

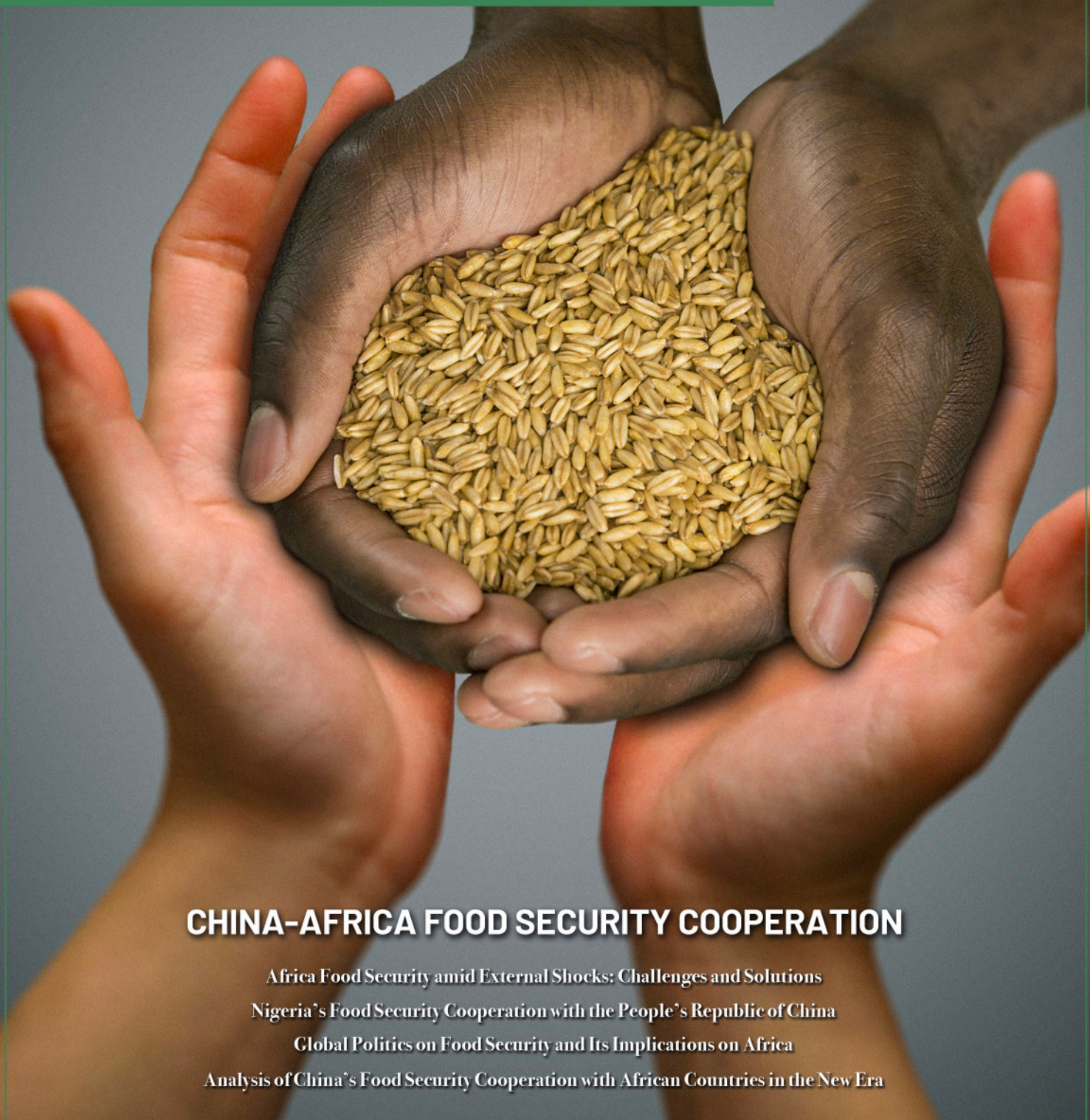
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CHINA-AFRICA FOOD SECURITY COOPERATION

Africa Food Security amid External Shocks: Challenges and Solutions

Nigeria's Food Security Cooperation with the People's Republic of China

Global Politics on Food Security and Its Implications on Africa

Analysis of China's Food Security Cooperation with African Countries in the New Era



Xi Jinping, General Secretary of the CPC Central Committee and Chinese President, attends the CPC in Dialogue with World Political Parties High-Level Meeting and delivers a keynote address under the title of “Join Hands on the Path Towards Modernization”, in Beijing, March 15, 2023.

(Photo/Xinhua)

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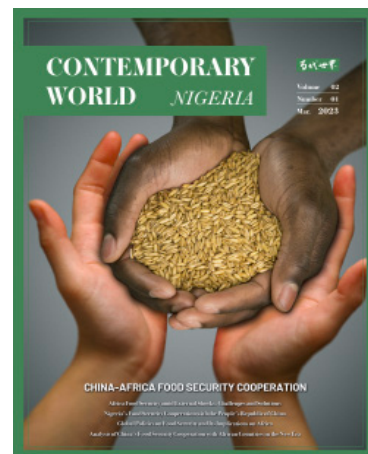
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AFRICA FOOD SECURITY AMID EXTERNAL SHOCKS: CHALLENGES AND SOLUTIONS

An Chunying

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Food security has economic, political and strategic implications, and bears on the basic right to subsistence, national economic security, and social stability. Since the dawn of the century, African countries, guided by the UN Millennium Development Goals, the 2030 Agenda for Sustainable Development, and the Comprehensive Africa Agriculture Development Programme (CAADP), have made progress towards “zero hunger” thanks to their unwavering commitment. Notwithstanding, under the combined impact of the Ukraine crisis and the COVID-19 pandemic, global food insecurity has grown and become a focus of global attention.

AFRICA FOOD CRISIS WORSENERD AMID EXTERNAL SHOCKS

In terms of the geographical distribution of the food-insecure population, Africa is particularly vulnerable in the global system. 33 out of the 44 food-deficit countries are in this continent. Food insecurity is a chronic problem for Africa, and heavy reliance on food trade and external aid only makes the continent more vulnerable. The situation has further deteriorated due to the protracted COVID pandemic since early 2020 and the ongoing Ukraine crisis in particular.

For starters, in terms of trade, the Ukraine crisis has disrupted Africa’s food supply chain. As important producers and suppliers of agricultural products and agricultural raw materials such as grains and fertilizers, Russia and Ukraine are crucial to global food security. According to the Foreign Agricultural Service of the U.S. Department of Agriculture, in 2021 prior to the Ukraine

crisis, produce of Russia and Ukraine took up a considerable share of global total: 27.6% in wheat, 29.4% in barley, 15.3% in corn, and 75.8% in sunflower oil. Since the outbreak of the conflict in February 2022, the two countries’ export channels of agricultural products have been hampered, putting the “breadbasket of Europe” on which many African countries rely at greater risk. Take wheat as an example. From 2018 to 2020, 32% and 12% of Africa’s wheat import came from Russia and Ukraine respectively, and for 16 African countries, over 50% of their wheat import came from the two countries. During the same period, 33 African countries imported sunflower oil from Russia and Ukraine. It is fair to say that global food trade and Russia-Ukraine relations have a direct bearing on Africa’s food security. In the wake of the Ukraine crisis, seaborne food supply from Russia and Ukraine to Africa and Asia was interrupted due to military control, port blockade, and international sanctions. A grain export deal between Russia and Ukraine was brokered by the UN in July 2022, but could barely offset the impact on food supply for African countries.

Second, in terms of production, the spillover effect of the Ukraine crisis has ramifications for Africa’s food production. Russia, the fourth largest producer of nitrogen and phosphorus fertilizers, produces 13% of fertilizers in the world. In 2021, its export of nitrogen, phosphorus and potassium fertilizers were among the world’s top three, accounting for 15% to 20% of the global total. 26 countries in Africa import fertilizers from Russia every year. Among them, Senegal, Congo, Mauritania, Benin, Cote d’Ivoire, Ghana, Cameroon, and Liberia rely on Russia for over 20% of their fertilizers. Logistical disruption

and financial sanctions against Russia have sent shockwaves across the global fertilizer market. In addition, the Ukraine crisis has pushed up prices of natural gas, the main raw material for fertilizers, making the latter more expensive. In May 2022, fertilizer prices in Malawi and Gambia went up by 300% and 100% respectively. Shorter supply and soaring prices compound with each other. The African Development Bank estimates that food production in Africa will drop by 20% due to less fertilizer inputs, and its food security will be in jeopardy.

Third, in terms of purchasing power, higher prices triggered by the Ukraine crisis make food less available to people in Africa. For individual consumers, food accessibility is positively correlated with income. Impoverished population in Africa increased by 30 million in 2021W. Another 18 million in the region slid into extreme poverty in 2022 due to the pandemic and the Ukraine crisis. Furthermore, the Ukraine crisis has severely disrupted the global supply chain of wheat, and greatly pushed up food prices. According to the World Bank, three of the top 10 countries in terms of food price increase from August to November 2022 are in Africa: Zimbabwe (52%), Rwanda (31%), and Uganda (17%). As a result, poor African households are under greater financial strain and can hardly afford food.

Fourth, in terms of foreign aid, the international community is tightening food aid to Africa. Expensive food purchase, and costly and disrupted logistics following the Ukraine crisis have a negative impact on the scale and timeliness of international food aid to Africa. To be more specific, Ukraine used to be the largest supplier of the World Food Programme's food aid. However, due to the Ukraine crisis, WFP's monthly food procurement cost is expected to increase by \$23 million, and transportation cost by \$6 million, resulting in a "short supply" of international food aid to Africa. More than 50% of food aid to Somalia, a country in the Horn of Africa, is procured from Ukraine. Currently, over 5 million people in Somalia are in severe food shortage due to a persistent drought and the Ukraine crisis.

DEEP-SEATED REASONS BEHIND AFRICA FOOD INSECURITY

To be fair, Africa's food insecurity is aggravated but not caused by either the COVID pandemic or the Ukraine crisis. There are some deep-seated reasons.

First, a fragile environment fraught with frequent climate disasters and conflicts hinders food production. On the one hand, the African continent has a very fragile agro-environment due to its unique geographical location. It is vulnerable to droughts, floods and other types of extreme weather which lead to large-scale crop failure. For instance, Cyclone Idai and Cyclone Kenneth in March and April 2019 that swept across Mozambique, Zimbabwe, and Malawi in Southern Africa destroyed many crops and the limited agricultural infrastructure there. African countries also suffer from pests and diseases. For example, a devastating locust plague in the Horn of Africa in early 2020 put 5 million people in eight East African countries at risk of starvation. On the other hand, various types of violent conflicts further deteriorate the agricultural production environment. Some regions and countries in Africa are high-risk zones featured by frequent wars and political instability. Even in 2020 and 2021 when COVID-19 was in full swing, terrorist attacks in Africa continued unabated. The active presence of the Jamaat Ansar al-Sunna and the Islamic State-Central Africa Province in Cabo Delgado has caused conflicts and disrupted agricultural production in northern Mozambique.

Second, limited growth of food supply cannot keep up with ever-growing consumer demand. Due to low productivity, high mortality rates, and religion, population growth rate is high in Africa with increasing food demand. At the same time, food production remains low due to local cultivars, inadequate use of agricultural and chemical products, low mechanization level, and poor farm management. The growth of food supply can hardly meet the increasing demand. To put it another way, the continued population growth has offset the positive effect of higher food supply. On supply and demand, the demand gap of major staple foods (rice, wheat and corn) increased from 58.01 million tons (36.5% of total consumption) in 2010 to 82.237 million tons (35.6% of total consumption) in 2021. This manifests low self-sufficiency and food insecurity in Africa.

Third, insufficient capital input and structural problems hamper food production. Agriculture, especially the grain industry, faces many uncertain and unpredictable natural risks, market risks, and social risks. The comparatively low-profit grain industry that requires hefty, long-term investment needs consistent policy support and strong financial input from the government

more than other industries. In light of this, the CAADP has been introduced to achieve food security. According to the Programme, African countries will allocate 10% of their total annual budgets toward boosting agricultural productivity. However, the reality tells a different story. Most African countries invest only 2%-3% of their annual budgets in agriculture. Another problem is the long-standing irrational production structure. Despite a wide variety of crops in the region, the percentage of coarse grains such as potatoes, maize and beans is quite high, while that of wheat and rice is only about 20%, far lower than the global average of around 50%. This results in a poor diet and a high risk of food insecurity.

Fourth, the weak food system makes Africa vulnerable to risks. The resilience of the food system covers many dimensions including availability, accessibility, utilization, and market stability, among which a stable and sustainable food access is particularly important. In 2021, self-sufficiency rate of the three major staple foods (rice, wheat and maize) was 34.1% in North Africa and 76.1% in Sub-Saharan Africa, lower than the UN safety threshold of 85%. In addition, the food system and food reserve capacity are poor in most African countries. In Sub-Saharan Africa, stock-to-utilization ratio of rice and wheat was 9.8% and 11.8% in 2021, much lower than the minimum safe ratio of 17%-18% proposed by the FAO. Food loss is also considerable in Africa. According to the AU, annual food loss accounts for about 13% of total production in sub-Saharan Africa. All these factors add to food insecurity and make African countries less resilient to risks and emergencies.

Lastly, Africa suffers from Western food hegemony. Since the beginning of the century, international capital has taken food products as investment goods. "Financialization of food" is gradually becoming the order of the day. With nearly 80% of global food trade in the hands of the world's largest grain traders,

namely ADM, Bunge, Cargill, and Louis Dreyfus, developed countries hold the pricing power of and say over food, and have the power to dominate and regulate global food trade. Capitalization of food threatens global food security. These multinationals manipulate international food prices and distort the actual supply and demand for hefty return on investment. The gradual shift from allocation of food resources by market to allocation by the financial market increases the risk of price fluctuations and uncertainties. This ultimately affects grain producers, global food supply, and food prices. Vulnerable African countries, especially those short of food, bear the consequences.

In short, Africa's food crisis is escalated and accentuated by the COVID pandemic and the Ukraine crisis. Yet the main factor driving food insecurity in Africa is the vulnerability of food production and distribution chains, and the root cause lies in the long-term trend of capitalization and financialization of food.

SOLUTIONS TO AFRICA FOOD INSECURITY

In tackling food insecurity in Africa, we need to think carefully with a broad perspective so as to address both the symptoms and the root cause. Specifically, attention should be given not only to supply and demand, but also to the underlying issue of the financialization of food.

To begin with, the right to food should be added to the global governance agenda to improve the external environment for African countries to achieve food security. Multinationals in developed countries have long dominated the futures market with the resources for food production and export in their hands. The root cause of global food insecurity lies in the domination of Western capital and the financialization of food. Hence, African countries and other food consumers can hardly guard against imported inflation brought by higher food prices through fiscal and financial tools, market regulation or any other means. In view of this, developing countries including those in Africa should bring the deteriorating global food crisis to public attention. They should call on the international community to address the "financialization of food" at the UN Human Rights Council and other platforms and to include it in the global security governance agenda. By doing so, practical measures can be taken to truly safeguard African countries' right to food.

Furthermore, higher food productivity can give African countries the initiative to ensure food security. Policy support is important, considering that the food sector carries considerable social benefit but little economic benefit. Africa's food sector is especially uncompetitive due to the absence of industrial agriculture and high production cost. Therefore, African governments need to play a



South-south cooperation helps transform Uganda's agriculture.

principal role in developing the food industrial chain. Well-designed plans must be made on the exploitation and utilization of cropland to ensure that land for food not be used for economic crops or non-agricultural construction. Continuous capital input and a refined subsidy mechanism for farmers are needed. Agricultural infrastructure especially water conservancy facilities need to be improved to gradually move away from rain-fed agriculture to irrigated agriculture. Agrotechnology is also important. Increasing food production is key towards food security. African countries can step up efforts in improving crop varieties and cultivation techniques, agricultural mechanization, proper fertilizer use, pest control, disaster avoidance, and developing AI-enabled smart agriculture. In this way, agrotechnology can boost the food sector. In addition, African countries can expand trade channels, establish a diversified network for food trade, and break the monopoly of international capital to mitigate the risks of over-reliance on particular partners.

Last but not least, African countries can learn from the experience of other countries and deepen international cooperation. Countries work for food security through different approaches. On the one hand, there are some common practices. For instance, on rice production, countries like China and Japan give importance to water conservancy facilities, high-yield varieties, soil improvement, and mechanization. They also have rich experience in intensive farming, and disease, pest, and weed management. On the other hand, some countries have their distinctive practices such as water-saving irrigation in Israel, mutual aid and cooperative farming organizations in the ROK, and grain reserve programs in the US.

While emphasizing food independence, African countries also need to learn from the experience of others. They can make use of existing bilateral and multilateral channels, such as the Poverty Reduction and Agricultural Development project within the framework of the Forum on China-Africa Cooperation and the FAO's South-South Cooperation Programme under the framework of the Special Programme for Food Security to channel aid funds and technologies to help African countries with capacity building concerning crop cultivation and processing, modern grain silo development, storage, transportation, and marketing.

CONCLUSION

Food security bears on the subsistence of African people and is the precondition for peace and development in the continent. African countries are working actively towards greater resilience of their agricultural system. The path to greater food security was put forward at the Dakar 2 Summit-Feed Africa: Food Sovereignty and Resilience held from 25 to 27 January, 2023. Despite these encouraging signs, African countries face daunting challenges in achieving UN 2030 Agenda for Sustainable Development due to the "financialization of food" manipulated by Western governments and international capital, the ongoing COVID pandemic, local military conflicts, and other uncertainties. Africa's chronic food insecurity has been highlighted by the black swan and gray rhino events in recent years, but the crux lies in the structural problem coupled with external shocks. Enhancing food security in Africa is an important means to hedge against global uncertainties. To resolve the long-standing distress, African countries need to step up food production capacity, maintain dynamic circulation in order to ensure that market supply meets demand, and keep the food industrial chain, supply chain and value chain in their own hands. 🇳🇮



Chinese rice experts guide local farmers in rice cultivation, in Burundi.

(Photo: Xinhua)

NIGERIA'S FOOD SECURITY COOPERATION WITH THE PEOPLE'S REPUBLIC OF CHINA

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Attainment of food security has been one of the focal points of the 52-year old China-Nigeria relations. Both countries factored in food security as an altruistic goal after establishing the strategic partnership in 2005 so as to blossom their common humanity and shared future. The most populous country in the world (China) and in Africa (Nigeria) have devoted their national interests to ensure the rights of their citizens to physical and economic access to sufficient, safe and nutritious food

that meets their dietary needs and food preferences for an active and healthy life.

Both countries are famous for their wide range of food varieties such as grains, tubers, nuts and seeds, meat and poultry, fish and seafood, fruits and vegetables, and therefore, become an integral part of their bilateral relations. While stressing the strategic relationship during his visit to Nigeria in January 2021, Mr Wang Yi, the former Chinese Foreign Affairs Minister, said, "Nigeria, as a major African

country, has always occupied an important position in China's diplomacy with Africa." Accessibility, availability, utilization and stability of the food security pillars have underscored the fruitful cooperation.

The use of advanced technology, technical capacity, trade and investment has defined these cooperation and partnership exchanges on food security, which are within the framework of equal treatment, respect for sovereignty, mutual benefits, win-win cooperation and people-to-people exchanges. While Nigeria is geared towards meeting the Sustainable Development Goals (SDGs)'s goal 2 for zero hunger, China is importing rich food resources and local knowledge from Nigeria.

