



The Dilemmas of Agri-food Systems and Food and Nutrition Security in Africa: Lessons from the Russian- Ukraine War (Agri-Secure)

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Introduction

- Globally, two-thirds of the extremely poor population lives in Sub-Saharan Africa (SSA).
- It is estimated that 490 million people in Africa live below the poverty threshold of 1.90 Purchasing Power Parity per day (PPP\$/day) (UNCTAD, 2021).
- Clear indication of a lack of access to sufficient, safe, and nutritious food for many Africans and a predicament to the continent's sustainable development process (UNICEF, 2019a; WFP, 2023).



Introduction (Cont.)

- Most SSA countries are dependent on agricultural imports and are therefore vulnerable to global socio-economic and geopolitical shocks such as the COVID-19 pandemic and climate change impacts (IMF, 2022; Onyeaka et al., 2023).
- About half of the Region's population works in agriculture, which contributes about 23% of its GDP.
- However, food and nutrition insecurity remain a fundamental problem for the population (UNICEF, 2019a; Hassen and Bilali, 2022; European Commission, 2022).
- Since the adoption of the Maputo Declaration in 2003 by the African Union, which called on all member countries to commit 10 percent of their public spending to the development of agriculture, only a handful have complied with the set target (Hörter & Rudloff, 2023).



Introduction (Cont.)

- According to the Food and Agriculture Organisation (FAO, 2022a), many African countries are unable to feed their rapidly increasing populations.
- The dependence of Africa on imports of grains like wheat, barley, and maize, as well as other needs such as sunflower oil, crude oil, and fertilizer is a major determinant of the continent's continuous food and nutrition insecurity.
- According to AfDB (2022), 33 of the 55 African countries import 90 percent or more of their wheat consumption from outside the continent.



Introduction (Cont.)

- The total volume of cereal imports is estimated at 100 Mt for the continent annually (WTI, 2023).
- A significant part of imports is provided by supplies from Ukraine and Russia, which are among the world leaders in the production and export of food, as well as inputs for agriculture.
- Ukraine – the world leader in the production of sunflower oil – in 2021 provided the needs of this product for 36 African countries and wheat for more than half of the continent's countries.



Introduction (Cont.)

- The impacts of shocks like climate change and variability, drought, floods, and epidemics like pest invasions and COVID-19 are affecting the capacity of agri-food systems to deliver nutritious, safe and affordable diets for all.
- These factors have caused agricultural productivity to drop by 18 % and hunger to increase by more than 20 % (Flowers, 2022).
- In addition to these global shocks, the outbreak of the Russian-Ukraine war has led to unprecedented impacts on global agricultural markets, and food and nutrition insecurity, especially in Africa (European Commission, 2022).



Introduction (Cont.)

- The war has jeopardized more than a third of the world wheat trade, 17 % of the world maize trade, and almost 75 % of the world sunflower oil trade.
- According to Welsh (2023), the Russia-Ukraine war is causing food and nutrition insecurity for millions of people in the world, especially in SSA.
- It has already led to a food shortage in Africa, at 30 Mt, a decrease in its economic availability due to inflation (over 40 % in some countries), an increase in the price of fertilizers (three to four times), and a deficit of about 2 Mt (WTI, 2023).
- It is estimated that the Russia-Ukraine war would push approximately 10 million people in Africa and Asia into hunger and poverty (FAO, 2022b).



Research Objectives and Methods

- This paper examines three inter-related challenges pertaining to agri-food systems, food insecurity and national and regional security concerns in Africa.
- First of all, the region is not optimally utilising its vast arable land to meet its food and nutrition requirements.
- Secondly, Africa's dependence on food imports is projected to worsen in the future, with food-import levels expected to increase by 2029 if proactive measures are not taken to reduce this dependency (Kitenge, 2023).
- Thirdly, although there is enough food in the world, almost a third of African children are chronically undernourished (Mohajan, 2022).

Research Objectives and Methods Cont.

