# Farming & Climate Change

# What is Climate Change?

It`s long-term changes in temperature and weather conditions.

- Main manifestations: rising average temperatures, extreme weather events (storms, droughts, floods)

- A global issue: affects human health, economy, food security

- Heat waves in Europe → hundreds of deaths, economic losses
- Droughts in Africa → lack of water and food, forced migration

**Action is needed now, because consequences affect everyone, not just farmers**

# Climate impact on agriculture

- Longer growing seasons → more crop cycles/higher irrigation needs
- Air pollution (ozone) → harms plants, reduces yields
- Wildfires → rising risk worldwide
- Insects, weeds, diseases → spread changes → more pest control needed
- Phenological mismatch → plants and pollinators out of sync → lower harvests

# Consequences for people

- Natural disasters affect health, economy, and politics
- Crop losses → higher food prices
- Hunger in vulnerable regions due to rising prices and reduced availability
- Climate migration: disasters force people to move, creating social/economic pressure
- Food insecurity: unreliable access to affordable, nutritious food; repeated crop failures, livestock deaths
- Poor countries heavily depend on agriculture → risk of deeper poverty and crisis

# Statistics nowadays

- 318 million people face acute hunger in 2025
- 74% of Latin American & Caribbean countries highly exposed to extreme weather.
- +1 °C global rise → ~70 million more food insecure; up to 276 million worldwide.

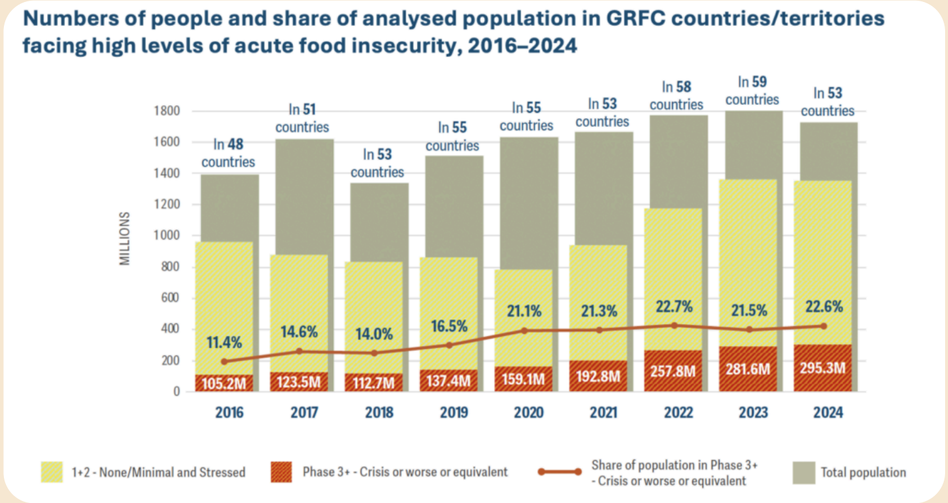


diagram from IFPRI

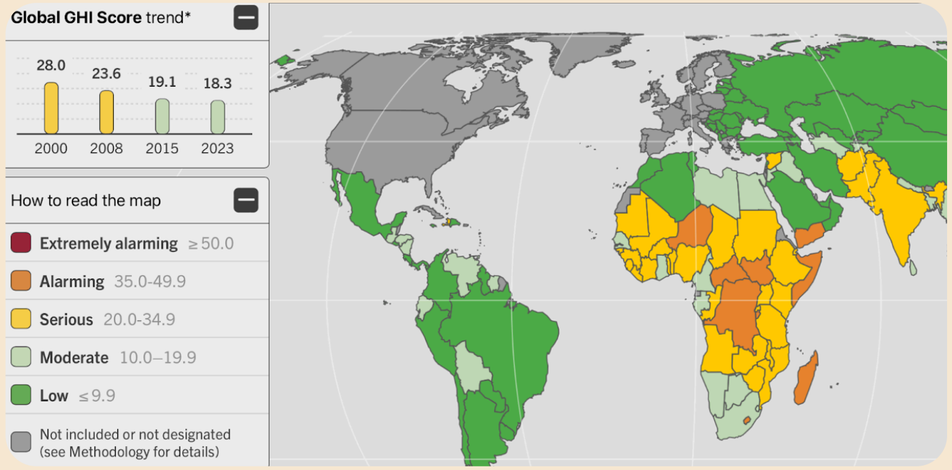


diagram from Goodera

# Why is this important?

Climate is changing: it’s getting hotter, droughts are more common, and rain is unpredictable. This is a problem for farmers because plants can die without water or from heat. To grow crops, we need new solutions:

- New Crop Varieties (able to survive extreme heat and drought)
- Efficient Water Use (directly to the roots)
- Modern Technologies (drones; soil moisture sensors;  GPS navigation)
- Renewable Energy (solar pumps; wind turbines; biogas plants)

# Examples of successful practices

Germany:

- Solar & wind → clean farm energy

India:

- Rainwater harvesting → crops in dry seasons

USA:

- GPS, drones, sensors → smart farming

**Tech + water saving + renewables = adaptation, food security, environment protection**

# Thanks

## for your attention!