WHAT INFLUENCED THE FOOD SECURITY COOPERATION?

The important goal of every nation is to attain food security. For Nigeria to accomplish that goal, it partners with the Communist Party of China under both countries' pre-existing diplomatic relations. The Nigerian government developed policies to address the problems of subsistence with small farm holdings, limited technology adoption, inadequate rural infrastructure, climate change, poor nutrition, low application of good agricultural practices, investments, insufficient value addition and inadequate agro-industrial processing facilities, outbreaks of Trans-boundary Animal Diseases (TADs), low access to quality inputs, finance and market. Cooperation with China for technical expertise, advice and investment in this regard became critically imperative and consistent with Nigeria's commitment to developing agriculture. The spirit is that if China could feed over one billion people, Nigeria can also feed itself.

Agricultural potentials and interests of both countries also influenced their cooperation. According to Zhao Linxiang, the Chinese Economic and Commercial Counsellor in Nigeria said, "China and Nigeria are both major agricultural nations, having a strong complementarity in the field of agriculture development." Therefore, feeding populations and prioritizing food security feeds into the principles of humanity, life harmony and mutual benefits often touted in their narratives. China produces food for 20% of the world's population and it has eliminated "absolute poverty" for its remaining 80 million population. Indeed, achieving symphony in national food demands and deliveries became the common focus for both countries.

Similarly, the Nigeria's plan to have a better alterna-

tive to the over-reliance on the revenue from oil-based economy influenced its decision to enter into food cooperation with China. Food security will be achieved if the agriculture sector was developed. Agriculture had been the mainstay of the nation's composite regions' economies in the 1950s and 1960s, and these had been relegated to a secondary sector by succeeding administrations. As there were groundnut (peanut) pyramids in the north, cocoa in the west, so also was palm oil in the east. Nigeria had enough to feed its population and export. But it was not until recently that governments realized the need to capacitate and develop its National Programme on Food Security through huge and sustainable investment with China.

Besides, demographic dividends and histories of the two partners as well as the skewed world order played significant role in influencing the food security cooperation with China. Both suffered from invasion, conquest, plunder and colonialism by external aggressors and imperialists. While Nigeria had its ugly experience with the British colonial power, China suffered humiliating defeats in the hands of Japan, the British, the Portuguese and the French in the 17th and 18th centuries (Hong Kong, Macao and southern islands were annexed). Civilizations were destroyed and territories were lost including arable lands where rich agricultural and natural resources were carted away to cater for the needs of the European and Japanese metropolises.

With that sense of sympathy, China and Nigeria felt the need to rise up against past subjugation and their attendant hunger, poverty and inequality, and come together with other African countries to forge common interests and goals during the Bandung Afro-Asian Conference in April 1955. Both were comrades in arms and forged a deep friendship when Nigeria was fighting for national independence and liberation. Since independence, both have demonstrated sympathy, solidarity and support for each other particularly in the post-Cold War, FAO South-South cooperation and the FOCAC initiatives. China has never attached any political conditions to its aid to Nigeria, let alone interfered in local affairs. Nigeria with other African countries supported China in its bid to become a permanent member of the United Nations Security Council. The deepened relationships complemented one another in food security.

Recently, the President Muhammadu Buhari administration introduced policies and programmes at overcoming food security problems and reducing food import. According to the data of Nigeria's central bank, Nigeria's food import expenditure in 2021 reached 2.71 billion U.S.

dollars, an increase of nearly 45 percent compared with the previous year. The extant policy direction of the government as encapsulated in the National Development Plan (2021-2025) reiterated earlier commitments to deploy knowledge, technology, innovation and global best practices to integrally strengthen the economic diversion and revitalize agricultural production and processing. Accordingly, the Federal Ministry of Agriculture and Rural Development (FMARD) conceived the National Agricultural Technology and Innovation Policy (NATIP, 2022-2027) to modernize the agricultural sector in line with the changing global food systems and supply chains.

FMARD's mandate to "ensuring food security in crop, livestock and fisheries, generating agricultural employment and services, promoting the production and supply of raw materials to agro-industries, providing markets for the products of the industrial sector, generating foreign exchange and promoting rural socio-economic development" could strategically be achieved with cooperation with China. As a result, massive direct investments were attracted into agriculture and thus making Nigeria closer to self-sufficiency, particularly in rice and poultry production. China has played a significant role in the investment drive and contributions.

In addition, the important lessons the government derived from the COVID-19 pandemic contributed to reasons that influenced food security cooperation with China. Both countries showed solidarity to defeat the virus that had endangered means of livelihoods and subsistence agriculture. Nigeria was not left out in the collective grievances aggravated by the disruptions in the food supply and lockdown-induced food shortages that sparked a wave of protests and disobedience with people demanding "we want food, not COVID tests and lockdowns." For example, an Abuja taxi driver that was caught contravening the restrictions was heard saying, "hunger virus" made him to come out and work. Similarly, the Ukraine crisis further reinforced Nigeria's resolve to pursue policies and programmes that would make Nigeria food secure for its citizens and competitive in the regional and global food chain. Problems with the grain supplies from Ukraine and fertilizers from Russia are two challenges that the government wanted to overcome in future emergencies.

Lastly, Nigeria was influenced on food security cooperation with China because of its desire to overcome the usual abysmal low poverty and nutritious food ranking by the World Bank and other development organizations. For

instance, Nigeria was ranked 93 out of 117 countries on the 2019 Global Hunger Index, and also ranked last of 157 countries with citizens living below the poverty line in the Oxfam 2019 report. Nigeria had to align with China to find sustainable and innovative solutions to reverse these classifications, and combat food and nutritional challenges.

But most of all, the confidence of the Nigerian public on the expertise of China on food production boosted the cooperation. With their dignity and pride, Nigerians did not want to be receiving food handouts but desire to be independent and self-sufficient in food production. Nevertheless, it is important to examine how the cooperation has benefited Nigeria's aspiration in promoting food security.

MUTUAL BENEFIT OF THE FOOD SECURITY COOPERATION

China and Nigeria have had flourishing agriculture cooperation, founded on the principles of equal treatment, mutual benefit, win-win cooperation and people-to-people exchanges. Nigeria adopted Chinese farming system and Juncao technology to boost food security and developed the agricultural sector. Chinese-type of mechanized farming and innovative interventions are noticed across the four pillars of food security: accessibility, availability, utilization and stability. Nigerian farmers have been imparted with the knowledge and requisite skills on tending to their farms and given solutions that helped them do more with less, and thereby built sustainable livelihoods.

The Chinese experts and technicians have contributed to the capacity development from traditional agriculture to technologically dynamics in Nigeria. "Made in China" farming methodology and equipment are being used in planting and harvesting of food and cash crops. Chemicals and agro-allied products are in use for weeding, care for animals, and optimize irrigation systems that are geared towards achieving food security in Nigeria. Chinese agro-industrial chemicals are used to preserve food, control pests and diseases. In other words, Nigeria has through the cooperation gained from the Chinese farming systems and agricultural practices to boost food security.

Grains, roots and tubers, legumes, nuts and seeds, fruits and vegetables, meat, fisheries and poultry products are more available and accessible in open market than before. Some rural farmers who use high-quality agricultural inputs have graduated from subsistence to income earners. Job opportunities and empowerment are created as more hands including women and youth are showing growing

interests in farming while some joined cooperative societies and exported food. For example, yam and cassava are exported to China and other western countries because their produce increased in quantity and quality. Rejection of Nigerian agricultural produce in foreign markets has been curbed.

Similarly, China played critical roles in the Agricultural Transformation Agenda (ATA) launched in 2011 by the President Goodluck Jonathan administration. Though, a World Bank financing, the National Fadama Development Project (NFDP) was one of the projects that enjoyed direct Chinese support through irrigation technology in 12 states: Adamawa, Bauchi, Gombe, Imo, Kaduna, Lagos, Niger, Ogun, Oyo, Taraba, including the Federal Capital Territory. Nigeria learned lessons from the Chinese irrigation system along the Yangtze River (Yellow River). All these programmes have accelerated achievement of food and nutritional security, generated employment and transformed the country into a leading player in regional food basket and market to grow wealth for millions of farmers.

The government's effort to fight hunger is on course. A Chinese firm, Green Agricultural West Africa Limited (GAWAL), owned by CGCOC, has at least four demonstration rice farms in Nigeria; one of them is the Agricultural Demonstration Centre at Ushafa in Bwari, on the outskirts of Abuja. It encompasses research and milling rice processing and bagging room; demonstration vegetable and

rice farms; edible oil production and processing room; biscuit production and processing room; corn flour, cassava powder and chilli powder processing room; and training centres for farmers. The partnership was such that national officials, experts and farmers would benefit from these facilities. According to the farm director, Dr Wang Xuemin, "the facilities are replica of modern Chinese farms – tourism and leisure, environmental conservation, agriculture, and industrial processing."

Also, during the 2021 World Food Day, the cooperation has encouraged the Buhari administration to sustain interventions in the agricultural sector to boost food sufficiency and grew the nation's Gross Domestic Product (GDP) from 2% to 4%-5%. Though the impact of COVID-19 pandemic has slowed down the economy. Nevertheless, when compared with the past challenges, initiatives to increase food productions have geared up through planting techniques, special-yield crops, and expertise offered by Chinese farmers and companies. For example, in the northeast Nigeria, the Chinese firm, GAWAL, introduced hybrid paddy rice and technology to local farmers where big harvests have been recorded since 2017. The Chinese technology facilitated increase in production by about 25% percent compared with the local main varieties. In 2021, President Buhari commissioned rice pyramids in Abuja. The director of the Agriculture Research Council of Nigeria (ARCN), Bello Zaki, alluded to the productivity of hybrid rice variety introduced by GAWAL as being "very conspicuous". Today, Kebbi rice is widely distributed across the country and the Sahel region. Other parts of the country have also witnessed increased food production and ensured food security.

With the increase in production and quality of food crops, Nigeria was able to feed its population. Social and economic lives of local farmers have changed. Farmers are able to feed their families, transited from subsistence farming to commercial for some income. In 2017 at the China-Nigeria Agricultural Modernization Cooperation Forum in Abuja, the Chinese Economic and Commercial Counsellor, Zhao Linxiang, donated \$6.7 billion to develop Nigeria's agriculture training to achieve food sufficiency. The China-Nigeria Agriculture Technical Training Programme was held in 2016 where over 40 officials and technical were capacitated on different agricultural innovations.

Vital to food security in terms of accessibility is transportation. Feeder roads, railways, bridges and airports that are built with Chinese loans especially under the China's Belt and Road Initiative (BRI) are helping farmers to con-

A Chinese expert team guide mechanized rice harvesting operations in a rice demonstration area in the Central and Western Region of Burkina Faso.



vey their produce more efficiently to markets across many communities in Nigeria, and likewise exported to China, UK, Europe and United States. Journeys that hitherto took several hours and made food to spoil are now taking few minutes or hours.

Another area of mutual benefit of the food cooperation is in preservation of food. Some farmers have cool bays or cold rooms, which are procured from China or supplied by Chinese companies. This innovation helps to deliver fresh deliveries of quality and well-preserved food. Through assistance from China, solar lights and boreholes are constructed at no cost to improve food production. Also through the Nigeria-Chinese Chamber of Commerce and Industry, and the Nigerian Export Promotion Council, Nigerian farmers are now able to export food like yam, cassava and palm oil to China. The mutual cooperation, win-win exchanges and people-to-people connectivity around this intervention have alleviated the problem of food production and rural poverty.

Through the Chinese trade and investment, Nigerian farmers now have opportunity to further build their capacity across many specialties including climate change resilience by attending conferences, workshops, consultations, study tours, demonstration plots, coaching and mentoring. For instance, there are training on crops, on watermelon, ginger, garlic, cucumber, turmeric, and red potatoes. There were also training on pest control, mechanization, and application of farm inputs, among others. Some agricultural extension workers have received training in Nigeria and China. As they are being incentivized to boost their harvests and increase income, the farmers are taking ownership from the training outcome. The paddy rice technology at the Wara Farm in Kebbi State was acquired from China.

Another connectivity opportunity provided for Nigerian farmers is to travel to China for the biannual Canton Fair (trade fair) in Guangdong to meet manufacturing companies and procure agricultural equipment and services for food production. For example, traders imported multi-purpose grain dryer machines to reduce post-harvest losses and boost production. Experiences and workable practices are shared. Besides agricultural equipment, Chinese herbs like green and black tea; kitchen utensils like grinders/blenders and tableware are also imported into Nigeria. Nigerian food lovers are patronizing Chinese restaurants. This has boosted good health and growth, utilization, and stimulated demand for more affordable staple food.



The China-aided Agricultural Technology Demonstration Center in Nigeria, photographed in Abuja, Nigeria.

Farmers in Edo State and their counterparts in southern Nigeria commended the government for capacity development benefits, saying the farming seasons are rewarding. Cassava processing machines were distributed to farmers through cooperative society. Increased yields, farm input, seeds, seedlings and equipment from China to farmer groups and cooperative societies through the FMARD's support initiatives. Women and youth across the states received donations of fish dryers, solar freezers, fertilizers, chemicals, and other relevant resources that made them independent in agribusiness and horticulture. With a few of these cooperation outcomes, it is important to offer suggestions on how the cooperation can be scaled up given existing national, regional and global challenges.

THE QUEST FOR MORE TRANSFORMATIVE AND SUSTAINABLE COOPERATION

The pervasive effects of climate change, the rampaging violence the unending Ukraine crisis and the post-COVID pandemic are some of the issues that endanger the sustainability of food sufficiency in Nigeria. This necessitates the need for more pragmatic and coherent strategies to transform the China-Nigeria cooperation. Both should deepen their cooperation and reaffirm commitment to



(Photo/Xinhua)



Author, Dr Babatunde with Dr Wang at the rice bagging section of the farm at Ushafa, Abuja

food security through more diplomatic openness, communication, transparency, accountability and high standards of technological support towards sustainable food security.

More sharing of knowledge and best practices from Chinese experts and think tanks should be sought so that Nigerian agriculturists, food scientists and technologists will be able to mitigate climate change impact, tropical diseases, and improve the use of genetically modified organisms (GMOs). Also the government's effort to revamp the National Food Reserve will succeed if the Chinese knowledge and advanced technology are transferred.

Resilience and conflict management mechanisms should be mainstreamed into the food security cooperation in case of potential conflict and unforeseen circumstances. Constant dialogue and understanding have to be engaged to sustain the food diplomacy. More jobs will be created when the food sector is linked with the industrial/ processing sector. Fortunately, the Nigerian public opinion on China is still favourable. This image can infuse confidence on the food security cooperation and strengthen their government's future relations with China. Women farmers should be encouraged with empowerment.

The use of technology such as remote sensing and artificial intelligence (AI) should be intensified to ensure adequate, sustainable and data-driven food security. Nigerian farmers' urgent needs of innovative technology to promote green energy farming and climate-smart agricultural practices that increase biodiversity, enrich soils, improve watersheds, promote organic farming and enhance ecosystem support services cannot be over-emphasized. Precision or e-agriculture that deploys digital technologies like tractor rental apps and drones for spraying and monitoring should be obtained through the cooperation.

Lastly, transformative and sustainable food security cooperation should not be oblivious of the security challenges threatening food sufficiency and investment. Therefore, Nigeria should deepen its partnership with China in providing a coordinated response to restore peace and security necessary for increased food production and distribution. The future of the China-Nigeria cooperation lies on sustainable food security and nutrition.

CONCLUSION

Food has brought China and Nigeria relations closer. They have both attached strategic values to each other to achieve the four pillars of food security: accessibility, availability, utilization and stability. The commitment and achievements of the 52-year old relations in the promotion of food diplomacy better illustrates their mutual friendship, solidarity, win-win exchanges and people-to-people connectivity. One could only hope that in the present unpredictable world order, post-COVID pandemic and the disruptive Ukraine crisis, Nigeria would cooperate more with China to transform its food system and be self-sufficient in food production. That is, Nigeria should forge a bright new future with China to ensure wholesome food security and prosperous nation. 🇳🇮

ANALYSIS OF CHINA'S FOOD SECURITY COOPERATION WITH AFRICAN COUNTRIES IN THE NEW ERA

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Since 2020, due to the compounding effects of the COVID-19 epidemic, climate change and the Ukraine crisis, the problem of food security in Africa has deteriorated in a spiral and has featured the issue of people's livelihood, which has been a key concern for the development of African countries. International cooperation is an important path to ensure food security in Africa. As a major partner in food security cooperation with African countries, China has pledged to help Africa enhance its food self-sufficiency, and the white paper "China and Africa in the New Era: A Partnership of Equals" released in November 2021 lists "helping Africa's agricultural development" as an important area of cooperation. In the new era, China-Africa cooperation on food security will become more in-depth and serves the building of the China-Africa community with a shared future and the development of the China-Africa strategic partnership.

THE PHILOSOPHICAL GUIDANCE OF CHINA'S COOPERATION WITH AFRICA ON FOOD SECURITY

Food security is an important area where China-Africa security cooperation directs and China contributes its philosophical wisdom. China's cooperation on food security in Africa is an important part of China's participation in solving the global governance deficit and addressing non-traditional security threats. It is conducive to

supporting the lengthening of the South's slab of the cask of global governance system, pooling the strength of South-South cooperation, as well as promoting a more balanced global governance system that reflects the wishes and interests of the majority of countries, especially developing countries. As an important participant, builder and contributor to the current international system, China adheres to the philosophical guidance with Chinese characteristics in the process of food security cooperation with Africa. The ideas and propositions not only fully reflect China-Africa joint efforts to build a comprehensive strategic partnership and a China-Africa community with a shared future, but also accord to China's outlook of global governance, i.e., extensive consultation, joint contribution and shared benefits.

I. China's diplomatic philosophy towards Africa stresses the importance of sincerity, real results, affinity and good faith

Food security is an important area for China's cooperation with Africa, and its cooperation process reflects China's "sincerity, real results, affinity and good faith" approach to Africa. First, "sincerity" is reflected in China's posture towards African food security cooperation. China has always defined itself as Africa's most reliable friend and partner in its food security cooperation with Africa. In China's view, agricultural technology, agricultural equipment and high-quality seeds are tools rather than weapons to help African countries improve their food self-sufficiency. China respects Africa's food development strategies at the integrated and country level and, on this basis, strengthens the exchange of experience with African countries in agriculture, especially in food security. For example, China supports the implementation of the African Union's Agenda 2063 in the area of agriculture and the implementation of Algeria's "one million hectares" food cultivation program, etc.

Secondly, "real results" is reflected in the

original aspiration of China's food security cooperation with Africa. China's cooperation with Africa on food security focuses on maximizing the value of China's agricultural advantages and governance experience in Africa, so as to fill Africa's shortcomings in agricultural science and technology, agricultural infrastructure and agricultural talent. A number of agricultural research institutions such as China Agricultural University, Chinese Academy of Agricultural Sciences and Northwest Agriculture and Forestry University have undertaken agricultural training programs in Africa, helping Africa to solve the problem of shortage of agricultural talents; the rice farms established by China in Mauritania, the African Agricultural Demonstration Park in the Democratic Republic of the Congo, and the rice demonstration projects in Uganda, Burundi, Madagascar and other countries have all contributed to increasing local agricultural production and farmers' income.