- This paper analyses the impact of the Russia-Ukraine war on agri-food systems and food and nutrition security in Africa with special reference to Ghana.
- It explores the lessons SSA countries can learn from the war to enable them to build robust and resilient systems to guarantee sustainable food and nutrition security in the Region.
- The impact of the war on food and nutrition security in Sub-Saharan African (SSA) countries is a clarion call for the need to build resilient and robust agri-food systems to guarantee sustainable food and nutrition security.
- The guiding premise of the paper is that an effective transformation of agri-food systems in SSA will enhance its capacity to withstand global shocks that undermine food and nutrition security, the well-being of the population, and national security.

Research Objectives and Methods Cont.

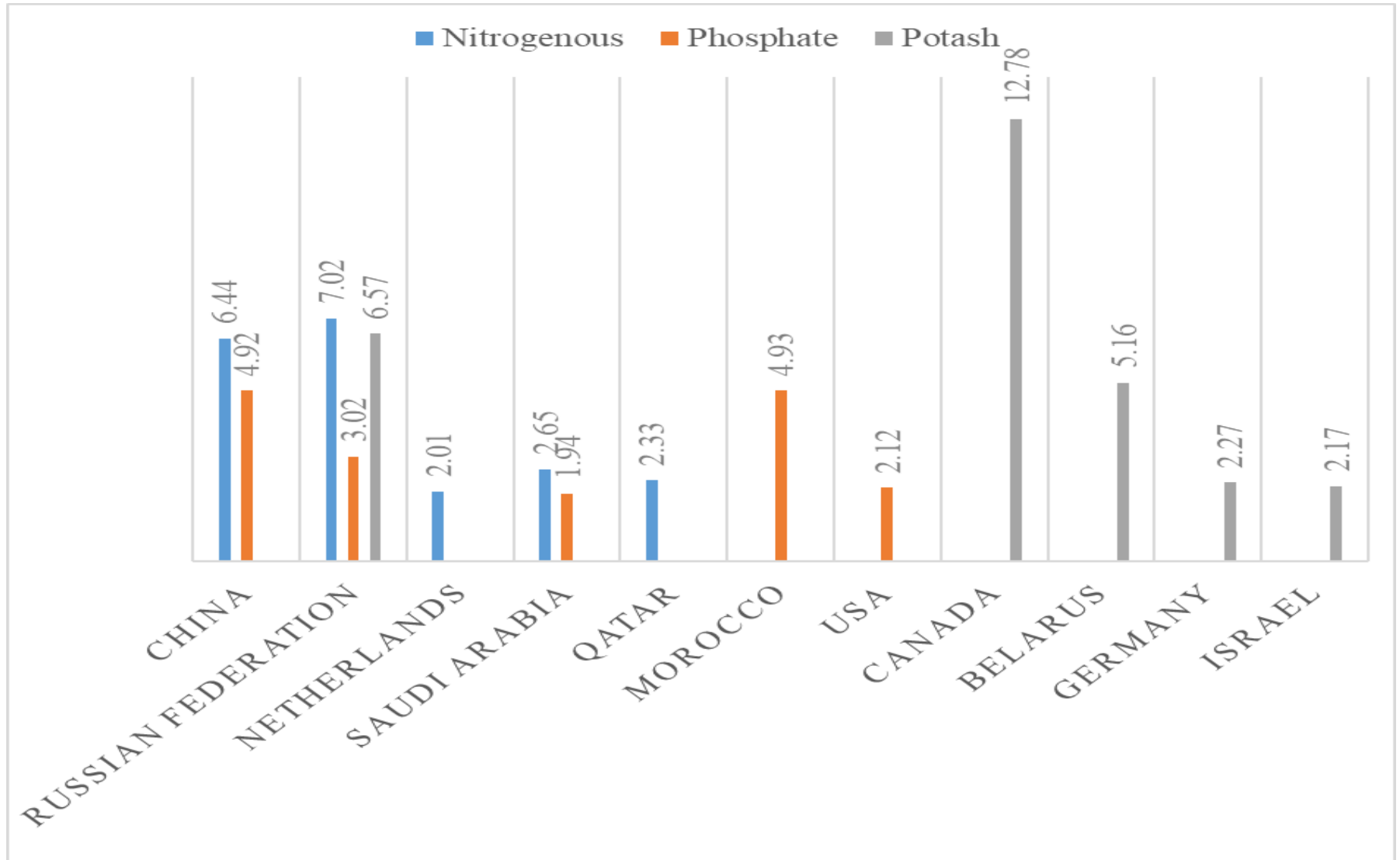
- The conceptual framework that guided the preparation of the paper has four inter-related elements: a) agri-food systems; b) food and nutrition security; c) regional/national security; and d) the well-being of the population in Africa.
- A qualitative research approach was used to glean relevant information from existing literature sources.
- The views of ten African and Ukranian experts in agri-food systems, food and nutrition security, and national and regional security issues in SSA and Ghana were solicited and analysed.
- The key issues of agri-food systems and their associated challenges were identified, and short-term, medium-term and long-term strategies recommended for mitigating them.

