

Developing partnerships on Sustainable Food Systems

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What the new strategy is about ?

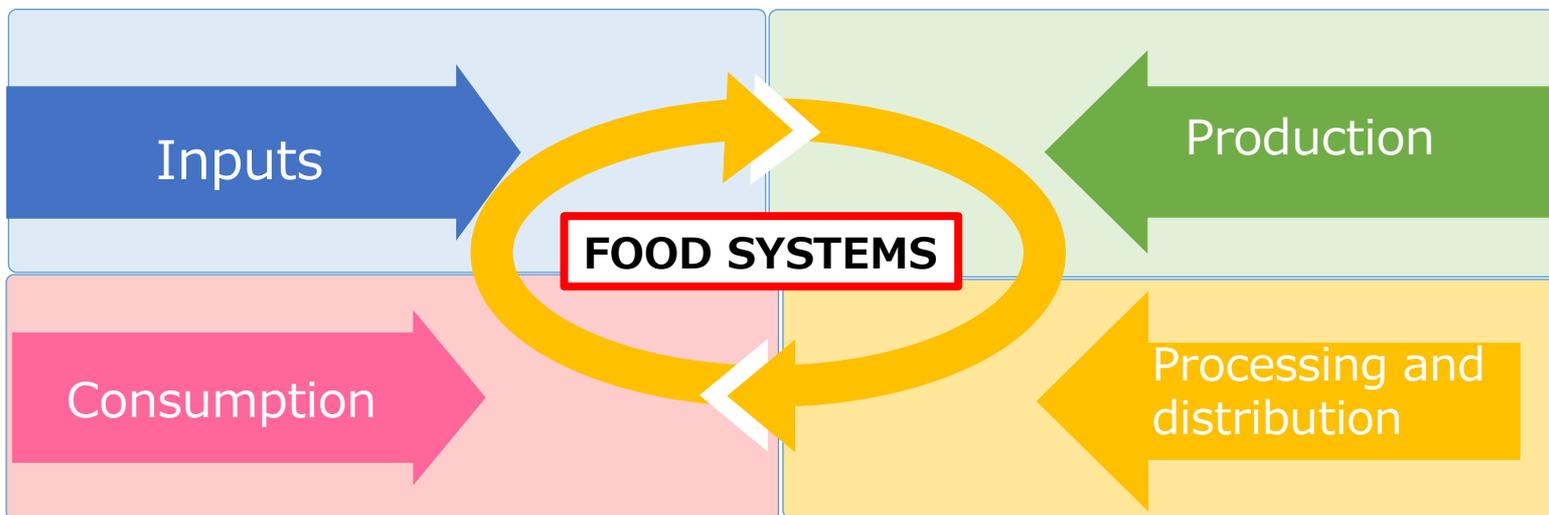
- Measures for achievement of Decarbonisation and Resilience with Innovation (MeaDRI), is the **national strategy** to achieve SDGs and sustainable food systems,
- The strategy was **formulated in May 2021**, following intensive discussions with stakeholders and public consultations.

Objectives of MeaDRI

- (1) build **the basis for sustainable food systems**
- (2) provide **healthy and nutritionally balanced dietary habits**,
 - enhance circular economy with more use of local resources and
 - improve livelihood/ job opportunities in rural areas
- (3) contribute to **carbon neutral** via
 - reduction in the risk of chemical pesticides/fertilisers,
 - disseminate energy saving/precision technologies

