

Climate Change Statistics at FAO for Agriculture, Forestry and Fisheries

**Workshop on Environment Statistics and Information
for Sustainable Development in the Arab Region**
Beirut, Lebanon
12-16 November 2018



Food and Agriculture Organization
of the United Nations

Outline

- ***Core Environment Statistics***
- ***Derived Statistics and Indicators***
- ***Climate Change Statistics***



Agri-Environment Statistics at FAO

Annual Data Collection, Analysis and Dissemination



1. MINERAL OR CHEMICAL FERTILIZERS

For information on how to complete this questionnaire (use of data in calendar year, in tonnes, notation keys, etc.) kindly read the "Instructions" sheet of this workbook.

If the commodity is not produced or is not used in the country, please report 0 (zero) under the corresponding column. If this is unknown, please report NA. Please report under Agricultural Use and Other Uses the use of all fertilizers available nationally, whether produced or imported.

Note on "other uses": use of fertilizers for non-agricultural uses can be relevant for some products in some countries. If information on other uses is available in your country, please report it in the dedicated columns below. Otherwise, please indicate NA (not available).

COMMODITY	Nutrient content:			ELEMENT (UNITS)	PRODUCTION				AGRICULTURAL USE				OTHER USES				NOTES
	Nx	P ₂ O ₅	K ₂ O		2014	2015	2016	2017	2014	2015	2016	2017	2014	2015	2016	2017	
TOTALS IN NUTRIENTS																	
TOTAL NITROGEN	100	0	0														
TOTAL PHOSPHATE	0	100	0														
TOTAL POTASH	0	0	100														

QUESTIONNAIRE ON PESTICIDES USE

Country: _____ Reference: calendar years from: _____ to: _____
Unit of measurement: tonnes (t)

1. DEFINITIONS OF CATEGORIES

Definitions of categories in this questionnaire and their FAO coding:

CATEGORY	DEFINITION
LAND USE	
COUNTRY AREA	
Country area	Area under national sovereignty, 4 to 16
LAND	
Land area	Country area excluding area under water
AGRICULTURE	
Agriculture	The total of areas under "land under use for agricultural purposes, scattered land and uncultivated patches, banes, footpaths, etc."
AGRICULTURAL LAND	
Cropland	Land used for cultivation of crops. The total of areas under "land under use for agricultural purposes, scattered land and uncultivated patches, banes and footpaths, etc." and "land under temporary crops" (including land that is potentially cultivable)
Available land	Land used for crops with a less-than-one harvest. Some crops that remain in the stubble, ornamentals, bananas and other crops
Land under temporary crops	Land temporarily cultivated with herbage between temporary and permanent meadows and pastures
Land under temporary meadows and pastures	Land that is not seeded for one or more years but is used for grazing

2. NATIONAL FOCAL POINT

Name	Title
Administration and Office	
Address	
City	
Email	
Tel	
Fax	
Web site address	

3. STRUCTURE

This questionnaire is composed of:
 Three introductory sections (Cover, Instructions and Definitions);
 Two data reporting sections (1. Pesticides Data, 2. Additional Information); and
 Two supplementary information sections (3. Metadata, and 4. Feedback).

The screenshot shows the FAO FAOSTAT website. At the top, there is a search bar and navigation links for 'About FAO', 'In Action', 'Courses', 'Themes', 'Media', 'Publications', 'Statistics', and 'Partnerships'. Below this, there are language options: العربية, 中文, English, Français, Pycckий, Español. The main navigation bar includes 'Data', 'Country Indicators', 'Compare Data', 'Definitions and Standards', and 'FAQ'. A search bar is present with the text 'Search an indicator or Commodity'. The 'Data' section is highlighted, and a filter box contains the text 'Filter the domain list e.g. crops, food security, fertilizers'. Below the filter, several domain categories are listed: 'Production' (Crops, Crops processed, Live Animals, Livestock Primary, Livestock Processed, Production Indices, Value of Agricultural Production), 'Inputs' (Fertilizers by Nutrient, Fertilizers by Product, Fertilizers archive, Fertilizers - Trade Value, Pesticides Use, Land Use, Employment Indicators), 'Emissions - Agriculture' (Agriculture Total, Enteric Fermentation, Manure Management, Rice Cultivation, Synthetic Fertilizers, Manure applied to Soils, Manure left on Pasture, Crop Residues, Cultivation of Organic Soils, Burning - Savanna, Burning - Crop Residues, Energy Use), 'Trade' (Crops and livestock products, Live animals, Detailed trade matrix, Trade Indices), 'Population' (Annual population), and 'Emissions - Land Use'.