Results

The Russia-Ukraine War and Global Food Systems

- Russia and Ukraine are among the world's largest producers and exporters of fertilizer and staple food commodities such as wheat, barley, maize, rapeseed, sunflower seeds and vegetable oils (OECD, 2022).
- In recent years, the two countries have produced 13% of the world's overall wheat production and 30 percent of global wheat exports.
- Russia and Ukraine are the third and fourth leading exporters of barley, and together they make up 20 % of the world's barley production (FAO, 2022b).

Russia as key supplier of critical agricultural inputs such as energy and fertilizer



Russia-Ukraine war

- The Russia-Ukraine war is directly disrupting physical, logistical, and market dynamics, the supply chains of major food products, and increasing the uncertainty of global food systems
- Global food, fuel, and fertilizer prices rose rapidly in the first half of 2022, mainly because of the Russia-Ukraine war (Arndt et al., 2023).
- According to the UN (2022a), a continuation of this war would prevent future harvests in the two countries and this could lead to further increases in the prices of food, fertilizers, and petroleum products.
- Two important dynamics of the war are its impacts on household food and nutrition security and on national and regional security.

Impact of the War on Ukraine

- Russia's invasion has led to devastating losses and suffering for the people of Ukraine. **The war is particularly hurting agricultural production.**
- Before the war, agriculture accounted for approximately 20 % of Ukraine's Gross Domestic Product (GDP) and was Ukraine's most valuable export, contributing over 41 % of the country's overall exports, with export values amounting to \$27.8 billion annually (Welsh, 2023).
- A recent report (DLF, 2023) estimates a 20% decrease in cultivated land availability compared to 2021 due to military operations and mine contamination.

Impact of the War on Ukraine

- The conflict has also decreased the financial resources available to farmers owing to low domestic prices and complicated export challenges.
- With limited access to export routes, many Ukrainian farmers have been unable to sell grain already harvested, denying them income to cover past debt or fund future agricultural activities.
- Because of the glut of grain available in Ukraine, domestic prices for export-oriented commodities are more than 60% higher than their pre-war levels (Welsh, 2023).

Impact of the War on Ukraine

- Bogonos (2023) estimates that, given adequate financial assistance, production volumes of key export crops like wheat and corn could return to pre-war levels only by 2030.
- Labour resources have declined due to military conscription and migration.
- Since Russia's invasion, the average price of shipping agricultural products has increased from \$30 per ton to \$200 per ton (Welsh, 2023).

Ukraine's Production of Major Crops

Crop	Area (*1000 ha)					Yield (t/ha)					Production (*1000 t)		
	Avg 5 yrs	2021	2023	% 23/5yrs	% 23 / 21	Avg 5 yrs	2021	MARS 2023 forecast	% 23/5yrs	% 23 / 21	2023	% 23/5yrs	% 23 / 21
Wheat	6684	7090	6178	-8	-13	4.07	4.53	4.58	+12	+1	28275	+4	-12
Barley	2488	2472	1981	-20	-20	3.35	3.82	3.78	+13	-1	7482	-10	-21
Winter barley	992	1137	904	-9	-21	3.63	4.27	4.09	+13	-4	3701	+3	-24
Spring barley	1496	1335	1077	-28	-19	3.16	3.43	3.51	+11	+2	3780	-20	-17
Grain maize	4981	5482	4056	-19	-26	6.78	7.68	8.08	+19	+5	32789	-3	-22
Sunflower	6266	6665	6282	+0	-6	2.27	2.46	2.65	+17	+8	16650	+17	+2
Soybean	1602	1322	1823	+14	+38	2.29	2.64	2.62	+15	-1	4782	+30	+37
Rapeseed	1044	999	1784	+71	+79	2.63	2.93	3.07	+17	+5	5473	+99	+87

