National system in the Mongolia
Dr. Damdin Dagvadorj

# GHG Inventories in Asia Region

**13-14 November 2003, Phuket, Thailand**

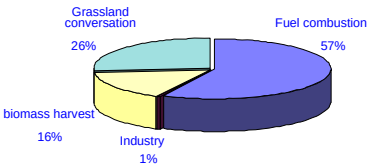
# NATIONAL SYSTEM IN MONGOLIA

D.Dagvadorj, Mongolia Met Agency
d_dagvadorj@env.pmis.gov.mn

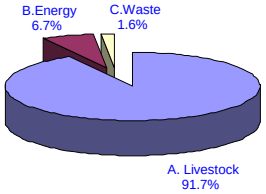
## GHG emissions in Mongolia (1)

Main GHGs are Carbon Dioxide and Methane in Mongolia.

Anthropogenic activities associated with the largest sources of carbon dioxide in Mongolia are combustion of fuel for power generation, heat production and conversion of grasslands to crops. The most significant source of methane is enteric fermentation in livestock. Emissions of nitrous oxide, nitrogen oxides and carbon monoxide are insignificant relative to total emissions of carbon dioxide and methane.

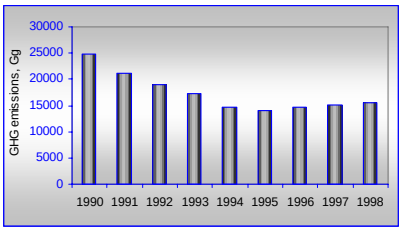



$CO_2$ emissions by sector for 1994




Methane emissions by sectors, 1994

# GHG emissions in Mongolia (2)

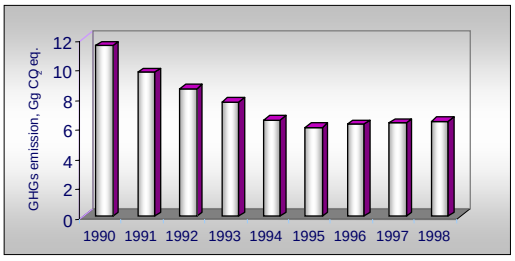



Net emissions of GHGs in $CO_2$-equivalents

The Mongolia total GHGs emissions is very low.

The sharp decrease of GHGs total emission since 1990 till 1995 is mostly due to socio-economic slowdown and subsequent recovery. The emissions of $CO_2$ and $CH_4$ start to increase from 1996 as a result of some increased economic activities in coal mining and liquid fuel import. Shortly emissions level follow country's economic growth.

# GHG emissions in Mongolia (3)




Dynamics of per capita emissions of GHGs, Gg $CO_2$-equivalent

Even though the Mongolia total GHGs emissions is very low, the annual per capita emission of GHGs in $CO_2$-equivalent is relatively high compared to other countries. It can be explained as very low population (2.4 million) and high requirement of heating for long duration.

National system in the Mongolia
Dr. Damdin Dagvadorj

## National context (1)

**Mongolia's GHGs inventories include emissions of carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), nitrogen oxides ($NO_x$) and carbon monoxide (CO). Emissions of other greenhouse gases, such as NMVOCs and PFCs, have not been included in the inventory.**

**Emissions were estimated for years 1990 to 1998, but according to the COP Guidelines for the preparation of Initial Communications by non-Annex I Parties to the UNFCCC, more detailed data are presented for 1994 as the base year for the inventory.**

## National context (2)

- **Because of the historical, geographical, climatic and economic circumstances of the country, some sources of GHGs such as methane emissions from oil and gas systems, emissions from savanna and agricultural residues burning, methane from rice cultivation, and use of fertilizers on agricultural soils are not applicable.**
- **A major limitation of the GHG Inventory data was the accuracy of the base data used. The main source of data was the Statistical Yearbook, which presents the only official inter-sectoral balance of energy and material flow in Mongolia.**

National system in the Mongolia
Dr. Damdin Dagvadorj

## National context (3)

- **Some country-specific sources of GHGs i.e. land used for open mining are considered as a source of $CO_2$ due to the conversion of grasslands for this purpose and accidental manmade steppe and forest fires in Mongolia occur often in spring and autumn, are the sources of greenhouse gases such as carbon dioxide, carbon monoxide, methane, nitrogen and nitrous oxides.**
- **However, while the last is believed to be a significant source of GHGs in Mongolia, it was not included in the national emission totals considering that the IPCC Guidelines do not consider this as an anthropogenic source at this time.**

