

Regional climate cooperation

ECRAN Environment and Climate Regional Accession Network

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This Project is funded by the European Union



Project implemented by Human Dynamics
Consortium

Overview National System

- In terms of organizational arrangements a centralized model has been applied in Serbia.
- From institutional point of view, Ministry of Agriculture and the Environment Protection is a National Focal Point for *United Nations Framework Convention on Climate Change*, while inventory preparation is under responsibility of Serbian Environment Protection Agency (SEPA).



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Overview National System

- Establishment of a National Inventory of emissions of greenhouse gases is required by Article 50 of the Law on Air Protection ("Off. Gazette of RS", no. 36/2009 and 10/2013) in order to monitor emissions and removals of greenhouse gases
- National inventory is conducted by the Environmental Protection Agency.



Completeness and non-estimates

- In accordance with the obligations under this section in the Department of National Register of polluters sources of the Agency, in early 2012 began with the establishment of the National inventory of emissions of greenhouse gases.
- Data is collected and processed for the period 1990-2013 (in the 2013th was made extrapolation).



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Completeness and non-estimates

- For inventory compiling was used the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, as well as all other instructions whose use is mandatory.
- Uncertainty analysis was not performed.
- 2006 IPCC Guidelines for GHG Inventory offers default values for the Activity data and Emission factors uncertainties, which were used.



Completeness and non-estimates

- To obtain the data we use a numerous different sources, depending on the category (Statistical Office of the Republic of Serbia, National Energy Balance, Customs Administration, Companies) .
- To calculate the emissions of greenhouse gases from all categories, it is used the IPCC Inventory Software 2006th.
- The software is divided into major categories and sub-categories, within which it is easier to calculate the emissions entering the basic data in the equation for any given area and selecting the appropriate default emission factor.



Completeness and non-estimates

- Inventory includes emissions of the following greenhouse gases:
 - Carbon dioxide (CO₂)
 - Methane (CH₄)
 - Nitrous oxide (N₂O)
 - Hydrofluorocarbons (HFC and PFC)
- Emissions of NO_x, CO, NMVOCs and SO_x will be taken from Serbian CLRTAP Inventory.

Completeness and non-estimates

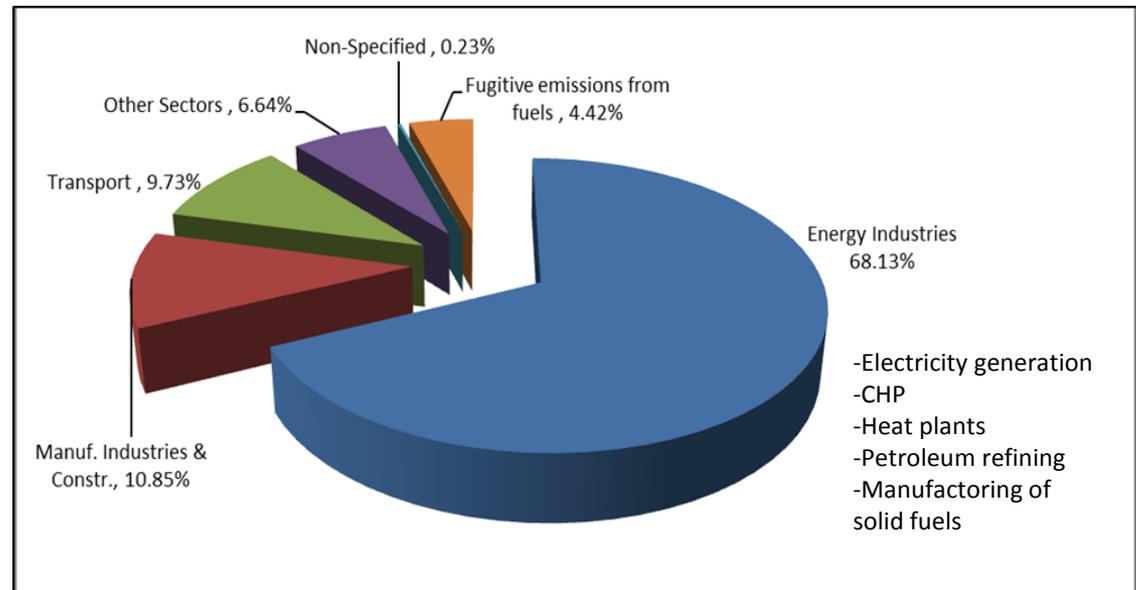
IPCC 2006 Categories	Greenhouse gas	2013 Ex,t (Gg CO ₂ Eq)
1.A.1 - Energy Industries - Solid Fuels	CO ₂	29882.24342
1.A.1 - Energy Industries - Gaseous Fuels	CO ₂	1829.8137
1.A.2 - Manufacturing Industries and Construction - Liquid Fuels	CO ₂	2630.235192
1.A.2 - Manufacturing Industries and Construction - Gaseous Fuels	CO ₂	1585.5543
1.A.2 - Manufacturing Industries and Construction - Solid Fuels	CO ₂	928.0290498
1.A.3.b - Road Transportation	CO ₂	4153.158969
1.A.4 - Other Sectors - Liquid Fuels	CO ₂	1314.965372
1.A.4 - Other Sectors - Gaseous Fuels	CO ₂	882.7335
1.A.4 - Other Sectors - Solid Fuels	CO ₂	652.30701
1.B.1 - Solid Fuels	CH ₄	814.0240622
1.B.2.a - Oil	CH ₄	901.5310649
2.A.1 - Cement production	CO ₂	774.017478
2.A.4 - Other Process Uses of Carbonates	CO ₂	1790.034199
2.C.1 - Iron and Steel Production	CO ₂	1010.8

IPCC 2006 Categories	Notification keys
1.A.3.a.ii - Domestic Aviation	NE
1.A.3.d.i - International water-borne navigation (International bunkers)	NE
1.A.4.c.iii - Fishing (mobile combustion)	NE
1.A.5.b.i - Mobile (aviation component)	NE
1.A.5.b.ii - Mobile (water-borne component)	NE
1.A.5.b.iii - Mobile (Other)	NE
1.B.1.b - Uncontrolled combustion and burning coal dumps	NE
1.B.1.c - Solid fuel transformation	NE
1.B.2.a.iii.1 - Exploration	NE
1.B.2.a.iii.4 - Refining	NE
1.B.2.a.iii.5 - Distribution of oil products	NE
1.B.2.b.iii.1 - Exploration	NE
2.F.2 - Foam Blowing Agents	NE
2.F.3 - Fire Protection	NE
2.F.5 - Solvents	NE
2.G.1.a - Manufacture of Electrical Equipment	NE
2.G.1.b - Use of Electrical Equipment	NE
2.G.1.c - Disposal of Electrical Equipment	NE

Critical Issues

- Creating reporting forms based on previous experience on data collecting (Regulation on the methodology of data collection for the national inventory of the greenhouse gases emissions).
- Plan to use Tier 3 methodology for sub-sector 1.A.1 – Energy Industries

**Shares of CO2
Emissions in Sector
1-Energy (2013.)**



Progress

- Significant improvements were made since INC (2010.):
 - Complete time-series (1990 – 2013)
 - Land-use and land-use change.
- Starting higher-level calculation for certain key categories.

Thank you!