Source: (Claverie *et al.*, 2023)

Impact of the War on Ukraine

- The Russia-Ukraine war is also worsening food insecurity among the Ukrainian people and seriously destabilising the economy.
- According to the UN World Food Programme (WFP, 2022), 14 million Ukrainians have been displaced by the war and 18 million people across Ukraine need humanitarian assistance today.
- Besides, the war is also severely affecting human and environmental health in the country. The repercussions are also felt far beyond Ukraine (Holsether, 2023).
- As a result of a decline in productivity and export capacity, exports of wheat have drastically declined (Welsh, 2023).

Change in Agri-market's Landscape

- Available data indicates that Russia has militarily and logistically squeezed Ukraine's world food market share despite a grain export agreement.
- Since the implementation of the Black Sea Grain Initiative in August 2022, Ukraine has exported over 22 Mt of grains through the Black Sea ports of Odesa, Chornomorsk, and Pivdennyi, which collectively handled approximately half of Ukraine's pre-war maritime agricultural exports (WFP, 2022).
- During 2022 and 2023, Ukraine's wheat exports lagged behind Russia's by almost half, whereas from September to November 2021, Ukraine exported more than Russia did.

Impacts of the Russia-Ukraine War on Africa

Food and Nutrition Insecurity

- The impacts of climate change, the COVID-19 pandemic, and widespread conflicts, mass movements of people from conflict zones and the Russia-Ukraine war have exacerbated the global food systems and hunger, especially in Africa (Glauber, 2023).
- Due to successive climatic events such as droughts and floods, most African countries are unable to buffer their dependence on global markets with domestic production.
- More than a third of African countries depend heavily on Russia and Ukraine for wheat imports.
- Twenty (20) African countries import 90 % of their wheat from Russia and Ukraine (Statista, 2022).

Impacts of the Russia-Ukraine War on Africa

Increasing Trade Protection Trends

- A major cause of food and nutrition insecurity in Africa is the increasing trade protection policies and practices in around the world (Aminu, 2022).
- Most countries want to protect their own interests and avoid civil unrests that are often linked to food insecurity.
- Beyond self-serving trade policies, an important issue with the Russia-Ukraine war is allowing a free flow of food products from the two countries to other parts of the world.

Impacts of the Russia-Ukraine War on Africa

Uncertainty in Agri-markets and Escalating Prices

- The Russia-Ukraine war has created huge uncertainty in terms of when it might end and its impact on agri-food systems (Flowers, 2022).
- What is more, the related price spikes caused by the war are clear evidence of a broken global agricultural system.
- The war has significantly affected the global price of fertilizers through higher prices of natural gas, an important feedstock for nitrogen-based fertilizers.
- High fertilizer prices are fundamental cause of food and nutrition insecurity in Africa (Flowers, 2023, Jico 2022).

Impacts of the Russia-Ukraine War on Africa

National and Regional Security Challenges

- The Russia-Ukraine war is also exacerbating national and regional security in Africa.
- The impacts of the war vividly illustrate the interconnectedness of food security with national and regional security.
- Africa's close trade and diplomatic ties with both Russia and Ukraine are fundamental reasons for the disruption of the food supply chains and hunger in on the continent.
- The food security- national/regional security nexus in Africa and its macro-economic environment require critical analysis and debate (ISDC, 2016; Kiteng, 2023).

Impacts of the Russia-Ukraine War on Africa

Well-being of the Population

- According to Statista (2023), Africa's total population will reach nearly 2.5 billion by 2050.
- The vulnerable populations, which are already experiencing absolute poverty and malnutrition, are the worst hit.
- The hike in prices is leading to a shift in demand towards cheaper, less-nutritious alternatives, potentially leading to dietary changes and diet-related health and well-being issues in Africa.
- For African countries to effectively fight food and nutrition insecurity, they must build more resilient and robust agri-food systems (World Bank and FAO, 2021).

