



Food and Sustainable Development: Security and Sovereignty

Dr Marta Guerriero
Global Sustainable Development

Food and Sustainable Development: A Cross-Cutting Issue

79% of the world's poor live in rural areas and work mainly in agriculture.

More than 10% of the world's population are **hungry**, while more than 2 billion people are **overweight and obese**.

Nearly 90% of the **world's marine fish stocks** are now fully exploited, overexploited or depleted.

Risks associated with poor diets are the **leading cause of death** worldwide.

10 food companies collectively generate more than \$1.2bn daily.

18.4% of GHGs emissions are attributed to agriculture, forestry and land use change.

Up to 65% of Africa's **arable land** is now degraded. Overgrazing is the main cause of this.



A Definition of Food Security

“all people, at all times, have physical and economic access to sufficient, safe and nutritious food”

(World Food Summit 1996

Rome Declaration on World Food Security)

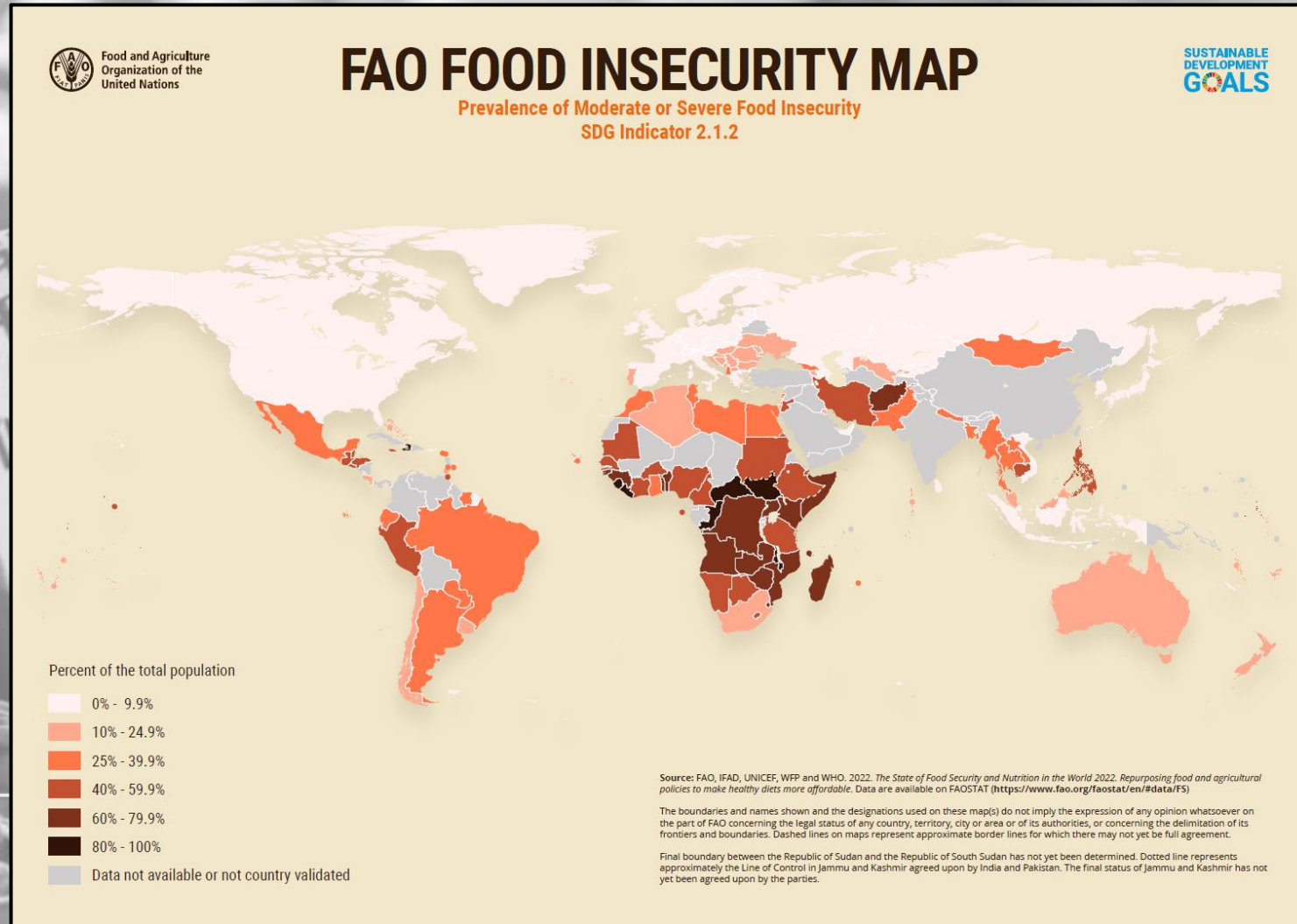
Essential Components of Food Security

Six essential components:

