Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic

Center for State Regulation in the Sphere of Environmental Protection and Ecolological Safety

National Inventory Report on GHG emissions and removals in the Kyrgyz Republic for the period 1990-2018

Bishkek, 2021

The first Biennial Update Report of the Kyrgyz Republic under the United Nations Framework Convention on Climate Change (UNFCCC) was prepared within the framework of the project "Support to the Kyrgyz Republic in the preparation of the first Biennial Update Report (BUR1) and the fourth National Communication (NC4) on the UNFCCC" implemented by the Ministry of Natural Resources, Environment and Technical Supervision of the Kyrgyz Republic and the UN Environment Program with the financial support of the Global Environment Facility.

Document references

Name:	National GHG Inventory Report for 1990-2018
Coordinators and Administrative Team	Bakai Zhumakadyr Uluu, Project Coordinator. Director of the State Regulation Center on Environment Protection and Ecological Safety under the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic Susan Lekoyet, GEF-UNEP Program Manager. UN Environment Program Aziza Zhandayeva, Project Manager Kushtar Malabaeva, Administrative Assistant of the PIU
Report preparation team:	Edilbek Bogombaev, Energy Sector Rajap Bayaliev, Transport Sector Valeriy Shevchenko, Industrial Processes and Product Use (IPPU) Sector Maksat Abduldaev, IPPU sector Narynbek Myrsaliev, Agriculture Sector Victoria Afanasenko, Agriculture Sector Venera Surappaeva, Forestry and Other Land Use Sector Zholdoshbek Bekbosun uulu, Forestry and Other Land Use Sector Oksana Zabenko, Waste Ssector" Mirlan Skakov, Waste Sector Aleksandr Temirbekov, GHG Inventory Group Leader, NIR Compiler
Electronic copy:	The document is available on the website: http://www.ecology.gov.kg
Comments:	Comments on this document can be sent to: Project Implementation Office of the State Regulation Center on Environment Protection and Ecological Safety under the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic 2 Dzerzhinsky Ave, Bishkek, Kyrgyz Republic. Tel: +996 312 560346 Email mail: project4nckyrgyz@gmail.com

Stakeholders engaged into National GHG Inventory

Representatives of the following organizations participated in the fouth National GHG Inventory process:

- Governmental Bodies:
  - Ministry of Economy and Commerce,
  - Ministry of Finance,
  - Ministry of Foreign Affairs, Foreign Trade and Investment,
  - Ministry of Agriculture,
  - Ministry of Transport and Communications,
  - Ministry of Emergency Situations,
  - Ministry of Health,
  - Ministry of Education and Science,
  - Ministry of Energy,
  - Ministry of Natural Resources, Environment and Technical Supervision,
  - National Statistical Committee,
  - State Agency on Forestry under the Ministry of Agriculture of Kyrgyz Republic,
  - State Agency for Regulation of the Fuel and Energy Complex under the Cabinet of Ministers of Kyrgyz Republic,
  - State Agency on Land Resources under the Cabinet of Ministers of Kyrgyz Republic,
  - State Agency for Architecture, Construction and Housing and Communal Services under the Cabinet of Ministers of Kyrgyz Republic,
  - State Agency on Water Resources under the Cabinet of Ministers of the Kyrgyz Republic,
  - State Customs Service,
  - Agency for Hydrometeorology under the Ministry of Emergency Situations of Kyrgyz Republic,
  - Climate Finance Center.
- Scientific, research and educational institutions:
  - Central Asian Institute for Applied Geosciences,
  - Kyrgyz-Russian Slavic University named after B.N. Yeltsin,
  - American University of Central Asia, Tien Shan Center,
  - Naryn State University,
  - Research Institute of Agriculture of the Ministry of Agriculture and Food Industry of the Kyrgyz Republic,
  - Research Institute of Energy and Economics of the Kyrgyz Republic,
  - Kyrgyz Research Institute of Livestock and Pastures KNAU named after K. I. Skryabin,
  - Scientific and Production Center for Forest Research of the Institute of Biology under the National Academy of Science,
  - Institute of Physics of the National Academy of Science of the Kyrgyz Republic,
  - International Higher School of Medicine under the International University of Kyrgyzstan,
  - Institute of Water Problems and Hydropower of the National Academy of Science of the Kyrgyz Republic,
  - Research and Production Center “Preventive Medicine” of the Ministry of Health of Kyrgyz Republic.
- Private structures and manufacturing sector:
  - Gazprom Kyrgyzstan LLC,
  - JSC “Electric Stations,”
  - OJSC “Kyrgyzenergoholding,”

- OJSC “Kyrgyzneftegaz,”
- OJSC “Kant Cement Plant,”
- TPP “Bishkek TPP,”
- LLC “Metal rolling plant named after M.V. Frunze,”
- CJSC “South Kyrgyz Cement,”
- LLC “Interglass,”
- LLC “Belovodskiy brick factory,”
- State Enterprise “Kyrgykomur,”
- CJSC “South Kyrgyz Cement.”

- Civil society organizations:
  - Public Fund “Center for the Development of Renewable Energy and Energy Efficiency,”
  - National Union of Water Users Associations of Kyrgyzstan,
  - Society of Soil Scientists of Kyrgyzstan,
  - Association of Forest and Land Users of Kyrgyzstan,
  - National Association of Pasture Users of Kyrgyzstan,
  - Environmental movement “BIOM.”
- Municipal organizations and enterprises:
  - City Hall of Bishkek,
  - Municipal Enterprise “Bishkek AsphaltService,”
  - Municipal Enterprise “Bishkekvodokanal,”
  - Association of legal entities “First Bishkek Recycling Association,”
  - Municipal Enterprise “Tazalyk,”
  - Center for State Sanitary and Epidemiological Surveillance of the city of Bishkek.

List of acronyms

AD	Activity Data
AFOLU	Agriculture, Forestry and Other Land Use
BUR	Biennial Update Report
CJSC	Closed Joint Stock Company
COP	Conference of Parties
CORINAIR	Coree Inventory of AIR emission
EEA	European Environmental Agency
EF	Emmision Factor
EMEP	European Monitoring and Evaluation Programme'
EPA	Environment Protection Agency
GEF	Global Environment Facility
GHG	Greenhouse gas
GWP	Global Warming Potential
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
IPPU	Industrial processes and other products use
LLC	Limited Liability Company
ME	Municipal Enterprise
MNRETS	Ministry of Natural Resources and Technical Oversight
NC	National Communication
NGHGI	National Greenhouse Gases Inventory
NIIP	National Inventory Improvement Plan
NIR	National Inventory Report
NSC	National Statistic Committee
OECD	Organization for Economic Co-operation and Development
OJSC	Open Joint Stock Company
PIU	Project Implementation Unit
QA / QC	Quality Assurance and Quality Control
SRCEPES	State Regulation Centre for Environment Ptotection and Ecological Security
TEG	Technical Expert Group
TTP	Thermo Power Plant
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United National Framework Convention on Climate Change

Chemical formulas and units used

CO_2	Carbon dioxide
CH_4	Methane
N_2O	Nitrous oxide
HFC	Hydrofluorocarbons
PFC	Perfluorocarbons
CO	Carbon monoxide
SF_6	Sulfur hexafluoride
NMVOC	Non-Methane Volatile Organic Compounds
NO_x	Nitrogen oxides
SO_2	Sulphur dioxide
Gg	Gigagram = 1,000 tons, 1 kiloton
TOFE	Tonnes of fuel equivalent
J	A joule is a unit of measure for energy and heat amount in the International System of Units (SI).

Decimal prefixes to the units used

Factor	Prefix		Symbol		Measure
	Russian	International	Russian	International	
10^1	дека	deca	да	da	Increase of the original unit by 10 times
10^2	гекто	hecto	г	h	- hundred times
10^3	кило	kilo	к	k	- thousand times
10^6	мега	mega	М	M	- million (10^6) times
10^9	гига	giga	Г	G	- billion (10^9) times
10^{12}	тера	tera	Т	T	- trillion (10^{12}) times
10^{15}	пета	peta	П	P	- quadrillion (10^{15}) times
10^{18}	экса	exa	Э	E	- quintillion (10^{18}) times
10^{21}	зетта	zetta	З	Z	- sextillion (10^{21}) times
10^{24}	иотта	yotta	И	Y	- septillion (10^{24}) times

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1. Introduction

The Kyrgyz Republic, as a signatory of the UN Framework Convention on Climate Change, directs all its climate actions to achieve the ultimate goal of the Convention, aimed at stabilizing the concentration of greenhouse gases in the atmosphere at a level that would prevent dangerous anthropogenic impact on the climate system.

Under Article 4 paragraph 1 point a) on the Obligations of the Parties and Article 12 paragraph 1 (a) on the provision of information related to the implementation of the Convention, each Party to the Convention is expected to regularly submit country reporting to the Conference of the Parties (COP).

The main mechanism for providing information on the country's activities under the UNFCCC is the National Communications (NC). The guidelines for the preparation of national communications for non-Annex I countries were adopted at the Conference of the Parties in 1996 in Geneva (Decision 10/CP2). The 8th Conference of the Parties (New Delhi, 2002) adopted a new Guide to National Communications for countries, which are not parties to Annex I of the Convention (Decision 17/CP8).

Following the Guidelines of the UNFCCC and within the framework of the UN Development Program (UNDP) project "Assistance to Kyrgyzstan in the preparation of the First National Communication in response to the obligations under the UN Framework Convention on Climate Change" with financial support from the Global Environment Facility (GEF), the Kyrgyz Republic developed in 2003 it's First National Communication, including a national inventory of greenhouse gas emissions for the period 1990 – 2000. This document was approved by the Decree of the Government of the Kyrgyz Republic on April 10, 2003 No. 200.

The second national communication of the Kyrgyz Republic to the UNFCCC was also developed within the framework of a UNDP project with financial support from the GEF in 2009 and approved by the Resolution of the Government of the Kyrgyz Republic dated by May 6, 2009 No. 274.

Kyrgyzstan prepared the Third National Communication with the support of the GEF project and the United Nations Environment Programme (UNEP) in 2016. This document was also approved by the Resolution of the Government of the Kyrgyz Republic dated October 13, 2016 No. 546.

This document is the National GHG Inventory Report of the Kyrgyz Republic conducted in the period 2019-2022, which was compiled based on the results of the fourth NGHGI conducted in 2019-2020. Project Implementation Department of the Center for State Regulation in the Sphere of Environmental Protection and Ecological Safety of the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic.

2. Background

The previous three national inventories of greenhouse gas emissions and removals of the Kyrgyz Republic were conducted according to the methodology developed by the Intergovernmental Panel on Climate Change (IPCC), which includes the following main documents:

- Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories (IPCC 1996 Guidelines). [1]

[1] Intergovernmental Panel on Climate Change (IPCC) (1997). Houghton J.T., Meira Filho L.G., Lim B., Tréanton K., Mamaty I., Bonduki Y., Griggs D.J. and Callander B.A. (Eds). Revised 1996 IPCC Guidelines for National Greenhouse Inventories. IPCC/OECD/IEA, Paris, France.

- Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.[2]
- Good Practice Guidance for Land Use, Land-Use Change and Forestry. [3]

Compiled together, they represent an internationally agreed methodology used by countries and currently used in the assessment of greenhouse gas inventories for country reporting under the United Nations Framework Convention on Climate Change (UNFCCC).

The 1996 IPCC Guidelines, outlined in three volumes, defined the coverage of the national inventory in terms of gases and categories of emissions by sources and removals by sinks, and all other guidelines provided additional direction on the choice of estimation methodology and improvement of methods, as well as recommendations on complex issues, including uncertainty assessment, time-series consistency, quality assurance, and quality control.

The first National Greenhouse Gas Inventory (NGHGI) was conducted in 1999-2003, the second NGGI in 2004-2009, and the third NGHGI in 2009-2014 carried using the above 1996 Guidelines.

The Fourth National Greenhouse Gas Inventory of Kyrgyzstan was developed using the IPCC 2006 Guidelines for National Greenhouse Gas Inventories.[4] These guidelines include new sources and gases, as well as updates of previously published methods, where scientific and technical knowledge has improved since the previous guidelines were issued. The content of the five volumes constituting the IPCC 2006 Guidelines has significantly expanded the coverage of anthropogenic emissions impacting climate change.

Greenhouse gas inventories are based on several key concepts with a common understanding. This helps to ensure that inventories are comparable between countries, that there is no double-counting or missing, and that actual changes in emissions are reflected in the time series.

"Anthropogenic emissions and removals" mean that greenhouse gas emissions and removals included in national inventories are the results of human activities. The distinction between natural and anthropogenic emissions and removals follows directly from the data used to quantify such activities.

National inventories contain estimates for the calendar year when air emissions (or removals) have occurred. Where suitable data are not available to comply with this principle, emissions/removals can be estimated using data from other years using appropriate methods such as averaging, interpolation, and extrapolation. The sequence of estimates of annual greenhouse gas inventories (e.g., for each year from 1990 to 2018) is called a time series. Due to the importance of tracking emission trends over time, countries should ensure that the time series of estimates are as consistent as possible.

The Greenhouse Gas Inventory Report (National Inventory Report) includes a set of standard reporting tables covering all relevant gases, categories and years, and a written report that documents methodologies and data used to prepare the evaluations. The 2006 Guidelines provide standardized reporting tables, but the actual nature and content of the tables, as well as the written report, are subject to change.

The fourth national inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks in Kyrgyzstan was accompanied by several methodologically important innovations:

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[2] Intergovernmental Panel on Climate Change (IPCC) (2000). Penman J., Kruger D., Galbally I., Hiraishi T., Nyenzi B., Emmanuel S., Buendia L., Hoppaus R., Martinsen T., Meijer J., Miwa K., and Tanabe K. (Eds). Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories. IPCC/OECD/IEA/IGES, Hayama, Japan.

[3] Intergovernmental Panel on Climate Change (IPCC) (2003), Penman J., Gytarsky M., Hiraishi T., Krug, T., Kruger D., Pipatti R., Buendia L., Miwa K., Ngara T., Tanabe K., Wagner F., Good Practice Guidance for Land Use, land-Use Change and Forestry IPCC/IGES, Hayama, Japan

[4] Prepared by the IPCC National Greenhouse Gas Inventories Programme, Eggleston H.S., Miwa K., Srivastava N. and Tanabe K. (eds), Institute for Global Environmental Strategies 2108-11, Kamiyamaguchi Hayama, Kanagawa, Japan, 240-0115

- Transition to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. (hereinafter Guidelines 2006);[5] and
- Application of IPCC Inventory Software Ver. 2.54» released in June 2017.[6]
- Using the EMEP/EEA Air Pollutant Emission Inventory Guidebook. Technical guidance for preparing national emission inventories. European Environment Agency. Report 21/2016. [7]

Kyrgyzstan presents the results of the fourth national inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks in the First Biennial Update on the UNFCCC for the period 2011-2018. The inventory was carried out in accordance with the provisions of the IPCC 2006 Guidelines for National Greenhouse Gas Inventories (hereinafter the Guidelines 2006) and includes emissions and removals of six direct greenhouse gases:

1. CO_2 (carbon dioxide),
2. CH_4 (methane),
3. N_2O (nitrous oxide),
4. HFC (hydrofluorocarbons - HFCs),
5. PFC (PFC perfluorocarbons), and
6. SF_6 (Sulphur hexafluoride)

and four precursor gases:

7. CO (carbon monoxide),
8. NOx (nitrogen oxides),
9. NMVOC (non-methane volatile organic compounds of NMVOCs) and
10. SO_2 (sulphur dioxide).

The 4th national GHG Inventory of the Kyrgyz Republic covered the first four categories of greenhouse gases, because studies of the initial data, as well as in the 3rd NGHGI, showed that emissions for the fifth (PFC) and sixth (SF_6) GHG categories in Kyrgyzstan are practically absent[8] as emissions for the rest of the GHGs from the list of the IPCC 2006 Guidelines.

3. Institutional arrangements for the Fourth National GHG Inventory

The legal framework for the inventory of anthropogenic emissions from sources and removals by sinks of greenhouse gases (hereinafter - inventory) is determined by the Law of the Kyrgyz Republic "On state regulation and policy in the field of emission and absorption of greenhouse gases"[9] and the Resolution of the Government of the Kyrgyz Republic dated July 23, 2001, No.369 "On measures to implement the United Nations Framework Convention on Climate Change."

Pursuant to article 13 of the abovementioned law, the country maintains state records of indicators on the emission and absorption of greenhouse gases, which includes the collection and synthesis of inventory and monitoring results in order to obtain reliable information. Article 14 indicates that the state inventory of greenhouse gas emissions and removals is a single and comprehensive register of greenhouse gas emissions and removals in the territory of the Kyrgyz Republic, and the procedure for its operation is approved by the Government of the Kyrgyz Republic.

[5] UNFCCC. https://www.ipcc-nggip.iges.or.jp/public/2006gl/russian/pdf/
[6] IPCC website. https://www.ipcc-nggip.iges.or.jp/software/index
[7] EEA website: https://www.eea.europa.eu/www/ru/publications/rukovodstvo-emep-eaos-po-inventarizaciivybrosov-2016
[8] SAEPF, GEF, UNEP, CCC. Third National Communication of Kyrgyz Republic. –B., 2016, p. 60.
[9] Law of the Kyrgyz Republic No.71 of May 25, 2007.

The Ministry of Foreign Affairs was designated as the responsible body for the UNFCCC instead of the State Agency on Environmental Protection and Forestry under the Government of the Kyrgyz Republic following the Resolution of the Government of the Kyrgyz Republic No. 15 "On Amendments to the Resolution of the Government of the Kyrgyz Republic "On increasing the efficiency of cooperation of the Kyrgyz Republic with international organizations, integration associations, and international treaty bodies dated December 2, 2015 No. 817" dated January 20, 2020. Thus, the UNFCCC was assigned to the Ministry of Foreign Affairs, which is now responsible for the preparation and coordination, including domestic, of draft documents on various issues of international cooperation, including National Communications, Biennial Reports, Greenhouse Gas Inventory, National Greenhouse Gas Inventory Reports.

As noted above, since the preparation of the First Biennial Update Report and the Fourth National Communication under the UNFCCC was started in 2018, prior the above-mentioned resolution, it was decided that the State Agency on Environmental Protection and Forestry under the Government of the Kyrgyz Republic (SAEPF) and the State Regulation Center on Environmental Protection and Ecological Safety (SRCEPES) under SAEPF will continue the work and finilize the development of both documents, including the conduct of a national inventory of greenhouse gases and an update of the GHG inventory.

According to the Resolution of the Government of Kyrgyz Republic "On the Coordination Council for the Green Economy Development and Climate Change" dated January 30, 2020, No. 46, the Coordination Council for the Green Economy Development and Climate Change will be the main body to manage the drafting process, periodic updates and submission of the necessary reporting on the implementation of the international obligations of the Kyrgyz Republic on climate change, including the inventory of greenhouse gases.

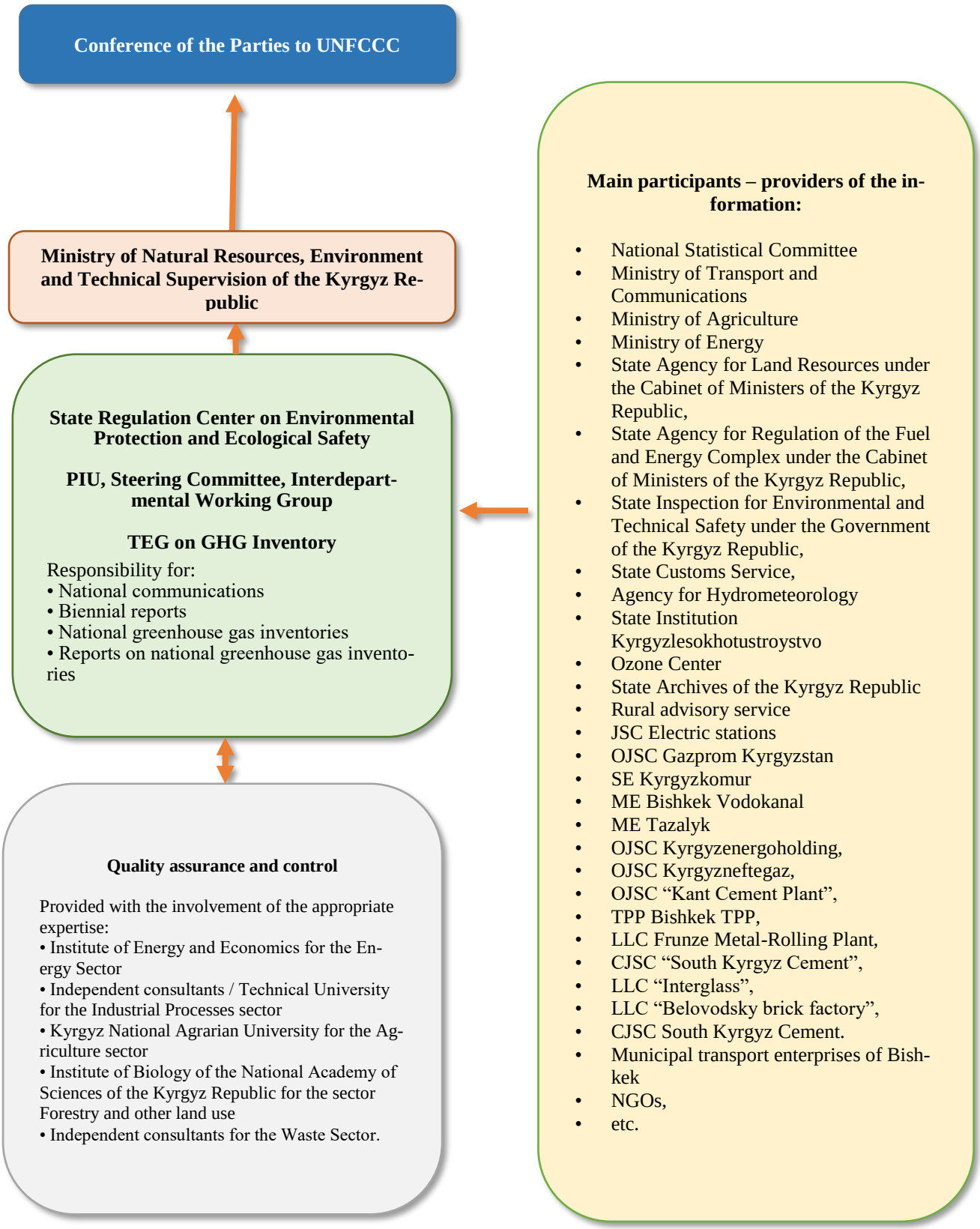
The overall management of the fourth national GHG inventory was managed by MNRETS and the Project Implementation Unit (PIU) of GEF-UNEP at SRCEPES. A cross-sectoral GHG Inventory Team, comprising several Technical Expert Groups (TEG), was established to provide technical support to the national GHG inventory and developing the register related GHG inventory. Each TEG included experts on the inventory of GHG sectors (two experts: the TEG Head and Leading Specialist), industry statisticians and representatives of relevant organizations and departments. Therefore, the direct administrator of the national GHG inventory is the Project Implementation Unit under the SRCEPES and its GHG Inventory Group, which consisted of the following TEGs:

- Energy (combustion of all types of fossil fuels in all industries, including transport and all other sectors, as well as fugitive emissions (vaporization) of various types of fuels).
- Industrial processes and product use.
- Agriculture (livestock, rice, soil).
- Forestry and other types of land use (for 6 types of land use).
- Waste (solid waste and waste water).

The provision of technical planning, coordination and quality control of the work of the group under the overall supervision of the project manager and coordinator was carried out by the Head of the Technical Expert Groups, which provided ongoing inventory control and technical advisory support.

The information and data required for the National GHG Inventory was provided by several organizations. At the same time, priority was given to the use of official statistics of the Kyrgyz Republic, which was delivered by ministries and departments, administrative bodies, the state archive, government agencies and enterprises, and private business structures. The general scheme for conducting a national GHG inventory is presented in Figure 3.1. below.

Figure 3.1 Institutional organization of the national GHG inventory in the Kyrgyz Republic



The Minister of Natural Resources, Environment and Technical Supervision was in charge of the overall management of the greenhouse gas inventory preparation process and ensured the essential interaction with all stakeholders in the process. The project coordinator at SRCEPES provided the day-to-day management of the GHG inventory process by ensuring that the PIU communicated with the required information providers.

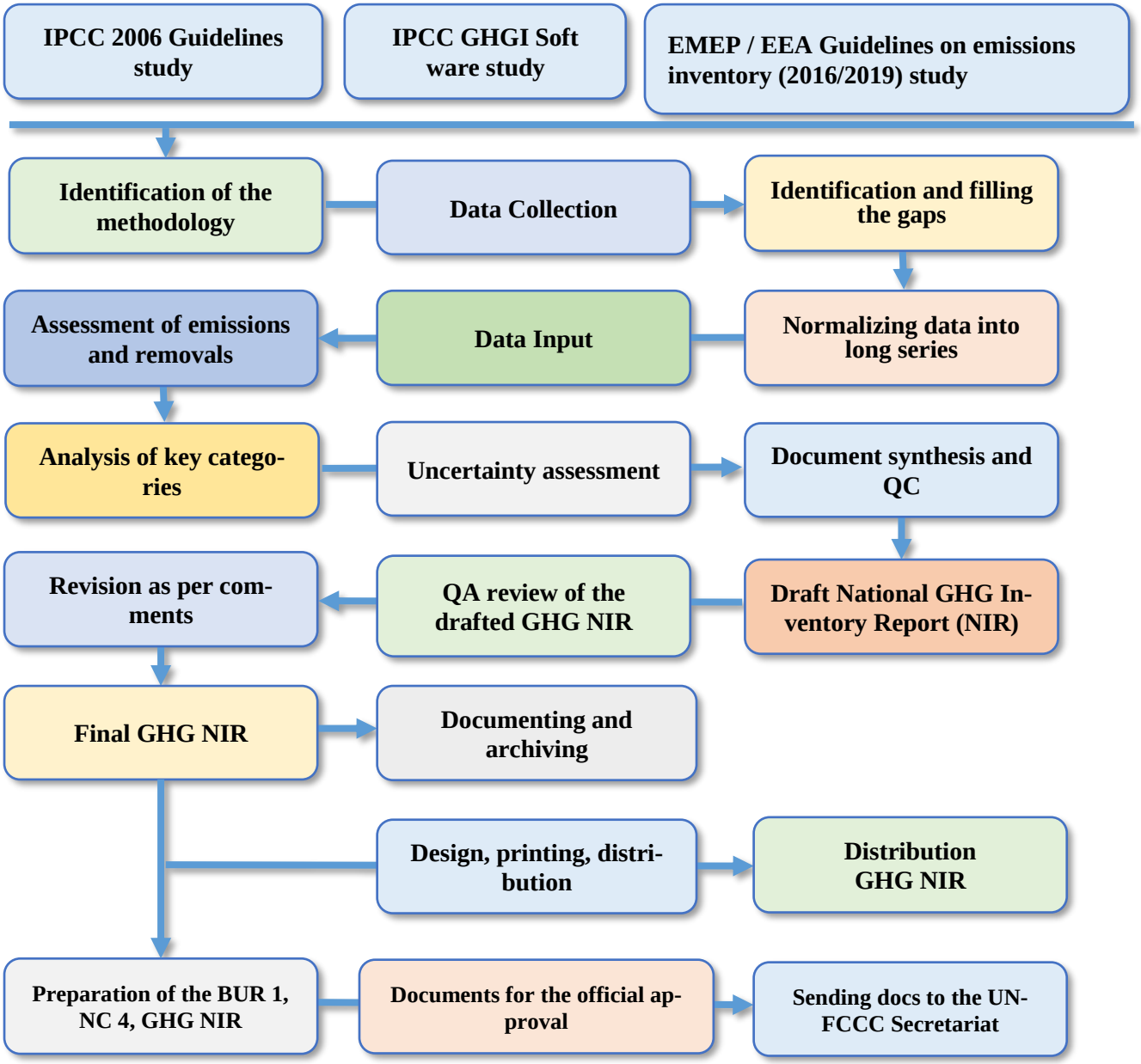
The project manager ensured routine management of the PIU, the deadlines of each stage of the process, preparation and distribution of requests for information on sources, and ensuring timely responses to requests, as well as the organization and implementation of all project activities.

4. Fourth National GHG Inventory Process

The process of the Fourth National Greenhouse Gas Inventory was conducted according to the recommendations of the UNFCCC and IPCC Guidelines within the national legal framework and institutional organization of the process presented above. Besides, the timing of the inventory was determined by the project document and the UNEP-GEF Project Implementation Plan, in close coordination with the UNEP office in Nairobi.

The primary performer of the GHG inventory was the PIU, including the GHG Inventory Group team, and the head of the technical expert groups. The main stages of the process are shown in Figure 4.1 below.

Figure 4.1. Diagram of the national GHG inventory process in the Kyrgyz Republic



The leader of the sectoral TEG inventory, together with the Project Manager, was responsible for organizing and conducting regular coordination meetings of all sectoral TEGs, as well as for collecting and compiling the results of the conducted emission inventory assessment into the National GHG Inventory, ensuring the integrity and quality of the inventory, presenting it in Chapter 2 "National GHG Inventory" in the BUR 1 and the NC 4.

Emissions by individual sources and removals by separate sinks are the responsibility of national inventory experts who together with the TEG leader, decide on the use of the most appropriate methodology, collect activity data necessary for estimating emissions. Since the new IPCC 2006 Guidelines were used to conduct the current emissions assessment and the new software had to re-generate long time series of activity data and recalculate emissions for all categories.

Decisions on the choice of parameters for emissions assessment, collecting the most necessary information and data, choosing the most adequate level and emission factors, calculating emissions, assessing uncertainty, checking the results for quality assurance and quality control by independent scientific institutes and experts, ministries and departments, private structures were made jointly by the

project manager, TEG leader, and national inventory experts. National experts also prepared explanatory text on ongoing emissions assessment studies, as well as all used bibliography.

In addition, national experts prepared summary tables of emissions by sector, category and subcategory, conducted uncertainty analysis and carried out quality assurance and quality control (QA/QC) activities in close cooperation with the TEG Leader - compiler of the National GHG Inventory in accordance with the QA/QC Plan developed by the PIU.

During the review of the draft National GHG Inventory, the document was sent to a group of independent experts who did not participate in the preparation of the inventory. The purpose of the inventory review is to receive comments from experts in the relevant fields on the quality of the work performed, in particular on the relevance of the methodological approaches used, emission coefficient, and activity data. The received comments were checked and corrected accordingly.

After completing the final editing of the National GHG Inventory, based on the comments received during the peer review, the PIU prepared the final version electronic version for approval by the MNRETS. This version was then used for publication.

The inventory of GHG emissions and removals after the publication, its data were included in BUR 1 and NC 4, after approval at the appropriate level of government of the country, were submitted to the UNFCCC secretariat.

5. Methodology

GHG emissions by sector were estimated in accordance with the IPCC 2006 Guidelines for National Greenhouse Gas Inventories developed by the United Nations Framework Convention and related good practice guidelines that provide internationally agreed methodologies for countries to use inventories assessment of greenhouse gases for reporting to the UNFCCC.

According to the IPCC 2006 Guidelines, estimation of greenhouse gas emissions and removals are divided into main sectors, combining relevant processes, sources and sinks.

- Energy
- Industrial Processes and Product Use (IPPU)
- Agriculture, forestry and other types of land use (AFOLU)
- Waste.

Energy

In the modern economy, energy systems are largely driven by the burning of fossil fuels. Carbon and hydrogen from fossil fuels are mainly converted to carbon dioxide (CO_2) and water (H_2O), releasing the chemical energy of the fuel and converting it into heat. This heat is usually used either directly or (with some conversion loss) to generate mechanical energy, most often to generate electricity or to transport.

The energy sector is usually the most important in the greenhouse gas inventory, accounting for over 90 percent of CO_2 emissions and 75 percent of total greenhouse gas emissions in developed countries. About half of these emissions are associated with combustion in the energy industries, mainly in power plants and refineries. Mobile combustion (cars and other vehicles) also accounts for a significant portion of the energy sector's emissions.

The energy sector consists mainly of:

- Exploration and Production of Primary Energy Sources,
- Converting primary energy sources into more usable forms of energy in refineries and electric and thermal plants,

- Fuel transfer and distribution,
- Stationary and mobile use (combustion) of fuel.

Emissions resulting from activities of solid, liquid, and gaseous fuels combustion, as well as volatile emissions, are subject to national inventories of greenhouse gas emissions from the energy sector.

Industrial Processes and Product Use (IPPU)

Many types of industrial production are associated with greenhouse gas emissions. The main sources of emissions are those coming from industrial processes of chemical or physical processing of materials (for example, blast furnaces in the steel industry; ammonia and other chemical products from fossil fuels used as chemical raw materials, cement production are the most important examples of industrial processes associated with the release of significant quantities of CO_2). These processes produce a variety of greenhouse gases, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

In addition, greenhouse gases are often can be found in products such as refrigerators, foams, and aerosol cylinders. For example, HFCs are used in various types of products instead of ozone-depleting substances (ODS). Sulfur hexafluoride (SF_6) and N_2O are also used in several industrial products (for example, SF_6 in electrical equipment, N_2O as a propellant in aerosol products, mainly in the food industry), as well as in final consumer products (for example, SF6 is used in sneakers, N_2O for anesthesia). A distinctive feature of this use of products is that in almost all cases a rather long time elapses between the production of the product and the release of the greenhouse gas. This delay time can range from a few weeks (for example, for aerosol cans) to several decades (for rigid foams). In some applications (such as refrigeration), the fraction of greenhouse gases contained in a product can be recovered at the end of the product's useful life and then reused or destroyed.

Product applications are integrated in the IPCC guidance with industrial processes, because production, import, and export data are often needed to estimate emissions of products; and since - in addition to application in non-industrial sectors (retail, services, household) - the use of products can be part of industrial production. [10] Consequently, this sector is called Industrial Processes and Product Use (IPPU).

Agriculture, Forestry and Other Land Use (AFOLU)

The Agriculture, Forestry and Other Land Use (AFOLU) sector is the only sector that not only emits greenhouse gas emissions, but also absorbs them. It has a number of features with regard to the development of inventory techniques. It contains many processes leading to emissions and removals of greenhouse gases, which can be widely distributed in space and highly variable over time. The factors controlling emissions and removals can be both natural and anthropogenic (direct or indirect), and it can be difficult to distinguish clearly between causal factors.

