

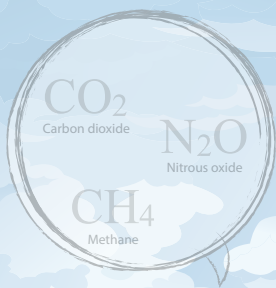


Food and Agriculture  
Organization of the  
United Nations

# GREENHOUSE GAS EMISSIONS

from Agriculture, Forestry and  
Other Land Use





At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal global climate agreement that sets out a global action plan to limit global warming to well below 2°C. A key outcome was the Enhanced Transparency Framework (ETF) to build trust and confidence in countries' contributions and progress.

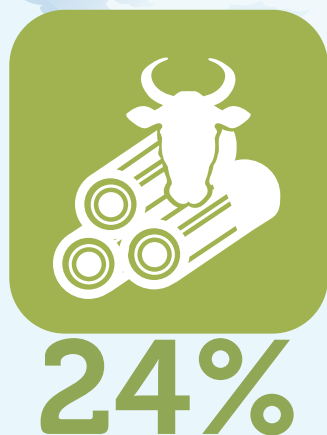
Food security and agriculture face major challenges under climate change, in terms of expected negative impacts on productivity as well as implementation of sectoral actions to limit global warming. Sustainable farming, livestock-raising, fisheries and forestry can help countries identify opportunities for reducing emissions while addressing their food security, resilience and rural development goals. Almost 90 percent of countries included these opportunities in their Intended Nationally Determined Contributions (INDCs).

FAO has developed tools, databases, guidance and learning material to enhance countries' capacity in designing, implementing and reporting actions compliant with the Paris Agreement.



# Agriculture, forestry and other land use sector contributions to climate change

Agriculture, Forestry  
and Other Land  
Use (AFOLU)



Energy



35%

DISTRIBUTION  
OF GLOBAL  
GREENHOUSE GAS  
(GHG) EMISSIONS  
BY SECTOR

Industry



21%

Transport



14%

Buildings



6%

To avoid serious impacts of climate change, major reductions in greenhouse gas emissions are required.