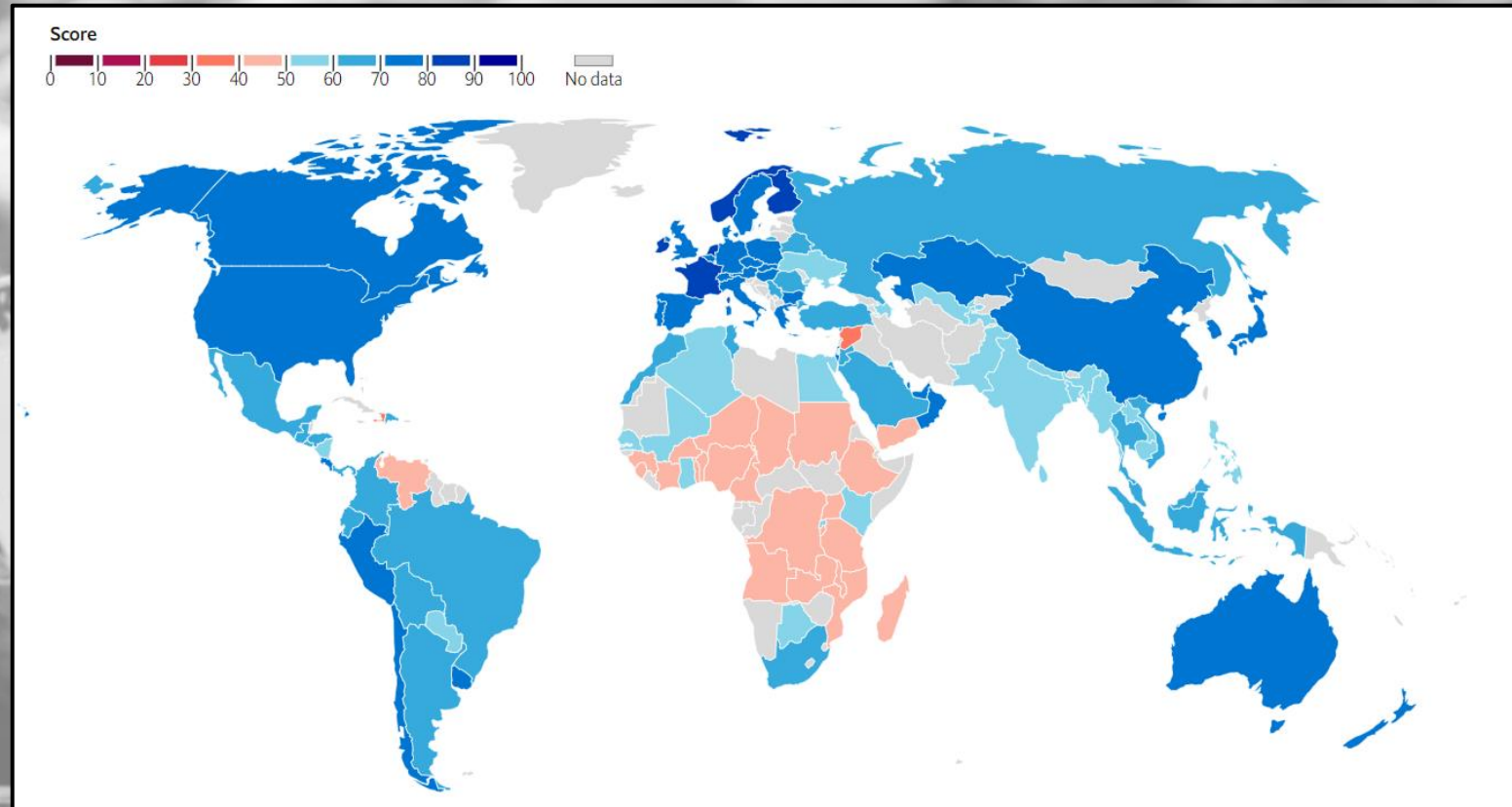
(High Level Panel of Experts on Food Security and Nutrition, 2020)

