Global Food Security Challenges & Solutions
NUTRITION FOR THE WORLD

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Opportunities and Challenges for Research on Food and Nutrition Security and Agriculture in Africa
The African context

Strong commitment to both agricultural growth as well as ensuring food and nutrition security for all on the continent, as set out in:

• Africa’s Agenda 2063,
• The 2014 Malabo Commitments Comprehensive Africa Agricultural Development Programmes (CAADP) Framework
• Science, Technology and Innovation Strategy for Africa – 2024 (STISA-2024)
• African Continental Free Trade Area (AfCFTA) agreement

As recognised by these policies, we argue that agricultural growth is a driver of broader development.

Preparation for the UN FS Summit provides an important moment for shaping the region's future and ensuring that the much-needed agriculture-led growth and development agenda can simultaneously deliver on improving nutrition and health, saving lives and curbing public health expenditure on nutrition-related diseases.
African food security and nutrition trends (SOFI 2020)

• Proportion of population undernourished (calories)
  • 19.1 percent of the population in 2019
  • more than 250 million
  • more than double the world average and
  • up from 17.6 in 2014 (an increase of 32M)

• Proportion of hungry people
  • 29.8% in 2019 (also increased since 2014)

• 675 million people food insecure (FIES)
African food security and nutrition trends

• Chid nutrition (SOFI 2020)
  • Stunting (short for age) 21.3% or more than 50M (down from 24.8 in 2014) but the only region where this is increasing and disproportionally in poorer households
  • Child overweight 5.6% (increased from 5.3 in 2014)
  • Low birthweight 14.6% (down from 15% in 2014)

• Adult obesity (SOFI 2020)
  • 13.1% (up from 11.8% in 2014)

Source: SOFI 2020
Causes of increasing food insecurity and malnutrition – a confluence of factors (SOFI 2020)

• Economic downturns (especially in Côte d’Ivoire, Gambia, Guinea-Bissau, Mauritania, Niger and Nigeria)
  • High level of youth unemployment

• Conflict, protracted instability and violence
  • Conflict in Burundi, the Central African Republic, Côte d’Ivoire, Democratic Republic of the Congo, Libya, Mali, northeast Nigeria and South Sudan and more recently, also in Ethiopia
  • Widespread violence (Central African Republic and Somalia – where almost half of the population is undernourished)
  • Displaced people from neighbouring countries add to the existing challenges in countries like the Democratic Republic of the Congo, Ethiopia, Kenya and Sudan.
Causes of increasing food insecurity and malnutrition – a confluence of factors (SOFI 2020)

• Reliance of African countries (national and livelihoods) on agriculture
  • Largely rain-fed

• Changing environmental conditions
  • Drop in crop yields due to climate variability
  • Increasing desertification (especially in the Sahel)
  • Wide-spread drought (Eastern and Southern Africa sub-regions, including Madagascar, South Africa, Zambia and Zimbabwe)
  • Extreme weather events e.g. cyclones

• Competition for resources (land and water) leads to conflict and displacement
  • E.g. pastoralists
Causes of increasing food insecurity and malnutrition – a confluence of factors

• High levels of population growth
  • By 2050 Africa's population will increase 2.5-fold (Suzuki, 2019) and
  • The demand for cereals is likely to triple (van Ittersuma et al., 2016)
  • The population below the age of 24 years accounts for the largest share of the population in almost all countries in Sub-Saharan Africa (World Bank and IFAD, 2017).
  • May increase pressure on land, raise land prices, increase conflict
Causes of increasing food insecurity and malnutrition – a confluence of factors

• African agriculture growth has accelerated, growth through innovations (i.e. total factor productivity growth) but Africa lags behind other regions of the world (Baumüller et al., 2021).

• Africa imports large amounts of food - US$ 60 billion per annum (UNCTAD, 2020) - to fill supply gaps.
  • In net terms, this amounts to about:
    • US$ 25 billion per year in cereals,
    • US$ 8 billion in meat and dairy,
    • US$ 4 billion in sugar and
    • US$ 9 billion in the vegetable oil sector (Bouët et al. 2020).

• Many African countries' over-reliance on imports to meet the local demand for staple foods renders these economies vulnerable to many risks, insecurities, and uncertainties.
  • While importing staple food is not negative per se, disproportional reliance on external sources for food is a risk that threatens long-term resilience.
Causes of increasing food insecurity and malnutrition – a confluence of factors

• Food prices and low incomes constrain access to adequate diets for many people in Africa

• While local prices vary significantly by location and across seasons, the costs of perishable and nutrient-dense foods contribute significantly to the total cost.