Thirdly, "affinity" is reflected in the state of China's food security cooperation with Africa. Addressing the issue of food security is a core concern of African people. China's cooperation with Africa on food security deepens the good feelings between the Chinese and African peoples and strengthens people-to-people ties between China and Africa. Chinese agricultural enterprises, agricultural research institutions, agricultural experts and other private actors actively participate in food security cooperation with Africa, building a harmonious and stable social state and a foundation of mutual trust in Africa. For example, as non-profit earning, highly policy-driven and de-personalized "state-class agents", agricultural experts help African countries solve their agricultural technical problems and share their experience in food production with African agricultural practitioners, while at the same time drawing closer to each other through daily informal contacts with partners in the countries. This not only enhances the rapport and effectiveness of formal cooperation, but also helps to

reverse the negative perception of China in African countries due to the influence of Western discourse.

Fourthly, "good faith" is reflected in China's attitude to African food security cooperation. Unlike other industries, agriculture is greatly affected by natural factors such as topographic, climatic and hydrological conditions, and Chinese agricultural production models and technologies are not universally applicable in Africa, leading to many difficulties in China's food security cooperation with Africa. China's consistent attitude of "treating each other with sincerity and dealing with the issue appropriately" is an indication that China's cooperation on food security in Africa is not a "political show", but a serious commitment to Africa and an effective responsibility of a great power. It also shows that China is a solution provider rather than an escapist to the problem of food security in Africa. It also demonstrated that China is often able to overcome difficulties in the face of the very different agricultural environments of certain countries. For example, China has sent agricultural experts to Africa to participate directly in crop cultivation and technology trials.

II. China pursues a "security-development" approach

Food security is a complex non-traditional security that overlaps security and development, and its governance needs to be carried out simultaneously in both security and development dimensions. In 2019, the China-Africa Agricultural Cooperation Forum was held in Sanya, and China-Africa reached a consensus on the key outcomes to be implemented in the next phase, including continuing to dispatch 100 senior agricultural experts to Africa by the end of 2021, training 10,000 agricultural talents for Africa in the next three years, and promoting the establishment and upgrading of agricultural demonstration parks in Sudan, Uganda, Zambia, Mozambique and Tanzania while supporting the establishment of a full production-processing-marketing agricultural industry chain in Africa, and promote the establishment of a number of new agricultural industrial parks in Africa in the next five years. As can be seen, China's cooperation with Africa on food security aims to integrate the two main issues of food security and agricultural economic development. On the one hand, technical guidance and training reflect China's governance experience of "hiding food in technology", with a view to solving Africa's production dilemma through technology diffusion, so that Africa can shift the root of its sense of food security from being given by others to being given by itself. On the other hand, the construction of agro-industrial parks is an effective way to diversify the agricultural economy and increase local employment, generating income for African governments and increasing the income of African people, thus increasing the purchasing power and risk-survival capability of countries and individuals.

To sum up, "sincerity, real results, affinity and good faith" is the

guiding philosophy of cooperation based on a strategic perspective, which is thoroughly embodied by the actions of the state, agricultural enterprises, agricultural research institutions and agricultural experts, and is the fundamental guideline for China's food security cooperation with Africa. The "security-development" concept is a concept of cooperation based on a sustainable perspective, aiming to achieve both food security and sustainable agricultural economic development. The two concepts are interdependent and together form the conceptual framework for China's food security cooperation with Africa.

THE MAIN MODELS OF CHINA'S FOOD SECURITY COOPERATION WITH AFRICA

Guided by the principles of "sincerity, real results, affinity and good faith" and "security and development", China has always adhered to the principles of "assuming joint responsibility, pursuing win-win cooperation, delivering happiness for all, enjoying cultural prosperity and common security, and promoting harmony between man and nature". China has been helping Africa improve food security by contributing Chinese solutions, intelligence and efforts. From a comprehensive perspective, China's cooperation with Africa on food security mainly includes the bilateral cooperation model of "China + African country" and the multilateral cooperation model of "China + international organisations + African countries".

The first is the bilateral cooperation model of "China + African country". Under the bilateral cooperation model, China's food security cooperation with Africa is mainly carried out through the establishment of agricultural technology demonstration centers in Africa and the dispatch of agricultural technicians to Africa.

Agricultural technology demonstration centers are an important platform for China's food security cooperation with Africa. On the one hand, the establishment of agricultural technology demonstration centers in Africa is both an embodiment of Chinese local gov-

ernment serving the national foreign exchanges and a strategic opportunity to promote local agricultural outreach. Each province hopes to showcase its own agricultural characteristics, embed its technological advantages in the demonstration centers and make them an important entity in improving food security in African countries. This has prompted localities to choose more suitable agricultural enterprises to help Africa escape from its production difficulties and improve its food self-sufficiency rate, thus increasing its agricultural influence in Africa. For example, the China-Mozambique Agricultural Technology Demonstration Center, run by Hubei Province, has established a standardized and sustainable industrial chain in Mozambique, driving local farmers to increase production and income. It has become a pilot project for the construction of an overseas agricultural cooperation demonstration zone by the Ministry of Agriculture of the People's Republic of China. At the same time, it has enabled the province's agriculture to enjoy a good development mode where domestic and foreign markets and resources interact well.

On the other hand, in order to ensure the sustainable operation of the demonstration center, agribusiness will take the initiative to innovate agricultural technology and actively explore farming models that are in line with the actual needs and natural environment of the target countries. The China-Tanzania Agricultural Technology Demonstration Center, run by Chongqing Sino-Tanzania Agricultural Development Co., Ltd, has demonstrated high rice yields of 580kg per mu (about 3500kg per acre), nearly six times the local yield, and the vegetables it grows in the country are supplied to major supermarkets and Chinese-funded institutions, which not only improves the self-sufficiency rate of food in the

Rice expert from China Overseas Group Green Agriculture West Africa Limited shows mature rice in Abuja, Nigeria.



Photo/Xinhua

country, but also ensures the economic returns. Meanwhile, China also adopts a “turnkey” approach, allowing the government of the target country to take ownership of the demonstration center and directly participate in its management, providing the necessary supervision and services to regulate the behavior of its contractors, thus achieving sustainable operation of this institution.

The dispatch of agricultural technicians to Africa is China’s intellectual path to food security cooperation with Africa under the bilateral model. The ultimate goal is to promote sustainable agricultural development in African countries and to prevent Africa from developing external dependency by striking a reasonable balance between food security and the agricultural economy. This is also in line with the principle of “supporting Africa in cultivating its endogenous growth capacity, accelerating its autonomous and sustainable development, and supporting Africa in exploring its own development path that suits its own conditions, formulating national development strategic plans, strengthening capacity building and improving governance”, which China has been emphasizing in its support for Africa’s development. The agricultural technicians have been highly praised by the governments of Egypt, Uganda, Guinea-Bissau, Sao Tome and Principe, Burundi and many other African countries for their outstanding contribution to the improvement of food production and agricultural economic development in Africa, and have been described by American scholar Beborah Bräutigam as “China’s gift to Africa”.

The second is the “China + International Organizations + African countries” multilateral cooperation. In 2020, the Ministry of Agriculture and Rural Development has made “multilateral cooperation under the international food and agriculture mechanism, with a focus on supporting African countries to improve their comprehensive food production capacity” a priority for international cooperation in agriculture. It demonstrated China’s commitment to Africa. This indicates that China’s multilateral food security cooperation in Africa has become an important element of its overall planning and macro strategy.

From a comprehensive perspective, the “China + FAO + Africa” model of food security cooperation has become more diversified, mainly including the economic path based on financial donations, the intellectual path based on the dispatch of experts and providing trainings, and the institutional path based on institutional innovation. For example, the South-south Cooperation Trust Fund donated by China to the FAO has benefited several projects in Africa, and the cooperation model of “experts exploring the way, government providing the platform and enterprises acting” jointly established by the Chinese government, expert groups and enterprises has helped to improve rice production in Uganda and other African countries. The joint mechanism of equal participation and

shared responsibility between China and FAO has helped African countries to cultivate a sense of self-development and self-blood generation. The “China + WFP+ Africa” model of food security cooperation mainly focuses on sharing China’s experience in agricultural value chains and food supply chains with African countries through the WFP China Center of Excellence. It conducted training on value chain management in Nigeria, Cameroon, Ghana, Kenya and Senegal in 2018. The “China + IFAD + Africa” model of food security cooperation is more oriented towards financial support. In February 2018, China donated US\$10 million to set up the China-IFAD South-South and Triangular Cooperation Fund at IFAD to support South-South food and agriculture cooperation like experience sharing and ability building. It has funded 17 South-South cooperation projects covering more than 30 countries, including African countries.

The bilateral and multilateral cooperation models reflect the hard, soft and smart capacities of China’s food security cooperation with Africa. Firstly, the hard capacity refers to the capacity to cooperate mainly in terms of funding and agricultural science and technology. It demonstrates China’s ability of material giving on food security cooperate with Africa. The dispatch of agricultural technicians, the establishment of agricultural technology demonstration centers and training of skills cannot happen in a sustainable way without economic, scientific and technological support. At the same time, China’s food security cooperation with Africa also pushes for the improvement of the hard capacity and the rethinking of the application of it. The former mainly manifests itself in the secondary creation of agricultural technology by Chinese experts according to the natural environment of Africa, while the latter is mainly reflected in the fact that China’s financial investment in Africa makes doing within the capacity standard. For example, the Chinese government will only bear the operating funds of an agricultural technology demonstration center for



The site of the hanging ceremony in Matanjitisa village, Nakuru County, Kenya.

the first three years, but let it will be self-financing in the later years.

Secondly, soft capacity is the capacity for cooperation based on the supply of methodological public goods and agenda setting. It is an important manifestation of China's conceptual contribution on food security cooperation with Africa. If Africa is to transform itself from a passive role relying on support out of the region to an active player that develops by itself and thus achieves endogenous long-term sustainable development, it is far from enough to rely on material assistance alone; it also needs intellectual support. Agricultural training and farming experience sharing hosted by China both at home and in Africa is in essence a sharing of governance experience. It aims to facilitate the docking of China-Africa governance concepts and development method and help Africa to adjust its mindset of governance and independently explore and innovate techniques and models that are in line with African farming.

Finally, smart capacity refers to the capacity that skillfully combines hard and soft capacities. It's a combination of material giving and methodology sharing. Some scholars believe that it takes smart capabilities for a country to participate in global governance because global problems are diversified and interrelated. They spill over and bring harms broadly. This understanding actually tells the incentives for China to cooperation with Africa on food security in this smart way. Food security is a multidimensional, diverse and spillover issue. Multidimensionality refers to the fact that food security

is measured in terms of adequacy of supply, availability, effective use and stability, and insecurity at any single level threatens the entire food security system; diversity refers to that food security concerns countries, households and individuals, and insecurity at any single level threatens others; and spillover refers to that food security is measured in terms of adequacy of supply, availability, effective use and stability, and insecurity at any one level may threaten others. Spillover refers to the tendency for food security problems to affect the overall security of a country. It is on the basis of these three characteristics that China has also adopted a combination of hard and soft approaches to its food security cooperation with Africa. For example, the agricultural technology demonstration centers and farms discussed above combine hard power, such as financial investment and technology transfer, with soft power, such as personnel training and experience sharing, so as to boot the development of African agricultural economy, increase food production and improve farmers' incomes. In this way, it is hopeful to ensure national, household and individual food security and to prevent social unrest caused by food crises.

PROSPECTS FOR THE DEVELOPMENT OF CHINA'S COOPERATION ON FOOD SECURITY IN AFRICA

Food security is an important part of national security as a whole and is related to social stability and people's well-being. It is thus highly valued by both China and Africa. Since 1982, Chinese government numbered documents related to agriculture the first of the year 25 times in total. They have covered many topics such as food security, agricultural modernization, rural revitalization and structural reform on the supply side of agriculture. At least 40 countries in Africa have issued the implementation plans of Comprehensive Africa Agriculture Development Programme (CAADP). 30 countries have signed this document and 23 countries have formulated their own agricultural development strategies under the CAADP framework. While China's agriculture has been developing steadily and food security is effectively ensured, Africa's agricultural development, however, is lagging behind and the issue of food security has not yet been effectively addressed in comparison. In the future, in order to improve the overall performance of China's food security cooperation with Africa and help it achieve self-reliant food security, the following four aspects can be considered to

implement comprehensive measures.

First, we should actively explore the cooperation model of “China + Africa + non-African countries” and bring in third parties to alleviate financial pressure. Europe can be a partner to build “China + Africa + EU” models of food security cooperation. As early as 2008, the EU’s Trilateral Dialogue and Cooperation between the EU, Africa and China identified agriculture and food security as one of its four priorities. In 2016, both trilateral cooperation seminars between China, France and Africa held in Paris and Beijing, identified agriculture as an important area. The China-UK-Malawi Aquaculture Development Project and the China-UK-Uganda Cassava Development Project are both progressing steadily. The cooperation agreements reached between China and Western countries and groups, together with the positive attempts already made provide mechanisms for the realization of the “China+Africa+Europe” model of food security cooperation and early examples. The promotion of this model will help Chinese and foreign agribusinesses to leverage each other’s resources, expand their sources of funding, mitigate project risks and ensure sustainable operations.

Second, consideration could be given to establishing a problem-solving team on food security cooperation in Africa. The team shall include the departments responsible for African affairs in the relevant ministries and commissions, agricultural enterprises in Africa, agricultural research institutions and agro-technical experts. It is advisable to establish a “warranty period” according to the size of the agricultural project and the length of the im-

Agricultural vocational and technical secondary schools build by Chinese aid to help Cameroon’s agricultural development.



(Photo/Xinhua)

plementation cycle, so that if African countries face technical problems after the withdrawal of Chinese experts, they can report them to the relevant Chinese institutions in Africa within the time limit, and the problem-solving team can then solve them in a unified manner.

Third, China needs to strengthen its cooperation with Africa on food security in the area of food crisis prevention and control. It would be appropriate for China to consider helping Africa to strengthen its prevention capacity at two levels: food storage and food information sharing. On one hand, China should give full play to its infrastructural advantages to help African countries build grain warehouses, reduce grain losses by improving the quality of the existed ones, and ensure their storage. On the other hand, a food information sharing platform can be established between China and Africa through internet technology. It will facilitate understanding of Africa’s agricultural policies and food production situation and provide a basis for China’s decision making on food security cooperation with Africa. Meanwhile, it also helps ensure information symmetry for collaborative governance in times of crisis.

Fourth, China should strengthen its training for African farmers and support for smallholder projects. China’s cooperation with Africa on food security should adhere to the practical principle of “relying on farmers and benefiting farmers” by reaching smallholders to understand the real situation of agricultural production in Africa. China can use agricultural technology demonstration centers, farms and agricultural parks as a basis to offer training courses specifically for African farmers. A village should be seen as a collectivity, and family a unit, and the courses should try to include every rural household instead of only a handful of farmers as representatives to a village which is the unit in this case. In this way, it can be expected that the capabilities of African farmers will be improved in a general manner. In addition, the development fund jointly set up by China and the International Food and Agriculture Organization of the United Nations (FAO) should increase its support for projects for smallholders, such as mechanization and loss reduction of grain storage, etc. It can be considered that five countries in each of the five African regions be enlisted as pilot ones, that is, East, West, North, South and Central, and then apply the experience to smaller and larger regions, so as to create a large-scale effect of linking points to lines and to boot the development of the whole region. 🇨🇳



Opening of the 35th Summit of the African Union at the AU Headquarters in Addis Ababa, Ethiopia, on February 5, 2022.

AFRICAN UNION FOOD SECURITY AGENDA IN AN ERA OF PROTECTIONISM

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Africa has 60 percent of the world's available arable land and agriculture is the source of livelihood for 70 percent of the population. Yet the continent generates only 10 percent of global agricultural output. According to FAO report of food security and nutrition of 2022, 278 million people are reported to be affected by hunger in Africa in 2021. Africa is the region where the prevalence is highest and with largest increase compared to the year 2019.

In a bid to boost agriculture and nutrition, the African Union Commission (AUC) has partnered with the New Partnership for Africa's Development (NEPAD)

Planning and Coordinating Agency (NPCA) and Regional Economic Communities (RECs) to increase food production and accessibility in Africa. The collaboration will involve implementing strategies outlined in the Comprehensive Africa Agriculture Development Programme (CAADP) and other frameworks, as well as promoting value addition of raw materials through agro-processing and market sectors in Member States.

The AUC is also committed to supporting Africa's transition to a green economy by promoting sustainable natural resource management and mitigating the effects of climate change without compromising growth.

The momentum of implementing the CAADP will be sustained by supporting Member States in aligning their policies and strategies with their agricultural sector. Key interventions, such as livestock production, land policy, agricultural inputs, and product markets, will be accelerated to increase productivity in African agriculture.

In addition to these efforts, the Commission will advocate for the allocation of 10% of national budget to agriculture and facilitate other measures to increase productivity in African agriculture. The Commission will also promote knowledge, innovation, and technology for agricultural transformation through rural infrastructure development and value addition.

As protectionism continues to rise around the world, African agriculture is facing a number of challenges that threaten to undermine the food security agenda of African Union (AU). These challenges include the proliferation of trade barriers that limit the ability of African farmers to access key international markets, as well as the potential impact of climate change on African agriculture.

At the same time, there are also a number of opportunities that could help to drive agricultural development and improve food security in Africa. These opportunities include the use of technology to increase agricultural productivity, the promotion of regional trade and integration, and increased investment in African agriculture.

In this article, we will examine the key challenges and opportunities facing the AU's food security agenda, and will discuss the strategies that are needed to address these challenges and fully realize the potential of African agriculture. By doing so, I hope to contribute to the ongoing conversation around food security in Africa, and to help chart a path forward for the continent's agriculture sector in an era of protectionism.

THE AU'S COMPREHENSIVE APPROACH TO FOOD SECURITY

The Comprehensive Africa Agriculture Development Programme (CAADP) was endorsed by African Heads of State in 2003 as part of the NEPAD. Its goal is to accelerate growth by eliminating poverty and hunger in Africa. Four pillars guide the effort to implement approved plans: extending irrigation and water control systems, improving rural infrastructure and trade-related

capacities, increasing food supply and reducing hunger, and improving agricultural research and technology dissemination. CAADP emphasizes adhering to principles such as ensuring a 6% annual growth rate in the agricultural sector, allocating 10% of the national budget to agriculture, exploiting regional complementarities, and developing partnerships with stakeholders like farmers, agribusiness, and civil society communities. Individual countries have designated roles and responsibilities for implementation, with coordination facilitated by Regional Economic Communities (RECs) and the NEPAD Secretariat.

The AU's comprehensive approach to food security is a vital step towards tackling the pressing issue of hunger and malnutrition on the continent. While the program's early focus was on national-level initiatives, stakeholders are now recognizing the need to shift their attention towards a more regional approach. By leveraging resources, expertise, and ideas across borders, the hope is that CAADP can achieve even greater success in raising agricultural productivity and promoting sustainable development throughout the continent.

One of the key strengths of the AU's approach is its focus on the entire agricultural value chain, from production to marketing and distribution. This holistic approach recognizes that improving food security requires addressing a range of interrelated challenges, including low agricultural productivity, inadequate infrastructure, and limited access to markets.