Strategic Thinking and Deployment of Integrated Approaches and Measures

- Africa is home to 600 million hectares of uncultivated arable land, representing nearly 65 % of the global total (ACET, 2017; AfDB et al., 2019).
- Despite the continent's remarkable factor endowments, crop yields are far below their potential (Statista, 2023a).
- Moreover, 70 % of Africa's population makes a living from agriculture. It is therefore quite intriguing that the continent imports about \$35 billion worth of food each year (World Bank Blog, 2020).
- The right question is: why a continent that is exceedingly abundant in both arable farmland and youthful agricultural workers dependent on external sources to feed itself. In fact, the Russia-Ukraine war can empower the leaders of the African Union's 55 member states

Strategic Thinking and Deployment of Integrated Approaches and Measures

- Africa must learn from the Russian-Ukraine war and stop its huge dependence on food imports, especially from the developed countries.
- African policymakers and leaders must therefore do well to seriously consider Winston Churchill's address that "never let a good crisis go to waste"
- The current crisis of acute food insecurity resulting from the Russia-Ukraine war, **presents African countries a golden opportunity to reform their agricultural policies** and build resilient and robust agri-food systems based on traditional foods such as beans, bananas, cassava, maize, plantains and yams.
- Transforming agri-food systems and ensuring food and nutrition security should be a key strategic aim of the continent

Short-term Measures

- Strengthen initiatives that provide food to vulnerable populations through access to strategic reserves. This approach should be multi-stakeholder-led and not only include governments.
- Major grain producers in Africa should be encouraged to increase their production and distribution systems.
- Restrictions impeding access to markets should be removed, including border restrictions on the movement of food and animal feed.
- Essential inputs such as seeds, fertiliser, machinery, equipment and limited fuel should be provided to ensure sustainable production throughout the dry and wet seasons.

Short-term Measures

- Relevant data, especially tailored to the needs of smallholder farmers, should be provided to enable them to practice all season agricultural production.
- Fixing the causes of rising food prices and seasonal price fluctuations that make it more difficult to get access to food supplies.
- Safeguarding biodiversity and mitigating climate change impacts are vital for increasing agricultural yields and access to nutritious food.
- Harvesting rainwater for dry season farming to supplement rainy season harvests and particularly vegetable crops production.

Medium-term Measures

- In the medium-term, the bottom-line objective is that African leaders and development stakeholders must pursue effective strategies that aim to achieve long-term food sovereignty and safety.
- Building efficient and resilient agri-food systems in Africa should focus on ending hunger, researching and developing crops that can withstand severe weather, connecting smallholder farmers to markets, and supporting farmers with more relevant data and information to enable them to make the best decisions in real time.
- African policy-makers must prioritise the building resilient agri-food systems and strengthening the capacity of local communities, especially smallholder farmers, to improve agricultural productivity and access to food.
- This also requires adequate investment in infrastructure and technologies that support sustainable agri-food systems.

Medium-term Measures

- It is essential to design and implement policies and strategies that anticipate global shocks to be able to recalibrate focus and expected assistance when required. These shocks are not going to end.
- It is vital to prioritise and strengthen response initiatives, particularly those that include partner countries, for a higher chance of success
- International development agencies should continue to support African countries as they formulate and implement initiatives to mitigate the fallout from the war in Ukraine.
- Africa will need international development partners to speak for it and raise awareness, if grain and fertiliser hoarding occurs.

Long-term Measures

- It is imperative for African countries to invest in longer-term solutions to avoid going from one food crisis to another.
- Policies must be expanded to include holistic and inclusive efforts in decision-making, implementation and enabling agency by combining measures on climate change, environment, mental and physical health and quality of life.
- In the long-term, the shift from efficiency to resiliency in the overall agri-food system is vital.

Long-term Measures

- Investing in Production
- Relevant Research and Development on Agri-food Systems
- Greening the Economy and Tackling Food Loss and Waste
- Diverse Multi-stakeholder Inclusion

National, Regional and Continental Approaches

- In the medium- and long-term, international trade can offer African countries access to foreign markets.
- It is therefore important that the Regional Economic Communities on the continent harmonise their key policies and strategies in order to strengthen markets and implement measures that will improve cross-border trade in agricultural products.
- The Africa Continental Free Trade Area offers enormous opportunities to create more jobs, foster trade and bolster the resilience of agri-food systems on the continent.