1. **Availability** of food on farms and in markets;
2. **Access** to that food by all households/individuals;
3. **Effective utilisation** of the food (e.g. nutritional uptake);
4. **Stability** of the food system;
5. **Sustainability** of the food system;
6. **Agency** of individuals or groups.

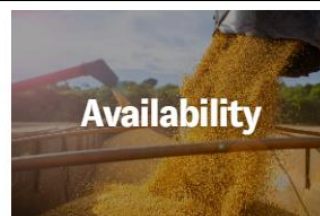
Food Insecurity Experience Scale



Global Food Security Index



Source: Economist Impact.



Affordability: Food Prices and Food Security

- Two important dimensions:

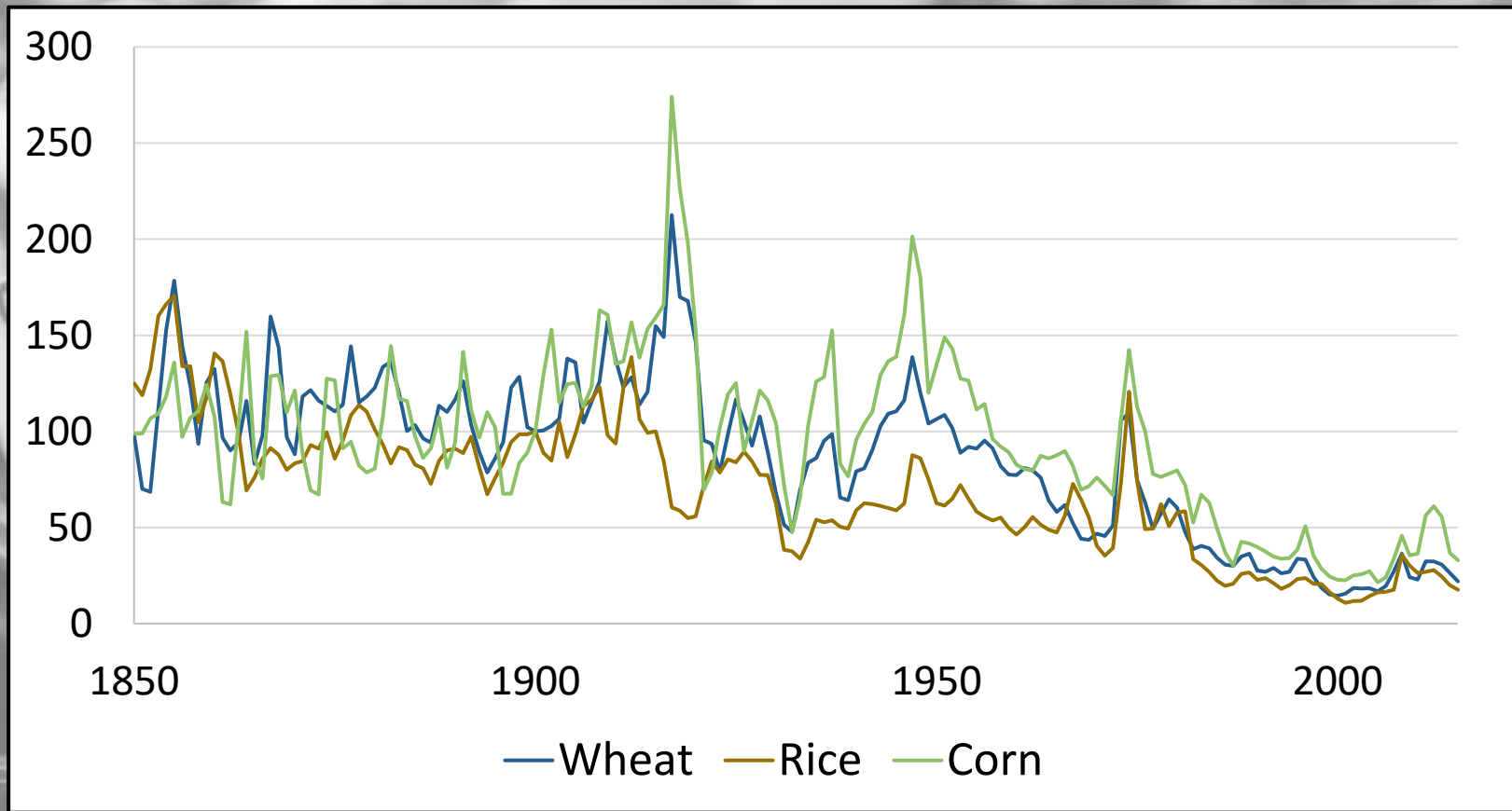
- Price levels

Why global food prices are higher today than for most of modern history

- Price volatility

How to Stop the Rise in Food Price Volatility

Long-Term Food Price Index



Source: Jacks (2016).

Trends in Global Food Prices



Source: FAO.

What Explains These Trends?

<i>Supply</i>	<i>Demand</i>
Seed technology Irrigation Total harvested area Climate change Knowledge and management skills	Population growth Income growth Dietary changes/tastes Meat/livestock economy
Weather Diseases Crop-specific harvested area Fuel costs Fertilizer costs	Exchange rates Speculation Biofuels (predictable from mandates; not predictable from oil prices) Panic/hoarding Government trade and inventory policies

Source: Timmer (2015).

Additional Challenges...

The COVID-19 crisis and rising food prices

COVID-19 and rising global food prices: What's really happening?

Food Security and COVID-19

How is the war in Ukraine affecting global food prices?

Russia to blame for 'worst food crisis since WW2', says US envoy

Food Prices and Social Unrest