For example, Rwanda has steadily increased its budgetary contribution to agriculture since signing its CAADP Compact in 2006. Rwanda allocated 10.2% of its national budget to the agriculture sector for the fiscal year 2010/11 and achieved an agricultural sector growth of 7.4% in 2010.

In Ethiopia, The Multi-Donor Trust Fund's Midterm Review of CAADP found that despite exceeding budgetary and agricultural growth targets, the impact of Ethiopia's engagement in CAADP cannot be adequately measured. However, the process has brought together stakeholders and prompted a review of agricultural budget allocations. In addition, cereal production has increased by 60% in just a few years, leading to a significant reduction in food insecurity.

Despite these strengths, the AU's food security agenda faces a number of significant challenges. In particular, rising protectionism around the world is making it

increasingly difficult for African farmers to access key international markets, and is limiting the ability of African agriculture to contribute to economic growth and development.

RUSSIA AND UKRAINE CONFLICT AND AFRICAN FOOD SECURITY

The ongoing war between Russia and Ukraine has a profound impact on food security in Africa. The sudden shortage of wheat, maize, and other grains imported from these countries is putting the continent's food supply chains to the test, just as it recovers from the global pandemic. In an exclusive interview with *The National*, Dr Akinwumi Adesina, the president of the African Development Bank (AfDB), warns that the situation could lead to civil unrest if it is not addressed urgently.

Russia and Ukraine account for almost a quarter of the world's wheat exports and one fifth of the world's barley exports. Since the start of February, 2022, prices of grains have risen dramatically, by anywhere between 22 to 37 percent. Wheat alone accounts for an estimated 20 percent of human calorie consumption, mostly in poor nations where bread is a staple food.

Dr Adesina highlights the growing gap between cereal crop production and consumption in Africa, putting the continent at risk of food insecurity. He warns that if Africa does not take action now and supports its food production, it could face a looming food crisis and civil unrest. The effect on Africa could be serious, and many African countries, such as Egypt, Morocco, Nigeria, and Kenya, could face significant problems.

The AfDB has formulated a \$1 billion emergency food production plan for Africa to mitigate the impact of the Ukraine crisis. Dr Adesina explains that the initiative will reach 20 million farmers with technologies to produce wheat as well as rice, resulting in 30 million metric tons of food with a value of \$12 billion. This plan will help to alleviate the impact on Africa, which must work tirelessly to be self-sufficient in feeding itself in the years to come.

THE EFFECTS OF PROTECTIONISM ON AFRICAN AGRICULTURE AND FOOD SECURITY

As Africa's population continues to grow, the continent's reliance on food imports has also increased,

prompting many countries to consider implementing trade barriers and tariffs to reduce the influx. However, this trend towards protectionism can have significant negative impacts on African agriculture and food security.

From 1999 to 2015, food imports for the continent increased at a rate of 3.3% annually, which is faster than the population growth. This growth in imports is closely linked to the transformation of agri-food systems, driven by rising incomes and rapid urbanization. As a result, food consumption is shifting towards more processed, purchased, and prepared options outside the home.

Recent years have seen a global trend towards protectionism, with many countries implementing new trade barriers and restrictions on imports and exports. This has raised concerns about the impact of protectionism on global trade and economic growth, leading to calls for increased cooperation and coordination between countries to promote open and fair trade.

One of the most apparent impacts of protectionism on African agriculture and food security is limiting access to food. Imported goods have become more expensive due to tariffs and other restrictions, making it challenging for vulnerable populations to access the food they need, leading to malnutrition and hunger.

Protectionist policies can also negatively impact African farmers as they face increased competition from heavily subsidized foreign agricultural producers. This can make it difficult for African farmers to compete in the global market and can limit their ability to sell their goods abroad. Protectionist policies can also undermine agricultural development in Africa by limiting investment in the sector and reducing the potential for economic growth.

For instance, a study in 2020 examined the effects of trade facilitation measures on food security in Africa and found that poor trade facilitation can significantly exacerbate food insecurity in Africa. The study suggests that reducing undue delays in cross-border trade and ensuring timely delivery of goods can significantly enhance food security in Africa. The study notes that investments in expanding or enhancing transport infrastructure can also help reduce excessive delays in moving goods within and across African borders.

The consumption of food will continue to remain the same with the increase in protectionism. A recent study investigated whether tariffs on imports of edible oils can stimulate demand and production of domestic varieties

in Tanzania. The results from this study indicate that price-based policy interventions are unlikely to stimulate significant changes in the consumption patterns of domestic and imported oils.

CLIMATE CHANGE AND ITS IMPACT ON FOOD SECURITY

Climate change is expected to have a significant impact on African agriculture and food security in the coming years. Rising temperatures, changing rainfall patterns, and more frequent extreme weather events are all expected to affect crop yields and lead to increased pest and disease pressures. In addition, climate change is expected to have a significant impact on water availability, which is a critical resource for agricultural production.

The AU’s food security agenda addresses climate change by promoting sustainable agricultural practices and investing in the development of climate-resilient crops. However, there is still much more that needs to be done in order to mitigate the impact of climate change on African agriculture.

Some regions of Africa are particularly vulnerable to the effects of climate change. For example, the Sahel region of Africa, which encompasses parts of Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal, is expected to experience increased temperatures, reduced rainfall, and increased desertification as a result of climate change. This is likely to have a significant impact on the region’s ability to produce food, and could lead to increased levels of food insecurity.

According to recent projections, cereal production growth in Sub-Saharan Africa is set to decline by 3.2 percent due to the effects of climate change. The yield growth of staple crops such as wheat and sweet potatoes is expected to be negatively impacted by 4.6 percent, though this decline will be partially offset by a 2.1 percent increase in area expansion. Interestingly, millet and sorghum are projected to experience slightly higher yields under climate change.

Unfortunately, the consequences of these changes go beyond agriculture alone. By 2050, the prices of maize, rice, and wheat are expected to increase by 4, 7, and 15 percent, respectively, compared to historic levels. This will result in a 1.5 percent decline in food demand across Sub-Saharan Africa. Additionally, while net cereal imports are expected to remain largely unchanged across the region, Eastern Africa is projected to experience a 15 per-

cent increase due to significant declines in maize yields.

Perhaps most concerning of all is the projected impact on childhood malnutrition. Incremental increases from climate change alone are expected to affect just under 1 million children by 2030, with 585,000 still facing malnutrition by 2050. Clearly, these changes are set to have far-reaching and long-lasting consequences for the region, and urgent action is needed to mitigate their effects.

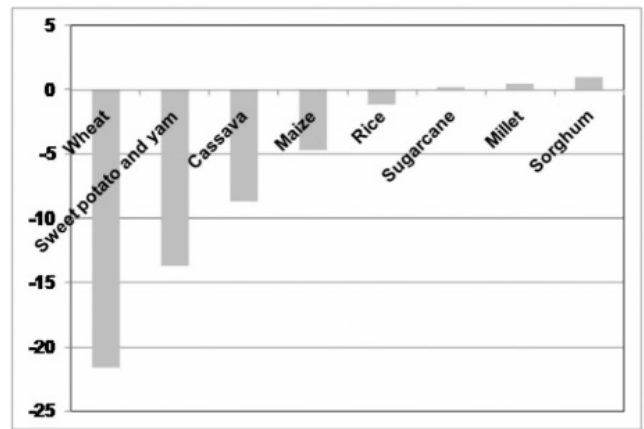


Figure 1: 2050 yield projection per crop as a result of climate change (source: Ringler et al., 2010)

THE ROLE OF TECHNOLOGY IN ADDRESSING FOOD SECURITY CHALLENGES

Technology can play a critical role in addressing the challenges facing African agriculture and food security. The Comprehensive African Agriculture Development Programme (CAADP) encourages AU Member States to use technology to increase agricultural production. Modern agricultural technologies, including robotics and digital technology devices, could boost productivity. For example, the development of drought-resistant crops, the use of precision agriculture techniques, and the implementation of mobile phone-based agricultural extension services. African countries such as Kenya and Rwanda have utilised AI-enabled drone technologies to apply pesticides on crops, improve irrigation schedules and field management.

The AU is working to promote the use of technology in agriculture through initiatives such as the African Agricultural Technology Foundation (AATF), which aims to improve the productivity of smallholder farmers through

the development and dissemination of agricultural technologies. AATF is active in 23 countries of East, Southern and West Africa, currently addressing challenges bedeviling key staples in Sub-Saharan Africa that include maize, rice, cassava, cowpeas, bananas and potatoes. Table 1 shows the statistics of the AATF achievement.

Category	Number
Number of total beneficiaries reached (farmers and other stakeholders)	12877887
Number of Smallholder farmers directly reached	5,172,122
Number of Market system value chain actors	81,215
Number of Seed companies and agrodealers engaged	451
Number of Metric tonnes of New product seed sold	27,694.87
Number of Hectares of Land area cultivated with AATF products	1,176,394.80
Number of Countries in Africa with AATF presence/reach/coverage	23
Number of farmers that AATF has educated on mechanization	656,783

Table 1: AATF achievement statistics (source: <https://www.aatf-africa.org/> accessed on 27th February 2023).

However, there are still significant challenges that need to be overcome in order to fully realize the potential of technology in African agriculture. For example, many farmers may not have access to the necessary technology, such as smartphones or computers, to take advantage of mobile-based agricultural extension services. In addition, there may be limited access to financing for the adoption of new technologies, particularly for smallholder farmers.

One among the projects of AAF is the Cassava Mechanisation and Agro-processing Project (CAMAP). Cassava is a crop that is highly valued in Sub-Saharan Africa for its economic importance. However, farmers in the region have been struggling to achieve high yields, with an average of only 7-9 tonnes per hectare. Hence, the CAMAP aims to revitalize the cassava industry by introducing mechanized production and agro-processing techniques across the entire cassava value chain.

Since its launch in 2013, the CAMAP project has been successful in increasing the efficiency and timeliness of operations. This has resulted in a 200% increase in yields, a 100% increase in incomes, and an improved quality of life for farmers. The project has also attracted more women and youth into cassava farming as a business. The success of CAMAP in Nigeria has led to the formation of Agridrive, which offers mechanization services as a business.


THE NEED FOR INCREASED INVESTMENT IN AFRICAN AGRICULTURE

One of the key challenges facing the AU's food security agenda is the need for increased investment in African agriculture. Despite the potential for agricultural development to drive economic growth and reduce poverty on the continent, agricultural investment in Africa remains low.

One of the main barriers to agricultural investment in Africa is the perception that agriculture is a risky investment. This perception is often based on the assumption that African agriculture is inherently risky due to the prevalence of droughts, pests, and other challenges. However, as the success of initiatives such as CAADP and the Malabo Declaration demonstrate, targeted investment in agriculture can lead to significant improvements in food security and economic growth.

There is a need for increased public and private investment in African agriculture in order to achieve the goals of the AU's food security agenda. This investment could take the form of increased government funding for agricultural research and development, greater access to financing for smallholder farmers, and increased private sector investment in African agriculture.

CONCLUSION

In conclusion, the AU's comprehensive approach to food security is a significant step forward in addressing the urgent issue of hunger and malnutrition in Africa. However, the road ahead is still long, and much work needs to be done to achieve the goals of the AU's food security agenda. In the face of rising protectionism, the challenges to the AU's food security agenda are formidable, but there are also opportunities for growth and development. By embracing the African Continental Free Trade Area, sustainable agriculture, healthy diets, increased investment in agriculture, and technological innovations, the AU can overcome these challenges and promote food security in Africa. For this to happen, there must be a greater commitment to investment in agriculture, a focus on sustainability, and a steadfast determination to ensure that all Africans have access to nutritious and affordable food. Together, we can create a future for Africa that is better and free from poverty and malnutrition. 

MITIGATING THE IMPACT OF INSECURITY ON FOOD SUFFICIENCY IN AFRICA

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The peace and progress of any country are absolutely dependent upon security. This is due to the fact that real development is impossible without security. Africa has historically struggled with significant security issues that have stifled regional growth and cut short periods of stability. Despite not being a major producer of weapons, Africa continues to be rife with illegally imported small arms and light weapons, which worsen conflicts and tensions with lethal consequences for its people and future. In addition to being the continent with the biggest danger of a humanitarian catastrophe due to its rising rate of insecurity, Africa is also the poorest continent in the world, with many people making less than \$1 per day while millions of others are starving to death and in desperate need of relief, specifically food availability. Africa has suffered greatly from ongoing civil wars, intergroup fighting, ethnic and religious strife, terrorism, and even xenophobia.

Millions of individuals have been uprooted from their homes and families as a result of the heinous actions of several Islamist sects on the continent, including Boko Haram, Al-Shabab, Islamic State of Iraq and Syria (ISIS), and Armed Herdsmen. These sects have killed thousands of people, especially women and children. The rising rates of unemployment, poverty, dictatorships, and political instability in many African countries—all outcomes of poor leadership—could be blamed for the deteriorating security conditions across the continent. The continent's issue with insecurity has also been made worse by a high level of corruption, poor conditions for security personnel, flawed hiring practices, particularly for public institutions,

lack of finance and inadequate tools for security personnel, poor adoption and application of new technologies, and pervasive political instability. On the effectiveness of security practitioners as well as overall security across the continent of Africa, each of these variables has correspondingly negative effects on the sufficiency of food.

Around the time of the 2007–2008 food price crisis, the concept of food sufficiency—which may be quantified at several levels and is defined as a household's or region's capacity to meet its own food needs—started to acquire relevance. It is crucial to note that food sufficiency is a subset of food security. Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Food sufficiency is when a particular community/state/country grows all the food needed, right at home without depending on others.

Conflict and food insecurity also feed off of one other and strengthen it. Food insecurity exacerbates conflict, which in turn causes it to escalate. Disputes have damaging and long-lasting repercussions on food security, and they can also lead to political instability, which could further destabilize the region's fragile peace. Therefore, it is essential to have sustainable food security interventions that boost conflict resilience and support efforts to prevent and mitigate conflict. This could eventually lead to sustainable development in the area. Such circumstances are largely the result of the work of policymakers and development professionals. A lack of food exacerbates ex-

isting rifts by igniting complaints. There are 155 million stunted children and 815 million undernourished people in the world, respectively. Interestingly, countries experiencing violent conflict are home to 60% of undernourished people and 79% of stunted children. When conflict disrupts the region's agricultural and non-agricultural activities, it has an impact on household livelihoods and food sufficiency. Armed conflict disrupts food systems, destroys livelihoods, displaces people and leaves those who do not flee both terrified and unsure when they will eat their next meal. Therefore, this article aimed at discussing the possibilities of lessening the impact of insecurity in food sufficiency in Africa, using Nigeria's and some other African countries perspectives.

THE NATURE OF NATIONAL SECURITY CHALLENGES IN NIGERIA

Nigeria is not technically at war in the traditional meaning of the word, but the devastation brought on by various forms of insecurity makes it acceptable to refer to it as such. Traditionally, 1,000 battle dead has been recorded for an armed conflict to be classified as a civil war. Over the years, Nigeria has constantly recorded more than 1,000 fatalities as a result of various wars that different factions have sparked all around the nation. Between June 2011 and June 2018, the Armed Conflict Location and Event Data Project (ACLED) and the Nigeria Security Tracker both assessed that a total of 34,261 to 37,530 persons had died as a result of Boko Haram terrorist activity. In Nigeria alone, there were approximately 10,665 deaths from various types of violence, with the highest source of violent deaths resulting from criminal activities, which recorded 3,425 deaths in 1,191 incidents. Other sources of violent deaths include intra-community conflicts, herders-farmers conflicts, clashes between security agencies, and socio-economic conflicts being faced by Nigerians presently as a result of the cashless policy. The threat posed by Fulani herdsmen is another major threat to national security with serious implications for food security and sufficiency, in addition to the deadly activities of the Boko Haram sect in the country's northeastern geopolitical zone. In order to find pastures for their herds, Fulani herders mostly travel nomadically across the country, destroying homegrown crops meant to increase food sufficiency.

Before 1999, these conflicts were well-managed by farmers and herders, and they never reached the point

where there were recorded fatalities, do we say this is politically motivated? However, conflicts between Fulani herders and farmers have gradually taken on a different tone, frequency, complexity, and lethality ever since Nigeria returned to democratic rule in 1999, and the traditional dispute resolution mechanisms have become insufficient to contain them. The Fulani herders' rampant violence prompted the Institute for Economics and Peace to include them in the global terrorism index, declare them a terrorist organization, and rank them as the fourth deadliest group in 2014, with 1,229 deaths, but has this really reduced their activities? The Fulani herders have continued to carry out a variety of deadly attacks since 2014, particularly ransom kidnappings and militia expeditions against farming communities that they perceive as opposing their herding and pasturing activities, thus, reducing food sufficiency. Despite the fact that the Fulani herders are considered terrorists on a global scale, the Nigerian government's composure must have encouraged the rash attacks. The open support of their socio-cultural organizations, including the Miyetti Allah Kautal Hore, Miyetti Allah Cattle Breeders Association of Nigeria, and Fulani Nationality Movement, are linked to the Fulani herders' boldness.

The variety of sophisticated weapons at their disposal demonstrated the Fulani herders' bravery. They only used long wooden staffs, machetes, and bows and arrows in the past. However, they are currently displaying the Avtomat Kalashnikova (AK47), a Soviet assault rifle. They have also been terrorizing farming communities all over Nigeria with these weapons. For instance, the Fulani herders only killed 80 people between 2010 and 2013, while they killed 1,229 people in 2014 alone. The scale of the calamity depicted by recent estimates is extremely upsetting. The violence that Fulani herders inflicted on farming communities is believed to have resulted in the deaths of over 10,000 people over the course of the previous ten years. More than 6,000 people out of this total have died in the last two years. A further breakdown revealed that approximately 2,500 people died in conflicts between farmers and Fulani herders in 2016 alone. Between 2011 and 2016, a similar high trend in fatalities occurred, with over 2,000 deaths per year on average. According to the most recent information from the Nigeria Security Tracker, conflicts between Fulani herders and farmers resulted in 1,041 and 2,037 deaths in 2017 and 2018, respectively.

While Fulani herders fought across the nation, the Boko Haram sect was terrorizing the northeastern geopolitical

zone. The death toll from Boko Haram-related conflicts in 2018 was 2,016. These conflicts have serious implications for food security because they disrupt activities that are necessary for food production. Internal displacement has also been caused by various conflicts. More than seven million people are at risk of starvation as a result of the activities of the Boko Haram group, which has been responsible for the displacement of 2.4 million people since 2013. Internal displacement as a result of the victims' ancestral homes being destroyed is a necessary consequence in the major Nigerian states where Fulani herders have unleashed terror. For instance, it has been estimated that over 620,000 people have been displaced in Nigeria's Middle Belt states of Benue, Kaduna, Nasarawa, and Plateau. These farming communities' contributions to the nation's food production to increasing food sufficiency are diminished as a result of being displaced because they are unable to continue their farming occupation. The problem of food insecurity in the country will get worse as a result, if not properly handled.

