What are the main challenges to food security in Africa?

COMPARATIVE TABLE: ARABLE LAND AREA AND AGRICULTURAL PRODUCTIVITY

Country/Continent	Area (millions of ha)	Agriculture Productivity
China	168.7	China has succeeded in producing one fourth of world's grain and feeding one fifth of world's population with less than 10 percent of world arable land, which is great achievement in pursuit of food and nutrition security not only in China but also in the world
Ukraine	42.0	Ukraine alone exports about 10% of all wheat and about 16% of all corn in the world. Wheat is the key commodity for global food security.
Africa	1,119.0	Overall trend in Africa is one of decline, which contrasts with other developing regions. Food security has been an ongoing problem, with 30% of SSA's population being food insecure. Subsistence farming for food security has therefore been a policy focus for many African governments. Consequently, there are more food imports than exports in most African countries

The Challenge of the Continent-wide Complexities

- Africa is a complex whole, an aggregation of 55 sovereign states in varying ecological zones, agricultural systems and producers of different agricultural products, varying styles of governance and policies, challenges with conflicts, and countries are at different levels of economic and agricultural growth.

The comparison with China and Ukraine is to highlight the potential of this vast naturally endowered continent whilst the details on food systems is to help understand where the emphasis should be in order to derive meaningful and tangible benefits from the China-Africa Agricultural Cooperation in the New Era.

Comprehensive Africa Agriculture Development Programme (CAADP)

Agriculture provides a livelihood for almost two thirds of the African population. Against this background;

- The African Union (AU) led the design of the Comprehensive Africa Agriculture Development Programme (CAADP) as the framework for action for agricultural transformation across Africa since 2003. CAADP gained considerable momentum in 2014 when the AU member states adopted the Malabo Declaration, recommitting to the CAADP process and pledging to develop and implement CAADP-based National Agricultural Investment Plans (NAIPs).
- As an African Union initiative, CAADP supports member states in increasing investment and productivity in agriculture.

Comprehensive Africa Agriculture Development Programme (CAADP) Cont'd

- The programme aimed to develop skills, resources and capacities for country-level CAADP implementation at the AU Commission, the NEPAD Planning and Coordinating Agency and in the regional economic communities (RECs).
- The technical body of the African Union Commission (AUC), the NEPAD Planning and Coordinating Agency (NPCA), coordinates the implementation of CAADP in AU member countries.
- The aim is to achieve annual agricultural growth rates of more than 6 per cent as a means of promoting food security and economic development.

Challenge to Food Security at AUC CAADP

- The African Union Commission (AUC), the NEPAD Planning and Coordinating Agency (NPCA), do not have sufficient human and financial resources available to meet the AU countries' need for support.
- Furthermore, there is still untapped potential for growth in private sector investment in agriculture.

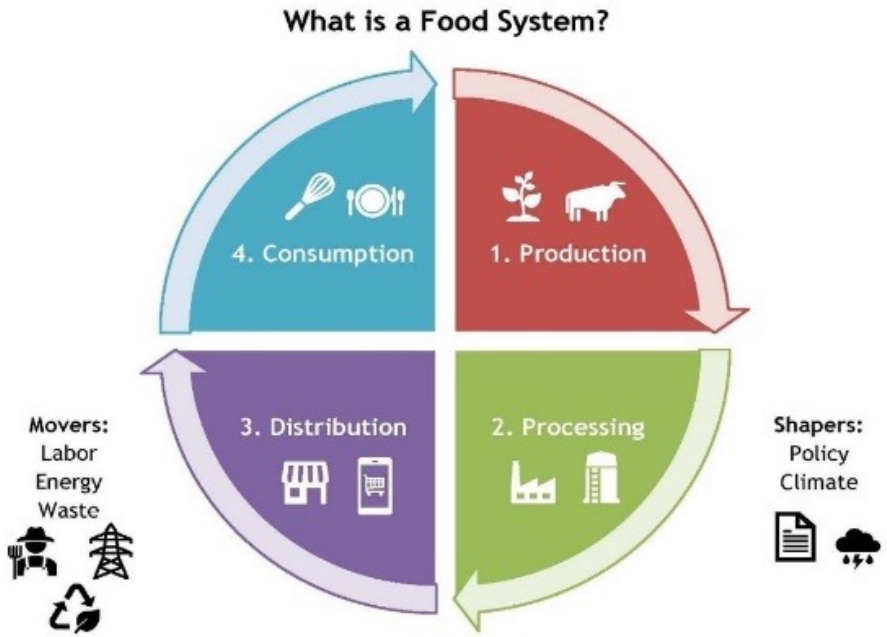
Effect of Russia-Ukraine War on Food Security

- Food security in Africa has been adversely affected by the war in Ukraine. Grain exports from this conflict zone has plunged.
- Exports from Ukraine and Russia are highly unlikely in the next 2-3 years.
- The world will be missing about 60 million tons of wheat, 38 million tons of corn and 10.5 million tons of barley.
- Shortfalls in oil crops (soya, sunflower and rapeseed) and vegetable oils.
- Consequently, global grain prices in many countries have substantially increased. It is estimated that the termination of exports from Ukraine and Russia can increase world market prices by 30% by the end of 2022.
- Major global humanitarian crisis is emerging. Millions of people are threatened with food insecurity and a major humanitarian crisis emerging not only in Ukraine but in a large number of low-income grain-importing countries.