Protests over food and fuel surged in 2022 — the biggest were in Europe

Soaring energy prices are driving the current wave of street protests, in contrast to a decade ago when food prices were to blame, say researchers.



Protesters burn their energy bills during a demonstration against the high cost of living and energy prices.

BY SUSANNAH SAVAGE

JANUARY 17, 2023 | 3:20 PM CET | © 7 MINUTES READ

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World food crisis alarms media

As food prices rise across the world and fears of a shortage of essential grain crops rise with them, newspapers in vulnerable areas warn of civil unrest or revolution if a solution is not found soon.

Several Asian papers suggest that the answer is to increase food production. One Arab daily urges the region's oil-rich states to fund investment in agriculture.

But not everyone is worried by the situation. A Thai paper and a Brazilian analyst predict good opportunities for their countries to make money.



Filipinos protest against spiralling price increases

SUSTAINABILITY

Climate Change and Rising Food Prices Heightened Arab Spring

The effects of climate change on the food supply exacerbated the underlying tensions that have led to ongoing Middle East instability

By Ines Perez, ClimateWire on March 4, 2013

Availability:

Food Production and Food Security

- Fundamental dimensions of food production:
 - **Agricultural productivity**
 - **Land use**
 - **Land rights**
 - **Sustainable practices and risks.**

Rural 'Development' in the 1950s: Heavy Emphasis on Industrialisation



"Unlimited supply of labour"

(W. Arthur Lewis

Nobel Prize in Economics, 1979)