For the AFOLU sector, anthropogenic emissions and removals of greenhouse gases are defined as all emissions and removals occurring in agricultural production on “managed land”. Managed land is land where human intervention and activities take place to implement production, environmental and social functions. All definitions and classifications of land should be established at the national level, described in a clear way and applied consistently over time. For unmanaged land, information on emissions / removals should not be provided. However, it is good practice for countries to quantify and track the area of unmanaged land over time to ensure consistency in accounting for area under land-use change.

The main sources of emissions from the sector are:

[10] IPCC. Guidelines for National Greenhouse Gas Inventories. Vol. 3. 2006 https://www.ipcc-nggip.iges.or.jp/public/2006gl/russian/pdf/3_Volume3/V3_1_Ch1_Introduction.pdf

- CO_2 emissions and removals due to carbon stock changes in biomass
- emissions of CO_2 and non- CO_2 gases from fires on all managed lands;
- CH_4 emissions from domestic animals (enteric fermentation);
- CH_4 and N_2O emissions from systems for cleaning, storing, and using manure
- N_2O emissions from all cultivated soils;
- CH_4 emissions from rice cultivation.

Due to the complex nature and specificity of each component, during the 4th NGHGI, the AFOLU sector was divided into two subsectors - Agriculture and Forestry and Other Land Use and examined separately. The results of these two analyzes were compiled into a sectoral single report.

Waste

The Waste section in the consolidated and annual inventory tables contains the results of the estimation of emissions of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) in the following categories:

- Disposal of solid waste;
- Biological treatment of solid waste;
- Incineration and open burning of waste;
- Wastewater treatment and discharge (chapter 6).

Each sector consists of separate categories and subcategories. Ultimately, all countries start building the inventory at the subcategory level, as this is the way the IPCC methodology is presented, and the total amount of emissions is calculated by subsequent summation. The national total is calculated by summing emissions and removals for each gas. The exception is emissions from fuel used on ships and aircrafts engaged in international transport, which are not included in the national total but reported separately.

A method has to be chosen to calculate the national total. To this end, countries can choose any of the approaches reflected in the Guidelines. The reporting procedures are generally structured and organized according to the sector where actual emissions or removals are generated.

In the 2006 Guidelines and the 2000 IPCC Good Practice Guidelines, the most common simple methodological approach for conducting national GHG inventories is to combine information on the volume and extent of human activity (called "activity data" or AD) with coefficients, which determine the volume of emissions or removals per unit of activity. Such values are called emission factors (EFs). Thus, the basic equation is:

$$\text{Emissions} = EF \times AD$$

Under certain conditions, the basic equation may be modified to include parameters other than the emission factors. The 2006 Guidelines also provide more complex modeling approaches, especially at higher levels. While this simple equation is widespread, the 2006 Guidelines also contain mass balance-based methods, such as the stock change method used in the AFOLU sector, which estimates CO2 emissions from the change in carbon in living biomass and reservoirs of dead organic matter over time.

The IPCC methods use the concept of "good practice," including the definition of "inventories consistent with good practice as those which contain neither over- nor underestimates so far as can be judged, and in which uncertainties are reduced as far as is practicable."

The 2006 guidelines provide three levels of methodology for conducting national GHG inventories. The level represents the degree of methodological complexity. Tier 1 is the basic method, level 2 is

intermediate, and level 3 is the most difficult in terms of difficulty and data requirements. Levels 2 and 3 are sometimes referred to as higher-level methods and are generally considered more accurate.

The Tier 1 methods provided for all categories are designed to use publicly available national or international statistics in combination with established default emission factors and additional parameters provided, and therefore should be applicable to all countries.

The Key Category concept is used to identify categories that have a significant impact on a country's overall greenhouse gas inventory in terms of absolute emissions and removals, trends in emissions and removals, or uncertainty in emissions and removals. Key categories should be prioritized by countries when allocating inventory resources for data collection, compilation, quality assurance/quality control, and reporting.

The IPCC guidance documents also provide so-called decision trees for each category. They help inventory compilers navigate the guidelines and select the appropriate tiered methodology suitable for their conditions, based on an assessment of key categories.

5.1. Methodology, Emission Factors and Data Time Series

The adoption of the new methodology (2006) and the use of new software specified to choose a simpler Tier 1 methodology for almost all categories of emissions and removals.

The use of the IPCC software package for data entry also determined the use of default emission factors.

Unfortunately, the lack of an archive of the previous - third national inventory forced the inventory team to collect data again and form long time series of data. At the same time, in many cases, experts had to contend with the availability of periodic data, data gaps, or the presence of multiple data options.

In cases where national information was unavailable or inaccessible, international databases were used (UN Food and Agriculture Organization, World Bank, etc.). The definition and use of the methodology and parameters, prerequisites, sources of information, and the results of the inventory were discussed at regular meetings with representatives of relevant ministries and departments, educational and scientific institutions, non-governmental organizations, and the business sector. The interpolation was used in the case of irrecoverable omissions of the original data. Interpolation algorithms are described in the relevant sectoral sections on the GHG inventory.

The information used consists of three main groups:

- activity data, mainly fuel consumption and output;
- emissions and sink coefficients for GHG and precursor gases;
- indicators and parameters specific to each source or sink, such as the morphological composition of waste, etc.

Activity data are based on governmental and/or departmental statistics and business reports. The indicators of this group are available in officially published sources or collected at the request of ministries, departments, and organizations.

The following used as emission factors:

- Values given in the IPCC Guidelines and its online Emission Factor Database;
- Values given in other international guidelines, e.g., EMEP / EEA Air Pollutant Emission Inventory Guidebook of the European Environment Agency 2016-2019;
- Values used in the national system of inventory and regulation of emissions of pollutants into the environment or derived from previous studies (in the Industrial Processes and Land Use, Land-Use Change, and Forestry sectors).

Specific indicators and parameters have been adopted according to the IPCC Guidelines based on available national data or determined by calculation through indirect indicators using the results of scientific research. In the absence of other possibilities, the indicators were determined by the method of expert assessments.

6. Key Categories

Chapter 4 Volume 1 of the 2006 IPCC Guidelines defines a key category as a category "that is prioritized within the national inventory system because its estimate has a significant influence on a country's total inventory of greenhouse gases in terms of the absolute level, the trend, or the uncertainty in emissions and removals. Whenever the term key category is used, it includes both source and sink categories." [11]

This section presents an analysis of key sources/sinks of GHG emissions and removals in the Kyrgyz Republic for the period 1990-2018 by the absolute values of emissions/absorption (analysis of levels and by trends).

The share of individual categories (convertible to CO_2 equivalent) in the total emissions/removals is calculated in accordance with the total level of emissions/removals (level estimate) to determine the key categories of sources/sinks. After calculation of the percentage contribution of each source/sink category, they are summed up in descending order to the level of 95% of the sum of all key categories.

According to the trend assessment method, a source/sink category is considered a key category if it makes a significant contribution to the overall trend of national emissions and removals. For this assessment, the trend of the source category is calculated for each emission/removal category as the difference between the emissions/removals obtained from this source/sink category between the current and base years of the inventory, divided by the current year's emissions/removals. In addition, the trend of the total inventory value is calculated by dividing the difference between the total emissions of the current and base year by the total emissions of the present year.

To assess the actual significance of the difference between the source category and the general trends in the general inventory results, these differences are weighted according to the estimated share of the absolute value of emissions in the source category, i.e. the level is estimated. Particularly, the overall emission trend is subtracted from the estimated trend of the source category and multiplied by the level value (share) obtained for that source category by the "level estimation" calculated for the base year. The values obtained for all source categories are added together, and the proportion of each category is calculated as part of this total. Thus, the key source category will include a source category where the difference between the overall inventory trend and the trend of the source categories according to the "level" of the source category in the base year is significant.

The 2006 IPCC Good Practice Guidelines (Volume 1, Chapter 4) presents techniques called "approaches" that are used to identify key categories. These methods define key categories by means of one-year inventory analysis of emission levels of individual categories (level assessment) and analyzing the time series of the inventory data (trend assessment), as well as through detailed analysis of inventory data with the estimation of errors (Level 2 assessment and trends accounting uncertainties).

During the fourth NGHGI, the analysis of key categories was carried out under the Approach 1 procedure for estimating GHG emissions in the Kyrgyz Republic for 2018 as the last reporting year. Consisting with IPCC documents, this analysis included both emissions by sources and removals by sinks.

Since the first round of the fourth national GHG inventory covers the period 1990-2018, 1990 is considered the base year for trends assessment. The results were presented in descending order and the

[11] IPCC. Guidelines for National Greenhouse Gas Inventories. 2006, vol.1, chapter 4, p. 4-5.

overall values were calculated. Sources for which totals were equal to or above 95% of all CO_2 equivalent emissions were identified as key source categories in terms of trends.

By the tools of IPCC Software v.2.54, used in the 4th NGHGI, it is possible to analyze the key categories of GHG emissions and sinks by level and trends. The results of the analysis of key categories by level are presented in tables 6.1. and 6.2 below.

Table 6.1 Key categories of GHG emissions and removals sources by level [12]

A	B	C	D	E	F	G
IPCC Category code	IPCC Category	Greenhouse gas	2018 Ex,t (Gg CO2 Eq)	|Ex,t| (Gg CO2 Eq)	Lx,t	Cumulative Total of Column F
3.B.1.a	**Forest land Remaining Forest land**	**CO2**	**-7471,735**	**7471,735**	**0,259**	**0,259**
1.A.3.b	**Road Transportation**	**CO2**	**4354,582**	**4354,582**	**0,151**	**0,411**
3.B.2.a	**Cropland Remaining Cropland**	**CO2**	**-3469,096**	**3469,096**	**0,120**	**0,531**
3.A.1	**Enteric Fermentation**	**CH4**	**2684,639**	**2684,639**	**0,093**	**0,624**
1.A.4	**Other Sectors - Solid Fuels**	**CO2**	**1926,916**	**1926,916**	**0,067**	**0,691**
3.C.4	**Direct N_2O Emissions from managed soils**	**N2O**	**1539,647**	**1539,647**	**0,053**	**0,745**
1.A.1	**Energy Industries - Solid Fuels**	**CO2**	**1060,279**	**1060,279**	**0,037**	**0,781**
1.A.4	**Other Sectors - Liquid Fuels**	**CO2**	**1033,901**	**1033,901**	**0,036**	**0,817**
2.A.1	**Cement production**	**CO2**	**915,983**	**915,983**	**0,032**	**0,849**
1.A.2	**Manufacturing Industries and Construction - Solid Fuels**	**CO2**	**628,881**	**628,881**	**0,022**	**0,871**
3.C.5	**Indirect N_2O Emissions from managed soils**	**N2O**	**590,657**	**590,657**	**0,021**	**0,892**
1.A.3.e	**Other Transportation**	**CO2**	**455,396**	**455,396**	**0,016**	**0,907**
4.A	**Solid Waste Disposal**	**CH4**	**325,958**	**325,958**	**0,011**	**0,919**
1.A.4	**Other Sectors - Gaseous Fuels**	**CO2**	**314,345**	**314,345**	**0,011**	**0,930**
1.A.1	**Energy Industries - Liquid Fuels**	**CO2**	**221,342**	**221,342**	**0,008**	**1,000**
1.A.1	Energy Industries - Gaseous Fuels	CO2	177,041	177,041	0,006	0,936
3.A.2	Manure Management	N2O	163,387	163,387	0,006	0,941
4.D	Wastewater Treatment and Discharge	CH4	152,543	152,543	0,005	0,947
1.B.2.a	Oil	CH4	146,681	146,681	0,005	0,952
1.A.2	Manufacturing Industries and Construction - Liquid Fuels	CO2	142,926	142,926	0,005	0,957

As shown in table 6.1., in 2018, the key category analysis of the contribution level to the total GHG emissions and removals volume included 15 categories, where emissions and removals module amounted to 93.85% of total emissions in 2018. Table 6.2 below presents 18 key categories of GHG emissions and removals based on the assessment of trends in 2018 compared to the GHG emissions of the base year 1990.

Table 6.2 Key categories of sources of the Kyrgyz Republic's GHG inventory by trends. [13]

A	B	C	D	E	F	G	H

[12] MNRETS, GEF-UNEP, IPCC Inventory Software V2.54 Data Base.
[13] Ibid.

IPCC Category code	IPCC Category	Greenhouse gas	1990 Year Estimate Ex0 (Gg CO2 Eq)	2018 Year Estimate Ext (Gg CO2 Eq)	Trend Assessment (Txt)	% Contribution to Trend	Cumulative Total of Column G
3.B.1.a	**Forest land Remaining Forest land**	**CO2**	**-6850,850**	**-7471,735**	**0,093**	**0,213**	**0,213**
1.A.3.b	**Road Transportation**	**CO2**	**2824,570**	**4354,582**	**0,085**	**0,193**	**0,406**
3.B.2.a	**Cropland Remaining Cropland**	**CO2**	**-3415,270**	**-3469,096**	**0,053**	**0,121**	**0,527**
3.A.1	**Enteric Fermentation**	**CH4**	**2510,217**	**2684,639**	**0,045**	**0,102**	**0,629**
1.A.4	**Other Sectors - Liquid Fuels**	**CO2**	**459,663**	**1033,901**	**0,022**	**0,051**	**0,679**
1.A.1	**Energy Industries - Gaseous Fuels**	**CO2**	**2648,369**	**177,041**	**0,022**	**0,050**	**0,729**
1.A.1	**Energy Industries - Liquid Fuels**	**CO2**	**2575,481**	**221,342**	**0,020**	**0,045**	**0,774**
2.A.1	**Cement production**	**CO2**	**591,522**	**915,983**	**0,018**	**0,041**	**0,815**
3.C.4	**Direct N_2O Emissions from managed soils**	**N2O**	**2633,558**	**1539,647**	**0,014**	**0,031**	**0,846**
1.A.2	**Manufacturing Industries and Construction - Solid Fuels**	**CO2**	**262,017**	**628,881**	**0,014**	**0,031**	**0,877**
4.A	**Solid Waste Disposal**	**CH4**	**218,446**	**325,958**	**0,006**	**0,014**	**0,892**
3.C.5	**Indirect N_2O Emissions from managed soils**	**N2O**	**909,996**	**590,657**	**0,006**	**0,014**	**0,906**
1.A.2	**Manufacturing Industries and Construction - Gaseous Fuels**	**CO2**	**795,453**	**82,009**	**0,006**	**0,013**	**0,919**
1.A.4	**Other Sectors - Gaseous Fuels**	**CO2**	**390,187**	**314,345**	**0,004**	**0,010**	**0,929**
2.F.1	**Refrigeration and Air Conditioning**	**HFCs**	**0,000**	**117,459**	**0,003**	**0,007**	**0,936**
1.B.2.a	**Oil**	**CH4**	**113,678**	**146,681**	**0,003**	**0,006**	**0,942**
4.D	**Wastewater Treatment and Discharge**	**CH4**	**148,981**	**152,543**	**0,002**	**0,006**	**0,948**
3.A.2	**Manure Management**	**N2O**	**200,620**	**163,387**	**0,002**	**0,005**	**0,953**
1.A.2	Manufacturing Industries and Construction - Liquid Fuels	CO2	209,506	142,926	0,002	0,004	0,956
1.B.1	Solid Fuels	CH4	253,383	38,998	0,002	0,003	0,960

7. Quality Control and Quality Assurance

Quality control and quality assurance were carried out on the basis of a predetermined institutional organization of the fourth national GHG inventory, specified by the national context and in full accordance with the recommendations of the 2006 IPCC Guidelines. According to these Guidelines, national inventories should be transparent, well-documented, consistent, comparable, assessed for uncertainty, passed verification and quality assurance and control (QA/QC) process. In doing so, the 2006 IPCC Guidelines define QA / QC as follows:

- Quality control (QC) is a system of routine technical activities for measuring and controlling the quality of an inventory during its development. The basic quality control system

should provide routine and consistent checks to ensure the integrity, correctness and completeness of the data; identify and correct errors and omissions; document and archive inventory materials and record all QC activities.

- Quality assurance (QA) includes a planned system of verification procedures carried out by specialists not directly involved in the cadaster compilation and conducting the inventory.[14]

Data quality assurance and quality control of calculations were performed in all three inventories according to the 2006 IPCC Guidelines and the 2000 IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.

The Quality Assurance and Quality Control Work Plan and tabular forms were developed to be filled during the quality control process of the inventory by sector to ensure the quality of the PIU of the project.

It should be noted that the QA / QC process has been improved based on the results of the self-assessment of previous National Communications conducted in 2018. Thus, to ensure quality and compliance with the requirements of the Enhanced Transparency Framework, all products developed and adopted at internal coordination meetings of sectoral TEGs were discussed during sectoral consultations in the form of round tables with all stakeholders, where all decisions made were documented in protocols and accepted for implementation.

The QA / QC process of the fourth national inventory of emissions by sources and removals by GHG sinks was organized in several stages:

- The first step was to determine the methodology and the parameters proposed by the 2006 IPCC Guidelines. For this, each sectoral TEG prepared proposals justifying the choice of the level, parameters, required activity data set, and other essential parameters needed for conducting a national GHG inventory. Then these proposals were discussed and agreed upon at coordination meetings of all sectoral TEGs on inventory in the PIU and were finalized and submitted for discussion at sectoral round tables, where consultations were held with representatives of all stakeholders, based on consultations there were made agreed decisions on the chosen methodology for the National GHG Inventory.
- At this stage, the completeness, comparability, and consistency of the time series of the initial data coming from various sources were checked. All sources of background information - data providers were ranked according to the degree of confidence in the following order of priority:
    - Official publications and online resources of the National Statistical Committee;
    - Official publications and online resources of ministries and agencies;
    - Data of the State Archive of the Kyrgyz Republic;
    - Information from international sources;
    - Information from national experts;
    - Information received by calculation;
    - Information from various Internet resources.

In case of data discrepancy between different sources, information from a higher priority was used. Additional queries and/or additional meetings with different data providers were undertaken to address issues of concern, and decisions were documented in a protocol.

- At the third stage, long time series were formed and gaps in the data were identified and necessary calculations were made. The data were entered in series and normalized in the

[14]IPCC. Guidelines for National Greenhouse Gas Inventories. 2006, vol. 1, chapter 6, p. 6.5.

uniform required format of units of measure. Methods of calculations and data normalization were checked and agreed upon at coordination meetings between TEG and PIU. The resulting time series of activity data from 1990 to 2018 to estimate GHG emissions and sinks were then also submitted to the sectoral round tables, where agreed by all stakeholders. The decisions taken on data harmonization were consolidated in the respective protocols.

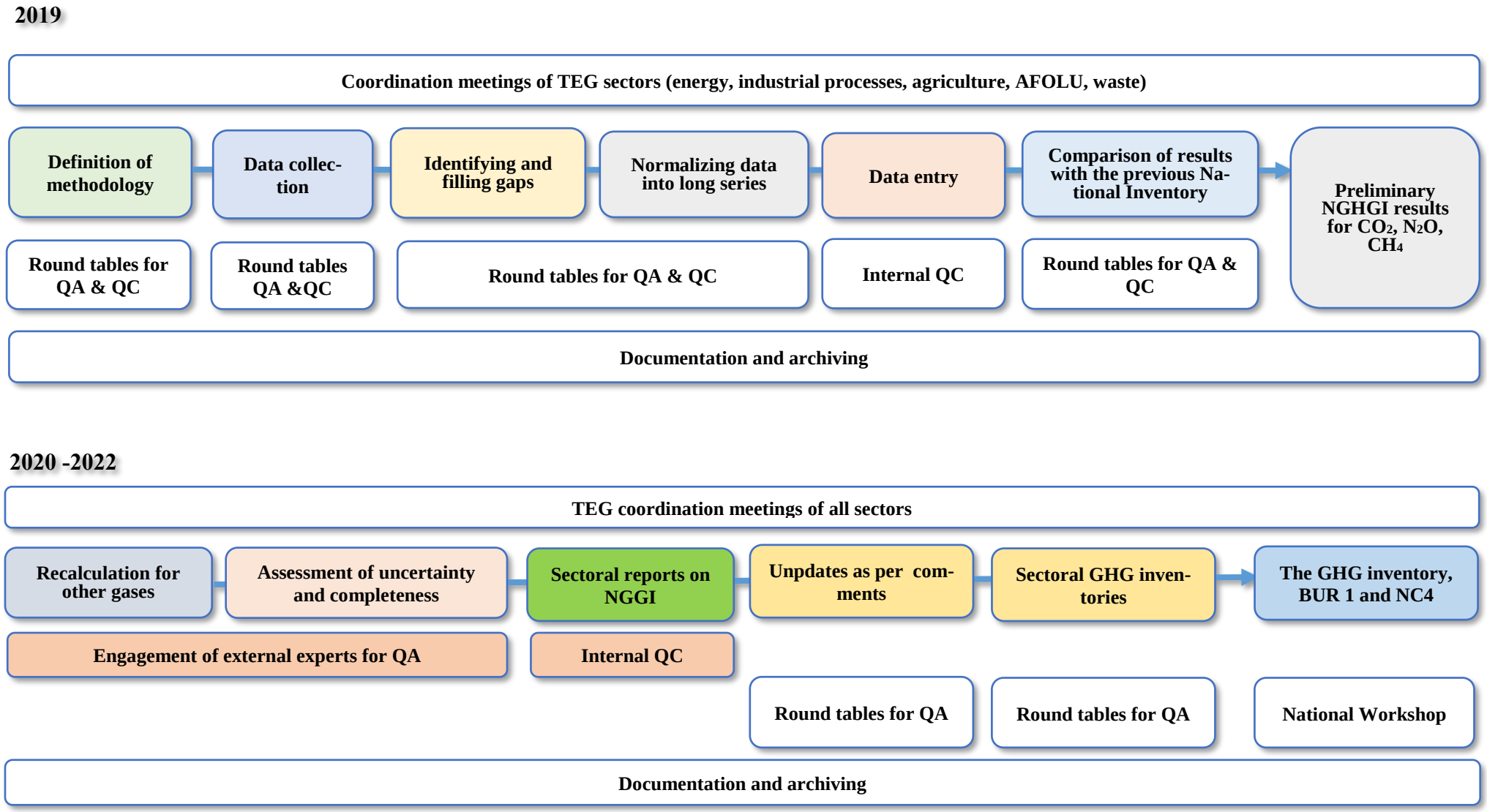
- The fourth step was to verify and agree on the preliminary results of the sectoral assessment of emissions by category and subcategory and by all gases. As a result of the transition to the new methodology, sectoral groups have recalculated emissions since 1990. For quality assurance, a comparison was made with the results of the third national inventory of GHG emissions and removals for the period 1990-2010 within PIU at coordination meetings of sectoral TEG. The results of the comparative analysis were then presented at the sectoral roundtables to all stakeholders.
- At the fifth stage, uncertainty in level and trends was assessed. Since the inventory was carried out for Tier 1, the uncertainty for the three main GHGs, CO_2, N_2O, and CH_4, as well as the completeness of the coverage for other gases, was estimated for all sectors, the calculation was made using CORINAIR emission factors of the European Environment Agency. The results of the uncertainty assessment and completeness for gases were presented at coordination meetings of all sectoral TEGs in the PIU for quality control.
- At the sixth stage, all data were consolidated in the tables of the UNFCCC common reporting format and the obtained results of various types of GHG emissions were brought into CO_2 equivalent format using the Global Warming Potential (GWP) factors.[15] At the sixth stage, all data were consolidated in the tables of the UNFCCC common reporting format and the obtained results of various types of GHG emissions were brought into CO2 equivalent format using the Global Warming Potential (GWP) factors. GWP presents factors that determine the extent to which different greenhouse gases contribute to global warming. Carbon dioxide shall be taken as a starting point, with a GWP as 1. The effect of GWP is calculated over a certain time horizon, usually 20, 100, or 500 years. The generally accepted GWP values are provided by the IPCC, which updates them in its assessment reports. Since the previous third national GHG inventory of the Kyrgyz Republic used the GWP values of the Second Assessment Report (SAR) of the IPCC to ensure comparability and analysis of the final data on GHG emissions and sinks, the data from the results of the Fourth National GHG Inventory were also recalculated using the IPCC SAR values. The results of this work were presented at online round tables to all interested parties due to the introduced restrictions on holding mass events in the country in connection with the COVID 19 pandemic.
- Then all the tables with the results of the 4th NGHGI were compiled into a separate document. In addition, the data from the results of the fourth NGHGI were compared with the results of international organizations (for example, the International Energy Agency, official World Bank data, etc.) and the results of inventories in other countries, especially countries with similar climatic and socio-economic conditions (Central Asian region). The comparative calculations were also presented to all interested parties in the online discussion of the sectors.
- On the final step, a group of independent experts and specialists from research and educational institutions has been engaged to implement the QA/QC Work Plan and conducted full verification and assurance of the documentation and results-based databases of the fourth national GHG inventory and the Inventory of GHG emissions and removals in the

[15] GWP was introduced in 1997 in the Kyoto Protocol.

Kyrgyz Republic for the period 1990-2018. After an external evaluation, all comments received were integrated into the National Inventory Report as appropriate. Then, the final NIR was presented at the national workshop to all stakeholders as an Annex to BUR 1.

The process of NGHGI QC and QA is presented of figure 7.1.

Figure 7.1 Quality assurance and quality control process of the fourth national GHG inventory



8. Uncertainty and Scope

Uncertainty estimates are an essential element of a complete inventory of greenhouse gas emissions and removals. They should be obtained for both the national level and for the trend assessment, as well as for their constituent parts such as emission factors, activity data, and other assessment parameters for each category.[16]

In the absence of developed national emission factors derived from published studies that are appropriate to the circumstances of this country, the default factors given in the sectoral volumes of the 2006 IPCC Guidelines were used in NGHGI 4, which are the most typical. However, there are uncertainties associated with the use of the factors in circumstances not related to the original measurements. There can be significant variability in how well the default totals reflect the conditions of the actual population of activities in a given country.

The default methods for using the factors represent a trade-off between the level of detail that would be required to generate accurate estimates for each country and the input data that are likely or readily available in most countries. It is clear that default methods are often simplistic and can introduce more uncertainty into a national estimate.

Activity data are more closely related to economic activity than emission factors. However, unlike emission factor data, there are usually no readily available statistical samples of alternative estimates of activity data that can match distributions and estimate uncertainty. However, activity data generally have lower uncertainty and lower correlation between years than emission factor data. Activity data are often collected and regularly published by national statistical offices, which also assess the uncertainty associated with their data as part of their data collection procedures and publish the data themselves.[17]

The NSC of the country has a significant information resource since it maintains and publishes various statistical data that can be used in the GHG inventory. For example, there are long series of data on macroeconomics, energy production, livestock, waste volumes, forest, and agricultural land. However, the long time series that is important for the GHG inventory on the number of different types of vehicles and their fuel consumption, the volume of industrial production, the morphological composition of waste, etc. are not available.

Uncertainty information is not intended to question the validity of the GHG inventory estimates, but to help improve the accuracy of future inventories and the validity of future methodological decisions. Despite the desire of the Kyrgyz national inventory team to estimate emissions with the highest accuracy, there were different uncertainties at all sectors, but with different percentages. The lack or unavailability of data, the use of a default emission factor, or an incomplete understanding of how emissions are generated by sources are the main factors contributing to the uncertainty surrounding the reported emission estimates.

It should be noted that the IPCC software for national GHG inventory, among other tools, also provides an opportunity to analyze uncertainty both for individual sectors and all data from GHG inventory as a whole. The largest percentage of uncertainty is associated with used IPCC default emission factors, the percentage of the uncertainty of which is automatically set in the range from several units to several hundred percent for each specific source of emissions and removals.

[16] IPCC. Guidelines for National Greenhouse Gas Inventories. 2006 vol. 1, chapter 3.
[17] Ibid

According to the IPCC software data used for all values entered during the fourth NGHGI, the uncertainty of the activity data ranged from 5 to 75%. And the uncertainty of the applied IPCC default emission factors are presented in the range from 3.1 to 999%.[18]

In general, the uncertainty in total inventory obtained in the result of the 4th NGHGI for the period 1990-2018, according to the IPCC software package, is determined at 61.255%, and the trend uncertainty at 22.882%. (See Annex 1).

A complete table of uncertainty analysis of the GHG inventory is presented in the NIR annexed to BUR 1. Uncertainties of sectoral inventories are presented further in the relevant sections.

The completeness of scope of the fourth national GHG sector inventory was consistent with the IPCC methodology and the corresponding calculations were made for the following greenhouse gas emissions: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O) and hydrofluorocarbons (HFCs), as well as for precursor gases (HP): carbon monoxide (CO); nitrogen oxides (NOx); non-methane volatile organic compounds (NMVOC); and sulfur dioxide (SO2).

The analysis of the background information, as in the 3rd NGHGI, [19] found that there is no emission of perfluorocarbons and sulfur hexafluoride in the republic and these gases are not considered further.

Emissions of methane, nitrous oxide, and HFCs were converted to CO_2 equivalents (CO_2 eq) using the values of the Global Warming Potential to estimate the total emissions of the country and sectors. The Global Warming Potential (GWP) has been developed to make it possible to compare the effects of different gases on global warming. It assigns a certain value to the amount of heat captured by a given mass of gas compared to the portion of heat captured by a similar mass of carbon dioxide in a given unit of time. The reference gas is carbon dioxide (CO_2), whose GWP is 1. The effect of emissions is estimated over a certain period of time - a time horizon of 100 years. The values given in the 1995 IPCC Second Assessment Report on Climate Change were used for comparison with previous inventories (see table 8.1).[20] In addition, these recalculation equivalents are set by default in the IPCC software package.

Table 8.1. GWP values used for calculation in this document [21]

Gases	Chemical Formula	Global Warming Potential with a Time Horizon of 100 Years
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310
Hydrofluorocarbon (HFC) - 23	CHF_3	11,700
HFC -32	CH_2F_2	650
HFC -125	CHF_2CF_3	2,800
HFC -134a	CH_2FCF_3	1,300
HFC -143a	CH_3CF_3	3,800
HFC -227 ea	CF_3CHFCF_3	2,900

9. Recalculation and Improvements

[18] IPCC. Guidelines for National Greenhouse Gas Inventories. 2006 vol. 1-5.
[19] SAEPF. GEF_UNEP. Third National Communication of the Kyrgyz Republic on UNFCCC. Bishkek. 2016, p. 60.
[20] https://archive.ipcc.ch/publications_and_data/publications_and_data_reports.shtml
[21] IPCC. Second Assessment Report. 1995.

The transition to the new IPCC methodology and the application of the new IPCC software product in NGHGI 4 necessitated the recalculation of the entire time series of estimates of the 3rd NGHGI presented in the Third National Communication. Therefore, the inventory team recalculated the entire time series from 1990 to 2018 for all direct greenhouse gases and indirect GHG precursor gases. In addition, a new round of activity data collection was carried out and the archive of the long data series was updated, which significantly expanded the primary database. Undoubtedly, this increased the quality, accuracy, coverage, and reliability of the obtained estimates of emissions by sources and removals by sinks in the process of the next NGHGI.

The results of recalculation of emissions of greenhouse gases and precursor gases by type in the Kyrgyz Republic for the period 1990-2018 in Gg are presented in Table 9.1.

Table 9.1 Results of direct and indirect greenhouse gases recalculations by gases for the period 1990-2018 (Gg) [22]

Year	Net CO_2	CH_4	N_2O	HFC-CO_2 eq	NO_x	CO	NMVOC	SO_2
1990	10031,278	183,188	13,351	0,000	50,255	371,469	60,966	101,326
1991	7631,225	176,404	14,053	0,000	42,884	310,618	53,265	86,024
1992	4005,783	159,665	12,519	0,000	33,312	261,844	40,465	71,628
1993	230,076	141,486	6,210	0,000	23,599	183,287	30,711	56,662
1994	-3032,120	114,784	4,770	0,000	16,565	120,212	21,772	46,888
1995	-4990,691	103,647	4,169	3,637	12,185	64,104	14,317	24,833
1996	-4895,548	99,976	4,114	4,094	13,040	71,148	15,247	22,582
1997	-4796,877	102,633	5,218	4,718	13,689	84,283	15,091	19,972
1998	-5380,236	104,081	4,995	5,510	12,052	91,966	15,033	20,585
1999	-5567,967	105,204	5,110	6,469	14,512	92,000	13,962	23,631
2000	-5855,474	106,913	5,082	7,597	10,966	87,200	13,341	24,111
2001	-5380,959	107,877	5,171	8,893	13,275	97,746	14,217	24,887
2002	-5709,159	109,852	5,140	10,357	10,329	90,986	14,841	23,805
2003	-5119,062	108,794	5,110	11,990	10,679	92,060	16,122	22,413
2004	-5219,664	110,945	5,188	13,661	11,356	100,404	17,589	21,679
2005	-4719,488	113,182	5,361	15,759	13,688	124,867	16,655	31,490
2006	-4620,528	116,538	5,568	17,896	13,795	127,924	16,326	31,427
2007	-3806,999	120,728	5,730	16,660	18,557	145,702	18,744	32,500
2008	-2952,789	126,850	6,214	22,139	20,388	183,194	20,997	42,561
2009	-3427,456	131,879	6,454	24,606	22,540	191,786	21,882	40,931
2010	-3966,646	136,033	6,429	49,983	21,776	198,820	24,027	34,933
2011	-2382,824	140,261	6,745	64,092	27,291	216,122	25,794	38,540
2012	-850,206	144,668	6,997	123,821	31,859	251,804	31,231	41,676
2013	-793,734	147,567	7,096	165,184	33,986	271,921	32,649	38,759
2014	-622,020	154,857	7,682	215,743	31,218	229,551	30,890	53,243
2015	-61,516	158,220	7,696	219,883	32,980	237,888	31,632	61,052
2016	-1462,075	161,831	7,758	305,900	28,891	224,296	33,410	40,522
2017	-918,246	167,874	8,157	341,548	32,334	237,129	35,389	38,570
2018	474,484	174,361	8,346	193,688	35,924	266,697	40,232	42,656

[22] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2017. Bishkek. 2022.

The results of the recalculation of the GHG emissions by sources and removals by sinks (minus values) with global warming potentials in Gg CO_2 eq. are presented in Table 9.2.

