Food Security and Agriculture face major challenges under climate change, in terms of expected negative impacts on productivity as well as implementation of sectoral actions to limit global warming. Agriculture’s greenhouse gas emissions continue to rise – although not as fast as emissions from other human activities. Better regional and national data on emissions from farming, livestock-raising, fisheries and forestry can help countries identify opportunities for reducing emissions while addressing their food security, resilience and rural development goals – and gain access to global funding to pursue them.

The new FAO/FAES emissions database provides the most comprehensive knowledge base on agricultural greenhouse gas emissions to date. Updated annually, it provides a global point of reference on emissions, and mitigation opportunities in the sector.

**Regional emissions from agriculture (crops & livestock) increased by almost 144% in the last 50 years**

- **1961** million tonnes CO₂ eq
- **2,459 million tonnes CO₂ eq**

**Emissions from energy use in agriculture added another**

- **408 million tonnes CO₂ eq**

**Livestock-related emissions from enteric fermentation and manure contributed over half of the total.**

**Emissions from forest change**

- Asia: +565,8 million tonnes CO₂ eq
- biomass fires: +46 million tonnes CO₂ eq
- degraded peatlands: +158 million tonnes CO₂ eq
- forest: -194 million tonnes CO₂ eq
- net forest conversion: +163,8 million tonnes CO₂ eq
- net forest conversion: +163,8 million tonnes CO₂ eq
- forest: -194 million tonnes CO₂ eq
- net forest conversion: +163,8 million tonnes CO₂ eq

**Regional emissions from agriculture by continent (crops & livestock)**

- **Americas**
  - 25%
- **Asia**
  - 44%
- **Europe**
  - 15%
- **Africa**
  - 12%

**Livestock-related emissions**

- Enteric fermentation: 33%
- Synthetic fertilizers: 20%
- Grassland: 18%
- Manure left on pasture: 11%
- Manure management: 7%
- Crop residues: 4%

**Crop residues**

- Manure left on pasture: 11%
- Manure management: 7%
- Crop residues: 4%

**Emmissions from energy use in agriculture added another**

- Fossil fuel energy needed to power machinery, irrigation pumps and fishing vessels.
- 408 million tonnes CO₂ eq

**Emissions from the transport sector**

- 1,006 million tonnes CO₂ eq

**Total emissions by sources from agriculture, forestry and other land uses were more than**

- **3.2 billion tonnes CO₂ eq**

**Total removals by sinks from agriculture, forestry and other land uses were**

- **194 million tonnes CO₂ eq**

**Food Security and Agriculture face major challenges under climate change, in terms of expected negative impacts on productivity as well as implementation of sectoral actions to limit global warming. Agriculture’s greenhouse gas emissions continue to rise – although not as fast as emissions from other human activities. Better regional and national data on emissions from farming, livestock-raising, fisheries and forestry can help countries identify opportunities for reducing emissions while addressing their food security, resilience and rural development goals – and gain access to global funding to pursue them.**

The new FAO/FAES emissions database provides the most comprehensive knowledge base on agricultural greenhouse gas emissions to date. Updated annually, it provides a global point of reference on emissions, and mitigation opportunities in the sector.

Food Security and Agriculture face major challenges under climate change, in terms of expected negative impacts on productivity as well as implementation of sectoral actions to limit global warming. Agriculture’s greenhouse gas emissions continue to rise – although not as fast as emissions from other human activities. Better regional and national data on emissions from farming, livestock-raising, fisheries and forestry can help countries identify opportunities for reducing emissions while addressing their food security, resilience and rural development goals – and gain access to global funding to pursue them.

The new FAO/FAES emissions database provides the most comprehensive knowledge base on agricultural greenhouse gas emissions to date. Updated annually, it provides a global point of reference on emissions, and mitigation opportunities in the sector.

Food Security and Agriculture face major challenges under climate change, in terms of expected negative impacts on productivity as well as implementation of sectoral actions to limit global warming. Agriculture’s greenhouse gas emissions continue to rise – although not as fast as emissions from other human activities. Better regional and national data on emissions from farming, livestock-raising, fisheries and forestry can help countries identify opportunities for reducing emissions while addressing their food security, resilience and rural development goals – and gain access to global funding to pursue them.**

The new FAO/FAES emissions database provides the most comprehensive knowledge base on agricultural greenhouse gas emissions to date. Updated annually, it provides a global point of reference on emissions, and mitigation opportunities in the sector.

**Total emissions by sources from agriculture, forestry and other land uses were more than**

- **3.2 billion tonnes CO₂ eq**

**Total removals by sinks from agriculture, forestry and other land uses were**

- **194 million tonnes CO₂ eq**

**Food Security and Agriculture face major challenges under climate change, in terms of expected negative impacts on productivity as well as implementation of sectoral actions to limit global warming. Agriculture’s greenhouse gas emissions continue to rise – although not as fast as emissions from other human activities. Better regional and national data on emissions from farming, livestock-raising, fisheries and forestry can help countries identify opportunities for reducing emissions while addressing their food security, resilience and rural development goals – and gain access to global funding to pursue them.**

The new FAO/FAES emissions database provides the most comprehensive knowledge base on agricultural greenhouse gas emissions to date. Updated annually, it provides a global point of reference on emissions, and mitigation opportunities in the sector. Updated annually, it provides a global point of reference on emissions, and mitigation opportunities in the sector.

Food Security and Agriculture face major challenges under climate change, in terms of expected negative impacts on productivity as well as implementation of sectoral actions to limit global warming. Agriculture’s greenhouse gas emissions continue to rise – although not as fast as emissions from other human activities. Better regional and national data on emissions from farming, livestock-raising, fisheries and forestry can help countries identify opportunities for reducing emissions while addressing their food security, resilience and rural development goals – and gain access to global funding to pursue them.

The new FAO/FAES emissions database provides the most comprehensive knowledge base on agricultural greenhouse gas emissions to date. Updated annually, it provides a global point of reference on emissions, and mitigation opportunities in the sector.