

# ***ANNEX 5***

## **Annex 5: Assessment of completeness and (potential) sources and sinks of greenhouse gas emissions and removals excluded**

An assessment of completeness for each sector may be found in the Sector Overview part of the corresponding sub chapters, here some aggregated information is presented. At the end also CRF Table 9 for 2006 has been included.

### **Sources and sinks**

All sources of direct GHG gases, included in the IPCC Guidelines, are covered in inventory. There are some gaps in estimations of sinks considering LULUCF sector. There are also some gaps in estimations of NMVOC emissions in Solvent Use Sector.

### **Gases**

All gases are covered although the postulated precursor gases are often filled in in more aggregated level.

### **Geographic coverage**

The geographic coverage is complete. No territory in Slovenia has been left uncovered by the inventory.

### **Notation keys**

#### IE (included elsewhere):

The consumption of fuel in water-borne navigation and for military purposes has not been estimated at the state level, due to its small size. The fuel used for this purposes is included in other sectors (road transportation, institutional sector and civil aviation). Slovenia doesn't have any jet fighter airplanes and Navy and there is no possibility that emissions from these sources would be included in international bunkers and therefore excluded from national totals.

Slovenia has no waste incineration plant yet. Very small amount of waste is combusted in cement plants and reported in Energy sector/Manufacturing Industry and Construction.

#### NE (not estimated):

The highest number of source categories marked with NE is found in LULUCF sector, which is in right now in the process of improvement.

There are also many categories marked with NE because methodologies for estimating GHG emissions are not available in IPCC manuals from 1996 or in GPG from 2000. These sources are:

- CO<sub>2</sub> emissions post mining activities from underground mines
- GHG emissions in solvent use sector
- CH<sub>4</sub> from enteric fermentation from poultry
- CH<sub>4</sub> from agricultural soil
- CO<sub>2</sub> from solid waste disposal sites
- N<sub>2</sub>O from industrial waste water

The potential emissions of F-gases have also not been estimated, because data on import and export are not available separately for individual gas but only together with some other gasses. Solution of this problem is in the hands of relevant institutions.

NA (not applicable):

The increase of this number is due to improved completeness of the CRF- tables.

NO (not occurring)

The highest number of source categories marked with NO is found in agriculture, but there are some in industrial processes and energy industries.

C (confidential)

Statistical law considering confidentiality is very strict in Slovenia. All data which are gathered from three or less reporting unit are confidential. It is good practise in national statistic that this boundary is even higher (five units). As Slovenia is a small country almost all relevant categories from industrial processes sector and in less extend also in energy sector are confidential. Nevertheless no data in our report is marked with C. The confidentiality problem in activity data has been solved on individual level with each relevant plant. In the future, data gathered from verified reports from installations included in ETS, are going to resolve this problem generally for most cases.

Sources and sinks not estimated (NE)			
GHG	Sector	Source/sink category	Explanation
Carbon	5 LULUCF	5.B.1 5.B.1 Cropland remaining Cropland	No data available for calculations.
Carbon	5 LULUCF	5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.2 Grassland converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.3 Wetlands converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.1 5.C.1 Grassland remaining Grassland	No data available for calculations.
Carbon	5 LULUCF	5.C.2.1 Forest Land converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.2 Cropland converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.3 Wetlands converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.1 5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.1 Forest Land converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.2 Cropland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.3 Grassland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.1 5.B.1 Cropland remaining Cropland	No data available for calculations.
Carbon	5 LULUCF	5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.2 Grassland converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.3 Wetlands converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.1 5.C.1 Grassland remaining Grassland	No data available for calculations.
Carbon	5 LULUCF	5.C.2.1 Forest Land converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.2 Cropland converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.3 Wetlands converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.1 5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.1 Forest Land converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.2 Cropland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.3 Grassland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	No data available for calculations.
Carbon	5 LULUCF	5.A.2.1 Cropland converted to Forest Land	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.2 Grassland converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.3 Wetlands converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.1 5.C.1 Grassland remaining Grassland	No data available for calculations.
Carbon	5 LULUCF	5.A.2.2 Grassland converted to Forest Land	Negligible! No data available for emission calculations.

Sources and sinks not estimated (NE)			
GHG	Sector	Source/sink category	Explanation
Carbon	5 LULUCF	5.B.1 5.B.1 Cropland remaining Cropland	No data available for calculations.
Carbon	5 LULUCF	5.C.2.1 Forest Land converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.2 Cropland converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.3 Wetlands converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.1 5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.1 Forest Land converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.2 Cropland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.3 Grassland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.1 5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.1 Forest Land converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.2 Cropland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.E.2.3 Grassland converted to Settlements	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	No data available for calculations.
Carbon	5 LULUCF	5.A.2.1 Cropland converted to Forest Land	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.1 5.B.1 Cropland remaining Cropland	No data available for calculations.
Carbon	5 LULUCF	5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.2 Grassland converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.B.2.3 Wetlands converted to Cropland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.1 5.C.1 Grassland remaining Grassland	No data available for calculations.
Carbon	5 LULUCF	5.C.2.1 Forest Land converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.2 Cropland converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.1 5.C.1 Grassland remaining Grassland	No data available for calculations.
Carbon	5 LULUCF	5.C.2.1 Forest Land converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.2 Cropland converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.3 Wetlands converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.C.2.3 Wetlands converted to Grassland	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	No data available for calculations.
Carbon	5 LULUCF	5.A.2.1 Cropland converted to Forest Land	Negligible! No data available for emission calculations.
CH4	1 Energy	1.B.2.B.5.1 at industrial plants and power stations	No data available
CH4	4 Agriculture	4.A 4.A Enteric Fermentation	No method available

