector's export capacity is also affected by inadequate infrastructure at ports and rail networks, which limits the efficient export of products. Despite being one of the world's largest producers of fruits and wine, logistical bottlenecks reduce the competitiveness of RSA on global markets (AgriSA, 2024).

Land reform and market access

The socio-political issue of land reform remains a contentious and unresolved challenge for RSA agriculture. The country's historical land policies have left many smallholder and black farmers with limited access to land. Although the government has initiated land redistribution programs, progress has been slow, and many of these programs have been criticized for poor implementation (Middelberg, 2013). This limits the ability of small-scale farmers to expand their operations and improve productivity. Furthermore, without secure land tenure, many farmers are unable to access credit, which restricts their ability to invest in modern agricultural technologies (Van Rooyen, 1997).

Access to markets is another critical challenge, particularly for small-scale farmers. While large commercial farms often have established connections to domestic and international markets, smaller farms struggle to compete due to high transportation costs, lack of storage facilities, and limited bargaining power. This issue is exacerbated by the strict import requirements imposed by international markets, such as the European Union, which are more difficult for smaller producers to meet (Giesel, 2023).

Biosecurity and livestock health

Biosecurity concerns, particularly in the livestock sector, represent a significant threat to agriculture in RSA. Diseases such as foot-and-mouth disease (FMD) and avian influenza periodically impact livestock exports, undermining the country's presence on international markets. While effective biosecurity measures are essential to maintaining livestock health and ensuring the continuity of exports, yet many farmers, particularly in rural areas, lack access to adequate veterinary services and resources to implement these measures (AgriSA, 2024).

1.5. AGRICULTURAL POLICY OVERVIEW

The Republic of South Africa, distinct from many of its regional counterparts, does not depend significantly on agricultural sector, yet it is envisioned as a driver for the further economic growth. Agriculture contributes about 3% to the country's GDP, yet it accounts for approximately 10% of total exports. RSA's agricultural production is primarily self-sufficient, making it a net exporter of food. Notably, imports often consist of higher value processed or finished agricultural products, while exports mainly comprise raw materials, underscoring the sector's focus on adding value. This economic dynamic has driven the government to prioritize export expansion and rural development, especially considering that 60% of the population living below the poverty line is concentrated in rural areas, despite rural inhabitants making up only 34% of the population. The country's agricultural policies have also given considerable attention to addressing land reform and rural inequality, both of which are legacies of apartheid-era discrimination.

South Africa's overarching development strategy is encapsulated in the **National Development Plan (NDP)**, a policy aimed at addressing the nation's most pressing socio-economic challenges: poverty, inequality, and unemployment (National Planning Comission, 2017). Within this narrower framework in the agriculture, the **Strategic Plan 2020–2025,** formulated by the Department of Agriculture, Land Reform, and Rural Development (DALRRD), places a strong emphasis on agricultural development (Financial and Fiscal Commission, 2021). A core objective is to increase agricultural output by 10%, not only to improve food security but also to stimulate economic growth. Achieving these ambitious targets requires integrated programmes that support land reform, rural development, and environmental sustainability.

A significant policy focus in RSA's agricultural sector is land reform. This stems from the country's historical legacy of racial land dispossession, which resulted into a situation when around 83% of the country's agricultural land was owned by the white minority by 1994. Since then, the democratic government has pursued land reform as a means of redressing these historical inequalities. By the late 2010s, however, progress remained slow, leading to increased political pressure to accelerate the process. In 2015, the government even initiated amendments to the Constitution to permit the expropriation of land without compensation in certain cases, an attempt to fast-track land redistribution.

The Commission on Restitution of Land Rights, operating within the DALRRD, plays a pivotal role in land restitution. It facilitates the resolution of land claims through various means, including the return of land, financial compensation, or a combination of both. Restitution claims, which represent the demands of individuals and communities who were dispossessed of their land under apartheid, is expected to be accelerated. By early 2021, the Commission had settled claims for nearly 2.2 million people, transferring 2.6 million hectares of land (Commission on Restitution of Land Rights, 2021). While this represents significant progress, it is only a fraction of the land required to meet broader reform objectives.

In 2021, to address the existing challenges, the Commission adopted a new Strategic Plan, aiming to accelerate land restitution up until the second quarter of 2024. This strategy focuses on improving the overall efficiency of the restitution process. Its key components include:

1. **Backlog Claims Reduction:** Reviewing the majority of unprocessed or deferred claims. Real-time monitoring of the process will be established to identify reasons for delays and verify data regarding land claims.
2. **Business Process Improvement:** Transitioning to more standardised business processes that adhere to improved norms, policies, and operational standards.
3. **Financial Model:** Revising the compensation structure for land losses.
4. **Settlement Model:** Involving a wider range of stakeholders in the restitution process for specific land, such as sugarcane fields, to ensure benefits for claimants and sustainability.
5. **Organisational Form:** Optimizing the Commission's structure and operations.
6. **People Management:** Restructuring the workforce in line with the new organizational model.
7. **Change Management:** Mitigating potential risks during the commission's transformation process, ensuring that all stakeholders are aware of the need for change, the reform plan, and that the transformation process is smooth and well-planned.

A key indicator of success in land restitution reform is reducing the average claim processing time from 246 to 89 weeks.

In parallel, the government has sought to expand the accessibility of state-owned land through the **State Land Lease and Disposal Policy** (Department of Agriculture, Land Reform and Rural Development, 2024). This policy, introduced as part of the broader land redistribution effort, allows historically disadvantaged citizens to lease agricultural land at favourable rates for those who yet could not afford to buy land plots. Specifically, those who were deprived of land ownership due to apartheid receive preferential leasing terms, including an annual rental rate of 1% of the land's assessed value. Conversely, those who benefited from previous discriminatory policies face stricter conditions, including a 2% rental rate and the need for special permission.

The agricultural sector is also central to addressing unemployment in rural areas, particularly among young people. **The Revised National Rural Youth Services Corps (NARYSEC),** introduced in 2022, is one such initiative (Department of Rural Development and Land Reform, 2013). NARYSEC provides training and employment opportunities for unemployed youth, with a strong focus on agricultural skills. The program aims not only to reduce rural unemployment but also to prepare the next generation of agricultural workers and entrepreneurs, ensuring long-term sustainability in the sector.

RSA's vulnerability to climate change has necessitated policy measures in the agricultural sector. In 2018, the government adopted the **Climate Smart Agriculture Strategic Framework,** a policy aimed at enhancing the resilience of agriculture to climate risks while also reducing greenhouse gas emissions. The framework promotes local-level adaptation programs, such as urban agriculture and horticulture on non-agricultural land, which help diversify food production. Additionally, the introduction of early warning systems for climate-related risks is designed to protect agricultural livelihoods from extreme weather events.

Government expenditure on agriculture remains relatively stable, with annual spending on the sector ranging between 800 million and 900 million USD. This accounts for approximately 1% of central government expenditure. Over the past two decades, government support for the sector has declined as a proportion of agricultural GDP, with the OECD reporting that public support contributed around 4.5% of producers' gross revenues between 2020 and 2022 (OECD, 2023). Despite this, the government has maintained most its support in form of the direct support for small-scale producers, particularly in sugar production. However, spending on broader agricultural services, such as research and extension services, remains relatively low and decreasing, indicating a need for greater public investment in sector-wide development.

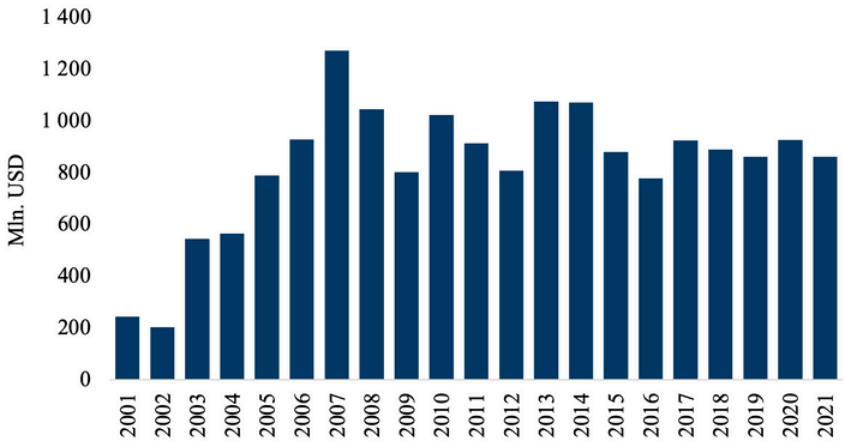

Figure 21. Central government expenditures to agriculture

Source: FAOSTAT

In 2022, RSA adopted the **Agriculture and Agro-processing Master Plan «Social Compact»,** aimed at improving food security, promoting sustainable development in agriculture, and enhancing competitiveness (Department of Agriculture, Land Reform and Rural Development, 2022). The Plan sets targets for the sector, including an additional 1.8 billion USD in value-added growth by 2030, the creation of 75,000 new jobs, increasing cropland by 700,000 hectares, and pastures by 1.5 million hectares. The Plan also aims to reduce inequality, with a goal of increasing the proportion of black farmers to 20%. Key measures include:

- Expanding state-owned agricultural land available for lease and redistribution by at least 6% (40,000 hectares) per year.
- Increasing investments in water infrastructure by 20% annually to revitalize irrigation systems.
- Expanding rail infrastructure to increase the share of grain and oilseed exports transported by rail from 15% to 30%.
- Upgrading port facilities to handle larger ships (up to 80,000 tonnes).
- Providing financial and material support for agricultural inputs, extension services, equipment, and workforce training.
- Raising spending on research into sustainable agriculture and climate change to 2.5 million USD annually.
- Replacing 30% of fertilizer imports by boosting domestic production.
- Improving access to market information and crop quality reports.
- Establishing new trade agreements to enhance export opportunities.
- Increasing maize and feed processing capacity through specialized clusters.

While RSA is one of the most developed countries in the region, donor support for agricultural development remains relatively small compared to poorer nations. Between 2011 and 2021, donor contributions averaged 15 million USD annually, increasing to 28 million USD by 2021. However, this still represents only 3% of government spending on the sector, or less than 1% of the annual agricultural production value.

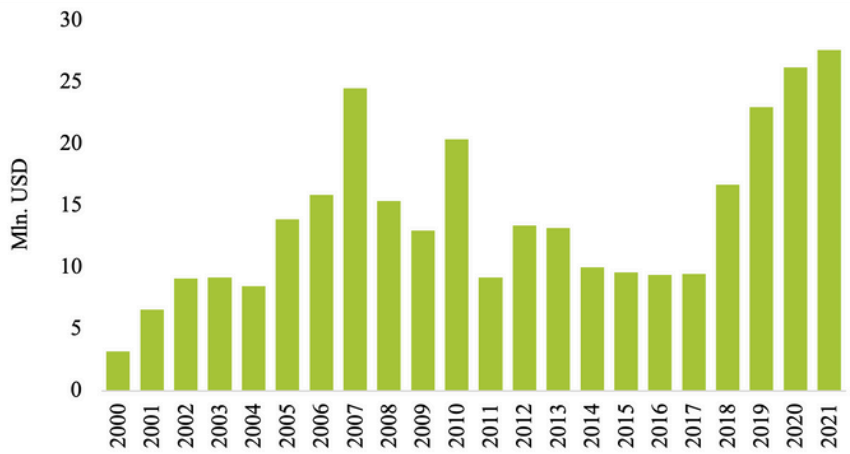

Figure 22. Development flows to agriculture, forestry, and fishery

Source: FAOSTAT data

In terms of trade policy, RSA maintains high import tariffs on food products but relatively lower tariffs for Most Favoured Nations (MFN). The highest nominal tariffs are on dairy products (81% on average) and sugary foods (88%) (WTO, 2022). In contrast, lower tariffs are applied to fruits and vegetables (30% on average) and meat products (37%). MFN tariffs for these categories range between 6–11%. Among MFN countries, Botswana and Namibia benefit from the lowest tariffs (10% and 11%, respectively). RSA also maintains relatively low tariffs in its trade with the UK (9% on average), whereas tariffs on agricultural products from the EU are higher, averaging 14%. The country does not provide export subsidies for food products.

Since 2022, RSA has been part of the African Continental Free Trade Agreement (AfCFTA), which aims to reduce trade barriers among member states, including lowering import tariffs.

Table 1. Import duties for agro-food products in the Republic of South Africa

Products group	Average Import duty	Average MFN applied import duty
Live animals and meat	37.4%	11.2%
Dairy products	80.8%	5.9%
Fruits and vegetables	29.5%	9.4%
Cereals and food preparations	48.8%	4.3%
Oilseeds, fats and oils	51.8%	7.4%
Sugars and confectionery	75.2%	8.6%

Source: WTO data and estimates for 2022

RSA's agricultural policy is therefore shaped by a mix of historical imperatives, such as land reform, as well as future-oriented challenges, including rural poverty, climate change, and food security. The government's focus on expanding exports, improving infrastructure, and enhancing the competitiveness of the sector will likely play a crucial role in the country's future agricultural landscape, ensuring sustainable growth while addressing pressing socio-economic inequalities.

1.6. THE REPUBLIC OF SOUTH AFRICA: SUMMARY

The Republic of South Africa, with a population of nearly 60 million as of 2022, is the most populous country in Southern Africa and the sixth-most populous on the continent. Its population has grown by a quarter over the last two decades, coinciding with a period of economic growth in the early 2000s followed by a prolonged recession beginning in 2011. As of 2022, RSA's GDP per capita is similar to that of Botswana, a sharp contrast to its previous leading position in the region. The South African economy faces significant challenges, including high levels of inequality, political corruption, and an unreliable energy supply.

Food security in South Africa has worsened in recent years, with the prevalence of undernourishment doubling from 4 to 8% since 2000. While this remains lower than the regional average, the number of undernourished individuals has tripled over the same period, highlighting the growing divide between economic growth and food security. Despite these challenges, RSA maintains a dietary energy supply adequacy above the regional average, though it has slightly declined in recent years. The country's diet is relatively diverse, with the share of dietary energy derived from cereals, roots, and tubers dropping to 51%. Protein supply has remained robust, averaging 80 grams per person per day since 2007.

Agriculture plays a relatively small role in RSA economy, contributing just 2-3% of GDP, though it remains a significant employer, engaging about 20% of the workforce. Agricultural production has shown growth over the last three decades, with key crops including sugarcane, maize, and grapes. However, production of certain crops such as sugarcane and wheat has declined, while soybean production has seen rapid growth. The livestock sector is also important, particularly cattle and chicken meat, with steady increases in output over the past 20 years. However, RSA's agriculture faces severe challenges from climate change, soil degradation, and water scarcity, particularly in regions dependent on irrigation.