Japan's approach

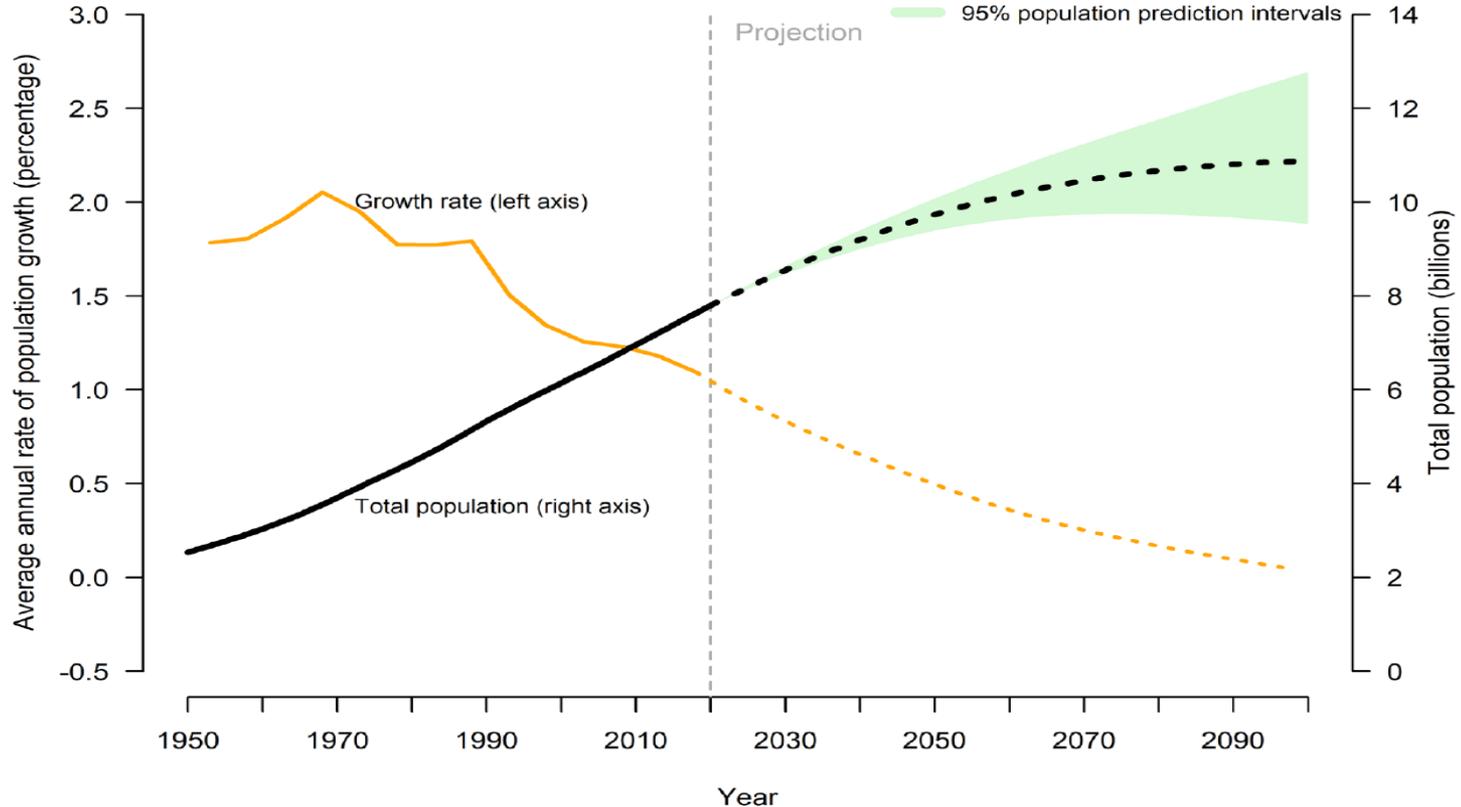
- Japan conceptualises food systems from four stages;
 - 1) inputs
 - 2) production
 - 3) processing/distribution
 - and 4) consumption.
- identifying challenges at each stage and encourage behavioural changes