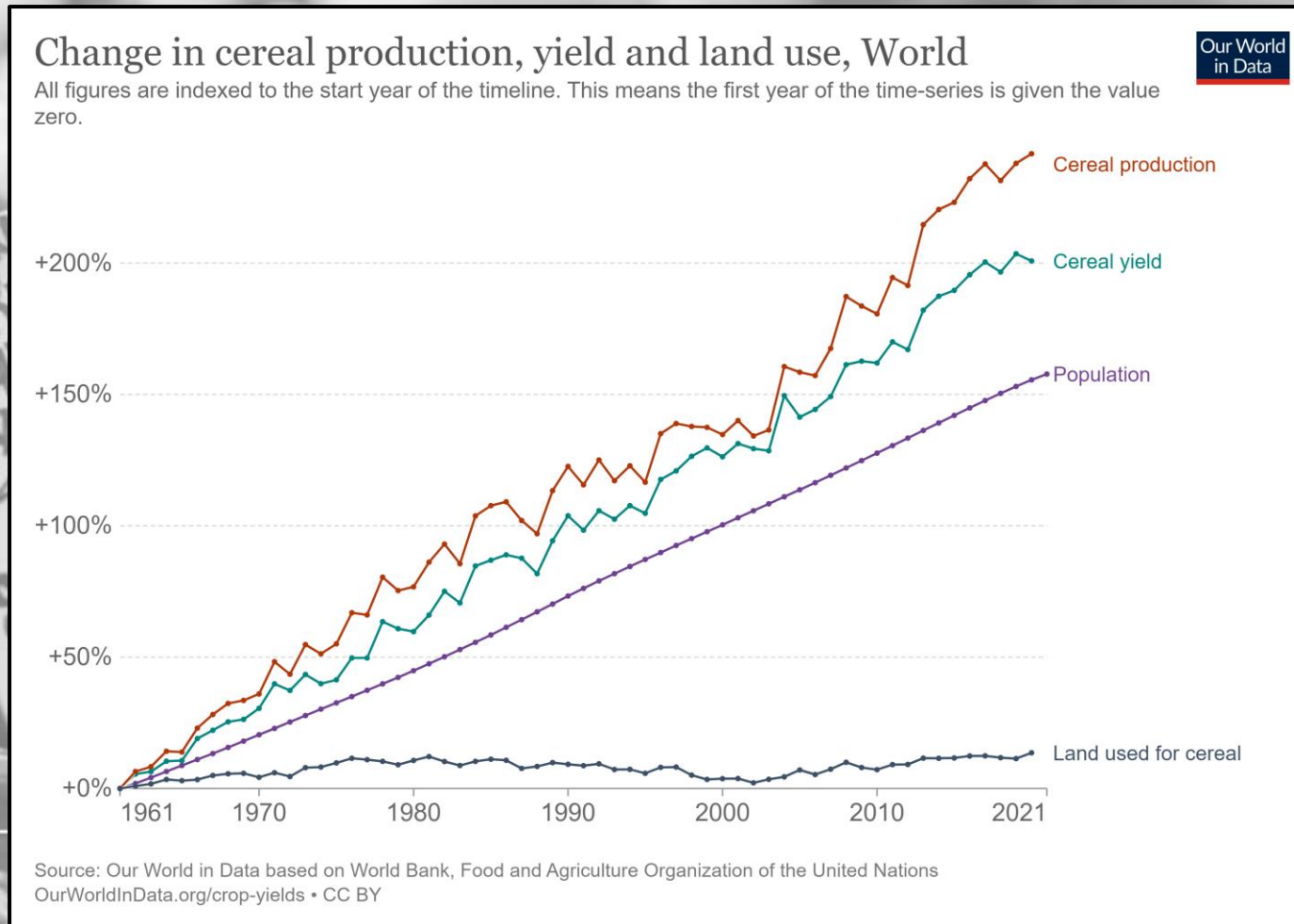
Rural 'Development' in the 1960s-1970s: The Green Revolution



"Food is a moral right"

(Norman E. Borlaug
Nobel Peace Prize, 1970)