RSA agricultural policy, outlined in its National Development Plan and the Agriculture and food processing Master Plan, prioritizes export growth, rural development, and land reform. While the sector is largely self-sufficient in food production, the country relies heavily on exports of raw agricultural products, particularly to the Netherlands, the UK, and China. The government also focuses on expanding irrigation, improving market access, and addressing land inequality, which remains a legacy of apartheid. Climate change adaptation is another key focus, as the country aims to enhance the resilience of its agricultural sector through conservation agriculture and water management initiatives.

2. BOTSWANA

2.1. FOOD SECURITY

Botswanan population is the fastest growing in the Southern Africa. However, the growth rate is still quite moderate, as compared to the continent average. Over the last two decades in increased by approximately 50%, from 1.7 in 2000 to 2.6 million people in 2022 (Figure 23).

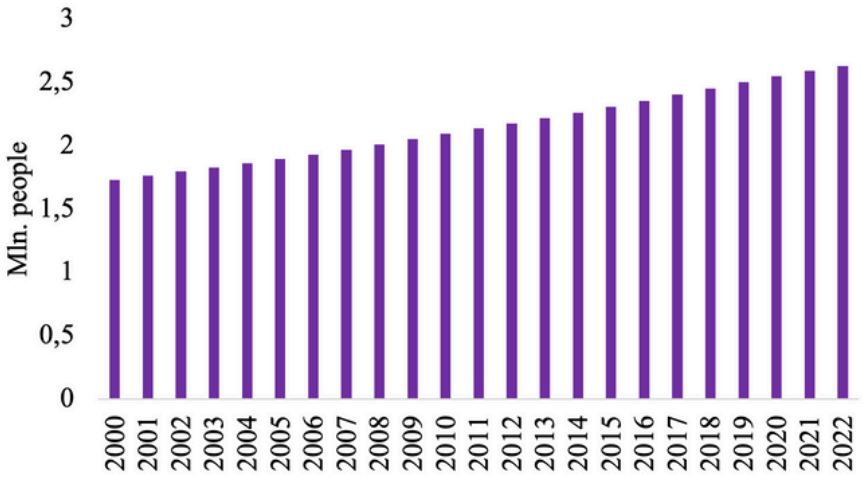

Figure 23. Total population in Botswana

Source: World Bank

Economy of Botswana experienced a period of growth in 2000s, and stagnated in 2010s. In 2020s, Botswanan GDP per capita returned to the positive trend and, as of 2022, was the highest in the region (Figure 24).

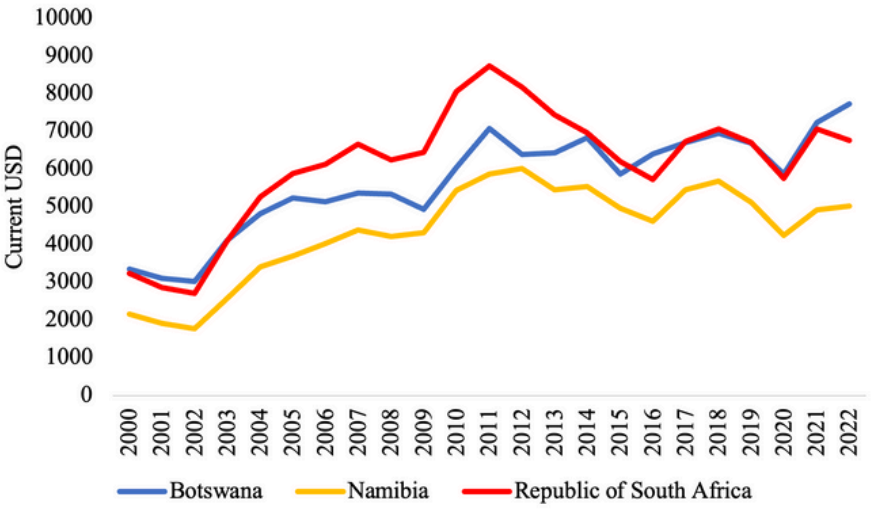

Figure 24. GDP per capita in Botswana

Source: World Bank

However, despite the comparable level of GDP per capita with the Republic of South Africa, undernourishment is much more prevalent in Botswana. Over the last two decades, it remained relatively unchanged, fluctuating around 24-26%, with a slight increase in aftermath of mid-2010s stagnation and a decrease in 2019-2022, as a result of return to economic growth (Figure 25).

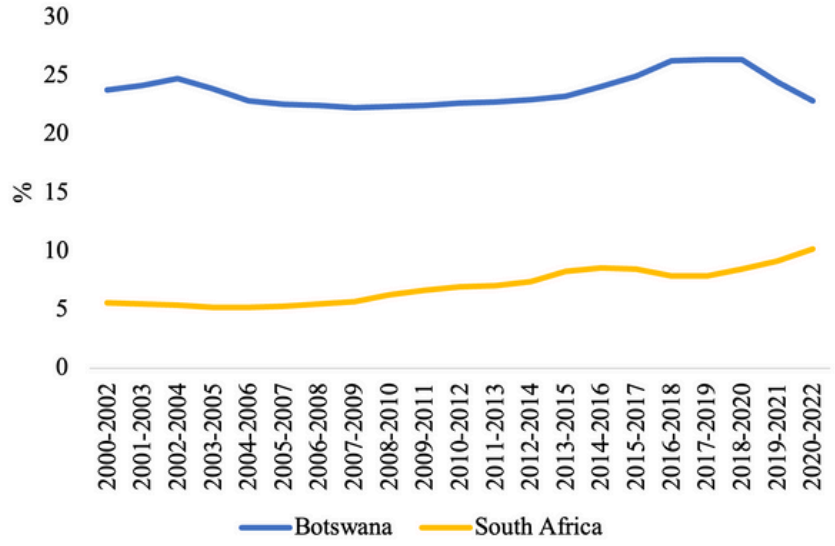

Figure 25. Prevalence of undernourishment in Botswana

Source: FAOSTAT

The number of undernourished persons increased from 400 to 600 thousand over the last two decades (Figure 26).

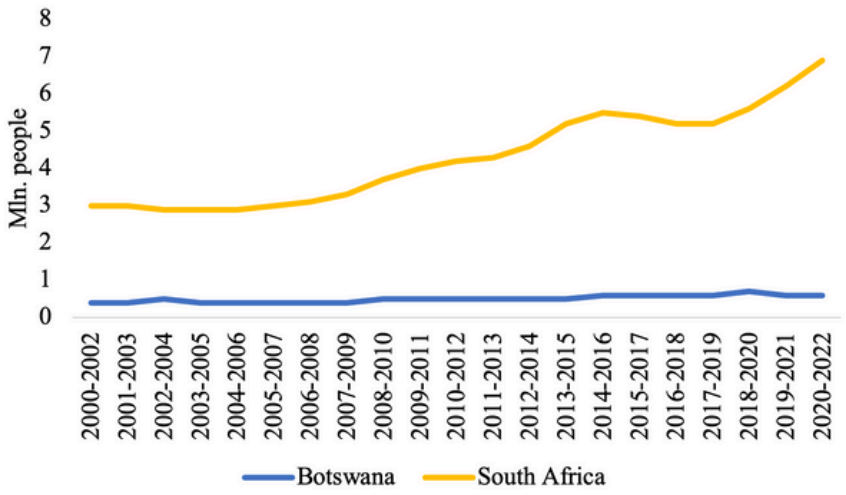

Figure 26. The number of undernourished persons in Botswana

Source: FAOSTAT

The average dietary energy supply adequacy in Botswana is lower that the regional average. However, it been gradually increasing over the last two decades, from 99% to 109% (Figure 27).

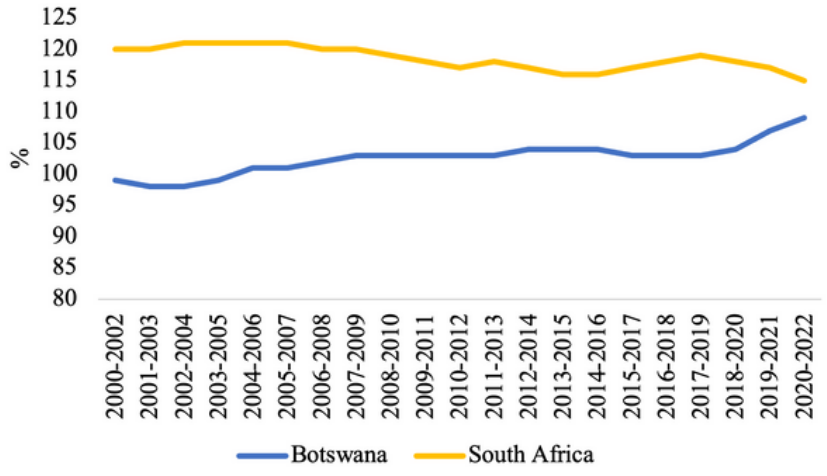

Figure 27. Average dietary energy supply adequacy in Botswana

Source: FAOSTAT

The economic stagnation of the 2010s negatively affected the diversity of diet. Share of calories intake derived from cereals, roots and tubers in Botswana remained lower than the regional average for majority of 2000s and 2010s. Over the last decade, it increased from 45% to 54%, thus exceeding the regional average of 52% (Figure 28).

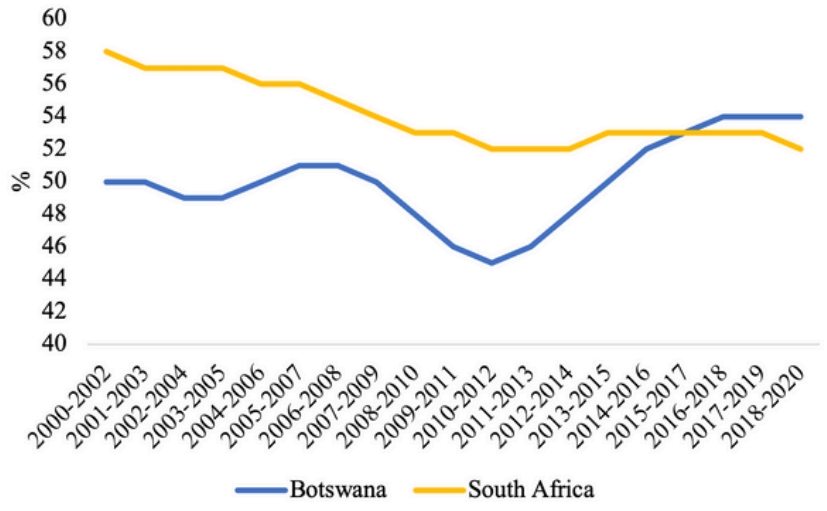

Figure 28. Share of dietary energy supply derived from cereals, roots and tubers in Botswana

Source: FAOSTAT

At the same time, average protein supply increased substantially in late 2000s from 58 grams per person per day in 2006-2008 up to 75 in 2010-2012. Since then, it remained relatively stable (Figure 29).

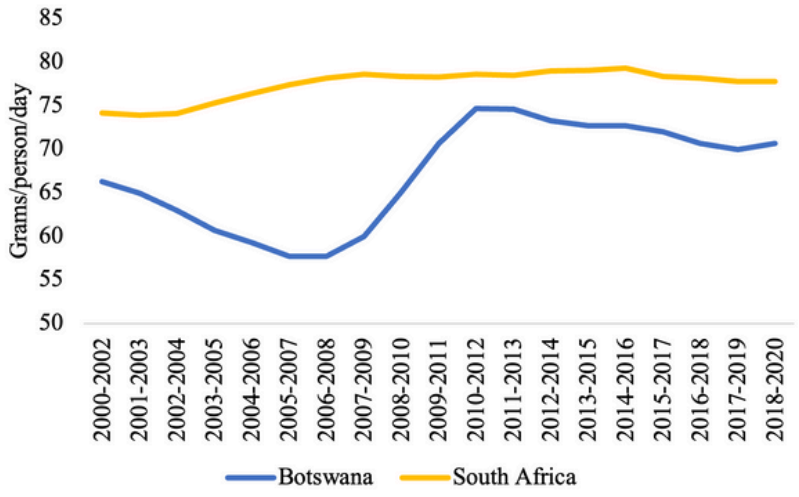

Figure 29. Average protein supply in Botswana

Source: FAOSTAT

Similarly to RSA, WFP is not presented in Botswana to cope with local food insecurity.

2.2. AGRI-FOOD TRADE

Botswanan food imports have been gradually growing over the past decade, from approx. 750 million to 1000 million USD in 2023. The main import categories are beverages and cereals. Over 2014-2023, the commodity structure of imports did not change significantly (Figure 30).

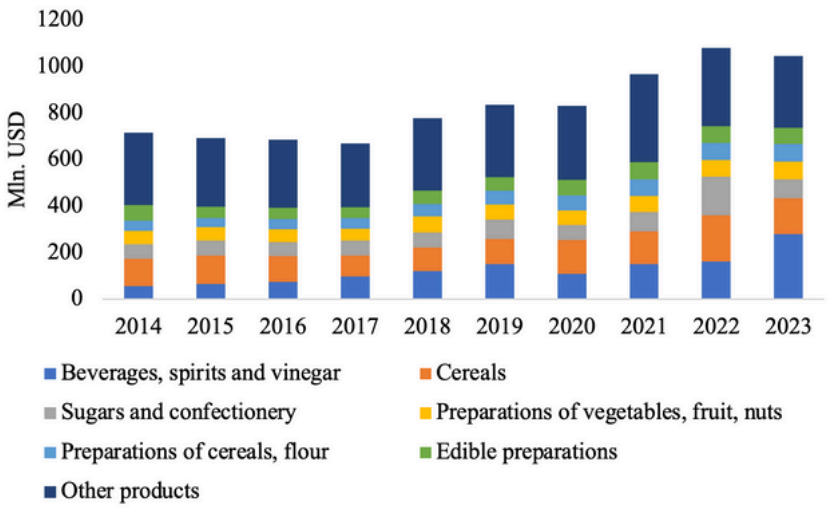

Figure 30. Product structure of food import to Botswana

Source: ITC Trade Map

The geographical structure of food imports is dominated by South Africa (Figure 31). There is no food import from Ukraine at all.