The Case of Ghana: Views of Experts and Focal Group Discussion Participants

Key Issues (1)	Associated Challenges (2)	Short-term Strategies (3)	Medium-term Strategies (4)	Long-term Strategies (5)
1. Agri-food Systems Policies	<p>1. Governments pay only lip service to agriculture.</p> <p>2. Policy inconsistency and incoherence.</p> <p>3 Non-comprehensive policies.</p> <p>4. Poor institutional arrangement.</p> <p>5. Inadequate finance and investment.</p> <p>6. Inefficient implementation.</p> <p>7. Cuts in international development assistance.</p>	<p>1. Strong political will and commitment.</p> <p>2. Effective multi-stakeholder involvement and awareness raising.</p> <p>3. Effective agricultural policies and programmes</p> <p>4. Mainstreaming nutrition and climate change</p> <p>5. Ensuring efficient implementation of existing agri-food policies and programmes.</p>	<p>1. Adapt a holistic approach to building agri-food systems.</p> <p>2. Initiate the transformation of the agri-food systems.</p> <p>3. Multi-stakeholder consultations and consensus for building and deploying robust and resilient agri-food systems.</p> <p>4. Improve access to land, finance and markets.</p> <p>5. Build the capacity of agri-value chain actors, i.e.: extension agents, smallholder farmers, students, the military, private sector companies.</p> <p>6. Deploy digitisation, innovation and postharvest technologies</p>	<p>1. Develop comprehensive long-term agri-food policies that anticipate global shocks.</p> <p>2. Effectively engage all stakeholders in the development and implementation of the agri-food systems.</p> <p>3. Ensure effective implementation of policies and programmes.</p> <p>4. Support smallholder farmers to engage in all-year round agriculture.</p> <p>5. Support research on agri-food systems development</p>

Views of Experts and Focal Group Discussion Participants

Key Issues (1)	Associated Challenges (2)	Short-term Strategies (3)	Medium-term Strategies (4)	Long-term Strategies (5)
	<p>8. Inadequate infrastructure.</p> <p>9. Climate change and variability.</p> <p>10. Non alignment of agriculture policies with existing food and nutrition challenges (malnutrition, climate change and lack of equity)</p>	<p>7. Prioritise the production of local foods.</p> <p>8. Improve access to land, finance and markets.</p> <p>9. Improve the capacity of agri-value chain actors, especially, smallholder farmers, women, students, etc.</p> <p>10. Improve legislation and the regulatory system.</p> <p>11. Promote green economy and biodiversity conservation.</p> <p>12. Robust information and early warning systems.</p>	<p>7. Improve the rural opportunity space.</p> <p>8. Promote the year-round production of nutrient rich and diverse food crops</p> <p>9. Promote green economy and biodiversity conservation.</p> <p>10. Information and early warning system.</p> <p>11. Monitor and evaluate the implementation of agri-food systems.</p>	<p>6. Improve access to land, finance and markets.</p> <p>7. Invest in agri-food systems transformation.</p> <p>8. Robust information and early warning systems.</p> <p>9. Build the capacity of human resources.</p> <p>10. Reduce the dependence on food imports.</p> <p>11. Deploy digitisation and innovation.</p> <p>12. Involve international development partners through regional and continental approach.</p>

Views of Experts and Focal Group Discussion Participants

Key Issues (1)	Associated Challenges (2)	Short-term Strategies (3)	Medium-term Strategies (4)	Long-term Strategies (5)
2. Food and Nutrition Security in Ghana	1. Poor agronomic practices. 2. Poor diet quality and security 3. Consumption of unhealthy foods. 4. Environmental degradation. 5. Inadequate infrastructure. 6. Regional inequality. 7. Policy inconsistency and incoherence	1. Improve access to land, finance and markets. 2. Increase investment in the development of rural economy. 3. Improve agronomic practices to increase yields and the food production system and sub-systems. 4. Reduce levels of food loss and waste. 5. Remove restrictions impeding access to food markets. 6. Provide access to food banks/reserves.	1. Prioritise agriculture and food systems and address the identified challenges. 2. Improve access to land, finance and markets. 3. Deploy technology and innovation. 4. Transform farming systems. 5. Build robust and resilient agri-food system. 6. Invest in infrastructure. 7. Support agri-value chain actors, especially smallholder farmers, women, students, the armed forces to engage in all-year round agriculture. 8. Support research in sustainable agri-food systems	1. Ensure sustainable exploitation of natural resources. 2. Prioritise agriculture and food systems. 3. Support smallholder farmers to engage in all-year round agriculture. 4. Pursue an integrated approach to build robust and resilient agri-food systems. 5. Pursue long-term strategies for achieving food sovereignty and safety. 6. Build the required infrastructure.

