



LITHUANIA'S GHG INVENTORY NATIONAL SYSTEM

Zagreb, Oct 14-16, 2015



Outline

- Background;
- National system's revision;
- GHG inventory National system;
- Institutional arrangements;
- Quality control /Quality assurance procedures;
- Main data providers/Data archiving;
- Good points/ bad points;
- Planned improvements.



Background

- Lithuania signed the UNFCCC as an Annex I Party in 1992 and ratified it in 1995.
- The Kyoto Protocol was signed in 1998 and ratified in 2002.
- Lithuania undertook to reduce its GHG emissions by 8% below 1990 levels during the first commitment period 2008-2012.
- Under the Doha Amendment of the UNFCCC Kyoto Protocol in the second commitment period 2013-2020 Lithuania with the other EU Member States and Iceland has jointly committed to reduce 20% the overall GHG emissions to compare with 1990 level.
- GHG inventory has been prepared since the year 2004 (first NIR & CRF).

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Background

2004

- First report was prepared with the assistance of EU PHARE project "Strengthening of institutional capacity to implement EU requirements on chemicals, GMO, IPPC and GHG"

2005

- The development and preparation of the GHG inventory was the responsibility of a single person with other tasks in the Air Division at the Ministry of Environment.

2006-2007

- Contract was signed with **Institute of Ecology** on compilation of NIR. Ministry of Environment submitted GHG inventory reports to European Commission and UNFCCC secretariat after final approval in the National Climate Change Committee.

2008-2011

- Contract was signed with **the Centre for Environmental Policy** (consulting company) on compilation of NIR. Ministry of Environment submitted GHG inventory reports to European Commission and UNFCCC secretariat after final approval in the National Climate Change Committee.

2012 - 2015

- Current National system

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National system's revision (1)

- In 2010 UNFCCC Expert Review Team (ERT) concluded that the national system of Lithuania fails to perform and non-compliant under the Kyoto.
- The issues related to GHG inventory system improvement were acknowledged and prioritised at highest political level.
- 2 action plans were developed and implemented in order to remedy the non-compliance:
 - Action Plan for the Improvement of the National GHG Inventory Preparation, approved by the Order No D1-182 of the Minister of Environment on 28-02-2012.
 - Action Plan for the Improvement of the LULUCF Reporting, approved by the Order No D1-987/3D-927 of the Minister of Environment and Minister of Agriculture on 16-12-2011, and

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National system's revision (2)

- Re-designed National system for national GHG inventory preparation for effective functioning with clearly described functions and responsibilities, ensuring expert capacity for long-term: permanent GHG inventory preparation group consisting of 7 sectoral experts was established by Government Resolution No 683 of 08-06-2011;
- Environment Protection Agency nominated as GHG inventory compiler and QA/QC manager by MoE Order No D1-1017 of 22-12-2010;

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National system's revision (3)

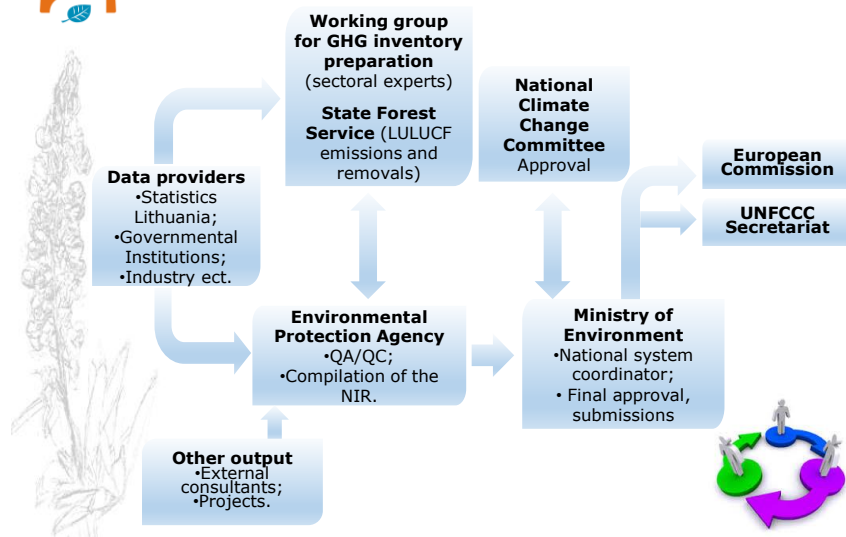
- State Forest Service delegated with functions to prepare LULUCF part of the GHG inventory by MoE Order No D1-666 of 29-07-2010;
- Annual land plots identification was strengthened through the results of 2 studies in accordance with Action plan to improve LULUCF reporting of Lithuania. Approval and amendments of the 7 legal acts improving the legislative basis to ensure mandatory registration of areas specific to the activities under Article 3 paragraph 3 and 4 of the Kyoto Protocol;



