

**TRAINING COURSES FOR NATIONAL  
EXPERTS INVOLVED IN THE  
DEVELOPMENT OF GHG INVENTORY  
– ENERGY SECTOR**

**Introduction and  
reporting requirement**

Moldova, Chisinau  
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# Target Audience and Objective of the Training Materials

- These training materials are suitable for experts and institutions involved in the development of GHG inventory in Energy sector with beginning and intermediate level knowledge of national greenhouse gas (GHG) inventory development
- After having read this presentation, in combination with the related documentation, the reader should:
  - Have an **overview** of how emissions inventories are developed for the energy sector (fuel combustion);
  - Have a **general understanding** of the methods available, as well as of the main challenges in that particular area;
  - Be able to **determine which methods** suits their country's situation best;
  - Know where to **find more detailed information** on the topic discussed.

# Background materials and references

**UNFCCC** (COP decisions, reporting guidelines, training materials, etc.)

**IPCC** (methodologies, software)

- The Revised 1996 IPCC Guideline for national GHG inventories
- Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories. 2000
- 2006 IPCC Guidelines for national GHG inventory

**IEA** (energy balances)

The peer review findings and recommendations

## Audience poll...

- Who has prepared a national inventory for your country?
- Who has worked on the energy sector?

## Problems to be considered

- Problems you have faced in preparing estimates for the energy sector have been identified during the technical peer review
- Your plans for the future to improve your inventory
  - Use 2006 IPCC Guidelines
  - Use new inventory software
  - Improve inventory accuracy, completeness and time series consistency

# UNFCCC references used for preparation of training courses

- The CGE Training Materials for the Preparation of National Communications from non-Annex I Parties
- **Measurement, reporting and verification (MRV) for Developing Country Parties**
- The tools and training materials for non-Annex I reporting
- **Basic course of the review of greenhouse gas inventories of Parties included in Annex I to the Convention**
- **IPCC Guidelines**

# UNFCCC requirements to National Reports from non-Annex I Parties

Reporting for [non-Annex I Parties](#) is implemented through national communications (NCs) and biennial update reports (BURs).

The national GHG inventory in the Energy sector is prepared according to the reporting requirements set up in

- “Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention” (Decision 17/CP.8 ) and
- “UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention” (Decision 2/CP.17 Annex III ).

# Reporting requirements for the GHG inventory (concerning Energy sector)

## Republic of Moldova as a non-Annex I party

- Should use the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, for estimating and reporting their national GHG inventories
- May use different tiers methods,
- encourage to use national methodology, country-specific and regional emission factors and activity data for key sources, provided that these methodologies are consistent, transparent and well documented
- encouraged, to estimate and report CO<sub>2</sub> fuel combustion emissions using both the sectoral and the reference approaches, and to explain any large differences between the two approaches

# **Reporting requirements for the GHG inventory (concerning Energy sector) – 17/CP.8**

- wishing to report on aggregated GHG emissions and removals expressed in CO<sub>2</sub> equivalents should use the global warming potentials (GWP) provided by the IPCC in its Second Assessment Report
- encouraged to provide information on methodologies used in the estimation of anthropogenic emissions of greenhouse gases, including a brief explanation of the sources of emission factors and activity data.
- encouraged to identify areas where data may be further improved in future communications through capacity-building.



# Methodology available – IPCC Guidance

- The Revised 1996 IPCC Guideline for national GHG inventories
- Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories. 2000
- 2006 IPCC Guidelines for national GHG inventory

Annex I Parties shall use the 2006 Guidelines in preparing their inventories beginning in 2015 (Decision 24/CP.19)

Moldova during the next inventory cycle has the intention to start use in more extent the 2006 IPCC Guidelines

Special attention will be paid during the training courses to the differences between the Revised 1996 IPCC guidelines for national GHG inventories and the 2006 IPCC Guidelines for national GHG inventories

# Methodology available (cont.)

- Fundamental methods laid out in the **Revised 1996 IPCC Guidelines**
- IPCC **good practice guidance** clarifies some issues (e.g. international bunker fuels) and provides some updated factors...
- ...but no major changes made for fuel combustion!
- 2006 IPCC Guidelines provide new information on non-energy use, new Tier 2 method for oil systems fugitives, guidance on abandoned coal mines, etc.

# GHG Inventory software

- Moldova uses the IPCC 1996 software
- Web-based tool - the Non-Annex I Inventory software (NAIIS) - developed for use by non-Annex I Parties  
([http://unfccc.int/national\\_reports/non-annex\\_i\\_national\\_communications/non-annex\\_i\\_inventory\\_software/items/7627.php](http://unfccc.int/national_reports/non-annex_i_national_communications/non-annex_i_inventory_software/items/7627.php)) – seems to be very similar to on-line CRF Reporter Inventory software
- The IPCC 2006 inventory software  
(<http://www.ipcc-nggip.iges.or.jp/software/index.html>)

# Training courses content

- Energy sector overview
- *Stationary combustion*
- *Mobile combustion*
- *Reference approach*
- *Fugitive emissions – Oil and gas system*
- Time series consistency
- The quality assurance