Views of Experts and Focal Group Discussion Participants

Key Issues (1)	Associated Challenges (2)	Short-term Strategies (3)	Medium-term Strategies (4)	Long-term Strategies (5)
	<p>8. Non-alignment of agriculture policies with existing food and nutrition challenges (malnutrition, climate change and lack of equity)</p> <p>9. High level of post-harvest losses</p> <p>10. Poor nutrition practices and behaviors</p>	<p>7. Improve safety nets.</p> <p>8. Give priority to the most vulnerable people.</p> <p>9. Support research in agri-food systems.</p> <p>10. Call for available international assistance.</p> <p>11. Information and early warning system.</p> <p>12. Mitigating climate and safeguarding biodiversity.</p> <p>13. Continuous monitoring and evaluation of agri-food system.</p>	<p>9. Mainstreaming nutrition and climate</p> <p>10. Improve legislation and the regulatory system.</p> <p>11. Replicate the “Operation Feed Yourself programme” of the 1970s.</p> <p>12. Information and early warning system.</p> <p>13. Improve post-harvest management of crops</p> <p>14. Behaviour change communication for creation of enabling environment for better nutrition</p> <p>15. Promote research activities, production and consumption of nutrient rich-crops (vegetable, fruits, small-husbandry)</p>	<p>7. Deploy digitisation and innovation.</p> <p>8. Ensure local, national, regional and continental stability and security.</p> <p>9. Build the capacity of human resources</p> <p>10. Replicate the “Operation Feed Yourself programme” of the 1970s.</p> <p>11. Effective information and early warning systems.</p> <p>12. Involve international development partners through regional and continental approaches.</p> <p>13. Continuous monitoring and evaluation of food and nutrition security systems.</p>

Key Issues (1)	Associated Challenges (2)	Short-term Strategies (3)	Medium-term Strategies (4)	Long-term Strategies (5)
3. Food security & national and regional Security implications	<ol style="list-style-type: none"> 1. Poor governance and instability. 2. Conflicts, terrorism and instability. 3. Violent extremism. 4. Migration and forced displacement of people. 5. Poverty and vulnerability. 6. National and regional insecurity risks, i.e.: illegal trade, drugs, human trafficking, murder, money laundering, waste dumping, etc. 7. Over exploitation of human and natural resources. 	<ol style="list-style-type: none"> 1. Sustainable management of natural resources. 2. increased food production and equitable distribution. 3. Remove restrictions impeding access to food markets. 4. Improve humanitarian aid and peacebuilding efforts. 5. Provide access to food banks/reserves to the most vulnerable groups. 6. Call for available international assistance. 	<ol style="list-style-type: none"> 1. Sustainable management of natural resources. 2. Improving democratic governance. 3. Effective management of population movements. 4. Provide access to food banks / reserves to the most vulnerable. 5. Effective involvement of public and private sector actors and civil society organisations. 6. Build robust and resilient agri-food systems. 7. Transform agri-food systems 8. Support smallholder farmers to engage in all-year round agriculture. 9. Deploy digitisation and innovation. 	<ol style="list-style-type: none"> 1. Prioritise agriculture and food systems and effectively address identified challenges. 2. Deploy holistic and integrated agricultural development approaches. 3. Build a robust and resilient agri-food systems. 4. Transform farming systems 5. Mitigate climate and safeguard biodiversity 6. Practice all-year round agriculture 7. Replicate the “Operation Feed Yourself programme”.