Table 9.2 Recalculation of GHG emissions by sources and removals by sinks for the period 1990 – 2018.[23]

Year	Energy	IPPU	Agriculture	FOLU	Waste	Net CO2 eq.
1990	20529,719	871,638	6437,637	-10273,525	451,682	18017,151
1991	18063,523	829,765	6641,579	-10294,483	451,686	15692,070
1992	14382,567	636,145	6071,064	-10289,530	439,378	11239,623
1993	10629,428	393,427	3957,862	-10293,574	439,104	5126,247
1994	7379,889	210,270	3154,111	-10309,734	422,415	856,952
1995	5398,675	169,149	2814,657	-10323,647	423,188	-1517,978
1996	5084,389	271,207	2734,142	-10032,159	425,864	-1516,555
1997	5387,290	331,971	3144,841	-10303,286	419,987	-1019,196
1998	4813,977	346,578	3114,813	-10331,511	415,535	-1640,609
1999	4800,656	202,095	3154,514	-10339,095	413,694	-1768,135
2000	4421,042	227,930	3210,044	-10303,877	417,481	-2027,380
2001	4837,803	236,972	3226,578	-10221,398	416,263	-1503,781
2002	4478,844	269,261	3270,211	-10239,260	422,325	-1798,619
2003	4625,340	370,012	3254,211	-9914,316	426,328	-1238,425
2004	4859,120	435,130	3308,048	-10302,866	432,714	-1267,855
2005	5213,316	482,930	3414,776	-10205,986	429,963	-665,001
2006	5239,271	556,227	3549,578	-10208,929	434,549	-429,305
2007	6160,400	585,435	3651,920	-10309,902	433,423	521,277
2008	7070,779	507,011	3893,094	-10250,705	439,495	1659,674
2009	6911,588	266,180	4033,822	-10303,402	459,145	1367,333
2010	6273,356	431,877	4089,427	-10334,544	472,887	933,003
2011	7658,652	569,079	4302,008	-10295,774	483,717	2717,682
2012	9205,812	735,169	4369,795	-10324,340	494,216	4480,652
2013	8958,767	950,554	4459,238	-10216,191	517,627	4669,995
2014	9221,209	1073,505	4732,395	-10327,718	527,741	5227,132
2015	9920,106	944,071	4803,018	-10336,530	536,210	5866,874
2016	8546,374	953,259	4891,298	-10302,540	559,009	4647,400
2017	9129,504	1078,098	5074,368	-10367,314	562,812	5477,467
2018	10923,480	1162,553	5196,342	-10941,371	576,037	6917,040

As shown in table 9.2, in the period of 1995-2006, Kyrgyzstan was a country with a negative carbon balance due to the post-soviet economy collapse and consumption decline.

The use of the new IPCC methodology during NGHGI 4 has resulted in some differences in the GHG emissions assessment with the previous GHG inventory. This is primarily related to the expansion of the scope and a more thorough assessment not only of emissions by source but also removals by sinks. The rejection of the old biomass growth factors of the Forestry Institute of the National Academy of Sciences of the Kyrgyz Republic, developed in the late 90s of the last century, and use of the default emission factors values from the 2006 IPCC Guidelines for recalculating carbon sinks, led to more than a 10-fold increase in the values of carbon absorption by forests and perennial crops, and, consequently, to a decrease in the values of the total GHG emissions of Kyrgyzstan. The difference between

[23] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. Bishkek. 2022.

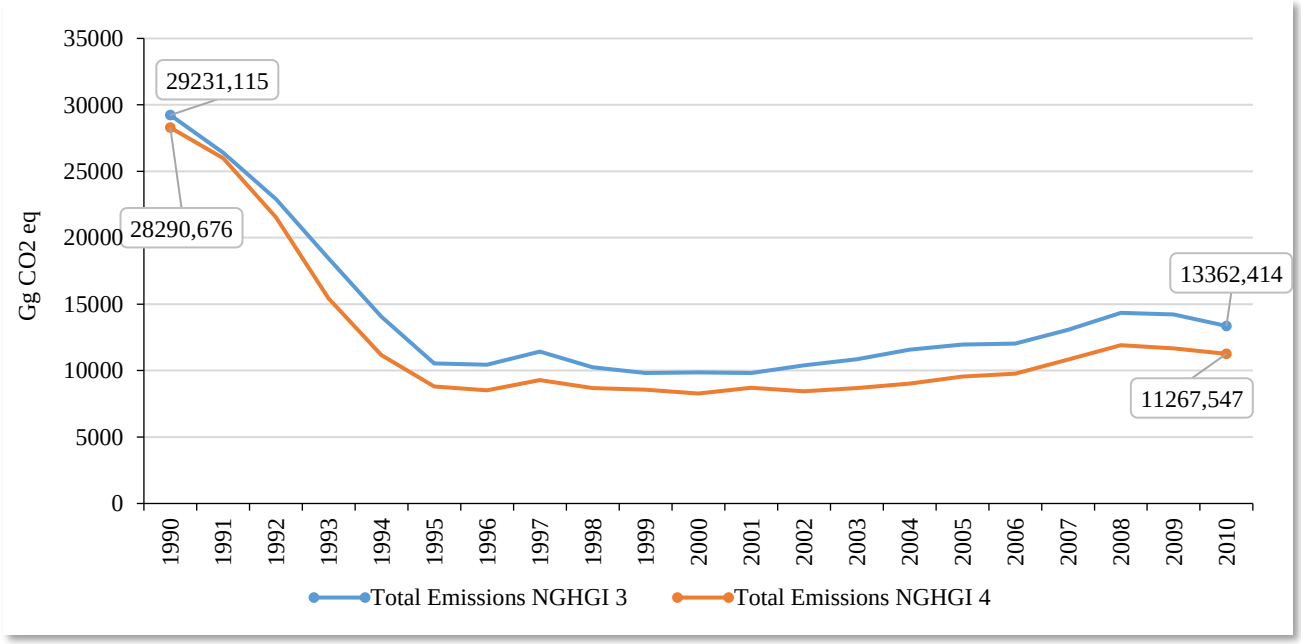
the assessments of the total emissions of NGHGI 4 in comparison with NGHGI 3 (in Gg of CO_2 eq. and %) is presented in table 9.3. below.

Table 9.3 The difference between NGHGI 4 and NGHGI 3 on total GHG emissions estimate for the period of 1990-2010. [24]

Indicators	1990	1991	1992	1993	1994	1995	1996
NGHGI 4	28290,676	25986,553	21529,154	15419,821	11166,686	8805,669	8515,603
NGHGI 3	29231,115	26382,498	22907,183	18439,035	14060,027	10538,306	10453,192
Difference (Gg)	-940,439	-395,945	-1378,029	-3019,214	-2893,341	-1732,637	-1937,589
Difference in %	-3,22	-1,50	-6,02	-16,37	-20,58	-16,44	-18,54
Indicators	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
NGHGI 4	9284,089	8690,903	8570,960	8276,497	8717,616	8440,641	8675,891
NGHGI 3	11426,954	10256,726	9821,162	9866,469	9821,705	10407,446	10848,899
Difference (Gg)	-2142,865	-1565,823	-1250,202	-1589,972	-1104,089	-1966,805	-2173,008
Difference in %	-18,75	-15,27	-12,73	-16,11	-11,24	-18,90	-20,03
Indicators	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
NGHGI 4	9035,011	9540,985	9779,624	10831,179	11910,379	11670,735	11267,547
NGHGI 3	11572,979	11957,163	12028,185	13074,542	14343,157	14230,964	13362,414
Difference (Gg)	-2537,968	-2416,178	-2248,561	-2243,363	-2432,778	-2560,229	-2094,867
Difference in %	-21,93	-20,21	-18,69	-17,16	-16,96	-17,99	-15,68

As can be seen from the table, there is difference in the estimate of total GHG emissions between 1990 and 2010. The difference between the results of NGHGI 3 and NGHGI 4 is observed for each year from a maximum of -21.93% in the total 2004 emissions to a minimum of -1.5% in the total 1991 emissions assessment (see Figure 9.1).

Figure 9.1 The difference in the assessments of the 3rd and 4th NGHGIs of the total GHG emissions of Kyrgyzstan in the period 1990-2010[25]



[24] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. Bishkek. 2022

[25].Ibid.

The transition to the new methodology of the 2006 IPCC Guidelines using appropriate biomass growth factors led to changes in the assessment of carbon sequestration in the Forestry and Other Land Use (FOLU) sector's sink to the biomass of forests and croplands perennials. The difference in the assessments of the volume of annual FOLU sector GHG removals in the period 1990-2010 based on the results of the 3rd and 4th NGHGIs data is presented in table 9.4.

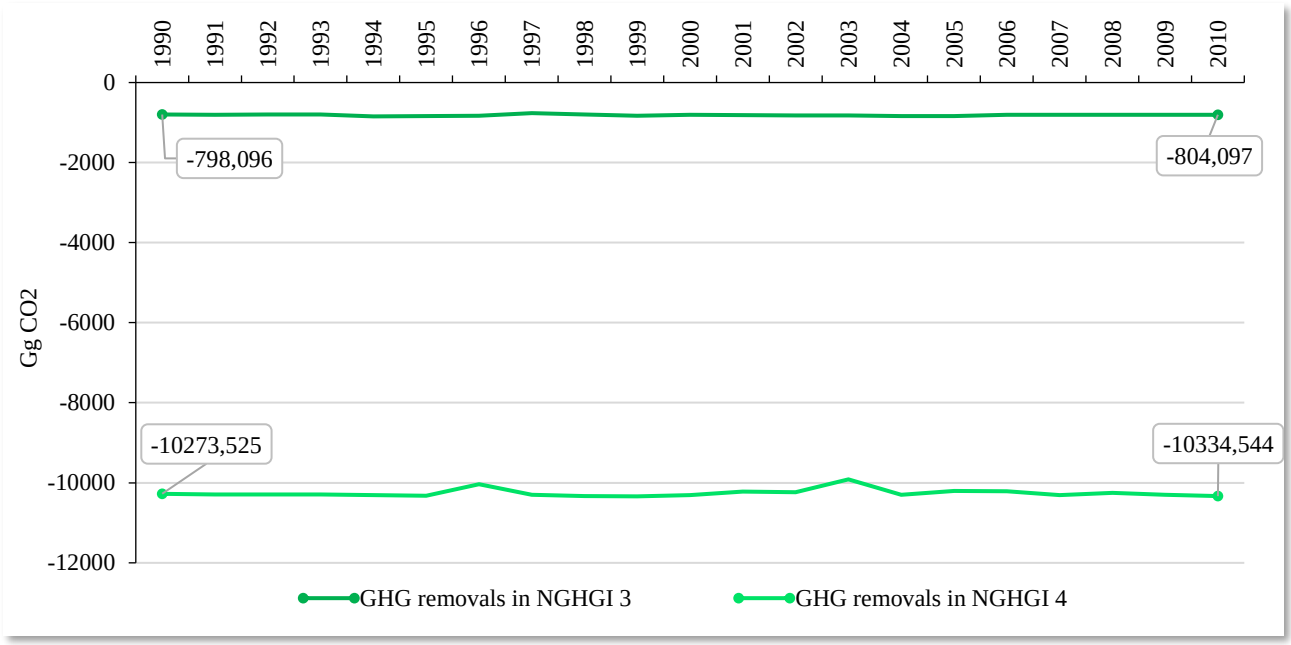
Table 9.4 Difference in the estimates of the third and fourth NGHGIs of CO_2 sequestration (in Gg) in the FOLU sector between 1990 and 2010 [26]

	1990	1991	1992	1993	1994	1995	1996
NGHGI 4	-10273,525	-10294,483	-10289,530	-10293,574	-10309,734	-10323,647	-10032,159
NGHGI 3	-798,096	-803,823	-798,788	-797,073	-845,476	-841,7	-828,167
Difference, Gg	-9475,429	-9490,660	-9490,742	-9496,501	-9464,258	-9481,947	-9203,992
Difference, %	1187,25	1180,69	1188,14	1191,42	1119,40	1126,52	1111,37
	1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
NGHGI 4	-10303,286	-10331,511	-10339,095	-10303,877	-10221,398	-10239,260	-9914,316
NGHGI 3	-764,051	-793,783	-827,822	-808,808	-813,996	-822,758	-821,911
Difference, Gg	-9539,235	-9537,728	-9511,273	-9495,069	-9407,402	-9416,502	-9092,405
Difference, %	1248,51	1201,55	1148,95	1173,96	1155,71	1144,50	1106,25
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
NGHGI 4	-10302,866	-10205,986	-10208,929	-10309,902	-10250,705	-10303,402	-10334,544
NGHGI 3	-838,879	-840,367	-804,864	-804,167	-804,08	-803,662	-804,097
Difference, Gg	-9463,987	-9365,619	-9404,065	-9505,735	-9446,625	-9499,740	-9530,447
Difference, %	1128,17	1114,47	1168,40	1182,06	1174,84	1182,06	1185,24

As can be seen, the difference in the estimates of carbon sinks in forests in the 3rd and 4th NGHGIs is significant, due to the use of new forest area data and new biomass growth factors from the 2006 IPCC Guidelines. Dynamics of CO_2 absorptions in FOLU between 1990 and 2010 in the 3rd and 4th NGHGI estimates are presented in figure 9.2.

Figure 9.2 Absorption of CO_2 in the FOLU sector in the period 1990 - 2010 [27]

[26] SAEPF, GEF-UNEP. Third National Communication. - B., 2016; MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic in the period 1990-2018.Bishkek. 2022.
[27] Ibid.



10. National Inventory Improvement Planning

In fact, it should be noted that Kyrgyzstan has never prepared National GHG Inventory Improvement Plan (NIIP) before. At the same time, preparing and reporting an improvement plan is consistent with future reporting requirements under the UNFCCC Enhanced Transparency Framework (ETF).[28] "To facilitate continuous improvement, countries should identify, regularly update and report information on areas of improvement. In addition to areas noted above, improvements should also address capacity constraints related to use of flexibility and in the future, responding to improvements identified by technical expert review teams."[29]

While considering UNFCCC recommended US Environment Protection Agency developed Template Workbook "Developing a National Greenhouse Gas Inventory System", [30] provisional NIIP was compiled as per propose template including the following sections:

1. Institutional Arrangement
2. Methods and Data Documentation
3. Quality Assurance and Quality Control Procedures
4. Archiving System
5. Key Categories Analysis
6. National Inventory Improvement Plan

Kyrgyzstan National Inventory Improvement Plan (NIIP) will options for improving the national GHG inventory system to support compilation of a high-quality inventory consistent with the 2006 IPCC Guidelines. The NIIP will guide future efforts to increase the transparency, consistency, comparability, completeness, and accuracy of future inventories. It will also inform the overall improvement of the national GHG inventory over the coming years. These improvements will be identified through documentation of existing institutional arrangements, category-by-category analyses of methods and data,

[28] See 18/CMA.1, Modalities, Procedures and Guidelines (MPGs), Annex Chapter II, Section D. Facilitating improved reporting and transparency over time (available at http://unfccc.int/decisions).
[29] UNFCCC. https://unfccc.int/sites/default/files/resource/Template_7._National_Inventory_Improvement_Plan.pdf
[30] US Environment Protection Agency. https://www.epa.gov/ghgemissions/toolkit-building-national-ghg-inventory-systems

QA/QC procedures, key categories, and the archiving system, all the recommendations formulated as appropriate.

When finalized this NIIP will be sent together with the NC 4, which is currently under development and which will prolong NGHGI reporting integrating data on 2019-2020 and GHG inventory assessment by territories of the country, as well as recalculations of the 1990-2020 time series emissions by source and removals by sinks completing the fourth round of Kyrgyzstan GHG emissions and removals inventory.

11. GHG emissions and removals report

The timeframe of NGHGI 4 results presented in this round cover the period 2011–2018. Wherein, the estimates of GHG emissions by sources and removals by sinks were also recalculated for the entire period 1990-2018. These results, in accordance with the accepted coverage of the main greenhouse gases and precursor gases are presented in tabular form in the commonly accepted for GHG emissions metric units - Gigagrams (Gg).

The assessment of emissions of different types of GHGs by major emitters and sinks for 2018 is presented in table 11.1.

Table 11.1 Greenhouse gas emissions and removals by main categories of sources and sinks in 2018 (Gg) [31]

Sources \ Gases	Net CO_2	CH_4	N_2O	HFC-32	HFC-125	HFC-134a	HFC-143a	HFC-227ea
Total national emissions and removals	**474,484**	**174,361**	**8,346**	**0,007**	**0,018**	**0,048**	**0,012**	**0,010**
1 – Energy	10442,593	16,377	0,442					
2 – IPPU	968,864			0,007	0,018	0,048	0,012	0,010
3 – AFOLU	-10941,371	134,478	7,653					
4 - Waste	4,398	23,506	0,252					
International Aviation Bunker	**340,613**	**0,002**	**0,010**					

The results of the 2018 inventory for the precursor gases emissions data are presented in table 11.2.

Table 11.2 Emissions of precursor gases by major sources in 2018 (Gg). [32]

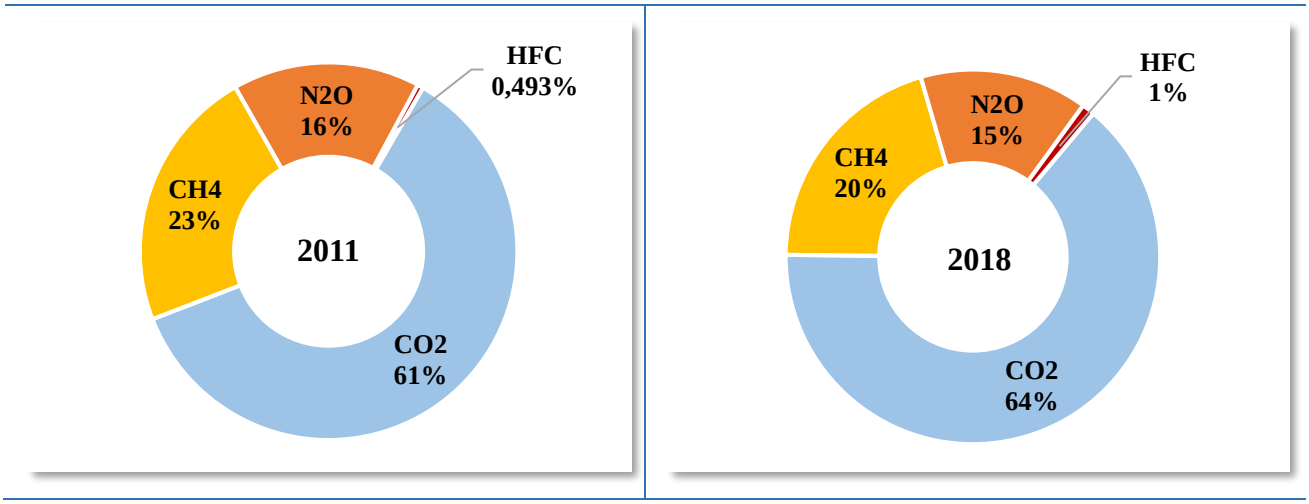
Sources \ Gases	NOx	CO	NMVOC	SO_2
Total national emissions and removals	**35,924**	**266,697**	**40,232**	**42,656**
1 – Energy	31,152	244,524	36,893	42,638
2 – IPPU	0,009	0,049	3,219	0,006
3 – AFOLU	0,453	16,681		
4 - Waste	0,310	5,444	0,120	0,011
International Aviation Bunker	**0,000**	**0,000**	**0,000**	**0,000**

According to the data of 2018 GHG emissions recalculated in CO_2 equivalent, most of the emissions were produced in carbon dioxide (64%), the share of methane in the total GHG emissions was 20%,

[31] MNRETS, GEF-UNEP. Data Base of the IPPC GHG Software v. 2.52. Bishkek. 2021.
[32] Ibid.

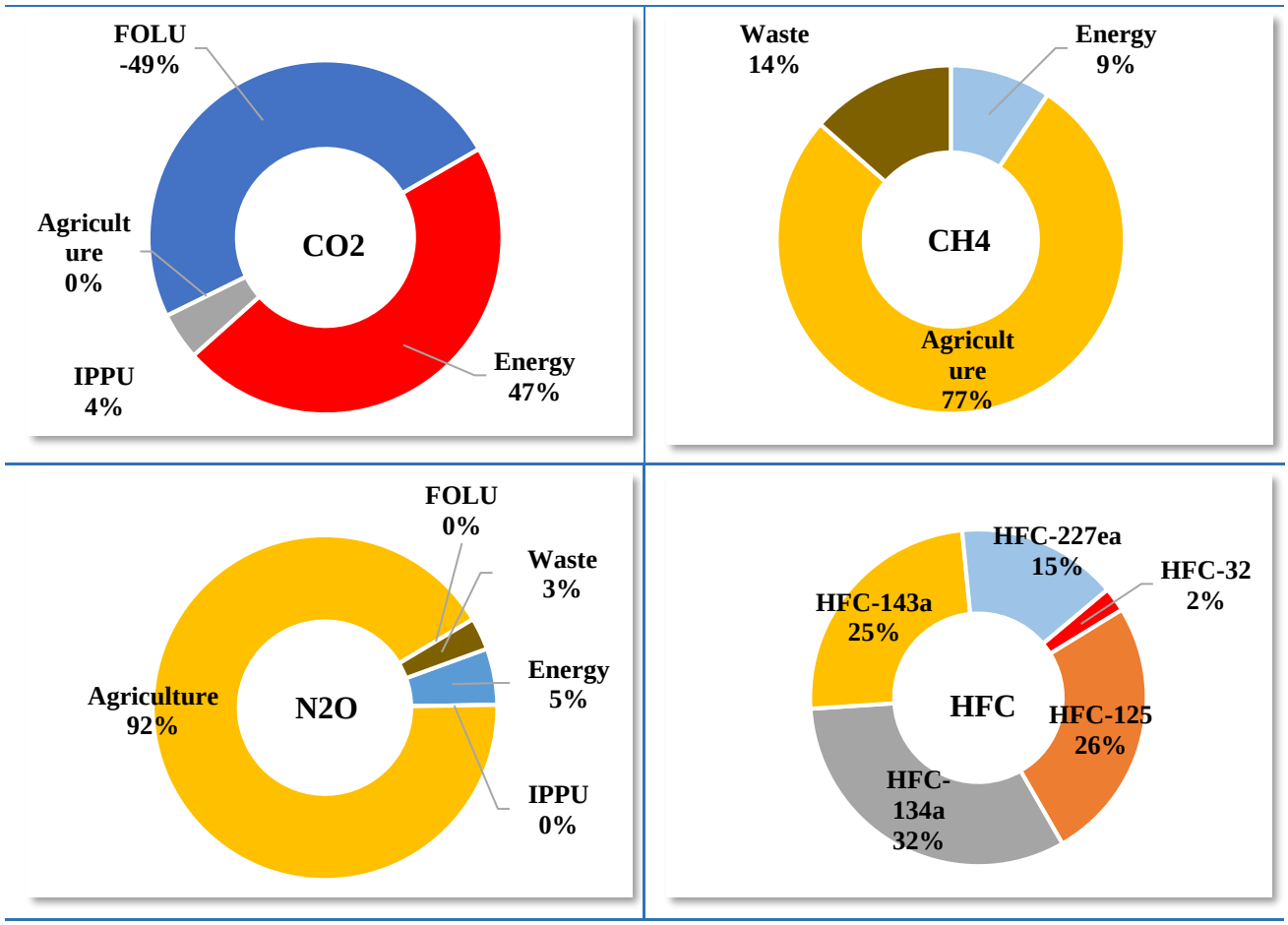
nitrous oxide - 15% and the share of HFCs - 1%. There were no emissions of PFCs and SF_6 in 2018. The structure of emissions by forks of gases is shown in Figure 11.1.

Figure 11.1 The structure of greenhouse gases emissions in 2011 and 2018 in CO_2 eq.[33]



Inventory results as per main GHG emission source categories in 2018 are shown in Figure 11.2.

Figure 11.2 Distribution of greenhouse gas emissions for 2018 in CO_2 equivalent by major emitting sectors [34]

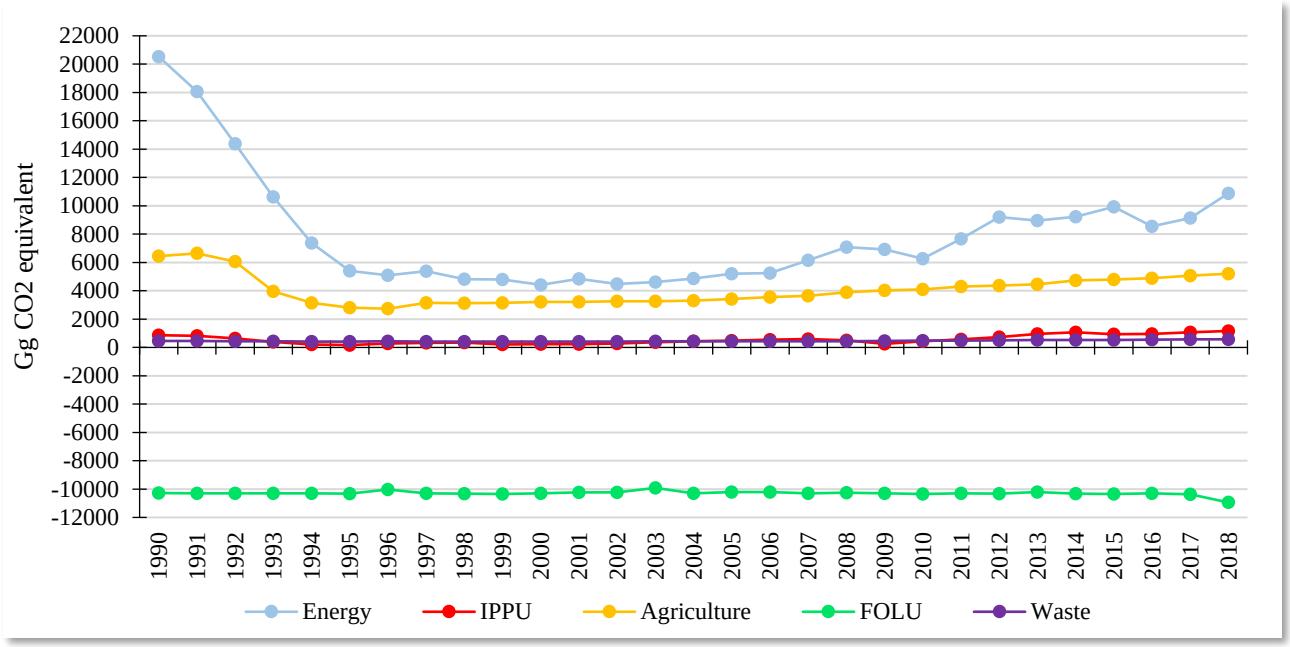


* Emissions of all types of HFCs are related to the IPPU sector

[33] MNRETS, GEF-UNEP. Data Base of the IPPC GHG Software v. 2.52. Bishkek. 2021.
[34] MNRETS, GEF-UNEP. Data Base of the IPPC GHG Software v. 2.52. Bishkek. 2021.

The general dynamics of GHG emissions and removals in CO_2 equivalent by major sectors-emitters for the period 1990-2018 is shown in Figure 11.3.

Figure 11.3 Emissions and removals of GHGs in CO_2 equivalent by sources for the period 1990-2018.[35]



In terms of contributions to the total annual GHG emissions of the sectors between 1990 and 2018, the largest share has been from the Energy sector. Thus, emissions from the energy sector varied from the maximum value of 20529,719 Gg CO_2 eq. in 1990 to a minimum value of 4421,042 Gg CO_2 eq. in 2000.

The second contributor to GHG emissions in the period under review has been the Agricultural sector, whose emissions reached a maximum in 1991 and amounted to 6641,579 Gg CO_2 eq. and decreased to their minimum of 2734,142 Gg CO_2 eq. in 1996.

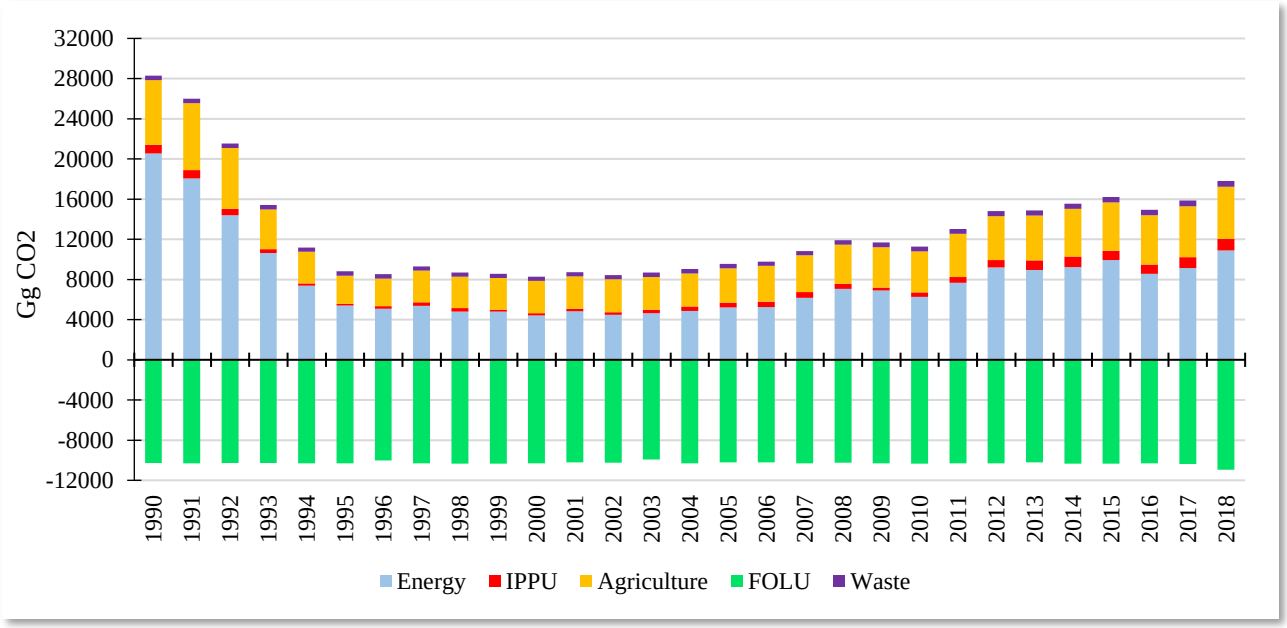
A completely different situation with emissions in the sector Industrial Processes and Product Use, where the maximum emissions were in 2018 amounting 1884,481 Gg CO_2 eq. and a minimum in 1995 accounted 169,149 Gg CO_2 eq.

The "Waste" sector maintained a relatively stable and steady growth of emissions in the period under review and, therefore, it had a maximum value of emissions amounting 576,037 Gg CO_2 eq. in 2018, and the minimum in the amount of 413,694 Gg CO_2 eq. in 1999.

Carbon dioxide was sequestered by the Forestry and Other Land Use Sector. The amount of carbon dioxide sink to forests and perennials of cropland has remained stable throughout the period under review at the amount of 10000 Gg CO_2 annually. (Figure 11.4).

Figure 11.4 Emissions and removals of GHGs between 1990 and 2018 by major sector [36]

[35] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. – Bishkek. 2022.
[36] Ibid.



12. GHG Emissions by Trends

In the period of 1990-2018, the GHG emissions in the Kyrgyz Republic, has showed generally a downward trend. The total volume of all GHG emissions decreased by 36.88% from 28290,676 Gg CO_2 eq. in 1990 up to 17858,411 Gg CO_2 eq. in 2018. The volume of removals has increased by 6,5% from 10273,525 Gg CO_2 in 1990 to 10941,371 Gg CO_2 in 2018. The volume of net emissions in 2018 amounted to 6878,042 Gg CO_2 eq. compared to 18017,151 Gg CO_2 eq. in 1990, thus, demonstrating reduction by 61,61%.

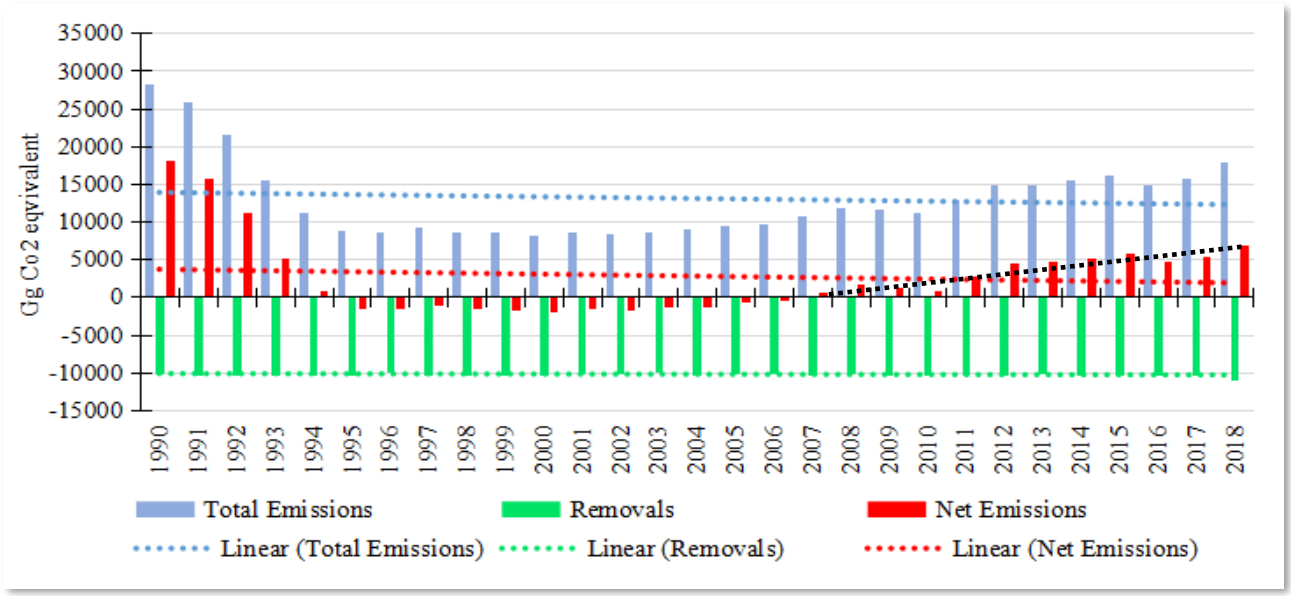
The volumes of GHG emissions in the Energy Sector decreased by 46,79% from 20529,719 Gg CO_2 eq. in 1990 up to 10923,480 Gg CO_2 eq. in 2018, GHG emissions of the second largest emitting sector - Agriculture, decreased by 19,28% from 6437,637 Gg CO_2 eq. to 5196,342 Gg CO_2 eq. in 2018.

At the same time, emissions from the Industrial Processes and Product Use sector increased by 33,38% from 871,638 Gg CO_2 eq. in 1990 up to 1162,553 Gg CO_2 eq. in 2018, as well as GHG emissions from the Waste sector increased by 27,53% from 451,682 Gg CO_2 eq. in 1990 up to 576,037 Gg CO_2 eq. in 2018.

Dynamics of the total and net GHG emissions and absorptions during 1990-2018 and the corresponding linear trends shown in Figure 12.1.