Challenges for global food system

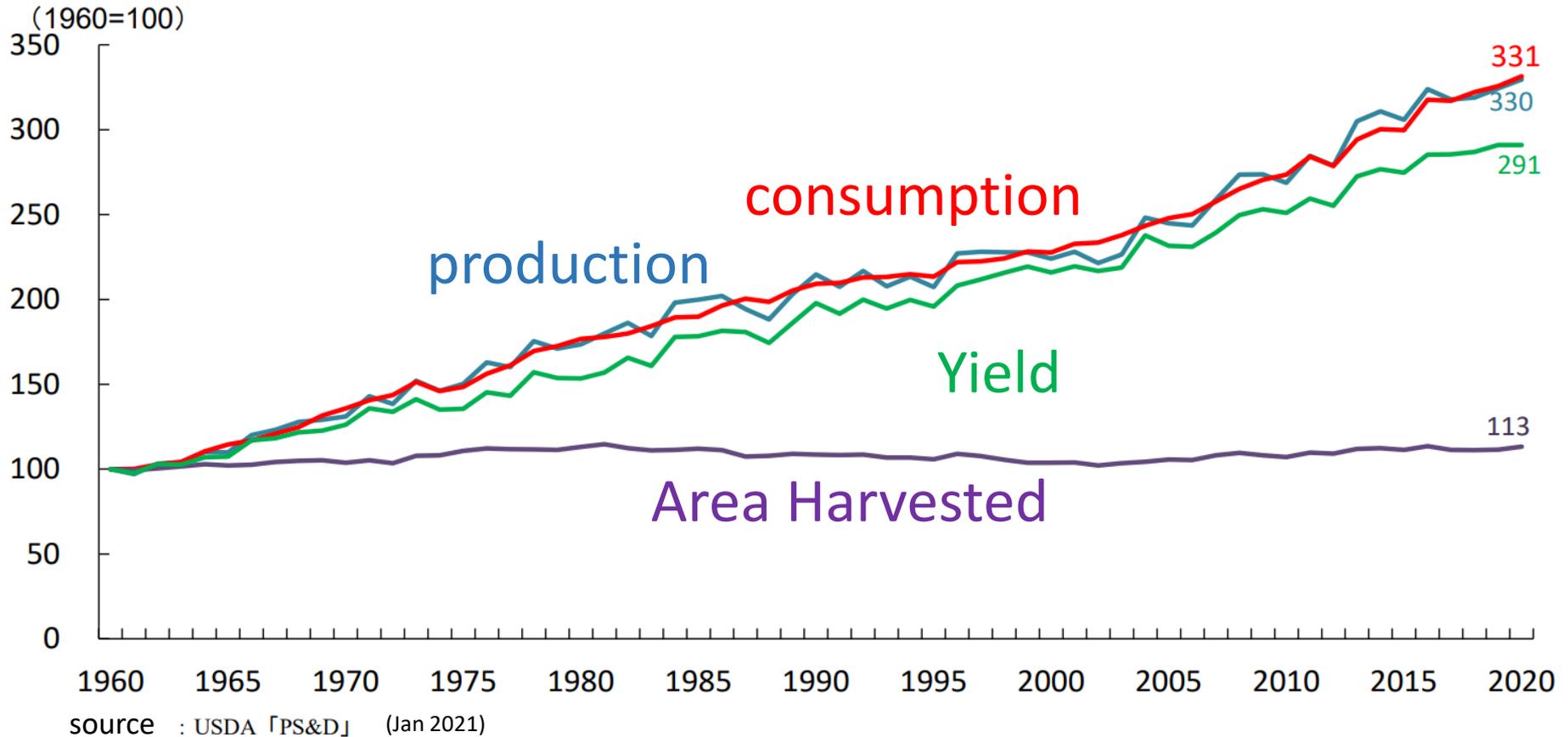
We need to achieve **reducing environmental impact** while **increasing food production** to meet the **population growth**

Population growth continues at the global level, but the rate of increase is slowing, and the world's population could cease to grow around the end of the century



Data source: United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Population Prospects 2019*.

Global cereal production and harvested area



Innovation is at the heart of “MeaDRI”

Examples of 141 technological areas
Timeline is provided for each of them

**Accelerate
Innovation**

**sustainable
food systems**

Healthy consumption

Scientific understanding of tasty and healthy food

Application of self-care food technology through AI analysis of consumer preferences, etc.

Optimised processing and distribution

Reduction of food loss through special freezing and packaging technologies

Optimisation of distribution through the use of data and AI

Reduction of GHG

Advanced use of biomass, including mass production and cost reduction of modified lignin

Use of bovines, which produce less methane

Reduction of chemical risk

Elucidation and full use of soil microbial functions

Use of biological agents effective against a wide range of pests

Maintaining and improving health through nutritional food

Use of plastic-free production materials

Promotion of super plants with high CO₂ absorption capacity

Practical use of energy management systems for local production and consumption

Expansion of high-rise wooden buildings

Electrification of agricultural and forestry machinery and fishing boats, hydrogenation

Development of low methane emitting rice varieties

Increasing carbon sequestration by biochar

Development of feedstuffs to reduce N₂O from livestock waste

Introducing superior varieties and F1 plus trees in forestry seedling

Carbon sink by blue carbon

Methane reduction through water management in paddy fields

Appropriate forest management, including thinning

Pinpoint pesticide spraying using drones

2020

2030

2040

2050

KPIs in the Strategy MeaDRI

11 of KPIs have numerical goals on core components towards 2050

- **ZERO CO2 EMISSION** from fossil fuel combustion in agriculture, forestry and fisheries sectors
- Complete transition to fossil fuel-free horticultural facilities
- **50% ↓** in risk-weighted use of chemical pesticides
- **30% ↓** in chemical fertiliser use
- Organic farming ↑ to **25%** of farmlands (1million ha)
- **30% ↑** of labor productivity in food manufacturing industries
- **Halving** food losses in the food business sectors ※1
- SGA ratio※2 in the wholesale sector ↓ to 10% through optimised distribution. ※1
- **90%** and more superior varieties and F1 plus trees in forestry seedling
- Restore fish resources to the same level of catch as in FY2010 ※1
- **100%** of artificial seedling rates in aquaculture of Japanese eel, Pacific bluefin tuna, etc.

