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Food and Agriculture Organization of the United Nations
Outline

1. Introduction to the FAO GHG Activities
2. Science and Policy Context, Gaps, Capacity Needs
3. The FAOSTAT emissions database
4. Capacity Development
5. 3rd FAO GHG Workshop, Casablanca
6. Conclusions
Monitoring and Assessment of GHG Emissions and Mitigation Potentials in Agriculture

PROJECT GOALS:

• Generate knowledge to help developing countries identify, assess and report their GHG emissions in agriculture, forestry and fisheries

• Help countries identify mitigation options consistent with their rural development goals, food security, agro-ecosystems resilience, including NAMAs

• Close collaboration with IPCC and UNFCCC in support of reporting and negotiations
Monitoring and Assessment of GHG Emissions and Mitigation Potentials in Agriculture

PROJECT ACTIVITIES:

- FAOSTAT Emissions database, to identify global and regional trends and support FAO member countries
- Capacity development for GHG data reporting and NAMA development
- Contribution to Intergovernmental Panel on Climate Change: IPCC: AR5, Revised 2013 Guidelines, IPCC Software
Need for GHG Statistics: The science and policy context

1. Climate Change International Agreements require that countries report their GHG emissions regularly (UNFCCC)
2. Developed parties use GHG reporting to demonstrate their emission reduction commitments (e.g., Kyoto Protocol)
3. Developing countries parties use GHG reporting as a key to receive climate funding and to inform international negotiations and support policy decisions
Need for GHG Statistics:
Urgent need for action in developing countries

1. Agriculture sectors are key emitters in developing countries, and a basis for climate mitigation that is relevant to food security and sustainable development goals

2. Need to improve capacity to collect and analyze activity data and GHG statistics. Only 3-4 reports per country over the past 20 years

3. Starting in 2014, need to report bi-annually to UNFCCC
## GHG Emission Statistics: Categories

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FAOSTAT Emissions Database

& geo-reference data

+ IPCC 2006 Guidelines

=
Addressing different needs

1. **Global and regional assessments**: Unlike for energy, no international agency regularly reports for GHG from agriculture.

2. **Fill data gaps and build capacity**: a bridging tool for many non-Annex I parties.

3. **QA/QC procedures and data analysis**: provide an internationally accepted and neutral data platform for evaluation of national reporting.

4. **Develop indicators for further analysis**: derive complex indexes useful for analysis and policy support.
1. Global and Regional Analyses

![Graph showing global and regional analyses of gigagrams CO2eq from 1990 to 2010. The graph shows contributions from agricultural soils, burning in savannas, burning of crop residues, rice cultivation, manure management, and enteric fermentation.](image-url)
1. IPCC AR5 AFOLU GHG Data

- Cultivated Organic Soils (N2O)
- Crop Residues (N2O)
- Manure Applied to Soils (N2O)
- Manure Management (CH4 and N2O)
- Crop Residues and Savannah Burning (N2O, CH4)
- Rice Cultivation (CH4)
- Synthetic Fertilizers (N2O)
- Manure on Pasture (N2O)
- Enteric Fermentation (CH4)
- Land Use Change and Forestry (CO2)
## 2. Fill data gaps and build capacity

### World Top non-Annex I Emitters for Enteric Fermentation

#### UNFCC National Communications

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#### FAOSTAT GHG Emissions
3. QA/QC Analysis
4. Developing Indicators
Summary 1
FAOSTAT Emissions Database

• The FAOSTAT Emission database makes available a global GHG emission by country, using official country data reported by countries to FAO.

• The FAOSTAT Emissions database can support the strengthening of national statistics processes.

• The FAOSTAT Emissions database offers support to develop robust greenhouse gases inventories, in support of BURs and NAMAs processes.
FAO GHG Statistics Capacity Development

• **Technical capacities, in support of Member Countries to:**
  - assess and report GHG emissions from agriculture, including land use activities (Biennial Update Report, BUR)
  - identify mitigation options, including Nationally appropriate mitigation actions (NAMAs).

• **Institutional capacities, to strengthen gaps in coordination and cooperation:**
  - capacities to access, generate, manage and exchange information and knowledge towards robust GHG inventory, BUR, NAMA (national data systems).
  - capacities to engage with relevant national and international agencies and institutions for efficient support to countries.
Regional level – CD activities

• Inception Workshop on Greenhouse Gas Emissions Statistics
  Da Lat, Viet Nam, 5 - 6 October 2012

• Second FAO workshop on Statistics for Greenhouse Gases Emissions
  Port of Spain, Trinidad and Tobago, 3 - 4 June 2013

• Third FAO Regional workshop on Statistics for Greenhouse Gas Emissions
  Casablanca, Morocco, 2 - 3 December 2013
Casablanca Workshop Attendance

Forty-five participants from twenty-one countries.

Ministries of Environment, Ministries of Agriculture and NSOs; IPCC; FAO

Morocco, Algeria, Egypt, Mali, Mauritania, Ghana, Gabon, Cote D’Ivoire, Nigeria, Central African Republic, Democratic Republic of Congo, South Africa, Lesotho, Kenya, Uganda, Madagascar, Ethiopia, Senegal, Rwanda, Tanzania, Zambia
Workshop Objectives:

• Raise awareness on the importance of agricultural and forestry statistics for preparing national greenhouse gas (GHG) inventories and for planning national mitigation actions that link long term agricultural productivity, food security and sustainability.

• Explore the need for increased capacity in view of *Nationally Appropriate Mitigation Action* (NAMA) preparation and new UNFCCC requirements to prepare and submit Biennial Update Reports (BUR), detailing national emissions and mitigation strategies by the end of 2014.

• Facilitate communication and exchange of relevant knowledge, at national and regional level, identifying challenges, gaps, and opportunities for improving national data systems and analysis tools.
Key Findings: Data and Institutional Gaps

• Role of FAO towards support for Data Gaps Capacity: Development along the four key dimensions of the FAOSTAT database:
  – Improved collection, maintenance and update of relevant activity data, Q/A and Q/C data analysis functions

• Role of FAO towards Institutional Capacity Development:
  – Enhanced national and regional institutional coordination of statistical data for GHG Emissions
  – Enhanced coordination of international agency work
Summary 2: Casablanca Workshop

- Participants welcomed the use of FAOSTAT Emissions database as a platform for achieving coherency in national reporting and support international climate policy.

- Encouraged the role of FAO for capacity development to fill gaps, and develop methods for improving agriculture and land use change statistics and GHG estimations.

- Expressed interests in follow-up regional activities, with proposals to develop work plans for Member Countries in Africa, to meet challenges of current climate policy requirements and develop robust national data systems.
Thank you

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