Figure 12.1 Dynamics and trends of the total and net GHG emissions and removals in the period 1990-2018 [37]

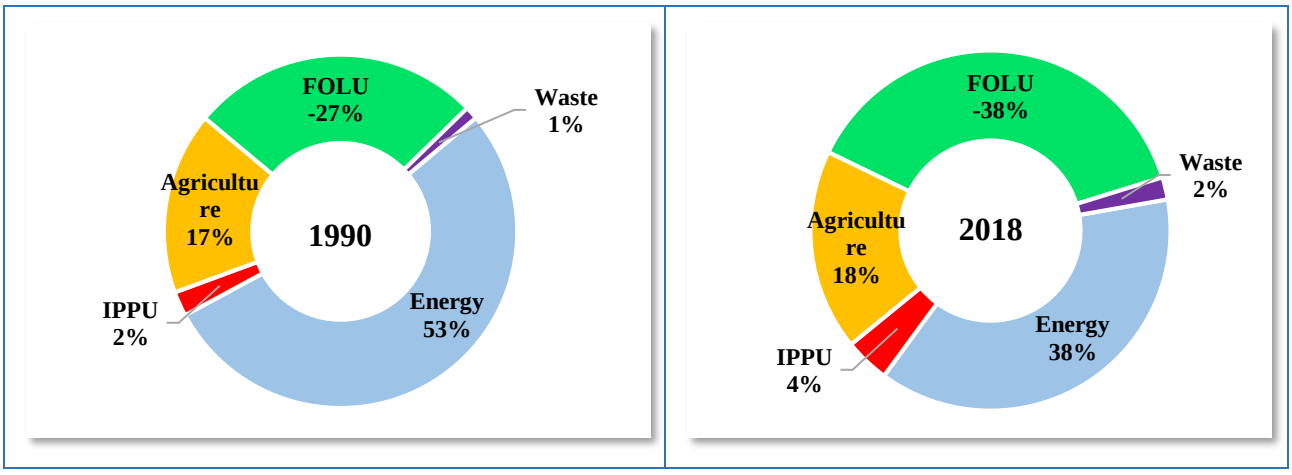
[37] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. Bishkek. 2022.



As shown in figure 12.1 despite the general downward trends in both total and net emissions between 1990 and 2018, the trend of the last 10 years turned towards an increase in emissions. The growth in total GHG emissions in 2018 increased by 49,94% compared to 2008 (see the trend in black), which determines the need to develop strategies to reduce emissions for all categories of emission sources in the emitting sectors and to the increase absorption of carbon dioxide by sinks.

The distribution of GHG emissions by major source category and the volume of emissions also changed in the period 1990-2018. Figure 12.2 shows the distribution of GHG emissions in CO_2 eq. by main sources, comparing the situations in 1990 and in 2018.

Figure 12.2 Distribution of GHG emissions by main sources in 1990 and in 2018 [38]



The figure shows that by 2018 the share of emissions from the Energy sector decreased due to increases in emissions from all other sectors. The decrease in the total emissions of the emitting sectors also increased the absorption share of the FOLU sector.

According to the results of the analysis of GHG emissions key categories of for the period 1990-2018 carried out during the 4th NGHGI, the level of various GHG emissions has significantly decreased in the following categories of emission sources:[39:]

[38] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. Bishkek. 2022.
[39] MNRETS, GEF-UNEP. IPCC Inventory Software Database 2.54.

- CO_2 emissions in category 1.A.1 “Energy industries” - gaseous fuels by 93,32%, and in the same category for liquid fuel - by 91,41%;
- CO_2 emissions in category 1.A.2 “Manufacturing industries and construction”- gaseous fuels - by 89,69%;
- N_2O emissions in category 3.C.4 “Direct N_2O emissions from managed soils” - by 41.54%;
- N_2O emissions in category 3.C.5 “Indirect N_2O emissions from managed soils” - by 35,09%;
- CO_2 emissions in category 1.A.4 “Other sectors”- gaseous fuels” - by 19,44%; and
- N_2O emissions in category 3.A.2 “Manure management” - by 18,56%.

Despite the general downward trend in GHG emissions, a comparative analysis of emissions in 1990 and 2018 by key categories showed an increase in emissions from the following sources[40]:

- HFC emissions in category 2.F.1 "Refrigeration and air conditioning" increased by more than 10 thousand % which is primarily due to the lack of activity data on the beginning of the 90s of the last century;
- CO_2 emissions in category 1.A.2 “Manufacturing industries and construction”- solid fuels - by 140,02%;
- CO_2 emissions in category 1.A.4 “Other sectors”- liquid fuels” - by 124,93%;
- CO_2 emissions in category 2.A.1 "Cement production" - by 54,85%;
- CO_2 emissions in category 1.A.3.b "Road transport" - by 54,17%;
- CH_4 emissions in category 4.A "Solid waste disposal" - by 49,22%;
- CH_4 emissions in category 1.B.2.a "Oil" - by 29,03%;
- CH_4 emissions in category 3.A.1 "Enteric fermentation" - by 6,95%; and
- CH_4 emissions in category 4.D "Wastewater Treatment and Discharge" – by2,39%.

In the period 1990-2018, the level of CO_2 sequestration increased:

- in category 3.B.1.a "Forest lands remaining forest land" by 9.06%; and
- in category 3.B.2.a. Cropland remaining cropland by 1.58%. [41]

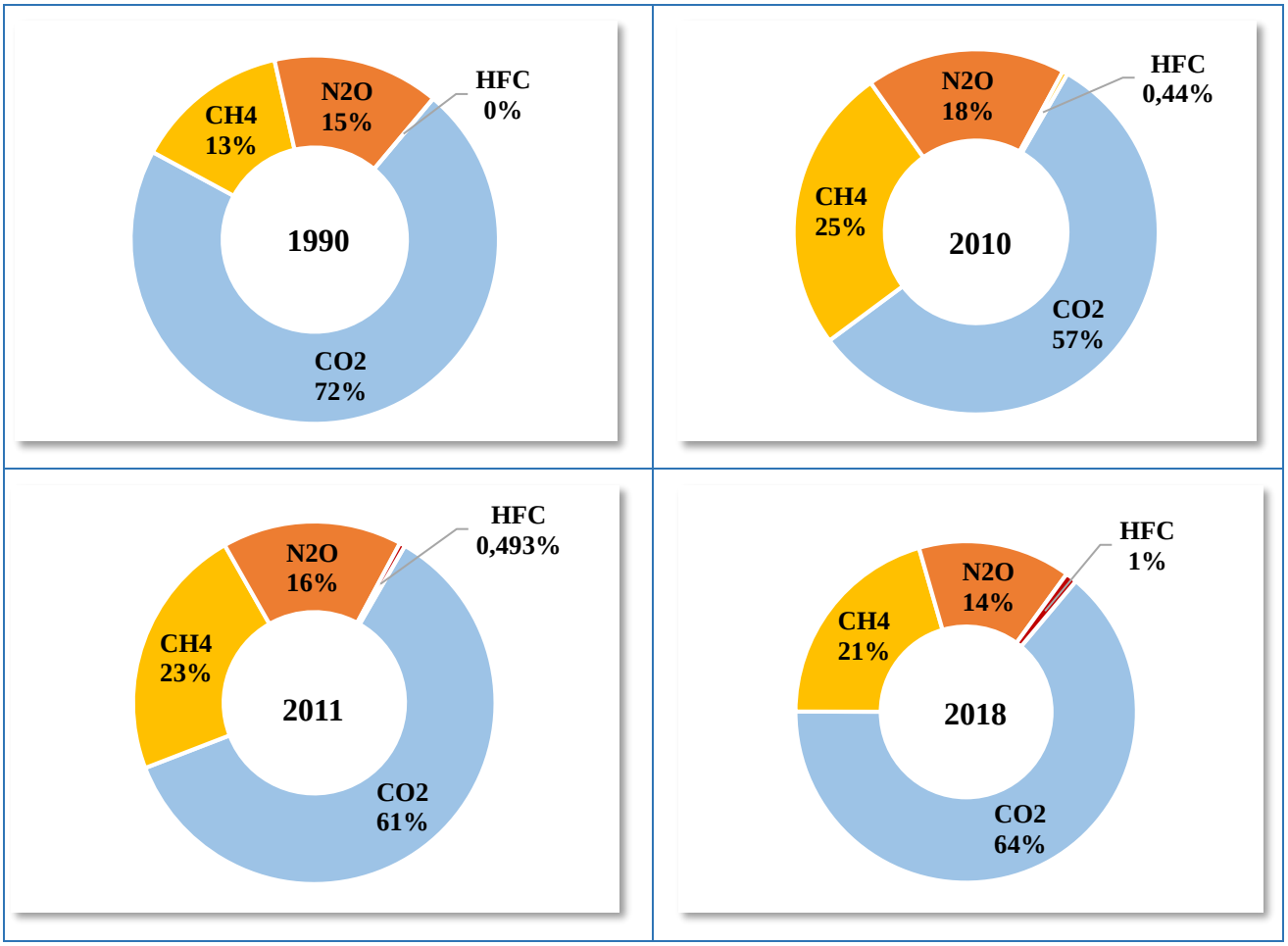
13. GHG Emissions and Removals by Gases

Emissions of major GHGs continued to increase during the reporting period 2011 - 2018. Thus, carbon dioxide emissions in 2018 increased by 44,27% compared to 2011, methane emissions by 24,31%, and nitrous oxide emissions by 23,74%. At the same time, the emissions of the same gases in 2018 compared with the 1990 level decreased: CO_2 by 43,78%, CH_4 by 4,84%, and N_2O by 37,49%.

The composition of GHG emissions for the same period 2011-2018 changed insignificantly, but the ratio of the main greenhouse gases has changed compared to 1990 by reducing the share of carbon dioxide emissions by 12%, and nitrous oxide by 1%, while increasing methane emissions by 8%. (Figure 13.1).

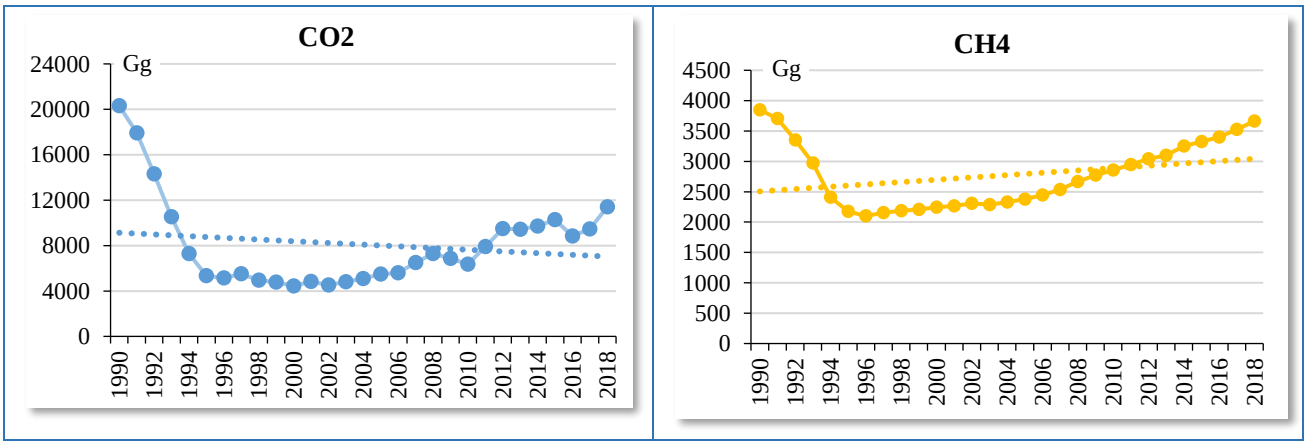
Figure 13.1 Structural composition of direct greenhouse gas emissions (in CO_2 equivalent) [42]

[40] MNRETS, GEF-UNEP. IPCC Inventory Software Database 2.54.
[41] Ibid.
[42] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic in 1990-2018. Bishkek. 2022.

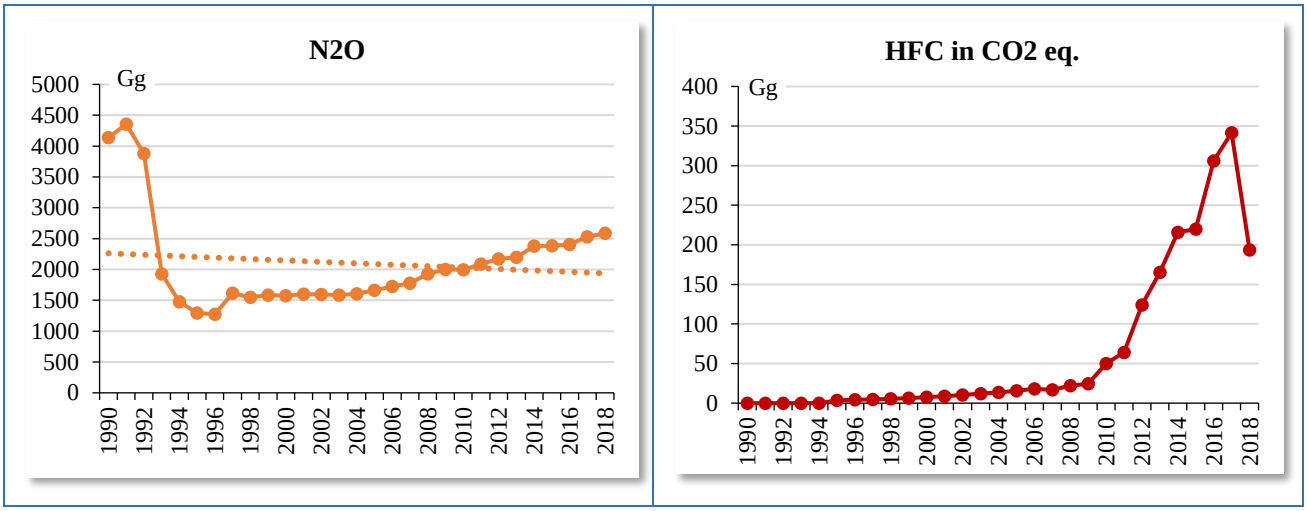


Dynamics and linear trends of major GHG emissions in the Kyrgyz Republic in the period 1990-2018 are presented in Figure 13.2.

Figure 13.2 Dynamics and linear trends of emissions of the main greenhouse gases in the period 1990-2018. [43]



[43] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2017. - B., 2021.



Results of recalculation of the 4th NGHGI consolidated in a long time series of data on direct greenhouse gas emissions for the period 1990-2018 are presented in table 13.1.

Table 13.1. Direct greenhouse gas emissions in the Kyrgyz Republic in 1990-2018 (Gg) [44]

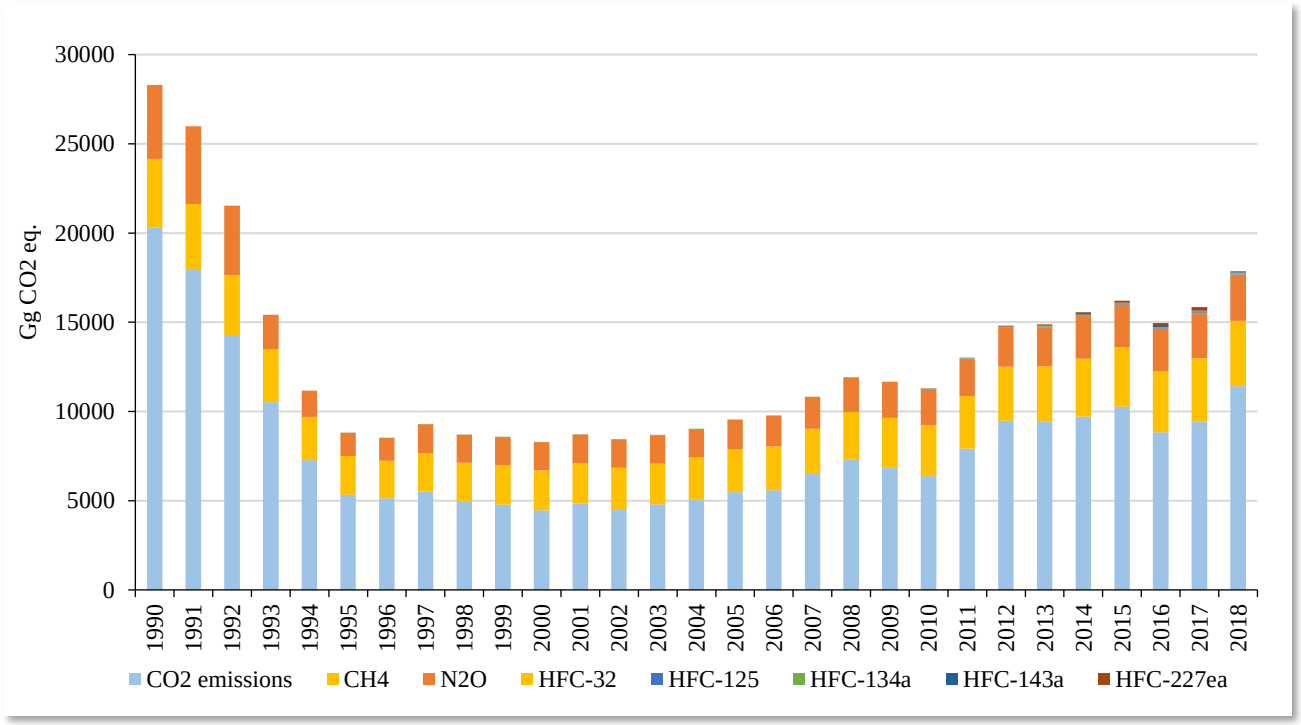
Gas / Year	1990	1991	1992	1993	1994	1995	1996	1997
CO_2	20304,803	17925,708	14295,314	10523,65	7277,614	5332,956	5136,61	5506,409
CH_4	183,188	176,404	159,665	141,486	114,784	103,647	99,976	102,633
N_2O	13,351	14,053	12,519	6,210	4,770	4,169	4,114	5,218
HFC-32	-	-	-	-	-	-	-	-
HFC-125	-	-	-	-	-	-	-	-
HFC-134a	-	-	-	-	-	0,003	0,003	0,004
HFC-143a	-	-	-	-	-	-	-	-
HFC-227ea	-	-	-	-	-	-	-	-
Gas / Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
CO_2	4951,275	4771,128	4448,403	4840,439	4530,101	4795,254	5083,202	5486,498
CH_4	104,081	105,204	106,913	107,877	109,852	108,794	110,945	113,182
N_2O	4,995	5,110	5,082	5,171	5,140	5,110	5,188	5,361
HFC-32	-	-	-	-	-	-	-	-
HFC-125	-	-	-	-	-	-	-	-
HFC-134a	0,004	0,005	0,006	0,007	0,008	0,009	0,011	0,012
HFC-143a	-	-	-	-	-	-	-	-
HFC-227ea	-	-	-	-	-	-	-	-
Gas / Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
CO_2	5588,4	6502,903	7297,916	6875,947	6367,899	7912,95	9474,134	9422,457
CH_4	116,538	120,728	126,850	131,879	136,033	140,261	144,668	147,567
N_2O	5,568	5,730	6,214	6,454	6,429	6,745	6,997	7,096
HFC-32	-	-	-	-	0,001	0,004	0,005	0,005
HFC-125	-	-	-	-	0,001	0,007	0,008	0,01
HFC-134a	0,014	0,013	0,017	0,019	0,033	0,025	0,028	0,027
HFC-143a	-	-	-	-	0,001	0,003	0,004	0,006

[44] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2017. - B., 2021.

HFC-227ea	-	-	-	-	-	-	0,015	0,027
Gas / Year	**2014**	**2015**	**2016**	**2017**	**2018**			
CO_2	9705,698	10275,014	8840,465	9449,068	11415,855			
CH_4	154,857	158,220	161,831	167,874	174,361			
N_2O	7,682	7,696	7,758	8,157	8,346			
HFC-32	0,006	0,006	0,007	0,007	0,007			
HFC-125	0,012	0,013	0,015	0,017	0,018			
HFC-134a	0,033	0,035	0,041	0,044	0,048			
HFC-143a	0,007	0,009	0,01	0,011	0,012			
HFC-227ea	0,038	0,034	0,058	0,066	0,010			

Dynamics of emissions of the main greenhouse gases in CO_2 equivalent for the period 1990-2018 is presented in Figure 13.3.

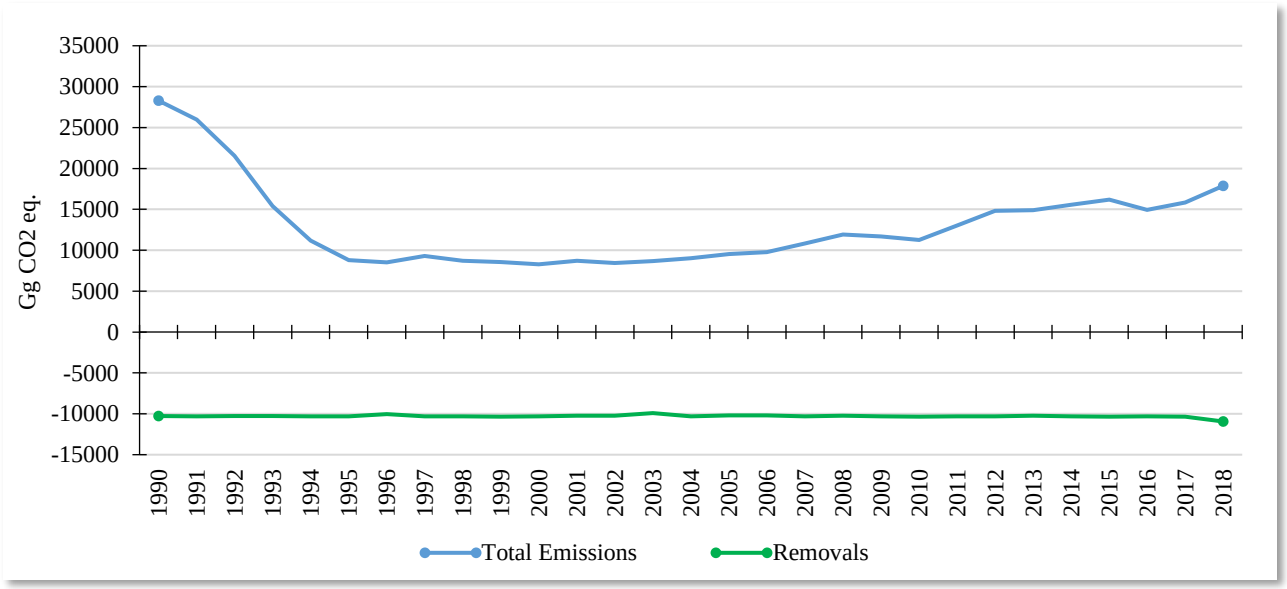
Figure 13.3 Greenhouse gas emissions in the period of 1990-2018 in CO_2 equivalent. [45]



Along with the change in GHG emissions in the period 1990-2018, a stable level of GHG absorption is maintained in Kyrgyzstan due to the sink of CO_2 into the forest and perennial plantations biomass. Conserving total forest area is a critical stabilizing factor for carbon balance and a low-carbon green economy. (Figure 13.4).

Figure 13.4 Dynamics of GHG emissions and removals in the period 1990-2018 (CO_2 eq.) [46]

[45] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. Bishkek. 2022.
[46] Ibid.



Recalculation of GHG removals according to the new IPCC methodology using biomass growth factors increased the CO_2 absorption values for the IPCC 3.B "Land" absorption source category. A time series of CO_2 uptake data for this category is presented below in Table 13.2.

Table 13.2 Dynamics of CO_2 absorption by category 3.B Land. (Gg) [47]

1990	1991	1992	1993	1994	1995	1996	1997
-10273,525	-10294,483	-10289,530	-10293,574	-10309,734	-10323,647	-10032,159	-10303,286
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
-10331,511	-10339,095	-10303,877	-10221,398	-10239,260	-9914,316	-10302,866	-10205,986
2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
-10208,929	-10309,902	-10250,705	-10303,402	-10334,544	-10295,774	-10324,340	-10216,191
2014	**2015**	**2016**	**2017**	**2018**			
-10327,718	-10336,530	-10302,540	-10367,314	-10941,371			

The results of the **assessment of precursor gases' emissions** for the reporting period 2011-2018 show an increase in all gases. Thus, emissions of nitrogen oxides (NO_x) increased in 2018 compared to 2011 by 31,64%, carbon monoxide (CO) by 23,40%, non-methane volatile organic compounds (NMVOC) by 55,98%, and sulfur dioxide (SO_2) by 10,68%.

The updated long series of precursor gas emissions in the country for the period 1990-2018 are presented in table 13.3 below.

Table 13.3 GHG precursor gases' emissions in the Kyrgyz Republic in the period 1990-2018(Gg) [48]

Gas	1990	1991	1992	1993	1994	1995	1996	1997
NO_x	50,255	42,884	33,312	23,599	16,565	12,185	13,040	13,689
CO	371,469	310,618	261,844	183,287	120,212	64,104	71,148	84,283
NMVOC	60,966	53,265	40,465	30,711	21,772	14,317	15,247	15,091
SO_2	101,326	86,024	71,628	56,662	46,888	24,833	22,582	19,972
Gas	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
NO_x	12,052	14,512	10,966	13,275	10,329	10,679	11,356	13,688
CO	91,966	92,000	87,200	97,746	90,986	92,060	100,404	124,867

[47] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. Bishkek. 2022.
[48] Ibid.

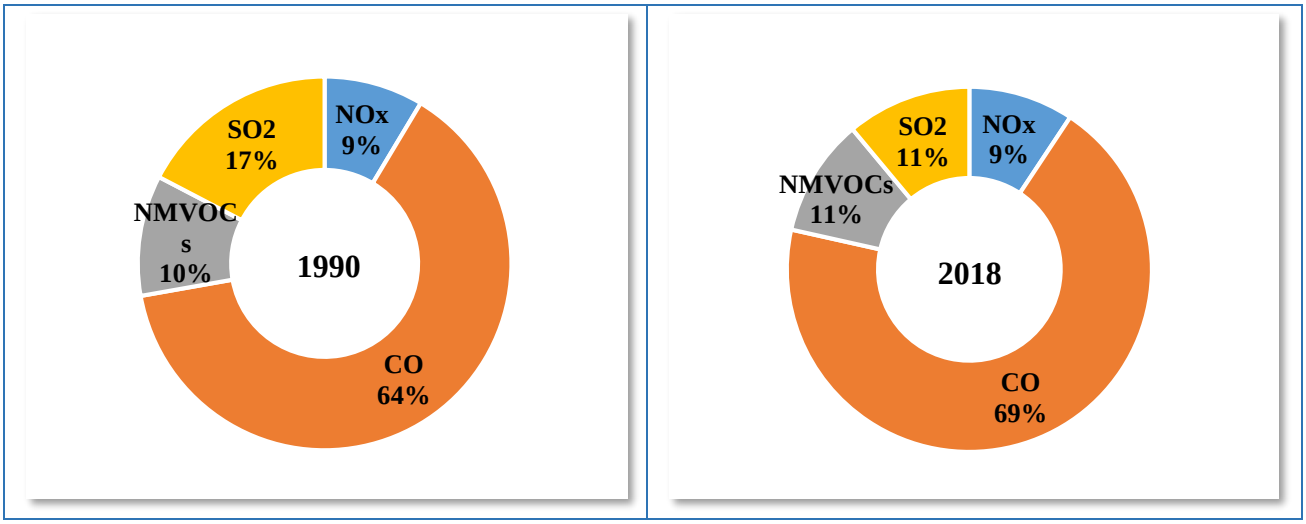
NMVOC	15,033	13,962	13,341	14,217	14,841	16,122	17,589	16,655
SO2	20,585	23,631	24,111	24,887	23,805	22,413	21,679	31,490
Gas	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
NOx	13,795	18,557	20,388	22,540	21,776	27,291	31,859	33,986
CO	127,924	145,702	183,194	191,786	198,820	216,122	251,804	271,921
NMVOC	16,326	18,744	20,997	21,882	24,027	25,794	31,231	32,649
SO2	31,427	32,500	42,561	40,931	34,933	38,540	41,676	38,759

Gas	**2014**	**2015**	**2016**	**2017**	**2018**
NOx	31,218	32,980	29,768	32,334	35,924
CO	229,551	237,888	234,538	237,129	266,697
NMVOC	30,890	31,632	33,735	35,788	40,232
SO2	53,243	61,052	40,525	38,570	42,656

Compared with 1990 precursor gases emissions, their emission in 2018 has reduced: emissions of NOx – by 28,52%; emissions of CO – by 28,20%; NMVOC emissions – by 34,01% and emissions of SO2 – by 57,90%.

The compound structure of annual emissions of precursor gases in the Kyrgyz Republic did not change significantly and was always dominated by carbon monoxide or carbon monoxide, which is a combustion product. (Figure 13.5).

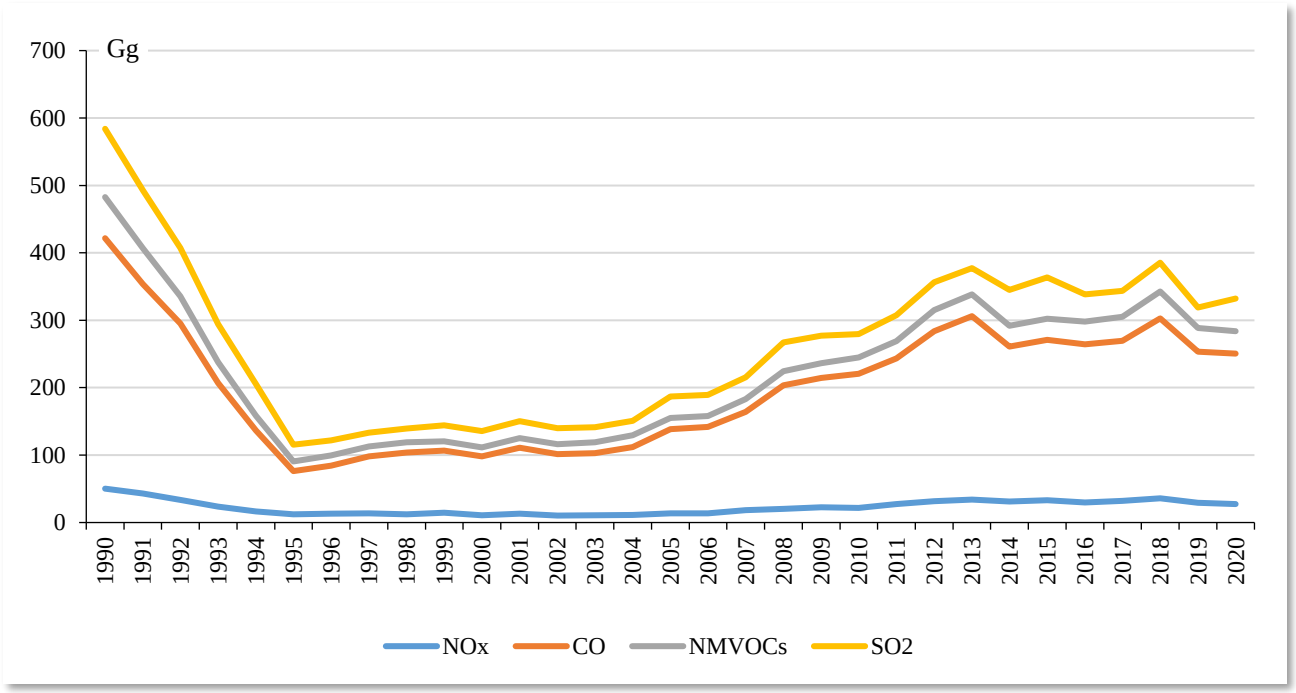
Figure 13.5 Comparison of the structure of emissions of precursor gases in 1990 and 2018. [49]



Dynamics of emissions of various types of precursor gases between 1990 and 2018 is shown in Figure 13.6.

Figure 13.6 Dynamics of emissions of precursor gases in the Kyrgyz Republic in 1990 and 2018. [50]

[49] MNRETS, GEF-UNEP. Inventory of Emissions and Removals of Greenhouse Gases in the Kyrgyz Republic during 1990-2018. Bishkek. 2022.
[50] Ibid.