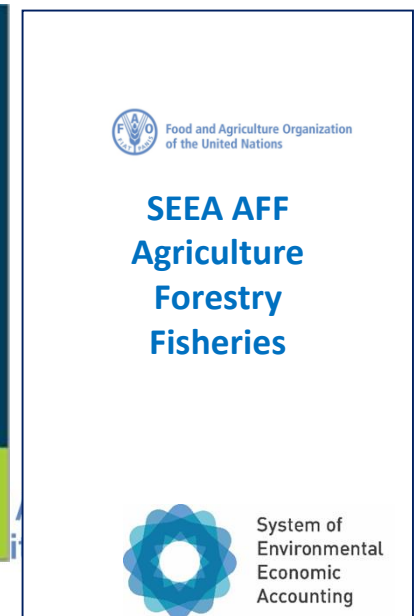
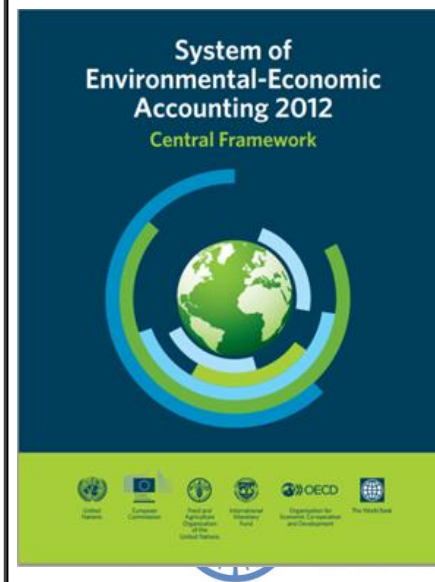
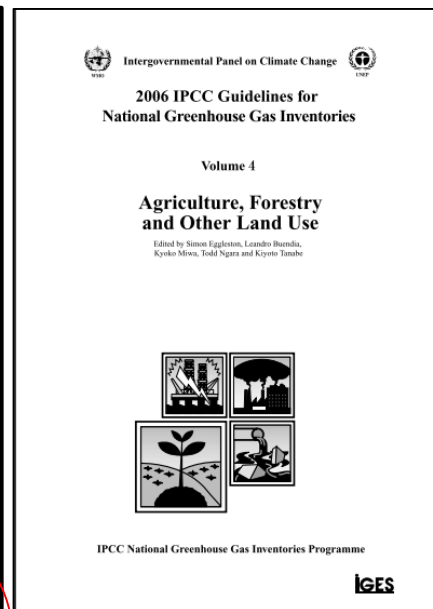
- FAO has a broad mandate towards collection, analysis and dissemination of food and agriculture statistics;
- Collection through official National focal points (NSOs; Min Ag; Other);
- Agri-environment domains: Fertilizers, Pesticides, Land Use, Irrigation & Practices. Elsewhere at FAO: FISHSTAT, FRA, AQUASTAT



