



# INNOVATION

FOR SUSTAINABLE AGRIFOOD SYSTEMS

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# Enabling more efficient, inclusive, resilient and sustainable agrifood systems

## FAO Strategic Framework 2022-2031

- Innovation as a key accelerator

## FAO Science & Innovation Strategy

- Strengthening science and evidence-based decision making
- Supporting innovation & technology at regional and country level
- Serving Members better by reinforcing FAO's capacities





‘Business as usual’ is not an option.

▶ If we continue operating the way we do today, we will continue facing hunger and malnutrition over the next decade, and we will not achieve the SDGs.

Dr QU, Dongyu, FAO Director-General,  
8 July 2021







## We need transformative change.

► To achieve the ambitious transformation required by today's challenges, we need to change:

- policies;
- mindsets;
- approaches; and
- business models.

Dr QU, Dongyu, FAO Director-General, 23  
March 2021 and 8 July 2021

# Unlocking **innovation** for transformation and sustainability

Do we have indicators for measuring sustainability in which innovation is the core element ?

▶ **A glimpse on the tools and methods** FAO has developed



# Measuring innovation and sustainability

## Key considerations

- Availability
- Accessibility
- Affordability
- Feasibility
- Location Specificity

## Guiding Principles

- Rights-based and people centered
- Gender-equal
- Evidence-based
- Needs-driven
- Sustainability-aligned
- Risk-informed
- Ethics-based





## Example 1

# TAPE: Tool for Agroecology Performance Evaluation

- ▶ Innovative framework to characterize and assess agroecology
- ▶ Refined and validated through co-creation and knowledge sharing



## Example 2

# EX-ACT: The Ex-Ante Carbon balance Tool

- ▶ Estimates and tracks agricultural intervention outcomes on GHG emissions
- ▶ Covers the entire agricultural sector, including AFOLU, wetlands, fisheries, aquaculture, inputs, and infrastructure.





## Example 3

# Behavioural science for innovation and sustainability

- ▶ AMR in Mozambique
- ▶ Climate Smart Crop choices in Kenya
- ▶ Improve recycling habits to reduce FAO's carbon footprint
- ▶ Support Healthy diets and sustainable food choices





## Example 5

# Agricultural Innovation System (AIS) indicator framework

- ▶ Applied under the Tropical Agriculture Platform in 3 continents, currently with the TAP-AIS project in 9 countries
- ▶ AIS properties: 25 indicators, grouped as enabling factors; system interaction; provision intensity)
- ▶ AIS performance: 11 indicators, grouped as knowledge, adoption and development outcomes)





## Example 6

# New genomic techniques

- ▶ New tool for plant and animal breeding in low- and middle-income countries.
- ▶ Potential hazards, benefits and impacts on the environment and society, plus regulatory aspects
  - Issue Papers on **Gene editing and agrifood systems** (2022) and **Gene editing and food safety** (2023)



# Innovation is the future of sustainability

- ▶ Foresight
- ▶ Artificial intelligence
- ▶ Digital Agriculture
- ▶ Blockchain
- ▶ Ethic and responsibility



A photograph of a tea plantation in Quang Nguyen Vinh, Vietnam. The image shows rolling green hills covered in terraced tea fields. Three women, wearing white long-sleeved shirts, black pants, and white hats, are seen harvesting tea leaves. They are carrying woven baskets. The sky is blue with some clouds. A solid blue vertical bar is on the left side of the image.

[Quang Nguyen Vinh](#)

**THANK YOU**  
[www.fao.org/office-of-innovation](http://www.fao.org/office-of-innovation)