National inventory system as a source of information for the evaluation of mitigation implementation

Paris, 30 November, 2015

Outline

- Background information

- GHG National Inventory System

- Main data providers

- Annual inventory process

- NIR as a source for climate change mitigation policy development and implementation

- International cooperation for NIR improvement

Background information

- Area: 65 302 km2

- Population: 2.96 million (2013)

- EU Member State since 2004

- GHG emissions in 2013: 19 946 kt CO2eq

- GHG emissions per capita (2013): 6.7 t CO2eq

- 0.04% from global GHG and 0.55% from the EU total GHG

- During Kyoto Protocol CP1 GHG emissions reduced by 56% (Lithuania's CP1 target: -8% below 1990 levels)
- Lithuania's Kyoto Protocol CP2 target: -20% jointly with other EU Member States and Iceland to compare with 1990 level
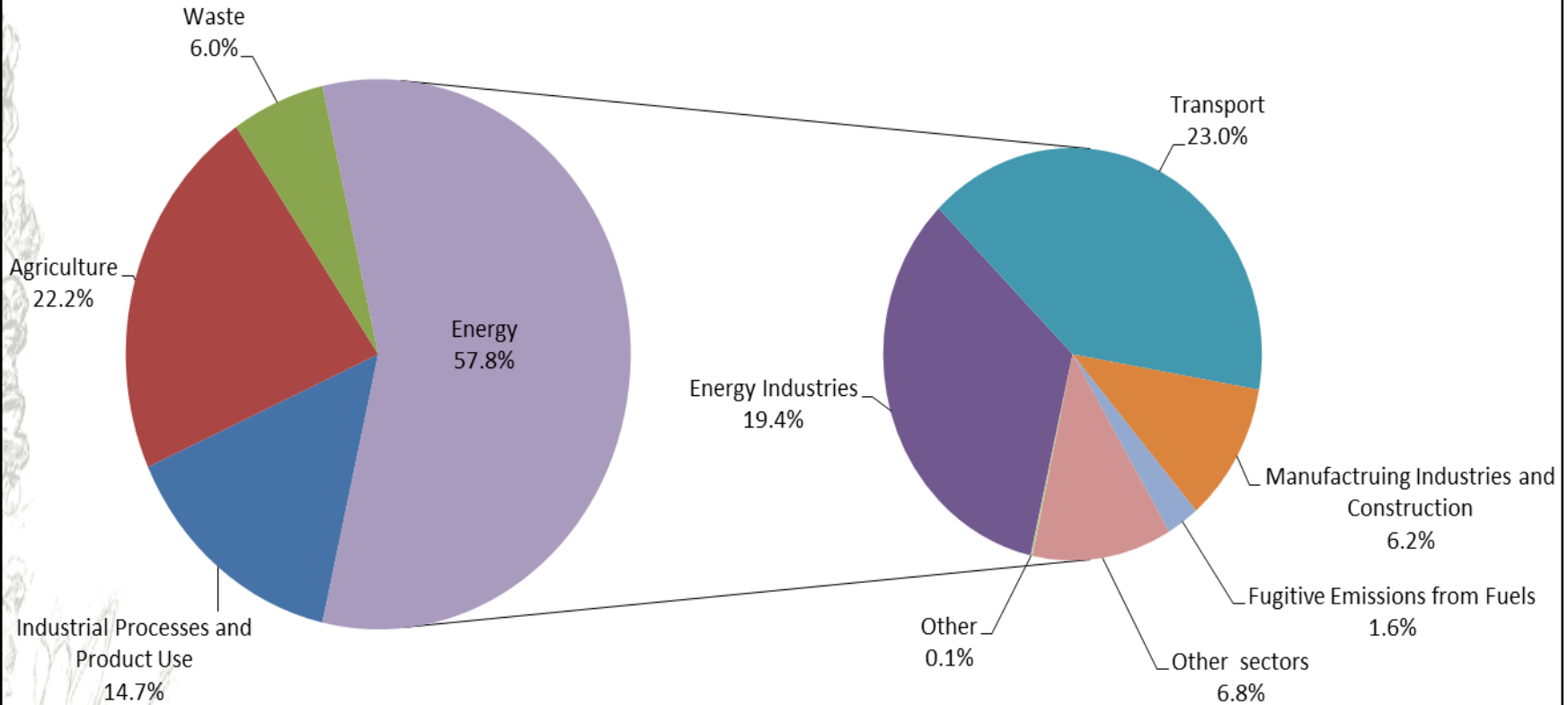- GHG inventory has been prepared since the year 2004 (first NIR & CRF).
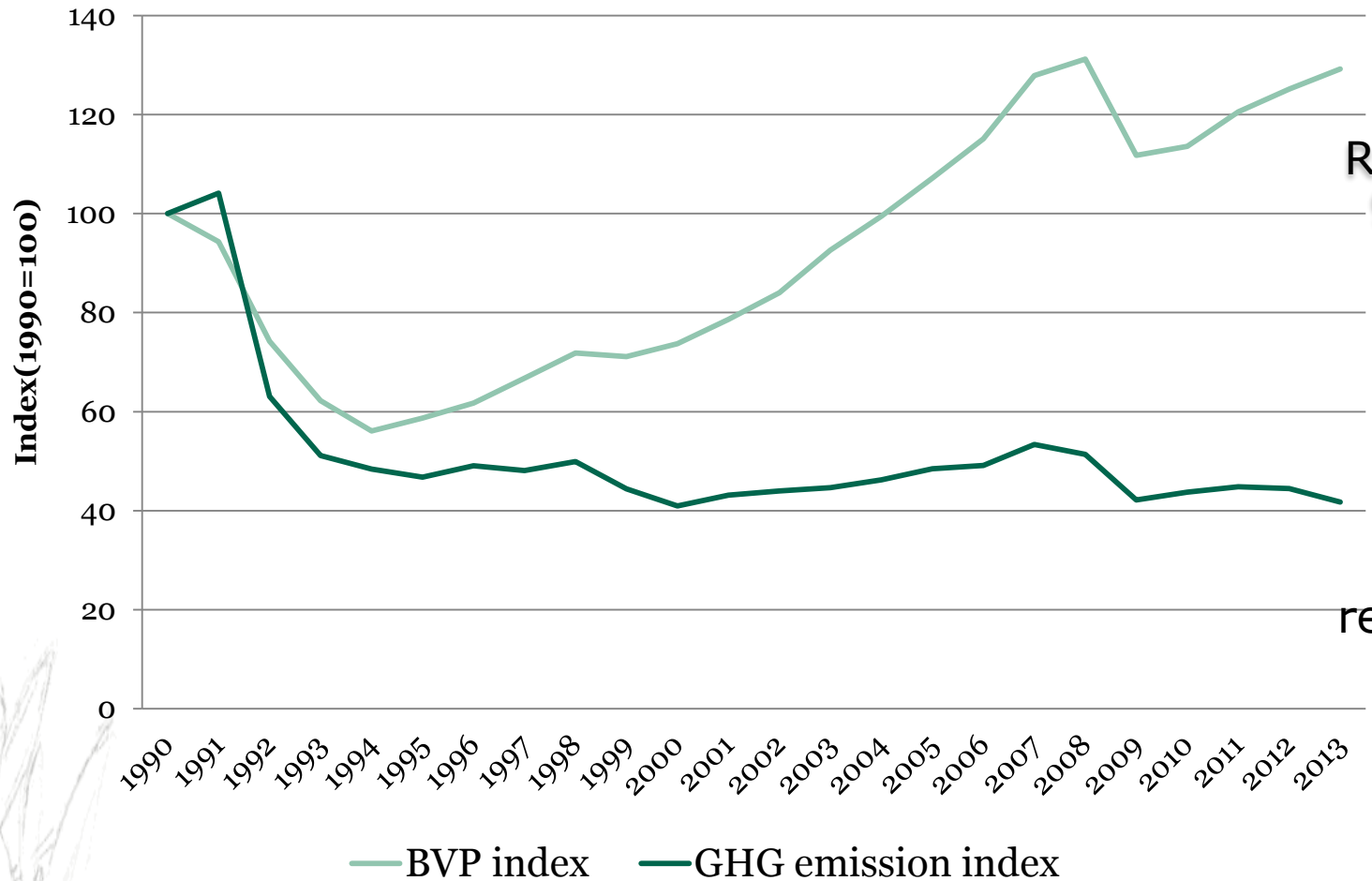
GHG emissions 1990-2013
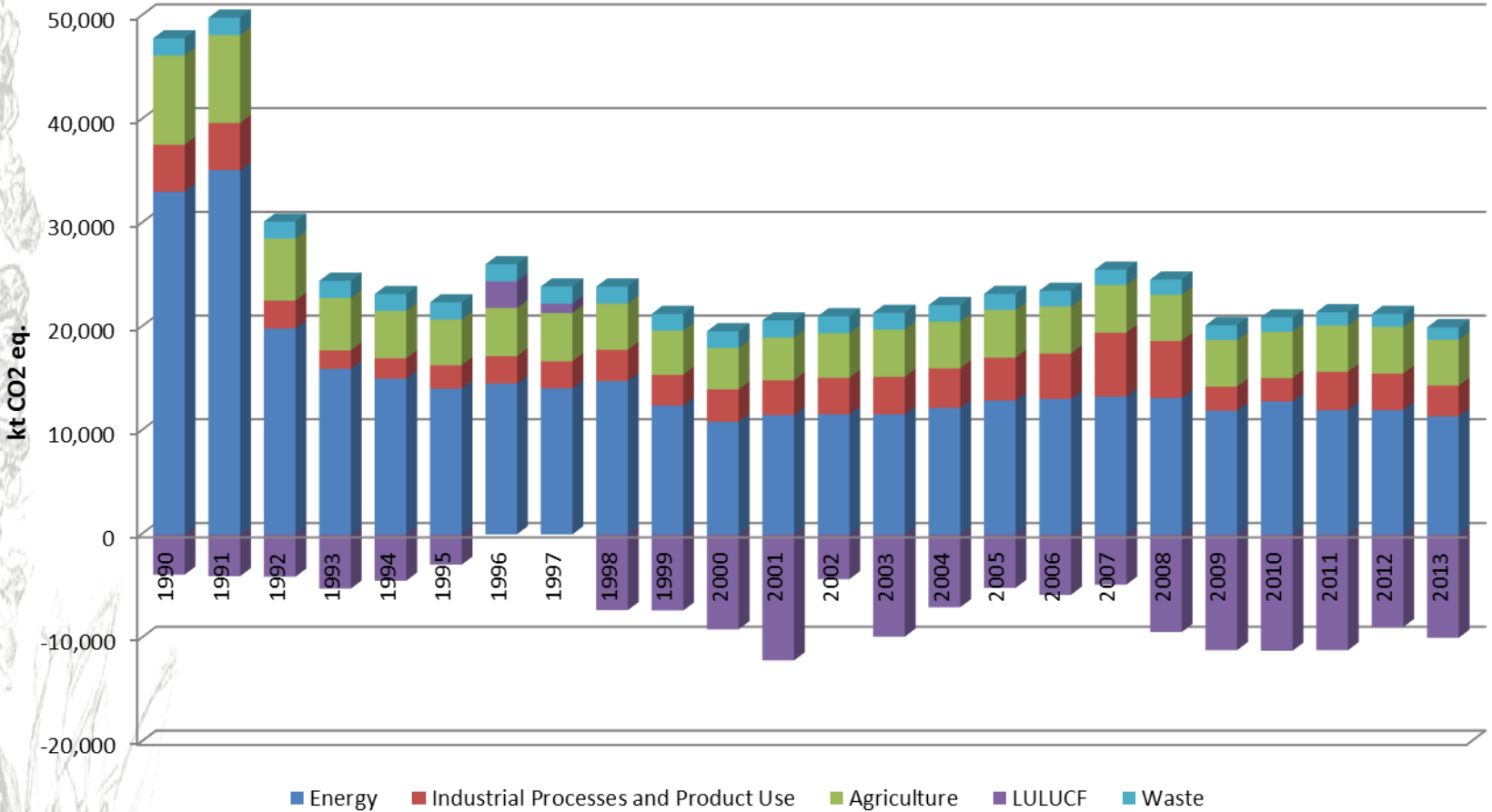
GHG emissions by sectors in 2013

