

# **Strategy for promoting methane mitigation from manure management in China**

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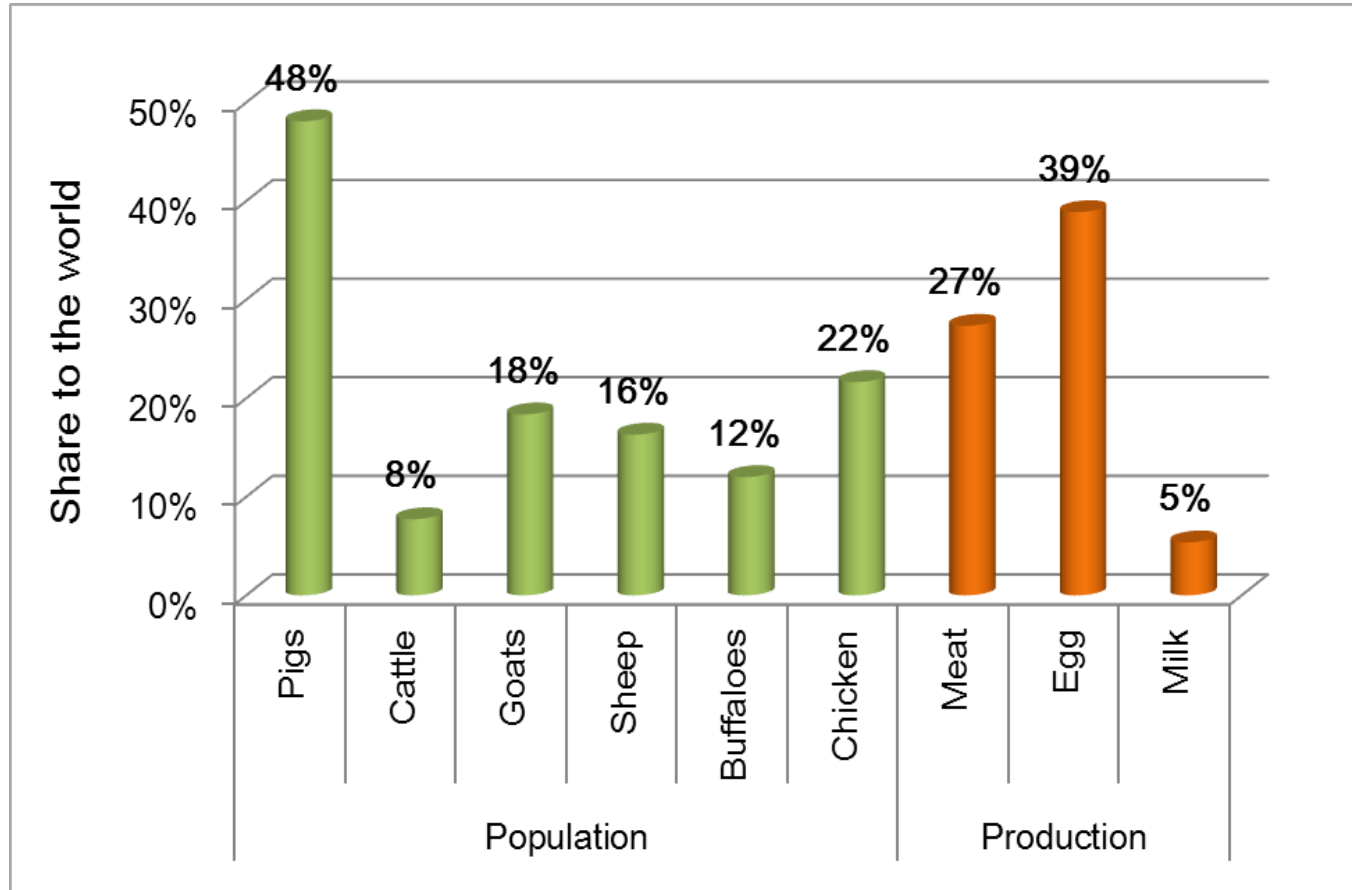
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# Outline