# Emissions from agriculture in the last 10 years:



## GLOBALLY

Emissions increased  
annually by

**8%**

2014

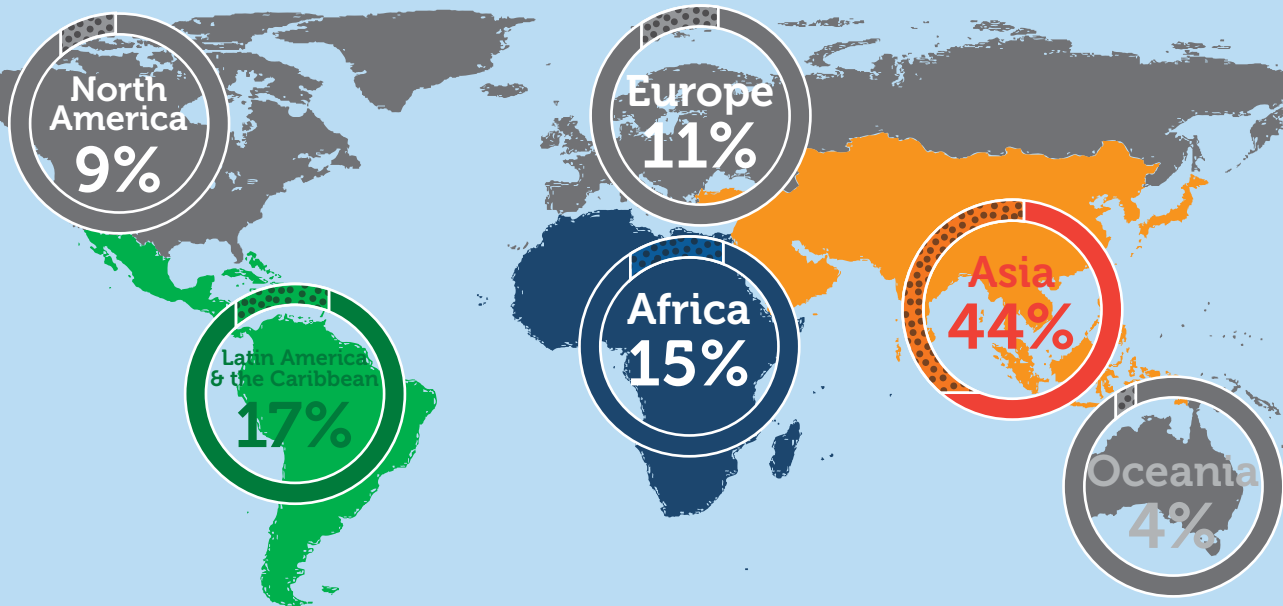
**5 246**

2005

**4 853**

Unit: kilotonne of CO<sub>2</sub>-equivalent  
Data source: FAOSTAT, 2016

# Emissions from agriculture by continent



Figures are averages for the period 2005-2014.  
Data source: FAOSTAT, 2016

Emissions from agriculture  
in the last 10 years in:



## AFRICA

Emissions increased  
annually by

**1.6%**

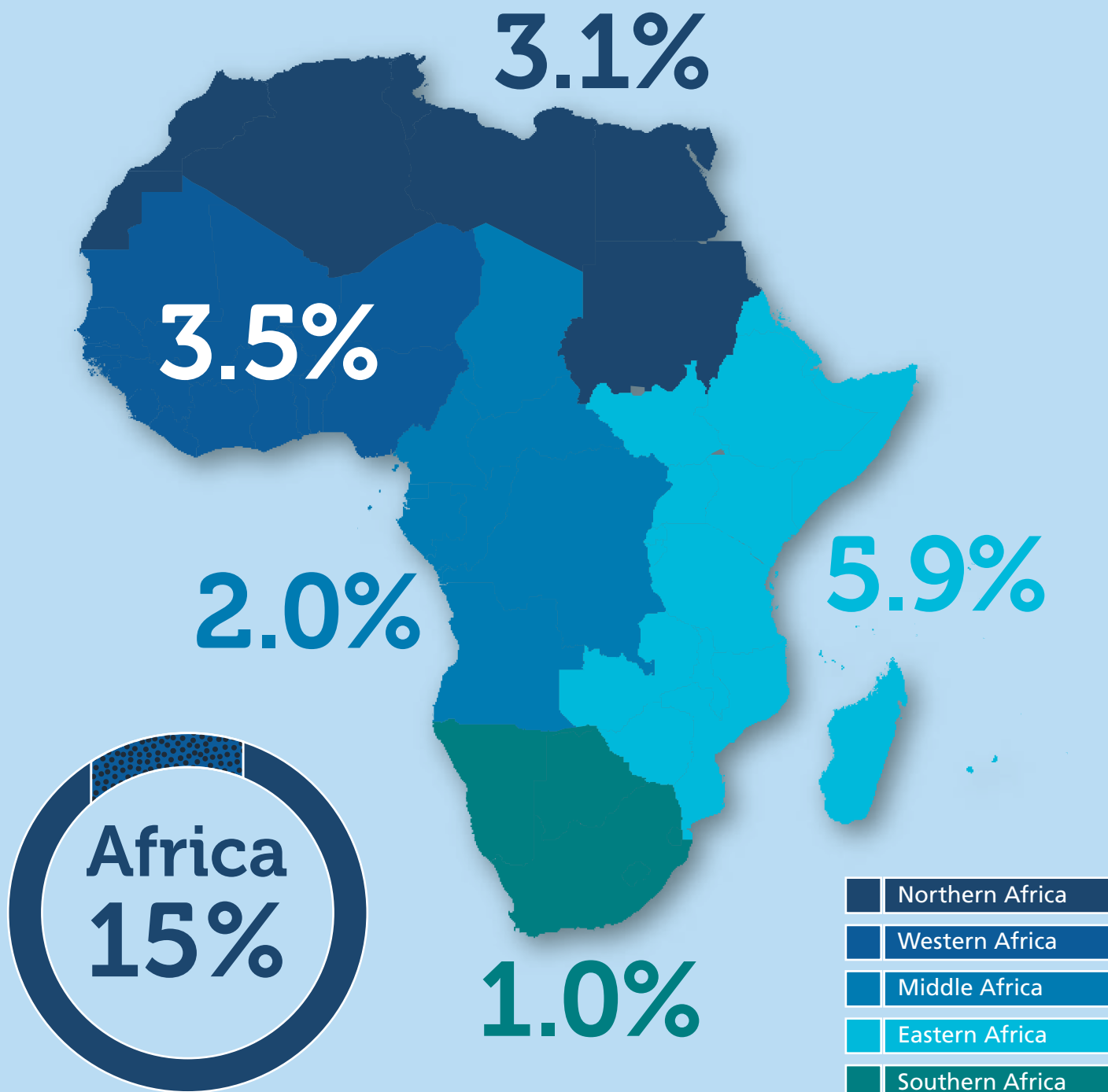
2014

**834**

2005

**738**

Unit: kilotonne of CO<sub>2</sub>-equivalent  
Data source: FAOSTAT, 2016



Figures are averages for the period 2005-2014.  