What do we mean by Food Security?

- A situation in which all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life, and could be adversely affected by a complexity of factors.
- These include unstable social and political environments that preclude sustainable economic growth, war and civil strife, macroeconomic imbalances in trade, natural resource constraints, poor human resource base, gender inequality, inadequate education, poor health, natural disasters, such as floods and plants and animal pests and diseases, and the absence of good governance.
- All these factors may contribute to either insufficient national food availability or insufficient access to food by households and individuals.
- So in order to be FOOD SECURED, we need to develop our FOOD SYSTEMS.

Concept of FOOD SYSTEMS



Food systems include the nuts and bolts of what it takes to move food from point A to point B along a supply chain. From labor and transportation to policies and climate, many factors influence how food gets from the farm to our plates.

At local, regional, national, or international levels, the major steps involved are production, processing, distribution, and consumption, each with a variety of inputs and outputs.

Concept of FOOD SYSTEMS (Production)

Production

- **What goes in**: Knowledge of how to raise crops and livestock, sun, soil, water, air, seeds, livestock, access to land, tools, farm equipment
- **What comes out**: Food ready for processing (also feed for animals, fiber for textiles, and biofuel, but we're focusing on food for humans in this piece)
- Production can look very different depending on the scale and growing methods used. Whether they farm a half-acre plot or a 50-thousand-acre ranch, food producers have a lot of choices to make about how they will grow food, including whether to cultivate one crop or a diverse array of fruits and vegetables, and whether to apply organic or synthetic fertilizers.
- While some farmers produce resources on-farm, there are entire industries built on production inputs – **including seed companies, plant nurseries, animal feed companies, fertilizer producers, and others**.

Concept of FOOD SYSTEMS (Processing)

Processing

- **What goes in:** Harvest, packaging, storage, and processing facilities
- **What comes out:** Food ready for sale and distribution
- Every food requires some level of processing, storage, and/or packaging, whether it's rinsing off freshly pulled carrots and putting them into a CSA box or the multi-step process of transforming wheat from the field into dry cereal packaged in an airtight bag.
- Small-scale farmers often have trouble accessing existing processing facilities, but building new ones is an expensive undertaking, whilst facilities like regional grain mills and small-scale meat processors help make the local food system more resilient.

Concept of FOOD SYSTEMS (Distribution)

Distribution

- **What goes in:** Food ready for sale or distribution, sales outlets, marketing efforts
- **What comes out:** Food ready for purchase and preparation
- In the distribution step, food gets to those who will prepare it for consumption.
- Restaurants, convenience stores, supermarkets, and cooperatives sell to the general public. They all play important strategic roles at the distribution stage.

Concept of FOOD SYSTEMS (Consumption)

Consumption

- **What goes in:** Food that is ready to prepare, knowledge of food preparation techniques, cooking appliances
- **What comes out**: Ready to eat food
- This is the part of the food system that everyone takes part in—eating! Family traditions, cultural heritage, time, dietary needs, budget, and personal preferences guide how we cook at home, and some of these factors may evolve over time.

What Moves Food Through the FOOD SYSTEM?

- **Labor:** Local and migrant farmworkers, farmer family members and community members, farmers' market staff, supermarket cashiers, meat plant workers, restaurant staff—it can require an incredible amount of human effort to get food from the field onto your plate. Providing workers a living wage and safe working conditions can help protect the people who make it possible for us to eat.
- **Energy:** Try to picture all the fuel and electricity needed to power tractors, farm equipment, factories, delivery trucks, restaurants and grocery stores, and your kitchen appliance. The food system can be very energy-intensive, though some farmers like Milagro Farms seek to reduce dependence on fossil fuels by switching to renewable energy and finding sales outlets closer to home.
- **Waste:** Food is packaged and repackaged as it moves through the food system, and there are losses at every step. Reducing packaging, recycling used packaging, and turning waste into biogas or compost can slash waste within the food system.

What Shapes the FOOD SYSTEM?

- **Policy.** Agricultural and food policy includes the regulations producers need to follow to sell their goods, government support to producers and consumers, trade agreements, and more.
- **Climate.** Climate and weather patterns have always had a large impact on farming. There's no question the unpredictable weather patterns, extreme temperatures, floods, and droughts brought on by climate change add more uncertainty to the food system.
  - Seed scientists are working to breed drought-resistant and heat-loving varieties that are adapted to local conditions.
  - Many universities and research groups are searching for climate-smart ways to ensure that we can grow food and get it to those who need it for generations to come.