Sources and sinks not estimated (NE)			
GHG	Sector	Source/sink category	Explanation
CH4	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.A.2 5.A.2 Land converted to Forest Land	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.B.2 5.B.2 Land converted to Cropland	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.B.2.1 5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.D.2 5.D.2 Land converted to Wetlands	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.E 5.E Settlements	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.E.2 Land converted to Settlements	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.G Harvested Wood Products	No data available for calculations.
CH4	6 Waste	6.B.1 6.B.1 Industrial Wastewater	No data available
CO2	1 Energy	1.B.1.A.1.2 Post-Mining Activities	no methodology available
CO2	1 Energy	1.B.2.B.3 Transmission	no method available
CO2	1 Energy	1.B.2.B.5.1 at industrial plants and power stations	No method available
CO2	3 Solvent and Oth. Product Use	3.B Degreasing and Dry Cleaning	No data and method available for calculations.
CO2	3 Solvent and Oth. Product Use	3.C Chemical Products, Manufacture and Processing	No data and method available for calculations.
CO2	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.A.2 5.A.2 Land converted to Forest Land	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.B.1 5.B.1 Cropland remaining Cropland	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.B.1 5.B.1 Cropland remaining Cropland	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.B.2 5.B.2 Land converted to Cropland	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.B.2.1 5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.C.1 5.C.1 Grassland remaining Grassland	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.C.1 5.C.1 Grassland remaining Grassland	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.E 5.E Settlements	Negligible! No data available for emission calculations.
CO2	5 LULUCF	5.G Harvested Wood Products	No data available for calculations.
CO2	6 Waste	6.A.1 Managed Waste Disposal on Land	No method available
HFCs	2 Industrial Processes	2.F.1 Refrigeration and Air Conditioning Equipment	No data available for calculations.
HFCs	2 Industrial Processes	2.F.2 Foam Blowing	No data available for calculations.
HFCs	2 Industrial Processes	2.F.3 Fire Extinguishers	No data available for calculations.
N2O	3 Solvent and Oth. Product Use	3.B Degreasing and Dry Cleaning	No data available for calculations.

Sources and sinks not estimated (NE)			
GHG	Sector	Source/sink category	Explanation
N2O	3 Solvent and Oth. Product Use	3.D.3 N2O from Aerosol Cans	No data available for calculations.
N2O	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.A.1 5.A.1 Forest Land remaining Forest Land	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.A.2 5.A.2 Land converted to Forest Land	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2 5.B.2 Land converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.1 5.B.2.1 Forest Land converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.2 Grassland converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.2 Grassland converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.3 Wetlands converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.3 Wetlands converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.5 Other Land converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.B.2.5 Other Land converted to Cropland	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.D.2 5.D.2 Land converted to Wetlands	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.E 5.E Settlements	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.E.2 Land converted to Settlements	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.G Harvested Wood Products	No data available for calculations.
N2O	6 Waste	6.B.1 6.B.1 Industrial Wastewater	No method available
N2O	6 Waste	6.B.1 6.B.1 Industrial Wastewater	No method available
N2O	6 Waste	6.B.2.1 6.B.2.1 Domestic and Commercial (w/o human sewage)	No method available
N2O	6 Waste	6.B.2.1 6.B.2.1 Domestic and Commercial (w/o human sewage)	No method available
SF6	2 Industrial Processes	2.F.8 Electrical Equipment	No data available for calculations.
SF6	2 Industrial Processes	2.F.P2.1 In bulk	No data available for calculations.
SF6	2 Industrial Processes	2.F.P2.2 In products	No data available
SF6	2 Industrial Processes	2.F.P3.2 In products	No data available for calculations.

Sources and sinks reported elsewhere (IE) <sup>(3)</sup>				
GHG	Source/sink category	Allocation as per IPCC Guidelines	Allocation used by the Party	Explanation
Carbon	5.A.2.1 Cropland converted to Forest Land	5.A.2.1 Cropland converted to Forest Land	5.A.1 Forest Land remaining Forest Land	It is very minor source.
Carbon	5.A.2.2 Grassland converted to Forest Land	5.A.2.2. Grasland converted to Forest Land		
Carbon	5.A.2.1 Cropland converted to Forest Land	5. A.2.1 Cropland converted to Forest Land	5.A.1 Forest Land remaining Forest Land	It is very minor source.
Carbon	5.A.2.2 Grassland converted to Forest Land	5.A.2.2. Grasland converted to Forest Land	5.A.1 Forest Land remaining Forest Land	
Carbon	5.A.2.2 Grassland converted to Forest Land		5.A.1 Forest Land remaining Forest Land	It is very minor source.
Carbon	5.A.2.2 Grassland converted to Forest Land		5.A.1 Forest Land remaining Forest Land	It is very minor source.
CH4	6.B.2.1 Domestic and Commercial (w/o human sewage)		Recovery is included under Sludge	
CH4	1.AA.3.D Navigation		Included in the road traffic.	It is very minor source.
CH4	Other non-specified		In energy sector in 1A2f (other industry)	
CO2	1.AA.3.D Navigation		Included in the road traffic.	It is very minor source.
CO2	Other non-specified		In energy sector in 1A2f (other industry)	
N2O	3.D.2 Fire Extinguishers		Included in the N2O use for anaesthesia.	It is very minor source.
N2O	3.D.4 Other Use of N2O		Included in the N2O use for anaesthesia.	It is very minor source.
N2O	1.AA.3.D Navigation		Included in the road traffic.	It is very minor source.
N2O	Other non-specified		In energy sector in 1A2f (other industry)	
N2O	5.A.2 Land converted to Forest Land		included in agriculture sector	