Gg
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2020
NOx
CO
NMVOCs
SO2

14. GHG and precursor gases emissions by sources and removals by sinks in 1990-2018

Inventory year: 1990

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	10031,278	183,188	13,351	0,000	50,255	371,469	60,966	101,326
1 - Energy	19429,632	41,368	0,746	0,000	49,619	355,392	54,280	101,306
1.A - Fuel Combustion Activities	19388,791	17,605	0,746	0,000	49,619	355,392	40,373	101,306
1.A.1 - Energy Industries	8113,007	0,177	0,070		14,060	9,267	2,034	50,527
1.A.2 - Manufacturing Industries and Construction	1266,976	0,051	0,007		2,910	3,128	0,636	2,591
1.A.3 - Transport	4109,672	1,165	0,582		26,152	96,041	11,544	0,469
1.A.4 - Other Sectors	5899,136	16,212	0,088		6,496	246,955	26,159	47,719
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	40,841	23,762	0,000	0,000	0,000	0,000	13,907	0,000
1.B.1 - Solid Fuels	33,310	12,066	0,000		0,000	0,000	5,987	0,000
1.B.2 - Oil and Natural Gas	7,531	11,696	0,000		0,000	0,000	7,920	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	871,638	0,000	0,000	0,000	0,081	0,409	6,590	0,011
2.A - Mineral Industry	871,042	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	591,522				0,000	0,000	0,000	0,000
2.A.2 - Lime production	65,536				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	69,275				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	144,710				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	0,596	0,000	0,000	0,000	0,075	0,379	0,000	0,000
2.C.1 - Iron and Steel Production	0,596	0,000			0,075	0,379	0,000	0,000
2.C.7 - Other (please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use								
2.D.4 - Other (please specify)								
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,006	0,030	6,590	0,011
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,006	0,030	0,011	0,011
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	6,579	0,000
3 - Agriculture, Forestry, and Other Land Use	########	123,711	12,386	0,000	0,307	11,295	0,000	0,000
3.A - Livestock	0,000	123,114	0,647	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		119,534			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,580	0,647		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6850,850				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3415,270				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	0,598	11,739	0,000	0,307	11,295	0,000	0,000
3.C.1 - Emissions from biomass burning		0,331	0,009		0,307	11,295	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			8,495		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			2,935		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,300		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		0,266			0,000	0,000	0,000	0,000
3.D - Other	-7,405	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-7,405				0,000	0,000	0,000	0,000
4 - Waste	3,533	18,109	0,219	0,000	0,249	4,373	0,096	0,009
4.A - Solid Waste Disposal	0,000	10,402	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,103	0,006	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,533	0,509	0,009	0,000	0,249	4,373	0,096	0,009

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
4.D - Wastewater Treatment and Discharge	0,000	7,094	0,204	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	366,257	0,003	0,010	0,000	1,661	1,097	0,218	0,098
1.A.3.a.i - International Aviation (International Bunkers)	366,257	0,003	0,010		1,661	1,097	0,218	0,098
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1991

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	7631,225	176,404	14,053	0,000	42,884	310,618	53,265	86,024
1 - Energy	17092,313	36,944	0,630	0,000	42,246	294,395	46,589	86,005
1.A - Fuel Combustion Activities	17054,719	14,406	0,630	0,000	42,246	294,395	33,731	86,005
1.A.1 - Energy Industries	7697,909	0,157	0,072		12,289	7,966	1,726	44,524
1.A.2 - Manufacturing Industries and Construction	912,712	0,037	0,005		2,451	2,794	0,548	2,340
1.A.3 - Transport	3552,771	1,029	0,482		22,133	82,915	10,189	0,411
1.A.4 - Other Sectors	4891,327	13,184	0,072		5,373	200,719	21,268	38,731
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	37,594	22,538	0,000	0,000	0,000	0,000	12,859	0,000
1.B.1 - Solid Fuels	30,986	11,224	0,000		0,000	0,000	5,568	0,000
1.B.2 - Oil and Natural Gas	6,609	11,314	0,000		0,000	0,000	7,291	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	829,765	0,000	0,000	0,000	0,080	0,641	6,577	0,010
2.A - Mineral Industry	829,169	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	563,140				0,000	0,000	0,000	0,000
2.A.2 - Lime production	53,042				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	66,500				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	146,487				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	0,595	0,000	0,000	0,000	0,075	0,379	0,000	0,000
2.C.1 - Iron and Steel Production	0,595	0,000			0,075	0,379	0,000	0,000
2.C.7 - Other (please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,005	0,262	6,577	0,010
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,005	0,262	0,009	0,010
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	6,568	0,000
3 - Agriculture, Forestry, and Other Land Use	########	121,080	13,222	0,000	0,301	11,089	0,000	0,000
3.A - Livestock	0,000	120,380	0,624	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		116,881			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,499	0,624		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6864,058				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3423,739				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	0,700	12,599	0,000	0,301	11,089	0,000	0,000
3.C.1 - Emissions from biomass burning		0,326	0,008		0,301	11,089	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			9,193		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			3,147		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,250		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		0,375			0,000	0,000	0,000	0,000
3.D - Other	-6,686	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.D.1 - Harvested Wood Products	-6,686				0,000	0,000	0,000	0,000
4 - Waste	3,630	18,380	0,200	0,000	0,256	4,493	0,099	0,009
4.A - Solid Waste Disposal	0,000	10,934	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,104	0,006	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,630	0,523	0,009	0,000	0,256	4,493	0,099	0,009
4.D - Wastewater Treatment and Discharge	0,000	6,819	0,185	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	111,845	0,001	0,003	0,000	0,993	0,656	0,131	0,058
1.A.3.a.i - International Aviation (International Bunkers)	111,845	0,001	0,003		0,993	0,656	0,131	0,058
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1992

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	4005,783	159,665	12,519	0,000	33,312	261,844	40,465	71,628
1 - Energy	13655,435	28,444	0,419	0,000	32,666	239,722	36,555	70,722
1.A - Fuel Combustion Activities	13628,190	11,259	0,419	0,000	32,666	239,722	27,337	70,722
1.A.1 - Energy Industries	5970,588	0,124	0,054		10,518	6,665	1,419	38,520
1.A.2 - Manufacturing Industries and Construction	892,203	0,037	0,005		1,993	2,459	0,459	2,089
1.A.3 - Transport	2856,866	0,939	0,304		15,889	76,095	9,082	0,348
1.A.4 - Other Sectors	3908,533	10,159	0,055		4,267	154,502	16,377	29,766
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	27,245	17,185	0,000	0,000	0,000	0,000	9,218	0,000
1.B.1 - Solid Fuels	21,558	7,826	0,000		0,000	0,000	3,442	0,000
1.B.2 - Oil and Natural Gas	5,687	9,359	0,000		0,000	0,000	5,777	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	636,145	0,000	0,000	0,000	0,048	5,167	3,808	0,897
2.A - Mineral Industry	628,067	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	467,377				0,000	0,000	0,000	0,000
2.A.2 - Lime production	27,977				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	74,033				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	58,679				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	8,078	0,000	0,000	0,000	0,044	5,144	0,000	0,889
2.C.1 - Iron and Steel Production	0,346	0,000			0,044	0,220	0,000	0,000
2.C.7 - Other (please specify)	7,732	0,000	0,000	0,000	0,000	4,924	0,000	0,889
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,004	0,023	3,808	0,009
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,004	0,023	0,009	0,009
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	3,799	0,000
3 - Agriculture, Forestry, and Other Land Use	########	113,440	11,899	0,000	0,335	12,332	0,000	0,000
3.A - Livestock	0,000	112,676	0,572	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		109,477			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,200	0,572		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6859,755				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3424,584				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	0,763	11,328	0,000	0,335	12,332	0,000	0,000
3.C.1 - Emissions from biomass burning		0,362	0,009		0,335	12,332	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.C.4 - Direct N2O Emissions from managed soils			8,241		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			2,825		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,251		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		0,401			0,000	0,000	0,000	0,000
3.D - Other	-5,191	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-5,191				0,000	0,000	0,000	0,000
4 - Waste	3,735	17,781	0,201	0,000	0,263	4,623	0,102	0,009
4.A - Solid Waste Disposal	0,000	11,389	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,105	0,006	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,735	0,538	0,010	0,000	0,263	4,623	0,102	0,009
4.D - Wastewater Treatment and Discharge	0,000	5,749	0,185	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	179,212	0,001	0,005	0,000	0,813	0,537	0,107	0,048
1.A.3.a.i - International Aviation (International Bunkers)	179,212	0,001	0,005		0,813	0,537	0,107	0,048
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1993

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	230,076	141,486	6,210	0,000	23,599	183,287	30,711	56,662
1 - Energy	10126,431	20,234	0,252	0,000	22,918	156,955	25,165	55,367
1.A - Fuel Combustion Activities	10107,609	7,735	0,252	0,000	22,918	156,955	17,454	55,367
1.A.1 - Energy Industries	4907,816	0,098	0,046		8,747	5,364	1,111	32,516
1.A.2 - Manufacturing Industries and Construction	698,461	0,031	0,004		1,535	2,125	0,371	1,838
1.A.3 - Transport	1575,574	0,472	0,162		9,477	41,181	4,485	0,213
1.A.4 - Other Sectors	2925,758	7,134	0,039		3,160	108,285	11,486	20,801
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	18,822	12,499	0,000	0,000	0,000	0,000	7,712	0,000
1.B.1 - Solid Fuels	15,402	5,580	0,000		0,000	0,000	3,240	0,000
1.B.2 - Oil and Natural Gas	3,420	6,920	0,000		0,000	0,000	4,472	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	393,427	0,000	0,000	0,000	0,022	7,217	5,442	1,286
2.A - Mineral Industry	382,112	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.A.1 - Cement production	286,454				0,000	0,000	0,000	0,000
2.A.2 - Lime production	10,194				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	59,603				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	25,859				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	11,315	0,000	0,000	0,000	0,020	7,206	0,000	1,282
2.C.1 - Iron and Steel Production	0,162	0,000			0,020	0,103	0,000	0,000
2.C.7 - Other (please specify)	11,153	0,000	0,000	0,000	0,000	7,103	0,000	1,282
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use								
2.D.4 - Other (please specify)								
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,011	5,442	0,004
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,011	0,004	0,004
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	5,438	0,000
3 - Agriculture, Forestry, and Other Land Use	########	103,468	5,758	0,000	0,392	14,420	0,000	0,000
3.A - Livestock	0,000	102,519	0,497	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		99,624			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,895	0,497		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6850,699				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3439,983				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	0,949	5,261	0,000	0,392	14,420	0,000	0,000
3.C.1 - Emissions from biomass burning		0,425	0,011		0,392	14,420	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,522		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,516		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,212		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		0,524			0,000	0,000	0,000	0,000
3.D - Other	-2,893	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,893				0,000	0,000	0,000	0,000
4 - Waste	3,793	17,783	0,200	0,000	0,267	4,695	0,103	0,009
4.A - Solid Waste Disposal	0,000	11,654	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,105	0,006	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,793	0,546	0,010	0,000	0,267	4,695	0,103	0,009
4.D - Wastewater Treatment and Discharge	0,000	5,477	0,183	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	43,321	0,000	0,001	0,000	0,197	0,130	0,026	0,012
1.A.3.a.i - International Aviation (International Bunkers)	43,321	0,000	0,001		0,197	0,130	0,026	0,012
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1994

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-3032,120	114,784	4,770	0,000	16,565	120,212	21,772	46,888
1 - Energy	7063,540	13,187	0,127	0,000	15,914	96,928	16,692	46,035
1.A - Fuel Combustion Activities	7052,076	4,514	0,127	0,000	15,914	96,928	10,842	46,035
1.A.1 - Energy Industries	3855,193	0,072	0,037		8,747	5,364	1,111	32,516
1.A.2 - Manufacturing Industries and Construction	504,719	0,024	0,004		1,223	1,848	0,328	1,588
1.A.3 - Transport	748,219	0,300	0,063		3,667	27,427	2,785	0,085
1.A.4 - Other Sectors	1943,945	4,117	0,023		2,278	62,289	6,618	11,846
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	11,464	8,673	0,000	0,000	0,000	0,000	5,850	0,000
1.B.1 - Solid Fuels	8,266	2,999	0,000		0,000	0,000	1,352	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.B.2 - Oil and Natural Gas	3,198	5,674	0,000		0,000	0,000	4,498	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	210,270	0,000	0,000	0,000	0,006	4,697	4,977	0,844
2.A - Mineral Industry	202,902	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	179,590				0,000	0,000	0,000	0,000
2.A.2 - Lime production	6,745				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	3,936				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,631				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	7,368	0,000	0,000	0,000	0,005	4,692	0,000	0,842
2.C.1 - Iron and Steel Production	0,042	0,000			0,005	0,027	0,000	0,000
2.C.7 - Other (please specify)	7,326	0,000	0,000	0,000	0,000	4,665	0,000	0,842
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,001	0,005	4,977	0,002
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,001	0,005	0,002	0,002
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	4,975	0,000
3 - Agriculture, Forestry, and Other Land Use	########	84,314	4,463	0,000	0,377	13,879	0,000	0,000
3.A - Livestock	0,000	83,258	0,375	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		80,881			0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.A.2 - Manure Management		2,377	0,375		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6858,848				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3447,758				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,056	4,088	0,000	0,377	13,879	0,000	0,000
3.C.1 - Emissions from biomass burning		0,408	0,011		0,377	13,879	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			2,757		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,166		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,154		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		0,649			0,000	0,000	0,000	0,000
3.D - Other	-3,128	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-3,128				0,000	0,000	0,000	0,000
4 - Waste	3,803	17,283	0,180	0,000	0,268	4,708	0,104	0,009
4.A - Solid Waste Disposal	0,000	11,590	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,106	0,006	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,803	0,548	0,010	0,000	0,268	4,708	0,104	0,009
4.D - Wastewater Treatment and Discharge	0,000	5,039	0,163	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	33,480	0,000	0,001	0,000	0,152	0,100	0,020	0,009
1.A.3.a.i - International Aviation (International Bunkers)	33,480	0,000	0,001		0,152	0,100	0,020	0,009
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1995

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-4990,691	103,647	4,169	3,637	12,185	64,104	14,317	24,833
1 - Energy	5163,616	8,377	0,191	0,000	11,508	40,100	9,530	24,023
1.A - Fuel Combustion Activities	5157,491	1,506	0,191	0,000	11,508	40,100	4,277	24,023
1.A.1 - Energy Industries	2811,543	0,046	0,030		5,204	2,762	0,496	20,509
1.A.2 - Manufacturing Industries and Construction	214,573	0,009	0,001		0,460	0,584	0,111	0,493

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.A.3 - Transport	1166,197	0,360	0,152		4,886	20,804	1,955	0,132
1.A.4 - Other Sectors	965,178	1,091	0,007		0,958	15,950	1,715	2,889
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	6,125	6,872	0,000	0,000	0,000	0,000	5,253	0,000
1.B.1 - Solid Fuels	3,144	1,132	0,000		0,000	0,000	0,741	0,000
1.B.2 - Oil and Natural Gas	2,981	5,740	0,000		0,000	0,000	4,512	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	165,512	0,000	0,000	3,637	0,005	4,454	4,683	0,801
2.A - Mineral Industry	158,523	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	135,798				0,000	0,000	0,000	0,000
2.A.2 - Lime production	4,599				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	5,616				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,509				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	6,990	0,000	0,000	0,000	0,004	4,452	0,000	0,800
2.C.1 - Iron and Steel Production	0,031	0,000			0,004	0,020	0,000	0,000
2.C.7 - Other (please specify)	6,959	0,000	0,000	0,000	0,000	4,432	0,000	0,800
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	3,637	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				3,637	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,001	0,003	4,683	0,001

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,001	0,003	0,001	0,001
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	4,682	0,000
3 - Agriculture, Forestry, and Other Land Use	########	78,158	3,785	0,000	0,402	14,812	0,000	0,000
3.A - Livestock	0,000	76,767	0,337	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		74,525			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,242	0,337		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6873,306				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3447,911				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,391	3,448	0,000	0,402	14,812	0,000	0,000
3.C.1 - Emissions from biomass burning		0,435	0,011		0,402	14,812	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			2,310		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			0,985		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,142		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		0,956			0,000	0,000	0,000	0,000
3.D - Other	-2,431	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,431				0,000	0,000	0,000	0,000
4 - Waste	3,828	17,112	0,194	0,000	0,270	4,738	0,104	0,009
4.A - Solid Waste Disposal	0,000	11,594	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,109	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,828	0,551	0,010	0,000	0,270	4,738	0,104	0,009
4.D - Wastewater Treatment and Discharge	0,000	4,858	0,177	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	173,906	0,001	0,005	0,000	0,789	0,046	0,521	0,104
1.A.3.a.i - International Aviation (International Bunkers)	173,906	0,001	0,005		0,789	0,046	0,521	0,104
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1996

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-4895,548	99,976	4,114	4,094	13,040	71,148	15,247	22,582
1 - Energy	4865,600	8,145	0,154	0,000	12,257	40,581	10,059	21,273
1.A - Fuel Combustion Activities	4860,514	1,327	0,154	0,000	12,257	40,581	5,065	21,273
1.A.1 - Energy Industries	2777,823	0,047	0,027		4,916	2,685	0,599	18,056
1.A.2 - Manufacturing Industries and Construction	250,713	0,009	0,001		0,452	0,571	0,125	0,459
1.A.3 - Transport	980,730	0,282	0,119		6,055	22,870	2,787	0,123
1.A.4 - Other Sectors	851,248	0,988	0,007		0,834	14,455	1,555	2,636
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	5,086	6,819	0,000	0,000	0,000	0,000	4,994	0,000
1.B.1 - Solid Fuels	2,778	1,000	0,000		0,000	0,000	0,714	0,000
1.B.2 - Oil and Natural Gas	2,308	5,818	0,000		0,000	0,000	4,280	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	267,114	0,000	0,000	4,094	0,005	7,216	5,083	1,299
2.A - Mineral Industry	255,789	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	232,862				0,000	0,000	0,000	0,000
2.A.2 - Lime production	3,066				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	6,456				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	13,405				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	11,324	0,000	0,000	0,000	0,004	7,212	0,000	1,297
2.C.1 - Iron and Steel Production	0,036	0,000			0,004	0,023	0,000	0,000
2.C.7 - Other (please specify)	11,289	0,000	0,000	0,000	0,000	7,189	0,000	1,297
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	4,094	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				4,094	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,001	0,004	5,083	0,001
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,001	0,004	0,001	0,001
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	5,081	0,000
3 - Agriculture, Forestry, and Other Land Use	########	74,538	3,770	0,000	0,503	18,528	0,000	0,000
3.A - Livestock	0,000	72,847	0,310	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		70,709			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,138	0,310		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6861,825				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3167,629				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,691	3,461	0,000	0,503	18,528	0,000	0,000
3.C.1 - Emissions from biomass burning		0,544	0,014		0,503	18,528	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			2,341		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			0,973		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,133		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,147			0,000	0,000	0,000	0,000
3.D - Other	-2,705	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,705				0,000	0,000	0,000	0,000
4 - Waste	3,897	17,292	0,190	0,000	0,275	4,824	0,106	0,010
4.A - Solid Waste Disposal	0,000	11,501	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,112	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,897	0,561	0,010	0,000	0,275	4,824	0,106	0,010
4.D - Wastewater Treatment and Discharge	0,000	5,117	0,173	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	209,688	0,001	0,006	0,000	0,951	0,628	0,125	0,056
1.A.3.a.i - International Aviation (International Bunkers)	209,688	0,001	0,006		0,951	0,628	0,125	0,056
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1997

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-4796,877	102,633	5,218	4,718	13,689	84,283	15,091	19,972
1 - Energy	5175,195	7,985	0,143	0,000	12,826	50,555	11,903	18,604
1.A - Fuel Combustion Activities	5170,492	1,408	0,143	0,000	12,826	50,555	6,749	18,604
1.A.1 - Energy Industries	2761,256	0,049	0,023		4,629	2,610	0,702	15,609
1.A.2 - Manufacturing Industries and Construction	282,224	0,009	0,001		0,443	0,557	0,138	0,425
1.A.3 - Transport	1389,382	0,463	0,113		7,037	34,425	4,514	0,188
1.A.4 - Other Sectors	737,631	0,886	0,006		0,717	12,963	1,396	2,382
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	4,703	6,578	0,000	0,000	0,000	0,000	5,154	0,000
1.B.1 - Solid Fuels	2,545	0,907	0,000		0,000	0,000	0,835	0,000
1.B.2 - Oil and Natural Gas	2,157	5,671	0,000		0,000	0,000	4,319	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	327,253	0,000	0,000	4,718	0,006	7,548	3,080	1,358
2.A - Mineral Industry	315,406	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	280,857				0,000	0,000	0,000	0,000
2.A.2 - Lime production	15,713				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	5,282				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	13,554				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	11,847	0,000	0,000	0,000	0,005	7,545	0,000	1,357
2.C.1 - Iron and Steel Production	0,040	0,000			0,005	0,026	0,000	0,000
2.C.7 - Other (please specify)	11,807	0,000	0,000	0,000	0,000	7,519	0,000	1,357
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	4,718	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				4,718	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,001	0,003	3,080	0,001
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,001	0,003	0,001	0,001
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	3,079	0,000
3 - Agriculture, Forestry, and Other Land Use	########	77,462	4,897	0,000	0,578	21,275	0,000	0,000
3.A - Livestock	0,000	75,534	0,321	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		73,316			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,217	0,321		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6859,905				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3441,286				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,928	4,577	0,000	0,578	21,275	0,000	0,000
3.C.1 - Emissions from biomass burning		0,625	0,016		0,578	21,275	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,170		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,251		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,140		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,303			0,000	0,000	0,000	0,000
3.D - Other	-2,096	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,096				0,000	0,000	0,000	0,000
4 - Waste	3,961	17,186	0,178	0,000	0,279	4,904	0,108	0,010
4.A - Solid Waste Disposal	0,000	11,483	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,113	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	3,961	0,571	0,010	0,000	0,279	4,904	0,108	0,010
4.D - Wastewater Treatment and Discharge	0,000	5,019	0,161	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Memo Items								
International Bunkers	115,449	0,001	0,003	0,000	0,524	0,031	0,069	0,346
1.A.3.a.i - International Aviation (International Bunkers)	115,449	0,001	0,003		0,524	0,031	0,069	0,346
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1998

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-5380,236	104,081	4,995	5,510	12,052	91,966	15,033	20,585
1 - Energy	4606,177	8,069	0,124	0,000	11,204	58,469	11,859	19,158
1.A - Fuel Combustion Activities	4602,044	1,908	0,124	0,000	11,204	58,469	7,242	19,158
1.A.1 - Energy Industries	2211,897	0,040	0,020		3,833	2,163	0,531	14,694
1.A.2 - Manufacturing Industries and Construction	266,548	0,008	0,001		0,425	0,515	0,129	0,391
1.A.3 - Transport	1268,831	0,450	0,094		6,072	34,757	4,327	0,169
1.A.4 - Other Sectors	854,768	1,410	0,009		0,874	21,033	2,255	3,905
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	4,133	6,161	0,000	0,000	0,000	0,000	4,617	0,000
1.B.1 - Solid Fuels	2,411	0,863	0,000		0,000	0,000	0,691	0,000
1.B.2 - Oil and Natural Gas	1,722	5,298	0,000		0,000	0,000	3,926	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	341,068	0,000	0,000	5,510	0,002	7,862	3,064	1,417
2.A - Mineral Industry	328,565	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	302,407				0,000	0,000	0,000	0,000
2.A.2 - Lime production	6,439				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	4,700				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	15,019				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	12,503	0,000	0,000	0,000	0,002	7,860	0,000	1,416
2.C.1 - Iron and Steel Production	0,018	0,000			0,002	0,011	0,000	0,000
2.C.7 - Other (please specify)	12,485	0,000	0,000	0,000	0,000	7,849	0,000	1,416
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	5,510	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				5,510	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,000	0,002	3,064	0,001
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,000	0,002	0,001	0,001
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	3,063	0,000
3 - Agriculture, Forestry, and Other Land Use	########	79,155	4,686	0,000	0,561	20,647	0,000	0,000
3.A - Livestock	0,000	77,379	0,328	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		75,098			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,281	0,328		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6884,336				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3444,903				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,776	4,358	0,000	0,561	20,647	0,000	0,000
3.C.1 - Emissions from biomass burning		0,607	0,016		0,561	20,647	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,000		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,197		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,145		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,169			0,000	0,000	0,000	0,000
3.D - Other	-2,272	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,272				0,000	0,000	0,000	0,000
4 - Waste	4,031	16,857	0,186	0,000	0,284	4,989	0,110	0,010

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
4.A - Solid Waste Disposal	0,000	11,365	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,114	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,031	0,581	0,010	0,000	0,284	4,989	0,110	0,010
4.D - Wastewater Treatment and Discharge	0,000	4,798	0,168	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	159,925	0,001	0,004	0,000	1,661	1,097	0,218	0,098
1.A.3.a.i - International Aviation (International Bunkers)	159,925	0,001	0,004		1,661	1,097	0,218	0,098
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 1999

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-5567,967	105,204	5,110	6,469	14,512	92,000	13,962	23,631
1 - Energy	4571,401	7,632	0,223	0,000	13,657	58,214	11,890	22,186
1.A - Fuel Combustion Activities	4566,878	2,340	0,223	0,000	13,657	58,214	7,301	22,186
1.A.1 - Energy Industries	1982,930	0,034	0,021		3,665	1,978	0,363	16,239
1.A.2 - Manufacturing Industries and Construction	250,873	0,008	0,001		0,407	0,473	0,121	0,356
1.A.3 - Transport	1360,857	0,364	0,189		8,554	26,659	3,704	0,163
1.A.4 - Other Sectors	972,217	1,935	0,011		1,031	29,104	3,113	5,427
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	4,523	5,292	0,000	0,000	0,000	0,000	4,589	0,000
1.B.1 - Solid Fuels	2,352	0,842	0,000		0,000	0,000	0,667	0,000
1.B.2 - Oil and Natural Gas	2,171	4,449	0,000		0,000	0,000	3,922	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	195,626	0,000	0,000	6,469	0,002	7,965	1,960	1,435
2.A - Mineral Industry	183,121	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	165,031				0,000	0,000	0,000	0,000
2.A.2 - Lime production	5,749				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	0,428				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	11,912				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	12,505	0,000	0,000	0,000	0,002	7,964	0,000	1,435

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.C.1 - Iron and Steel Production	0,020	0,000			0,002	0,013	0,000	0,000
2.C.7 - Other (please specify)	12,485	0,000	0,000	0,000	0,000	7,951	0,000	1,435
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	6,469	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				6,469	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,000	0,001	1,960	0,000
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,000	0,001	0,000	0,000
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	1,959	0,000
3 - Agriculture, Forestry, and Other Land Use	########	80,884	4,697	0,000	0,564	20,744	0,000	0,000
3.A - Livestock	0,000	78,977	0,333	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		76,624			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,353	0,333		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6871,174				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3465,693				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,907	4,364	0,000	0,564	20,744	0,000	0,000
3.C.1 - Emissions from biomass burning		0,609	0,016		0,564	20,744	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,016		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,203		0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.C.6 - Indirect N2O Emissions from manure management			0,129		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,298			0,000	0,000	0,000	0,000
3.D - Other	-2,228	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,228				0,000	0,000	0,000	0,000
4 - Waste	4,102	16,688	0,191	0,000	0,289	5,077	0,112	0,010
4.A - Solid Waste Disposal	0,000	11,296	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,115	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,102	0,591	0,011	0,000	0,289	5,077	0,112	0,010
4.D - Wastewater Treatment and Discharge	0,000	4,686	0,173	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	112,952	0,001	0,003	0,000	0,512	0,338	0,067	0,030
1.A.3.a.i - International Aviation (International Bunkers)	112,952	0,001	0,003		0,512	0,338	0,067	0,030
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-5855,474	106,913	5,082	7,597	10,966	87,200	13,341	24,111
1 - Energy	4223,906	8,008	0,093	0,000	10,076	53,377	11,068	22,871
1.A - Fuel Combustion Activities	4218,936	2,424	0,093	0,000	10,076	53,377	6,457	22,871
1.A.1 - Energy Industries	2102,956	0,034	0,022		3,834	1,997	0,414	16,352
1.A.2 - Manufacturing Industries and Construction	259,935	0,008	0,001		0,438	0,520	0,126	0,402
1.A.3 - Transport	877,885	0,257	0,059		4,756	18,788	2,490	0,108
1.A.4 - Other Sectors	978,160	2,125	0,012		1,048	32,072	3,428	6,010
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	4,970	5,584	0,000	0,000	0,000	0,000	4,610	0,000
1.B.1 - Solid Fuels	2,309	0,826	0,000		0,000	0,000	0,680	0,000
1.B.2 - Oil and Natural Gas	2,661	4,758	0,000		0,000	0,000	3,930	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	220,333	0,000	0,000	7,597	0,002	6,828	2,159	1,230
2.A - Mineral Industry	209,612	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	193,114				0,000	0,000	0,000	0,000
2.A.2 - Lime production	6,285				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.A.3 - Glass Production	0,431				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	9,782				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	10,720	0,000	0,000	0,000	0,002	6,827	0,000	1,230
2.C.1 - Iron and Steel Production	0,017	0,000			0,002	0,011	0,000	0,000
2.C.7 - Other (please specify)	10,703	0,000	0,000	0,000	0,000	6,816	0,000	1,230
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	7,597	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				7,597	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,000	0,001	2,159	0,000
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,000	0,001	0,000	0,000
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,159	0,000
3 - Agriculture, Forestry, and Other Land Use	########	81,958	4,803	0,000	0,593	21,840	0,000	0,000
3.A - Livestock	0,000	79,945	0,335	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		77,561			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,384	0,335		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6817,929				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3483,711				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,013	4,468	0,000	0,593	21,840	0,000	0,000
3.C.1 - Emissions from biomass burning		0,641	0,017		0,593	21,840	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,078		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,224		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,150		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,372			0,000	0,000	0,000	0,000
3.D - Other	-2,237	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,237				0,000	0,000	0,000	0,000
4 - Waste	4,165	16,946	0,185	0,000	0,294	5,155	0,114	0,010
4.A - Solid Waste Disposal	0,000	11,230	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,121	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,165	0,600	0,011	0,000	0,294	5,155	0,114	0,010
4.D - Wastewater Treatment and Discharge	0,000	4,995	0,167	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	112,952	0,001	0,003	0,000	0,512	0,338	0,067	0,030
1.A.3.a.i - International Aviation (International Bunkers)	112,952	0,001	0,003		0,512	0,338	0,067	0,030
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2001

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-5380,959	107,877	5,171	8,893	13,275	97,746	14,217	24,887
1 - Energy	4608,150	8,214	0,184	0,000	12,360	62,680	12,192	23,564
1.A - Fuel Combustion Activities	4603,048	2,681	0,184	0,000	12,360	62,680	7,543	23,564
1.A.1 - Energy Industries	2258,863	0,035	0,022		4,004	2,016	0,465	16,465
1.A.2 - Manufacturing Industries and Construction	275,869	0,009	0,001		0,569	0,527	0,131	0,404
1.A.3 - Transport	1110,777	0,322	0,148		6,743	25,108	3,205	0,103
1.A.4 - Other Sectors	957,539	2,315	0,013		1,044	35,029	3,741	6,591
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	5,102	5,533	0,000	0,000	0,000	0,000	4,649	0,000
1.B.1 - Solid Fuels	2,412	0,859	0,000		0,000	0,000	0,820	0,000
1.B.2 - Oil and Natural Gas	2,690	4,674	0,000		0,000	0,000	3,829	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	228,079	0,000	0,000	8,893	0,004	7,298	1,910	1,313
2.A - Mineral Industry	216,620	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	200,260				0,000	0,000	0,000	0,000
2.A.2 - Lime production	7,205				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	0,213				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	8,941				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	11,459	0,000	0,000	0,000	0,004	7,297	0,000	1,313
2.C.1 - Iron and Steel Production	0,034	0,000			0,004	0,021	0,000	0,000
2.C.7 - Other (please specify)	11,426	0,000	0,000	0,000	0,000	7,276	0,000	1,313
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	8,893	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				8,893	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,000	0,001	1,910	0,000
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,000	0,001	0,000	0,000
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	1,910	0,000
3 - Agriculture, Forestry, and Other Land Use	########	82,819	4,798	0,000	0,613	22,557	0,000	0,000
3.A - Livestock	0,000	80,955	0,335	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		78,550			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,405	0,335		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.B.1 - Forest land	-6830,883				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3388,539				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,865	4,463	0,000	0,613	22,557	0,000	0,000
3.C.1 - Emissions from biomass burning		0,662	0,017		0,613	22,557	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,074		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,221		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,152		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,202			0,000	0,000	0,000	0,000
3.D - Other	-1,976	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,976				0,000	0,000	0,000	0,000
4 - Waste	4,210	16,844	0,188	0,000	0,297	5,211	0,115	0,010
4.A - Solid Waste Disposal	0,000	11,196	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,125	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,210	0,607	0,011	0,000	0,297	5,211	0,115	0,010
4.D - Wastewater Treatment and Discharge	0,000	4,917	0,170	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	113,435	0,001	0,003	0,000	0,514	0,340	0,068	0,030
1.A.3.a.i - International Aviation (International Bunkers)	113,435	0,001	0,003		0,514	0,340	0,068	0,030
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2002

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-5709,159	109,852	5,140	10,357	10,329	90,986	14,841	23,805
1 - Energy	4266,942	8,539	0,105	0,000	9,446	57,630	11,459	22,561
1.A - Fuel Combustion Activities	4262,005	2,620	0,105	0,000	9,446	57,630	6,876	22,561
1.A.1 - Energy Industries	2020,533	0,032	0,020		3,574	1,814	0,420	15,416
1.A.2 - Manufacturing Industries and Construction	251,040	0,009	0,001		0,475	0,602	0,126	0,492
1.A.3 - Transport	804,908	0,269	0,071		4,149	20,433	2,624	0,082
1.A.4 - Other Sectors	1185,524	2,309	0,013		1,249	34,780	3,706	6,570

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	4,936	5,920	0,000	0,000	0,000	0,000	4,584	0,000
1.B.1 - Solid Fuels	2,411	0,862	0,000		0,000	0,000	0,734	0,000
1.B.2 - Oil and Natural Gas	2,525	5,058	0,000		0,000	0,000	3,849	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	258,904	0,000	0,000	10,357	0,006	6,841	3,265	1,234
2.A - Mineral Industry	248,186	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	227,327				0,000	0,000	0,000	0,000
2.A.2 - Lime production	7,314				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	4,994				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	8,550				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	10,718	0,000	0,000	0,000	0,003	6,826	0,000	1,229
2.C.1 - Iron and Steel Production	0,027	0,000			0,003	0,017	0,000	0,000
2.C.7 - Other (please specify)	10,691	0,000	0,000	0,000	0,000	6,809	0,000	1,229
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,714	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,713	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,001	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	10,357	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				10,357	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,015	2,551	0,006
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,015	0,006	0,006
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,546	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3 - Agriculture, Forestry, and Other Land Use	########	84,341	4,836	0,000	0,577	21,248	0,000	0,000
3.A - Livestock	0,000	82,266	0,339	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		79,818			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,448	0,339		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6827,891				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3409,560				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,075	4,497	0,000	0,577	21,248	0,000	0,000
3.C.1 - Emissions from biomass burning		0,625	0,016		0,577	21,248	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,096		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,230		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,155		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,451			0,000	0,000	0,000	0,000
3.D - Other	-1,809	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,809				0,000	0,000	0,000	0,000
4 - Waste	4,255	16,971	0,199	0,000	0,300	5,267	0,116	0,010
4.A - Solid Waste Disposal	0,000	11,126	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,125	0,008	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,255	0,613	0,011	0,000	0,300	5,267	0,116	0,010
4.D - Wastewater Treatment and Discharge	0,000	5,107	0,180	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	396,187	0,003	0,011	0,000	0,000	0,000	0,000	0,000
1.A.3.a.i - International Aviation (International Bunkers)	396,187	0,003	0,011		0,000	0,000	0,000	0,000
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2003

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-5119,062	108,794	5,110	11,990	10,679	92,060	16,122	22,413
1 - Energy	4432,933	7,765	0,095	0,000	9,836	62,497	11,702	21,576

