How consumption steers land use

Global land use plays a central role in determining...

- Our food
- Our materials
- Our energy supply

TRENDS IN LAND USE CHANGE

- High Estimate
- Low Estimate

Expected magnitude of cropland expansion

- Expansion of cropland from 2005 to 2050 under BAU conditions for various demand and compensation factors

Drivers for land competition

- Expansion of global cropland (estimates 310 to 845 Mha)
- Land use intensification
- Growing demand for food, feed and fuel
- Increasing food prices
- Food insecurity

Results of land competition

- Expected net expansion of global cropland
  - Gross expansion
  - Compensation
  - Net expansion

Environmental impacts of land use change and land use intensification on...

- Land
  - Land degradation
  - Soil erosion
  - Salinization
  - Nutrient pollution
  - Disruption of nutrient cycles

- Biodiversity and ecosystem services
  - Loss of biodiversity
  - Loss of ecosystem services

- Climate change
  - Accelerated by land-use and land-cover change (LULCC)
  - LULCC can increase the release of carbon dioxide by disturbing soils and vegetation and deforestation

- Water
  - Disruption of water cycles
  - Water pollution (i.e. eutrophication)

Policy options to keep land use change within the safe operating space

- Improve agriculture through best management practices
- Involve farmers and other stakeholders
- Improve land use planning and monitoring
- Promote land tenure and ownership
- Support urban farming and gardening
- Implement economy-wide sustainable resource management programmes
- Strengthen product-specific approaches such as certification
- Reduce food loss and waste
- Scale back biofuel quotas
- Monitor and control biomaterial consumption

Biomaterial supply
- Food supply
- Biofuel supply
- Biomaterial supply
- Compensation for built environment
- Compensation for soil degradation

SAFE OPERATING SPACE CONCEPT

Comparing actual global land use of countries to a preliminary orientation value for safe operating space indicates the direction and order of magnitude of necessary adaptations.

Reference value: around 1640 Mha available for supplying demand in 2020
- Target of 0.20 hectares of cropland per person in 2050.

SOURCES & CONTACT

This document highlights key findings from the report, and should be read in conjunction with the full report. References to research and reviews on which this infographic is based are listed in the full report:

www.unep.org/resources