

منظمة الأغذية والزراعة للأم المتحدة

联合国 粮食及 农业组织

Food and Agriculture Organization of the **United Nations** 

Organisation des Продовольственная и Nations Unies сельскохозяйственная pour l'alimentation et l'agriculture

организация Объединенных Наций

Organización de las Naciones Unidas para la Alimentación y la Agricultura

#### ASIA AND PACIFIC COMMISSION ON AGRICULTURAL STATISTICS

TWENTY-SIXTH SESSION

Thimphu, Bhutan, 15-19 February 2016

Agenda Item 8

Greenhouse Gas emissions from Agriculture, Forestry and Land Use: FAOSTAT data analysis and tools in support of capacity development in m ember countries

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#### Greenhouse Gas emissions from Agriculture, Forestry and Land Use: FAOSTAT data analysis and tools in support of capacity development in member countries

26<sup>TH</sup> Meeting of the Asia-Pacific Commission on Agricultural Statistics

FEBRUARY 15-19 2016, Thimpu, Bhutan

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## Introduction

- Improving agriculture statistics for crop and livestock, forestry and land use change, with a focus on greenhouse gas emissions
- Support to member countries to report to the climate change convention (UNFCCC):
  - Establishment of simplified Inventories as reference for gap analysis, QA/QC, longterm sustainability
  - Consistency with food security, resilience and rural development goals



## FAOSTAT Emissions Database: A reference Tier 1 GHG Inventory







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# **GHG Emissions Statistics: Categories**

DOMAIN	CATEGORY		GAS reported	Data source					
	Enteric Fermentation		CH4	FAOSTAT					
	Manure Management		CH4, N2O	FAOSTAT		DOMAIN	CATEGORY	GAS reported	Data source
	Rice Cultivation		CH <sub>4</sub>	FAOSTAT			Forest land	CO <sub>2</sub>	FRA
	Agricultural soils	Synthetic Fertilizers	N <sub>2</sub> O	FAOSTAT			Cropland	CO <sub>2</sub>	
ure		Manure applied to soils	N <sub>2</sub> O	FAOSTAT			Grassland	CO	
cult		Manure left on	N <sub>2</sub> O	FAOSTAT			Orassianu		
gri		pasture	-2			LULUCF	Burning Biomass	CH4,	
¥		Crop residues	N <sub>2</sub> O	FAOSTAT				$N_2O$ , $CO_2$	
		Cultivated organic soils	N <sub>2</sub> O				Wetlands	CO <sub>2</sub>	
	Burning - Savanna		CH4, N2O				Settlements	CO <sub>2</sub>	
		Burning – Crop residues	CH4, N2O	FAOSTAT			Other land	CO <sub>2</sub>	



## **Statistical Application of Emission Data:**

- 1. <u>National, Regional and Global Assessments</u>: Facilitate regional comparisons and trend analysis for AFOLU
- 2. <u>Fill data gaps and QA/QC procedures</u>: Provide a reference, Tier 1 data framework for analysis of AFOLU GHG trends for all countries–EU 28 QA/QC in 2014 using FAOSTAT Emissions data
- 3. <u>Develop Indicators</u>: Derive complex GHG indexes useful for analysis and policy support
- 4. <u>Access geo-referenced data</u>: Move beyond nationally aggregated statistics for the land use sector



# New Data Analysis Tools in FAOSTAT Emissions Database



Per capita

Agro-meterology

#### Global and Regional Trends in Agriculture



#### Global and Regional Trends Carbon Intensity of Commodities

Africa, Cattle Meat (kgCO2/kg product)



#### Quality Control/Quality Assurance of Inventories



## **Assessing Future Reduction Commitments**



## CAPACITY DEVELOPMENT

Country work based on national statistics and FAOSTAT Emissions database in support of sustainable inventories:

- Gap filling and trend analysis
- Quality Control, Quality Assurance of GHG Inventories
- IPCC Guidelines
- Annex to WCA 2020



## CAPACITY DEVELOPMENT

- Country Pilots' QA/QC: Mexico, Uruguay, Costa Rica, China, Mongolia
- UN REDD Targeted Support: Ecuador, Colombia, Paraguay, DRC, Congo, Indonesia
- GIO/JICA WGIA GHG Workshop, Bangkok and Bali 2014 and 2015: 30 Countries
- Thematic Workshop II, Manure Statistics (Rwanda, Nov 2015)
- Peatlands: Indonesia
- Interagency Coordination : UNREDD, UNDP, UNFCCC, IPCC



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# Conclusions

- Availability of a global greenhouse gas emission database by country, as tool to support member countries build a robust inventory and perform QA/QC analyses on activity data and emissions
- Possibility of direct work with member countries
- Focus on building linkages with climate reporting and rural development goals
- Focus on coherency among relevant programs, internationally and across national agencies



Based on the presentations in this session, issues for consideration include the possibility of APCAS to:

• Welcome FAO work on greenhouse gas emissions analysis tools, based on the FAOSTAT Emissions database, including function for data quality control and assurance, indicators and geospatial data

• Encourage FAO to continue its regional and national capacity development activities in Asia-Pacific, to address the challenges of member countries on greenhouse gas emission statistics for agriculture, forestry and land use



## Thank You!

## For additional information:

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