NATIONAL INSECURITY AS OPPOSITION TO FOOD SECURITY

In recent times, agricultural production has been negatively impacted by insecurity. The terrorist activities of the Boko Haram group have completely halted agricultural activities in the northeast of Nigeria. The demolition, which the exercises of Boko Haram have caused, isn't just self-evident yet in addition expansive in its effect on farming. In Nigeria, insecurity has been exacerbated by a variety of criminal organizations in addition to Boko Haram. The Fulani herders, whose murderous campaigns have targeted farming communities without opposition from the state, are the group with the greatest impact. Conflicts in Nigeria have resulted in a steady rise in the number of people forced to flee their homes since 2013. Joined Countries' sources assessed that over 2.4 million individuals have so far been dislodged with new records of removal from conflicts expanding the number. There were approximately 142,000 new displacements recorded between January and June 2019, with about 140,000 people displaced as a result of conflict, and 2,000 people displaced as a result of natural disasters.

An alarming rise in food and nutrition insecurity is linked to the displacement of farming communities as a result of banditry, criminal violence, and attacks by armed groups. The future of young generations in the region is

at stake, as food insecurity not only affects the dignity of families but has serious consequences on the physical and cognitive development of children. The overall effect is strengthening cyclic connections that would bring about and keep an insurmountable security crisis. The conflict between food insecurity and national insecurity would make insecurity intractable. To put it another way, food shortages would occur if national insecurity prevented farmers from engaging in their farm activities. A new round of insecurity is sparked by the intensification of the food crisis and the widespread response to it as a result of food shortages. As a result, there would be ongoing insecurity as a result of the interaction between food insecurity and national insecurity. Obviously, this scenario could be avoided by importing a lot of food to fill the gap and encouraging the farming community to grow more. However, capital flight and growing poverty would have repercussions on national development.

THE RELATIONSHIP BETWEEN NATIONAL INSECURITY AND FOOD SECURITY

The international community's policy direction has largely focused on food security issues for the past two decades. In point of fact, it was a component of the major objectives that world leaders initially agreed to implement by 2015 but now by 2030. As a result, from the Millennium Development Goals (MDGs), which were established by world leaders in 2000, to their successor, the Sustainable Development Goals (SDGs), the goal of achieving "no poverty" and "zero hunger" by 2030 has become the global focus. However, it may be challenging in conflict-ridden environments to achieve these two noble goals out of the 17 that make up the SDGs. This is because public safety is inherently connected to human security. Without a doubt, human security is the focal point of public safety. Human security focuses on the security of the person over that of the state since there can be no state without its residents. Human security "essentially centres around safeguarding the indispensable worth of individuals against weaknesses" by managing "the conditions that compromise the prosperity and endurance of individuals". In this way, human security underlines the "foundation of food and water security, financial and political security for everybody as basic systems to accomplish a steadier degree of state security".

Issues connecting with food security at first just cen-

tred around food supply issues with specific reference to the accessibility of satisfactory supplies of essential staples as well as cost solidness at the public and worldwide levels with contemplations additionally given to sufficient sustenance and prosperity. Starting around 1974, the idea of food security has gone through a series of refinements beginning from when it was basically conceptualized to accessibility and sufficiency of food supplies. This aimed to support a consistent development of utilization to when issues of getting access by weak individuals and having sufficient food to carry on with a functioning, solid existence turned into its accentuation. Presently, the issue of nourishment has been consolidated as an essential part of food security and it is alluded to as food and sustenance security. Consequently, food and sustenance security are dared to exist “when all individuals consistently have physical, social and financial admittance to food, which is protected and eaten in adequate amount and quality to meet their dietary necessities and food inclinations and is upheld by a climate of satisfactory disinfection, wellbeing administrations and care, considering a sound and dynamic life”.

In a national context, a number of factors affect food security. Favourable agroecological conditions, access to land, sound agricultural policies that assure long-term public and private investment in the industry, availability of farm inputs in terms of quality and quantity, and a tranquil environment are among the main determinants. The chance of states reaching their food expectations may be an illusion if these components are absent. Also, if there is a shortage of food, a large portion of the population may be at risk of a food crisis, which could lead to civil unrest, and jeopardize national security. There is ample evidence that food crises can spark unrest, even revolutions, which compromise national security. There is historical proof that shows a connection between increasing food costs and violent riots. This connection became very clear during the global food crisis of 2007–2008 when riots broke out in a number of nations and regions of the world regardless of the type of government in power due to the then-record-high food prices. National insecurity in Nigeria, brought on by protracted military conflicts involving numerous groups, particularly the Boko Haram group and Fulani herders, worsens food insecurity.

Acute insecurity has been brought on by the Boko Haram terrorist organization’s and Fulani herders’ assault and sacking of farmland towns, which have resulted in

several civilian deaths. It is practically impossible for farmers to continue to engage in agricultural output at an ideal level in many of these rural communities, which affects productivity and results in market disruptions and food price shocks. In order to engage in productive agriculture and achieve food security and sufficiency, a peaceful environment is a requirement. On the other side, food insecurity puts strain on national security and always makes it worse. In order to ensure national security, sustainable food security and sufficiency in a calm atmosphere is a necessary requirement.

STRATEGIES TO MITIGATE THE IMPACT OF INSECURITY ON FOOD SUFFICIENCY IN AFRICA

Ethiopia

Residents in Ethiopia’s northern, eastern, and southern regions confront severe food insecurity that is mostly fueled by conflict and unrest as well as climate change. In order to mitigate the effects of climate change and lessen the interaction with conflict, there are constructive initiatives that may be capitalized on and expanded in Ethiopia. For instance, the World Food Programme (WFP) supports pastoralists and agro-pastoralists by preserving their assets during a drought with short-term insurance payouts. As a result, they are able to retain their herds without having to change their movement habits in a way that would increase inter-communal violence. Similar results may be obtained through routine cash transfers. This means that if Ethiopia’s broad and long-running Productive Safety Net Plan can be further expanded to serve the dispersed communities of the pastoralist lowlands, it could have a favourable influence on both food security/sufficiency and conflict reduction.

South-Sudan

Similar to Ethiopia, South Sudan is extremely vulnerable to the effects of climate change, which presents serious difficulties for the estimated 95% of the population whose livelihoods depend on climate. Nevertheless, as South Sudan is dealing with its worst flooding in more than 60 years, Ethiopia is undergoing a terrible drought. This resulted in widespread evictions, the devastation of livelihoods, lands, and crops, the killing of livestock, and the tainted of water sources. The Reconciliation, Stabilization and Resilience Trust Fund (RSRTF) provides an innovative, all-encompassing, and cogent solution to tack-

ling many of the aforementioned difficulties in light of the growing magnitude, scope, and complexity of civilian demands, including protection needs. The RSRTF supports a number of initiatives that collectively diminish the conflict's destructive forces and improve the environment for attaining development and resilience goals in South Sudan.

Community violence reduction initiatives in Jonglei and the Greater Pibor Administrative Area of South Sudan are examples of other project interventions. These initiatives aim to empower impacted communities to exercise power without resorting to violence by facilitating collaborative, consensus-building processes that result in tangible improvements for communities. Although the project is still in its early phases, it has already produced noticeable results. For example, it has built community assets like dykes and roads in remote and flood-affected areas, ensuring that communities continue to have access to services and markets. This is crucial because the majority of the local food production was destroyed by floods. Sustaining access also enables the provision of humanitarian food aid, which when paired with chances for skill development and livelihood support enables people to cope during times of food shortage without turning to unhealthy coping mechanisms.

Mali

One of Mali's worst-hit regions, Mopti saw a decrease in cultivated agricultural land in roughly a quarter of communities in 2021. Dogon community members in Mali are unable to access fields close to Fulani villages as a result of intercommunal violence between Fulani pastoralists and Dogon farmers. At the same time, armed organizations with ties to the northern Mali wars take advantage of concerns with land rights and the marginalization of Fulani herders to win over locals and enlist the help of young Fulani people. Notwithstanding the complexity of the problem, local efforts aimed at preserving food security and enhancing capabilities for peace have shown encouraging progress. One instance is the project "Peers for peace: Promoting social cohesion in the Mopti and Segou Areas in Mali", which was carried out by the UNHCR, WFP, and Food and Agricultural Organization of the United Nations (FAO) in 2017–2019.

The intervention improved livelihoods and community infrastructure while bolstering community-based conflict mediation systems. In some places, like Dianka-

bou in Koro Circle, the intensity and scope of inter-communal violence decreased. The Fulani permitted Dogon to bring their animals to their village to drink from the pastoral well established by the initiative, which increased economic interdependence between the settlements. Similar to this, the Dogon sells the Fulani veggies that were cultivated in the project-supported market gardens. Also, village credit and savings groups gave participants access to small-scale financing and allowed them to create networks of cooperation and communication. Moreover, there has been a rise in village-to-village travel. This helped communities become more robust to violent conflict related to natural resource management, repairing the social fabric and boosting social cohesiveness.

The Democratic Republic of Congo

The eastern provinces of North Kivu, South Kivu, and Ituri, which face the greatest levels of armed violence, combine violent conflict and pervasive insecurity. In these provinces in 2021, violence directed towards civilians caused the displacement of 2.7 million people. Armed gangs assault aid convoys responding to the crisis as well as farmers' access to their land and crops. However, because of the pandemic's stringent measures, land preparation and harvesting were disrupted in 2021, which resulted in lower-than-average cereal harvests throughout the whole eastern region. A multifaceted strategy including a variety of parties will be necessary to address the complicated hunger situation in the Democratic Republic of Congo (DRC). Provincial-scale assessments, local market monitoring, and flexibility are required to respond to changes in circumstances like influxes of refugees from neighbouring countries, sporadic conflict and subsequent internal displacement, seasonally deplorable roads, and inadequate mobile communications networks.

In order to do this, WFP and FAO have established programs to increase the resilience of host communities and IDPs as well as to strengthen agricultural value chains, in collaboration with the government and local partners. For instance, the "Strengthening value chains for smallholder farmers in the DRC" project, implemented from 2016 to 2021, provided integrated technical, economic, and social interventions to almost 90 000 people in order to revive local economies and livelihoods. The initiative improved social cohesion and reduced tensions between communities. The development of farmer organizations' capacities, the formation of Early Warning Committees and Peace

Committees, and the establishment of Village and Saving Loans Associations were all concrete outcomes. All smallholder farmers used better post-harvest management methods, and 60% of them adopted at least one excellent practice to safeguard the environment. Ninety per cent of the women in the project region claimed that their social position and access to resources had improved and there is possible food sufficiency.

Nigeria

Between 2008 and 2021, 7.6 million individuals were displaced by the conflict in Nigeria, of whom 4.4 million were internally displaced and 3.2 million became refugees. The majority of displaced individuals in northeastern Nigeria remain in the states of Borno, Adamawa, and Yobe, where they settle in areas where there are already significant vulnerabilities and needs, including widespread food insecurity, a lack of basic services, and few possibilities for employment. These circumstances may lead to tensions within communities and animosity among the host community, especially if the relocation is prolonged. Also, local people have encountered challenges in obtaining essential services, livelihoods, and land for farming and grazing due to limitations on mobility and public gatherings as well as pandemic-related business and market closures. Humanitarian organizations are pursuing small-scale interventions to increase resilience in the face of these difficulties by helping residents to grow food crops in the protective trenches encircling garrison towns in northeast Nigeria. Despite the fact that the majority of households still rely on food assistance, this enables them to meet their immediate requirements and avoids the passing of skills from one generation to the next. Additionally, it keeps jobs and promotes a sense of community involvement. There is proof that giving locals hope for better livelihoods has helped to deter armed group membership.

Furthermore, the primary goal of Nigeria's agricultural policies, the Agriculture Transformation Agenda (ATA) and the Agriculture Promotion Policy (APP), is to increase agricultural productivity in order to achieve food security for the nation and stop its reliance on food imports. As a result, the government's efforts primarily focus on leveraging the nation's natural resources and favourable environment to increase food production and agro-allied industrial operations. Nigeria's natural endowments consist of a total landmass of 92.4 million hectares, of which

roughly 79 million hectares are arable. Only roughly 32 million hectares are under cultivation at the moment. Agricultural production is still just sufficient for sustenance, and the vast majority of those involved in the industry are smallholder farmers. In addition to the agricultural sector's peasant structure, traditional farming practices still predominate, leaving little room for contemporary agronomic techniques. So, a number of presidential initiatives that were put into action to support the agricultural industry were centred on modernizing the industry to assure higher production, which would open the door for competition. These activities were centred on crop enhancement and modification, giving rice, cassava, and cocoa among other crops the biggest priority.

CONCLUSION

African countries cannot become more productive or competitive in an environment where people feel physically, psychologically, and symbolically frightened. This is because national insecurity directly affects food production by undermining farming capacity and increasing the risk of skyrocketing food costs, both of which increase poverty and hunger and foreshadow a potential national food crisis. While millions of farmers have been uprooted and forced out of their traditional farming villages, others live in constant fear of death and are unable to carry out farming activities to their full potential. Directly affected are the possibilities for food security and sufficiency in Africa as well as the contradictions surrounding agricultural output in that continent. Declining productivity and the resulting deficits are also a direct result. The insecurity that permeates farming communities must be quickly addressed if the African government is to stay on track with its goals to reposition the agricultural sector. If food insecurity is not reduced and eradicated, it will have a significant impact on Africa's security framework. Depending on the circumstances, food insecurity may either lead to or be a result of national insecurity. In other words, as we are currently witnessing in Nigeria with the disruptive actions of Boko Haram and Fulani herdsmen, national instability can make food insecurity worse. On the other hand, a lack of food might lead to unrest, which might compromise national security by causing a security crisis. This vicious cycle could continue indefinitely and result in difficult security circumstances that could ultimately erode the state and reduce food security and sufficiency. ■

COVID-19 PANDEMIC AND AU'S PUBLIC HEALTH GOVERNANCE

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Since its establishment in 2002, the African Union (AU) has led African countries to make remarkable achievements on the road to joint self-improvement, development and revitalisation, including in the field of public health governance. The outbreak of the COVID-19 pandemic in 2020 is a major event in the history of public health governance in Africa and the world at large. As the continent with the most concentrated developing countries, the heaviest burden of disease and very weak public health systems, Africa faces serious challenges. Based on the strong recognition of pan-Africanism, the AU has been coordinating the solidarity among African countries to fight against the COVID-19, promoting the development of African public health governance mechanisms, and strengthening legal supervision of public health. In the international arena, multilateralism has been practised and international cooperation strengthened to obtain material and technical assistance. As a result, an important defence line has been built for Africa to maintain pandemic prevention and control. In the context of the COVID-19 pandemic, the study of public health governance in the AU serves both as an important window to understand the practical operation of the AU mechanism and a necessary prerequisite for deepening China-Africa cooperation on public health governance against the backdrop of the major changes unseen in a century.

AU'S RESPONSE TO COVID-19 PANDEMIC

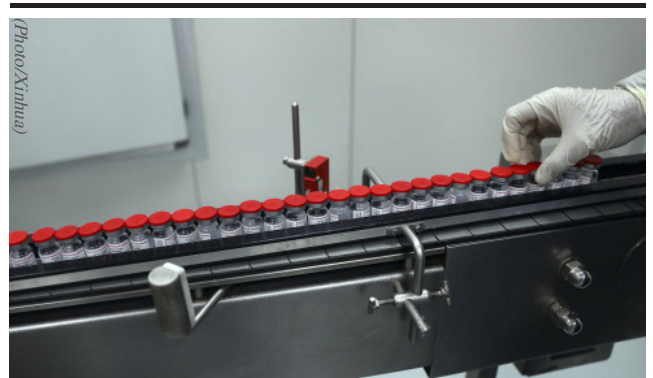
The COVID-19 pandemic has had a huge impact on public health governance systems in Africa. Since the first confirmed case was found in Africa on 14 February 2020, the outbreak has spread to 52 countries across the

continent in only 70 days. However, Africa has not lost control, which can be attributed to the AU's aggressive action against the pandemic.

I. Launching and dynamic adaptation of the Africa Joint Continental Strategy for COVID-19 Outbreak

In order to effectively respond to the COVID-19 pandemic, the AU developed a strategic plan as guidance at the continental level and has been readjusting and improving it in accordance with the pandemic situation. In the early stage of the COVID-19 outbreak in Africa, the AU adopted the strategy of early detection and early prevention. On the one hand, the AU launched a guiding strategy for the entire continent, namely the Africa Joint Continental Strategy for COVID-19 Outbreak (hereinafter referred to as the Strategy for COVID-19) to prevent the spread of the pandemic. On the other hand, the AU has put the detection focus on the individuals infected with the COVID-19, predicting the risk level and taking ap-

September 6, 2021, Egyptian Biologics and Vaccines uses COVID vaccine based on SINOVA C vaccine.



appropriate prevention and control measures according to their tracks of movement.

The COVID-19 pandemic has fluctuated in Africa with three peaks. During this period, the AU authorised the emergency use of vaccines through the African Regulatory Working Group and refined the Strategy for COVID-19 in accordance to changing situation. In other words, it has enhanced the prevention, monitoring and treatment (PMT), sent community health workers (CHWs) to its member states, and taken corresponding refined prevention and control measures based on specific quantitative indicators of virus transmission, namely the public health and social measure (PHSM). After the fourth peak of the pandemic in Africa, the AU adopted a regular pandemic prevention and control policy, decentralising the power of COVID-19 infection detection and advising its member states to incorporate the COVID-19 detection and management into regular medical service. An action framework of Partnership for Africa Vaccine Manufacturing (PAVM) has been built to support the localisation of African vaccine manufacturing.

II. Establishing a linkage and cooperation mechanism for regional disease prevention and control systems

The AU mainly relies on the Africa Centers for Disease Control and Prevention (Africa CDC) to link up with regional cooperation centres for pandemic prevention and control. The Africa CDC, as an AU-affiliated technical institution with a relatively complete structure of disease prevention and control, has played a significant role in containing the spread of the COVID-19 mainly in three ways. The first one is to collect information about the pandemic situation. The Africa CDC makes full use of the five regional cooperation centres and the Regional Integrated Surveillance and Laboratory Network (RISLNET) on the continent to collect and analyse laboratory data, so as to facilitate timely monitoring of COVID-19 infected people. The second is to provide technical and talent support. The Africa CDC launched the Partnership for Accelerated COVID-19 Testing (PACT) to improve the efficiency of virus testing in AU member countries. The third one is to enhance the publicity of prevention and control policies. The AU and Africa CDC had been raising the public awareness by distributing pamphlets on COVID-19 prevention throughout the continent before the pandemic spread to all countries in Africa.



December 8, 2022, Goma, DRC, inside a treatment center operated by Médecins Sans Frontières.

III. Establishment of the African Medicines Agency

Africa has long faced a fragmentation of legislation in the field of public health. Although the AU Assembly of Heads of State and Government approved the African Union Model Law on Medical Products Regulation in 2016 as a tool for AU member states to review existing laws and provide policy and technical guidance, as a non-regulatory document, the law has not been localised effectively. Therefore, there is an urgent need to establish a unified and effective drug regulatory body on the African continent.

In fact, the African Union adopted a treaty to set up the African Medicines Agency (AMA) as early as February 2019, which needed the notification of at least 15 African countries before the Agency could officially operate. With AU's unremitting efforts, Cameroon as the 15th country to deposit the instrument of ratification of the



AMA Treaty with the AU Commission. On November 5, 2021, the Treaty entered into force and the AMA was officially established. The AMA is the second AU dedicated continental health agency, after the CDC, which aims to harness the continent's institutional, scientific and regulatory resources to improve access of local people to safe, effective and quality medicines.

