THE STATE OF FOOD AND AGRICULTURE
CLIMATE CHANGE, AGRICULTURE AND FOOD SECURITY

THE CHALLENGE
- Produce more food for the growing population
- Reduce greenhouse gas emissions

HOW AGRICULTURE CONTRIBUTES TO CLIMATE CHANGE

- Energy: 6%
- Agriculture, forestry, and other land use: 8%
- Transport: 11%
- Residential, commercial, and institutional: 21%
- Industrial processes and solvent use: 47%
- All other sources: 7%

Shares of greenhouse gas emissions from economic sectors 2010

Taken together, agriculture, forestry, and land use change account for at least 1/5 of total emissions, mainly from the conversion of forests to farmland as well as from livestock and crop production.

The agriculture sectors can substantially contribute to balancing the global carbon cycle.

RESPONDING TO CLIMATE CHANGE

Mitigation is key for the long-term food security of the world’s population.

- **Agriculture**
  - Resources use efficiency
  - Soil regeneration
  - Can bind large amount of atmospheric CO₂ and lower emissions of N₂O and CH₄

- **Forestry**
  - Reducing deforestation and increasing forested areas
  - Adaptive sustainable management in timber production
  - Can help mitigate the rise of atmospheric CO₂

Reducing food loss and waste
- Would improve the efficiency of the food system, reduce both pressure on natural resources and emissions of greenhouse gases.

Rebalancing diets towards less animal-sourced foods
- Would make an important contribution, with probable co-benefits for human health.

How we mitigate climate change and adapt to it today will determine whether humanity succeeds in eradicating hunger and poverty by 2030.

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