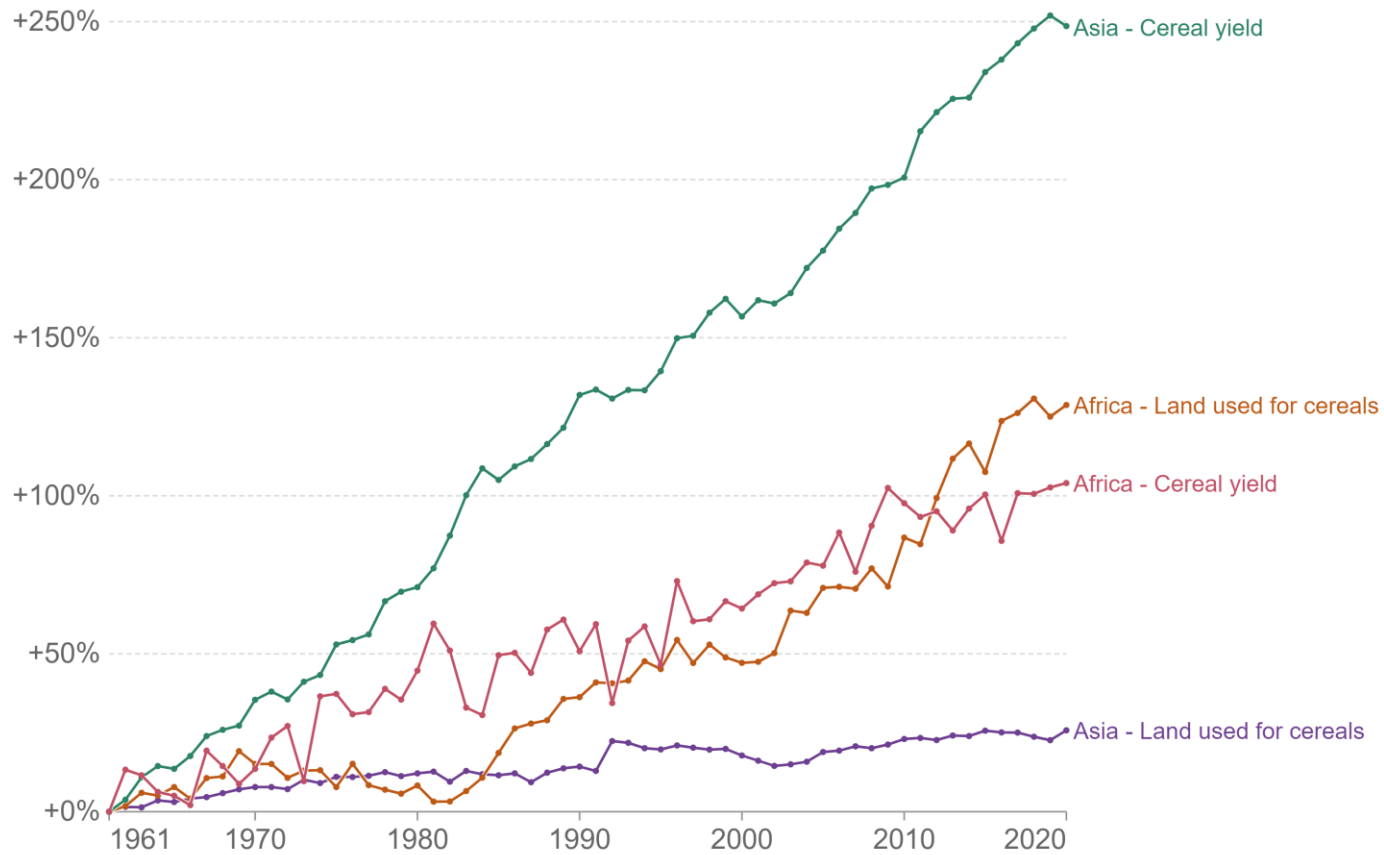
The Impact: Yield, Land Use and Population



Land Use and Yield: Asia vs. Africa

Change of cereal yield and land used for cereal production

Our World
in Data



Source: Food and Agriculture Organization of the United Nations

OurWorldInData.org/crop-yields • CC BY

Was the Green Revolution Successful?

- The pace of improvement has **slowed steadily** in recent years.
- **Rural inequality worsened. Rural employment** did not grow as much as production. Significant **environmental impacts**.
- ... We need to analyse the **structure of land**.

Rural 'Development' in the 1990s-2000s: Land Rights

- Small-scale farmers produce **the majority of the world's food**, despite using only 25% of the world's farmland.
- Small farms are **the most productive** (inverse relationship between farm size and output per unit of land area) and more **ecologically sustainable**.

The Importance of Institutional Reforms



Source: IFAD.