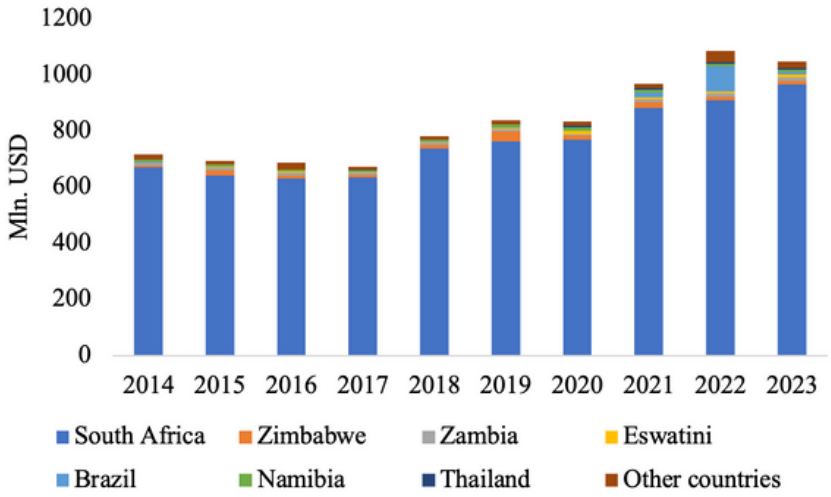

Figure 31. Geographical structure of food import to Botswana

Source: ITC Trade Map

Food exports from Botswana have been slowly decreasing over in the second half of 2010s, but grown slightly in the beginning of 2020s. Overall, monetary value of exported food products decreased from 155 million USD in 2014 down to 100 million in 2023 (Figure 32). Until 2020, majority of food exports consisted of meat. Since 2020, meat started to be largely replaced by the live animals.

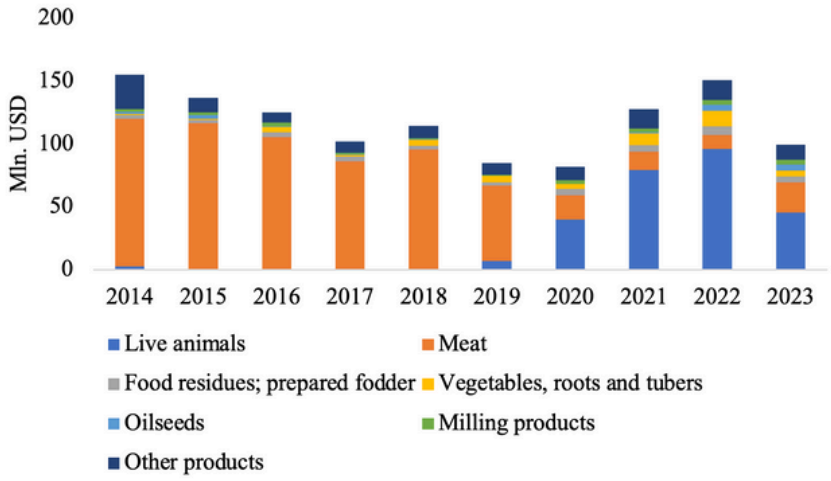

Figure 32. Product structure of food export from Botswana

Source: ITC Trade Map

The primary destination of Botswanan food exports is the Republic of South Africa (Figure 33). Botswana does not export food to Ukraine at all.

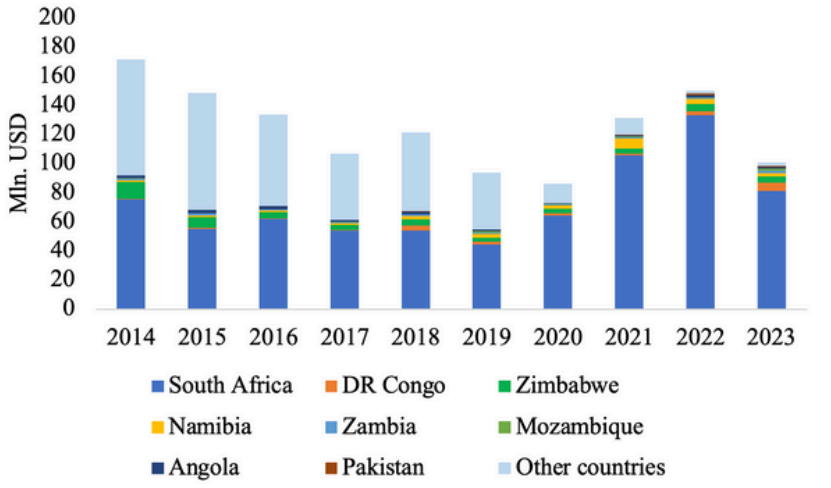

Figure 33. Geographical structure of food export from Botswana

Source: ITC Trade Map

2.3. LOCAL AGRICULTURAL SECTOR

Agriculture does not play an important role in Botswanan economy. It's share in GDP has been gradually declining over the last three decades, from 4.5% in 1993 down to 1.6% in 2023. Similarly, the share of working population, engaged in agricultural production has been decreasing since mid 2000-s, reaching 17.6% in 2022 (Figure 34).

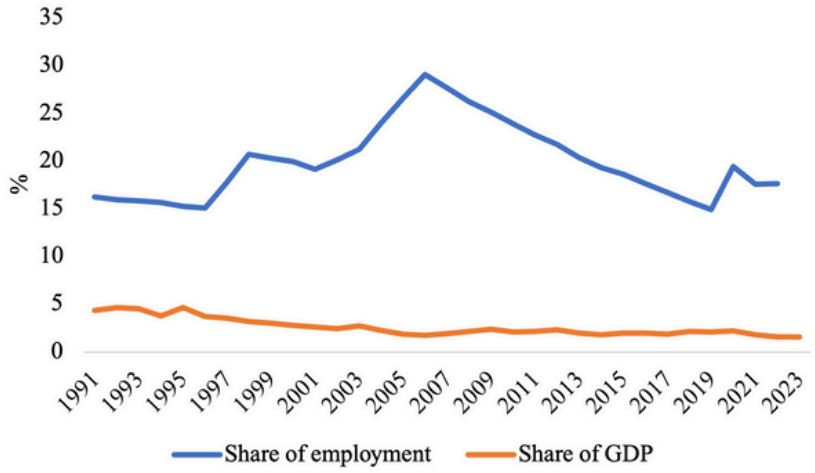

Figure 34. Share of agriculture in GDP and total employment in Botswana

Source: World Bank database

However, over the past three decades, value of Botswanan agricultural production has been quite volatile, with periods of rapid growth in 2000s, and stagnation in 1990s and 2010s. However, despite the volatility, the overall trend has been positive over the past two decades, with an average year-to-year growth rate of 2.9%. In 2023, monetary value of produced commodities in constant 2015 USD accounted for approx. 143% of the 2003 value (Figure 35).

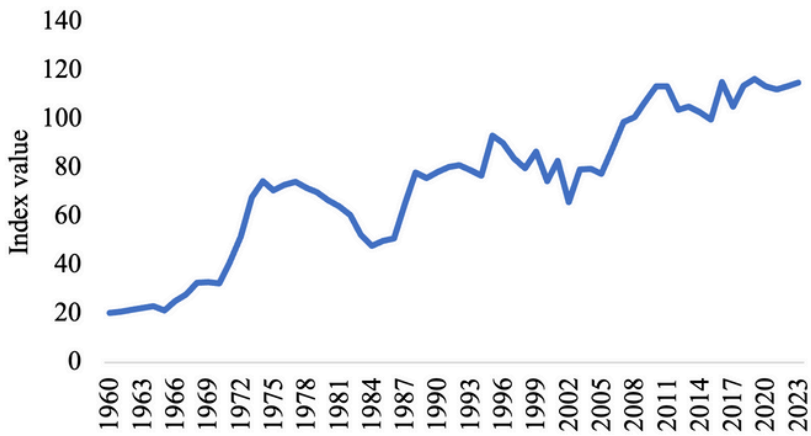

Figure 35. Agricultural production value index, constant 2015 USD. Baseline: 2015

Source: World Bank database

Crop production

Crop production in Botswana is a relatively small sub-sector of agriculture and is mostly focused on subsistence. Main crops produced in Botswana are edible roots and tubers, with 105 thousand tons produced in 2022. It is followed by maize and sorghum, 40 and 35 thousand tons of which have been produced in 2022, respectively. Production of roots and tubers has been slowly increasing since 2008, with a 13% increase, as compared to 2002 value. On the other hand, production of maize and sorghum demonstrated a rapid growth in late 2010s (Figure 36).

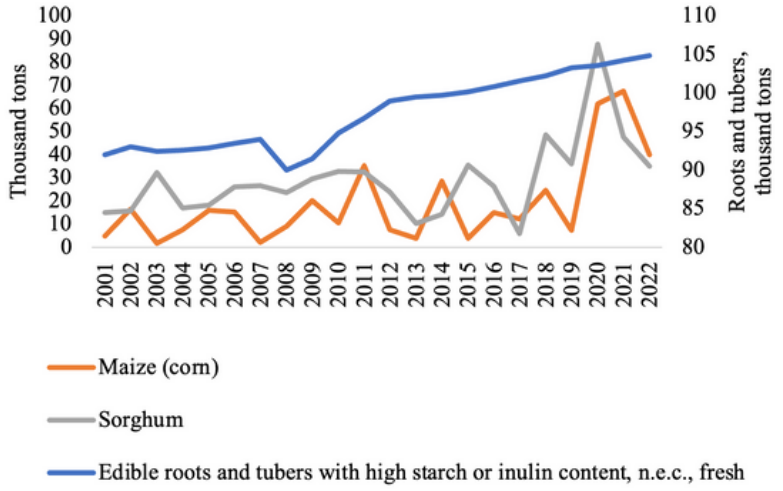

Figure 36. Production amounts of the 3 most-produced crops in Botswana, 2001-2022

Source: FAOSTAT

Land use and sown areas

As of 2022, there were 259 thousand square kilometers of agricultural land in Botswana, which is approx. 46% of the total country's area. However, only a small portion of this land is cultivated (3 thousand square km, as of 2022), with majority being devoted to meadows and pastures (256 thousand square kilometers, as of 2022). Amount of agricultural land remained relatively unchanged through 1691-2021 (Figure 37).

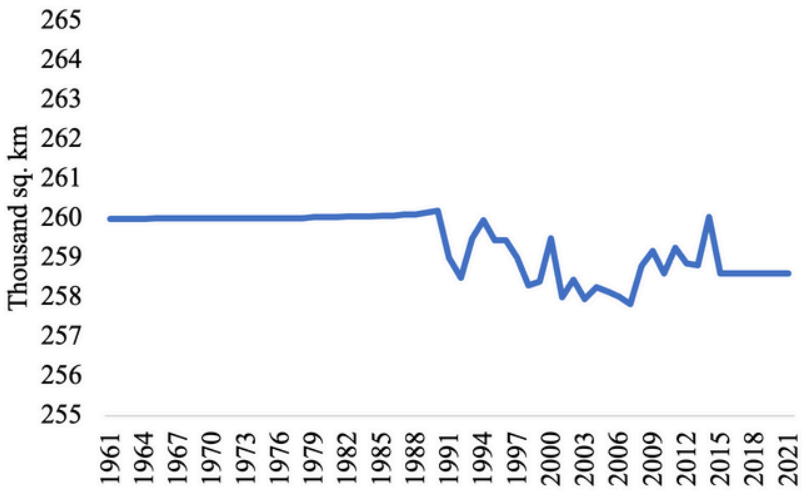

Figure 37. Agricultural land in Botswana

World Bank Database

According to FAO's AQUASTAT, as of 2021, irrigation is basically non-existent in Botswana. Only 3750 hectares are equipped for irrigation, which is roughly 1.3% of the cultivated area. However, this share was only 0.7% in 2001, so there has been a slight increase over the past two decades.

Livestock production

Botswanan livestock production is significantly larger than the crop sector. Milk of cattle is the most produced livestock commodity in Botswana. As of 2022, 212 thousand tons of it has been produced. Milk is followed by meat, in particular cattle, and game meat. 34, and 27 thousand tons of them were produced in 2022, respectively. Another commonly produced livestock commodity is goat milk, with 11 thousand tons of it produced in 2022.

Over the last two decades, a livestock production has been on a decline. The most pronounced decrease was observed for cattle milk production, in 2010s particularly. Over the last two years, the produced amount dropped by more than two times. Similar pattern is observed for cattle meat as well, with a 28% decrease over the past decade. The only product for which growth is observed is game meat. Its production increased by 136% over the last decade (Figure 38).

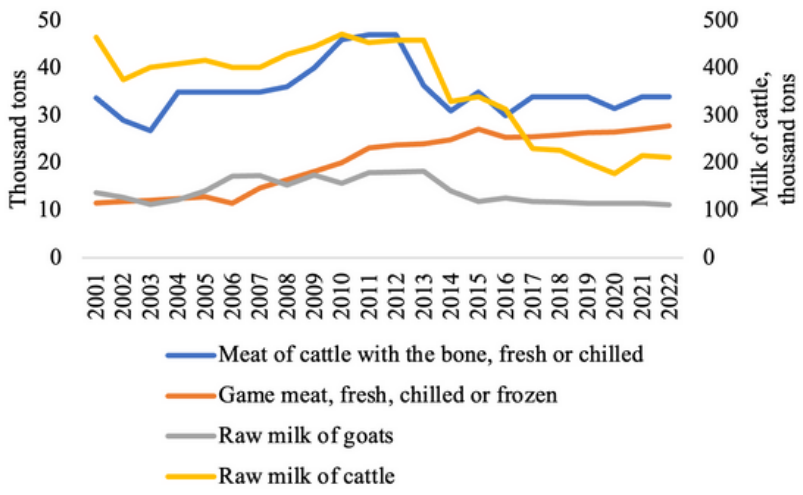

Figure 38. Livestock commodities production in Botswana, 2001-2022

Source: FAOSTAT

Live animals stock data reflects the production statistics with the gradual decline of animals' populations. Over the last two decades, number of cattle dropped from 1.7 to 1.2 million heads, which is a 30% decrease. Populations of goats and chicken have been decreasing as well, with approximately 50% and 44% drop over 2002-2022, respectively (Figure 39).