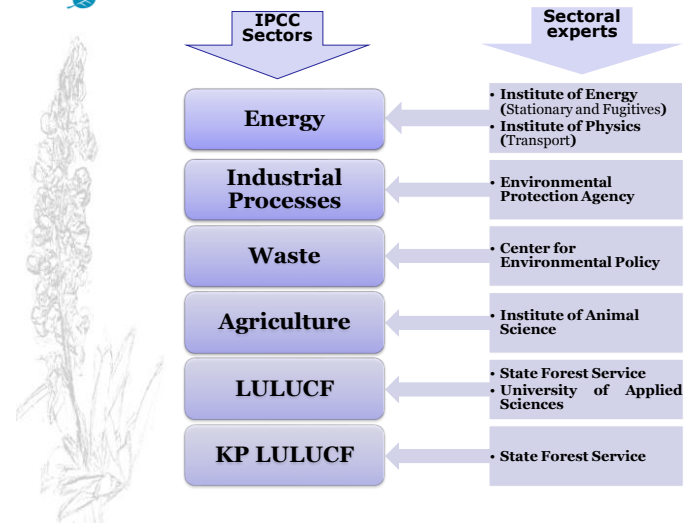
National system's revision (4)

- In 2011-2012, 4 additional studies were conducted aiming to collect sufficient activity data, process information and emission factors in 4 sectors (Energy, Industrial processes, Agriculture, Waste);
- Most of the ERT recommendations were addressed in 2011 and 2012 NIRs, transparency of the NIR was also considerably improved: more descriptions on institutional arrangements, methodologies, activity data and emissions factors used was provided;
- GHG inventory archive was improved following the implementation of Lithuania's GHG inventory archive improvement plan.

National GHG inventory system




Institutional arrangements (1)





Institutional arrangements (2)



•**Ministry of Environment** (MoE)– single national entity responsible for national GHG inventory:

- Overall responsibility for GHG inventory preparation process
- Development of legal arrangements
- Inventory consideration and approval
- Timely submission to EC and UNFCCC secretariat

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Institutional arrangements (3)




•**Environmental Protection Agency** (EPA) responsibilities include:

- Coordination of GHG inventory preparation process
- Compilation of NIR
- Cross-cutting issues (key categories, uncertainty etc.)
- QA/QC manager, data checks, archiving
- Maintain CRF database

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Institutional arrangements (4)




•**Permanent GHG inventory working group** is responsible for:

- Identification on the basis of the IPCC GPG of methodologies for calculation of GHG emissions
- Determination of activity data/ emission factors
- Calculation of emissions
- Data quality control
- Filling CRF tables for corresponding sectors, drafting relevant NIR sectoral chapters

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Institutional arrangements (5)



•**State Forest Service (SFS)** - Governmental institution established and supervised by MoE. SFS compiles National Forest Inventory and the forest information system, carries out monitoring of the status of the Lithuanian forests etc.

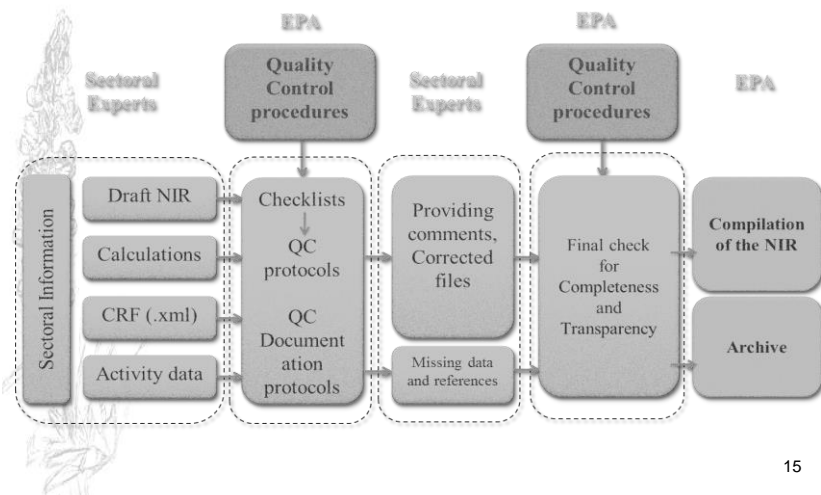
•Main responsibilities:

- Collection of activity data and emission factors used to calculate emissions and removals for LULUCF and KP-LULUCF sectors;
- Selection of methods, emission and removals estimates

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Quality control procedure



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Quality Assurance (1)

- **A basic review** of the draft GHG emission and report takes place before the final submissions to the EC and UN by the involved institutions, on GHG inventory preparation process
- **Reviewers are independent experts** not closely connected with national inventory preparation (other agencies, national or international experts or groups)
- The **final draft of the NIR** is coordinated with:
 - Climate Change Policy Division at MoE
 - National Climate Change Committee
 - Relevant departments of the Ministry of Environment (e.g. Department of Waste, Department of Water, Department of Forestry and others)
 - Subordinated institutions of MoE (e. g. Environmental Protection Agency, etc.).

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Quality Assurance (2)

- Each year, the **European Commission** performs quality checks of the EU member states GHG inventories. The corrections are elaborated in Lithuania's GHG inventory in response to EC quality checks and comments.
- **UNFCCC** reviews performed by the ERTs help to fulfill requirements of the Quality Assurance of the GHG inventory. UNFCCC review reports indicate issues where inventory needs improvements.