※1) 2030 goal ※2) Selling, General and Administrative Expenses as a ratio of net sales

INNOVATION and behaviour changes of players are the keys to achieve these goals.

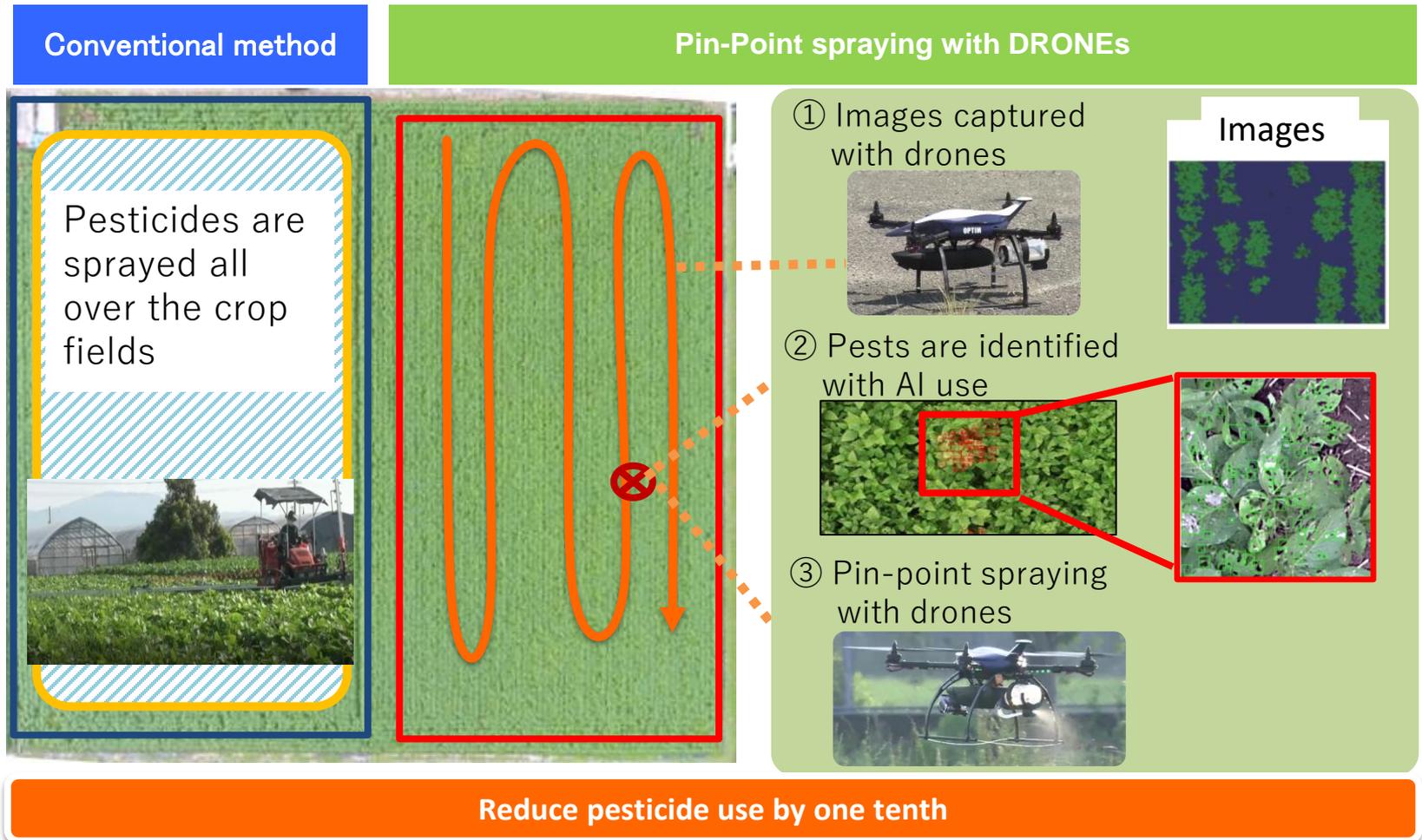
Transition to sustainable agriculture and food systems

➤ EU – Japan joint statement,

- promote actions to support the necessary transition
- work together on robust solutions and pathways based on the diversity of our natural and societal circumstances as well as dietary cultures,
- acknowledging that agricultural innovation is key.
- Research and development, strengthening human capital and other related activities should be encouraged,

A technology for transition : Pest control

Pest diagnosis and pin-point spraying can also reduce pesticide use.