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.A - Fuel Combustion Activities	4428,703	2,686	0,095	0,000	9,836	62,497	7,494	21,576
1.A.1 - Energy Industries	1782,520	0,028	0,017		3,143	1,613	0,374	14,367
1.A.2 - Manufacturing Industries and Construction	236,190	0,010	0,001		0,483	0,649	0,122	0,549
1.A.3 - Transport	996,796	0,346	0,063		4,755	25,704	3,339	0,110
1.A.4 - Other Sectors	1413,196	2,302	0,013		1,454	34,531	3,658	6,549
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	4,230	5,079	0,000	0,000	0,000	0,000	4,208	0,000
1.B.1 - Solid Fuels	1,957	0,697	0,000		0,000	0,000	0,666	0,000
1.B.2 - Oil and Natural Gas	2,273	4,382	0,000		0,000	0,000	3,542	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	358,022	0,000	0,000	11,990	0,006	4,585	4,303	0,827
2.A - Mineral Industry	350,848	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	319,207				0,000	0,000	0,000	0,000
2.A.2 - Lime production	6,756				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	12,095				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,789				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	7,174	0,000	0,000	0,000	0,003	4,569	0,000	0,822
2.C.1 - Iron and Steel Production	0,026	0,000			0,003	0,017	0,000	0,000
2.C.7 - Other (please specify)	7,148	0,000	0,000	0,000	0,000	4,552	0,000	0,822
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,821	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,820	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,001	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	11,990	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				11,990	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,015	3,482	0,006
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,015	0,006	0,006
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	3,477	0,000
3 - Agriculture, Forestry, and Other Land Use	-9914,316	83,940	4,811	0,000	0,534	19,657	0,000	0,000
3.A - Livestock	0,000	82,031	0,333	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		79,608			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,423	0,333		0,000	0,000	0,000	0,000
3.B - Land	-9912,145	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6813,973				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3098,172				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,909	4,478	0,000	0,534	19,657	0,000	0,000
3.C.1 - Emissions from biomass burning		0,578	0,015		0,534	19,657	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,085		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,222		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,156		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,331			0,000	0,000	0,000	0,000
3.D - Other	-2,171	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,171				0,000	0,000	0,000	0,000
4 - Waste	4,299	17,089	0,204	0,000	0,303	5,322	0,117	0,010
4.A - Solid Waste Disposal	0,000	11,043	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,126	0,008	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,299	0,619	0,011	0,000	0,303	5,322	0,117	0,010
4.D - Wastewater Treatment and Discharge	0,000	5,300	0,185	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	522,259	0,004	0,015	0,000	2,369	1,564	0,311	0,139
1.A.3.a.i - International Aviation (International Bunkers)	522,259	0,004	0,015		2,369	1,564	0,311	0,139
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2004

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-5219,664	110,945	5,188	13,661	11,356	100,404	17,589	21,679
1 - Energy	4657,377	8,010	0,108	0,000	10,517	69,639	12,966	20,579
1.A - Fuel Combustion Activities	4653,386	2,785	0,108	0,000	10,517	69,639	8,452	20,579
1.A.1 - Energy Industries	1544,509	0,025	0,015		2,713	1,411	0,329	13,319
1.A.2 - Manufacturing Industries and Construction	220,707	0,010	0,001		0,491	0,690	0,118	0,600
1.A.3 - Transport	1245,145	0,453	0,079		5,653	33,254	4,387	0,132
1.A.4 - Other Sectors	1643,026	2,297	0,013		1,660	34,284	3,618	6,528
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	3,991	5,225	0,000	0,000	0,000	0,000	4,515	0,000
1.B.1 - Solid Fuels	1,567	0,550	0,000		0,000	0,000	0,738	0,000
1.B.2 - Oil and Natural Gas	2,424	4,675	0,000		0,000	0,000	3,777	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	421,470	0,000	0,000	13,661	0,007	6,045	4,504	1,090
2.A - Mineral Industry	412,001	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	370,784				0,000	0,000	0,000	0,000
2.A.2 - Lime production	7,972				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	16,931				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	16,314				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	9,469	0,000	0,000	0,000	0,004	6,030	0,000	1,084
2.C.1 - Iron and Steel Production	0,034	0,000			0,004	0,022	0,000	0,000
2.C.7 - Other (please specify)	9,435	0,000	0,000	0,000	0,000	6,008	0,000	1,084
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,987	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	13,661	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				13,661	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,015	3,517	0,005
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,015	0,005	0,005
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	3,511	0,000
3 - Agriculture, Forestry, and Other Land Use	########	85,599	4,873	0,000	0,525	19,329	0,000	0,000
3.A - Livestock	0,000	83,712	0,343	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		81,219			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,493	0,343		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6827,798				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3473,316				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,887	4,530	0,000	0,525	19,329	0,000	0,000
3.C.1 - Emissions from biomass burning		0,567	0,015		0,525	19,329	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,113		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,241		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,161		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,319			0,000	0,000	0,000	0,000
3.D - Other	-1,752	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,752				0,000	0,000	0,000	0,000
4 - Waste	4,355	17,337	0,207	0,000	0,307	5,391	0,119	0,011
4.A - Solid Waste Disposal	0,000	11,077	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,127	0,008	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,355	0,627	0,011	0,000	0,307	5,391	0,119	0,011
4.D - Wastewater Treatment and Discharge	0,000	5,506	0,188	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	593,287	0,004	0,017	0,000	2,691	1,777	0,354	0,158

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.A.3.a.i - International Aviation (International Bunkers)	593,287	0,004	0,017		2,691	1,777	0,354	0,158
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2005

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-4719,488	113,182	5,361	15,759	13,688	124,867	16,655	31,490
1 - Energy	5014,913	7,232	0,150	0,000	12,834	95,885	12,550	30,800
1.A - Fuel Combustion Activities	5011,436	2,217	0,150	0,000	12,834	95,885	8,046	30,800
1.A.1 - Energy Industries	2047,397	0,029	0,024		3,918	1,792	0,303	24,025
1.A.2 - Manufacturing Industries and Construction	787,310	0,023	0,003		1,536	1,234	0,367	0,874
1.A.3 - Transport	1258,639	0,429	0,112		6,406	32,460	4,174	0,036
1.A.4 - Other Sectors	918,091	1,736	0,011		0,975	60,398	3,202	5,865
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	3,477	5,016	0,000	0,000	0,000	0,000	4,503	0,000
1.B.1 - Solid Fuels	1,297	0,458	0,000		0,000	0,000	0,536	0,000
1.B.2 - Oil and Natural Gas	2,179	4,558	0,000		0,000	0,000	3,967	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	467,171	0,000	0,000	15,759	0,006	3,771	3,985	0,678
2.A - Mineral Industry	461,269	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	415,120				0,000	0,000	0,000	0,000
2.A.2 - Lime production	6,515				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	18,892				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	20,742				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	5,902	0,000	0,000	0,000	0,004	3,759	0,000	0,674
2.C.1 - Iron and Steel Production	0,035	0,000			0,004	0,023	0,000	0,000
2.C.7 - Other (please specify)	5,867	0,000	0,000	0,000	0,000	3,736	0,000	0,674
2.D - Non-Energy Products from Fuels and Solvent Use	0,000	0,000	0,000	0,000	0,000	0,000	1,100	0,000
2.D.1 - Lubricant Use	0,000				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,097	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,003	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	15,759	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				15,759	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,012	2,885	0,004
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,012	0,004	0,004
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,881	0,000
3 - Agriculture, Forestry, and Other Land Use	########	88,857	4,996	0,000	0,537	19,749	0,000	0,000
3.A - Livestock	0,000	87,022	0,350	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		84,475			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,547	0,350		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6849,918				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3354,351				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,835	4,646	0,000	0,537	19,749	0,000	0,000
3.C.1 - Emissions from biomass burning		0,581	0,015		0,537	19,749	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,197		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,270		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,164		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,254			0,000	0,000	0,000	0,000
3.D - Other	-1,717	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,717				0,000	0,000	0,000	0,000
4 - Waste	4,414	17,092	0,215	0,000	0,311	5,463	0,120	0,011
4.A - Solid Waste Disposal	0,000	11,031	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,134	0,008	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
4.C - Incineration and Open Burning of Waste	4,414	0,636	0,011	0,000	0,311	5,463	0,120	0,011
4.D - Wastewater Treatment and Discharge	0,000	5,292	0,195	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	400,450	0,003	0,011	0,000	1,816	1,199	0,239	0,107
1.A.3.a.i - International Aviation (International Bunkers)	400,450	0,003	0,011		1,816	1,199	0,239	0,107
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2006

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-4620,528	116,538	5,568	17,896	13,795	127,924	16,326	31,427
1 - Energy	5045,606	7,009	0,150	0,000	12,950	101,043	12,342	31,035
1.A - Fuel Combustion Activities	5042,739	2,296	0,150	0,000	12,950	101,043	8,220	31,035
1.A.1 - Energy Industries	1939,744	0,027	0,023		3,735	1,713	0,268	24,042
1.A.2 - Manufacturing Industries and Construction	864,543	0,024	0,003		1,514	1,251	0,393	0,849
1.A.3 - Transport	1311,231	0,435	0,113		6,713	32,036	4,260	0,038
1.A.4 - Other Sectors	927,221	1,810	0,011		0,989	66,043	3,300	6,106
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	2,867	4,713	0,000	0,000	0,000	0,000	4,122	0,000
1.B.1 - Solid Fuels	1,109	0,390	0,000		0,000	0,000	0,514	0,000
1.B.2 - Oil and Natural Gas	1,757	4,324	0,000		0,000	0,000	3,608	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	538,331	0,000	0,000	17,896	0,007	2,119	3,862	0,381
2.A - Mineral Industry	529,281	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	485,220				0,000	0,000	0,000	0,000
2.A.2 - Lime production	7,588				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	16,814				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	19,659				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	3,301	0,000	0,000	0,000	0,004	2,102	0,000	0,375
2.C.1 - Iron and Steel Production	0,036	0,000			0,004	0,023	0,000	0,000
2.C.7 - Other (please specify)	3,265	0,000	0,000	0,000	0,000	2,079	0,000	0,375

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.D - Non-Energy Products from Fuels and Solvent Use	5,749	0,000	0,000	0,000	0,000	0,000	1,167	0,000
2.D.1 - Lubricant Use	5,463				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,285				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,165	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	17,896	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				17,896	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,016	2,695	0,006
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,016	0,006	0,006
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,689	0,000
3 - Agriculture, Forestry, and Other Land Use	########	92,238	5,202	0,000	0,523	19,237	0,000	0,000
3.A - Livestock	0,000	90,316	0,363	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		87,680			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,636	0,363		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6880,279				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3327,093				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,922	4,838	0,000	0,523	19,237	0,000	0,000
3.C.1 - Emissions from biomass burning		0,565	0,015		0,523	19,237	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,331		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,322		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,170		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,357			0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.D - Other	-1,557	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,557				0,000	0,000	0,000	0,000
4 - Waste	4,464	17,291	0,216	0,000	0,315	5,526	0,122	0,011
4.A - Solid Waste Disposal	0,000	11,028	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,139	0,008	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,464	0,643	0,012	0,000	0,315	5,526	0,122	0,011
4.D - Wastewater Treatment and Discharge	0,000	5,480	0,196	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	856,080	0,006	0,024	0,000	3,883	2,564	0,510	0,228
1.A.3.a.i - International Aviation (International Bunkers)	856,080	0,006	0,024		3,883	2,564	0,510	0,228
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2007

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-3806,999	120,728	5,730	16,660	18,557	145,702	18,744	32,500
1 - Energy	5929,608	7,258	0,253	0,000	17,746	118,247	14,852	31,747
1.A - Fuel Combustion Activities	5927,153	2,700	0,253	0,000	17,746	118,247	10,732	31,747
1.A.1 - Energy Industries	1913,848	0,026	0,023		3,688	1,661	0,261	23,793
1.A.2 - Manufacturing Industries and Construction	892,331	0,027	0,004		1,506	1,564	0,422	1,150
1.A.3 - Transport	2081,902	0,643	0,214		11,457	46,188	6,383	0,059
1.A.4 - Other Sectors	1039,072	2,004	0,012		1,095	68,834	3,665	6,745
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	2,455	4,557	0,000	0,000	0,000	0,000	4,121	0,000
1.B.1 - Solid Fuels	1,004	0,346	0,000		0,000	0,000	0,633	0,000
1.B.2 - Oil and Natural Gas	1,451	4,211	0,000		0,000	0,000	3,488	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	568,775	0,000	0,000	16,660	0,010	4,131	3,769	0,742
2.A - Mineral Industry	560,478	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	509,661				0,000	0,000	0,000	0,000
2.A.2 - Lime production	9,888				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	18,769				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	22,160				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	6,463	0,000	0,000	0,000	0,007	4,116	0,000	0,736
2.C.1 - Iron and Steel Production	0,055	0,000			0,007	0,035	0,000	0,000
2.C.7 - Other (please specify)	6,408	0,000	0,000	0,000	0,000	4,081	0,000	0,736
2.D - Non-Energy Products from Fuels and Solvent Use	1,834	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Lubricant Use	1,797				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,037				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,000	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	1,371	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	16,660	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				16,660	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,015	2,398	0,006
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,015	0,006	0,006
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,392	0,000
3 - Agriculture, Forestry, and Other Land Use	########	96,175	5,265	0,000	0,482	17,729	0,000	0,000
3.A - Livestock	0,000	94,336	0,379	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		91,599			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,737	0,379		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6841,592				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3466,386				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,839	4,886	0,000	0,482	17,729	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.C.1 - Emissions from biomass burning		0,521	0,014		0,482	17,729	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,355		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,341		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,177		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,318			0,000	0,000	0,000	0,000
3.D - Other	-1,923	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,923				0,000	0,000	0,000	0,000
4 - Waste	4,520	17,295	0,212	0,000	0,319	5,595	0,123	0,011
4.A - Solid Waste Disposal	0,000	11,046	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,141	0,008	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,520	0,651	0,012	0,000	0,319	5,595	0,123	0,011
4.D - Wastewater Treatment and Discharge	0,000	5,456	0,192	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	750,450	0,005	0,021	0,000	3,403	2,248	0,448	0,200
1.A.3.a.i - International Aviation (International Bunkers)	750,450	0,005	0,021		3,403	2,248	0,448	0,200
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2008

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-2952,789	126,850	6,214	22,139	20,388	183,194	20,997	42,561
1 - Energy	6808,575	8,619	0,262	0,000	19,546	155,038	17,728	41,902
1.A - Fuel Combustion Activities	6805,527	3,868	0,262	0,000	19,546	155,038	13,323	41,902
1.A.1 - Energy Industries	2281,734	0,030	0,029		4,505	1,987	0,255	30,870
1.A.2 - Manufacturing Industries and Construction	825,610	0,021	0,003		1,429	1,037	0,367	0,649
1.A.3 - Transport	2267,416	0,719	0,212		12,084	51,869	7,089	0,063
1.A.4 - Other Sectors	1430,767	3,098	0,019		1,528	100,145	5,612	10,320
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	3,048	4,750	0,000	0,000	0,000	0,000	4,405	0,000
1.B.1 - Solid Fuels	1,421	0,494	0,000		0,000	0,000	0,787	0,000
1.B.2 - Oil and Natural Gas	1,628	4,257	0,000		0,000	0,000	3,618	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	484,779	0,000	0,000	22,139	0,006	3,600	3,145	0,648

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.A - Mineral Industry	471,827	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	435,264				0,000	0,000	0,000	0,000
2.A.2 - Lime production	6,669				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	15,151				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	14,743				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	5,636	0,000	0,000	0,000	0,004	3,589	0,000	0,644
2.C.1 - Iron and Steel Production	0,030	0,000			0,004	0,019	0,000	0,000
2.C.7 - Other (please specify)	5,606	0,000	0,000	0,000	0,000	3,570	0,000	0,644
2.D - Non-Energy Products from Fuels and Solvent Use	7,316	0,000	0,000	0,000	0,000	0,000	1,229	0,000
2.D.1 - Lubricant Use	7,313				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,003				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,227	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	22,139	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				22,139	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,012	1,916	0,004
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,012	0,004	0,004
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	1,912	0,000
3 - Agriculture, Forestry, and Other Land Use	########	100,776	5,732	0,000	0,514	18,908	0,000	0,000
3.A - Livestock	0,000	98,932	0,396	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		96,087			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,845	0,396		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6900,723				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3347,421				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,844	5,335	0,000	0,514	18,908	0,000	0,000
3.C.1 - Emissions from biomass burning		0,556	0,014		0,514	18,908	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,677		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,461		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,183		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,288			0,000	0,000	0,000	0,000
3.D - Other	-2,561	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-2,561				0,000	0,000	0,000	0,000
4 - Waste	4,562	17,456	0,221	0,000	0,322	5,647	0,124	0,011
4.A - Solid Waste Disposal	0,000	11,309	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,146	0,009	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,562	0,657	0,012	0,000	0,322	5,647	0,124	0,011
4.D - Wastewater Treatment and Discharge	0,000	5,343	0,200	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	882,882	0,006	0,025	0,000	4,004	2,644	0,526	0,235
1.A.3.a.i - International Aviation (International Bunkers)	882,882	0,006	0,025		4,004	2,644	0,526	0,235
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2009

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-3427,456	131,879	6,454	24,606	22,540	191,786	21,882	40,931
1 - Energy	6630,005	7,959	0,369	0,000	21,671	162,593	18,823	40,206
1.A - Fuel Combustion Activities	6626,909	3,892	0,369	0,000	21,671	162,593	13,921	40,206
1.A.1 - Energy Industries	2127,978	0,034	0,028		4,365	2,197	0,213	29,944
1.A.2 - Manufacturing Industries and Construction	476,170	0,019	0,003		0,822	0,330	0,120	0,208
1.A.3 - Transport	2618,649	0,806	0,320		14,976	57,528	8,099	0,028
1.A.4 - Other Sectors	1404,112	3,033	0,019		1,508	102,538	5,489	10,026
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	3,096	4,067	0,000	0,000	0,000	0,000	4,901	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.B.1 - Solid Fuels	1,611	0,557	0,000		0,000	0,000	0,971	0,000
1.B.2 - Oil and Natural Gas	1,485	3,511	0,000		0,000	0,000	3,930	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	241,296	0,000	0,001	24,606	0,014	4,011	2,932	0,715
2.A - Mineral Industry	226,682	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	213,015				0,000	0,000	0,000	0,000
2.A.2 - Lime production	3,603				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	0,320				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	9,744				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	6,282	0,000	0,000	0,000	0,012	4,000	0,000	0,711
2.C.1 - Iron and Steel Production	0,096	0,000			0,012	0,061	0,000	0,000
2.C.7 - Other (please specify)	6,186	0,000	0,000	0,000	0,000	3,939	0,000	0,711
2.D - Non-Energy Products from Fuels and Solvent Use	8,332	0,000	0,000	0,000	0,000	0,000	0,986	0,000
2.D.1 - Lubricant Use	8,304				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,028				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,983	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,003	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	24,606	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				24,606	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,011	1,946	0,004
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,011	0,004	0,004
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	1,942	0,000
3 - Agriculture, Forestry, and Other Land Use	########	105,671	5,854	0,000	0,528	19,430	0,000	0,000
3.A - Livestock	0,000	103,757	0,418	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.A.1 - Enteric Fermentation		100,786			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,971	0,418		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6862,298				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3439,128				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,914	5,436	0,000	0,528	19,430	0,000	0,000
3.C.1 - Emissions from biomass burning		0,571	0,015		0,528	19,430	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,735		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,495		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,191		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,343			0,000	0,000	0,000	0,000
3.D - Other	-1,976	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,976				0,000	0,000	0,000	0,000
4 - Waste	4,646	18,248	0,230	0,000	0,327	5,752	0,127	0,011
4.A - Solid Waste Disposal	0,000	12,058	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,150	0,009	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,646	0,669	0,012	0,000	0,327	5,752	0,127	0,011
4.D - Wastewater Treatment and Discharge	0,000	5,371	0,209	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	1027,927	0,007	0,029	0,000	4,662	3,079	0,613	0,274
1.A.3.a.i - International Aviation (International Bunkers)	1027,927	0,007	0,029		4,662	3,079	0,613	0,274
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2010

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-3966,646	136,033	6,429	49,983	21,776	198,820	24,027	34,933
1 - Energy	5980,971	9,167	0,322	0,000	20,912	170,266	20,188	34,184
1.A - Fuel Combustion Activities	5977,503	4,900	0,322	0,000	20,912	170,266	14,992	34,184
1.A.1 - Energy Industries	1627,627	0,024	0,021		3,335	1,482	0,172	22,426

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.A.2 - Manufacturing Industries and Construction	589,175	0,023	0,004		2,590	0,982	0,248	0,802
1.A.3 - Transport	2341,589	0,689	0,266		13,309	48,344	6,899	0,024
1.A.4 - Other Sectors	1419,113	4,164	0,031		1,678	119,457	7,673	10,932
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	3,467	4,268	0,000	0,000	0,000	0,000	5,196	0,000
1.B.1 - Solid Fuels	1,453	0,500	0,000		0,000	0,000	0,960	0,000
1.B.2 - Oil and Natural Gas	2,015	3,767	0,000		0,000	0,000	4,236	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	381,894	0,000	0,000	49,983	0,015	4,142	3,701	0,738
2.A - Mineral Industry	368,722	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	354,024				0,000	0,000	0,000	0,000
2.A.2 - Lime production	4,982				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	0,405				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	9,311				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	6,483	0,000	0,000	0,000	0,013	4,129	0,000	0,733
2.C.1 - Iron and Steel Production	0,105	0,000			0,013	0,067	0,000	0,000
2.C.7 - Other (please specify)	6,379	0,000	0,000	0,000	0,000	4,062	0,000	0,733
2.D - Non-Energy Products from Fuels and Solvent Use	6,688	0,000	0,000	0,000	0,000	0,000	1,290	0,000
2.D.1 - Lubricant Use	6,688				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,000				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,288	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	49,983	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				46,263	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				3,720	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,013	2,412	0,005
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,013	0,005	0,005
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,407	0,000
3 - Agriculture, Forestry, and Other Land Use	########	107,987	5,876	0,000	0,494	18,181	0,000	0,000
3.A - Livestock	0,000	106,045	0,430	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		103,020			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,025	0,430		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6869,834				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3462,921				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,942	5,447	0,000	0,494	18,181	0,000	0,000
3.C.1 - Emissions from biomass burning		0,534	0,014		0,494	18,181	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			3,732		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,505		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,196		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,408			0,000	0,000	0,000	0,000
3.D - Other	-1,790	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,790				0,000	0,000	0,000	0,000
4 - Waste	5,034	18,879	0,230	0,000	0,355	6,231	0,137	0,012
4.A - Solid Waste Disposal	0,000	12,601	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,129	0,008	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	5,034	0,725	0,013	0,000	0,355	6,231	0,137	0,012
4.D - Wastewater Treatment and Discharge	0,000	5,424	0,210	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	781,981	0,005	0,022	0,000	3,546	2,342	0,466	0,208
1.A.3.a.i - International Aviation (International Bunkers)	781,981	0,005	0,022		3,546	2,342	0,466	0,208
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2011

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-2382,824	140,261	6,745	64,092	27,291	216,122	25,794	38,540
1 - Energy	7403,129	9,209	0,200	0,000	26,442	190,382	22,019	38,273
1.A - Fuel Combustion Activities	7399,077	4,863	0,200	0,000	26,442	190,382	16,750	38,273
1.A.1 - Energy Industries	1690,632	0,025	0,023		3,539	1,507	0,165	24,235
1.A.2 - Manufacturing Industries and Construction	598,303	0,026	0,004		2,075	1,518	0,289	1,300
1.A.3 - Transport	3231,938	0,976	0,150		18,900	69,378	9,506	0,034
1.A.4 - Other Sectors	1878,205	3,837	0,024		1,929	117,980	6,791	12,704
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	4,052	4,346	0,000	0,000	0,000	0,000	5,269	0,000
1.B.1 - Solid Fuels	1,807	0,615	0,000		0,000	0,000	1,329	0,000
1.B.2 - Oil and Natural Gas	2,245	3,730	0,000		0,000	0,000	3,940	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	504,957	0,000	0,000	64,092	0,008	1,433	3,641	0,255
2.A - Mineral Industry	494,315	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	479,036				0,000	0,000	0,000	0,000
2.A.2 - Lime production	1,993				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	0,441				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,846				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	2,230	0,000	0,000	0,000	0,006	1,420	0,000	0,250
2.C.1 - Iron and Steel Production	0,051	0,000			0,006	0,033	0,000	0,000
2.C.7 - Other (please specify)	2,178	0,000	0,000	0,000	0,000	1,387	0,000	0,250
2.D - Non-Energy Products from Fuels and Solvent Use	8,412	0,000	0,000	0,000	0,000	0,000	1,423	0,000
2.D.1 - Lubricant Use	8,404				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,008				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,421	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	64,092	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				38,357	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.F.6 - Other Applications (please specify)				25,735	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,013	2,218	0,005
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,013	0,005	0,005
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,214	0,000
3 - Agriculture, Forestry, and Other Land Use	########	111,656	6,314	0,000	0,497	18,286	0,000	0,000
3.A - Livestock	0,000	109,738	0,447	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		106,617			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,121	0,447		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6830,232				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3464,307				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	1,918	5,867	0,000	0,497	18,286	0,000	0,000
3.C.1 - Emissions from biomass burning		0,537	0,014		0,497	18,286	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,066		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,585		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,202		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,380			0,000	0,000	0,000	0,000
3.D - Other	-1,235	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,235				0,000	0,000	0,000	0,000
4 - Waste	4,864	19,397	0,231	0,000	0,343	6,021	0,133	0,012
4.A - Solid Waste Disposal	0,000	13,173	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,161	0,010	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,864	0,701	0,013	0,000	0,343	6,021	0,133	0,012
4.D - Wastewater Treatment and Discharge	0,000	5,363	0,208	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	219,730	0,002	0,006	0,000	0,997	0,658	0,131	0,059
1.A.3.a.i - International Aviation (International Bunkers)	219,730	0,002	0,006		0,997	0,658	0,131	0,059
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2012

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-850,206	144,668	6,997	123,821	31,859	251,804	31,231	41,676
1 - Energy	8858,302	10,427	0,415	0,000	31,031	226,961	27,191	41,494
1.A - Fuel Combustion Activities	8853,107	5,524	0,415	0,000	31,031	226,961	21,311	41,494
1.A.1 - Energy Industries	1778,997	0,024	0,024		3,721	1,514	0,173	25,904
1.A.2 - Manufacturing Industries and Construction	800,441	0,037	0,005		2,006	2,508	0,425	2,195
1.A.3 - Transport	4442,712	1,385	0,361		23,362	100,582	13,512	0,037
1.A.4 - Other Sectors	1830,956	4,077	0,024		1,941	122,356	7,202	13,358
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	5,195	4,903	0,000	0,000	0,000	0,000	5,880	0,000
1.B.1 - Solid Fuels	2,804	0,963	0,000		0,000	0,000	1,862	0,000
1.B.2 - Oil and Natural Gas	2,390	3,941	0,000		0,000	0,000	4,018	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	611,162	0,000	0,001	123,821	0,007	0,958	3,914	0,170
2.A - Mineral Industry	609,270	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	582,273				0,000	0,000	0,000	0,000
2.A.2 - Lime production	2,070				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	12,048				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,879				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	1,485	0,000	0,000	0,000	0,005	0,946	0,000	0,166
2.C.1 - Iron and Steel Production	0,041	0,000			0,005	0,026	0,000	0,000
2.C.7 - Other (please specify)	1,444	0,000	0,000	0,000	0,000	0,920	0,000	0,166
2.D - Non-Energy Products from Fuels and Solvent Use	0,407	0,000	0,000	0,000	0,000	0,000	1,628	0,000
2.D.1 - Lubricant Use	0,400				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,007				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,626	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	123,821	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				47,098	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.F.2 - Foam Blowing Agents				44,759	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				31,964	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,012	2,286	0,005
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,012	0,005	0,005
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,281	0,000
3 - Agriculture, Forestry, and Other Land Use	########	114,308	6,353	0,000	0,492	18,104	0,000	0,000
3.A - Livestock	0,000	112,223	0,457	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		109,035			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,188	0,457		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6856,630				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3466,539				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,085	5,896	0,000	0,492	18,104	0,000	0,000
3.C.1 - Emissions from biomass burning		0,532	0,014		0,492	18,104	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,046		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,629		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,207		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,553			0,000	0,000	0,000	0,000
3.D - Other	-1,171	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-1,171				0,000	0,000	0,000	0,000
4 - Waste	4,671	19,933	0,229	0,000	0,329	5,782	0,127	0,011
4.A - Solid Waste Disposal	0,000	13,523	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,179	0,011	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,671	0,673	0,012	0,000	0,329	5,782	0,127	0,011
4.D - Wastewater Treatment and Discharge	0,000	5,557	0,206	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Memo Items								
International Bunkers	602,567	0,004	0,017	0,000	2,733	1,805	0,359	0,161
1.A.3.a.i - International Aviation (International Bunkers)	602,567	0,004	0,017		2,733	1,805	0,359	0,161
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2013

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-793,734	147,567	7,096	165,184	33,986	271,921	32,649	38,759
1 - Energy	8632,260	8,840	0,454	0,000	33,112	246,038	26,966	38,586
1.A - Fuel Combustion Activities	8625,587	3,474	0,454	0,000	33,112	246,038	20,459	38,586
1.A.1 - Energy Industries	1455,953	0,018	0,021		3,129	1,112	0,123	21,970
1.A.2 - Manufacturing Industries and Construction	871,082	0,057	0,009		1,885	4,574	0,568	4,259
1.A.3 - Transport	4644,764	1,376	0,403		26,324	122,249	13,014	0,035
1.A.4 - Other Sectors	1653,787	2,022	0,023		1,774	118,104	6,753	12,322
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	6,673	5,366	0,000	0,000	0,000	0,000	6,507	0,000
1.B.1 - Solid Fuels	3,997	1,388	0,000		0,000	0,000	2,253	0,000
1.B.2 - Oil and Natural Gas	2,676	3,978	0,000		0,000	0,000	4,255	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	785,075	0,000	0,001	165,184	0,006	0,903	5,543	0,162
2.A - Mineral Industry	773,342	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	735,029				0,000	0,000	0,000	0,000
2.A.2 - Lime production	1,916				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	20,589				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	15,808				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	1,398	0,000	0,000	0,000	0,004	0,890	0,000	0,157
2.C.1 - Iron and Steel Production	0,035	0,000			0,004	0,022	0,000	0,000
2.C.7 - Other (please specify)	1,363	0,000	0,000	0,000	0,000	0,868	0,000	0,157
2.D - Non-Energy Products from Fuels and Solvent Use	10,336	0,000	0,000	0,000	0,000	0,000	3,227	0,000
2.D.1 - Lubricant Use	10,292				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,044				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.D.3 - Solvent Use	0,000				0,000	0,000	3,225	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	165,184	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				50,402	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				77,010	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				37,773	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,002	0,013	2,315	0,005
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,002	0,013	0,005	0,005
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,311	0,000
3 - Agriculture, Forestry, and Other Land Use	########	117,823	6,403	0,000	0,507	18,639	0,000	0,000
3.A - Livestock	0,000	115,585	0,472	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		112,308			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,277	0,472		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6866,986				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3348,287				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,238	5,931	0,000	0,507	18,639	0,000	0,000
3.C.1 - Emissions from biomass burning		0,548	0,014		0,507	18,639	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,088		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,615		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,214		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,690			0,000	0,000	0,000	0,000
3.D - Other	-0,919	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-0,919				0,000	0,000	0,000	0,000
4 - Waste	5,122	20,904	0,237	0,000	0,361	6,340	0,140	0,012

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
4.A - Solid Waste Disposal	0,000	14,046	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,143	0,009	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	5,122	0,738	0,013	0,000	0,361	6,340	0,140	0,012
4.D - Wastewater Treatment and Discharge	0,000	5,978	0,215	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	226,544	0,002	0,006	0,000	1,027	0,679	0,135	0,060
1.A.3.a.i - International Aviation (International Bunkers)	226,544	0,002	0,006		1,027	0,679	0,135	0,060
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2014

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-622,020	154,857	7,682	215,743	31,218	229,551	30,890	53,243
1 - Energy	8842,901	11,441	0,445	0,000	30,355	204,254	26,407	53,119
1.A - Fuel Combustion Activities	8834,461	5,536	0,445	0,000	30,355	204,254	19,332	53,119
1.A.1 - Energy Industries	2503,491	0,044	0,031		5,188	2,284	0,367	32,717
1.A.2 - Manufacturing Industries and Construction	842,667	0,071	0,011		1,967	6,180	0,661	5,891
1.A.3 - Transport	3671,101	1,062	0,378		21,232	81,251	10,401	0,033
1.A.4 - Other Sectors	1817,202	4,359	0,026		1,968	114,539	7,902	14,478
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	8,439	5,905	0,000	0,000	0,000	0,000	7,076	0,000
1.B.1 - Solid Fuels	5,775	2,019	0,000		0,000	0,000	2,899	0,000
1.B.2 - Oil and Natural Gas	2,665	3,886	0,000		0,000	0,000	4,177	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	857,763	0,000	0,000	215,743	0,007	0,628	4,346	0,112
2.A - Mineral Industry	853,588	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	816,244				0,000	0,000	0,000	0,000
2.A.2 - Lime production	2,376				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	19,601				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	15,366				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	0,962	0,000	0,000	0,000	0,004	0,613	0,000	0,107

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.C.1 - Iron and Steel Production	0,034	0,000			0,004	0,022	0,000	0,000
2.C.7 - Other (please specify)	0,928	0,000	0,000	0,000	0,000	0,591	0,000	0,107
2.D - Non-Energy Products from Fuels and Solvent Use	3,213	0,000	0,000	0,000	0,000	0,000	2,214	0,000
2.D.1 - Lubricant Use	3,187				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,026				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	2,213	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,001	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	215,743	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				65,319	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				109,407	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				41,017	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,015	2,132	0,005
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,015	0,005	0,005
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,126	0,000
3 - Agriculture, Forestry, and Other Land Use	########	122,128	6,993	0,000	0,501	18,438	0,000	0,000
3.A - Livestock	0,000	119,850	0,488	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		116,456			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,394	0,488		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6862,692				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3464,106				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,279	6,505	0,000	0,501	18,438	0,000	0,000
3.C.1 - Emissions from biomass burning		0,542	0,014		0,501	18,438	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,478		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,792		0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.C.6 - Indirect N2O Emissions from manure management			0,220		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,736			0,000	0,000	0,000	0,000
3.D - Other	-0,920	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-0,920				0,000	0,000	0,000	0,000
4 - Waste	5,034	21,288	0,244	0,000	0,355	6,232	0,137	0,012
4.A - Solid Waste Disposal	0,000	14,357	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,136	0,008	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	5,034	0,725	0,013	0,000	0,355	6,232	0,137	0,012
4.D - Wastewater Treatment and Discharge	0,000	6,069	0,223	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	189,637	0,001	0,005	0,000	0,860	0,568	0,113	0,051
1.A.3.a.i - International Aviation (International Bunkers)	189,637	0,001	0,005		0,860	0,568	0,113	0,051
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2015

