Food and Agriculture Organization of the United Nations

CABI 21ST REVIEW CONFERENCE 2022

Today challenges:

Are we doing enough to achieve the SDGs?

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Chief Scientist, FAO

September 26, 2022

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We are not on track to ending hunger, food insecurity & malnutrition – major drivers & underlying factors are challenging us

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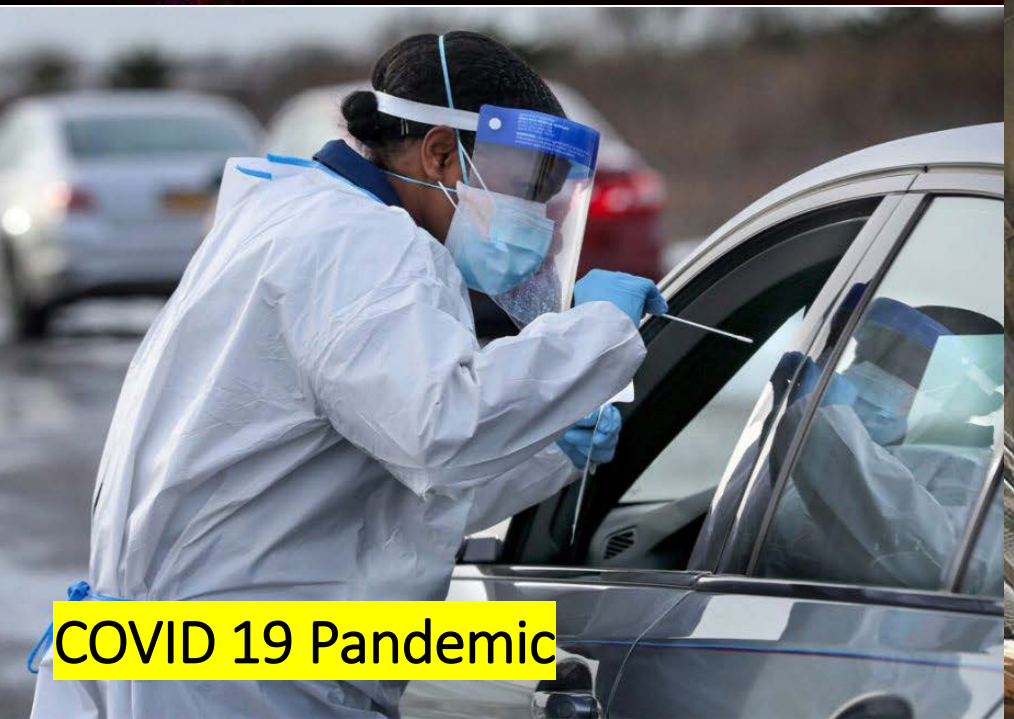
MAJOR DRIVERS OF RECENT FOOD SECURITY AND NUTRITION TRENDS