## Institutional arrangements (1)

**National Agency for Meteorology, Hydrology and Environment Monitoring was designated by the Government of Mongolia as a leading agency for climate change related studies, including GHG inventories.**

**The Agency is responsible for Establishment of National GHG Inventory Team, Collecting activity data and Emission Factors, Compiling, Archiving, Updating, and Managing GHG Inventories.**

National system in the Mongolia
Dr. Damdin Dagvadorj

# Institutional arrangements (2)

**Participating Organisations:**

- **Ministry of Nature and the Environment**
- **Ministry of Infrastructure**
- **Ministry of Agriculture**
- **Ministry of Food and Agriculture**
- **State Statistical Office**
- **Ulaanbaatar City Governor's Office**
- **Universities**
- **Private sector and NGOs**

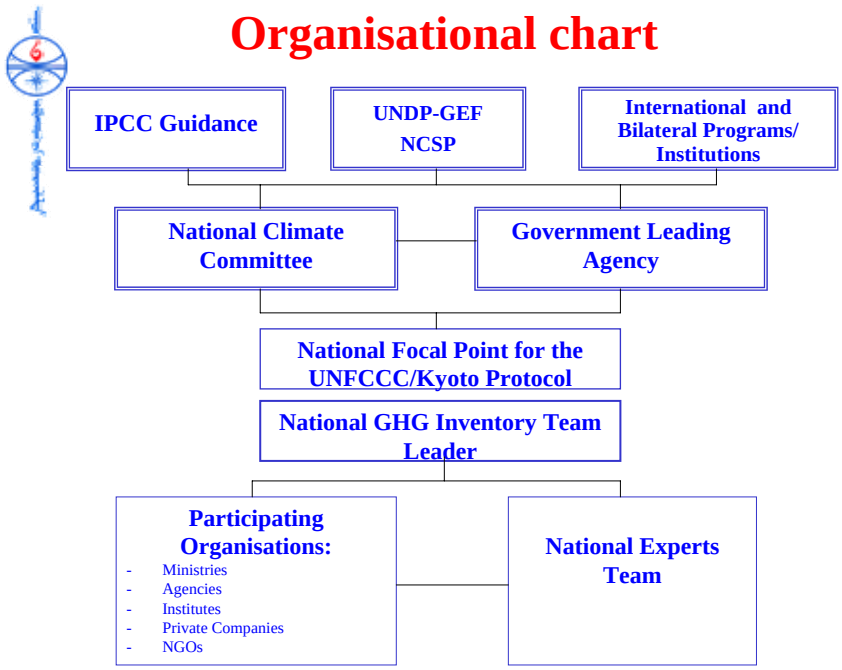
# Institutional arrangements (3)

**National GHG Inventory Team was created. But, the Team is not permanent. National experts work on the contract basis when a inventory activities are necessary.**

**National Team Leader in National Agency for Meteorology, Hydrology and Environment Monitoring**

National system in the Mongolia
Dr. Damdin Dagvadorj

# Organisational chart




# Planning Immediate Objectives

1. Strengthening of national arrangements for compiling, archiving, updating, and managing greenhouse gas inventories
2. Create a Sustainable institutional process
3. Enhance technical capacity for preparing national inventories
4. Improve emission factors and methods

National system in the Mongolia
Dr. Damdin Dagvadorj

## National Strategy (1)

**The main strategies of the country are:**

- **to improve the quality of the GHG inventories to be included in the Second National Communication.**
- **to sustain Technical and Institutional capacity**

## National Strategy (2)

**Activities to strengthen national arrangements :**

- Training of National GHG Inventory Team in the IPCC's Good Practice Guidance
- Development of Long-term National Strategies to improve inventory preparation
- Identification of the national institutions and organisations to be targeted for long-term involvement in the inventory process.
- Development of a manual of procedures for preparing a national GHG inventory

## National Project Strategy (2)

**Activities on improving selected emission factors and methods:**

- Systematically documentation of the reliability of the emission factors and re-estimation of EFs.
- Preparation of key source inventory.
- Training of National experts in quality analysis and quality control (QA/QC) procedures
- Development of plans of the QA/QC that can be put into place for Second National Communications.
- Archiving of all activity data and emission factors

# Thank you