IV. Deepening special cooperation with international organisations on African pandemic prevention and control mechanisms

Faced with the onslaught of COVID-19, the AU strengthens its international health cooperation with a view to obtaining material and technical support. On the one hand, the AU has established the African Vaccine Acquisition Trust Fund (AVAT), through which the AU has strengthened its docking with the COVID-19 Vaccine

Implementation Programme (COVAX) led by the World Health Organisation (WHO) and the Global Alliance for Vaccine and Immunization (GAVI) jointly, among others, to provide timely access to vaccines. On the other hand, six African countries, namely Egypt, Kenya, Nigeria, Senegal, South Africa and Tunisia, became the first countries to receive the production and technical licences needed to produce the COVID-19 vaccines (mRNA), with the joint assistance of WHO and the EU.

RESPONSE TO COVID-19 PANDEMIC AND PROGRESS OF THE AU PUBLIC HEALTH GOVERNANCE SYSTEM

As the newly infected population in Africa continued to rise, the AU has played a central role as regional leadership and made an outstanding contribution to the prevention and control of the pandemic on the continent.

I. Enhancing Africa's indigenous medicine and vaccine production capacity

With the COVID-19 pandemic, the disparities in the development of indigenous medicines in Africa were exposed. In 2020, there are around 600 pharmaceutical companies in Africa, 80% of which are located in eight countries, and as many as 22 African countries have no indigenous production capacity at all. Africa's weak pharmaceutical manufacturing capacity has increased its dependence on imported medicines.

Although external imports can also meet the needs of local people, in the context of Africa's response to the COVID pandemic, there is a risk of supply chain disruption from external imports. Strengthening indigenous pharmaceutical production capacity is therefore the source of solving the contradiction between supply and demand for medicines on the African continent. In view of this, the AU has gradually increased its support for the development and production of vaccines. The AU accelerated the vaccine test based on Africa through the Africa CDC Consortium for COVID-19 Vaccine Clinical Trials (CONCVACT), and then set the goal to develop, produce and supply over 60% of the total demanded vaccine doses in Africa by African vaccine industry. To this end, the AU and the Africa CDC have jointly launched the Action Framework of Partnership for Africa Vaccine Manufacturing (PAVM), with an estimated US\$30 billion in dedicated funding. In view of this, the indigenous African pharmaceutical and vaccine manufacturing industry

enjoy good opportunities for development.

II. Strengthening the capacity for collaborative regional public health governance

Different from the previous way of coping with diseases, it is difficult to prevent and control the pandemic this time. Therefore, the AU has focused on regional health cooperation. On the one hand, the AU uses the Africa CDC to transmit the continent's unified response strategy to all countries through the regional cooperation centres, while at the same time feeds back the first-hand information collected through the regional cooperation centres to the Africa CDC. On the other hand, the AU keeps close contact with public health institutions and other public health stakeholders in member states through the Africa CDC to explore public health resources in the regions. This will enable the Africa CDC to understand the real situation in each region of Africa and to invest more in drugs, funding or personnel for weak areas of prevention and control.

III. Improving the emergency capacity of public health legal supervision

The AU, through the AMA Treaty, acts as the AMA to promote the coordination of legal policies between countries and regions, advance the process of joint review of medical products, strengthen the supervision of medicines and reduce the circulation of counterfeit medicines in the market. The African continent has long been plagued by a shortage of supply to meet the demand for medicines, which, combined with the differences among the regulatory laws of medical products in African countries, has led to a proliferation of substandard medicines. In particular, during the COVID-19 pandemic, substandard medicines were prevalent in the African market in the face of a global shortage of vaccines, leading to a decrease in trust in the medicines available on the market and thus affecting the promotion of qualified vaccines. As a health agency on the African continent, the AMA can both pass on information from international partners about national medicine regulators to African countries and work better with African national medicine regulators to effectively limit the entry into circulation of substandard medical products.

AU FACES DIFFICULTIES IN PUBLIC HEALTH GOVERNANCE

In response to the COVID-19 epidemic, the AU has assumed the role of coordinator, organizer and resource integrator on the African continent, and has made important contributions to curbing the spread of the epidemic. However, the AU in the meantime has been faced with many challenges in public health governance.

I. Public health governance effectiveness needs to be improved.

The AU is of special nature. Firstly, still at a low level of integra-

tion, it is far from being as supranational as the EU. Secondly, lacking coercive power, the AU does not have broad jurisdictional powers over its member states. Thirdly, the AU has a prominent political characteristic. As AU's highest decision-making body, the AU Summit is composed of Heads of State and Government or their officially appointed representatives, and its decision-making power may exceed the influence of relevant laws and regulations.

Looking at the AU's response to the COVID-19 pandemic, due to the above characteristics, there is some room for the AU to improve its public health governance effectiveness. First, there are deviations in policy implementation. The AU's Strategy for COVID-19 emphasises the need for greater collaboration across all regions to reduce duplication of effort, but in practice there is still repeated establishment of the funds for combating the disease. Second, AU relies on the strong support from various regions and the member states for effective advancement of its policies. During the pandemic, even though the Strategy for COVID-19 was unanimously adopted at the continental level, African countries suffered from a lack of accuracy in reporting data on domestic outbreaks. In addition, the mismatch between the design of prevention policies and the actual situation is one of the causes for the low governance efficiency. The AU has advocated that African countries take such measures as self-isolation and regional control that have been taken by other countries around the world, yet it is in fact difficult to fully implement them. That is because nearly half of Africa's population is in extreme poverty according to international standard and live in poor housing conditions that make it difficult to achieve self-isolation.

II. Inadequate operational capacity of the public health system

Affected by the global pandemic, African countries have suffered from increased fiscal deficits and current account deficits. Although

many African countries have responded to the AU's call to take action to stop the COVID-19 spread, the financial expenditure related to the fight against COVID-19 is far below the standards of developed countries due to excessive financial pressure. Underfunding of public health has exacerbated the vulnerability of the health systems in African countries, causing the failure of African countries in making full efforts to combat COVID-19. For example, at the peak of the outbreaks, large-scale testing was regarded as the best way to break the spread of the virus, but it was difficult for African countries to carry out multiple large-scale testing. As for the reason, in addition to the lack of basic medical equipment, there was a lack of laboratories capable of COVID-19 virus testing. Furthermore, in sub-Saharan Africa, the number of doctors, nurses and midwives per 10,000 people was 2.2 and 10 respectively before the COVID-19 spread to the continent, far below the standards set by the WHO to meet daily needs.

III. Inadequate international Assistance in public health

On the one hand, the international community's financial assistance to Africa can only temporarily relieve the pressure on health governance in the AU. Under the impact of the global pandemic, the AU encountered challenges to its autonomous funding and was in urgent need for international assistance. According to official AU data, the EU is AU's largest financial supplier. Moreover, some African countries have been granted debt suspension, such as the G20's Debt Service Suspension Initiative (DSSI). While it is true that the above-mentioned external assistance has to some extent relieved the financial pressure on African countries to deal with the pandemic, there is also the potential for funders to use their influence to interfere with the AU's agenda or planning, thus failing to address the root causes of Africa's failure to upgrade the resilience of its public health systems.

On the other hand, vaccine aid from developed countries and international organisations to Africa lacks timeliness and longevity. Due to the weak pharmaceutical production capacity in Africa, the global vaccine production gap and the rush for vaccines by some developed countries, the COVID-19 Vaccine Implementation Plan has not been fully implemented and there is a shortage of vaccines in most African countries. The AU has been somewhat successful in seeking vaccine supplies. For example, it reached an agreement with Pfizer Biotech for access to vaccines. But the agreement is not a finalised sales contract and is therefore fraught with uncertainty in its implementation. Moreover, not all of the aid vaccines received on the continent are necessarily of good quality and effective, the alternative model of external vaccine procurement for stress transfer does not fundamentally help African countries to address barriers to public health governance

AU'S PATHWAY TO IMPROVING PUBLIC HEALTH GOVERNANCE

Although the AU has led its member states in the fight against COVID-19, pandemic is not yet over. Meanwhile, the variant strains appear constantly, bringing more pressure on the AU to respond to the pandemic. The joint efforts of the AU and its member states are needed to better enhance the AU's public health governance capacity.

I. Promoting institutional reform and optimising policy design

Faced with ineffective governance in public health, the AU on the one hand could deepen its institutional reforms, prioritise public health governance among the continent's top agendas and acquire greater disciplinary powers, while on the other hand needs to strengthen cooperation with its member states in public health governance and enhance their cohesion, so as to drive the AU's develop-

January 11, 2023, China-aided African Union African Center for Disease Control and Prevention headquarters project officially completed.



Photo/Xinhua

ment into a strong supranational institution. In addition, the AU could pursue pandemic data modelling for optimised policy design. The AU needs to take a prudent approach and promote consensus among its member states on principles and systems for data sharing in health emergencies. A shared data space at national, regional and continental levels in Africa can be built to form epidemiological data models that provide a dynamic guide for policy makers, predict the range of plausible scenarios that may arise under existing policy options, which will be helpful for the policy makers in developing scientific guiding strategies.

II. Enhancing health system defencing capacity

The Africa CDC serves as a key institution in the functioning of public health governance systems in Africa. The AU could work on three aspects to respond more effectively to public health emergencies and increase the resilience of public health systems. The first one is to give greater authority and responsibility to the Africa CDC. At the 2022 AU Summit, African leaders decided to make the Africa CDC the autonomous health body of the AU, which means its increased recognition in Africa and the need for it to take on more responsibility for the whole process of coordination, including health communication strategies and implementation across Africa. The second one is to increase the flexible stock of medical supplies. Due to the unpredictable nature of disease outbreaks, the Africa CDC can store an appropriate amount of medical supplies in case of emergency to guarantee emergency supplies during an outbreak. The third one is to enhance the development of human resources in health. In view of the serious shortage of African healthcare personnel in the response to COVID-19, the Africa CDC can, on the one hand, carry out long-term cooperation with renowned universities on the African continent to build a supply chain of talents, while on the other hand, keep close contact with health institutions in its member states to improve the skills of medical teams in practice.

III. Optimising models for international health cooperation

The AU may take a “multi-wheel driving” strategy to reduce its dependence on external funding: Firstly, it can continue with the autonomous funding model. Secondly, the partnership with the IMF, the EU and other international

organisations could be consolidated to reduce sovereignty debt burden. Thirdly, it could carry out health diplomacy to upgrade local medical productivity. The AU can further deepen its cooperation with China in public health governance. Since the outbreak of COVID-19, the AU and China have played an active role in the medical supplies and experience sharing in fighting the pandemic. However, in the context of the gradual normalisation of COVID-19 prevention and control, China and the AU can further optimise the mode of public health cooperation by changing from “hard” cooperation to “both hard and soft”, and deepening public health technical cooperation, such as the development and production of vaccines to deal with sudden diseases. In addition, the Africa CDC can strengthen its precise cooperation with the Chinese CDC in national public health policy planning, disease prevention and control system and norms to explore the public health governance institutional mechanism suitable for Africa itself, and enhance the comprehensive pandemic management capacity.

CONCLUSION

At present, the global crisis caused by COVID-19 has not relieved, and there is always the possibility that the virus could mutate and accelerate its spread. There have been outbreaks of monkeypox in several countries around the world since May 2022. The WHO declared on July 23 monkeypox outbreak as a “public health emergency of international concern”. With the simultaneous spread of multiple major pandemics such as COVID-19 and monkeypox, African countries will undoubtedly face more complex public health governance pressures. As seen in the fight against the COVID-19, the AU is increasingly aware of the need to address these issues and to give Africa a greater role in major global issues. Apart from the continued strengthening of solidarity and cooperation with the international community, it is more important to accelerate the improvement of Africa’s own governance capacity. The AU needs to continuously promote the construction of the continent’s Free Trade Area (FTA) and to take into account factors such as the pandemic, in order to optimise the allocation of resources and restructure the FTA, promote the development of digital economy and achieve inclusive economic growth in Africa, in order to more effectively help African countries to build public health capacity while addressing issues such as the economic crisis and climate change. ■



Photo/Xinhua

GLOBAL POLITICS ON FOOD SECURITY AND ITS IMPLICATIONS ON AFRICA

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There is no gainsaying that the world is facing shortage of food and this indeed is attributed to many factors that arose four years back and are still occurring up till now. Needless for me to say that COVID-19 pandemic affected people globally leading to the number of starved people by about 150 million, with Africa taking the largest percentage. Second to this again is the current Ukraine crisis, this further increases the rate of starvation in Africa, taking into consideration the following reasons: one that Russia and Ukraine are major producers of wheat which serve as the ingredients of flour, and flour serves as the major food source of bread and other related food accessories both in Africa and beyond. Two, Russia is a

major producer and manufacturer of fertilizer to many countries in Africa, and food growth and survival depends heavily on fertilizer as a major booster. Hence, the current war is reducing drastically food sustainability in Africa.

However, one needs to ask some questions which need to be addressed in this paper; are these only the problems prompting food insecurity in Africa? Or are there other problems beyond those dealing with some global political issues that equally aggravated the issue of food insecurity in Africa? And does global politics on climate change equally have impact on the food security in Africa? These and many more related matters will be the focus of this paper.

FOOD SECURITY

There are many attempts by different scholars and non-governmental institutions in defining what food security is, though I am not here to analyze all: food security is referred to one's access to safe and nutritious food. It is a multidimensional concept that looks at different food system elements, including production, processing, distributing and consumption. Food security covers all access points, from physical to economic and social access to food supplies.

Having a detailed analysis on what food security and food insecurity is all about, it would be imperative to understand that food security cannot be sustained and achieved by any nation under any circumstance unless the following structures are established and successfully maintained. These structures to food security are:

Accessibility: For an effective food security society to be sustained, accessibility of food as a major structure must be provided and instituted. This can be achieved by making sure that quality food production and sources are provided within the reach of people at ease, and not only that, but people should have easy access to necessary tools and equipment to produce and purchase food within a good reasonable time. To further actualize accessibility as a structure to food security, the accessibility must be both physically and socio-economical in nature. Physical entails adequate supply, resources, and location of food must be made ready to people while socio-economic entails, process of goods and household finances must equally be made easy for people to get.

Availability: Where accessibility is enhanced in an environment, food security cannot effectively be capable of converting hunger, unless availability is also addressed. Availability here encompasses having enough food through its production, and distribution to everyone. Availability can only be secured when all these three requirements are met. These include: Sufficiency, Regularity and Variety. Sufficiency, requires that food must be provided and supplied to meet the demands of the required population; Regularity, entails that food supply and sufficiency must be maintained at all regular times, period and season without any seizure or interval; and varieties, entails, the sufficiency, and regularity must be sustained towards meeting different varieties of food, without limitation or restriction to particular brand of food.

Utilization: Achieving accessibility and availability of food will not avail a country out of food insecurity

unless, such country addresses utilization capacity, which requires that there should be proper preparation and adequate facilities for food storage, cooking and absorption of nutrients, storage, saving for nutritious purposes.

Stability: For a good and sustainable food secured society to exist, the food must be structured towards a stable supply without other extraneous factors affecting the accessibility, availability, and sufficiency. Some of the extraneous factors may include, economic meltdown, change of weather, communal or inter-communal conflicts, price stability, etc.

AFRICA'S TREND TO FOOD SECURITY

One of the major challenges facing countries across the globe is the right to food for all. This challenge is most critical in low-inclined food deficit countries, and which the eighty-six countries that are defined as low-inclined and food-deficient, forty-six are in Africa. Sub-Saharan Africa, for example, produces less food per persons today than it did three decades ago, and the number of chronically undernourished people increased dramatically.

In addition to the above, there is drastically huge amount of food wastage by African farmers due to ignorance, poverty, and illiteracy. The farmers in Africa lose 15%-20% of their crops in the field due to the stated reasons, and 15%-20% is wasted due to pest in-control after harvest, which is attributed to lack of storage and its knowledge.

Majority people in sub-Saharan Africa live in rural agricultural and fishing communities, and these people do not have access to necessary infrastructures to prevent and address adverse weather resulting from climate change. For example, farmers depend on rain for the production of their crops and ironically, 1% of their arable land is equipped with irrigation.

FACTORS AFFECTING FOOD SECURITY IN AFRICA

Old Factors

Population: The population growth of Africa is overwhelming compared to other continents. The practices of multiple wives, religion and lack of awareness help in African population growth, and this affect the food input already in scare resources, and making it difficult to meet the need of everyone.

Conflicts: African region is the worst continent experiencing both inter and intra conflicts which invariably affects the growth of food production. For example, con-

flict in South Sudan, Cameroon, Central African Republic, Burkina Faso, Mali, Chad, Ethiopia, Kenya, Somalia, Nigerian herdsmen-farmers and Boko Haram conflicts, etc. are responsible for slow food agricultural products in Africa due to dislodgment of farmers and insecure farmland.

Water Scarcity: The drought in some parts of Africa, for example, Somalia, Niger, Ethiopia, Kenya, etc. has affected food production. This tendency leads to crop loss and further increases the food prices beyond common average person in the region due to its non-availability and scarcity.

New Factors

COVID-19: The emergence of COVID-19 in the late 2019, which cut across the globe affected food production in Africa, the effect of the virus affected the food distribution, supply and leading to economic instability, lock down imposed by governments, and many other restrictions made it difficult for people to access food, leading to hunger and malnutrition globally.

Climate Change: Food is produced from the environment and within, once the environment is affected negatively, it also has resultant effect in food production. This effect led to droughts, climate change reactions and inactions destroyed crops and disrupted food transportation. Chad, Nigeria, Cameroon, Tanzania are severally affected by torrential rains and flooding.

Extreme weather conditions occasioned as a result of climate change led to the damage of million tons of crops and livestock, and this resultant effect led to reduction in availability of food, its quality and nutritional quantity required for consumption.

Local farmers in Kenya try to chase away a swarm of desert locusts.



(Photo/C Photo)

Energy Crisis: The energy crisis experienced globally particularly those in oil, gas and other fossil fuels affected food production. This becomes so, because, major means of transporting food is heavily relied on those energy, and once there is crisis in their production, it negatively affects food production.

Economic Meltdown: The global economic crisis has a tremendous impact on food security in world and Africa in particular, the economic downturns, in world which in turn affects Africa, lead to many companies to close and many employees were laid off and which invariably brings poverty and reduces income. The resultant effect here is that it makes people affected by this economic downturn difficult to access food in Africa.

GLOBALIZED POLITICS ON FOOD SECURITY IN AFRICA

African Continental Free Trade Agreement: This is an agreement regionally brought, signed and ratified by 54 African countries, which cover mostly goods and services. Though the agreement focuses on free trade but it has the capacity and tendency to enhance food security through allowing and giving free access to producer organizations, farming cooperation societies/associations reach remote climate vulnerable agricultural communities without hindrance of obtaining any permit/visa or traveling documents, of more importance, through this means, is the opportunity of taken and spreading new technologies such as pest control devices, high yield seeds that resist heat and drought and improve climate adaptation training and market information on tax free basis. Equally of importance in this regard, is the free flow from any African country agricultural mechanized equipment and techniques, which are driven towards boosting high rate of food production as against the manual and traditional method which many countries in Africa are used to.

ECOWAS Free Trade Treaty: The ECOWAS Free Trade Treaty is targeting free inflow of movement of all citizens of ECOWAS without rigid requirement of documents limiting each member for any trade activities; this treaty on trade include but not limited to food agricultural products, equipment, and other pests control that are influenced by climate change and other related factors, this in turn has the tendency of enhancing food security in Africa.