A food systems lens is critical …

Climate variability and extremes



COVID 19 Pandemic

Conflicts

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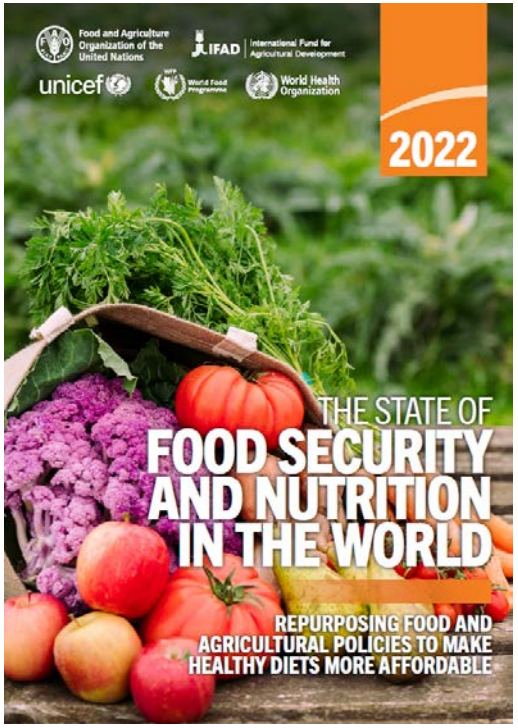
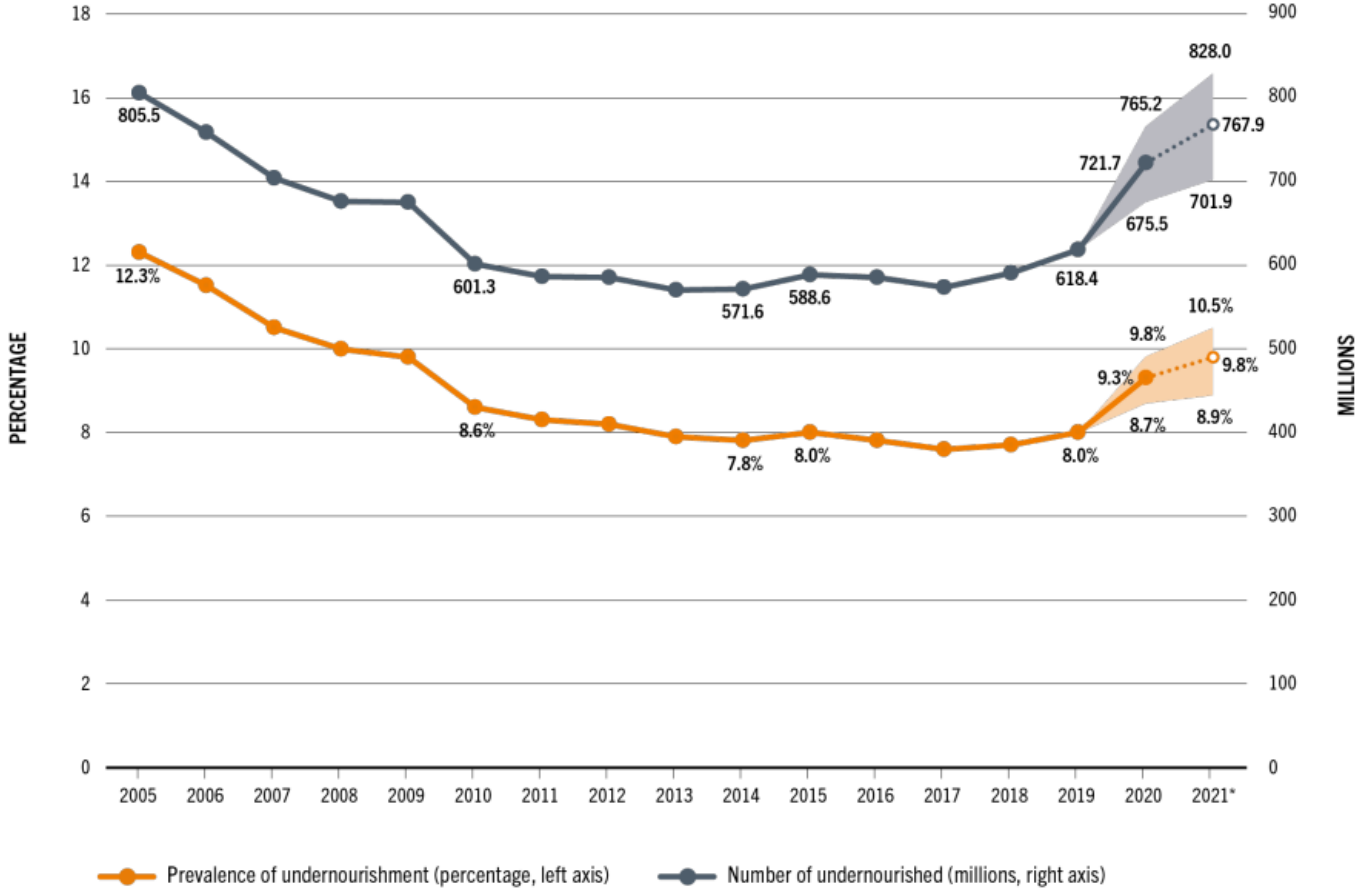
Global hunger has been aggravating over the past years

BETWEEN 702 AND 828 MILLION PEOPLE IN THE WORLD WERE FACING HUNGER IN 2021

- Hunger affected about 46 million more people in 2021 than in 2020 (considering the middle of the projected range).
- A total of 150 million more people since the outbreak of the COVID-19 pandemic in 2019 (considering the middle of the projected range).





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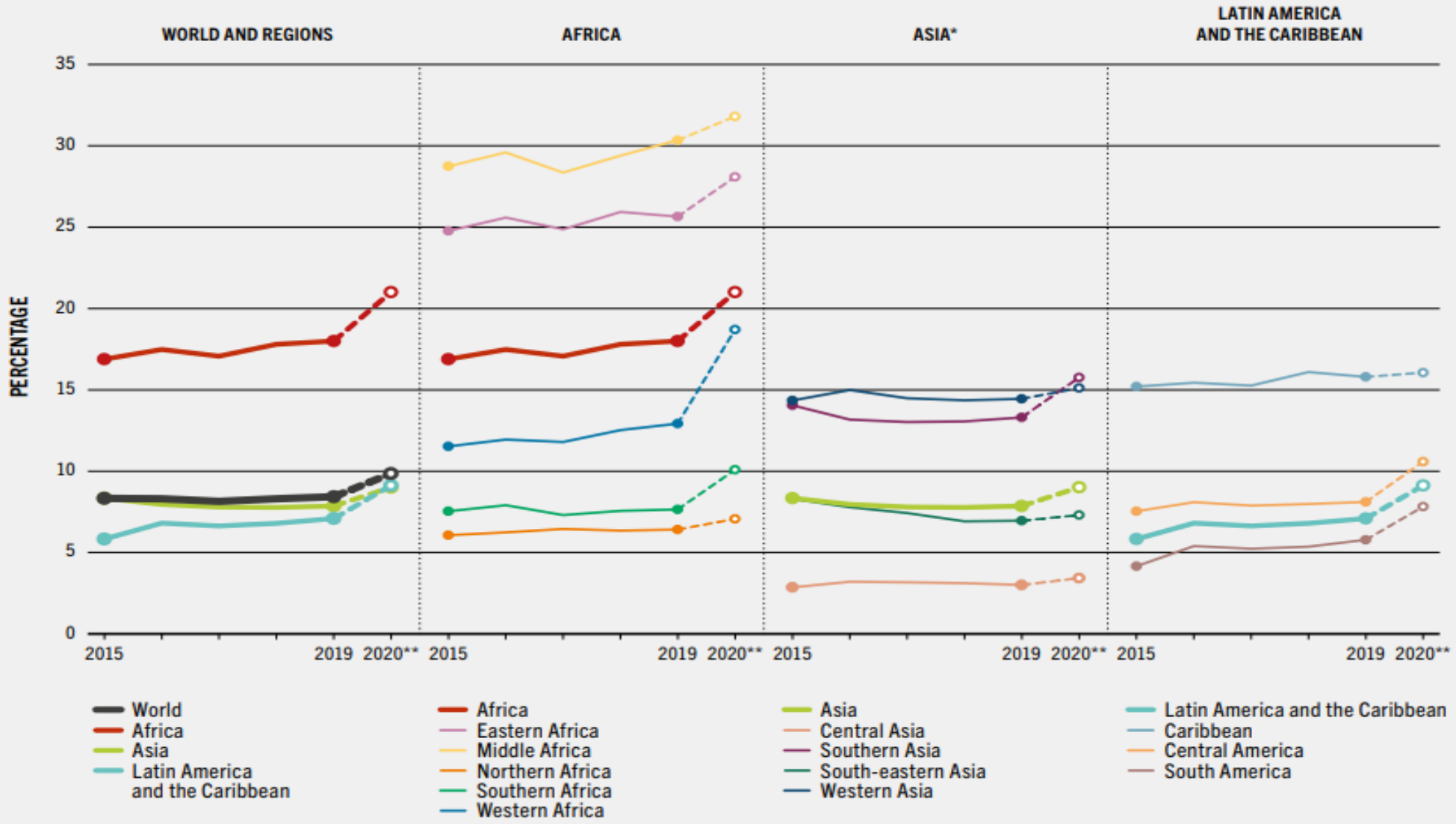