Data source: FAOSTAT, 2016

# Emissions from agriculture in the last 10 years in:



## ASIA

Emissions increased  
annually by

**1.1%**

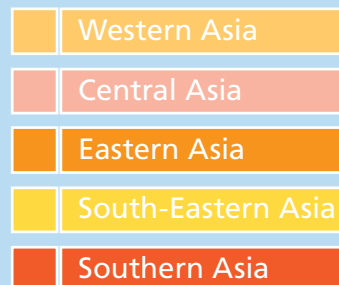
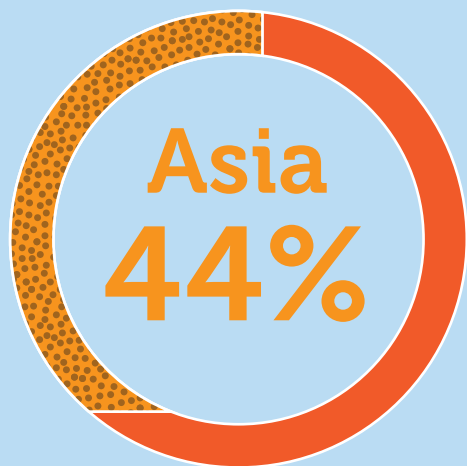
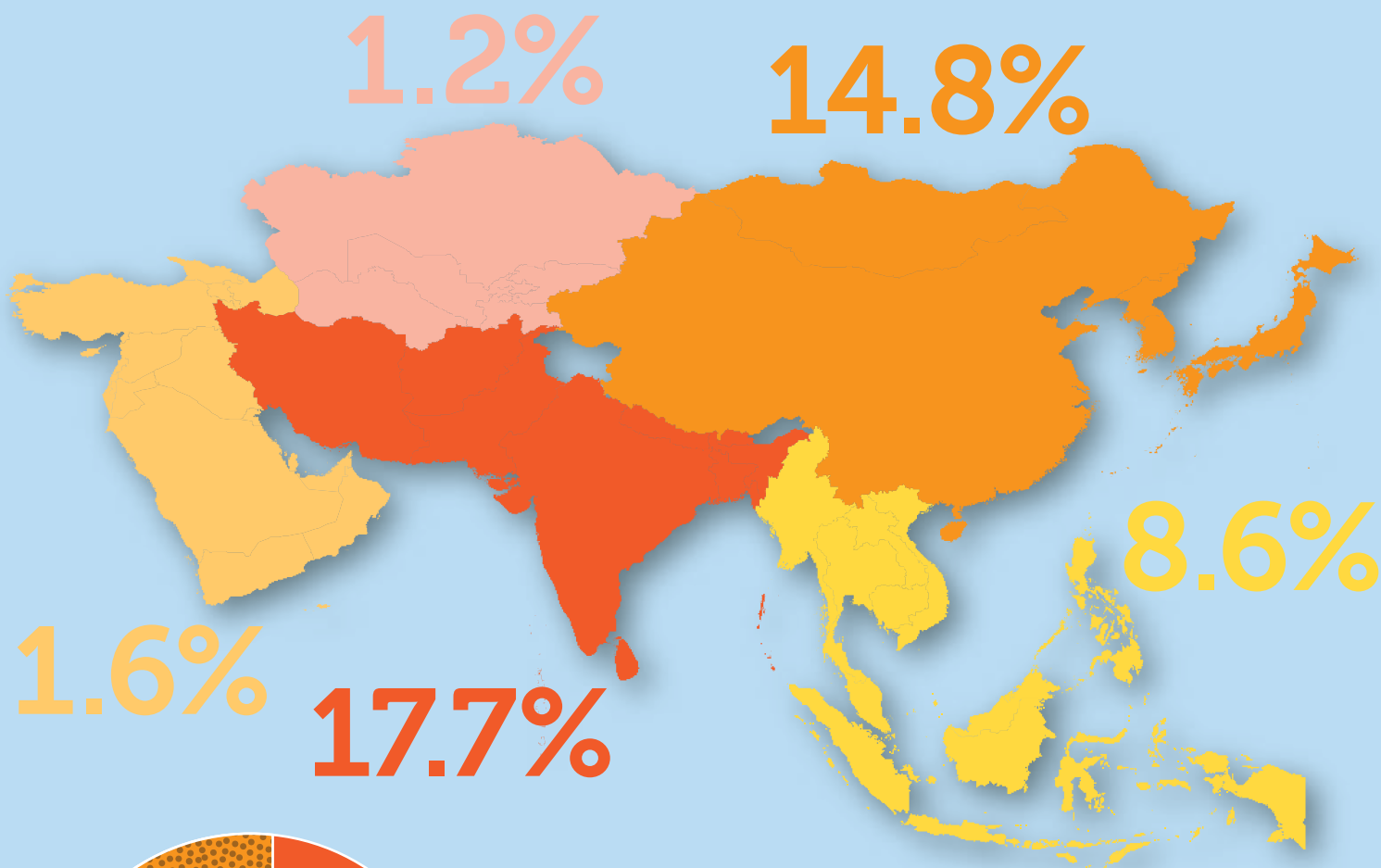
2014