A technology for transition : Accelerated Breeding

➤ Improving resource efficiency and productivity



Tomatoes with increased γ -aminobutyric acid (GABA) content



Thick and meaty sea bream with a lot of muscle mass

Data source : <https://regional.fish/projects/post-4751/>



Potatoes with reduced solanine
※under development



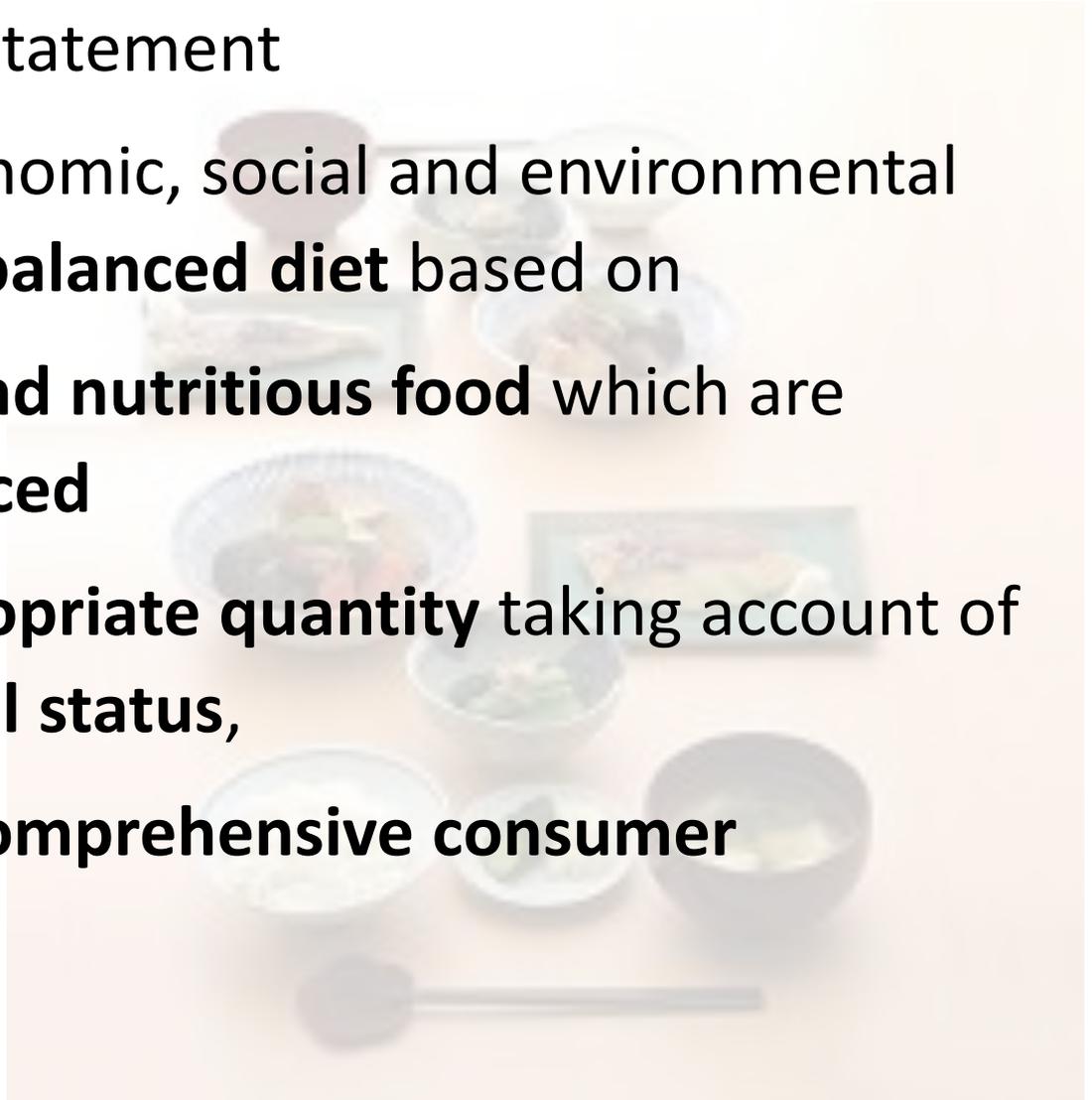
Wheat with resistance to pre-harvest sprouting (PHS)
※under development