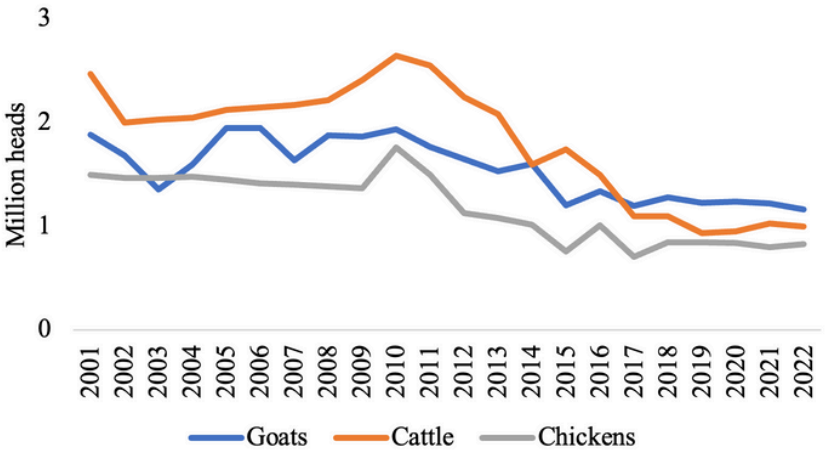

Figure 39. Live animals stock in Botswana, 2001-2022

Source: FAOSTAT

Processing sector

As of 2022, food, beverages and tobacco processing sector accounted for 1.4% of the Botswanan GDP. In 2002, this share was 1.1%, thus demonstrating a moderate growth of 0.3 percentage points over the past two decades.

Dairy products are the main processed commodities produced in Botswana. The main is skim milk of cows, 62 thousand tons of which has been produced in 2021. It is followed by butter, cheese, and cream. A rapid growth in their production has been observed in 2010, with an approx. 3-4 times increase in production. Since 2010, no further growth has been observed (Figure 40).

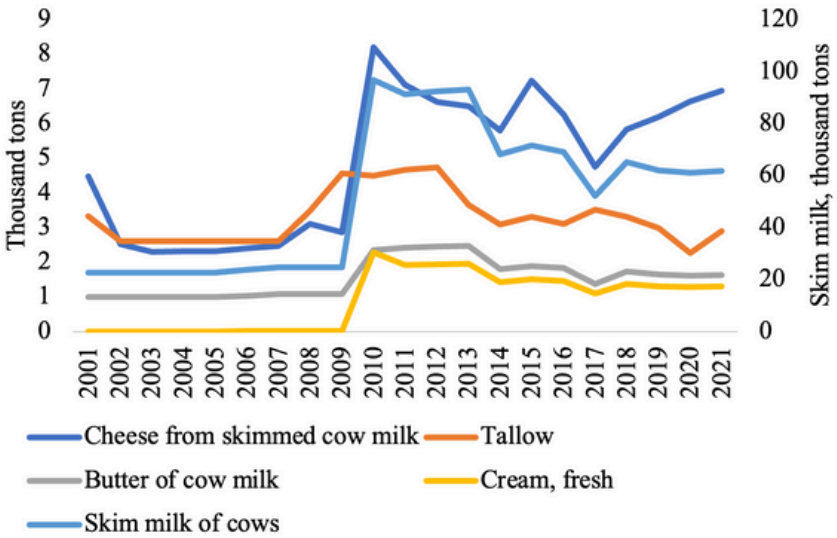

Figure 40. Processed commodities production in Botswana, 2001-2021

Source: FAOSTAT

2.4. CHALLENGES IN AGRICULTURE

Climate and environmental issues

One of the primary challenges faced by Botswana's farmers is the increasingly unpredictable rainfall patterns exacerbated by climate change. Irrigation is not common in Botswana's, making it vulnerable to fluctuated weather conditions. The irregular and reduced rainfall, which has worsened in recent years, particularly affects the growth of key crops such as maize and sorghum. These crops require 500–800 mm of rainfall per annum, but some regions of Botswana now receive significantly less, making agriculture even more precarious (Moseley, 2016). In the country's semi-arid areas, where rainfall has dropped by 50–100 mm in recent decades, subsistence farmers struggle to maintain adequate production levels (Moseley, 2016).

The quality of soil in many regions of Botswana is another significant barrier to agricultural productivity. Poor soils, particularly in areas known as the 'sandveld,' are characterized by low water retention, low nutrient levels, and minimal organic matter, which severely limit crop yields (Kashe et al., 2023). Furthermore, the reliance on conventional tillage methods has contributed to land degradation by accelerating the erosion of topsoil and the depletion of organic matter (Acquah, 2004). Conservation agriculture (CA), which advocates for minimum tillage and soil cover retention, is seen as a potential solution to this problem. However, the adoption of CA practices remains low, mainly due to competing demands for crop residues, which are often used as livestock feed rather than soil cover (Kashe et al., 2023).

Socio-economic challenges and labor shortage

Socio-economic issues further exacerbate the agricultural challenges in Botswana. Limited access to credit and markets, particularly for smallholder farmers, restricts their ability to invest in modern farming techniques and technologies that could improve productivity (Moepeng, 2013). Moreover, high input costs, and a lack of infrastructure (irrigation systems and transportation networks), increase the cost of farming, making it difficult for farmers to compete on both domestic and international markets (Acquah, 2004). The government's Integrated Support Programme for Arable Agriculture Development (ISPAAD), which subsidizes tillage and inputs, has attempted to address these challenges. However, critics argue that these subsidies often reinforce conventional, unsustainable farming practices rather than promoting long-term sustainable approaches like conservation agriculture (Kashe et al., 2023).

Additionally, labor shortages due to rural-urban migration also contribute to the challenges faced by Botswana's agricultural sector. As more people, especially younger generations, migrate to urban areas in search of better employment opportunities, rural farms are left without the necessary labor to sustain productivity. This issue is compounded by the aging farming population, which further diminishes the sector's labor force (Moseley, 2016). The loss of labor not only impacts the physical ability to farm but also reduces the capacity to adopt labor-intensive sustainable farming practices, such as CA, which require more knowledge and effort to implement effectively (Moepeng, 2013).

2.5. AGRICULTURAL POLICY OVERVIEW

Agriculture, unlike in many other countries in the region, plays a relatively minor role in Botswana's economic structure, contributing less than 2% to the GDP (Statistics Botswana, 2023). However, about 18% of the employed population is engaged in agricultural activities. While poverty is less widespread in Botswana compared to other African nations, it remains predominantly concentrated in rural areas. The poverty rate among the rural population is nearly 33%, compared to less than 9% in urban areas (Statistics Botswana, 2021). Therefore, a key objective of the government's agricultural policy is to enhance productivity and increase value addition in the sector to help reduce poverty among rural populations and support overall economic growth. Additionally, the goal of ensuring food security underscores the government's commitment to prioritizing agriculture for development and transformation.

The country's strategic development direction is defined by **Vision 2036**, adopted in 2016 (Vision 2036 Presidential Task Team, 2016). According to this strategy, the agricultural sector is envisioned as a driver of improved living conditions through enhanced food security, increased employment, and expanded export earnings, which would, in turn, boost national revenue and foreign exchange reserves. These objectives are expected to be achieved by integrating new technologies into agricultural production and encouraging private sector initiatives. In line with Vision 2036, the National Transformation Strategy was introduced in 2023 to provide an updated analysis of the economic situation and refine the strategic directions needed to achieve Vision 2036's goals (National Planning Commission, 2023). The strategy emphasizes the importance of agricultural development, achieving national food security, optimizing water supply, and protecting the environment.

A more detailed plan for implementing government strategies is outlined in the **Second Transitional National Development Plan,** adopted in 2023 (National Planning Commission, 2023a). Key areas of focus within the Plan include:

- **Liberalization of beef exports.** Currently, beef exports are exclusively managed by the Botswana Meat Commission (BMC), a state agency, which has proven to be an inefficient model. The government plans to open the market to local private producers and partially privatize BMC. A new state body will be established to oversee standards and quality control for exporters.
- **Development of climate-smart agriculture.** This initiative aims to promote the adoption of innovative technologies that can optimize irrigation requirements and reduce labour needs.
- **Adaptation of the agricultural sector to climate change.** A primary focus here is on the development of conservation agriculture, which aims to stabilize and ensure adequate water supply – a significant current challenge that is expected to intensify due to climate change.
- **Subsidizing agricultural inputs for local producers.** Through government programs designed to lower the costs of fertilizers, seeds, and tillage services, the government aims to boost productivity in the sector and stimulate production growth.
- **Improving the productive capacity of the livestock sector.** Planned reforms include modernizing the National Artificial Insemination Laboratory, developing Assisted Reproductive Technology, expanding fodder production, and implementing training programs to enhance livestock productivity and increase herd sizes.

Government spending on the agricultural sector is a crucial tool for implementing these policies in Botswana. Between 2017 and 2021, the government allocated an average of over 214 million USD annually for agricultural needs (Figure 41), accounting for 3-5% of total central government expenditures. One of the main tools supporting local agricultural producers is government's subsidy programs for farmers.

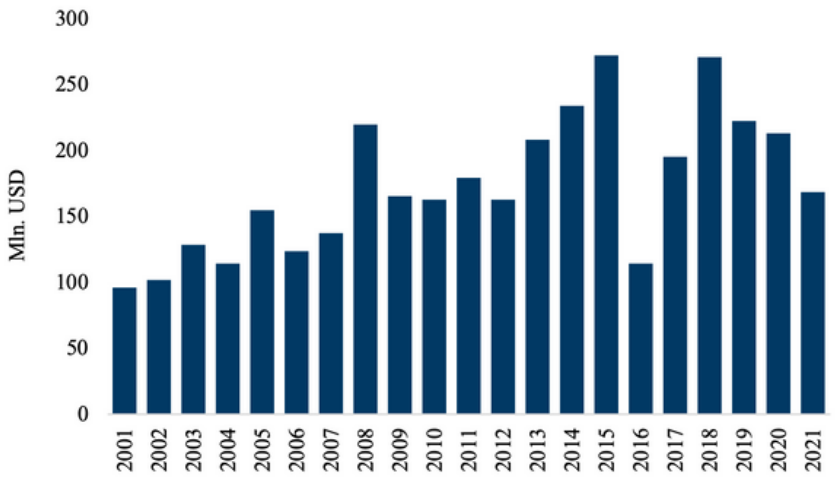

Figure 41. Central government expenditures to agriculture

Source: FAOSTAT

Until 2023, the **Integrated Support Programme for Arable Agriculture Development (ISPAAD)** was the main support scheme in place. Agricultural producers managing plots of 0.5 hectares or more could apply for reimbursements of up to 9000 USD to cover expenses on pesticides, fertilizers, packaging, and seeds.Individual farmers were required to contribute at least 60% of total costs, while cooperatives or enterprises were required to contribute 40%.

In 2023, the ISPAAD was replaced by the **Temo Letlotlo program.** Unlike the previous general subsidy program, Temo Letlotlo is tailored according to the beneficiaries and targeted crops. The program has two components: Household Food Security and National Food Security. The first component targets micro-farmers (up to 4 hectares of cultivated land intended for subsistence farming), offering a 100% subsidy on input supplies to meet household food needs. The National Food Security component is designed for commercial agricultural producers, offering various forms of support, including:

- **Seasonal loans at prime rate.** These loans are intended for purchasing agricultural inputs, and producers are required to have insurance under a special government scheme to mitigate crop loss risks.
- **Mmoko reward package.** This package provides payments to producers who meet specific crop yield criteria.
- **Fencing assistance program.** This initiative offers support for fencing agricultural plots.
- **Preferential loans for tractors and spare parts.** This scheme provides low-interest loans to purchase agricultural machinery and necessary spare parts.
- **Special government's insurance scheme.** This insurance program is designed to protect producers against crop loss risks.

Table 2. Eligibility criteria for Temo Letlotlo support programme.

Category of producer	Programme component	Eligibility criteria
Micro scale farmer	Household Food Security	- Cultivates a maximum of 4 ha of land. - Productivity level is above 0.6 t/ha. - Produce to meet the family food requirement.
Small scale farmer	National Food Security	- Cultivates less than 16 ha of land. - Member of Grain Producers Association. - Has annual turnover of up to 600 thousand Botswana pula (~ 45 thousand USD). - Productivity level is above 1.5 t/ha. - Produce for the market. - Has at least 1 full-time employee or is working full time on the farm. - Undertake production on a fully fenced field.
Medium scale farmer	National Food Security	- Cultivates between 16.1ha and 150ha of land. - Have annual turnover of between 600 thousand pula (45 thousand USD) and 10 million pula (760 thousand USD). - Productivity level is above 2 t/ha. - Member of Grain Producers Association. - Produce for the market. - Has at least 2 full-time employees or is working full time on the farm. - Undertake production on a fully fenced field.
Large scale farmer	National Food Security	- Cultivates above 150 ha of land. - Have annual turnover of above 10 million pula (760 thousand USD).- 50% contract-based production. - Productivity level is above 2.5 t/ha. - Member of Grain Producers Association. - Produce for the market. - Has at least 3 full-time employees or is working full time on the farm. - Undertake production on a fully fenced field.
Micro scale cluster	National Food Security	- Has a minimum of 10 members. - Cultivates between 500 and 2,000 ha of land. - Has an annual turnover of up to 10 million pula (760 thousand USD). - 50% contract-based production. - Productivity level is above 2.5 t/ha. - Member of Grain Producers Association. - Has at least 3 full-time employees, - Undertake production on a fully fenced field.

Category of producer	Programme component	Eligibility criteria
Medium scale cluster	National Food Security	- Has a minimum of 10 members. - Cultivates between 2,000 and 6,000 ha of land. - Has an annual turnover of between 10 million pula (760 thousand USD) and 50 million pula (3.8 million USD). - 60% contract-based production. - Productivity level is above 2.5 t/ha. - Member of Grain Producers Association. - Has at least 4 full-time employees. - Undertake production on a fully fenced field.
Large scale cluster	National Food Security	- Has a minimum of 10 members. - Cultivates between 6,000 and 12,000 ha of land. - Have annual turnover of above 50 million pula (3.8 million USD). - 75% contract-based production. - Productivity level is above 2.5 t/ha. - Member of Grain Producers Association. - Has at least 5 full-time employees. - Undertake production on a fully fenced field.

Source: Temo Letlotlo website, Ministry of Agriculture of Botswana.

International donor support plays a relatively minor role in the development of Botswana's agricultural sector compared to state support, which is partly explained by the country's relatively stable food security situation and overall economic development. Since 2017, annual donor contributions for the sector have not exceeded 7.5 million USD. An example of international support is the African Development Bank's 137 million USD credit program for Botswana, approved in 2023. This program supports reforms outlined in the Second Transitional National Development Plan, such as the liberalization of the beef export market, partial privatization of BMC, and the establishment of a special agency for quality oversight of beef exports.