Changes of GDP and GHG emission index in Lithuania

Real GDP growth 29%

GHG reduction 58%

— BVP index — GHG emission index
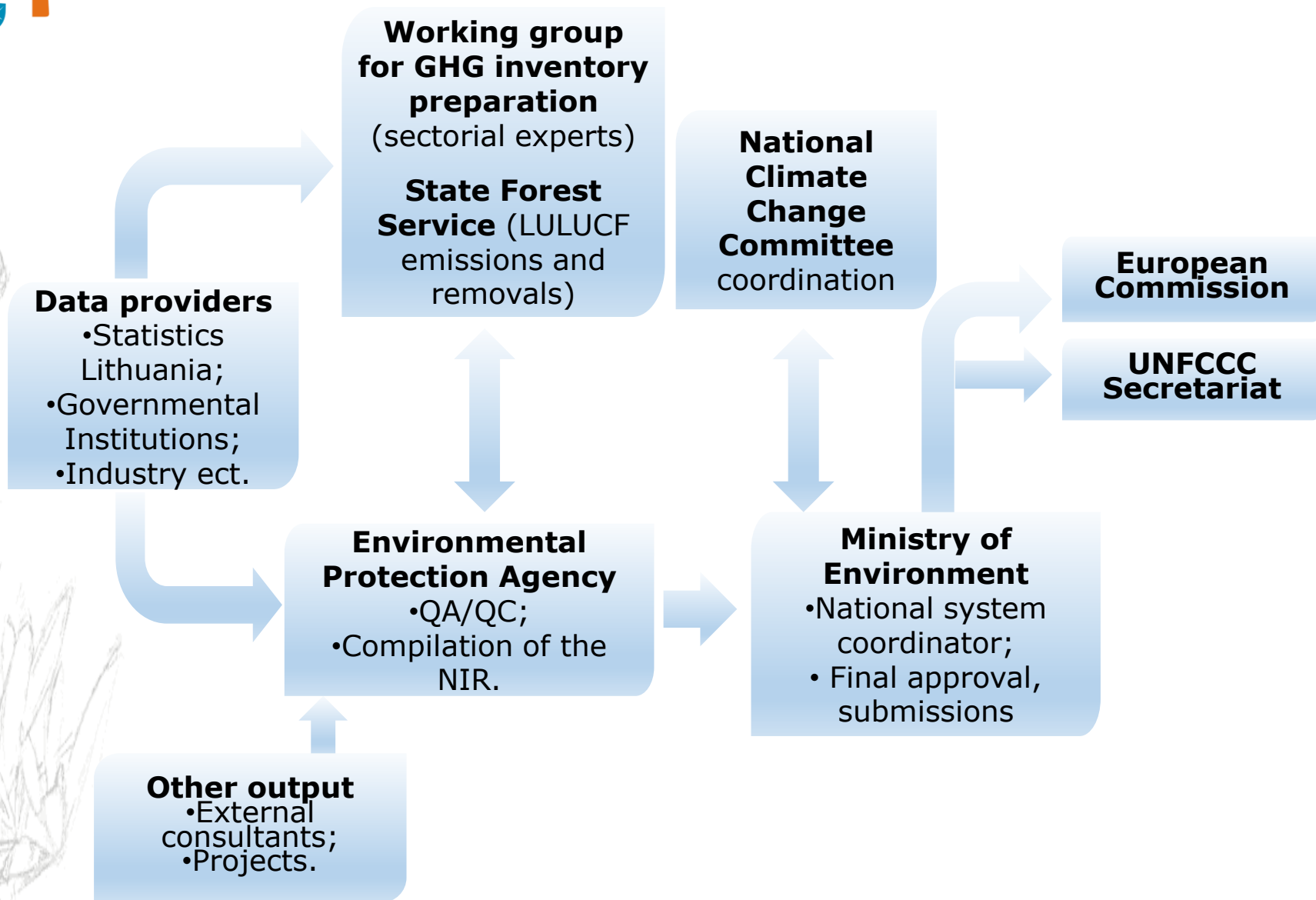
GHG inventory preparation system (1)