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COVID 19 Impacts
on Agriculture and Food security
Shortages of
labour to produce
food
Decreased
supply of
perishable
commodities
Increasing struggle
for farmers to
access markets
Transport
restrictions blocking
food deliveries

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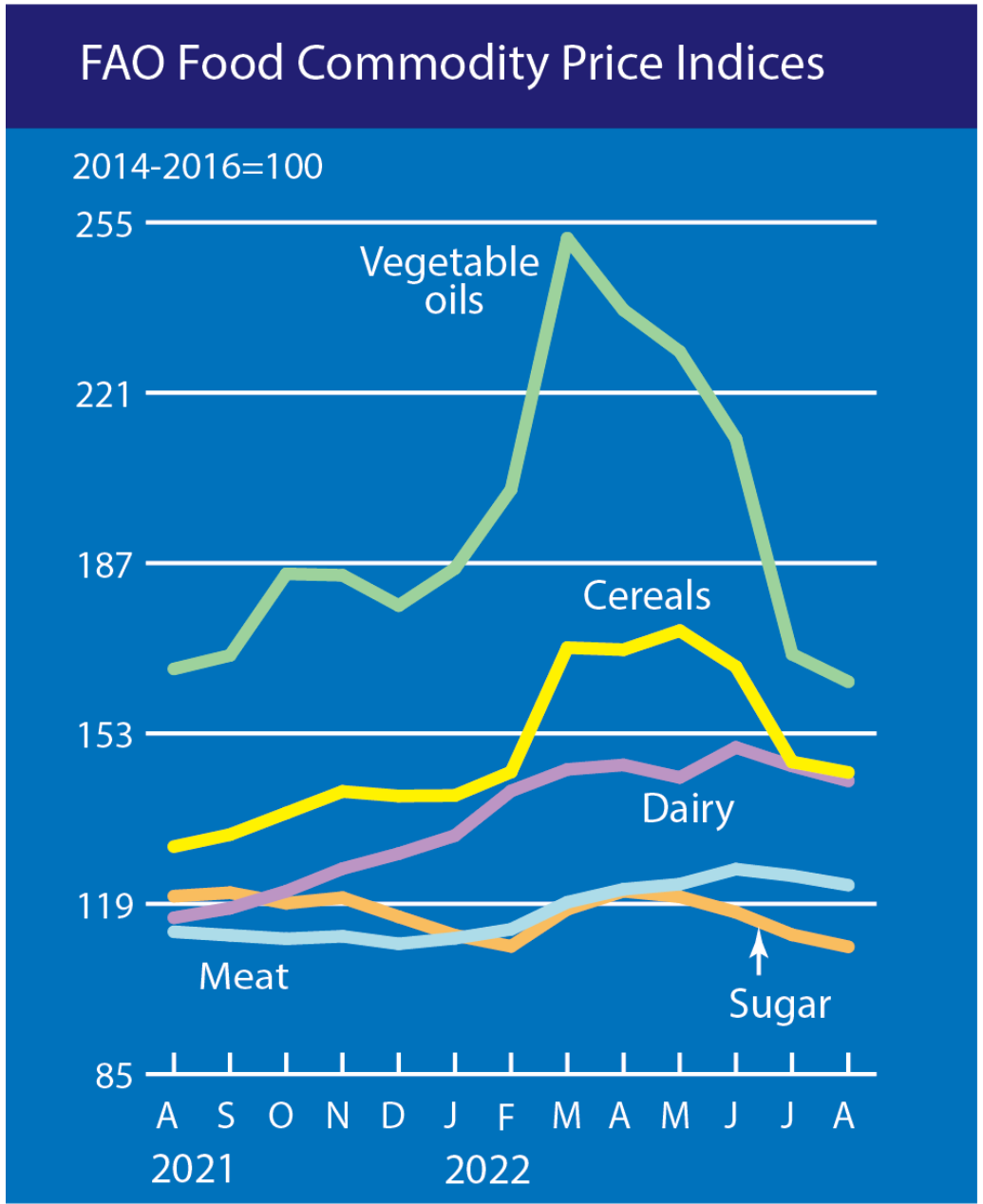
Recent trends in food prices: The FAO FPI up to August 2022