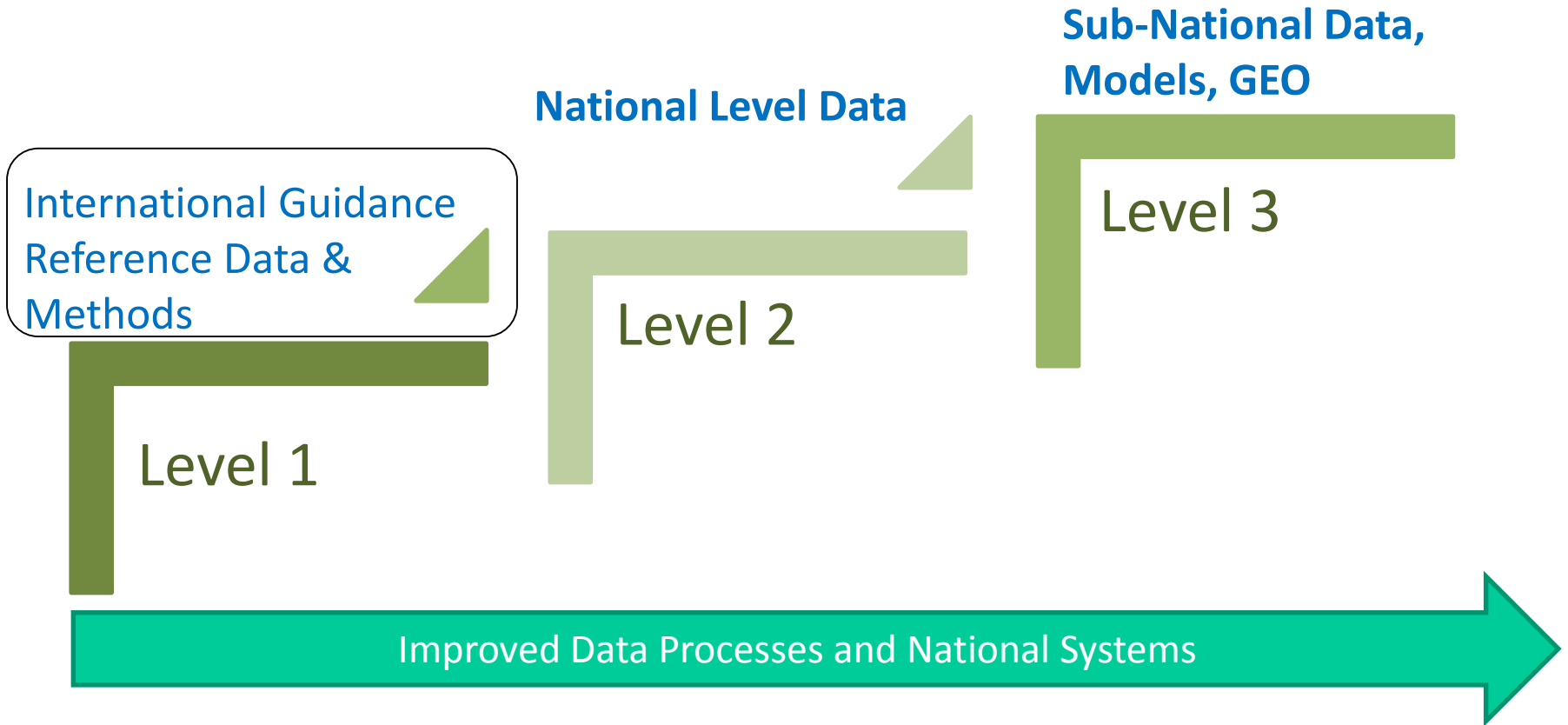
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Analytical Data Products: Supporting SDGs and Climate Change Actions

- Reference global data products in support of national analysis and international reporting (SDGs, UNFCCC);
- Estimates and Indicators are based directly on FAO core statistics and/or derived from geospatial sources



Framing FAOSTAT Analytical Data Products:



FAOSTAT Analytical Environment Statistics

Global default estimates

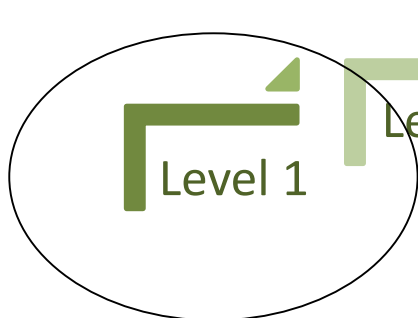
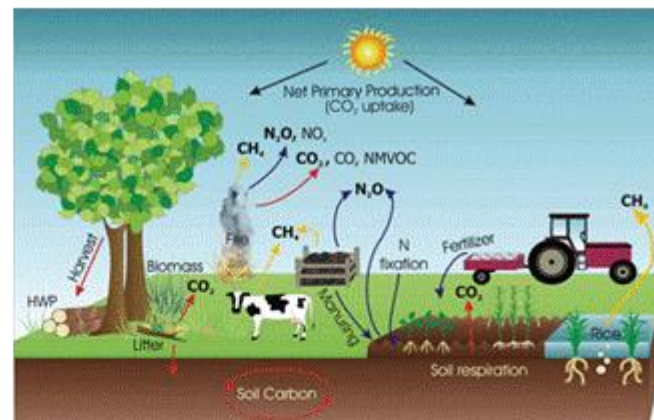