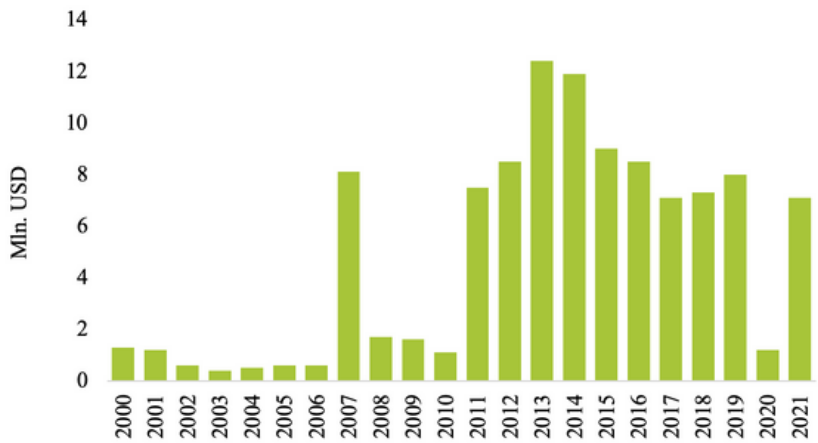

Figure 42. Development flows to agriculture, forestry, and fishery

Source: FAOSTAT

Credit financing is becoming increasingly significant in the development of agriculture, serving as a strategic tool for market growth through private initiatives. Since 2010, the annual volume of loans issued to farmers has quadrupled, reaching nearly 117 million USD in 2021. With the introduction of the Temo Letlotlo program, which offers preferential loans and crop insurance mechanisms, the volume of credit is expected to rise. However, it is important to note that government funding remains the primary external financial source for investments in the sector.

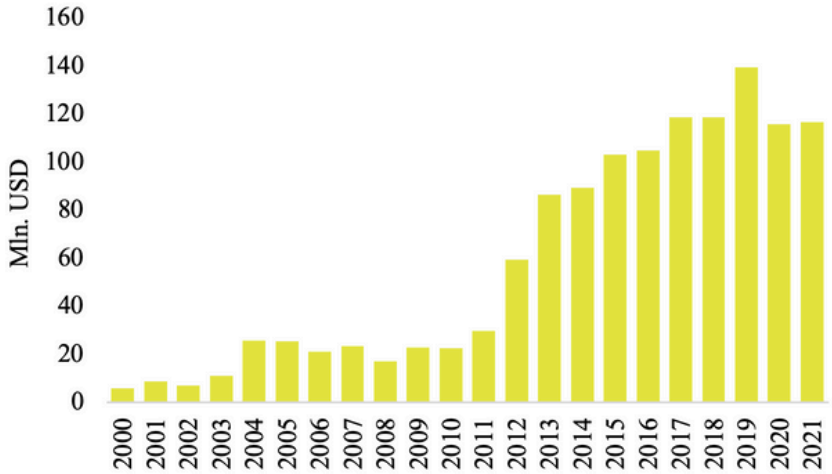

Figure 43. Credit to agriculture, forestry, and fishery

Source: FAOSTAT data

Botswana maintains relatively high standard tariff rates on imported food products, ranging from 30% on fruits and vegetables to nearly 82% on dairy products (WTO, 2023). However, import tariffs for countries classified by Botswana as Most Favoured Nations (MFN) are significantly lower. For instance, dairy products, which face the highest standard import tariff, have an MFN rate of under 7%. In contrast, categories with relatively lower standard tariffs, such as livestock products and fruits and vegetables, see higher MFN rates – 37% versus 11% for livestock products and 30% versus over 9% for fruits and vegetables.

Additionally, fruits and vegetables are among the least likely to benefit from duty-free status, with less than 5% of these imports exempted from tariffs. By comparison, livestock and dairy products have much higher shares of duty-free imports, with over 45% and 61%, respectively.

Botswana identifies RSA, Namibia, Mozambique, and EU countries as key partners for food imports, with whom it shares various common import duties. Average import tariffs on food products from RSA are below 11%, while those from Namibia and Mozambique hover around 13%. In contrast, the average tariff on agri-food imports from the EU is close to 20%. This dual approach reflects the government's strategy: on one hand, it seeks to protect domestic producers by maintaining higher tariffs, thereby encouraging local production; on the other, it aims to secure more favourable trade agreements with strategic partners, including countries from its region and developed countries in the EU.

Table 3. Import duties for agro-food products in Botswana

Products group	Average Import duty	Average MFN applied import duty
Live animals and meat	37.4%	11.2%
Dairy products	20.4%	6.8%
Fruits and vegetables	29.5%	9.4%
Cereals and food preparations	47.7%	8.4%
Oilseeds, fats and oils	49.1%	7.4%
Sugars and confectionery	75.2%	8.9%

Source: WTO data and estimates for 2022-2023.

2.6. BOTSWANA: SUMMARY

Botswana, with a population of approximately 2.6 million as of 2022, is one of the fastest-growing countries in Southern Africa, though its growth rate remains moderate compared to regional averages. The country experienced significant economic growth in the early 2000s, but this progress stagnated during the 2010s. As of 2022, Botswana's GDP per capita is the highest in the region, surpassing that of RSA. Despite this economic success, food insecurity remains a persistent issue, with the prevalence of undernourishment hovering around 24-26% over the past two decades.

The number of undernourished people in Botswana increased from 400,000 to 600,000 between 2000 and 2022. However, the dietary energy supply adequacy has improved, rising from 99% to 109% during this period, though the diversity of the diet has suffered. The share of calories derived from cereals, roots, and tubers increased from 45% to 54%, surpassing the regional average. Protein intake has also increased substantially since the late 2000s, stabilizing at around 75 grams per person per day.

Agriculture plays a minor role in Botswana's economy, contributing just 1.6% of GDP in 2023. The sector is characterized by volatility, with periods of rapid growth followed by stagnation. Crop production is largely subsistence-based, with roots and tubers, maize, and sorghum being the primary crops. Livestock production, particularly cattle and game meat, dominates the agricultural sector, though output has declined in recent years due to climate change and other challenges.

Botswana's agricultural policy, outlined in its Vision 2036 and the National Transformation Strategy, focuses on improving food security and increasing value-added production. The government aims to promote climate-smart agriculture and expand irrigation infrastructure, though irrigation remains limited to just 1.3% of cultivated land. The Temo Letlotlo program, introduced in 2023, provides targeted subsidies and support to farmers, particularly smallholders, to enhance productivity and reduce reliance on imports. However, challenges such as climate variability, poor soil quality, and limited access to markets and credit continue to hinder the sector's development.

3. NAMIBIA

3.1. FOOD SECURITY

The population in Namibia gradually increased over the last two decades, from 1.9 million people in 2000 to 2.6 million in 2022 (Figure 44).

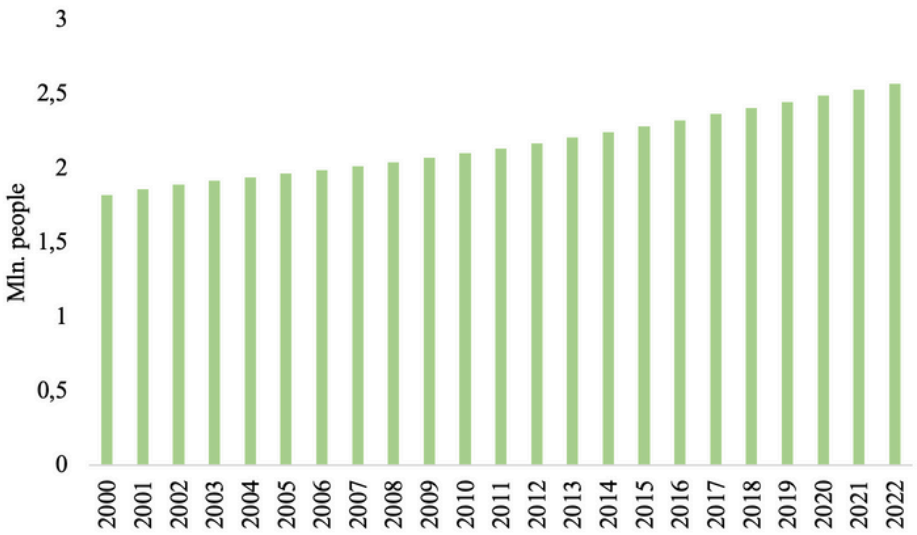

Figure 44. Total population in Namibia

Source: World Bank

Economy of Namibia followed the pattern of other Southern African countries over the past two decades. After a substantial growth in 2000s, it entered a period of stagnation in 2010s. Overall, Namibian GDP per capita remained the lowest among the three biggest countries in Southern Africa over the whole observed period (Figure 45)

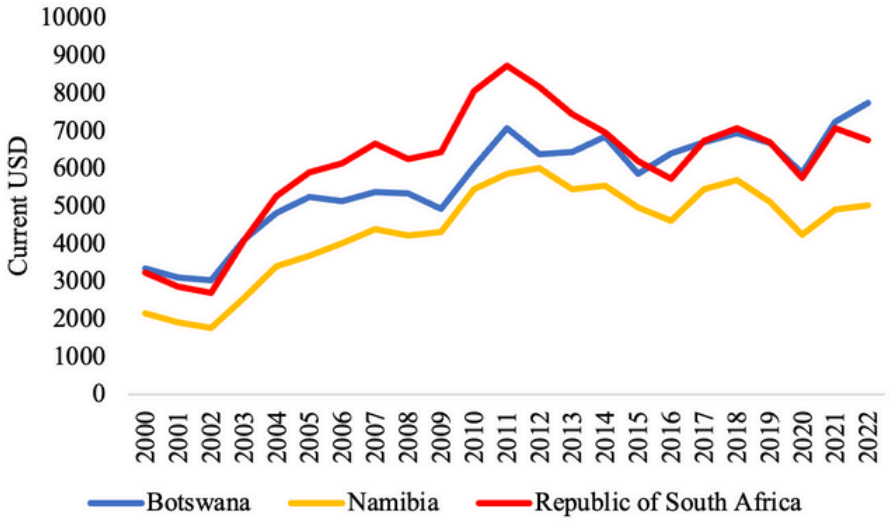

Figure 45. GDP per capita in Namibia

Source: World Bank

Prevalence of undernourishment in Namibia is substantially higher than on average in the region. Throughout 2000-2010, the share of undernourished population has been steadily growing, peaking at 32% in 2008-2010. In 2010s, the prevalence of undernourishment started to decrease and reached 17% in 2000-2022 (Figure 46).

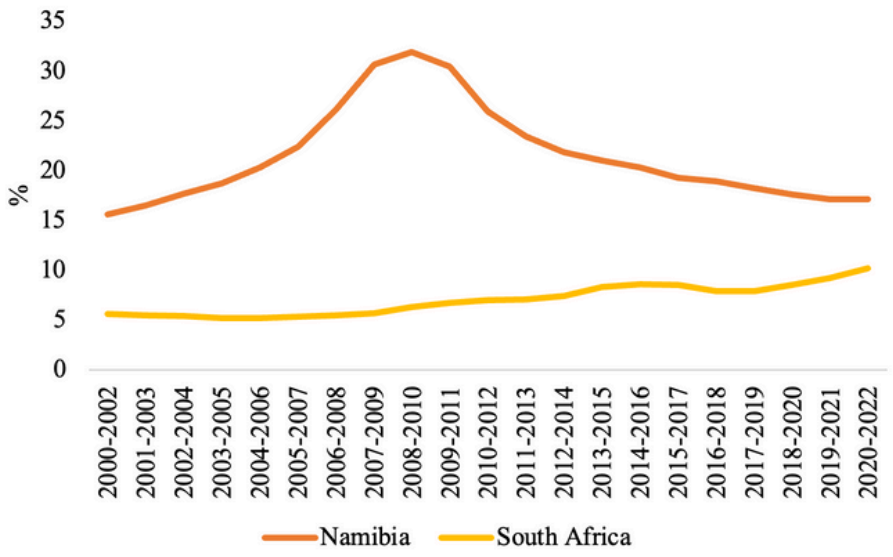

Figure 46. Prevalence of undernourishment in Namibia

Source: FAOSTAT

Meanwhile, the total number of undernourished persons increased by 100 thousand people over the last two decades, from 300 thousand people in 2000-2002 to 400 thousand in 2020-2022 (Figure 47).

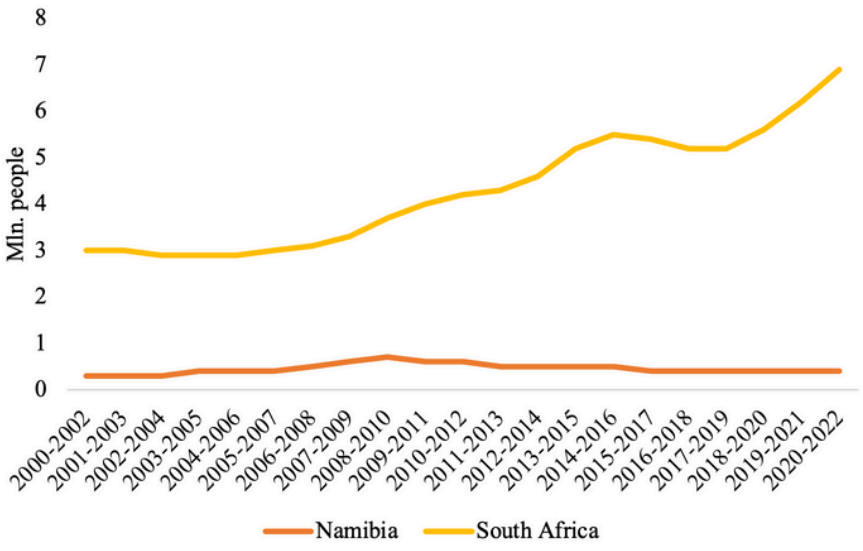

Figure 47. The number of undernourished persons in Namibia

Source: FAOSTAT

The average dietary energy supply adequacy followed a pattern similar to the share of undernourished population over the last two decades. After a period of gradual decrease in 2000s, in turned to a positive trend since 2010s, almost reaching a regional average by 2022 (Figure 48).