1) Lower world prices generally reflect better availability at the global level; however, this has not led to better food access or lower prices at the retail level.

2) The recent decreases in world prices do not mean market stability. We are still subject to uncertainties and volatility.

3) Continued high prices of energy and gas reduce fertilizer affordability and increase production costs, adding a serious challenge to production in 2022/23.

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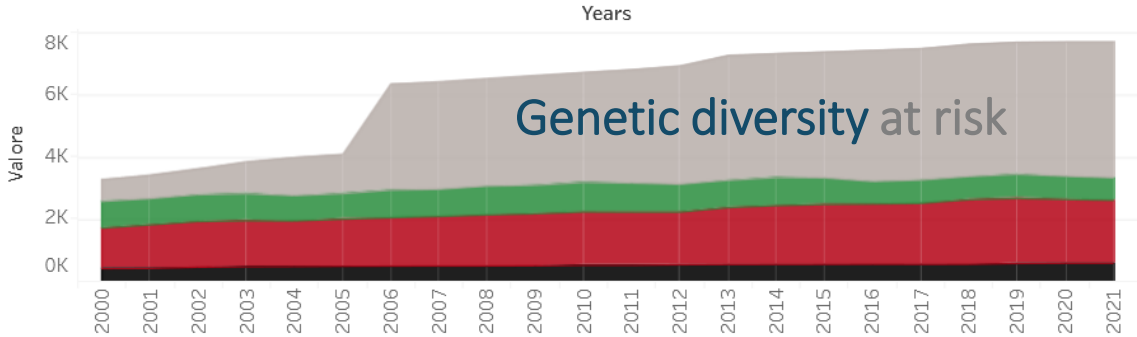
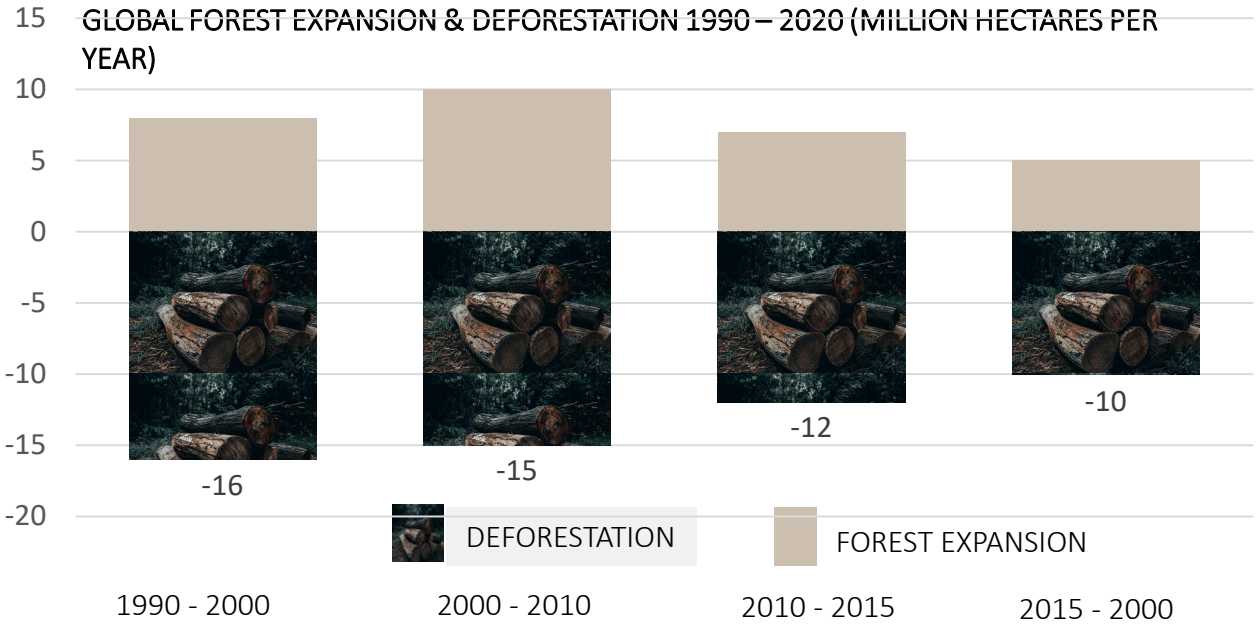
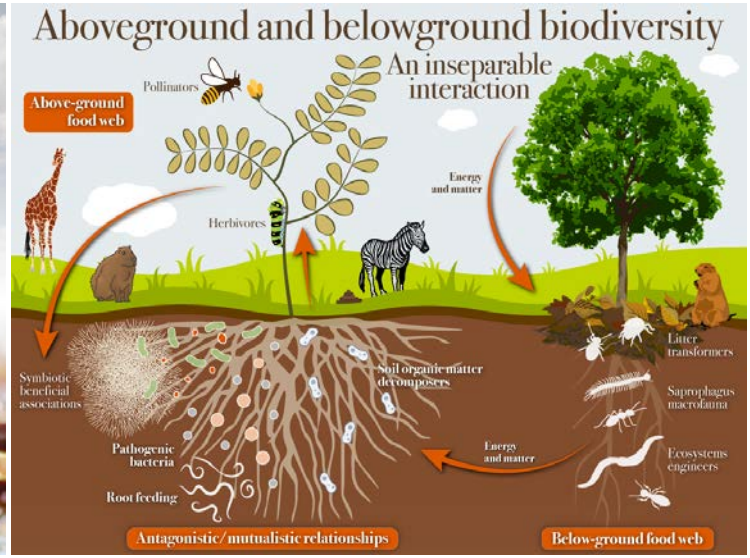
There are number of other factors contribute to the food security and nutrition trends