Core of the sustainable food systems : a balanced diet

➤ France-Japan Joint statement

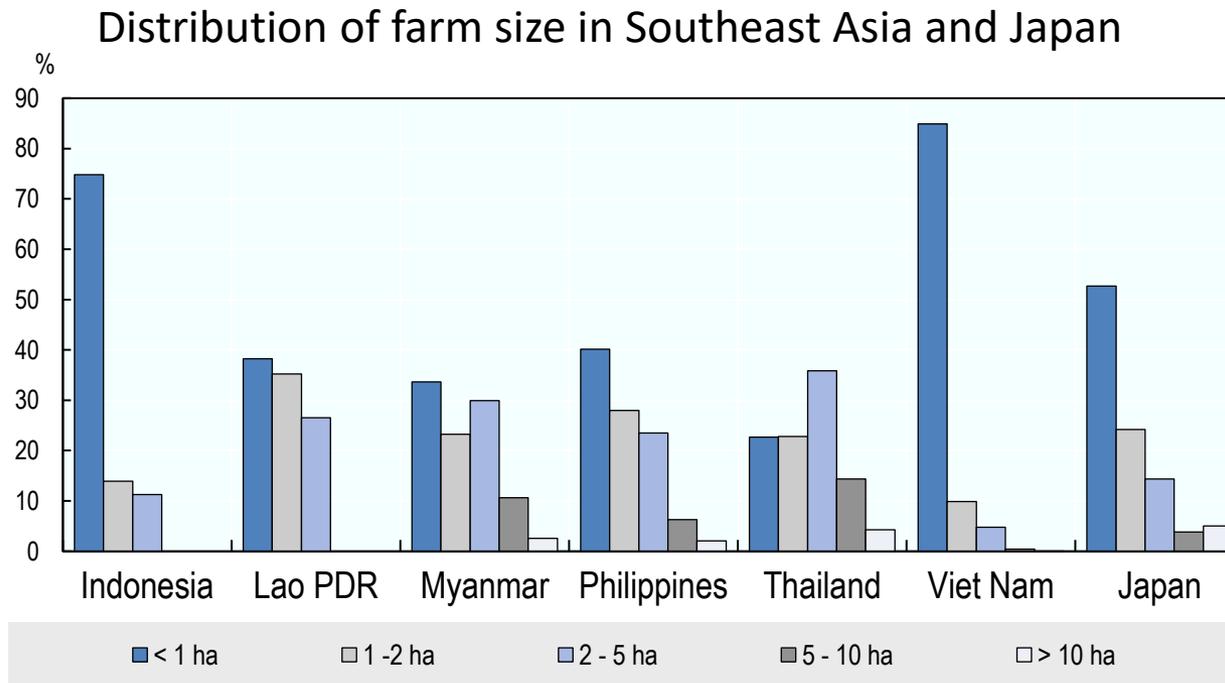
To achieve global economic, social and environmental sustainability, a **well-balanced diet** based on

- **diversity of safe and nutritious food** which are **sustainably produced**
 - consumed in **appropriate quantity** taking account of **age and nutritional status,**
 - accompanied by **comprehensive consumer information**
- are essential.



Challenges for Asia-Monsoon region

- Small farmers constitute a vast majority of farms in Asia.
- The technology to resolve these challenges must be accessible for those small farms easily and widely.
- there is no one-size-fits-all solution



Data source:

Southeast Asia: OECD-FAO Agricultural Outlook 2017-2026 - © OECD 2017

Japan: Agricultural Census, 2015

Dialogues with stakeholders

➤ 63 dialogues for FSS were held

including 22 MeaDRI high-level dialogues hosted by Minister, vice-ministers, parliamentary secretaries with a total 127 stakeholders.

And numerous bilateral dialogues with stakeholders have been organised to inform and implement this strategy.

➤ New round table council will be set up this autumn.

Thank you.