African Growth and Opportunity Act (AGOA): The African Growth and Opportunity Act is a law enacted and implemented by United States of America (USA) to open Af

rican opportunities in many disciplines including research and development in agricultural and climate change. The essence of this law by the American government is to liberalize business opportunities without limitation to African countries with less tax bottlenecks. It enhances food supply from America and other related demands towards boosting food, research and teaching in Africa.

New Partnership for African Development (NEPAD): This was taken by American government after AGOA, with a view of enhancing partnership agreement between African countries and America, which include among others, partnership in food growth, supply, manifestations of agricultural implements, research and development in agriculture, diseases, pest and other natural causes and disaster. Through this medium, food production and distribution is highly enhanced by countries in both Africa and America.

Chinese African Relationship on Trade and Development: The Chinese government is playing a leading role globally among all emerging nations in partnering with Africa in many areas, including food security: it is pertinent we examine briefly these developments and partnerships, some of these include but not limited to Yale-African China Conference; Forum of China-African Cooperation; China-African Research Initiative, etc.

The Belt and Road Initiative: This was designed to reinvigorate the old sick trading route along East African Coast. This initiative brought huge number of significant infrastructure projects bound across Asia and Africa. This created huge opportunities of free access to movement of food and other accessories, which resultant effect led to food security in Africa.

China-Africa Environment Cooperation Centre: This centre is created to strengthen cooperation between China and African countries in the field of environment as well as to promote green investment and development. It was designed to provide services to support African Member – States to contribute to the achievement of the Sustainable Development Goals of the 2030 and the African Union Agenda 2063, and one of the focus of the agenda relates to availability of food and sustainable environment in Africa.

Declaration on China-Africa Cooperation on Combating Climate Change: This was brought by Chinese government and 53 African countries in 2021 under African Union Commission, whose motive is to collectively address the devastating effect caused by climate change in Africa.

Beijing summit of the Forum on China-Africa Coopera-



China-aided rice demonstration field in Antananarivo, Tagalog, Madagascar.

tion 2018: The summit aimed at strengthening partnership between China and Africa. The China – Africa Cooperation focus was aimed towards increasing development cooperation between China and Africa, based on 2030 Agenda for Sustainable Development and AU agenda 2063, this summit addressed the following: reforming the foundations of African progress; ensuring national ownership and African-led sustainable development; south-south cooperation; promoting sustainable fiscal policies; and climate friendly and climate resilient development, including support for Africa to adapt to climate change and bound resilience.

Forum on China-Africa Cooperation (FOCAC), Dakar Action Plan 2022 – 2024: Item 3.1 of the Action Plan centered on agriculture, food security and food safety, the two sides will give full play to the China – Africa agriculture cooperation mechanism, hold second forum on China-Africa cooperation in agriculture, and convene the first meeting of the China-AU joint initiative cooperation methods, enrich the content of cooperation, and ensure the effective implementation of agriculture in field of shared interest. The two sides will further strengthen food security cooperation by giving full play to China-AU coordination mechanism for Belt and Road Cooperation and making good use of south-south cooperation, assistance fund. The two sides will launch trials in such areas as reduction of post-harvest grain loss in light of AU's needs and China's strengths in order to support African countries to improve their food supply capacity with existing production capacities.

Greenhouse Emission: China not only provided the above efforts in tackling food security issues in Africa but

greatly contributed in addressing to the greenhouse emission capable of heavy impact on climate crisis, particularly with the event in climate famine in Madagascar. The global temperature rise has put a strain of Africa's productive systems with extreme wealth events like drought and floods becoming more intense and widespread across the continent. China in response to this problem, particularly in ameliorating Africa's climate change, China in the COP 26, Chinese President Xi Jinping not only called on other advanced countries to help the African continent but led and set the ball rolling by inaugurating the sum of \$232.47 million (USD) fund support in biodiversity conversation to developing countries in Africa.

New Coal Plants: In addition to this, Chinese government further undertook not to finance New Coal Plants abroad adding to its earlier domestic commitments to retrieve carbon dioxide emission before 2030 and achieve carbon neutrality before 2060. All these were geared towards establishing a low carbon industrial packs in developing countries, even though Africa as a continent contributes only 4% of the global greenhouse emission.

Solar and Wind Energy: In terms of solar and wind energy production, which is aimed at mustering new forms of energy that sustainable and climate friendly China seem to be the lead among countries across the globe by upgrading solar capacity in Africa from 739 to 5,500 megawatts with wind energy installations from 108 to 6,100 megawatts.

Kenyan President Uhuru Kenyatta attends the launch ceremony of the Garissa photovoltaic power station in Garissa County, Kenya, December 13, 2019.

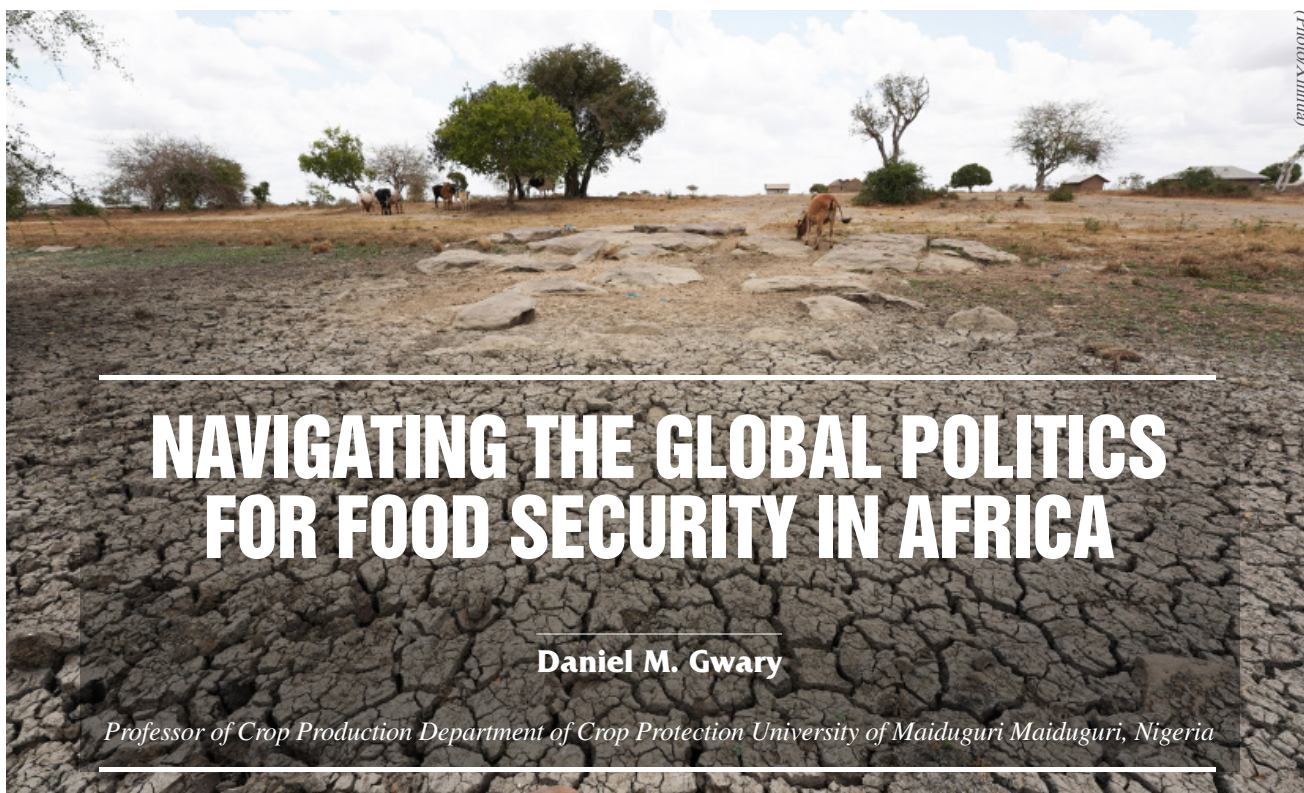


Fund contribution to Africa: From the revelation of this article, there is no doubt that advanced and developed countries are striving politically in curbing food insecurity in Africa by some countries such as US, UK, Russia, and France. However, indexes and records so far indicated that China takes the lead by being the biggest and largest partner to Africa than any advanced nation contributing to Africa not only in climate change driven policies that are calculated or desired to boost food production, but also in helping Africa by availing pledged funds to help emerging economies cope with the vagaries of climate change.

COP 27: More importantly is the position taken by China at COP 27 which took place in Egypt, China laudably called for financial help to developing countries suffering from the effect of climate change, African countries at COP 27 pushed harder for rich nations to pay compensation and contribute to loss and damage (L & D) fund. Though Chinese envoy Xie Zhenhua said China does not have any obligation to promote L & D caused by climate change yet, China is willing to support lower income countries for L & D caused by climate change.

CONCLUSION

Needless for a sensible person to think that Africa alone cannot achieve anything meaningful in climate change adaptation without external investment driven towards that China has had and still invests heavily in about forty-six African countries through industrializing, strengthening, and strategizing their ability to cope with the effects of climate change through the Belt and Road Initiative (BRI) earlier discussed. Therefore, the best way and approach in redesigning the focus of effect of climate change, is through global politics as discussed above, and legislative reforms by many developed countries are needed towards achieving a desired climate environment that can be responsible to food security and sustainable development. In this regard, for the entire continent of Africa to succeed, it is not only about what the advanced countries do or have done, but rather it is the collective efforts and collaborations that would lead to successful good result. Hence, the United Nations Economic Commission for African (UNECA), the African Union (AU), ECOWAS, SADC, AfDB, etc. must come in and partner with each other to achieve the desired goals of climate governance that would accelerate food production aimed at food security in Africa. 🇳🇮



(Photo: Xinhua)

NAVIGATING THE GLOBAL POLITICS FOR FOOD SECURITY IN AFRICA

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In the food Science literature although there are a number of definitions of food security but the current working definition is that issued by the United Nations' Committee on World Food Security, to mean that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life. From this definition, food security can be viewed under four main dimensions of: Physical availability (Sufficient food for all people at all times), accessibility (Physical and economic access to food for all at all times), adequacy (Access to nutritious and safe food produced in environmentally sustainable ways), utilization (the body makes the most of various nutrients in the food, to determine the nutritional status of individuals) and stability of the other three dimensions over time. The Food and Agriculture Organization (FAO) of the United Nations identified the four pillars of food security as availability, accessibility, utilization, and stability. Since then the concept of food security has continued to evolve to recognize the centrality of agency and sustainability, therefore bringing to six the dimensions of food security (availability, accessibility, utilization, stability, agency and

sustainability). These six dimensions in present times are reinforced in conceptual and legal understandings of the right to food. Global food security statistics suggests that too many people are hungry and food insecure today. For this reason, the United Nations (UN) recognized the right of individuals to food under the universal declaration of Human Rights of 1948. According to reports from The State of Food Insecurity in the World reported that as many as 778 million people were affected by hunger in 2020 and increased to 828 million in 2021. The proportion of people affected by hunger rose from 8 percent in 2019 to 9.3 percent in 2020 and 9.8 percent in 2021 of the world population. Similarly, analysis in the State of the Food Insecurity in the World showed that the gender gap in food insecurity continued to rise in 2021; 31.9 percent of women in the world were judged moderately or severely food insecure, compared to 27.6 percent of men showing a gap of more than 4 percentage points, compared with 3 percentage points in 2020. In addition, about 112 million and 3.1 billion people could not afford a healthy diet in 2019 and 2020 respectively reflecting the effects of inflation in consumer food prices stemming from the economic impacts of the COVID-19 pandemic and the measures put in

place to contain it. To worsen the situation an estimated 45 million children of the future generation under the age of five were suffering from wasting, the deadliest form of malnutrition, which increases children's risk of death by up to 12 times. Furthermore, 149 million children under the age of five had stunted growth and development due to a chronic lack of essential nutrients in their diets, while 39 million were overweight.

For the reasons above, different international agreements and mechanisms have been developed to address food security. The main global policy to reduce hunger and poverty is in the Sustainable Development Goals (SDGs) of the United Nations. In particular SDG number 2 of Zero Hunger sets a global target to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture by 2030. All major international organizations including FAO, WFP, UNICEF, WHO and IFAD have given their commitment to support global effort to end hunger and malnutrition through improving the world agro-food systems.

GLOBAL FOOD POLITICS

The world is experiencing a global food crisis. High food prices have driving several millions of people into extreme poverty, magnifying global hunger and malnutrition. This ongoing global food crisis has been triggered, and continues to be fueled, by several key factors, such as COVID-19, climate shocks, the ongoing Ukraine crisis, and trade-distorting government policies. Amid the worsening global food crisis, there have been growing domestic and international concerns regarding the food security of China, the world's most populous country and largest food importer. China's food security situation is at stake in the heat of growing threats from climate shocks and current worsening ties with the United States and other Western countries, which are among the top agricultural suppliers to China. In response, the country's foremost leaders have repeatedly stressed the strategic importance of safeguarding the country's food security. The challenges to China's food industry, which will continue to weigh on the country for at least the short to medium term, suggest opportunities for international food producers, such as Canada. Canada is an important supplier of canola seeds, wheat, barley, seafood, and meat products to China. Statistics Canada's 2020 data shows that Canada exported more than \$10 billion in agricul-

tural and agricultural foods products to China in 2018. However, food exports soon slumped by 38.3% in 2019 due to the diplomatic tension between the two countries before jumping dramatically by nearly 50% in 2020 and 2021, driven by strong demand in China. China's inconsistency in geopolitical policies is considered the biggest uncertainty for its Western food trade partners. Invariably Canada will certainly, benefit from the trade disputes between China and other suppliers. For example, China reportedly increased its purchase of Canadian barley after it's barely trade with Australia was impacted by worsening relations.

AFRICA AND THE POLITICS OF FOOD SECURITY

Africa is home to 60% of the world's arable land, but the continent remains food insecure, with millions of people experiencing chronic hunger and facing famine. It is estimated that over 100 million of 1.4 billion Africans in 54 Countries were facing crisis, emergency, or catastrophic levels of food insecurity in 2020, which increased by more than 60 percent from the previous year. The levels of food insecurity are expected to worsen further in 2021 and beyond. The African region spends more than \$35 billion on food imports per year and it is projected that by 2050, Africa's population will increase from current 1.4 billion to 2.4 billion by 2050 and that two out of every five children globally will be African.

Of the challenges currently facing the continent, it is climate change that has greatly slowed down Africa's progress towards achieving the SDGs, especially those related to eliminating hunger and poverty, improving human health and ensuring environmental sustainability. This is because climate change disproportionately affects the livelihoods of the most vulnerable population by increasing the occurrence of natural disasters, affecting the continuity of ecosystem functioning and the ecosystem services it provides. Climate change also damages the critical natural resources that vulnerable communities depend on. Extreme weather events; limited adoption of yield-increasing technologies; dependency on rain-fed agriculture and low levels of irrigation; and most recently, the spread of armyworm in parts of the continent have reduced the chances of producing enough food for the continent. It is estimated that more than 38 million people are at risk of hunger and poverty in Africa due to climate change.

Africa faces a myriad of hurdles on its way to achieving food security for the region. Climate change, population growth, youth bulge, widespread unemployment, extreme poverty and hunger are some of the challenges that the continent is grappling with. In view of this the AU dedicated 2022 as the Year of Nutrition with the main objective to strengthen resilience in food and nutrition security. The AU Comprehensive African Agriculture Development Programme (CAADP) biennial review report of 2019 revealed that Africa is not on track to meet its goal of ending hunger by 2025, noting deterioration in food and nutrition security on the continent. Due to its inability to meet its food requirements from local production the African Continent has witnessed growing demand for cereal crops particularly wheat, and sunflower, is heavily depending on imports from Russia and Ukraine, and the Continent is already experiencing price shocks and disruptions in the supply chain of these commodities.

COVID-19 pandemic ravaged Africa, a large percentage of Africans were already affected by poverty and food insecurity. The pandemic superimposed additional stress on the already weak food security situation. The direct and indirect impacts of COVID-19 included but not limited to illness and deaths of food systems' workers, interruption of food supply chains, unemployment, depreciation of currency value, and disruption of social protection programs.

Russia and Ukraine, both often referred to as the world's breadbasket, are major players in the export of wheat and sunflower to Africa. According to African Union Secretariat, North Africa (including Algeria, Egypt, Libya, Morocco, Tunisia), Nigeria in West Africa, Ethiopia and Sudan in East Africa, and South Africa account for 80 per cent of wheat imports. Wheat consumption in Africa is projected to reach 76.5 million tonnes by 2025, of which 48.3 million tonnes or 63.4 per cent is projected to be imported outside of the Continent. Sub-Saharan Africa and the Horn of Africa are at greater risk of food insecurity due to country-specific shocks, climate change, export restrictions, and stockpiling, especially if rising fertilizer and other energy-intensive input costs will negatively impact the next agricultural season as a result of the ongoing conflict.

RUSSIA AND UKRAINE CONFLICT

Russia and Ukraine together exports account for

about 12% of total calories traded in the world, and the two countries are among the top five global exporters for many important cereals and oilseeds, including wheat, barley, sunflowers and maize. Ukraine is also an important source of sunflower seed oil, supplying about 50% of the global market. Many importing countries depend even more on these products from Russia and Ukraine. North Africa and the Middle East import over 50% of their cereal needs and a large share of wheat and barley from Ukraine and Russia. Ukraine is also an important supplier of maize for the European Union and China, as well as several North African markets. The Ukraine crisis has serious implications for global food security. Much of Ukraine's most fertile agricultural land is in its eastern regions, which are under major impact of the Ukraine crisis. The flow of goods from Ukraine is impacted, including Ukraine's agricultural exports. As a major grain exporter, Ukraine plays a crucial role in feeding populations world-wide. So the consequence of Ukraine crisis has extend into the countries and regions that depend on Ukraine for food, exacerbating social and political instability as well as leading to food insecurity. The Ukraine crisis has also provoked countermeasures by the EU, United States, and other countries have large impacts on Russian exports of natural gas and fertilizers. Russian exports of natural gas account for about 20% of global trade and Russia supplies about 40% of the EU's current imports. Economic sanctions on Russia by NATO and other UN countries have so far halted trade and drive up natural gas prices to even higher levels. While European importers could switch to other suppliers such as the U.S.

August 16, 2022, Odessa region, Ukraine, cargo ship with 23,000 tons of wheat leaves the southern port of Ukraine.



(Photo/Xinhua)

not all countries have the same leverage to do so.

Natural gas is also an important feedstock for the production of nitrogenous fertilizers such as ammonia and urea. The impact on fertilizer prices would be further exacerbated by the fact that Russia is an important supplier of nitrogenous fertilizers and potash. Russia accounts for 15% of global trade in nitrogenous fertilizers and 17% of global potash fertilizer exports. Belarus, an ally of Russia and staging ground for the current invasion and already being targeted by some international sanctions accounts for an additional 16% of global market share of potash exports. Since global fertilizer market has been rising high further shortages will have global implications, particularly in developing countries such as Africa where price impacts could significantly reduce fertilizer use and result in poor local harvests.