Sustainability: Practices and Risks

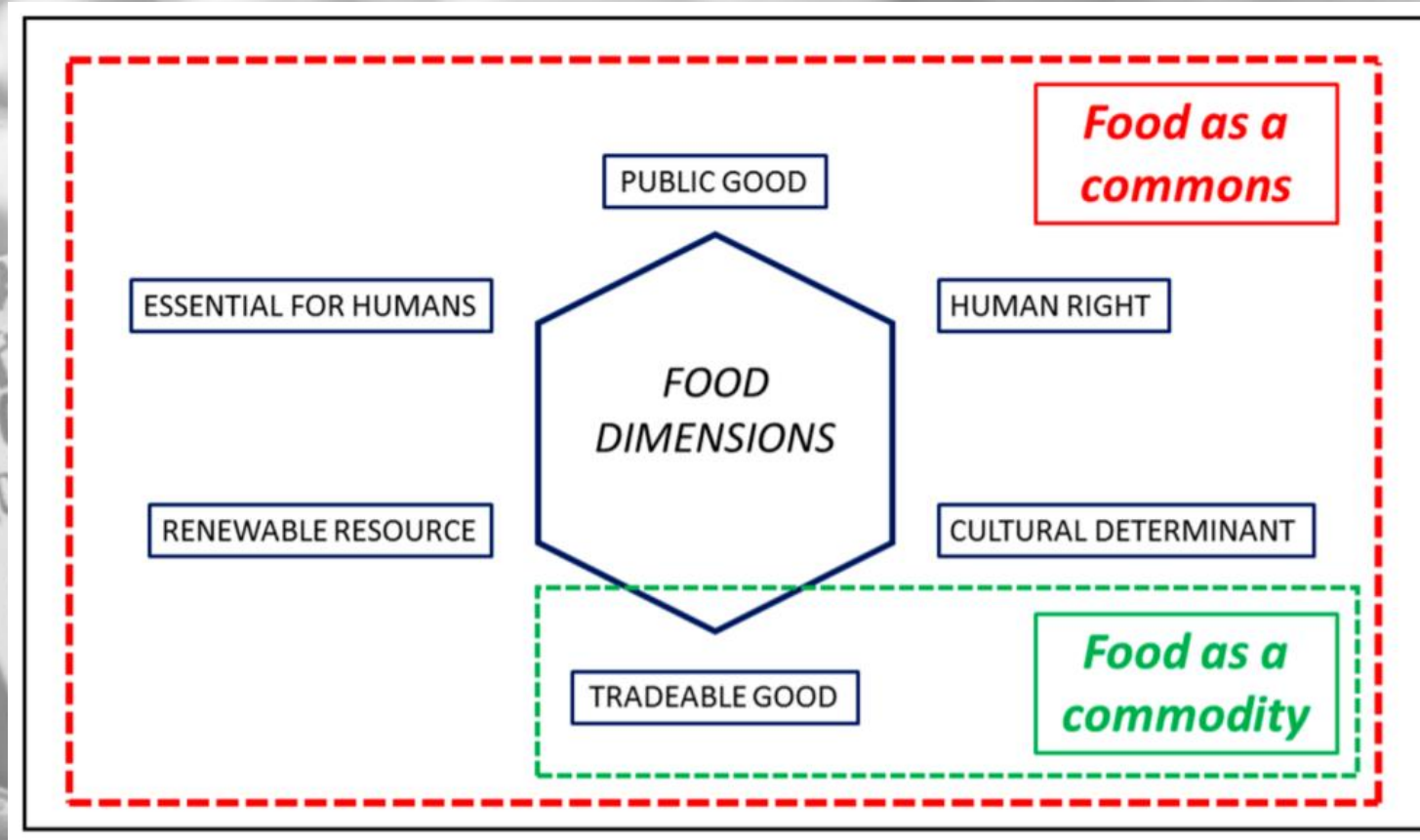
- **Vulnerability to shocks** (e.g. price, weather) and “**safety first**” **theory** (risk aversion; poor farmers minimise the likelihood of income falling **below some threshold** or subsistence level).
- Encouraging farmers to undertake more **sustainable practices** could actually reduce their risks.
- Targeting **women** and **indigenous people**: impact on socio-economic development and environmental sustainability.

Rural 'Development' Today: A Required Language Shift?

*“So it is time to change the way we think. Farmers are not the cause of Africa’s poverty; they are a **potential solution**. They are key to creating the future envisioned by the SDGs.”*

Kofi Annan (7th Secretary General of the United Nations)

Food as 'Commodity' or 'Commons'?



Source: Vivero-Pol (2017).

Food Sovereignty

“right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.”

(Declaration of Nyéléni, Mali
Global Forum on Food Sovereignty 2007)

Thank You!

M.Guerriero@warwick.ac.uk