**2 313**

2005

**2 081**

Unit: kilotonne of CO<sub>2</sub>-equivalent  
Data source: FAOSTAT, 2016



Figures are averages for the period 2005-2014.  
Data source: FAOSTAT, 2016

# Emissions from agriculture in the last 10 years in:

## Latin America & the Caribbean



Emissions increased  
annually by

**0.5%**

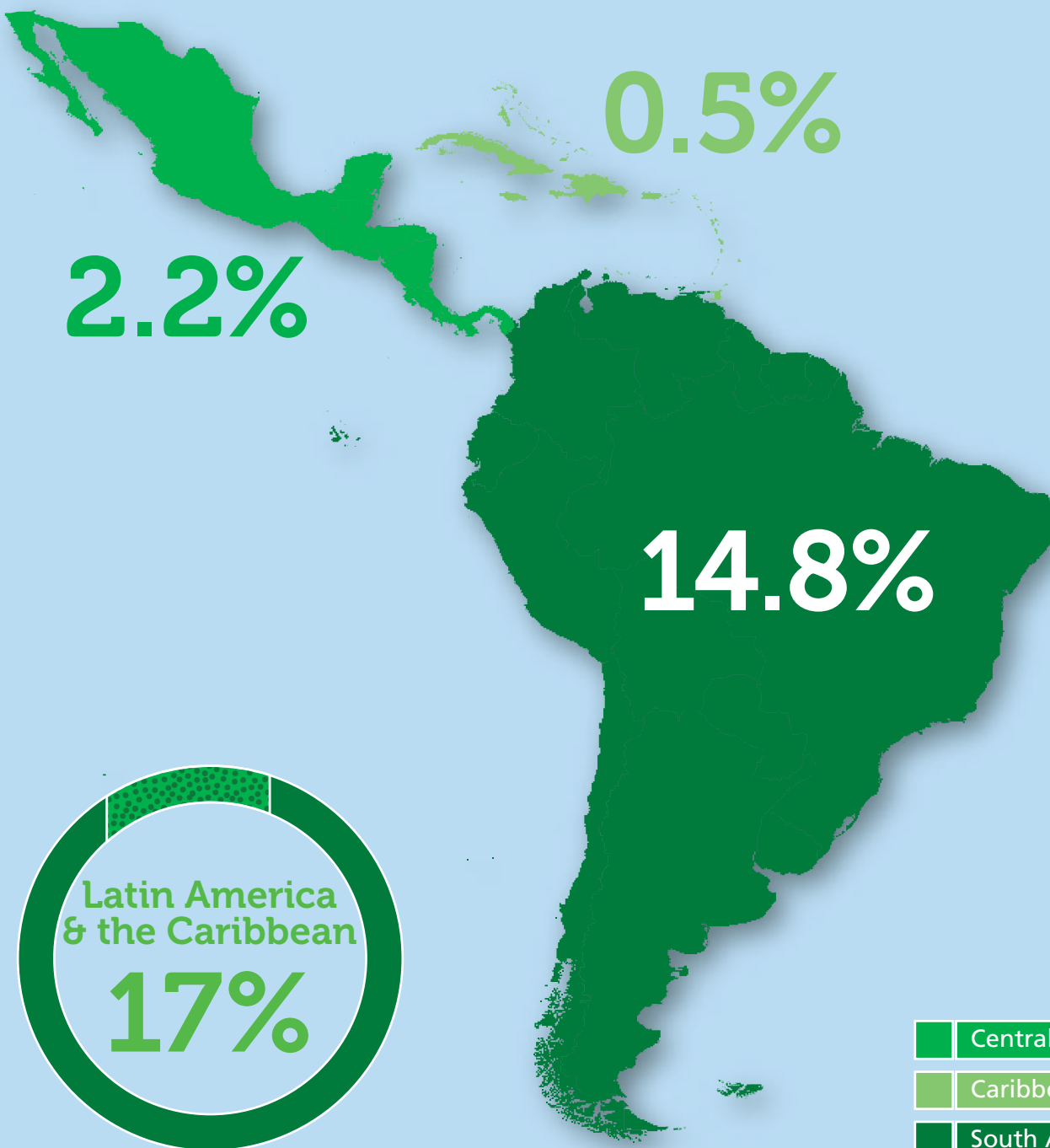
2014

**909**

2005

**867**

Unit: kilotonne of CO<sub>2</sub>-equivalent  
Data source: FAOSTAT, 2016

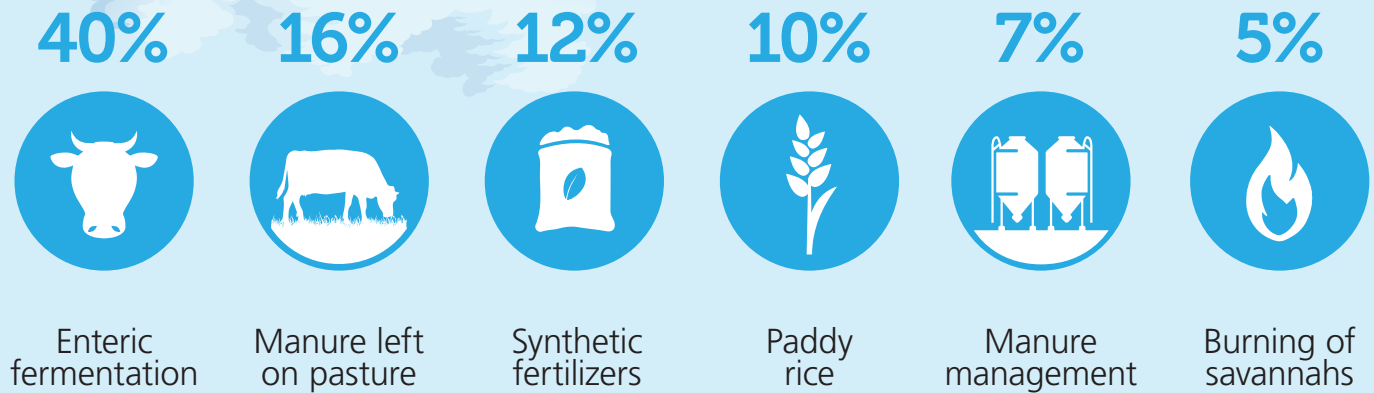


	Central America
	Caribbean
	South America

Figures are averages for the period 2005-2014.  
Data source: FAOSTAT, 2016

# The largest emitters in agriculture

## GLOBAL



Livestock-related emissions from enteric fermentation and manure contributed to nearly two-thirds of the total.

Figures are averages for the period 2005-2014

## AFRICA

39%



Enteric  
fermentation

28%



Manure left  
on pasture

21%



Burning of  
savannahs

3%