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-61,516	158,220	7,696	219,883	32,980	237,888	31,632	61,052
1 - Energy	9546,003	11,684	0,415	0,000	32,135	213,092	28,031	60,933
1.A - Fuel Combustion Activities	9538,713	5,364	0,415	0,000	32,135	213,092	19,496	60,933
1.A.1 - Energy Industries	3140,439	0,055	0,040		6,493	3,136	0,396	42,967
1.A.2 - Manufacturing Industries and Construction	671,989	0,049	0,008		2,164	3,906	0,457	3,694
1.A.3 - Transport	3863,181	1,115	0,342		21,477	81,533	10,935	0,036
1.A.4 - Other Sectors	1863,105	4,145	0,025		2,000	124,517	7,709	14,236
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	7,289	6,320	0,000	0,000	0,000	0,000	8,535	0,000
1.B.1 - Solid Fuels	4,548	1,559	0,000		0,000	0,000	3,086	0,000
1.B.2 - Oil and Natural Gas	2,741	4,761	0,000		0,000	0,000	5,449	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	724,017	0,000	0,001	219,883	0,004	0,611	3,466	0,107
2.A - Mineral Industry	714,074	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	683,421				0,000	0,000	0,000	0,000
2.A.2 - Lime production	3,833				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.A.3 - Glass Production	13,899				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,921				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	0,888	0,000	0,000	0,000	0,001	0,595	0,000	0,101
2.C.1 - Iron and Steel Production	0,008	0,000			0,001	0,005	0,000	0,000
2.C.7 - Other (please specify)	0,880	0,000	0,000	0,000	0,000	0,590	0,000	0,101
2.D - Non-Energy Products from Fuels and Solvent Use	9,055	0,000	0,000	0,000	0,000	0,000	1,496	0,000
2.D.1 - Lubricant Use	9,019				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,037				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,493	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,003	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	219,883	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				77,333	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				99,607	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				42,943	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,016	1,970	0,006
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,016	0,006	0,006
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	1,964	0,000
3 - Agriculture, Forestry, and Other Land Use	########	124,800	7,039	0,000	0,489	18,002	0,000	0,000
3.A - Livestock	0,000	122,427	0,498	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		118,962			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,465	0,498		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6885,509				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3450,306				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,373	6,541	0,000	0,489	18,002	0,000	0,000
3.C.1 - Emissions from biomass burning		0,532	0,014		0,489	18,002	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,497		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,805		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,225		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		1,841			0,000	0,000	0,000	0,000
3.D - Other	-0,716	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-0,716				0,000	0,000	0,000	0,000
4 - Waste	4,995	21,736	0,241	0,000	0,352	6,183	0,136	0,012
4.A - Solid Waste Disposal	0,000	14,761	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,119	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,995	0,720	0,013	0,000	0,352	6,183	0,136	0,012
4.D - Wastewater Treatment and Discharge	0,000	6,137	0,221	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	258,322	0,002	0,007	0,000	1,172	0,774	0,154	0,069
1.A.3.a.i - International Aviation (International Bunkers)	258,322	0,002	0,007		1,172	0,774	0,154	0,069
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2016

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-1462,075	161,831	7,758	305,900	28,891	224,296	33,410	40,522
1 - Energy	8187,677	11,645	0,368	0,000	28,044	200,051	29,134	40,393
1.A - Fuel Combustion Activities	8180,658	4,072	0,368	0,000	28,044	200,051	18,787	40,393
1.A.1 - Energy Industries	1779,270	0,027	0,023		3,784	1,379	0,222	24,767
1.A.2 - Manufacturing Industries and Construction	569,410	0,042	0,007		1,715	3,453	0,396	3,266
1.A.3 - Transport	3878,251	1,189	0,315		20,425	89,379	11,561	0,045
1.A.4 - Other Sectors	1953,727	2,814	0,023		2,121	105,840	6,608	12,314
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	7,019	7,573	0,000	0,000	0,000	0,000	10,347	0,000
1.B.1 - Solid Fuels	4,251	1,454	0,000		0,000	0,000	2,962	0,000
1.B.2 - Oil and Natural Gas	2,769	6,119	0,000		0,000	0,000	7,385	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	647,359	0,000	0,000	305,900	0,005	0,639	4,128	0,116
2.A - Mineral Industry	638,107	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	604,572				0,000	0,000	0,000	0,000
2.A.2 - Lime production	4,829				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	16,074				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,632				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	0,982	0,000	0,000	0,000	0,002	0,625	0,000	0,111
2.C.1 - Iron and Steel Production	0,015	0,000			0,002	0,010	0,000	0,000
2.C.7 - Other (please specify)	0,967	0,000	0,000	0,000	0,000	0,615	0,000	0,111
2.D - Non-Energy Products from Fuels and Solvent Use	8,270	0,000	0,000	0,000	0,000	0,000	1,857	0,000
2.D.1 - Lubricant Use	8,238				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,032				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	1,855	0,000
2.D.4 - Other (please specify)	0,000				0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	305,900	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				92,482	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				168,297	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				45,121	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,014	2,271	0,005
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,014	0,005	0,005
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,266	0,000
3 - Agriculture, Forestry, and Other Land Use	########	127,595	7,135	0,000	0,459	16,887	0,000	0,000
3.A - Livestock	0,000	124,981	0,507	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		121,446			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,536	0,507		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3.B.1 - Forest land	-6835,627				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3466,324				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,614	6,628	0,000	0,459	16,887	0,000	0,000
3.C.1 - Emissions from biomass burning		0,496	0,013		0,459	16,887	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,555		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,830		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,230		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		2,117			0,000	0,000	0,000	0,000
3.D - Other	-0,590	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-0,590				0,000	0,000	0,000	0,000
4 - Waste	5,428	22,591	0,255	0,000	0,383	6,719	0,148	0,013
4.A - Solid Waste Disposal	0,000	15,020	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,112	0,007	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	5,428	0,782	0,014	0,000	0,383	6,719	0,148	0,013
4.D - Wastewater Treatment and Discharge	0,000	6,677	0,235	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	331,081	0,002	0,009	0,000	1,502	0,992	0,197	0,088
1.A.3.a.i - International Aviation (International Bunkers)	331,081	0,002	0,009		1,502	0,992	0,197	0,088
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2017

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	-918,246	167,874	8,157	341,548	32,334	237,129	35,389	38,570
1 - Energy	8707,705	14,144	0,402	0,000	31,545	214,847	32,396	38,551
1.A - Fuel Combustion Activities	8701,105	5,759	0,402	0,000	31,545	214,847	20,602	38,551
1.A.1 - Energy Industries	1364,533	0,019	0,018		2,892	0,846	0,196	18,339
1.A.2 - Manufacturing Industries and Construction	776,013	0,057	0,009		2,187	4,737	0,549	4,472
1.A.3 - Transport	4207,615	1,144	0,346		24,040	85,422	11,448	0,093
1.A.4 - Other Sectors	2352,944	4,539	0,030		2,427	123,842	8,409	15,647

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	6,601	8,386	0,000	0,000	0,000	0,000	11,794	0,000
1.B.1 - Solid Fuels	3,875	1,314	0,000		0,000	0,000	2,993	0,000
1.B.2 - Oil and Natural Gas	2,726	7,072	0,000		0,000	0,000	8,801	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	736,549	0,000	0,000	341,548	0,007	0,039	2,862	0,006
2.A - Mineral Industry	726,843	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	684,356				0,000	0,000	0,000	0,000
2.A.2 - Lime production	5,059				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	23,254				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	14,174				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	0,035	0,000	0,000	0,000	0,004	0,022	0,000	0,000
2.C.1 - Iron and Steel Production	0,035	0,000			0,004	0,022	0,000	0,000
2.C.7 - Other (please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Non-Energy Products from Fuels and Solvent Use	9,672	0,000	0,000	0,000	0,000	0,000	0,485	0,000
2.D.1 - Lubricant Use	9,614				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,058				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use					0,000	0,000	0,483	0,000
2.D.4 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	341,548	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				105,269	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				190,155	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				46,124	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,017	2,377	0,006
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,017	0,006	0,006
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	2,371	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
3 - Agriculture, Forestry, and Other Land Use	########	130,768	7,510	0,000	0,443	16,286	0,000	0,000
3.A - Livestock	0,000	127,998	0,516	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		124,378			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,621	0,516		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-6900,206				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3466,608				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,769	6,995	0,000	0,443	16,286	0,000	0,000
3.C.1 - Emissions from biomass burning		0,479	0,013		0,443	16,286	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,825		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,922		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,235		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		2,290			0,000	0,000	0,000	0,000
3.D - Other	-0,500	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-0,500				0,000	0,000	0,000	0,000
4 - Waste	4,813	22,962	0,245	0,000	0,339	5,957	0,131	0,012
4.A - Solid Waste Disposal	0,000	15,242	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,093	0,006	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,813	0,693	0,012	0,000	0,339	5,957	0,131	0,012
4.D - Wastewater Treatment and Discharge	0,000	6,933	0,226	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	341,089	0,002	0,010	0,000	1,547	1,022	0,203	0,091
1.A.3.a.i - International Aviation (International Bunkers)	341,089	0,002	0,010		1,547	1,022	0,203	0,091
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Inventory year: 2018

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
Total National Emissions and Removals	474,484	174,361	8,346	193,688	35,924	266,697	40,232	42,656
1 - Energy	10442,593	16,377	0,442	0,000	35,152	244,524	36,893	42,638

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
1.A - Fuel Combustion Activities	10434,200	6,452	0,442	0,000	35,152	244,524	24,816	42,638
1.A.1 - Energy Industries	1458,662	0,022	0,018		2,802	0,619	0,166	19,069
1.A.2 - Manufacturing Industries and Construction	853,816	0,072	0,011		2,007	6,362	2,101	6,005
1.A.3 - Transport	4846,560	1,317	0,375		27,645	97,954	12,740	0,034
1.A.4 - Other Sectors	3275,162	5,041	0,038		2,698	139,589	9,809	17,531
1.A.5 - Non-Specified	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.B - Fugitive emissions from fuels	8,393	9,924	0,000	0,000	0,000	0,000	12,078	0,000
1.B.1 - Solid Fuels	5,435	1,857	0,000		0,000	0,000	1,916	0,000
1.B.2 - Oil and Natural Gas	2,957	8,067	0,000		0,000	0,000	10,161	0,000
1.B.3 - Other emissions from Energy Production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Carbon dioxide Transport and Storage	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial Processes and Product Use	968,864	0,000	0,000	193,688	0,009	0,049	3,219	0,006
2.A - Mineral Industry	957,684	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	915,983				0,000	0,000	0,000	0,000
2.A.2 - Lime production	6,515				0,000	0,000	0,000	0,000
2.A.3 - Glass Production	22,257				0,000	0,000	0,000	0,000
2.A.4 - Other Process Uses of Carbonates	12,929				0,000	0,000	0,000	0,000
2.A.5 - Other (please specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000
2.B - Chemical Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metal Industry	0,049	0,000	0,000	0,000	0,006	0,031	0,000	0,000
2.C.1 - Iron and Steel Production	0,049	0,000			0,006	0,031	0,000	0,000
2.C.7 - Other (please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Non-Energy Products from Fuels and Solvent Use	11,131	0,000	0,000	0,000	0,000	0,000	0,002	0,000
2.D.1 - Lubricant Use	11,095				0,000	0,000	0,000	0,000
2.D.2 - Paraffin Wax Use	0,036				0,000	0,000	0,000	0,000
2.D.3 - Solvent Use	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (please specify)	0,000	0,000			0,000	0,000	0,002	0,000
2.E - Electronics Industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	0,000	0,000	0,000	193,688	0,000	0,000	0,000	0,000
2.F.1 - Refrigeration and Air Conditioning				117,459	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents				29,894	0,000	0,000	0,000	0,000
2.F.3 - Fire Protection				0,000	0,000	0,000	0,000	0,000
2.F.4 - Aerosols				0,000	0,000	0,000	0,000	0,000
2.F.5 - Solvents				0,000	0,000	0,000	0,000	0,000
2.F.6 - Other Applications (please specify)				46,335	0,000	0,000	0,000	0,000
2.G - Other Product Manufacture and Use	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	NOx	CO	NMVOCs	SO2
2.G.3 - N2O from Product Uses			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (Please specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.H - Other	0,000	0,000	0,000	0,000	0,003	0,018	3,217	0,006
2.H.1 - Pulp and Paper Industry	0,000	0,000			0,003	0,018	0,006	0,006
2.H.2 - Food and Beverages Industry	0,000	0,000			0,000	0,000	3,210	0,000
3 - Agriculture, Forestry, and Other Land Use	########	134,478	7,653	0,000	0,453	16,681	0,000	0,000
3.A - Livestock	0,000	131,560	0,527	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteric Fermentation		127,840			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,720	0,527		0,000	0,000	0,000	0,000
3.B - Land	########	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest land	-7471,735				0,000	0,000	0,000	0,000
3.B.2 - Cropland	-3469,096				0,000	0,000	0,000	0,000
3.B.3 - Grassland	0,000				0,000	0,000	0,000	0,000
3.B.4 - Wetlands	0,000		0,000		0,000	0,000	0,000	0,000
3.B.5 - Settlements	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other Land	0,000				0,000	0,000	0,000	0,000
3.C - Aggregate sources and non-CO2 emissions sources on land	0,000	2,918	7,126	0,000	0,453	16,681	0,000	0,000
3.C.1 - Emissions from biomass burning		0,491	0,013		0,453	16,681	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils			4,967		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils			1,905		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management			0,241		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivations		2,427			0,000	0,000	0,000	0,000
3.D - Other	-0,540	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested Wood Products	-0,540				0,000	0,000	0,000	0,000
4 - Waste	4,398	23,506	0,252	0,000	0,310	5,444	0,120	0,011
4.A - Solid Waste Disposal	0,000	15,522	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	0,000	0,087	0,005	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste	4,398	0,634	0,011	0,000	0,310	5,444	0,120	0,011
4.D - Wastewater Treatment and Discharge	0,000	7,264	0,235	0,000	0,000	0,000	0,000	0,000
Memo Items								
International Bunkers	340,613	0,002	0,010	0,000	0,000	0,000	0,000	0,000
1.A.3.a.i - International Aviation (International Bunkers)	340,613	0,002	0,010		0,000	0,000	0,000	0,000
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000		0,000		0,000	0,000	0,000	0,000

15. Summary table of GHG and precursor gases emissions in the period 1990-2018

All data in the following table are given in Gigagrams.

Year	Net CO_2	CH_4	N_2O	HFC 32	HFC 125	HFC 134a	HFC 143a	HFC 227ea	NO_x	CO	NMVOCs	SO_2
1990	10031,278	183,188	13,351	n/a	n/a	n/a	n/a	n/a	50,255	371,469	60,966	101,326
1991	7631,225	176,404	14,053	n/a	n/a	n/a	n/a	n/a	42,884	310,618	53,265	86,024
1992	4005,783	159,665	12,519	n/a	n/a	n/a	n/a	n/a	33,312	261,844	40,465	71,628
1993	230,076	141,486	6,210	n/a	n/a	n/a	n/a	n/a	23,599	183,287	30,711	56,662
1994	-3032,120	114,784	4,770	n/a	n/a	n/a	n/a	n/a	16,565	120,212	21,772	46,888
1995	-4990,691	103,647	4,169	n/a	n/a	0,003	n/a	n/a	12,185	64,104	14,317	24,833
1996	-4895,548	99,976	4,114	n/a	n/a	0,003	n/a	n/a	13,040	71,148	15,247	22,582
1997	-4796,877	102,633	5,218	n/a	n/a	0,004	n/a	n/a	13,689	84,283	15,091	19,972
1998	-5380,236	104,081	4,995	n/a	n/a	0,004	n/a	n/a	12,052	91,966	15,033	20,585
1999	-5567,967	105,204	5,110	n/a	n/a	0,005	n/a	n/a	14,512	92,000	13,962	23,631
2000	-5855,474	106,913	5,082	n/a	n/a	0,006	n/a	n/a	10,966	87,200	13,341	24,111
2001	-5380,959	107,877	5,171	n/a	n/a	0,007	n/a	n/a	13,275	97,746	14,217	24,887
2002	-5709,159	109,852	5,140	n/a	n/a	0,008	n/a	n/a	10,329	90,986	14,841	23,805
2003	-5119,062	108,794	5,110	n/a	n/a	0,009	n/a	n/a	10,679	92,060	16,122	22,413
2004	-5219,664	110,945	5,188	n/a	n/a	0,011	n/a	n/a	11,356	100,404	17,589	21,679
2005	-4719,488	113,182	5,361	n/a	n/a	0,012	n/a	n/a	13,688	124,867	16,655	31,490
2006	-4620,528	116,538	5,568	n/a	n/a	0,014	n/a	n/a	13,795	127,924	16,326	31,427
2007	-3806,999	120,728	5,730	n/a	n/a	0,013	n/a	n/a	18,557	145,702	18,744	32,500
2008	-2952,789	126,850	6,214	n/a	n/a	0,017	n/a	n/a	20,388	183,194	20,997	42,561
2009	-3427,456	131,879	6,454	n/a	n/a	0,019	n/a	n/a	22,540	191,786	21,882	40,931
2010	-3966,646	136,033	6,429	0,001	0,001	0,033	0,001	n/a	21,776	198,820	24,027	34,933
2011	-2382,824	140,261	6,745	0,004	0,007	0,025	0,003	n/a	27,291	216,122	25,794	38,540
2012	-850,206	144,668	6,997	0,005	0,008	0,028	0,004	0,015	31,859	251,804	31,231	41,676
2013	-793,734	147,567	7,096	0,005	0,010	0,027	0,006	0,027	33,986	271,921	32,649	38,759
2014	-622,020	154,857	7,682	0,006	0,012	0,033	0,007	0,038	31,218	229,551	30,890	53,243
2015	-61,516	158,220	7,696	0,006	0,013	0,035	0,009	0,034	32,980	237,888	31,632	61,052
2016	-1462,075	161,831	7,758	0,007	0,015	0,041	0,010	0,058	29,768	234,538	33,735	40,525
2017	-918,246	167,874	8,157	0,007	0,017	0,044	0,011	0,066	32,334	237,129	35,788	38,570
2018	474,484	174,361	8,346	0,007	0,018	0,048	0,012	0,010	35,924	266,697	40,232	42,656

n/a – not assessed

16. Summary table of direct GHG emissions and absorbtion in 1990-2018 by sectors.

Gg CO_2

Year	Energy	IPPU	Waste
1990	19429,632	871,638	3,533
1991	17092,313	829,765	3,630
1992	13655,435	636,145	3,735
1993	10126,431	393,427	3,793
1994	7063,540	210,270	3,803
1995	5163,616	165,512	3,828
1996	4865,600	267,114	3,897
1997	5175,195	327,253	3,961
1998	4606,177	341,068	4,031
1999	4571,401	195,626	4,102
2000	4223,906	220,333	4,165
2001	4608,150	228,079	4,210
2002	4266,942	258,904	4,255
2003	4432,933	358,022	4,299
2004	4657,377	421,470	4,355
2005	5014,913	467,171	4,414
2006	5045,606	538,331	4,464
2007	5929,608	568,775	4,520
2008	6808,575	484,779	4,562
2009	6630,005	241,296	4,646
2010	5980,971	381,894	5,034
2011	7403,129	504,957	4,864
2012	8858,302	611,162	4,671
2013	8632,260	785,075	5,122
2014	8842,901	857,763	5,034
2015	9546,003	724,017	4,995
2016	8187,677	647,359	5,428
2017	8707,705	736,549	4,813
2018	10442,593	968,864	4,398

Gg CH_4

Year	CH4	Agriculture	Waste
1990	41,368	12,386	18,109
1991	36,944	13,222	18,380
1992	28,444	11,899	17,781
1993	20,234	5,758	17,783
1994	13,187	4,463	17,283
1995	8,377	3,785	17,112
1996	8,145	3,770	17,292
1997	7,985	4,897	17,186
1998	8,069	4,686	16,857
1999	7,632	4,697	16,688
2000	8,008	4,803	16,946
2001	8,214	4,798	16,844
2002	8,539	4,836	16,971
2003	7,765	4,811	17,089
2004	8,010	4,873	17,337
2005	7,232	4,996	17,092
2006	7,009	5,202	17,291
2007	7,258	5,265	17,295
2008	8,619	5,732	17,456
2009	7,959	5,854	18,248
2010	9,167	5,876	18,879
2011	9,209	6,314	19,397
2012	10,427	6,353	19,933
2013	8,840	6,403	20,904
2014	11,441	6,993	21,288
2015	11,684	7,039	21,736
2016	11,645	7,135	22,591
2017	14,144	7,510	22,962
2018	16,377	7,653	23,506

Gg N_2O

Year	Energy	IPPU	Agriculture
1990	0,746	0,0000	12,386
1991	0,630	0,0000	13,222
1992	0,419	0,0000	11,899
1993	0,252	0,0000	5,758
1994	0,127	0,0000	4,463
1995	0,191	0,0000	3,785
1996	0,154	0,0000	3,770
1997	0,143	0,0000	4,897
1998	0,124	0,0000	4,686
1999	0,223	0,0000	4,697
2000	0,093	0,0000	4,803
2001	0,184	0,0000	4,798
2002	0,105	0,0000	4,836
2003	0,095	0,0000	4,811
2004	0,108	0,0000	4,873
2005	0,150	0,0000	4,996
2006	0,150	0,0000	5,202
2007	0,253	0,0000	5,265
2008	0,262	0,0003	5,732
2009	0,369	0,0009	5,854
2010	0,322	0,0000	5,876
2011	0,200	0,0001	6,314
2012	0,415	0,0006	6,353
2013	0,454	0,0010	6,403
2014	0,445	0,0000	6,993
2015	0,415	0,0006	7,039
2016	0,368	0,0000	7,135
2017	0,402	0,0000	7,510
2018	0,442	0,0000	7,653

17. Summary table of the IPPU sector hydrofluorocarbon (HFC) emissions in 1990-2018

Emissions, Gg					
Год	HFC 32	HFC 125	HFC 134a	HFC 143a	HFC 227ea
GWP	**650**	**2800**	**1300**	**3800**	**2900**
1995			0,003		
1996			0,003		
1997			0,004		
1998			0,004		
1999			0,005		
2000			0,006		
2001			0,007		
2002			0,008		
2003			0,009		
2004			0,011		
2005			0,012		
2006			0,014		
2007			0,013		
2008			0,017		
2009			0,019		
2010	0,001	0,001	0,033	0,001	0,000
2011	0,004	0,007	0,025	0,003	0,000
2012	0,005	0,008	0,028	0,004	0,015
2013	0,005	0,010	0,027	0,006	0,027
2014	0,006	0,012	0,033	0,007	0,038
2015	0,006	0,013	0,035	0,009	0,034
2016	0,007	0,015	0,041	0,010	0,058
2017	0,007	0,017	0,044	0,011	0,066
2018	0,007	0,018	0,048	0,012	0,010

Emissions Gg CO_2 eq						
Год	HFC-32	HFC-125	HFC-134a	HFC-143a	HFC-227ea	Всего
GWP	**650**	**2800**	**1300**	**3800**	**2900**	
1995	0,000	0,000	3,637	0,000	0,000	3,637
1996	0,000	0,000	4,094	0,000	0,000	4,094
1997	0,000	0,000	4,718	0,000	0,000	4,718
1998	0,000	0,000	5,510	0,000	0,000	5,510
1999	0,000	0,000	6,469	0,000	0,000	6,469
2000	0,000	0,000	7,597	0,000	0,000	7,597
2001	0,000	0,000	8,893	0,000	0,000	8,893
2002	0,000	0,000	10,357	0,000	0,000	10,357
2003	0,000	0,000	11,990	0,000	0,000	11,990
2004	0,000	0,000	13,661	0,000	0,000	13,661
2005	0,000	0,000	15,759	0,000	0,000	15,759
2006	0,000	0,000	17,896	0,000	0,000	17,896
2007	0,000	0,000	16,660	0,000	0,000	16,660
2008	0,000	0,000	22,139	0,000	0,000	22,139
2009	0,000	0,000	24,606	0,000	0,000	24,606
2010	0,459	3,827	43,157	2,539	0,000	49,983
2011	2,576	18,742	32,929	9,845	0,000	64,092
2012	3,100	23,404	36,443	16,116	44,759	123,821
2013	3,263	28,012	34,527	22,374	77,010	165,184
2014	3,845	33,328	42,285	26,877	109,407	215,743
2015	4,026	37,695	45,923	32,633	99,607	219,883
2016	4,277	42,011	53,505	37,810	168,297	305,900
2017	4,485	46,471	56,920	43,518	190,155	341,548
2018	4,556	49,282	62,523	47,433	29,894	193,688

* GWP Global warming potential values according to the IPCC Second Assessment Report (conversion factor to CO_2 equivalent).
n/a - no data.

18. Summary table of precursor gases emmisions in 1990-2018

Table data values are given in Gigagrams

Year	NO_x	CO	NMVOCs	SO_2
1990	50,255	371,469	60,966	101,326
1991	42,884	310,618	53,265	86,024
1992	33,312	261,844	40,465	71,628
1993	23,599	183,287	30,711	56,662
1994	16,565	120,212	21,772	46,888
1995	12,185	64,104	14,317	24,833
1996	13,040	71,148	15,247	22,582
1997	13,689	84,283	15,091	19,972
1998	12,052	91,966	15,033	20,585
1999	14,512	92,000	13,962	23,631
2000	10,966	87,200	13,341	24,111
2001	13,275	97,746	14,217	24,887
2002	10,329	90,986	14,841	23,805
2003	10,679	92,060	16,122	22,413
2004	11,356	100,404	17,589	21,679
2005	13,688	124,867	16,655	31,490
2006	13,795	127,924	16,326	31,427
2007	18,557	145,702	18,744	32,500
2008	20,388	183,194	20,997	42,561
2009	22,540	191,786	21,882	40,931
2010	21,776	198,820	24,027	34,933
2011	27,291	216,122	25,794	38,540
2012	31,859	251,804	31,231	41,676
2013	33,986	271,921	32,649	38,759
2014	31,218	229,551	30,890	53,243
2015	32,980	237,888	31,632	61,052
2016	29,768	234,538	33,735	40,525
2017	32,334	237,129	35,788	38,570
2018	35,924	266,697	40,232	42,656

19. Summary table of precursor gases emissions by sectors in 1990-2018

Gg NOx

Year	Energy	IPPU	Agriculture	FOLU	Waste
1990	49,619	0,081	0,307	0,00001	0,249
1991	42,246	0,080	0,301	0,00050	0,256
1992	32,666	0,048	0,335	0,00001	0,263
1993	22,918	0,022	0,388	0,00350	0,267
1994	15,914	0,006	0,376	0,00090	0,268
1995	11,508	0,005	0,402	0,00011	0,270
1996	12,257	0,005	0,503	0,00000	0,275
1997	12,826	0,006	0,577	0,00129	0,279
1998	11,204	0,002	0,560	0,00112	0,284
1999	13,657	0,002	0,563	0,00058	0,289
2000	10,076	0,002	0,593	0,00027	0,294
2001	12,360	0,004	0,612	0,00072	0,297
2002	9,446	0,006	0,576	0,00192	0,300
2003	9,836	0,006	0,533	0,00143	0,303
2004	10,517	0,007	0,525	0,00040	0,307
2005	12,834	0,006	0,535	0,00178	0,311
2006	12,950	0,007	0,535	0,00063	0,315
2007	17,746	0,010	0,481	0,00105	0,319
2008	19,546	0,006	0,512	0,00187	0,322
2009	21,671	0,014	0,527	0,00099	0,327
2010	20,912	0,015	0,493	0,00113	0,355
2011	26,442	0,008	0,496	0,00126	0,343
2012	31,031	0,007	0,491	0,00135	0,329
2013	33,112	0,006	0,504	0,00216	0,361
2014	30,355	0,007	0,499	0,00260	0,355
2015	32,135	0,004	0,482	0,00769	0,352
2016	28,044	0,005	0,458	0,00105	0,383
2017	31,545	0,007	0,440	0,00296	0,339
2018	35,152	0,009	0,451	0,00229	0,310

Gg CO

Year	Energy	IPPU	Agriculture	FOLU	Waste
1990	355,392	0,409	11,295	0,0002	4,373
1991	294,395	0,641	11,072	0,0178	4,493
1992	239,722	5,167	12,331	0,0002	4,623
1993	156,955	7,217	14,295	0,1250	4,695
1994	96,928	4,697	13,847	0,0320	4,708
1995	40,100	4,454	14,808	0,0038	4,738
1996	40,581	7,216	18,528	0,0000	4,824
1997	50,555	7,548	21,229	0,0460	4,904
1998	58,469	7,862	20,607	0,0400	4,989
1999	58,214	7,965	20,724	0,0206	5,077
2000	53,377	6,828	21,831	0,0095	5,155
2001	62,680	7,298	22,531	0,0258	5,211
2002	57,630	6,841	21,179	0,0686	5,267
2003	62,497	4,585	19,606	0,0508	5,322
2004	69,639	6,045	19,315	0,0142	5,391
2005	95,885	3,771	19,685	0,0633	5,463
2006	101,043	2,119	19,214	0,0225	5,526
2007	118,247	4,131	17,692	0,0373	5,595
2008	155,038	3,600	18,842	0,0667	5,647
2009	162,593	4,011	19,395	0,0354	5,752
2010	170,266	4,142	18,141	0,0405	6,231
2011	190,382	1,433	18,241	0,0449	6,021
2012	226,961	0,958	18,056	0,0481	5,782
2013	246,038	0,903	18,562	0,0769	6,340
2014	204,254	0,628	18,345	0,0926	6,232
2015	213,092	0,611	17,728	0,2741	6,183
2016	200,051	0,639	16,849	0,0373	6,719
2017	214,847	0,039	16,180	0,1055	5,957
2018	244,524	0,049	16,599	0,0816	5,444

Gg NMVOC

Year	Energy	IPPU	Waste
1990	54,280	6,590	0,096
1991	46,589	6,577	0,099
1992	36,555	3,808	0,102
1993	25,165	5,442	0,103
1994	16,692	4,977	0,104
1995	9,530	4,683	0,104
1996	10,059	5,083	0,106
1997	11,903	3,080	0,108
1998	11,859	3,064	0,110
1999	11,890	1,960	0,112
2000	11,068	2,159	0,114
2001	12,192	1,910	0,115
2002	11,459	3,265	0,116
2003	11,702	4,303	0,117
2004	12,966	4,504	0,119
2005	12,550	3,985	0,120
2006	12,342	3,862	0,122
2007	14,852	3,769	0,123
2008	17,728	3,145	0,124
2009	18,823	2,932	0,127
2010	20,188	3,701	0,137
2011	22,019	3,641	0,133
2012	27,191	3,914	0,127
2013	26,966	5,543	0,140
2014	26,407	4,346	0,137
2015	28,031	3,466	0,136
2016	29,134	4,128	0,148
2017	32,396	2,862	0,131
2018	36,893	3,219	0,120

GG SO_2

Year	Energy	IPPU	Waste
1990	101,306	0,011	0,009
1991	86,005	0,010	0,009
1992	70,722	0,897	0,009
1993	55,367	1,286	0,009
1994	46,035	0,844	0,009
1995	24,023	0,801	0,009
1996	21,273	1,299	0,010
1997	18,604	1,358	0,010
1998	19,158	1,417	0,010
1999	22,186	1,435	0,010
2000	22,871	1,230	0,010
2001	23,564	1,313	0,010
2002	22,561	1,234	0,010
2003	21,576	0,827	0,010
2004	20,579	1,090	0,011
2005	30,800	0,678	0,011
2006	31,035	0,381	0,011
2007	31,747	0,742	0,011
2008	41,902	0,648	0,011
2009	40,206	0,715	0,011
2010	34,184	0,738	0,012
2011	38,273	0,255	0,012
2012	41,494	0,170	0,011
2013	38,586	0,162	0,012
2014	53,119	0,112	0,012
2015	60,933	0,107	0,012
2016	40,393	0,116	0,013
2017	38,551	0,006	0,012
2018	42,638	0,006	0,011

20. 1990-2018 Inventory of GHG emissions by sources and removals by sinks in Gg CO_2 eq.