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- 1. Livestock production and GHG emissions**
  - 2. National Policies and NDCs**
  - 3. Objective , Activities and Outputs**
  - 4. Tasks Assignment**
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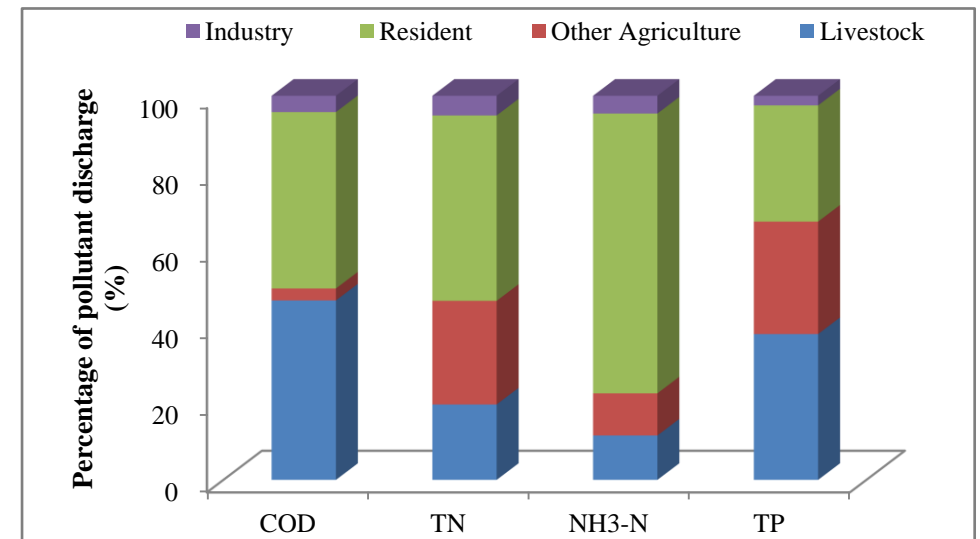
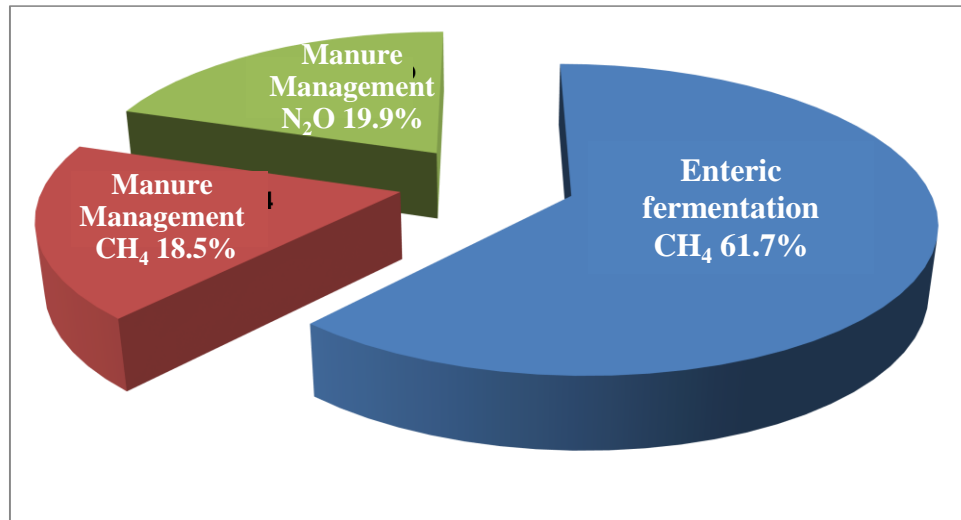
# Livestock Production in China



- **1/2 pigs, 1/3 poultry, 1/5 sheep, and 1/10 dairy of the world's total population.**
- **About 90 million household involved in activities related to animal production.**