Synthetic  
fertilizers

3%



Paddy  
rice

2%



Manure  
management

Livestock-related emissions from enteric fermentation and manure contributed to nearly two-thirds of the total.

## ASIA

34%



Enteric  
fermentation

22%



Paddy  
rice

15%



Synthetic  
fertilizers

11%



Manure left  
on pasture

7%



Manure  
management

4%



Crop  
residues

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

## LATIN AMERICA & THE CARIBBEAN

59%



Enteric  
fermentation

24%



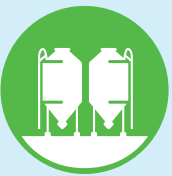
Manure left  
on pasture

5%



Synthetic  
fertilizers

3%



Manure  
management

3%



Manure applied  
to soils

2%



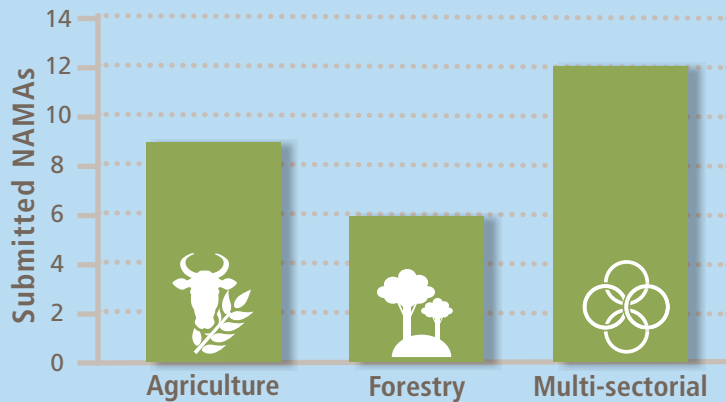
Crop  
residues

Livestock-related emissions from enteric fermentation and manure contributed to nearly 90% of the total.

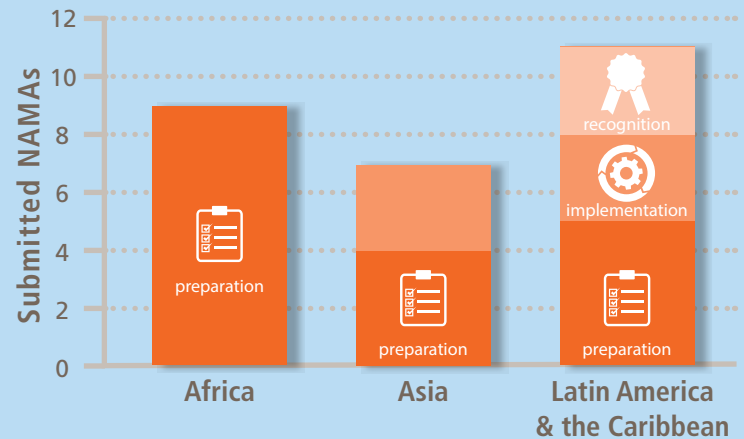
# Nationally Appropriate Mitigation Action (NAMA) is the instrument to reduce GHG emissions

