

Lao Republic
Mr. Syamphone Sengchandala

**GHG Inventory in ASIA Region
13-14/11/2003, Phuket Thailand**

**The First Experience GHG Inventory
Preparation in Lao PDR**

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Outline presentation

- **Background Information**
- **GHG Inventory**
- **GHG Mitigation Option**
- **Factors affected the achievement of results**
- **Next Step.**

Background Information

- Lao PDR Ratified the UNFCCC on 4 April 1995 and Ratify Kyoto Protocol in 6 February 2003.
- The Science Technology and Environment Agency (STEA) is assigned by the Government as a National Authority for coordinating and implementing UNFCCC and Designated National Authority (DNA) for CDM
- Established National Greenhouse Gas Inventory Committee (NGIC) and Technical Working Group(TWG).
- Lao PDR has carried out two main projects:
 - National GHG Inventory Project supported by UNDP-GEF, since July 1997 and completed in 2000.
 - Climate Change Enabling Activity (additional financing for capacity building in priority area) supported by UNDP-GEF since January 2001 and will finalizing soon.

GHG Inventory

Based Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventory were studied in 4 Sectors (Based year 1990 data) as below:

1. Energy sector:
 - Fossil fuel consumption
 - Traditional biomass burned for energy
2. Agriculture sector:
 - Enteric fermentation
 - Manure management
 - Rice cultivation

GHG Inventory [Cont.]

3. Forestry sector:

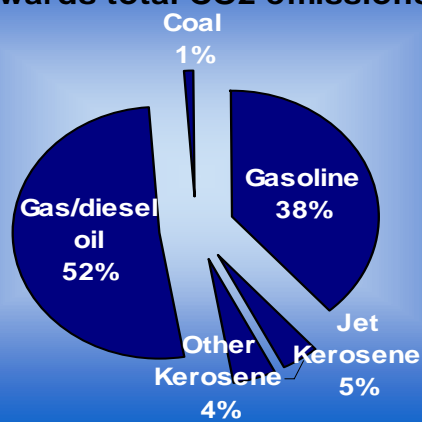
- Change in forest and woody biomass
- Forest conversion: Aboveground CO₂ released from on-site burning
- Forest conversion: Aboveground CO₂ released from off-site burning
- Aboveground CO₂ release from decay

4. Waste:

- Landfills
- ❖ Lao PDR is a net emitter

GHG Emission (%) from fossil fuel consumption in Energy sector:

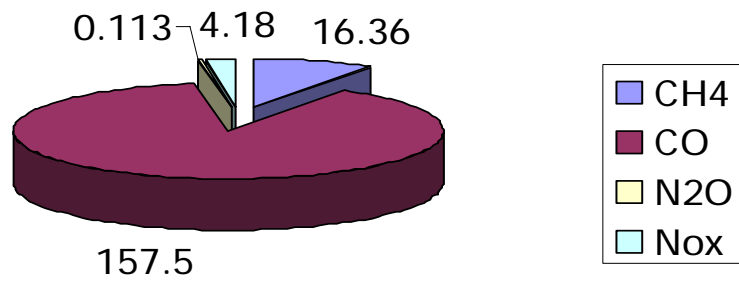
Contribution of different fuels towards total CO₂ emissions



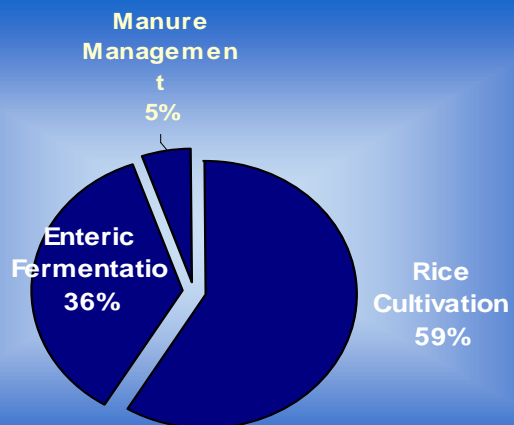
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GHG Emission from traditional fuels in Energy sector:

Emissions from traditional fuels



GHG Emission (%) from Agriculture Sector:



GHG Mitigation Option

- Energy sector:
 - Energy conservation and improvement in energy efficiency through upgradation currently employed technologies.
 - Introduction of the advanced technologies that are more efficient or based on renewable energy source.
 - Structural change within the consumer sectors.
 - Promotion of the use of renewable energy such as small-scale hydropower development and electricity generation by wind, solar, thermal energy and biogas.
 - In the transportation sector, the options governed by objective of the reducing congestion and local air pollution. The major options are use of 4- stroke engine to replace 2- stroke and expansion of public transportation service.

GHG Mitigation Option [cont.]

- Agriculture sector:
 - The options possible in the agriculture sector are as below:
 1. Multiple Aeration Technique or MAT
 2. Strategic supplement to feed through MUB (multi-nutrient urea block)
 3. Biogas digesters to capture CH₄ for energy use.
- Forest sector:
 - Increase the total forest area in the country.
 - Reforestation of regarded forest land, afforestation programm and delineation of the national protected.

GHG Mitigation Option [cont.]

- Waste:
 - Promote public to reduce, reuse and recycle of solid waste.
 - Use three principal methods to dispose of solid waste as municipal landfills, open burning and dumping.
 - Encourage the treatment of waste water before releasing out.

Factors affected the achievement of results:

- Lack of Local Expertise
- Lack of realistic data
- Lack of country-specific or regional-specific emission factor
- Lack of activity data required to estimate GHG emissions



Next Step

- Preparation Second National Communication on Climate Change.
- Preparation National Action Plan of Action (NAPA) on Climate Change.
- Increase public awareness activities on climate change
- Implement a GHG mitigation plan



Thank you