& geo-reference data



SDG Methods

IPCC 2006 Guidelines



<http://www.fao.org/faostat/en/#data>

Climate Change-relevant Statistics at FAO

Rationale

- Agriculture, Forestry and Fisheries are both a significant cause of climate change (20-24% of global emissions), and a sector greatly vulnerable through negative climate impacts on food production and food security
- Agriculture figures prominently in member countries' National Determined Contributions under the UNFCCC Paris Agreement, for both mitigation and adaptation commitments and goals

CC Statistics support to member countries

- Contribute to the Enhanced Transparency Framework for reporting under the climate convention
- Enable national analysis and regional comparisons, complementing SDG 13 by means of quantifiable indicators



New FAOSTAT Climate Change Statistics

Products

- Greenhouse gas emissions for [agriculture, forestry and other land use](#), 1961-2016
- Related indicators: [Agriculture contribution](#) to total emissions (1961-2010); [Emissions intensities](#) of ag commodities (1961-2016)
- [Temperature Change](#) (NASA/FAO), 1961-2017

International Context

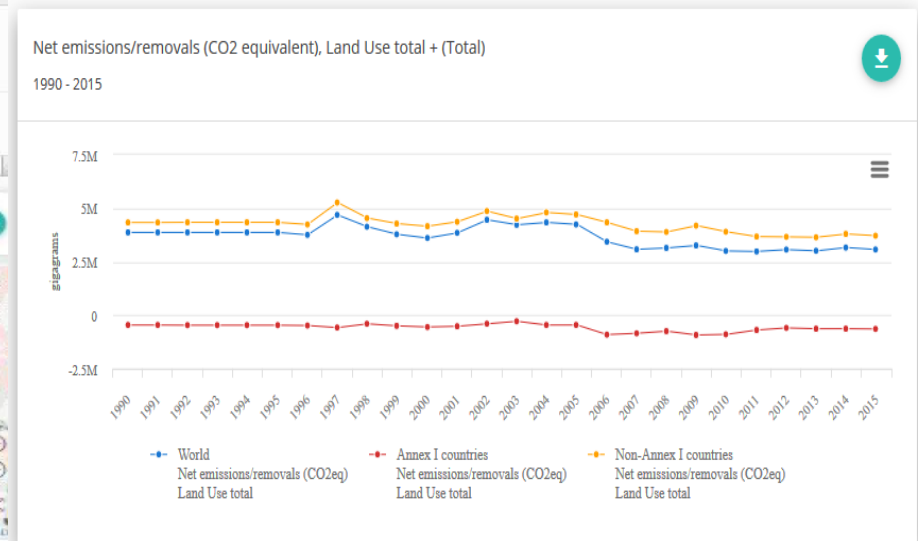
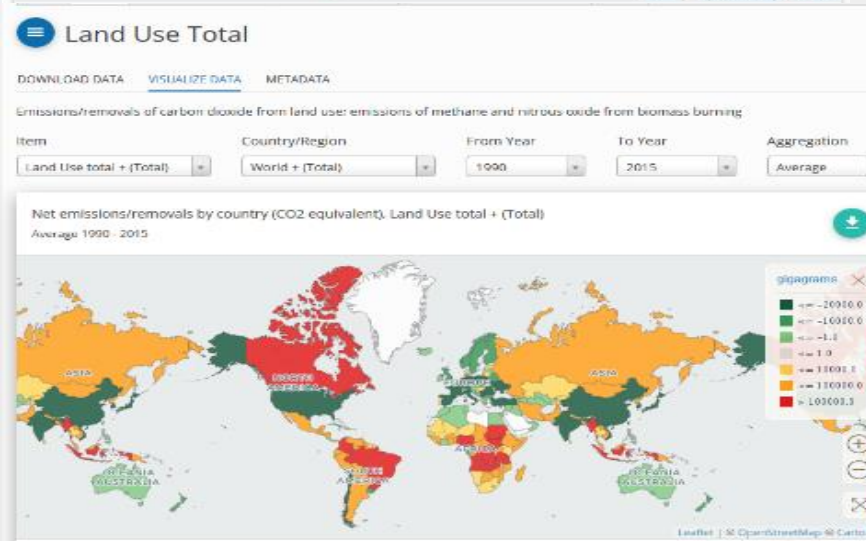
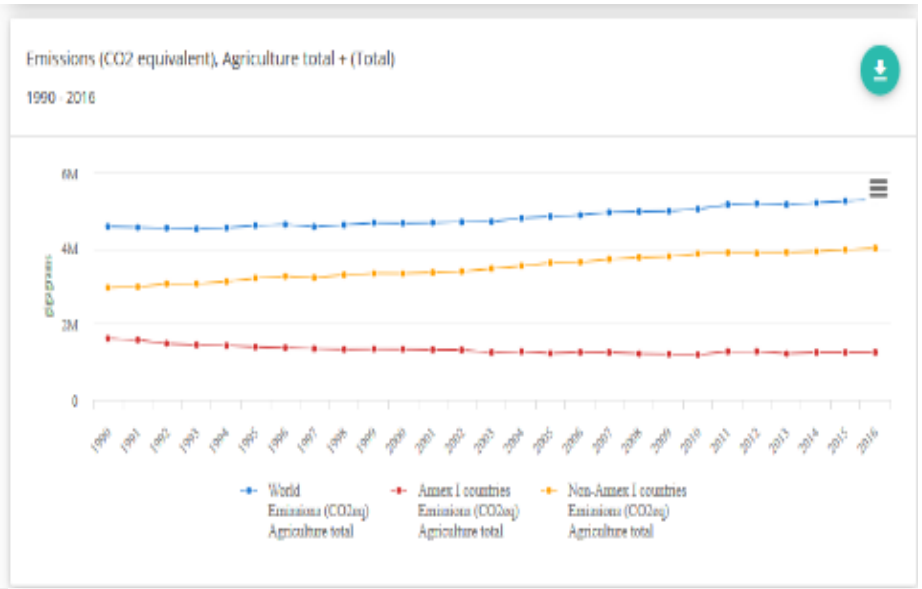
- Support countries reporting to UNFCCC
- Contribute to UNSD work and the UNECE Task Force on CC-Relevant Statistics (FAO pilot for UNECE set)
- Extend the SEEA Air Emissions Accounts for Agriculture, Forestry and Fisheries

Outreach

- Capacity development to strengthen relevant national statistics
- Focus on communication of results to non-specialized users