- Until 2011 GHG inventory preparation process was performed by contracting GHG compilers on annual basis. Inventory work carried out only by means of temporary projects was not systematic enough.

Aiming to increase institutional capacity for inventory preparation and continuity of the inventory preparation process **during 2011-2012 major revisions of the national system took place**:

➢ *Environmental Protection Agency* was nominated as GHG inventory compiler and QA/QC manager (MoE Order No. D1-1017)

➢ *State Forest Service* was delegated with functions to prepare LULUCF part of the GHG inventory (MoE Order No. D1-666)

➢ *Working group* for GHG inventory preparation consisting of 5 experts from scientific institutions was established (Governmental Resolution No. 683, 2011)

➢6 studies were conducted aiming to collect sufficient activity data, process information and emission factors in 5 sectors

➢Improved QA/QC, developed GHG inventory archiving system…

GHG National Inventory System (2)

Working group for GHG inventory preparation (sectorial experts)

State Forest Service (LULUCF emissions and removals)

National Climate Change Committee coordination

European Commission

UNFCCC Secretariat

Data providers
•Statistics Lithuania;
•Governmental Institutions;
•Industry ect.

Environmental Protection Agency
•QA/QC;
•Compilation of the NIR.

Ministry of Environment
•National system coordinator;
• Final approval, submissions

Other output
•External consultants;
•Projects.

GHG National Inventory System (3)

IPCC Sectors

Sectoral experts

IPCC Sectors	Sectoral experts
Energy	• **Institute of Energy (**Stationary and Fugitives**)** • **Institute of Physics (**Transport**)**
Industrial Processes	• **Environmental Protection agency**
Waste	• **Center for Environmental Policy**
Agriculture	• **Institute of Animal Science**
LULUCF	• **State Forest Service** • **Lithuanian Research Center for Agriculture and Forestry**
KP LULUCF	• **State Forest Service**

Data providers

Summary of institutions responsibilities to provide data under the Government Resolution No 1540