Key Issues (1)	Associated Challenges (2)	Short-term Strategies (3)	Medium-term Strategies (4)	Long-term Strategies (5)
3. Food security & national and regional Security implications		<p>7. Mitigate climate change and safeguard biodiversity.</p> <p>8. Information and early warning system.</p> <p>9. Monitor and evaluate the implementation of agri-food system.</p>	<p>10. Involve international development partners through regional and continental approaches.</p> <p>11 Replicate Operation Feed Yourself programme.</p> <p>12. Effective information and early warning systems.</p> <p>13. Continuous monitoring and evaluation of agri-food systems.</p>	<p>8. Effective information and early warning system.</p> <p>9. Call for available international assistance.</p> <p>10. Continuous monitoring and evaluation of agri-food systems.</p>

Key Issues (1)	Associated Challenges (2)	Short-term Strategies (3)	Medium-term Strategies (4)	Long-term Strategies (5)
4. Impacts of the Russia-Ukraine War on Food and Nutrition security in Ghana	<ol style="list-style-type: none"> 1. Distortion of markets. 2. Hunger. 3. Malnutrition and wasting. 3. Health problems. 4. Vulnerability of the population. 	<ol style="list-style-type: none"> 1. Establish and increase regional food stocks. 2. Provide access to food banks/reserves to the most vulnerable groups. 3. Remove restrictions impeding access to food markets. 4. Call for available international assistance. 5. Information and early warning system. 6. Mitigate climate and safeguard biodiversity. 7. Monitor and evaluate the implementation of agri-food system. 	<ol style="list-style-type: none"> 1. Provide access to food banks/reserves 2. Give priority to the most vulnerable people 3. Increasing local, regional and global resilience to food imports. 4. Supporting self-sufficiency pathways combined with open trade 5. Provide comprehensive technical support for production systems 6. Improve independent crop monitoring capacity 7. Call for available international assistance. 8. Effective information and early warning systems. 9. Mitigate climate and safeguard biodiversity. 10. Continuous monitoring and evaluation of agri-food systems. 	<ol style="list-style-type: none"> 1. Deploy holistic and integrated agricultural development approaches 2. Build robust and resilient agri-food systems. 3. Prioritise agriculture and food systems and effectively address emerging challenges. 4. Transform farming systems 5. Practice all-year round agriculture 6. Replicate the “Operation Feed Yourself Programme” of the 1970s. 7. Greening the economy and avoiding food loss and waste. 8. Effective information and early warning systems. 9. Mitigate climate and safeguard biodiversity. 10. Continuous monitoring and evaluation of agri-food system.

Conclusion and Recommendations

- The Russia-Ukraine war clearly reveals the vulnerability of most African countries to external and multi-dimensional shocks.
- The war also highlights the interconnection amongst food systems, national security and how geopolitical conflicts can disrupt global food security, especially in Africa.
- To avoid Africa's huge dependence on food imports, it is necessary, first of all, to learn lessons from the impacts of the Russia-Ukraine war

Conclusion and Recommendations

- Major cross-cutting pathways identified by ten African and Ukrainian experts indicated that Ghana and the other SSA countries should avoid a repeat of the impacts of the Russian-Ukraine war.
- This requires building strong political will and commitment, formulating comprehensive agri-food policies, building robust and resilient agri-food systems and ensuring effective multi-stakeholder involvement.
- African development policy-makers and development actors need to build resilient and robust agri-food systems and strengthen the capacity of local communities, especially smallholder farmers, to improve agricultural productivity and access to food.

Conclusion and Recommendations

- This also calls for adequate investments in infrastructure and technologies that can support agri-food systems in a sustainable manner. Climate change has become a crucial cross-cutting challenge that must be taken into consideration by all African countries.
- As the UN Secretary General warned, the world is on a “highway to climate hell” and it’s clear that only by working together – across sectors – can we succeed to fulfil the Paris Agreement (Holsether, 2023).
- In addition, the critical role of small-scale and family producers play in addressing global food and nutrition insecurity challenges must be recognised and provided the attention it deserves.
- Therefore, to ensure food and nutrition security at all times, it is imperative to increase smallholder farmers’ access to land, infrastructure, markets, finance, and advisory services.

Conclusion and Recommendations

- A change in mind-set and adaption of strategic thinking and innovation to transform agro-food systems in the continent is vital for maintaining stability and preventing threats to national and regional security.
- Failure to address food and nutrition insecurity in Africa can provide opportunities for terrorist organisations to compromise regional and national security.
- Effective international cooperation can help to strengthen the resilience of Africa's agri-food systems.

AGRI-SECURE



THANK YOU!