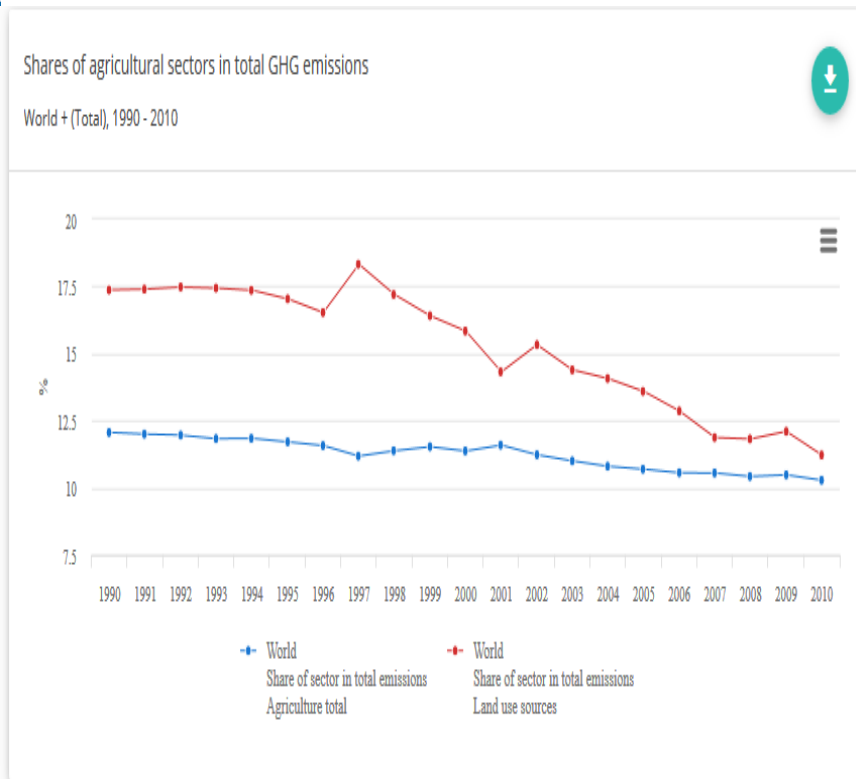


FAOSTAT Emissions Database



FAOSTAT Climate Change Indicators: Emissions by Sector

The screenshot shows the FAOSTAT website interface. At the top, there is a navigation bar with the FAO logo and the text 'Food and Agriculture Organization of the United Nations'. Below this, there are links for 'About FAO', 'In Action', 'Countries', 'Themes', 'Media', 'Publications', 'Statistics', and 'Partnerships'. The main content area is titled 'Emissions by sector' and includes a search bar and a 'Back to domains' button. There are four filter panels: 'COUNTRIES', 'ELEMENTS', 'ITEMS', and 'YEARS'. The 'COUNTRIES' panel lists various countries like Afghanistan, Albania, Algeria, etc. The 'ELEMENTS' panel lists emission categories like 'Share of sector in total emissions', 'Share of sector in total CO2 emissions', etc. The 'ITEMS' panel lists emission sources like 'Energy (ener., man., cons & fugitive)', 'Transport', etc. The 'YEARS' panel lists years from 2010 to 2005. A 'Bulk Downloads' section is also visible, listing download options for 'All Data', 'All Data Normalized', and various regions.



- % Share Emissions Agriculture to total economy, 1970-2010
- % Share Emissions Forestry and Land Use , 1990-2010

FAOSTAT Climate Change Indicators: Emissions Intensity (Milk, Meat, Rice, etc.)