# GHG emission inventory from livestock sector

- ❑ The total GHG emissions from livestock were **379 Mt CO<sub>2</sub>e**
- ❑ Accounted for 45.6% to agricultural emissions
  - CH<sub>4</sub> emissions from enteric fermentation: 61.7%
  - CH<sub>4</sub> emissions from manure management: 18.5%
  - N<sub>2</sub>O emissions from manure management: 19.9%
- ❑ Bulletin of the second national survey of pollution sources
  - COD emission from livestock accounted for 46.7% of the total emissions;
  - 94% of the total agricultural emissions;
  - **Exceeding emissions of municipal waste**



# Take actions to promote manure utilization and control pollution

## Policies & regulations

- ❑ **2014.01.01** *Regulation on the Prevention and Control of Pollution from Intensive animal farms*
- ❑ **2017.06.31** *General Office of the State Council issues Opinions of Accelerating Animal manure Utilization*
  - **Promote energy and fertilizer use**
  - **Promote the integration of crop & livestock production**

## Actions : 20 billion RMB

Manure utilization in  
586 counties

Manure utilization  
in intensive farms



Replacement of  
chemical fertilization  
in tea , veg, fruits

Subsidies for  
Machines

# China Nationally Determined Contributions

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## ❑ China NDC are as followed

- To achieve the peaking of CO<sub>2</sub> emissions around 2030 and making best efforts to peak early
- To lower CO<sub>2</sub> emissions per unit of GDP by 60% to 65% from the 2005 level

## ❑ Agricultural related content in NDC

- To promote the low-carbon development in agriculture, making efforts to achieve zero growth of fertilizer and pesticide utilization by 2020
- To control methane emissions from rice fields and nitrous oxide emissions from farmland
- To construct a recycle agriculture system, promote comprehensive utilization of crop wastes and animal manure

**Current policies on manure focus on the control of local environmental pollution.**

**There is no quantitative analysis on CH<sub>4</sub> mitigation potential of those policies and national actions.**

# Objectives

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## General objective

Promoting Updating China's NDCs and the incorporation of CH<sub>4</sub> mitigation from manure management into the 14th Five-Year (2021-2025) Work Plan.

## Specific objectives

- ❑ Identification of new practice and suitable applied practices for reducing CH<sub>4</sub> emissions;
- ❑ Quantification of mitigation potentials;
- ❑ Provision of policy recommendations for the formulation of the “14th Five-Year (2021-2025)” Work Plan for GHG reductions and the updating of NDCs.

# Activities and deliverables

Activity	Description	Deliverables
Activity 1	Quantify CH <sub>4</sub> emissions and co-benefits / trade off in the manure chain, including excretion, manure treatments and utilization, land application	Report on CH <sub>4</sub> emissions in the entire manure chain
Activity 2	Identify technologies and practices to reduce CH <sub>4</sub> emissions and propose synergistic integration of current technologies and practices	List of technologies and practices, for reducing CH <sub>4</sub> emissions
Activity 3	Survey the national policies on manure utilization and GHG mitigation, identify the policy gap	Report on policy of manure management and GHG mitigation



# Activities and deliverables

Activity	Description	Deliverables
Activity 4	Analyze policy scenarios and estimate the potential for CH <sub>4</sub> emissions reductions by 2025 and 2030 under different scenarios	Report on CH <sub>4</sub> mitigation potential by the years 2025 and 2030 under different policy scenarios
Activity 5	Organize a national and international workshop to invite the suggestion and disseminate results	Domestic workshop report; International workshop report
Activity 6	Propose policy and strategy recommendations on the formulation of “14th Five-Year (2021-2025)”, and update of NDC s related to manure	Policy and strategy recommendations on formulation of China’s national “14th Five-Year (2021-2025)” Work Plan and the update of NDCs.

# Tasks Assignment

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**☐ Climate & Clean Air Coalition (CCAC) Secretariat, United Nations Environment Programme(UNEP)**

- Cooperate to monitor the progress of this project



**☐ Institute of Environment and Sustainable Development in Agriculture, Chinese Academy of Agricultural Sciences (IEDA-CAAS)**

- Implement Activity 1 to 6



**☐ Global Rresearch Alliance on Agricultural Greenhouse Gases (GRA)**

- Co-organize of international workshop



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Thanks