A integrated systems approach is important to tackle the issues comprehensively








An enormous revolution in both SCIENCE & TECHNOLOGY is moving at incredible speed….
Science & innovation is a catalyst for change but only when it is accompanied by appropriate policies, regulatory frameworks, institutions & governance.


Science, technology and
innovation
are impacting
EVERYTHING

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Harnessing STI is key for the transformation to more **efficient, inclusive, resilient & sustainable** agri-food systems

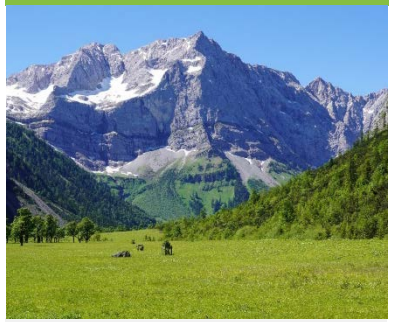
BETTER PRODUCTION

Ensure sustainable consumption and production patterns, through efficient and inclusive food and agriculture supply chains at local, regional and global level

BETTER NUTRITION

End hunger, achieve food security and improved nutrition in all its forms

BETTER ENVIRONMENT



Protect, restore and promote sustainable use of terrestrial and marine ecosystems and combat climate change through MORE efficient, inclusive, resilient and sustainable agri-food systems

BETTER LIFE

Promote inclusive economic growth by reducing inequalities (urban/rural areas, rich/poor countries, men/women)

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We have no choice but to use **science, technology** and **innovation** as they are **accelerators of change** if we want to transform our agrifood systems…

…but we need to **understand how and where to use them**

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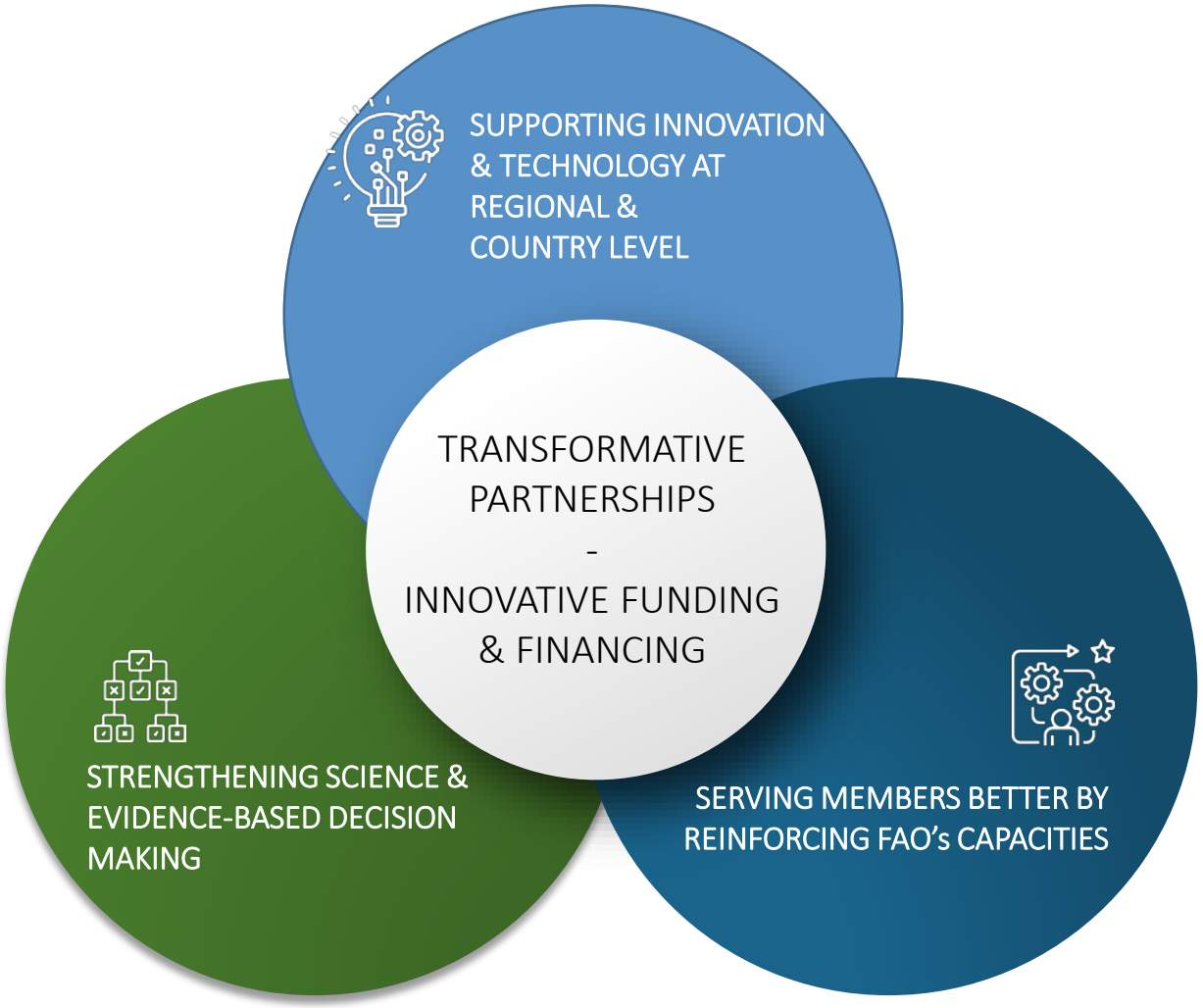
FAO SCIENCE & INNOVATION STRATEGY