Emissions intensities

DOWNLOAD DATA VISUALIZE DATA METADATA

< COUNTRIES REGIONS SPECIAL > ⚙

Filter results

- Afghanistan
- Albania
- Algeria
- American Samoa
- Andorra
- Angola

Select All Clear All

ELEMENTS

Filter results e

- Emission int
- Emissions (C
- Production C

Select All

ITEMS

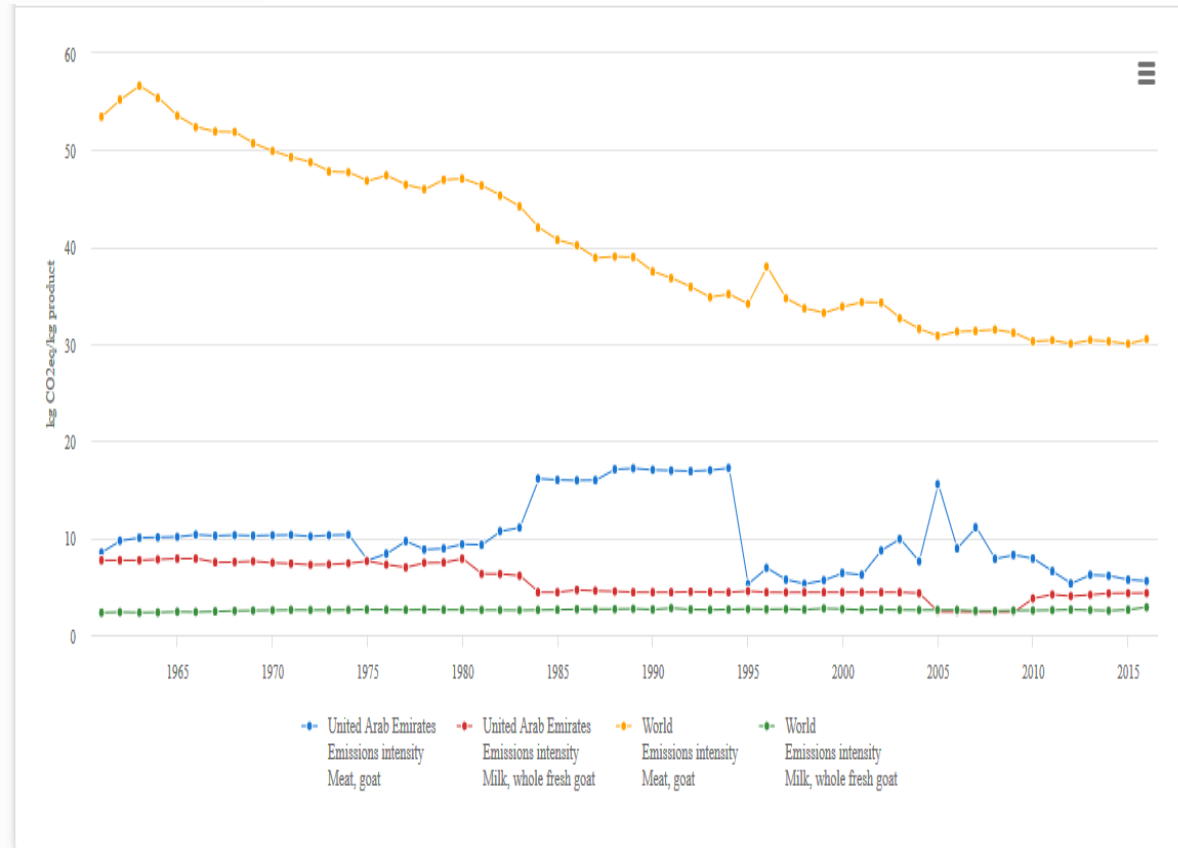
Filter results e.g. cereals excluding rice

- Cereals excluding rice
- Rice, paddy
- Meat, cattle
- Milk, whole fresh cow
- Meat, goat
- Milk, whole fresh goat