GHG Inventory Expert team shall take into consideration recommendations provided by the ERT to ensure that all estimates or explanations as indicated by the ERT are corrected and included into NIR the next submissions.

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Main data providers

- **Statistics Lithuania**
Statistical database and Yearbooks on energy balance, agriculture, commodities, natural resources and environmental protection
- **Lithuanian Environmental Protection Agency**
 - Waste generation and management
 - Wastewater treatment and discharge
 - Database of F-gases
- **State Forest Service :**
 - National Forest Inventory
 - Lithuanian Statistical Yearbooks of Forestry
 - Lithuanian State Forest Cadastre
- **Agriculture Information and Rural Business Center**
- **Other Governmental Institutions**
- **Research Institutes**
- **Industrial companies**



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Data archiving

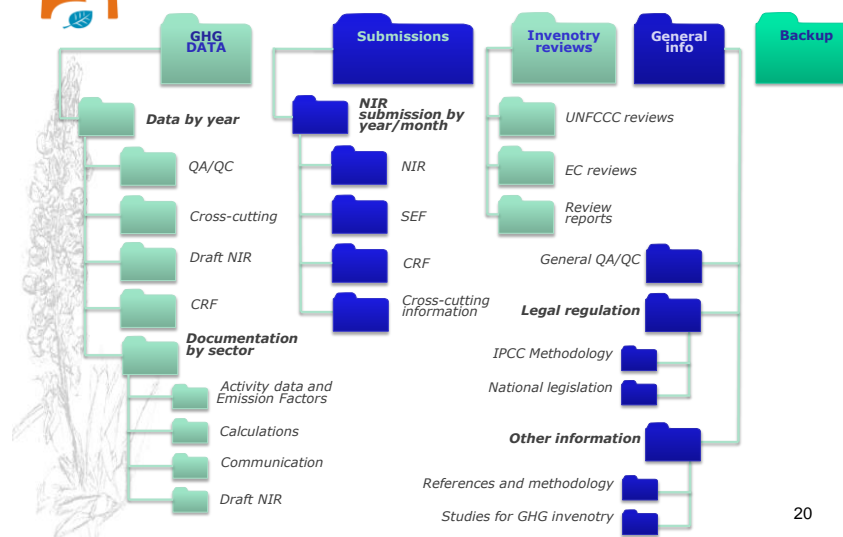
•Climate Change Division of EPA is responsible for management and maintenance of GHG inventory Archive

- Inventory data - background information on activity data and emission factors are archived
- Information on QA/QC activities, decisions reached by the experts group, reviews, results of key category analysis and uncertainty analysis, draft NIR of each sector
- Archive of GHG submissions and all supporting reference material is stored and maintained in the ftp server at the EPA
- Backups are prepared on regular basis following the EPA information management procedures

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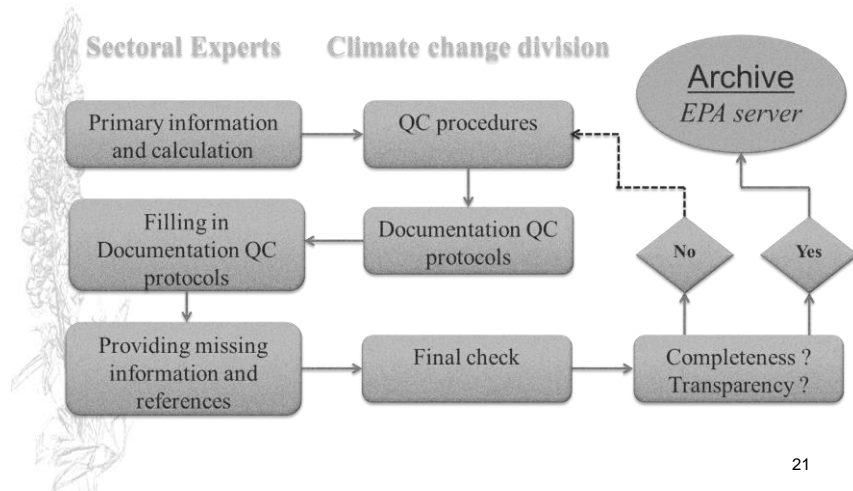
Archive structure



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Quality control procedures for Archive



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Good points:

- More consistent National system - the permanent group of experts;
- Research institutes are involved;
- Improved QA/QC system;

Bad points:

- Higher financial and administrative burden in order to maintain current GHG NIR National system.

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Planned improvements

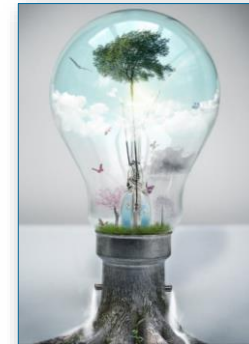
- Continue to build the capacity and improve the expert qualification: Implementation of the Norway Grants partnership project **"Partnership project on greenhouse gas inventory"** between Lithuania and Norway
- Investigate possibilities for collaboration with neighbouring countries by sharing knowledge and experience, performing PEER reviews

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Thank you

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