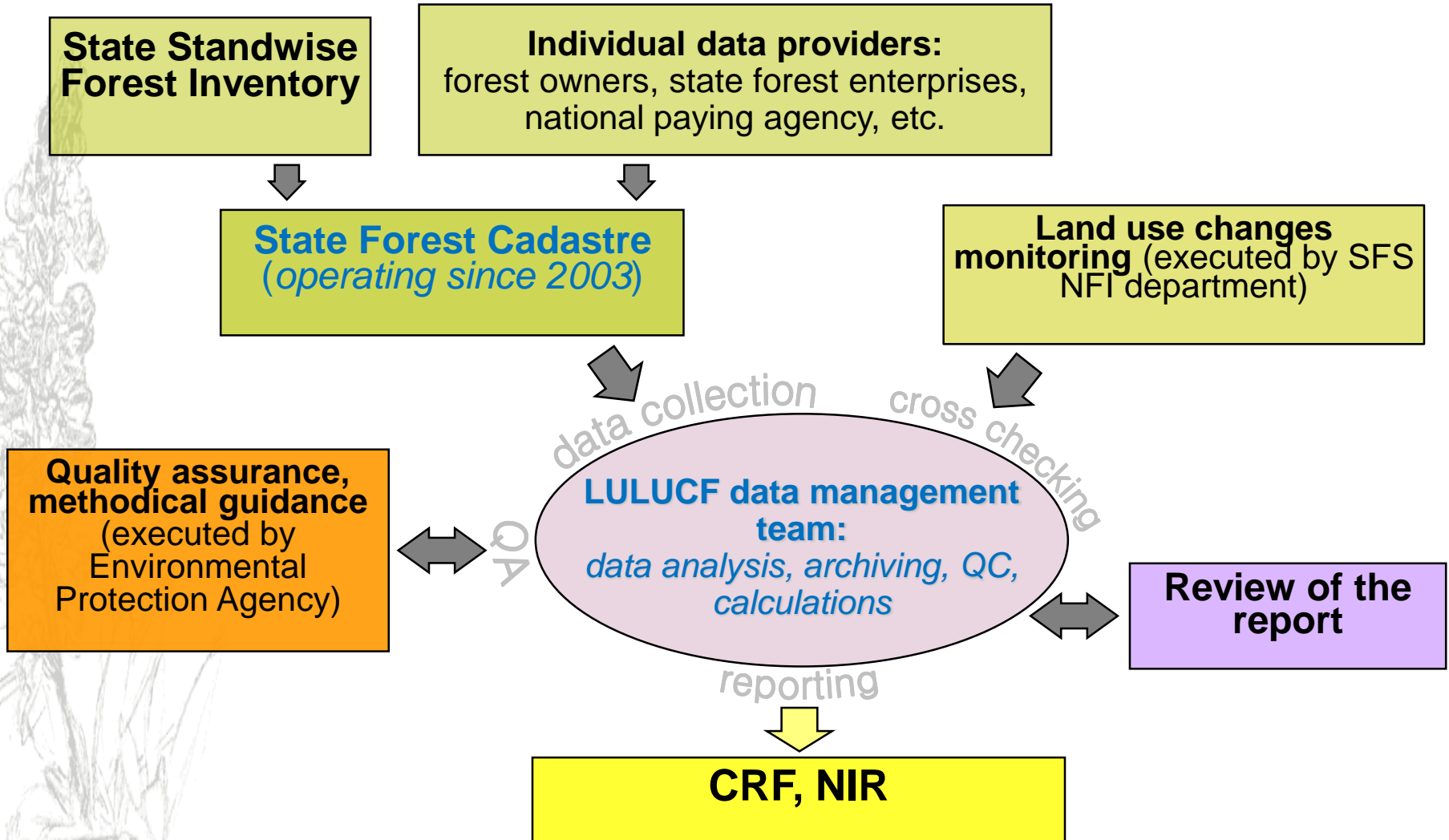| Institution	Data
Statistics Lithuania	Statistical database on energy balance, agriculture, commodities
Ministry of Agriculture and it's subordinates	Information on land use and land use change areas and other relevant information Information on cattle population, age and other relevant information required for inventory's Agriculture sector's estimates preparation
Ministry of Energy and it's subordinates	All the available information required for GHG inventory's Energy sector's estimates preparation
State science research institutes	All the available information required for GHG inventory preparation possessed by the Lithuanian Energy Institute, Agriculture Institute, Institute of Agrarian Economics, Institute of Animal Science, Institute of Physics, etc.
State Road Transport Inspectorate under the Ministry of Transport and Communications	Information on average CO_2 emission from different type of vehicles
Ministry of Interior and it's subordinates	Information on annually registered number of vehicles, their models, types, engine capacity and fuels used

Other Data providers

Institution	Data
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
ETS operators	ETS data reports
Other Governmental institutions	Various data
Industrial companies	Industrial production data

LULUCF data collection

State Standwise Forest Inventory

Individual data providers: forest owners, state forest enterprises, national paying agency, etc.