CHINA'S FOOD SECURITY

China, with a population of 1.411 billion people to feed is a major player in the global food security equation. Safeguarding its food security has always been a top priority for policymakers. The country has been nearly self-sufficient in grain supply for some time, with 97% of staple cereals such as wheat and rice domestically produced but it still imports massive amounts of oilseeds, corn, sugar, meat and dairy products to fill supply gaps. Available information for 2020, China produced 560 million tons of corn, wheat, rice, and soybeans combined, but had a total demand of 697 million tons. Most grain and oilseed imports are used as animal feed or vegetable oil. Among the imported grains, soybeans have the largest domestic supply gap, and 85% of its domestic consumption relies on imports. The Ukraine crisis has only a limited direct impact on China's food supply and prices, at least in the near term, as the trade volume between China and the two countries is relatively small. However, in the longer run, China may purchase more wheat and barley from Russia after lifting the import restrictions to meet increasing domestic supply shortage in certain types of wheat. Meanwhile, corn and barley imports from Ukraine have become an important part of China's grain supplier diversification effort to shore up food security in recent years. Now, export disruptions caused by the Ukraine crisis are affecting China's food supply chain by pushing up energy, fertilizer, and food prices. Furthermore, other factors



A field of rape flowers taken in Wayao Village, Mugang Town, Liuzhi Special Zone, Liupanshui City, Guizhou Province, China, March 9, 2023.

exacerbating China's food insecurity concerns include power cuts, rising vegetable costs, and panic buying triggered by the pandemic. Having a population of 1.4 billion to feed, China must stay alert to possible food scarcity in the face of market turmoil compounded by the Ukraine crisis and the resurgence of the COVID-19 pandemic. China's overall food self-sufficiency rate has continued to decline in recent years. Official data shows that oilseeds and coarse grains (i.e., soybeans, corn, barley, and sorghum) imports saw a significant rise of 18.1% in 2021 from a year ago, hitting a new record. A study by Tsinghua University shows that by 2035, China's food self-sufficiency rate may fall from 76% to 65% which can be attributed to declining arable land as well as farmland and cropland degradation.

NEEDED INTERVENTIONS FOR AFRICAN FOOD SECURITY

Understanding the causes and the effects food insecurity is the first step in helping to mitigate the damage that food insecurity has caused Africa and to the world. African nations have to pursue policies and strategies that promote long-term growth while at the same time offering short-term safety nets for the poor of Africa. The growth and development strategy will have to increase significantly the levels of public-sector investment in agriculture and rural development and to give top priority to the commercialization of smallholder agriculture so as to increase productivity and competitiveness.

THE AU-US COOPERATION

The African Union and the United States reaffirm their shared commitment to realizing African food security by establishing a strategic partnership to guide and accelerate their work. This strategic framework will reference and build on existing bilateral, regional, multilateral, non-governmental, and philanthropic efforts to advance food security and will leverage the public and private sectors to address immediate and acute food and fertilizer needs in the short-term– including by addressing food supplies that have been disrupted – and promote transformational investments in medium-to long- term sustainable and resilient food systems. African Union Commission leaders will have to assess CAADP progress and identifies priorities going forward in the current complex and changing global context.

CHINA-AFRICA-UN COOPERATION

Rice is a staple or alternative food crop in many African countries. Due to funding and technology constraints, the potential for rice production has yet to be unleashed in Africa. Under the South-South Cooperation (UNOSSC) the China-Africa-UN Cooperation aims at assessing and outlining Africa's demands for the development of the rice industry with a focus on facilitating, policy making, planning, investment matchmaking, research, development, local technology demonstration, and capacity development training. Through customized technology transfer application and investment, the initiative aims to leverage the comparative advantages of each partner to unblock bottlenecks impeding agricultural transformation including provenance research, and the improvement of cultivation technologies, equipment and the agricultural industry chain.

WORLD BANK INTERVENTION

The World Bank Group works with partners to build food systems that can feed everyone, everywhere, every day by improving food security, promoting 'nutrition-sensitive agriculture' and improving food safety. The Bank is a leading financier of food systems.

As part of a comprehensive, global response to the food security crisis, in May 2022 the World Bank announced that it was releasing up to \$30 over a period of 15 months, including \$12 billion in new projects with almost half of this

for Africa, which is one of the hardest hit regions by the food crisis. The financing is to scale up short- and long-term responses to boost food and nutrition security, reduce risks, and strengthen food systems along four themes:

- support producers and consumers,
- facilitate increased trade in food and trade inputs,
- support vulnerable households, and
- invest in sustainable food and nutrition security.

In May2022, the World Bank Group and the G7 Presidency co-convened the Global Alliance for Food security, with the aims at an immediate and concerted response to the unfolding global hunger crisis. The Alliance has developed the Global Food and Nutrition Dashboard which provides timely information for global and local decision-makers to help improve coordination of the policy and financial response to the food crisis.

The heads of the FAO, IMF, World Bank Group, WFP, and WTO released a third joint statement on February 8, 2023 advocating the prevention of the worsening situation of the food and nutrition security crisis.

THE FUTURE OF AFRICAN FOOD SECURITY

It has been estimated that by 2050 there will be two billion more people on Earth hitting the 10 billion target out which will be 2.1billion Africans. Certainly today's agriculture can't deliver enough food to meet that need. So change is needed to increase output across the globe. But it must not be done at the expense of an increasingly fragile environment. All the support in forms of finance, technologies and inputs from developed economies and International organizations will need to be mobilized particularly to developing and least developed countries to increase sustainable food production. 🇷🇺



(Photo/C Photo)

NEW LANDSCAPE OF ENERGY POLITICS AND GLOBAL ENERGY GOVERNANCE

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Since the 1990s, international energy cooperation has advanced on all fronts, and energy governance has become a focal point of global governance. However, with the emerging anti-globalization tide and intensified competition among major countries in recent years, the trend of “politicizing” energy cooperation has been stronger. After the outbreak of the Ukraine crisis, the energy sanctions imposed by the United States and Europe against Russia have brought an “end” to nearly half a century of free trade in energy, highlighting the trend of “bloc-based division” in energy cooperation and causing a certain degree of regression in global energy governance. Under the new circumstances, the international community not only needs to strengthen strategic dialogue and cooperation between energy exporters and consumers, and actively promote the “de-politicization” of international energy, but also needs emerging economies to play a greater role in promoting global energy governance.

DEGENERATION OF INTERNATIONAL ENERGY POLITICS

With the regression of globalization and the rise of nationalism, the geopolitical games of major countries have been remarkably intensified, and the political and security attributes of energy have once again come to the fore. In order to achieve their geopolitical and strategic goals, the United States and Europe frequently impose energy sanctions on energy exporting countries, advocate energy and economic “decoupling” from some countries, and extend competition among major countries to the energy sector, which fragments the global market and reverses the globalization of trade in energy.

First, energy has become more “politicized”. The United States is a veritable global “superpower of sanctions” and also a prime example of using energy as weapons back against oil-producing countries. In recent years, the United States has even redoubled the use of energy sanctions and other means to pursue its national strategic interests. During his presidency, Donald Trump has repeatedly accused the Organization of Petroleum Exporting Countries (OPEC) of pushing up oil prices, threatened to enact the “No Oil Production and Export Cartel Act” (NOPEC) and imposed sanctions on Saudi Arabia and other OPEC members. In the Russia-Europe energy game, the United States has been obstructing the Nord Stream 2 pipeline project since its conception. After the Ukraine crisis broke out, the European energy crisis was aggravated mainly by the escalation of energy sanctions imposed by the United States and Europe against Russia. In 2022, the International Energy Agency issued 10 recommendations for the EU to reduce energy dependence on Russia, which were mainly non-market measures. Many multinational companies also chose to sacrifice commercial interests and submit to political will.

In the context of major country competition, the trend of “de-globalization” and “decoupling” in the United States and the West has also affected the clean energy sector: China-US clean energy cooperation has taken a great hit, as many of the previous cooperation projects on renewable energy and energy efficiency ceased to exist. The United States has been actively advocating the “decoupling” from China by playing up China’s strengths in the clean energy chain and the “threat” it poses to the United States and the West. The EU has also called for greater protection and review of clean energy technologies. There were even some voices

that compared getting rid of clean energy dependence on China to getting rid of energy dependence on Russia, arguing that “Russian energy today could be China’s green high technology in the next conflict”.

Second, the energy game has rebounded on all fronts. With the escalation of US and European energy sanctions against Russia, Russia-Europe energy relations continue to deteriorate. On 27 September 2022, Nord Stream 1 and Nord Stream 2 pipelines exploded under the sea, making the geopolitical energy conflicts between Russia, the United States and Europe even more complicated. Europe is actively exploring new import channels to get rid of its energy dependence on Russia, further intensifying competition in energy trade and markets with Asia.

In terms of energy geopolitics, the energy game between Russia, the United States and Europe is becoming increasingly complicated. On one hand, after the Ukraine crisis, the United States first pressured the EU to escalate energy sanctions against Russia, and then joined the EU and the G7 to place a cap on Russian oil prices. European-Russian energy cooperation has continued to weaken, with only a few countries in the EU, such as Hungary, remaining supportive of energy cooperation with Russia. On the other hand, Russia has taken unprecedented countermeasures by accelerating the “eastward” and “southward” process of its energy strategy. On 27 December 2022, Russian President Vladimir Putin signed a presidential decree imposing special economic measures in response to the West’s cap on Russian oil prices. In addition, geopolitical competition on new energies such as key minerals and competition for clean energy supply chains and technologies have become more intense.

In terms of trade in energy, Asia-Europe competition has become fiercer. Europe is accelerating its search for alternative energy sources and competing intensely with Asian buyers. From 2020 to 2021, Asia accounted for half of US LNG exports, but in the first four months of 2022, US LNG exports to Asia fell by 51%. The EU’s search for alternatives to Russian energy around the world is driving up energy costs and exacerbating supply gaps in some developing countries. Countries like Sri Lanka and Pakistan, unable to compete with Europe in terms of price, inevitably fell into energy and economic difficulties.

Third, energy cooperation has gradually moved toward bloc-based division. With the accelerated adjustment of international landscape, Russia’s energy exports have shifted from Europe to the Asia Pacific, more energy from the United States is flowing to Europe, and energy supply from

the Middle East and Australia to Europe increases significantly. The game between energy-consuming countries and exporting countries has been upgraded, and some countries have the tendency of taking sides in energy cooperation based on political positions.

First, the transatlantic partnership has grown closer. Under the pressure of the United States, the EU has accelerated its “decoupling” from Russia, and US-EU energy cooperation has increased sharply. The EU and the United States jointly issued several joint statements on energy cooperation, strengthening strategic cooperation and seeking greater shared interests in energy through the transatlantic partnership and NATO. From January to October 2022, the United States exported 48 billion cubic meters of liquefied natural gas (LNG) to the EU, 26 billion cubic meters more than the whole year of 2021, and crude oil exports increased by more than 50% year-on-year. Second, the United States has stepped up its crackdown on OPEC. On 5 May 2022, the US Senate passed the NOPEC and intended to file lawsuits against OPEC member countries. In July, Joe Biden visited Saudi Arabia and other Middle Eastern countries to pressure oil-producing countries to increase production. Third, the OPEC+ cooperation mechanism has been further improved. After the Ukraine crisis broke out, OPEC countries remained neutral on the issue of sanctions against Russia, repeatedly rejecting the demands from the United States and Europe to increase production and choose sides. The UAE abstained from voting on the UN Security Council resolution condemning Russia and made it clear that Russia would “always be part of OPEC+”. In mid-July 2022, Saudi Arabia said after Joe Biden’s visit that it would continue to cooperate with Russia and other non-OPEC oil producers.

GLOBAL ENERGY GOVERNANCE SYSTEM HAS TAKEN A HEAVY TOLL

Against the backdrop of anti-globalization and intensified competition among major countries, global energy governance is facing more serious challenges. Many international energy crisis response mechanisms are seriously out of place and ineffective, and the international energy order is in “turmoil”. As the most influential international energy governance mechanism, the International Energy Agency has performed disappointingly, with no substantive action in response to the European energy crisis, and is even more powerless in the face of the trend of “weaponization” and “camp-based division” of international energy. Global energy governance is still largely constrained by the global



Protesters demonstrate against the government's decision to demolish the village of Lüsifat and expand the local coal mine, Germany, on January 14, 2023.

governance dilemma under the anti-globalization trend. There is still a long way to go in reforming the energy governance system.

First, globalization of energy governance has been reversed. The success of the shale revolution and the slowdown in consumption have significantly reduced the need and concern for energy supply security in the United States, and the slowdown in energy demand growth has also greatly reduced energy security anxieties in the EU. The focus of the United States and Europe has shifted more towards climate negotiations and global emissions reductions, with energy security becoming somewhat of a secondary objective. The COVID-19 pandemic has exacerbated the trend of economic nationalism and anti-globalization, and global energy governance has taken a big step backward.

Second, the international energy security environment has deteriorated. The energy geopolitical game between Russia, the United States and Europe has worsened the EU's energy dilemma, and various "spillover" effects have had many negative impacts on the international energy security environment. The US and EU sanctions against Russia to some extent marked the end of free trade in energy and triggered regional imbalances in energy supply and demand.

First, energy market stability faces new challenges. The energy sanctions imposed by the United States and Europe against Russia aggravate the fragmentation of the international energy order, reduce free mobility and significantly increase long-distance energy transport, and the "era of cheap energy" may be gone and never return. Daniel Yergin, a US energy expert, pointed out that the European oil ban on Russia, combined with US and European cap on Russian oil prices marked the end of the global oil market, which was replaced by a fragmented market. Henning Gloystein, head of energy, climate and resources at Eurasia Group, said a total ban on oil imports

from Russia could cause "real damage" to the market, with sanctions and restrictions on free trade in energy emerging as new disruptive factors triggering instability in international energy markets.

Second, the sanctions have limited the growth of oil and gas production capacity. The energy and economic sanctions imposed on oil-producing countries by major consumers like the United States and Europe have to some extent exceeded oil embargos or local wars in oil-producing countries, becoming an important factor affecting the security of international energy supply today. The sanctions imposed on Russia would make Russia cut its oil production and ultimately lead to global oil shortages. If the EU ban on Russian oil goes into full effect, 4.1 million barrels per day of oil supply will be blocked from entering the European market, which, together with the U.S. ban on Russian oil (600,000 barrels per day), means that about 4.7 million barrels per day of Russian oil will be excluded from the international oil market.

ADVANCING THE RETURN TO RATIONALITY OF INTERNATIONAL ENERGY POLITICS AND GOVERNANCE

In the face of the regression and stalemate in global energy governance, the international community needs to strengthen dialogue and cooperation between energy consuming and exporting countries, oppose green trade protectionism, reject the tendency to "politicize" energy issues, use trade as a tool or use geopolitical game as a weapon, so as to promote the building of a diverse, fair and effective global energy governance system.

First, international consensus should be deepened to actively promote the "de-politicization" of energy. The "politicization of energy" is fundamentally against market and economic laws, and will eventually backfire on those who promote it. Gal Luft, a US energy expert, said "politicizing" energy

policies would not solve anything.

After the Ukraine crisis broke out, in order to maintain the stability of international markets and global energy security, many countries actively advocated international energy dialogue and cooperation, and opposed the “politicization” of energy or using it as a weapon. In March 2022, OPEC Secretary General Mohammad Sanusi Barkindo reiterated at the CERAWEEK event in the United States that the “politicization” of energy undermines market stability. In July 2022, Saudi Arabia promised to maintain stability in global energy markets after Joe Biden’s visit, and stressed that oil is a commodity and decisions will be made based on market fundamentals, not geopolitics, and opposed to imposing values on other countries. After OPEC+ made its decision to cut production in October 2022, countries like Saudi Arabia have repeatedly said their motivation to cut production comes purely from economic factors and has nothing to do with politics. In response to US accusations of buying Russian oil, India pointed out that “legitimate energy transactions should not be politicized.”


Second, governance system should be reformed to build a new international energy order. For the stability of the global energy market, the international community needs to promote energy openness in greater scope and depth, strengthen dialogue between energy exporting and consuming countries, and reduce barriers to energy trade and investment. It’s imperative to promote structural reform of traditional energy governance mechanisms and build new energy cooperation platforms through negotiation.

Multilateralism should be adhered to advance a more orderly and inclusive energy governance structure. Guided by the vision of a community with a shared future for humanity, the Global Development Initiative and the Global Security Initiative, countries need to work to promote cooperation and common security in the energy sector and jointly cope with various energy-related challenges through development. Countries need to enhance their openness, promote international cooperation on energy trade and investment, safeguard the stability of commodity markets and energy supply chains, secure energy supplies for low-income countries, and jointly work to build a global community with shared interests in energy.

Collaboration and innovation are called for to promote the reform of relevant international energy governance mechanisms. As we actively promote the reform of mechanisms such as the International Energy Agency and the International Energy Charter, we should also work to make

mechanisms like G20 more authoritative and internationally influential platforms for global energy governance. The role of the Shanghai Cooperation Organization, the East Asia Summit, APEC and other mechanisms in energy governance need to be fully leveraged, and energy cooperation under BRICS and Belt and Road Initiative should be further substantiated. On top of this, it’s also imperative to strengthen renewable energies and deepen global clean energy partnership.

Third, the role of emerging economies in global energy governance should be fully leveraged. In recent years, the energy demand of developing countries, especially emerging economies, has soared, and the share of energy consumption in Asia Pacific has been on the rise. However, just like the current global governance system cannot fully reflect the changes in the global balance of power, emerging markets and developing countries don’t have enough voice in the current energy governance architecture dominated by developing countries. Under the new situation, developing countries and emerging economies should take an active part in the reform of the global energy governance system and play a greater role through international platforms like the G20.

On 17 September 2022, the Council of Heads of State of the Shanghai Cooperation Organization issued a statement on safeguarding international energy security, calling for the reduction of trade barriers and the joint construction of an open, transparent and efficient international energy market. It advocated endeavors to support stronger coordination among energy producing, transit and consuming countries, to unblock international production and supply chains, and to encourage the reduction of barriers to technology. On October 2022, President Xi Jinping pointed out at Session I of the 17th G20 Summit that the root cause of the ongoing crises is not production or demand, but interrupted supply chains and international cooperation. The way out of this is for all countries to enhance cooperation on market supervision and regulation, build partnerships on commodities, and develop an open, stable and sustainable commodities market. It’s imperative to resolutely oppose the attempt to politicize food and energy issues or use them as tools and weapons. On 9 December 2022, President Xi Jinping pointed out at the First China-Arab States Summit that China is willing to strengthen energy policy coordination with Arab states and promote the establishment of a fair, equitable, balanced and inclusive global energy governance system. These are China’s resounding voice and powerful action to promote energy globalization and global energy governance. 



A ceremony to mark the completion of the China-aided African CDC headquarters building held in Addis Ababa, Ethiopia, January 11, 2023.

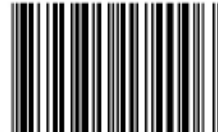
(Photo/Xinhua)



XIAOCANG SHE TOWNSHIP IN LIANJIANG COUNTY, FUZHOU CITY, FUJIAN PROVINCE, CHINA, INSISTS ON GIVING PRIORITY TO ECOLOGY AND WATER PROTECTION, AND COMES OUT OF A ROAD OF RURAL REVITALIZATION WITH ECOLOGICAL BEAUTY AND RICH PEOPLE.

(PHOTO/XINHUA)

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