• Yet, these foods are essential to overcome undernutrition and micronutrient deficiencies.
Causes of increasing food insecurity and malnutrition – a confluence of factors

- Cost and affordability (SOFI 2020)

### Table 7

The cost of a healthy diet is 60 percent higher than the cost of the nutrient adequate diet, and almost 5 times the cost of the energy sufficient diet in 2017

<table>
<thead>
<tr>
<th>Regions</th>
<th>Energy sufficient diet</th>
<th>Nutrient adequate diet</th>
<th>Healthy diet</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORLD</td>
<td>0.79</td>
<td>2.33</td>
<td>3.75</td>
</tr>
<tr>
<td>AFRICA</td>
<td>0.73</td>
<td>2.15</td>
<td>3.87</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>0.75</td>
<td>2.90</td>
<td>4.12</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>0.73</td>
<td>2.06</td>
<td>3.84</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>0.61</td>
<td>1.98</td>
<td>3.67</td>
</tr>
<tr>
<td>Middle Africa</td>
<td>0.73</td>
<td>2.09</td>
<td>3.73</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>0.86</td>
<td>2.29</td>
<td>3.99</td>
</tr>
<tr>
<td>Western Africa</td>
<td>0.80</td>
<td>2.05</td>
<td>4.03</td>
</tr>
</tbody>
</table>
Causes of increasing food insecurity and malnutrition – a confluence of factors

- Cost and affordability (SOFI 2020)

**Table 8**

<table>
<thead>
<tr>
<th></th>
<th>Energy sufficient diet</th>
<th>Nutrient adequate diet</th>
<th>Healthy diet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Total number (million)</td>
<td>%</td>
</tr>
<tr>
<td>WORLD</td>
<td>4.6</td>
<td>185.5</td>
<td>23.3</td>
</tr>
<tr>
<td>AFRICA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Africa</td>
<td>1.4</td>
<td>2.9</td>
<td>29.2</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>12.5</td>
<td>145.8</td>
<td>53.4</td>
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<tr>
<td>Eastern Africa</td>
<td>9.4</td>
<td>28.9</td>
<td>53.9</td>
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<tr>
<td>Middle Africa</td>
<td>18.5</td>
<td>27.9</td>
<td>59.8</td>
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<tr>
<td>Southern Africa</td>
<td>10.0</td>
<td>11.1</td>
<td>41.7</td>
</tr>
<tr>
<td>Western Africa</td>
<td>13.1</td>
<td>77.9</td>
<td>53.5</td>
</tr>
</tbody>
</table>
Causes of increasing food insecurity and malnutrition – a confluence of factors

• COVID
  • GDP effects
  • Livelihood disruptions
  • Food systems disruptions – different between rural and urban communities
  • Land-locked countries – trade and supplies
  • Price volatility
  • Undernourishment expected to increase from 19.1% to 25.7% by 2030
  • Childcare and schooling disruptions
  • Vaccine delivery challenges
  • Beliefs and perceptions
The potential STI solutions

• Improving production systems and restoring degraded systems (including soil quality);
• Innovation in the processing and packaging of foods;
• Improving human nutrition, health and productivity;
• Addressing fragility and instability and
• Greater access to information and transparent monitoring and accountability systems.
Change will need to be supported by:

• Institutional coordination
• Clear, food safety and health-conscious regulatory environments
• Greater access to information and transparent monitoring and accountability systems.
• Mechanisation and digitisation to speed up such transformation and enable more inclusive advancement of food systems.
• ICT solutions and advances could play a significant role in advancing food systems and addressing inequalities in access to inputs, knowledge and markets.
• Adaptation through sustainable intensification and agricultural diversification may have to be combined with the creation of off-farm opportunities, both locally and through strengthened rural-urban linkages.
• Financial support (microfinance, credit, subsidies, loans, insurance, etc.) plays an important role in risk reduction for producers.
Nourished: How Africa can build a future free from hunger and malnutrition

- Multi-sectoral approach and coordination
- High level coordination
- Nutrition is a policy priority
- Private sector involvement
- Focus on children
- ‘Localize’ ownership

Source: International Food Policy Research Institute, Welthungerhilfe, and Concern International, 2016, Global Hunger Index
STI can overcome the challenges and transform African food systems to achieve the vision of Agenda 2063:

“The Africa we want” & the Sustainable Development Goals

Through the bold actions of the Food Systems Summit 2021
Opportunities and challenges for research on food and nutrition security and agriculture in Africa

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