Pillars of the S&I Strategy



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Different regions will need to address different problems …. but all will require the best of science!

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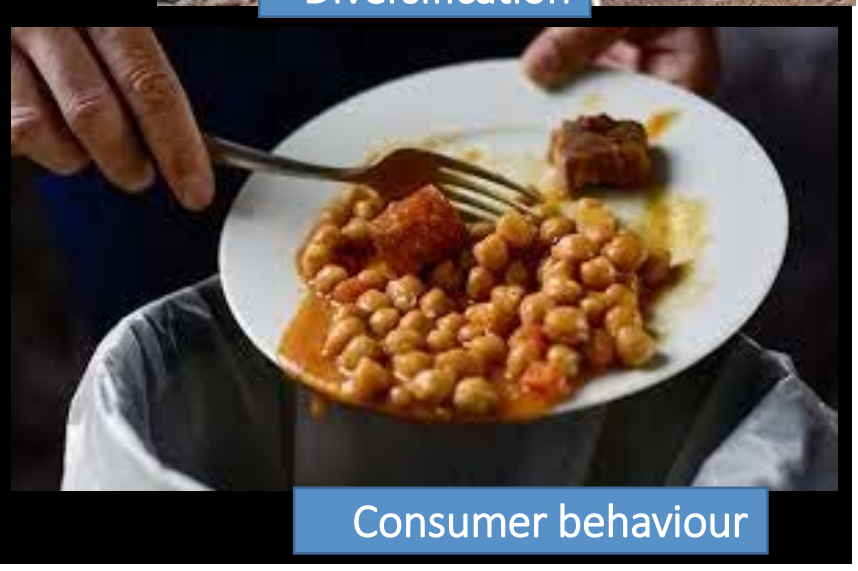
WHAT NEEDS TO BE DONE TO TRANSFORM ÀGRIFOOD SYSTEMS FOR FOOD SECURITY, IMPROVED NUTRITION AND AFFORDABLE HEALTHY DIETS?

Five recommendations to address major drivers behind recent food security and nutrition trends



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Building coherent portfolios of policies & investments