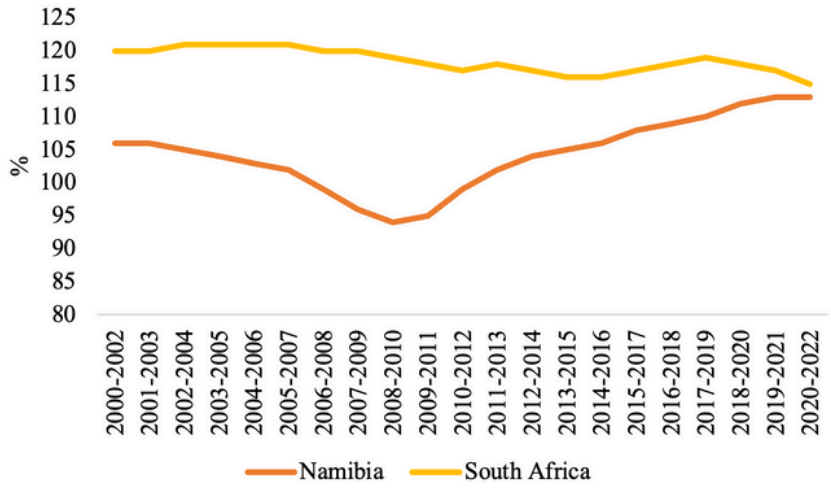

Figure 48. Average dietary energy supply adequacy in Namibia

Source: FAOSTAT

The share of dietary energy supply derived from cereals, roots and tubers remained slightly higher than the regional average over the observed period but followed the similar pattern. Overall, it decreased from 60% in 2000-2002 to 55% in 2018-2020, indicating a moderate improvement in diet diversity (Figure 49).

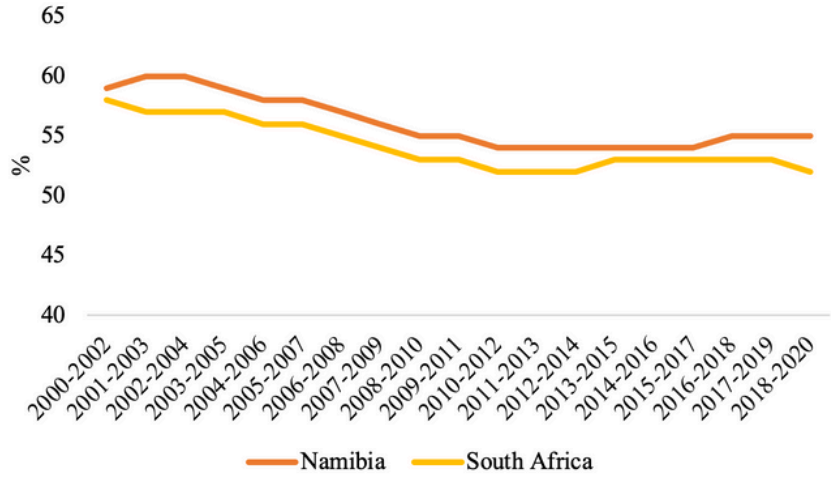

Figure 49. Share of dietary energy supply derived from cereals, roots and tubers in Namibia

Source: FAOSTAT

As Figure 50 shows, the average protein supply remained relatively unchanged at approximately 62-65 grams per person per day over the last two decades.

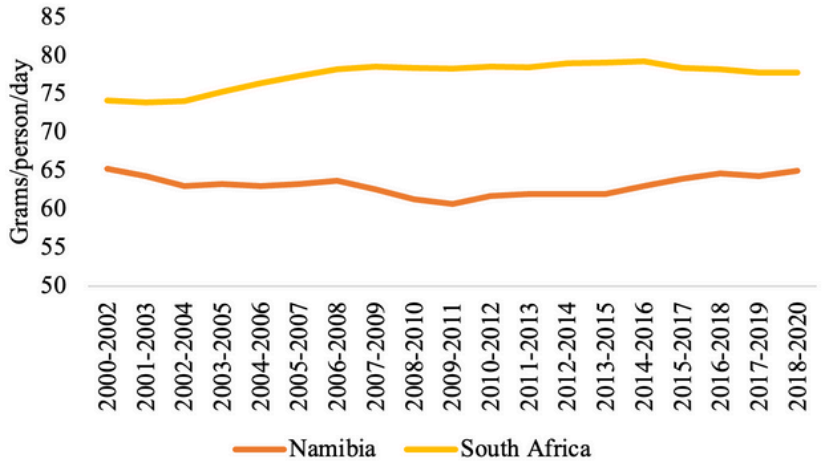

Figure 50. Average protein supply in Namibia

Source: FAOSTAT

By contrast to RSA and Botswana, UN WFP operates in Namibia. As indicated in Table 4, WFP budget is inclined towards support of food insecure households (78% of expenditures) and increasing the resilience of food systems (13%).

Table 4. WFP Namibia Country Portfolio Budget 2023 (2020-2025)

SDG target	Strategic outcome	Expenditures,mln. USD	Share in totalexpenditures, %
2.1. Access to Food	Targeted food insecure households affected by shocks in Namibia benefit from enhanced access to adequate food and nutrition during and in the aftermath of crises. Vulnerable populations in Namibia are enabled to meettheir food and nutrition needs throughout the year.	16.6	78
2.4. Sustainable Food System	Governmental institutions in Namibia have capacity to conduct analysis that supports planning towards transformative and resilient food systems by the end of 2023.	2.7	13
17.9. Capacity Building	Government Policy dialogue and programme design in Namibia is informed by evidence and enhanced knowledge of hunger issues throughout NDP5 period.	1.8	8
17.16. Global Partnership	Government and development partners in Namibia are supported by efficient and effective supply chain and digital services and expertise through CSP period.	0.1	1
Total		**21.2**	**100**

Source: WFP. (2024). Annual Country Reports – Namibia

3.2. AGRI-FOOD TRADE

Namibian food import remained relatively unchanged over the last two decades, fluctuating within the 800-1000 million USD interval. The main import categories are beverages, sugars and confectionery, and cereals, with the share of latter increasing in the recent years (Figure 51).

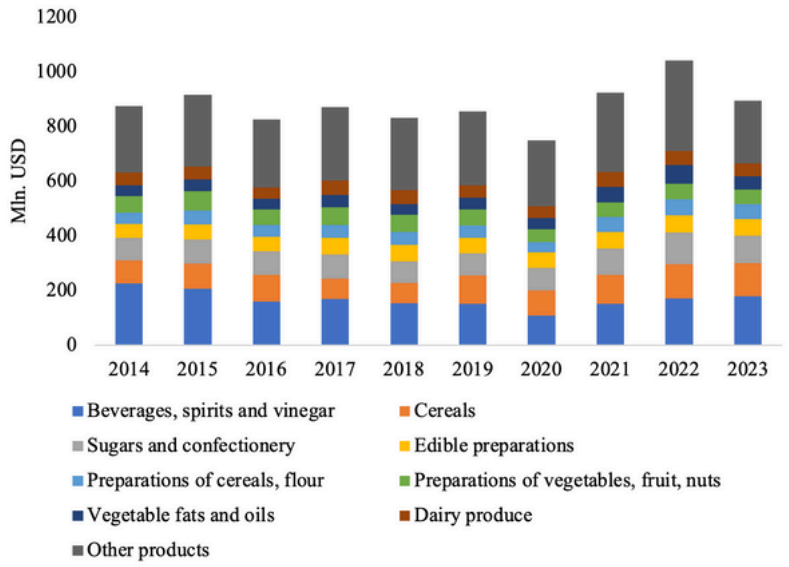

Figure 51. Product structure of food import to Namibia

Source: ITC Trade Map

The geographical structure of import is dominated by RSA (Figure 52). No food was imported from Ukraine to Namibia over the last decade.

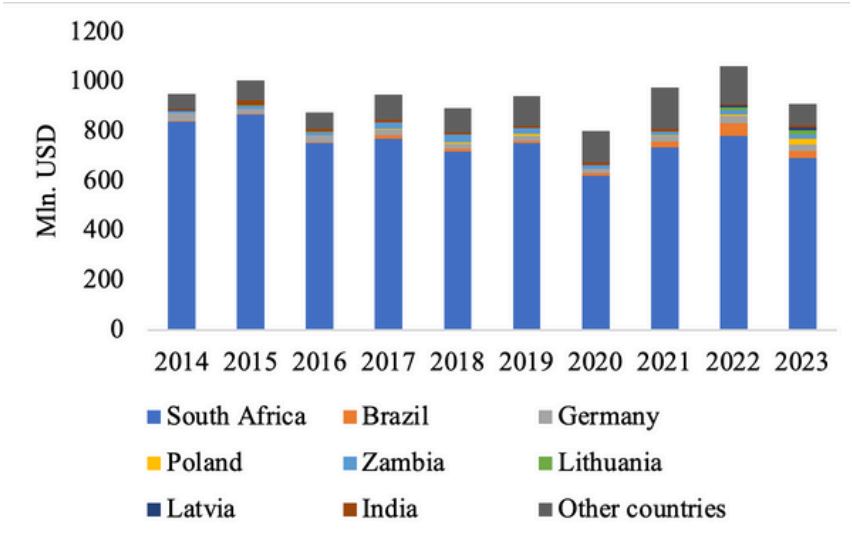

Figure 52. Geographical structure of food import to Namibia

Source: ITC Trade Map

Food exports from Namibia has been quite volatile over the past decade, ranging from 800 to 1200 million USD. The primary export product is fish, accounting for more than a half of the exports (Figure 53).

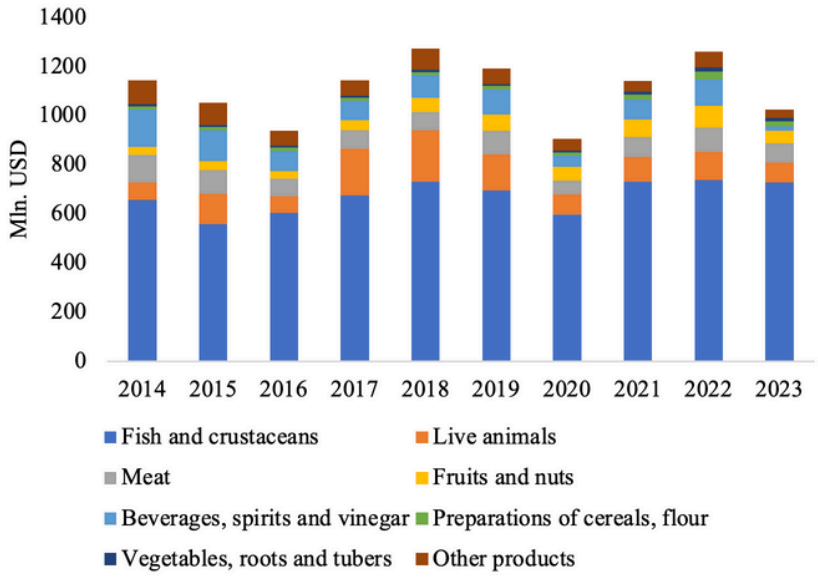

Figure 53. Product structure of food export from Namibia

Source: ITC Trade Map

The primary destination of Namibian food exports is the Republic of South Africa, which accounted for 50-75% of export value on average over the last decade (Figure 54). Food exports to Ukraine have been almost non-existent over the observed period.

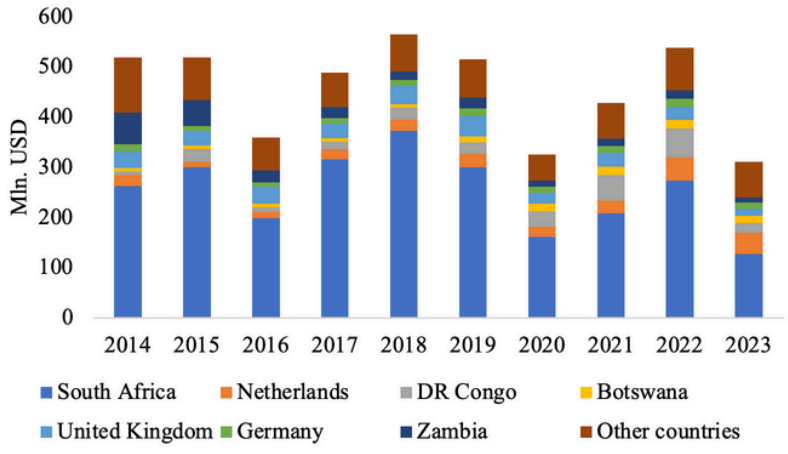

Figure 54. Geographical structure of food export from Namibia

Source: ITC Trade Map

3.3. LOCAL AGRICULTURAL SECTOR

Agriculture plays an important role in Namibian economy. It's share in GDP has been relatively unchanged over the last three decades, fluctuating around 9-10%. On the other hand, the share of working population, engaged in agricultural production has been decreasing over this period, from 48% in 1991, down to 22 % in 2022, indicating a growth of agricultural labor productivity.

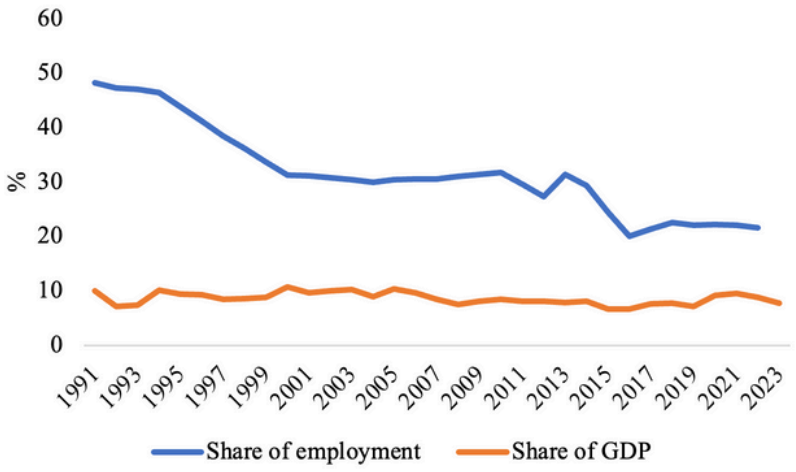

Figure 55. Share of agriculture in GDP and total employment in Namibia

Source: World Bank database

However, over the past three decades, value of Namibian agricultural production has been quite volatile, with periods of growth in 1990s and first half of 2000s, and stagnation in 2010s. However, despite the volatility, the overall trend has been positive over the past three decades, with an average year-to-year growth rate of 1.9%.