State Forest Cadastre (*operating since 2003*)

Land use changes monitoring (executed by SFS NFI department)

data collection

cross checking

Quality assurance, methodical guidance (executed by Environmental Protection Agency)

QA

LULUCF data management team: *data analysis, archiving, QC, calculations*

Review of the report

reporting

CRF, NIR

Lithuania's commitments under the EU law and the KP CP2 until 2020

	Lithuania	EU
GHG emission reduction under KP CP2 (reference year 1990)	EU level target	-20%
EU ETS emission reduction (reference year 2005)	EU level target	-21%
Non-ETS emission reduction (reference year 2005)	+15%	-10%
Renewable energy in final consumption	23%	20%
RES in transport	10%	10%
Improvement of energy efficiency	17%	20%

NIR as a source for climate change mitigation policy development and implementation

➢ The Strategy for the National Climate Change Management Policy by 2050, adopted on 6 November 2012 by the Decree No XI-2375 of the Parliament of the Republic of Lithuania

http://www.am.lt/VI/files/File/Lankstinukas%20Klimato%20kaita%20ENG.pdf

➢ Action Plan on the Implementation of the Goals and Objectives for 2013-2020 of the Strategy for the National Climate Change Management Policy, adopted on 23 April 2013 by the Government Resolution No 366 of the Government of the Republic of Lithuania (measures for 2013-2016)

➢ Action Plans with measures for 2015-2017 and 2016-2018

GHG target setting in non EU ETS sectors

In the Strategy annual GHG emission allocation (reduction target) in non - EU ETS sectors is proportionally (based on 2005 emissions level) allocated among sectors determining "**carbon budget**". Specific sectors projected emissions and abatement potential were not taken into account.

Quantitative annual GHG emission reduction targets in m t CO_2e determined for transport, agriculture, waste management, non-ETS industries and other sectors are set as assessment criteria in Action Plan.

Monitoring of GHG emissions and control of the achievement of GHG emission targets set for individual non- EU ETS sectors, including **transport, agriculture, waste management and non-ETS industries**, is carried out according to the annual National GHG Inventories accounted GHG emissions by individual sectors.

The remaining part of the overall target is attributed to **other sectors**.

Quantitative annual GHG emission reduction targets in the non EU ETS sectors by 2013-2020

	2013	2014	2015	2016	2017	2018	2019	2020
Transport	3.925 **4.583**	4.044	4.138	4.260	4.351	4.473	4.595	4.707
Agriculture	4.115 **4.429**	4.239	4.337	4.465	4.561	4.689	4.816	4.934
Industry	1.976 **651**	2.036	2.083	2.145	2.191	2.251	2.313	2.370
Waste management	1.272 **1.190**	1.311	1.341	1. 81	1.411	1.450	1.489	1.526
Other sectors	1.612 **1.760**	1.661	1.699	1.749	1.787	1.837	1.887	1.934
Total	12.936 **12.613**	13.297	13.658	14.019	14.38	14.741	15.102	15.463

International cooperation for NIR improvement

➢ Continue to build the capacity and improve the expert qualification: Implementation of the Norway Grants partnership project on greenhouse gas inventory" between Lithuania and Norway

➢ Possible cooperation with neighbouring countries participating in project "Baltic Expert Network for GHG inventory, projections and PaMs reporting" by sharing knowledge and experience, network building, performing PEER reviews (application for funding from Seed Money Facility of the EU Strategy for the Baltic sea region)

Thank you. Ačiū.

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