EIGHTEEN PERCENT OF NAMAS IN THE UNFCCC REGISTRY INCLUDE AFOLU SECTOR

CATEGORIES OF AFOLU NAMAS



STAGE OF NAMAs SEEKING SUPPORT



\* Multi-sectorial category includes NAMAs which targets AFOLU sector together with other sectors, such as energy.  
Data source: UNFCCC NAMA registry 2016. As of as of July 2016, 153 NAMA entries were entered in the NAMA registry.

# FAO's support to countries



FAOSTAT  
Emissions  
database



E-learning "Building a  
sustainable national  
greenhouse gas  
inventory for  
Agriculture, Forestry  
and Other Land Use"



Learning tool on  
NAMAs in the  
AFOLU sector



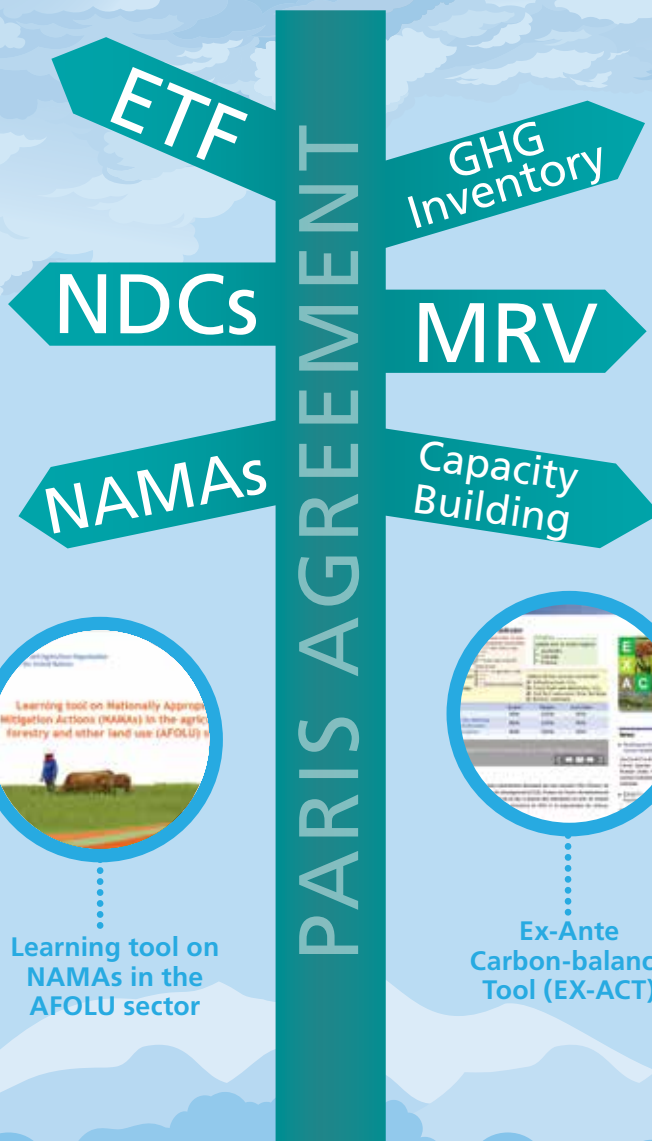
Ex-Ante  
Carbon-balance  
Tool (EX-ACT)



Economics and  
Policy Innovations  
for Climate-Smart  
Agriculture (EPIC)



AFOLU Emissions  
Analysis Tools



Capacities



Finance



Data



Knowledge



Policies



Coordination