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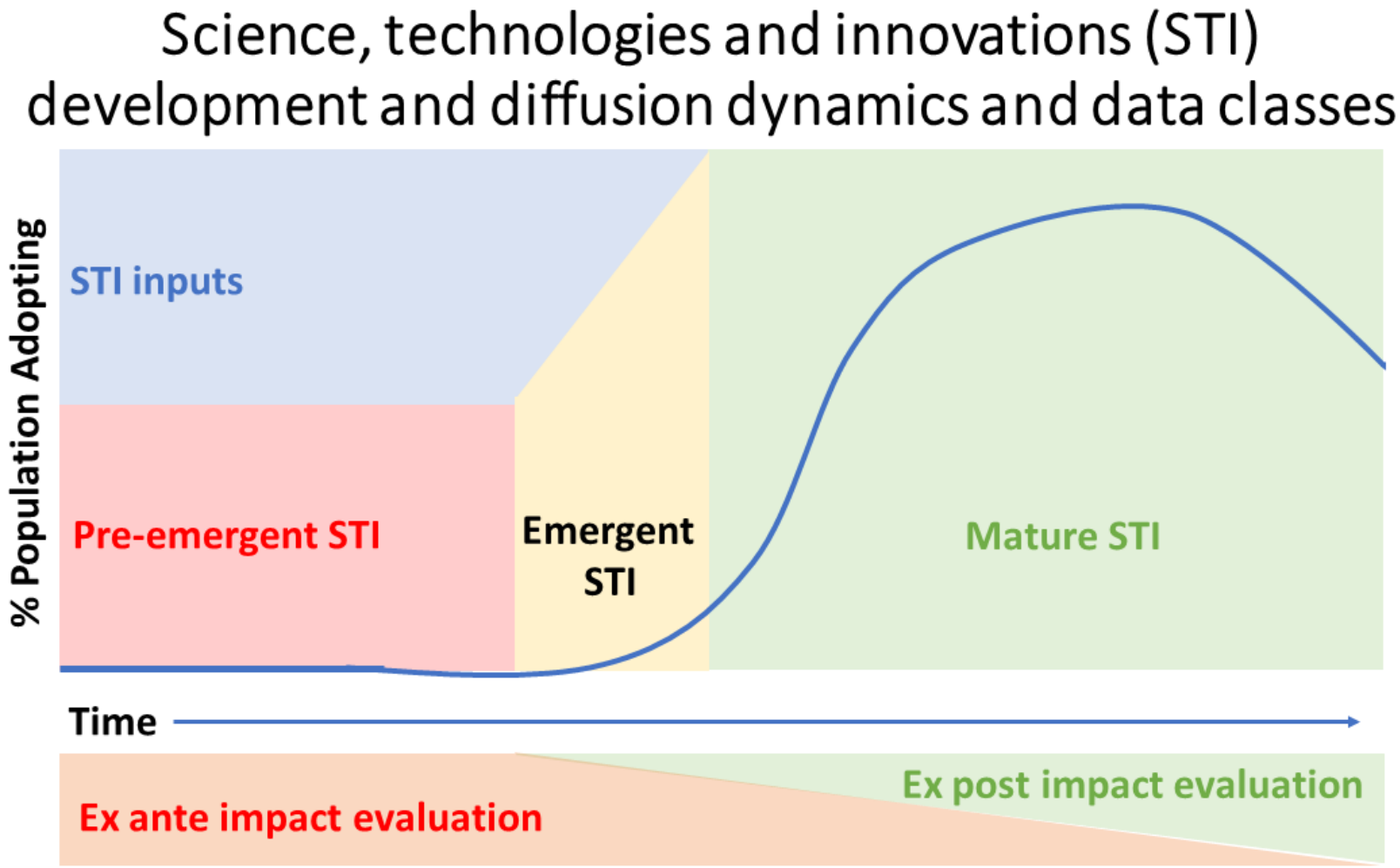
Agrifood Systems Technologies and Innovations Outlook (ATIO)



An open access knowledge product line with end-to-end life cycle coverage of agrifood systems (AFS) STI to accelerate AFS transformation

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Marginal Agricultural Areas Programme

Harnessing Science and Innovation for Resilient Marginal Agricultural Areas

Promote **integrated science-based and innovative** actions **to reduced vulnerability** in marginal agricultural areas:

- Drylands
- Mountains
- Small Islands

FAO must play a lead role in engaging in **strategic participatory foresight** to better prepare for alternative plausible futures and feeding it into anticipatory action, as well as in **convening the global community for constructive dialogue and exchange of knowledge.**

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Role of Foresight
Handling future risks and new challenges

What breakthroughs in technologies and innovations are expected in the next 10-30 years?

What would be the context-specific impacts of these disruptive technologies or innovations?

How can foresight enable identification of synergies and trade-offs?

What is the role of foresight in informing policy makers better anticipate investment needs and guiding future policies?

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POLEMIC TOPICS WHERE FAO'S VOICE IS NEEDED