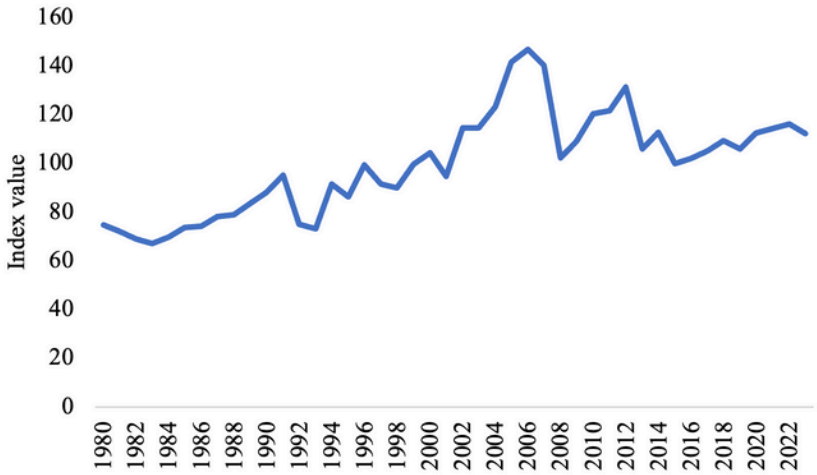

Figure 56. Agricultural production value index, constant 2015 USD. Baseline: 2015

Source: World Bank database

Crop production

Crop production is not a big sub-sector of agriculture in Namibia, as compared to livestock. Main crops produced in Namibia are edible roots and tubers, with 368 thousand tons produced in 2022. It is followed by maize and millet, 99 and 45 thousand tons of which have been produced in 2022, respectively. Another commonly produced crop is table grapes. Namibian crop production is mostly subsistence focused, with exception of maize and table grapes.

The highest growth over the past two decades has been observed for grapes. Production of them increased by 320% throughout this period. Production of edible roots and tubers has also been growing, but at a more relative pace, resulting in 30% increase in 2002-2022. Amounts of production of maize and millet has been highly volatile in the past two decades, with periods of both rapid growth and drops in production. However, overall trend of maize production has been positive as well, with a 256% increase (Figure 57).

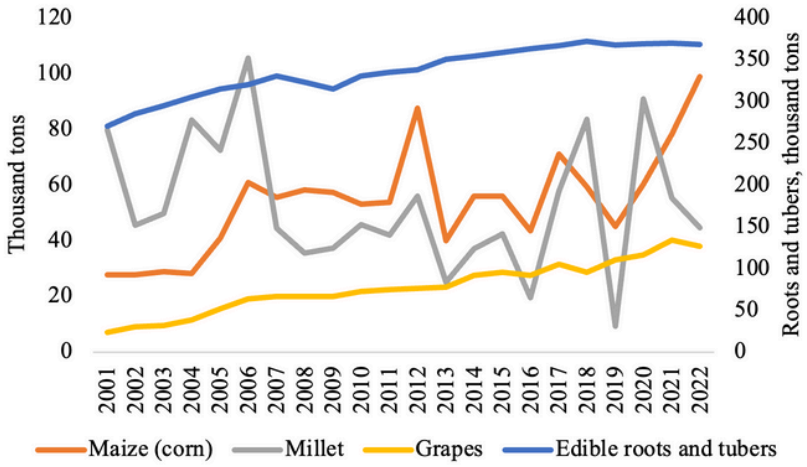

Figure 57. Production amounts of the 4 most-produced crops in Namibia, 2001-2022

Source: FAOSTAT

Land use and sown areas

As of 2022, there were 388 thousand square kilometers of agricultural land in Namibia, which is approx. 47% of the total country's area. Similar to Botswana, as of 2022, only a 2% of it was cultivated (8.12 thousand square km), with the rest being devoted to permanent meadows and pastures (380 thousand square kilometers, as of 2022). Amount of agricultural land remained relatively unchanged through 1691-2021 (Figure 58).

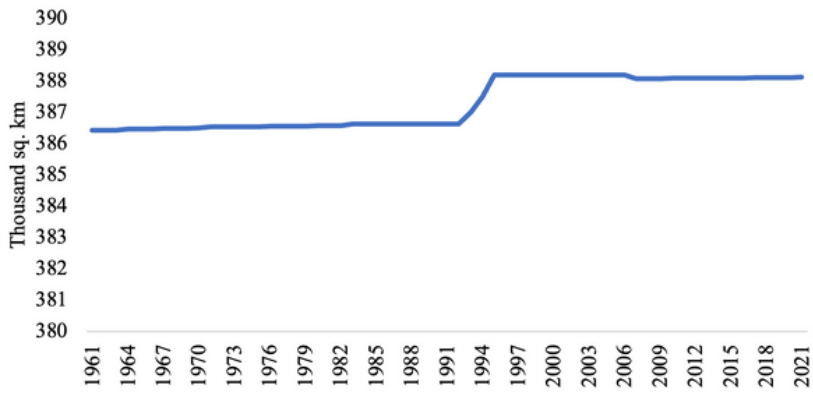

Figure 58. Agricultural land in Namibia

Source: World Bank Database

According to FAO's AQUASTAT, as of 2021, irrigation is basically non-existent in Namibia. Only 7570 hectares are equipped for irrigation, which is roughly 0.9% of the cultivated area. This number remained relatively unchanged through the past two decades.

Livestock production

Namibian livestock production is much larger than the crop sector. Milk of cattle is the most produced livestock commodity in Namibia, followed by cattle, pig, and chicken meat. Throughout 2002-2022, the fastest growing livestock commodity in Namibia was pork; its production had increased four times. Chicken meat production has been growing as well, however, at a more moderate pace. In 2022, produced amount of it accounted for 141% of the 2002 value. In contrast, cattle sub-sector has been on a decline. Production of cattle in 2022 was 2 times lower than in 2002. Milk production stagnated, remaining relatively unchanged (Figure 59).

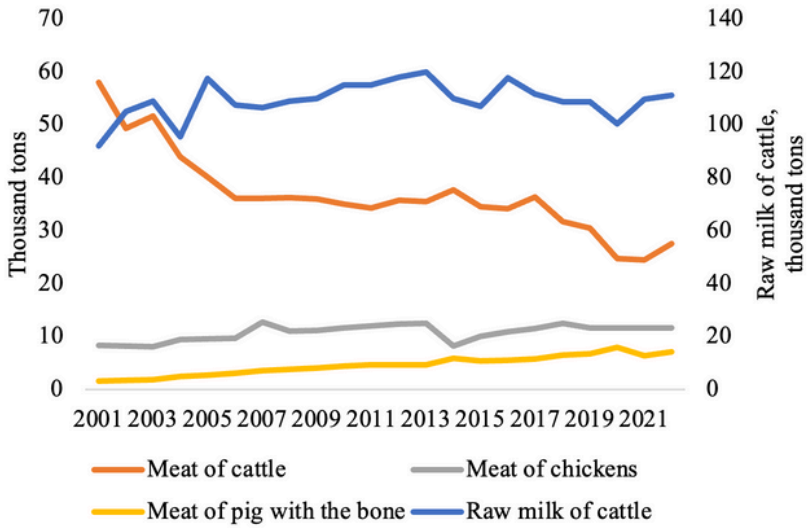

Figure 59. Livestock commodities production in Namibia, 2001-2022

Source: FAOSTAT

Over 2002-2022, population of cattle has been quite volatile, but overall trend remained positive (125% of the 2002 population in 2022, 2.9 million heads). At the same time, population of chickens exhibited a gradual growth, but there was a rapid drop, which happened in 2014 due outbreak of avian influenza. As a result, in 2022 chicken population has reached only 113% of the 2002 value (4.5 million heads). On the other hand, populations of sheep and goats has been shrinking, resulting in 51% and 15% decrease in 2022, as compared to 2002 level.

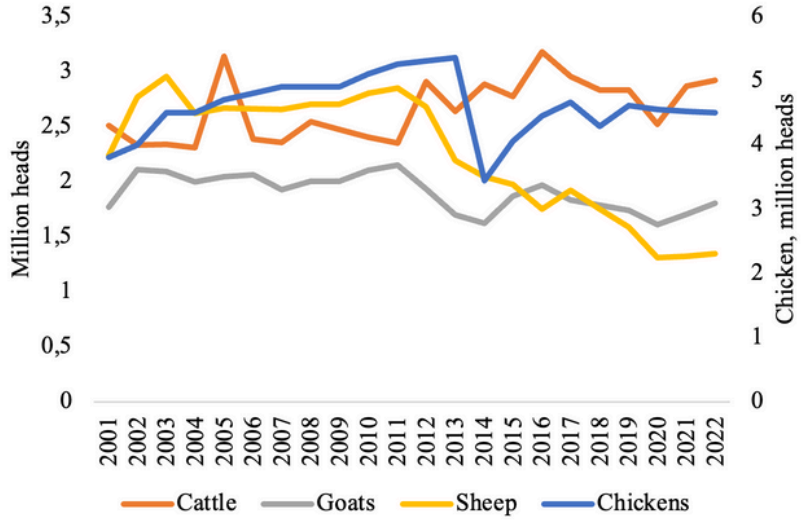

Figure 60. Live animals stock in Namibia, 2001-2022

Source: FAOSTAT

Processing sector

As of 2022, food, beverages and tobacco processing sector accounted for 6.7% of the Namibian GDP. In 2007, this share was 4.3%, thus demonstrating a moderate growth of 2.4 percentage points over the past 15 years. Beer of barley contributes the most to the size of this share, with 180 thousand tons produced in 2021. Apart of that, the food processing sector of Namibia is quite small. Dairy production demonstrated a moderate growth in 2000s and remained relatively stagnant since a slight rollback in 2012. Tallow production remained unchanged throughout 2001-2021 as well (Figure 61).

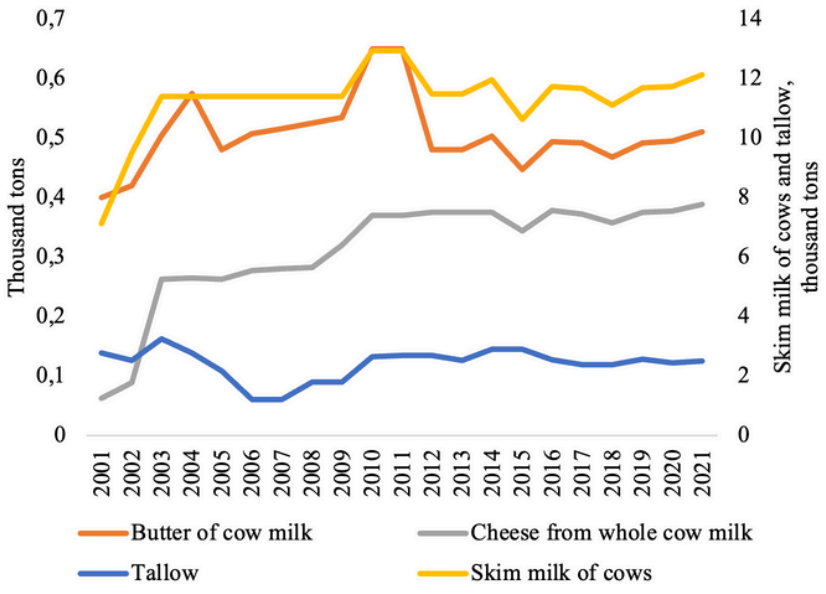

Figure 61. Processed food commodities production in Namibia, 2001-2021

Source: FAOSTAT

3.4. CHALLENGES IN AGRICULTURE

Climate and environmental issues

Namibia is the driest country in Sub-Saharan Africa, which severely limits agricultural productivity. Only 2% of the country's land receives adequate rainfall to support crop production (GIZ, 2020). The country relies heavily on groundwater, and the scarcity of this resource, coupled with frequent droughts, makes both crop and livestock farming highly vulnerable. According to Fortunato and Enciso (2023), the long-term degradation of land, exacerbated by bush encroachment and poor soil fertility, has significantly reduced the land's carrying capacity. The country has been unable to significantly increase yields despite efforts to expand farmland, reflecting a critical productivity gap in comparison to global trends (Fortunato & Enciso, 2023).

Water scarcity is particularly pronounced in communal areas, where smallholder farmers depend on unreliable rain-fed agriculture. Irrigation is possible only in limited areas, such as along the Orange River Basin, and overall, only a small portion of Namibia's land is suitable for arable farming (GIZ, 2020). This limitation places immense pressure on both smallholder and commercial farmers to manage water resources effectively, but Namibia's current water infrastructure remains underdeveloped and underutilized. (Fortunato & Enciso, 2023).

At the same time, livestock production is affected by droughts as well. Droughts in 2013, 2016, and 2019 significantly reduced livestock productivity, leading to a sharp decline in exports of live animals and processed meat products. Despite efforts to revive the sector, the livestock industry has yet to recover fully from these losses, and droughts continue to pose a recurrent threat to agricultural stability (Bank of Namibia, 2017). Additionally, the scarcity of animal feed, driven by both environmental conditions and market inefficiencies, further hampers the productivity and profitability of the livestock sector (Fortunato & Enciso, 2023).

Livestock veterinary constraints

Livestock farming, which constitutes nearly 70% of the country's agricultural output, in addition to droughts, faces challenges related to the restrictions related to animal health. The Veterinary Cordon Fence (VCF), also known as the «Red Line», prevents the export of livestock from northern communal areas due to disease risks, limiting market access for small-scale farmers (GIZ, 2020). This not only reduces income opportunities for communal farmers but also contributes to Namibia's overall dependence on exporting weaners (young cattle) rather than adding value through local slaughtering and processing (Fortunato & Enciso, 2023).

Productivity constraints and limited access to quality inputs

The country's agricultural productivity remains low, partly due to limited access to modern inputs such as high-quality seeds, fertilizers, and machinery. According to Fortunato and Enciso (2023), the lack of access to advanced inputs is a binding constraint for smallholder farmers, particularly in communal areas where traditional farming methods prevail. The commercial agriculture sector, although more advanced, still struggles with productivity challenges. For example, grape production, one of Namibia's most successful export crops, has grown significantly over the past few decades but has not yet reached its full potential due to structural limitations in irrigation

infrastructure and market coordination (Fortunato & Enciso, 2023). Additionally, Namibia's overall agricultural growth has relied more on expanding land use rather than increasing yield per hectare, a pattern that diverges from global trends where productivity gains have driven agricultural growth (GIZ, 2020).