YEARS

Filter results e

- 2014
- 2013
- 2012
- 2011
- 2010
- 2009

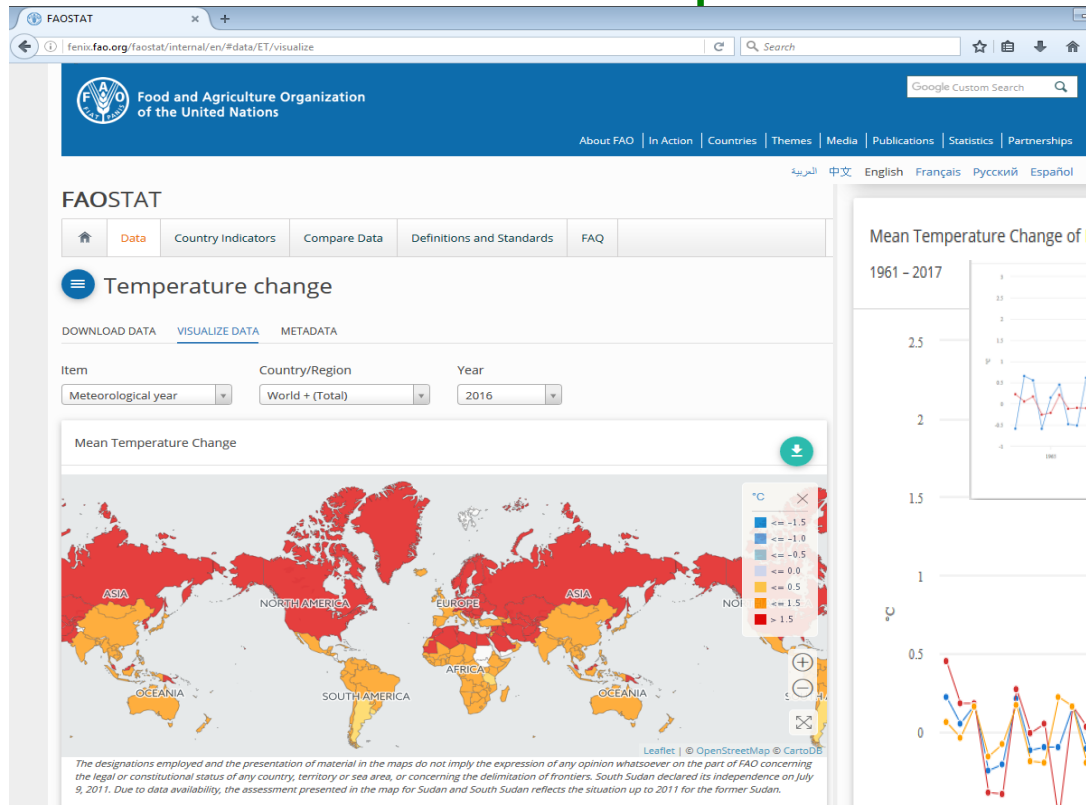


- GHG emissions per unit milk, meat, rice, 1961-2016

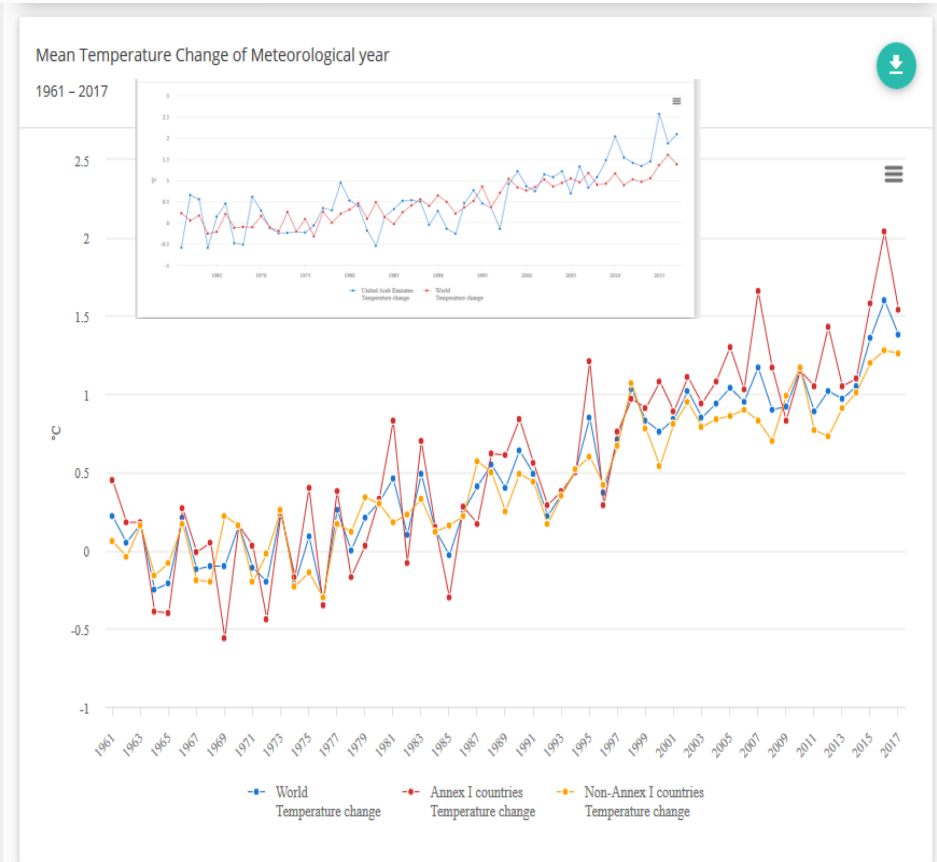


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FAOSTAT Climate Change Indicators: Temperature Change



- Temp Change for annual, seasonal and monthly means, 1961-2017
- Based on observed meteorological station data analysed by NASA – [movie](#) [youtube](#)



Conclusions

- FAOSTAT Climate Change Statistics aim to support member countries in their national analyses and international reporting needs
- Established domains include emissions and related indicators, and are used to inform regional and global trends
- FAO aims to work with member countries, UNFCCC, UNSD and UNECE on the creation of a climate change relevant statistical framework in support of the Enhanced transparency goals of the Paris agreement



Thank You !

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<http://www.fao.org/economic/ess/environment/en/>



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