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA.

An Underdeveloped Agricultural Sector

The major challenge to food security in Africa is its underdeveloped agricultural sector.

Characterized by

- over-reliance on primary or subsistence agriculture,
- low fertility soils, minimal use of external farm inputs,
- environmental degradation,
- significant food crop loss both pre- and post-harvest,
- minimal value addition and product differentiation, and
- inadequate food storage and preservation that result in significant commodity price fluctuation.

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

An Underdeveloped Agricultural Sector

Ninety five percent of the food in Sub-Saharan Africa is grown under rain fed agriculture. **Hence food production is vulnerable to adverse weather conditions.**

- There is an overall decline in farm input investment including fertilizers, seeds, and technology adoption.

- Access to fertilizer use is constrained by market liberalization and trade policies that increase fertilizer prices relative to commodity prices, limited access to markets and infrastructure, limited development of output, input and credit markets, poverty and cash constraints that limit farmer's ability to purchase fertilizer and other inputs.

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

Soils continue to degrade leading to a reduction in the productivity of the farms.

- Some of the causes of soil fertility depletion in Africa include the limited adoption of fertilizer replenishment strategies and soil and water conservation measures;
- the decline in the use and length of fallow periods;
- expansion of agricultural production into marginal and fragile areas; and
- the removal of vegetation through overgrazing, logging, development, and domestic use.

Other causes include **rapid population growth**,

limited access to agriculture-related technical assistance and technologies,

and **lack of knowledge about profitable soil fertility management practices leading to expansion into less-favorable lands.**

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

- A significant amount of the food is lost through pre- and post-harvest losses. The tropical climate makes foods produced in these regions prone to pests and diseases.
- Poor handling and storage further increase the post-harvest losses.

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

Barriers to Market Access

- Access to markets is the second huddle that smallholders have to overcome. The problem is many-fold:

- poor infrastructure and barriers in penetrating the market caused by their limited resource base,
- lack of information,
- lack of or inadequate support institutions and
- poor policies in place among other factors.

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

Barriers to Market Access (Cont'd)

Poor infrastructure literally limits the markets to which farmers can profitably take their produce by increasing the cost of transportation, and hence also

- acts as a barrier to market penetration
- Other barriers include market standards
- limited information
- requirements for large initial capital investments
- limited product differentiation

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

Barriers to Market Access (Cont'd)

- While almost any of the farm produce sells at the village level market, consumers are quick to discriminate against produce that is comparatively inferior, hence farmers have, over time, adapted to selling only that which will sell.
- This is a highly subjective process that has worked traditionally. However, when the same farmer wants to sell the produce to high-end markets, then subjective standards no longer work.

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

Barriers to Market Access (Cont'd)

- The farmer is forced to meet objective standards such as size, quantity, and quality.
- The quality aspect of the standards is of major concern and gets more rigid where the food crop is for export. It is as detailed as the nutritional content per serving size, allowable bacterial load, and residual pesticide.
- Some markets have zero tolerance to bacterial load and residual pesticides.

COMMON CHALLENGES TO FOOD SECURITY IN AFRICA. (Cont'd)

Barriers to Market Access (Cont'd)

- Apart from the fact that standards in themselves provide a bottleneck as to the crop and amount thereof that a farmer can produce, standards also put a strain as to who can produce.
- Lastly, Africa's high export costs limit farmer's access to the international markets. In order to meet the standards, there is need for information, capital, technology and expertise that the smallholder farmers have no capacity to meet without external assistance.

Effects of Globalization

- The effect of globalization on our food security systems depends on a country's level of economic development, structures in place, and flexibility of its economy
- With globalization comes liberalization of markets. The food security threat caused by liberalization is due to dumping of heavily subsidized produce in developing countries and premature exposure of upcoming industries to genuine competition from producers in developing and developed countries.
- Most profits are repatriated by transnational companies reducing the potential for poverty reduction to direct employment alone. In most cases, the pay is low because the national policies do not protect the labourer.

DISEASES AND INFECTION

Disease and infection continue to plague the African continent. Diseases such as malaria, tuberculosis and HIV/AIDS, and more recently the Covid-19 pandemic, not only reduce the man-hours available to agriculture and household food acquisition, but also increase the burden of household in acquiring food.

FOOD INSECURITY IS MAJOR THREAT TO ACHIEVING SUSTAINABLE DEVELOPMENT

Conclusion

- In order to achieve food security we need to intensify our efforts in developing food systems
- A sustainable food system supports food security, makes optimal use of natural and human resources, is culturally acceptable and accessible, environmentally sound and economically fair and viable, and provides the consumer with nutritionally adequate, safe, healthy and affordable food for present and future generations. Thus Sustainable development is achieved
- A food secured country is in a good standing to lift its people out of poverty
- Because of the complexities in Africa, food security delivery must be tailored to specific countries and regions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