EMERGING BIOTECHNOLOGIES: GENE EDITING

KEY BROAD-RANGE TOPICS

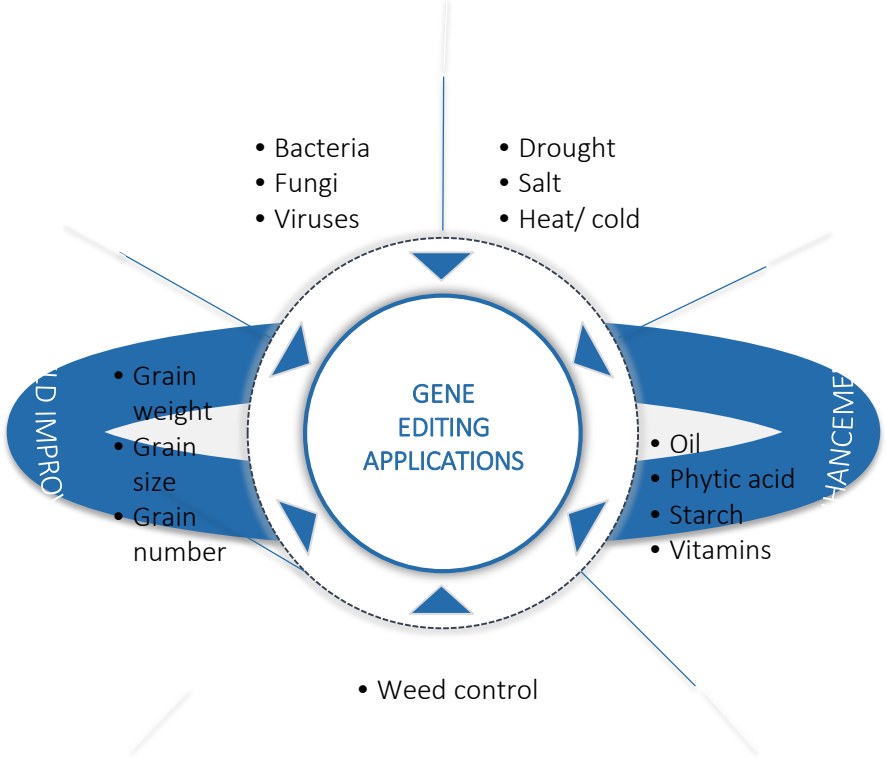
High-tech

- GM
- whole genome sequencing
- gene editing
- synthetic biology

Low-tech

- Artificial insemination
- Fermentation
- Biofertilizers

ISSUE PAPER BEING COMMISSIONED



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FAO's recent Initiatives on Science, Technology and Innovation

- Digital Villages Initiative (DVI): 1000 digital village hubs to offer a variety of ICT-based services.
- International Platform for Digital Food and Agriculture
- Hand-in-Hand Initiative and its Geospatial Platform
- Global Action on One Country One Priority Product

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CABI works on the biggest challenges facing humanity –

hunger, poverty, gender inequality, climate change and the loss of biodiversity


Improve the food security and livelihoods of smallholder communities
1
Help communities adapt to the impacts of climate change
2
Reduce inequality through better opportunities for rural women and youth
3
Safeguard biodiversity and support the sustainable use of natural resources
4
Increase the reach, application and impact of science in agriculture and the environment
5

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- Explore scientific and technological advances .
- Analyze options for strengthening science and evidence-based decision-making.
- Share robust science and evidence-based options.
- Support countries in making informed decisions.
- Promote effective science communication

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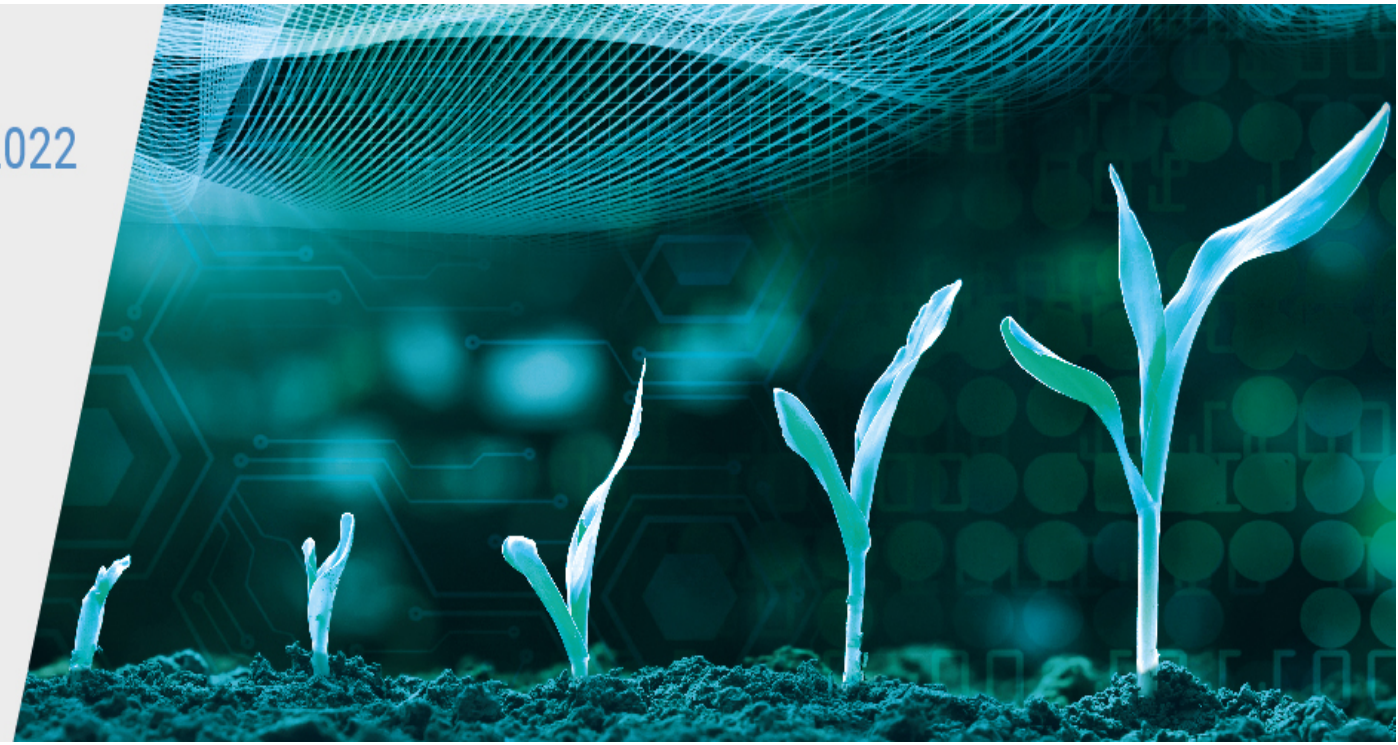
#SIF2022

17-21 October 2022

FAO SCIENCE AND INNOVATION FORUM

Harnessing science, technology and innovation for transforming our agrifood systems



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Thank you !

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