Institutional challenges: access to finance and transport infrastructure

Access to finance remains a critical barrier to improving agricultural productivity, particularly for smallholder and communal farmers. While Namibia's commercial farmers generally have access to credit, small-scale farmers often rely on informal lending sources, which are insufficient to meet their needs for investing in modern inputs (Fortunato & Enciso, 2023). Communal farmers are also unable to use land as collateral for loans, further restricting their access to formal financial institutions (Bank of Namibia, 2017). Besides that, Namibia's rural infrastructure, including roads and logistics services, is underdeveloped, particularly in the northern regions, which makes it difficult for smallholder farmers to access markets and sell their produce at competitive prices (Fortunato & Enciso, 2023). The lack of reliable transportation and storage facilities further limits the profitability of agricultural activities, particularly for perishable crops like fruits and vegetables.

3.5. AGRICULTURAL POLICY OVERVIEW

For Namibia, agriculture, as in many other countries in the region, is regarded as a crucial component in improving the well-being of the population, particularly in addressing poverty, food insecurity, and dependence on imported food products. Agriculture accounts for 22% of employment in the country (ILOSTAT). However, the sector's contribution to the national GDP is relatively low – estimated at less than 4%, according to the FAO. There is a significant development gap between urban and rural areas: while around 25% of the urban population is poor, over 59% of the rural population lives in poverty (Namibia Statistics Agency & UNICEF Namibia, 2021). Given that Namibia has one of the most arid climates on the continent, with less than 1% of the land being arable, increasing agricultural production largely depends on developing irrigation systems, improving yields through access to agricultural machinery and fertilisers, and expanding processing capabilities within the sector.

A fundamental basis for policy formulation in Namibia's agriculture is found in the **National Development Plans** (NDPs), with its edition for 2025-2030 currently under development. These plans fit within the broader **Vision 2030** strategy, which was adopted in 2004 (Government of Namibia, 2004). The latest edition, NDP 2017-2022, aimed to accelerate economic growth, reduce unemployment, poverty, and inequality, and promote private sector initiative, including by increasing labour productivity in agriculture (Government of Namibia, 2017). In agriculture, the plan outlined improvements in extension services for small-scale farmers, providing land to farmers, improving market access, and enhancing the quality of seeds. A strategic goal of NDP 2017-2022 was to increase the value added in crop production from 38% to 55%, and in

livestock production from 16.5% to 30%. Together with accelerating domestic production in absolute terms, this was intended to help reduce the proportion of food-insecure people by nearly half – to 12%.

The key document directly defining the development objectives for Namibia's agriculture is the **National Agriculture Policy (NAP).** Like NDP 2017-2022, NAP sets targets for increasing production and productivity across the agricultural value chain (Government of Namibia, 2015). Significant policy tools declared under this policy include the provision of subsidised agricultural inputs, such as fertilisers and seeds, improvement and expansion of access to extension services for producers, facilitating access to breeding materials, and implementing measures for soil conservation. In addition to reducing poverty and inequality among agricultural producers, these actions aim to promote the adoption of sustainable production practices.

Central government expenditure on the agricultural sector in Namibia is relatively low compared to the region, accounting for around 2% of total public expenditure during 2018-2022. In monetary terms, expenditures remained relatively stable during this period, averaging over 92 million USD (Figure 62). A key component of these expenditures is funding for the development of the sector, which focuses on expanding domestic production and productivity – around half of the budget is allocated to these needs (Sherbourne, 2024). Additionally, about a quarter of this budget is directed towards land reform and land administration.

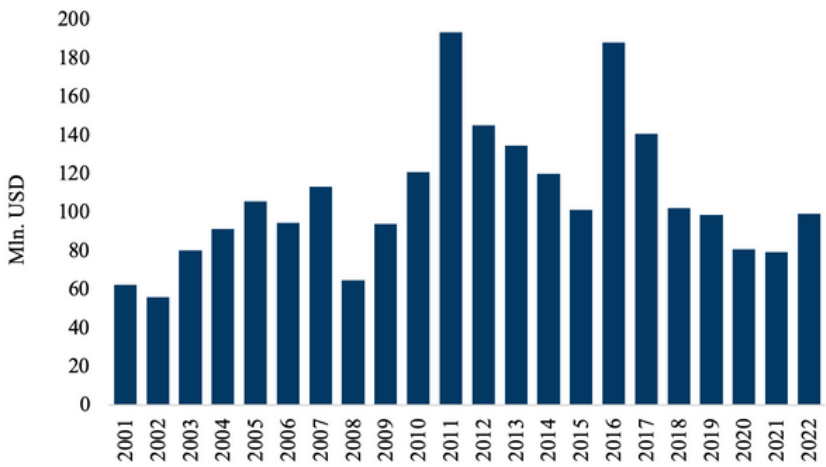

Figure 62. Central government expenditures to agriculture

Source: FAOSTAT data

One of the approaches the Namibian government sees for addressing income inequality and increasing labour productivity is through the promotion of communal cooperatives. In 2017, a separate strategy – the **Co-Operative Policy** – was adopted to support this initiative (Government of Namibia, 2017a). Through this cooperative ownership model, particularly in agriculture, the government seeks to involve financially vulnerable groups in higher value-added economic activities, which is expected to help alleviate both poverty and inequality more broadly. Furthermore, by fostering higher levels of trust within cooperative communities, it is anticipated that access to credit financing will improve, which is a key factor in mechanising production and, consequently, boosting its

productivity. Nevertheless, the cooperative model is not widely adopted in Namibia. In agriculture, approximately 100 cooperatives officially operated, involving 7,500 citizens, a significant portion of whom were engaged in livestock farming (67%).

Special attention in the sector is given to irrigation policy and reducing the risks of drought for agriculture. The **National Drought Policy and Strategy** outlines the state's policy direction in this area (Government of Namibia, 2023). The policy focuses on a new national approach to addressing drought, based on several components:

- **Redefining drought.** Based on a scientific approach, the government determines that drought can only be considered when abnormal weather conditions, relative to the local climate, occur, and their consequences cannot be mitigated by ordinary risk management policies, but require direct government intervention.
- **Changing the government's role in drought management.** According to the revised policy, the government's role is reduced to providing direct support to households during droughts, prioritising long-term poverty alleviation policies to reduce vulnerability to drought, and assisting farmers by encouraging income diversification and implementing more climate-resilient production practices.
- **Increasing the role of agricultural producers in drought resilience.** Farmers are expected to diversify their incomes, develop sustainable production practices, and establish a reserve to mitigate the impacts of drought.
- **Defining drought assistance.** Special assistance during droughts will only be provided directly during drought periods, and it will be based on shared contributions from the state and agricultural producers to a specialised fund aimed at mitigating the effects of drought.

Namibia has regularly suffered from drought in recent years. The COVID-19 pandemic and the global food crisis, exacerbated by Russia's invasion of Ukraine in 2022, have intensified the negative impact of drought on food security in the country. In 2024, Namibia experienced one of the most severe drought waves in a century, which required not only mobilisation of resources and actions from the national government but also assistance from international organisations. According to WFP estimates, due to the severe drought, about 1.26 million Namibians will face significant food access issues (WFP, 2024).

To assist the government in mitigating such consequences, the **WFP launched an emergency programme** that includes food provision for the most vulnerable, support for restoring food supply chains, and assisting the government in shock-response policies and hunger prevention strategies. The total value of the programme is nearly 11 million USD over a six-month period. Despite international support, the government had to resort to radical measures. In late August 2024, a decision was made to cull over 700 animals living in national parks (including hippos, buffaloes, impalas, zebras, and elephants) to distribute the meat to people affected by the drought (Ministry of Environment, Forestry and Tourism, 2024). The government also argued that this step would help reduce water resource consumption for maintaining these animals.

International donor support is generally directed towards strengthening agriculture's resilience to drought and enhancing the country's capacity to assist vulnerable populations. From 2015 to 2021, the average annual development expenditure from donors exceeded 11 million USD. Given the relatively low public spending on agriculture, international aid plays a significant role in addressing the sector's development issues.

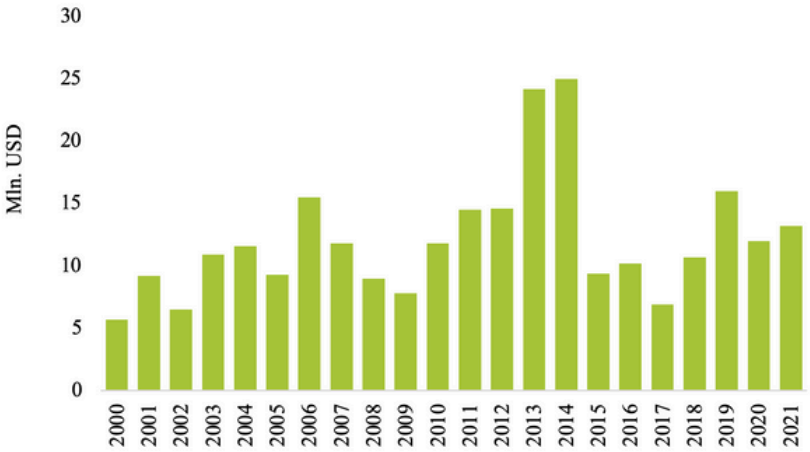

Figure 63. Development flows to agriculture, forestry, and fishery

Source: FAOSTAT

Credit financing plays more significant role in developing agriculture in Namibia compared to budget or donor funding. Loans provided to agricultural producers are approximately four times the size of public expenditures on the sector; between 2018 and 2021, nearly 432 million USD in loans were issued on average (Figure 64). This resource is important in the context of the government's strategic goal of mechanising production to increase productivity, as well as promoting private sector initiatives.

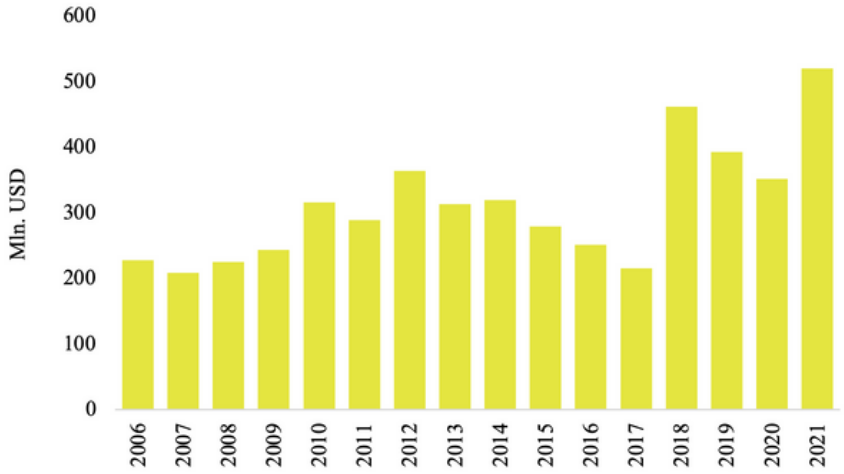

Figure 64. Credit to agriculture, forestry, and fishery

Source: FAOSTAT data

Namibia's trade policy in the agricultural sector is governed by the **Namibian Agriculture Marketing and Trade Policy and Strategy** (Government of Namibia, 2011). The country seeks to develop its export potential by increasing the value added in its agricultural exports while simultaneously reducing its reliance on food imports to become more self-sufficient. To safeguard the domestic market from trade practices viewed as extensions of post-colonial policies, the government employs both non-tariff measures to enforce minimum product quality requirement and various tariff strategies.

The country has relatively high tariff rates on imported food products, ranging from 30% (for fruits and vegetables) to nearly 82% (for dairy products) (WTO, 2023a). However, for countries classified by Namibia as Most Favoured Nations (MFN), import tariffs are much lower. For dairy products, which have the highest average import tariff, the MFN rate is less than 7%. Conversely, for categories with relatively lower average standard

import tariffs, MFN rates are relatively higher. For example, this applies to livestock products (37% common import tariff versus 11% for MFN) and fruits and vegetables (30% versus 9%). Moreover, imported fruits and vegetables are least likely to be duty-free - only 7% of imports of such goods enjoy duty-free status, whereas for livestock and dairy products, this share is closer to 30%.

Namibia identifies RSA, with which it shares many common import duties, and EU countries as key partners for food imports. Average import tariffs for food products from these countries are 11% and 16%, respectively. Thus, on one hand, the government aims to protect domestic producers to stimulate production, and on the other, it seeks to establish more favourable trade agreements with strategic partners, which include both regional leaders and developed countries in the EU.

Table 5. Import duties for agro-food products in Namibia

Products group	Average Import duty	Average MFN applied import duty
Live animals and meat	37.4%	11.2%
Dairy products	81.6%	6.7%
Fruits and vegetables	29.5%	9.3%
Cereals and food preparations	48.8%	8.4%
Oilseeds, fats and oils	51.8%	7.4%
Sugars and confectionery	75.2%	8.7%

Source: WTO data and estimates for 2022-2023.

3.6. NAMIBIA: SUMMARY

Namibia, with a population of 2.6 million people as of 2022, has experienced steady population growth over the past two decades, though its economy has struggled with stagnation since the 2010s. Namibia's GDP per capita is the lowest among the three largest countries in Southern Africa, despite significant growth in the early 2000s. Food insecurity remains a major issue, with the prevalence of undernourishment peaking at 32% in 2010 before declining to 17% in 2022.

The number of undernourished individuals in Namibia increased from 300,000 to 400,000 over the last two decades, though dietary energy supply adequacy has improved, nearing the regional average by 2022. The diet in Namibia is still heavily reliant on cereals, roots, and tubers, which account for 55% of dietary energy supply. Protein supply has remained relatively stable, averaging 62-65 grams per person per day over the last two decades.

Agriculture plays an important role in Namibia's economy, contributing around 9-10% of GDP and employing 22% of the population. Crop production is small compared to the livestock sector, with roots and tubers, maize, and millet being the primary crops. Livestock production, particularly cattle, dominates the sector, though the production of chicken and pig meat has grown rapidly in recent years. Namibia faces significant challenges from water scarcity, with only 0.9% of cultivated land equipped for irrigation. Droughts have severely impacted livestock production, reducing exports and threatening food security.

Namibia's agricultural policy, outlined in the National Development Plan and the National Agriculture Policy, focuses on increasing productivity, expanding irrigation, and addressing poverty in rural areas. The government provides subsidies and support to smallholder farmers through various programs, though public investment in agriculture remains relatively low. International donors and credit financing play a crucial role in supporting the sector, particularly in efforts to mitigate the effects of climate change and improve resilience to drought. The government also seeks to develop value-added industries, particularly in livestock, to reduce reliance on exports of raw agricultural products and increase self-sufficiency.

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