Inventory year: 1990

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**10031,278**	**3846,941**	**4138,931**	**0,000**	**18017,151**
1 - Energy	**19429,632**	**868,721**	**231,366**	**0,000**	**20529,719**
1.A - Fuel Combustion Activities	**19388,791**	**369,714**	**231,366**	**0,000**	**19989,871**
1.A.1 - Energy Industries	8113,007	3,719	21,599		8138,325
1.A.2 - Manufacturing Industries and Construction	1266,976	1,061	2,250		1270,286
1.A.3 - Transport	4109,672	24,474	180,295		4314,441
1.A.4 - Other Sectors	5899,136	340,461	27,222		6266,820
1.B - Fugitive emissions from fuels	**40,841**	**499,006**	**0,000**	**0,000**	**539,848**
1.B.1 - Solid Fuels	33,310	253,383	0,000		286,693
1.B.2 - Oil and Natural Gas	7,531	245,624	0,000		253,155
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**871,638**	**0,000**	**0,000**	**0,000**	**871,638**
2.A - Mineral Industry	**871,042**	**0,000**	**0,000**	**0,000**	**871,042**
2.A.1 - Cement production	591,522				591,522
2.A.2 - Lime production	65,536				65,536
2.A.3 - Glass Production	69,275				69,275
2.A.4 - Other Process Uses of Carbonates	144,710				144,710
2.C - Metal Industry	**0,596**	**0,000**	**0,000**	**0,000**	**0,596**
2.C.1 - Iron and Steel Production	0,596	0,000			0,596
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10273,525**	**2597,936**	**3839,700**	**0,000**	**-3835,889**
3.A - Livestock	**0,000**	**2585,386**	**200,620**	**0,000**	**2786,007**
3.A.1 - Enteric Fermentation		2510,217			2510,217
3.A.2 - Manure Management		75,170	200,620		275,790
3.B - Land	**-10266,120**	**0,000**	**0,000**	**0,000**	**-10266,120**
3.B.1 - Forest land	-6850,850				-6850,850
3.B.2 - Cropland	-3415,270				-3415,270
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**12,550**	**3639,080**	**0,000**	**3651,630**
3.C.1 - Emissions from biomass burning		6,961	2,664		9,625
3.C.4 - Direct N2O Emissions from managed soils			2633,558		2633,558

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C.5 - Indirect N2O Emissions from managed soils			909,996		909,996
3.C.6 - Indirect N2O Emissions from manure management			92,861		92,861
3.C.7 - Rice cultivations		5,589			5,589
3.D - Other	**-7,405**	**0,000**	**0,000**	**0,000**	**-7,405**
3.D.1 - Harvested Wood Products	-7,405				-7,405
4 - Waste	**3,533**	**380,284**	**67,865**	**0,000**	**451,682**
4.A - Solid Waste Disposal	0,000	218,446	0,000	0,000	218,446
4.B - Biological Treatment of Solid Waste	0,000	2,169	1,921	0,000	4,091
4.C - Incineration and Open Burning of Waste	3,533	10,688	2,840	0,000	17,061
4.D - Wastewater Treatment and Discharge	0,000	148,981	63,104	0,000	212,085
Memo Items					
International Bunkers	366,257	0,054	3,176	0,000	369,487
1.A.3.a.i - International Aviation (International Bunkers)	366,257	0,054	3,176		369,487
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1991

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**7631,225**	**3704,488**	**4356,357**	**0,000**	**15692,070**
1 - Energy	**17092,313**	**775,826**	**195,384**	**0,000**	**18063,523**
1.A - Fuel Combustion Activities	**17054,719**	**302,524**	**195,384**	**0,000**	**17552,627**
1.A.1 - Energy Industries	7697,909	3,289	22,242		7723,440
1.A.2 - Manufacturing Industries and Construction	912,712	0,768	1,517		914,997
1.A.3 - Transport	3552,771	21,599	149,447		3723,818
1.A.4 - Other Sectors	4891,327	276,868	22,178		5190,373
1.B - Fugitive emissions from fuels	**37,594**	**473,301**	**0,000**	**0,000**	**510,895**
1.B.1 - Solid Fuels	30,986	235,701	0,000		266,686
1.B.2 - Oil and Natural Gas	6,609	237,600	0,000		244,209
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**829,765**	**0,000**	**0,000**	**0,000**	**829,765**
2.A - Mineral Industry	**829,169**	**0,000**	**0,000**	**0,000**	**829,169**
2.A.1 - Cement production	563,140				563,140
2.A.2 - Lime production	53,042				53,042
2.A.3 - Glass Production	66,500				66,500
2.A.4 - Other Process Uses of Carbonates	146,487				146,487
2.C - Metal Industry	**0,595**	**0,000**	**0,000**	**0,000**	**0,595**
2.C.1 - Iron and Steel Production	0,595	0,000			0,595
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10294,483**	**2542,684**	**4098,895**	**0,000**	**-3652,903**
3.A - Livestock	**0,000**	**2527,975**	**193,325**	**0,000**	**2721,300**
3.A.1 - Enteric Fermentation		2454,496			2454,496
3.A.2 - Manure Management		73,479	193,325		266,803
3.B - Land	**-10287,797**	**0,000**	**0,000**	**0,000**	**-10287,797**
3.B.1 - Forest land	-6864,058				-6864,058
3.B.2 - Cropland	-3423,739				-3423,739
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**14,709**	**3905,571**	**0,000**	**3920,279**
3.C.1 - Emissions from biomass burning		6,840	2,625		9,465
3.C.4 - Direct N2O Emissions from managed soils			2849,909		2849,909
3.C.5 - Indirect N2O Emissions from managed soils			975,598		975,598
3.C.6 - Indirect N2O Emissions from manure management			77,439		77,439
3.C.7 - Rice cultivations		7,869			7,869
3.D - Other	**-6,686**	**0,000**	**0,000**	**0,000**	**-6,686**
3.D.1 - Harvested Wood Products	-6,686				-6,686
4 - Waste	**3,630**	**385,978**	**62,078**	**0,000**	**451,686**
4.A - Solid Waste Disposal	0,000	229,609	0,000	0,000	229,609
4.B - Biological Treatment of Solid Waste	0,000	2,186	1,936	0,000	4,122
4.C - Incineration and Open Burning of Waste	3,630	10,981	2,918	0,000	17,529
4.D - Wastewater Treatment and Discharge	0,000	143,201	57,224	0,000	200,425
Memo Items					
International Bunkers	111,845	0,016	0,970	0,000	112,832
1.A.3.a.i - International Aviation (International Bunkers)	111,845	0,016	0,970		112,832
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1992

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**4005,783**	**3352,959**	**3880,880**	**0,000**	**11239,623**
1 - Energy	**13655,435**	**597,318**	**129,814**	**0,000**	**14382,567**
1.A - Fuel Combustion Activities	**13628,190**	**236,431**	**129,814**	**0,000**	**13994,435**
1.A.1 - Energy Industries	5970,588	2,602	16,637		5989,827
1.A.2 - Manufacturing Industries and Construction	892,203	0,777	1,656		894,636
1.A.3 - Transport	2856,866	19,710	94,328		2970,903
1.A.4 - Other Sectors	3908,533	213,342	17,194		4139,070

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.B - Fugitive emissions from fuels	**27,245**	**360,887**	**0,000**	**0,000**	**388,132**
1.B.1 - Solid Fuels	21,558	164,343	0,000		185,902
1.B.2 - Oil and Natural Gas	5,687	196,544	0,000		202,231
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**636,145**	**0,000**	**0,000**	**0,000**	**636,145**
2.A - Mineral Industry	**628,067**	**0,000**	**0,000**	**0,000**	**628,067**
2.A.1 - Cement production	467,377				467,377
2.A.2 - Lime production	27,977				27,977
2.A.3 - Glass Production	74,033				74,033
2.A.4 - Other Process Uses of Carbonates	58,679				58,679
2.C - Metal Industry	**8,078**	**0,000**	**0,000**	**0,000**	**8,078**
2.C.1 - Iron and Steel Production	0,346	0,000			0,346
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10289,530**	**2382,232**	**3688,832**	**0,000**	**-4218,466**
3.A - Livestock	**0,000**	**2366,206**	**177,244**	**0,000**	**2543,450**
3.A.1 - Enteric Fermentation		2299,012			2299,012
3.A.2 - Manure Management		67,194	177,244		244,438
3.B - Land	**-10284,340**	**0,000**	**0,000**	**0,000**	**-10284,340**
3.B.1 - Forest land	-6859,755				-6859,755
3.B.2 - Cropland	-3424,584				-3424,584
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**16,026**	**3511,589**	**0,000**	**3527,614**
3.C.1 - Emissions from biomass burning		7,600	2,909		10,509
3.C.4 - Direct N2O Emissions from managed soils			2554,821		2554,821
3.C.5 - Indirect N2O Emissions from managed soils			875,904		875,904
3.C.6 - Indirect N2O Emissions from manure management			77,956		77,956
3.C.7 - Rice cultivations		8,426			8,426
3.D - Other	**-5,191**	**0,000**	**0,000**	**0,000**	**-5,191**
3.D.1 - Harvested Wood Products	-5,191				-5,191
4 - Waste	**3,735**	**373,409**	**62,234**	**0,000**	**439,378**
4.A - Solid Waste Disposal	0,000	239,171	0,000	0,000	239,171
4.B - Biological Treatment of Solid Waste	0,000	2,209	1,957	0,000	4,166
4.C - Incineration and Open Burning of Waste	3,735	11,298	3,002	0,000	18,035
4.D - Wastewater Treatment and Discharge	0,000	120,731	57,275	0,000	178,006

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Memo Items					
International Bunkers	179,212	0,026	1,554	0,000	180,793
1.A.3.a.i - International Aviation (International Bunkers)	179,212	0,026	1,554		180,793
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1993

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**230,076**	**2971,196**	**1924,974**	**0,000**	**5126,247**
1 - Energy	**10126,431**	**424,922**	**78,076**	**0,000**	**10629,428**
1.A - Fuel Combustion Activities	**10107,609**	**162,438**	**78,076**	**0,000**	**10348,122**
1.A.1 - Energy Industries	4907,816	2,058	14,200		4924,074
1.A.2 - Manufacturing Industries and Construction	698,461	0,645	1,378		700,484
1.A.3 - Transport	1575,574	9,916	50,288		1635,778
1.A.4 - Other Sectors	2925,758	149,818	12,210		3087,786
1.B - Fugitive emissions from fuels	**18,822**	**262,484**	**0,000**	**0,000**	**281,306**
1.B.1 - Solid Fuels	15,402	117,171	0,000		132,573
1.B.2 - Oil and Natural Gas	3,420	145,313	0,000		148,733
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**393,427**	**0,000**	**0,000**	**0,000**	**393,427**
2.A - Mineral Industry	**382,112**	**0,000**	**0,000**	**0,000**	**382,112**
2.A.1 - Cement production	286,454				286,454
2.A.2 - Lime production	10,194				10,194
2.A.3 - Glass Production	59,603				59,603
2.A.4 - Other Process Uses of Carbonates	25,859				25,859
2.C - Metal Industry	**11,315**	**0,000**	**0,000**	**0,000**	**11,315**
2.C.1 - Iron and Steel Production	0,162	0,000			0,162
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10293,574**	**2172,831**	**1785,031**	**0,000**	**-6335,712**
3.A - Livestock	**0,000**	**2152,908**	**154,049**	**0,000**	**2306,957**
3.A.1 - Enteric Fermentation		2092,111			2092,111
3.A.2 - Manure Management		60,797	154,049		214,846
3.B - Land	**-10290,681**	**0,000**	**0,000**	**0,000**	**-10290,681**
3.B.1 - Forest land	-6850,699				-6850,699
3.B.2 - Cropland	-3439,983				-3439,983

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**19,923**	**1630,982**	**0,000**	**1650,905**
3.C.1 - Emissions from biomass burning		8,925	3,466		12,391
3.C.4 - Direct N2O Emissions from managed soils			1091,803		1091,803
3.C.5 - Indirect N2O Emissions from managed soils			469,910		469,910
3.C.6 - Indirect N2O Emissions from manure management			65,803		65,803
3.C.7 - Rice cultivations		10,998			10,998
3.D - Other	**-2,893**	**0,000**	**0,000**	**0,000**	**-2,893**
3.D.1 - Harvested Wood Products	-2,893				-2,893
4 - Waste	**3,793**	**373,444**	**61,868**	**0,000**	**439,104**
4.A - Solid Waste Disposal	0,000	244,740	0,000	0,000	244,740
4.B - Biological Treatment of Solid Waste	0,000	2,209	1,957	0,000	4,166
4.C - Incineration and Open Burning of Waste	3,793	11,474	3,049	0,000	18,316
4.D - Wastewater Treatment and Discharge	0,000	115,021	56,862	0,000	171,883
Memo Items					
International Bunkers	43,321	0,006	0,376	0,000	43,703
1.A.3.a.i - International Aviation (International Bunkers)	43,321	0,006	0,376		43,703
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1994

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-3032,120**	**2410,472**	**1478,600**	**0,000**	**856,952**
1 - Energy	**7063,540**	**276,930**	**39,419**	**0,000**	**7379,889**
1.A - Fuel Combustion Activities	**7052,076**	**94,789**	**39,419**	**0,000**	**7186,284**
1.A.1 - Energy Industries	3855,193	1,514	11,446		3868,153
1.A.2 - Manufacturing Industries and Construction	504,719	0,513	1,100		506,332
1.A.3 - Transport	748,219	6,308	19,624		774,151
1.A.4 - Other Sectors	1943,945	86,453	7,249		2037,648
1.B - Fugitive emissions from fuels	**11,464**	**182,141**	**0,000**	**0,000**	**193,605**
1.B.1 - Solid Fuels	8,266	62,988	0,000		71,254
1.B.2 - Oil and Natural Gas	3,198	119,153	0,000		122,351
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**210,270**	**0,000**	**0,000**	**0,000**	**210,270**
2.A - Mineral Industry	**202,902**	**0,000**	**0,000**	**0,000**	**202,902**
2.A.1 - Cement production	179,590				179,590
2.A.2 - Lime production	6,745				6,745
2.A.3 - Glass Production	3,936				3,936
2.A.4 - Other Process Uses of Carbonates	12,631				12,631
2.C - Metal Industry	**7,368**	**0,000**	**0,000**	**0,000**	**7,368**
2.C.1 - Iron and Steel Production	0,042	0,000			0,042

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Refrigeration and Air Conditioning				0,000	0,000
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10309,734**	**1770,603**	**1383,508**	**0,000**	**-7155,623**
3.A - Livestock	**0,000**	**1748,420**	**116,369**	**0,000**	**1864,790**
3.A.1 - Enteric Fermentation		1698,494			1698,494
3.A.2 - Manure Management		49,926	116,369		166,296
3.B - Land	**-10306,606**	**0,000**	**0,000**	**0,000**	**-10306,606**
3.B.1 - Forest land	-6858,848				-6858,848
3.B.2 - Cropland	-3447,758				-3447,758
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**22,183**	**1267,139**	**0,000**	**1289,322**
3.C.1 - Emissions from biomass burning		8,563	3,290		11,853
3.C.4 - Direct N2O Emissions from managed soils			854,647		854,647
3.C.5 - Indirect N2O Emissions from managed soils			361,367		361,367
3.C.6 - Indirect N2O Emissions from manure management			47,835		47,835
3.C.7 - Rice cultivations		13,619			13,619
3.D - Other	**-3,128**	**0,000**	**0,000**	**0,000**	**-3,128**
3.D.1 - Harvested Wood Products	-3,128				-3,128
4 - Waste	**3,803**	**362,939**	**55,673**	**0,000**	**422,415**
4.A - Solid Waste Disposal	0,000	243,392	0,000	0,000	243,392
4.B - Biological Treatment of Solid Waste	0,000	2,222	1,968	0,000	4,190
4.C - Incineration and Open Burning of Waste	3,803	11,506	3,057	0,000	18,366
4.D - Wastewater Treatment and Discharge	0,000	105,819	50,648	0,000	156,467
Memo Items					
International Bunkers	33,480	0,005	0,290	0,000	33,775
1.A.3.a.i - International Aviation (International Bunkers)	33,480	0,005	0,290		33,775
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1995

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-4990,691**	**2176,591**	**1292,486**	**3,637**	**-1517,978**
1 - Energy	**5163,616**	**175,925**	**59,135**	**0,000**	**5398,675**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A - Fuel Combustion Activities	**5157,491**	**31,618**	**59,135**	**0,000**	**5248,243**
1.A.1 - Energy Industries	2811,543	0,973	9,334		2821,850
1.A.2 - Manufacturing Industries and Construction	214,573	0,185	0,388		215,146
1.A.3 - Transport	1166,197	7,557	47,159		1220,913
1.A.4 - Other Sectors	965,178	22,903	2,253		990,334
1.B - Fugitive emissions from fuels	**6,125**	**144,307**	**0,000**	**0,000**	**150,432**
1.B.1 - Solid Fuels	3,144	23,774	0,000		26,918
1.B.2 - Oil and Natural Gas	2,981	120,533	0,000		123,514
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**165,512**	**0,000**	**0,000**	**3,637**	**169,149**
2.A - Mineral Industry	**158,523**	**0,000**	**0,000**	**0,000**	**158,523**
2.A.1 - Cement production	135,798				135,798
2.A.2 - Lime production	4,599				4,599
2.A.3 - Glass Production	5,616				5,616
2.A.4 - Other Process Uses of Carbonates	12,509				12,509
2.C - Metal Industry	**6,990**	**0,000**	**0,000**	**0,000**	**6,990**
2.C.1 - Iron and Steel Production	0,031	0,000			0,031
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**3,637**	**3,637**
2.F.1 - Refrigeration and Air Conditioning				3,637	3,637
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10323,647**	**1641,315**	**1173,342**	**0,000**	**-7508,990**
3.A - Livestock	**0,000**	**1612,107**	**104,543**	**0,000**	**1716,650**
3.A.1 - Enteric Fermentation		1565,027			1565,027
3.A.2 - Manure Management		47,080	104,543		151,624
3.B - Land	**-10321,216**	**0,000**	**0,000**	**0,000**	**-10321,216**
3.B.1 - Forest land	-6873,306				-6873,306
3.B.2 - Cropland	-3447,911				-3447,911
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**29,208**	**1068,799**	**0,000**	**1098,007**
3.C.1 - Emissions from biomass burning		9,130	3,496		12,625
3.C.4 - Direct N2O Emissions from managed soils			716,080		716,080
3.C.5 - Indirect N2O Emissions from managed soils			305,256		305,256
3.C.6 - Indirect N2O Emissions from manure management			43,968		43,968
3.C.7 - Rice cultivations		20,079			20,079
3.D - Other	**-2,431**	**0,000**	**0,000**	**0,000**	**-2,431**
3.D.1 - Harvested Wood Products	-2,431				-2,431
4 - Waste	**3,828**	**359,351**	**60,008**	**0,000**	**423,188**
4.A - Solid Waste Disposal	0,000	243,466	0,000	0,000	243,466

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
4.B - Biological Treatment of Solid Waste	0,000	2,285	2,024	0,000	4,308
4.C - Incineration and Open Burning of Waste	3,828	11,581	3,077	0,000	18,486
4.D - Wastewater Treatment and Discharge	0,000	102,020	54,908	0,000	156,928
Memo Items					
International Bunkers	173,906	0,026	1,508	0,000	175,439
1.A.3.a.i - International Aviation (International Bunkers)	173,906	0,026	1,508		175,439
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1996

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-4895,548**	**2099,492**	**1275,408**	**4,094**	**-1516,555**
1 - Energy	**4865,600**	**171,055**	**47,735**	**0,000**	**5084,389**
1.A - Fuel Combustion Activities	**4860,514**	**27,866**	**47,735**	**0,000**	**4936,115**
1.A.1 - Energy Industries	2777,823	0,997	8,225		2787,044
1.A.2 - Manufacturing Industries and Construction	250,713	0,187	0,376		251,277
1.A.3 - Transport	980,730	5,926	37,039		1023,695
1.A.4 - Other Sectors	851,248	20,756	2,094		874,099
1.B - Fugitive emissions from fuels	**5,086**	**143,189**	**0,000**	**0,000**	**148,274**
1.B.1 - Solid Fuels	2,778	21,005	0,000		23,783
1.B.2 - Oil and Natural Gas	2,308	122,183	0,000		124,491
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**267,114**	**0,000**	**0,000**	**4,094**	**271,207**
2.A - Mineral Industry	**255,789**	**0,000**	**0,000**	**0,000**	**255,789**
2.A.1 - Cement production	232,862				232,862
2.A.2 - Lime production	3,066				3,066
2.A.3 - Glass Production	6,456				6,456
2.A.4 - Other Process Uses of Carbonates	13,405				13,405
2.C - Metal Industry	**11,324**	**0,000**	**0,000**	**0,000**	**11,324**
2.C.1 - Iron and Steel Production	0,036	0,000			0,036
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**4,094**	**4,094**
2.F.1 - Refrigeration and Air Conditioning				4,094	4,094
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10032,159**	**1565,303**	**1168,839**	**0,000**	**-7298,016**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.A - Livestock	**0,000**	**1529,797**	**96,074**	**0,000**	**1625,871**
3.A.1 - Enteric Fermentation		1484,892			1484,892
3.A.2 - Manure Management		44,905	96,074		140,979
3.B - Land	**-10029,454**	**0,000**	**0,000**	**0,000**	**-10029,454**
3.B.1 - Forest land	-6861,825				-6861,825
3.B.2 - Cropland	-3167,629				-3167,629
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**35,506**	**1072,765**	**0,000**	**1108,271**
3.C.1 - Emissions from biomass burning		11,419	4,370		15,789
3.C.4 - Direct N2O Emissions from managed soils			725,603		725,603
3.C.5 - Indirect N2O Emissions from managed soils			301,486		301,486
3.C.6 - Indirect N2O Emissions from manure management			41,306		41,306
3.C.7 - Rice cultivations		24,087			24,087
3.D - Other	**-2,705**	**0,000**	**0,000**	**0,000**	**-2,705**
3.D.1 - Harvested Wood Products	-2,705				-2,705
4 - Waste	**3,897**	**363,134**	**58,834**	**0,000**	**425,864**
4.A - Solid Waste Disposal	0,000	241,523	0,000	0,000	241,523
4.B - Biological Treatment of Solid Waste	0,000	2,360	2,091	0,000	4,451
4.C - Incineration and Open Burning of Waste	3,897	11,790	3,133	0,000	18,819
4.D - Wastewater Treatment and Discharge	0,000	107,461	53,611	0,000	161,072
Memo Items					
International Bunkers	209,688	0,031	1,818	0,000	211,537
1.A.3.a.i - International Aviation (International Bunkers)	209,688	0,031	1,818		211,537
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1997

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-4796,877**	**2155,286**	**1617,677**	**4,718**	**-1019,196**
1 - Energy	**5175,195**	**167,694**	**44,402**	**0,000**	**5387,290**
1.A - Fuel Combustion Activities	**5170,492**	**29,559**	**44,402**	**0,000**	**5244,453**
1.A.1 - Energy Industries	2761,256	1,026	7,132		2769,414
1.A.2 - Manufacturing Industries and Construction	282,224	0,190	0,364		282,778
1.A.3 - Transport	1389,382	9,733	34,969		1434,083
1.A.4 - Other Sectors	737,631	18,610	1,936		758,177
1.B - Fugitive emissions from fuels	**4,703**	**138,135**	**0,000**	**0,000**	**142,838**
1.B.1 - Solid Fuels	2,545	19,051	0,000		21,596
1.B.2 - Oil and Natural Gas	2,157	119,084	0,000		121,241
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**327,253**	**0,000**	**0,000**	**4,718**	**331,971**
2.A - Mineral Industry	**315,406**	**0,000**	**0,000**	**0,000**	**315,406**
2.A.1 - Cement production	280,857				280,857
2.A.2 - Lime production	15,713				15,713

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.A.3 - Glass Production	5,282				5,282
2.A.4 - Other Process Uses of Carbonates	13,554				13,554
2.C - Metal Industry	**11,847**	**0,000**	**0,000**	**0,000**	**11,847**
2.C.1 - Iron and Steel Production	0,040	0,000			0,040
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**4,718**	**4,718**
2.F.1 - Refrigeration and Air Conditioning				4,718	4,718
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10303,286**	**1626,695**	**1518,146**	**0,000**	**-7158,445**
3.A - Livestock	**0,000**	**1586,209**	**99,382**	**0,000**	**1685,591**
3.A.1 - Enteric Fermentation		1539,642			1539,642
3.A.2 - Manure Management		46,567	99,382		145,949
3.B - Land	**-10301,190**	**0,000**	**0,000**	**0,000**	**-10301,190**
3.B.1 - Forest land	-6859,905				-6859,905
3.B.2 - Cropland	-3441,286				-3441,286
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**40,486**	**1418,764**	**0,000**	**1459,250**
3.C.1 - Emissions from biomass burning		13,126	5,042		18,168
3.C.4 - Direct N2O Emissions from managed soils			982,649		982,649
3.C.5 - Indirect N2O Emissions from managed soils			387,804		387,804
3.C.6 - Indirect N2O Emissions from manure management			43,269		43,269
3.C.7 - Rice cultivations		27,360			27,360
3.D - Other	**-2,096**	**0,000**	**0,000**	**0,000**	**-2,096**
3.D.1 - Harvested Wood Products	-2,096				-2,096
4 - Waste	**3,961**	**360,897**	**55,129**	**0,000**	**419,987**
4.A - Solid Waste Disposal	0,000	241,136	0,000	0,000	241,136
4.B - Biological Treatment of Solid Waste	0,000	2,377	2,106	0,000	4,483
4.C - Incineration and Open Burning of Waste	3,961	11,985	3,185	0,000	19,131
4.D - Wastewater Treatment and Discharge	0,000	105,399	49,839	0,000	155,238
Memo Items					
International Bunkers	115,449	0,017	1,001	0,000	116,467
1.A.3.a.i - International Aviation (International Bunkers)	115,449	0,017	1,001		116,467
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1998

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-5380,236**	**2185,710**	**1548,408**	**5,510**	**-1640,609**
1 - Energy	**4606,177**	**169,452**	**38,349**	**0,000**	**4813,977**
1.A - Fuel Combustion Activities	**4602,044**	**40,074**	**38,349**	**0,000**	**4680,466**
1.A.1 - Energy Industries	2211,897	0,835	6,108		2218,840
1.A.2 - Manufacturing Industries and Construction	266,548	0,178	0,341		267,067
1.A.3 - Transport	1268,831	9,444	29,205		1307,479
1.A.4 - Other Sectors	854,768	29,618	2,694		887,080
1.B - Fugitive emissions from fuels	**4,133**	**129,378**	**0,000**	**0,000**	**133,511**
1.B.1 - Solid Fuels	2,411	18,125	0,000		20,536
1.B.2 - Oil and Natural Gas	1,722	111,252	0,000		112,975
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**341,068**	**0,000**	**0,000**	**5,510**	**346,578**
2.A - Mineral Industry	**328,565**	**0,000**	**0,000**	**0,000**	**328,565**
2.A.1 - Cement production	302,407				302,407
2.A.2 - Lime production	6,439				6,439
2.A.3 - Glass Production	4,700				4,700
2.A.4 - Other Process Uses of Carbonates	15,019				15,019
2.C - Metal Industry	**12,503**	**0,000**	**0,000**	**0,000**	**12,503**
2.C.1 - Iron and Steel Production	0,018	0,000			0,018
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**5,510**	**5,510**
2.F.1 - Refrigeration and Air Conditioning				5,510	5,510
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10331,511**	**1662,259**	**1452,554**	**0,000**	**-7216,698**
3.A - Livestock	**0,000**	**1624,968**	**101,655**	**0,000**	**1726,623**
3.A.1 - Enteric Fermentation		1577,063			1577,063
3.A.2 - Manure Management		47,906	101,655		149,561
3.B - Land	**-10329,239**	**0,000**	**0,000**	**0,000**	**-10329,239**
3.B.1 - Forest land	-6884,336				-6884,336
3.B.2 - Cropland	-3444,903				-3444,903
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**37,291**	**1350,899**	**0,000**	**1388,190**
3.C.1 - Emissions from biomass burning		12,737	4,891		17,628
3.C.4 - Direct N2O Emissions from managed soils			929,903		929,903
3.C.5 - Indirect N2O Emissions from managed soils			371,048		371,048
3.C.6 - Indirect N2O Emissions from manure management			45,057		45,057
3.C.7 - Rice cultivations		24,554			24,554
3.D - Other	**-2,272**	**0,000**	**0,000**	**0,000**	**-2,272**
3.D.1 - Harvested Wood Products	-2,272				-2,272

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
4 - Waste	**4,031**	**353,999**	**57,505**	**0,000**	**415,535**
4.A - Solid Waste Disposal	0,000	238,658	0,000	0,000	238,658
4.B - Biological Treatment of Solid Waste	0,000	2,396	2,122	0,000	4,518
4.C - Incineration and Open Burning of Waste	4,031	12,194	3,240	0,000	19,464
4.D - Wastewater Treatment and Discharge	0,000	100,751	52,143	0,000	152,894
Memo Items					
International Bunkers	159,925	0,023	1,387	0,000	161,335
1.A.3.a.i - International Aviation (International Bunkers)	159,925	0,023	1,387		161,335
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 1999

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-5567,967**	**2209,280**	**1584,082**	**6,469**	**-1768,135**
1 - Energy	**4571,401**	**160,265**	**68,991**	**0,000**	**4800,656**
1.A - Fuel Combustion Activities	**4566,878**	**49,142**	**68,991**	**0,000**	**4685,011**
1.A.1 - Energy Industries	1982,930	0,708	6,485		1990,124
1.A.2 - Manufacturing Industries and Construction	250,873	0,166	0,318		251,356
1.A.3 - Transport	1360,857	7,642	58,735		1427,234
1.A.4 - Other Sectors	972,217	40,626	3,453		1016,297
1.B - Fugitive emissions from fuels	**4,523**	**111,122**	**0,000**	**0,000**	**115,645**
1.B.1 - Solid Fuels	2,352	17,687	0,000		20,039
1.B.2 - Oil and Natural Gas	2,171	93,435	0,000		95,606
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**195,626**	**0,000**	**0,000**	**6,469**	**202,095**
2.A - Mineral Industry	**183,121**	**0,000**	**0,000**	**0,000**	**183,121**
2.A.1 - Cement production	165,031				165,031
2.A.2 - Lime production	5,749				5,749
2.A.3 - Glass Production	0,428				0,428
2.A.4 - Other Process Uses of Carbonates	11,912				11,912
2.C - Metal Industry	**12,505**	**0,000**	**0,000**	**0,000**	**12,505**
2.C.1 - Iron and Steel Production	0,020	0,000			0,020
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**6,469**	**6,469**
2.F.1 - Refrigeration and Air Conditioning				6,469	6,469
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3 - Agriculture, Forestry, and Other Land Use	**-10339,095**	**1698,567**	**1455,948**	**0,000**	**-7184,580**
3.A - Livestock	**0,000**	**1658,519**	**103,157**	**0,000**	**1761,677**
3.A.1 - Enteric Fermentation		1609,096			1609,096
3.A.2 - Manure Management		49,423	103,157		152,581
3.B - Land	**-10336,867**	**0,000**	**0,000**	**0,000**	**-10336,867**
3.B.1 - Forest land	-6871,174				-6871,174
3.B.2 - Cropland	-3465,693				-3465,693
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**40,047**	**1352,790**	**0,000**	**1392,838**
3.C.1 - Emissions from biomass burning		12,791	4,904		17,695
3.C.4 - Direct N2O Emissions from managed soils			934,835		934,835
3.C.5 - Indirect N2O Emissions from managed soils			373,013		373,013
3.C.6 - Indirect N2O Emissions from manure management			40,039		40,039
3.C.7 - Rice cultivations		27,256			27,256
3.D - Other	**-2,228**	**0,000**	**0,000**	**0,000**	**-2,228**
3.D.1 - Harvested Wood Products	-2,228				-2,228
4 - Waste	**4,102**	**350,449**	**59,143**	**0,000**	**413,694**
4.A - Solid Waste Disposal	0,000	237,220	0,000	0,000	237,220
4.B - Biological Treatment of Solid Waste	0,000	2,417	2,141	0,000	4,558
4.C - Incineration and Open Burning of Waste	4,102	12,409	3,297	0,000	19,808
4.D - Wastewater Treatment and Discharge	0,000	98,403	53,705	0,000	152,108
Memo Items					
International Bunkers	112,952	0,017	0,979	0,000	113,948
1.A.3.a.i - International Aviation (International Bunkers)	112,952	0,017	0,979		113,948
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-5855,474**	**2245,169**	**1575,327**	**7,597**	**-2027,380**
1 - Energy	**4223,906**	**168,172**	**28,964**	**0,000**	**4421,042**
1.A - Fuel Combustion Activities	**4218,936**	**50,912**	**28,964**	**0,000**	**4298,812**
1.A.1 - Energy Industries	2102,956	0,721	6,665		2110,342
1.A.2 - Manufacturing Industries and Construction	259,935	0,178	0,348		260,461
1.A.3 - Transport	877,885	5,391	18,163		901,438
1.A.4 - Other Sectors	978,160	44,622	3,788		1026,570
1.B - Fugitive emissions from fuels	**4,970**	**117,260**	**0,000**	**0,000**	**122,230**
1.B.1 - Solid Fuels	2,309	17,350	0,000		19,659
1.B.2 - Oil and Natural Gas	2,661	99,910	0,000		102,571
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**220,333**	**0,000**	**0,000**	**7,597**	**227,930**
2.A - Mineral Industry	**209,612**	**0,000**	**0,000**	**0,000**	**209,612**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.A.1 - Cement production	193,114				193,114
2.A.2 - Lime production	6,285				6,285
2.A.3 - Glass Production	0,431				0,431
2.A.4 - Other Process Uses of Carbonates	9,782				9,782
2.C - Metal Industry	**10,720**	**0,000**	**0,000**	**0,000**	**10,720**
2.C.1 - Iron and Steel Production	0,017	0,000			0,017
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**7,597**	**7,597**
2.F.1 - Refrigeration and Air Conditioning				7,597	7,597
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10303,877**	**1721,125**	**1488,919**	**0,000**	**-7093,833**
3.A - Livestock	**0,000**	**1678,847**	**103,835**	**0,000**	**1782,683**
3.A.1 - Enteric Fermentation		1628,789			1628,789
3.A.2 - Manure Management		50,058	103,835		153,893
3.B - Land	**-10301,640**	**0,000**	**0,000**	**0,000**	**-10301,640**
3.B.1 - Forest land	-6817,929				-6817,929
3.B.2 - Cropland	-3483,711				-3483,711
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**42,277**	**1385,084**	**0,000**	**1427,361**
3.C.1 - Emissions from biomass burning		13,463	5,156		18,620
3.C.4 - Direct N2O Emissions from managed soils			954,028		954,028
3.C.5 - Indirect N2O Emissions from managed soils			379,392		379,392
3.C.6 - Indirect N2O Emissions from manure management			46,508		46,508
3.C.7 - Rice cultivations		28,814			28,814
3.D - Other	**-2,237**	**0,000**	**0,000**	**0,000**	**-2,237**
3.D.1 - Harvested Wood Products	-2,237				-2,237
4 - Waste	**4,165**	**355,872**	**57,444**	**0,000**	**417,481**
4.A - Solid Waste Disposal	0,000	235,831	0,000	0,000	235,831
4.B - Biological Treatment of Solid Waste	0,000	2,547	2,256	0,000	4,803
4.C - Incineration and Open Burning of Waste	4,165	12,599	3,348	0,000	20,111
4.D - Wastewater Treatment and Discharge	0,000	104,895	51,840	0,000	156,735
Memo Items					
International Bunkers	112,952	0,017	0,979	0,000	113,948
1.A.3.a.i - International Aviation (International Bunkers)	112,952	0,017	0,979		113,948
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2001

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-5380,959**	**2265,426**	**1602,858**	**8,893**	**-1503,781**
1 - Energy	**4608,150**	**172,495**	**57,158**	**0,000**	**4837,803**
1.A - Fuel Combustion Activities	**4603,048**	**56,304**	**57,158**	**0,000**	**4716,510**
1.A.1 - Energy Industries	2258,863	0,735	6,847		2266,445
1.A.2 - Manufacturing Industries and Construction	275,869	0,193	0,393		276,456
1.A.3 - Transport	1110,777	6,765	45,874		1163,416
1.A.4 - Other Sectors	957,539	48,611	4,044		1010,194
1.B - Fugitive emissions from fuels	**5,102**	**116,191**	**0,000**	**0,000**	**121,292**
1.B.1 - Solid Fuels	2,412	18,030	0,000		20,442
1.B.2 - Oil and Natural Gas	2,690	98,161	0,000		100,850
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**228,079**	**0,000**	**0,000**	**8,893**	**236,972**
2.A - Mineral Industry	**216,620**	**0,000**	**0,000**	**0,000**	**216,620**
2.A.1 - Cement production	200,260				200,260
2.A.2 - Lime production	7,205				7,205
2.A.3 - Glass Production	0,213				0,213
2.A.4 - Other Process Uses of Carbonates	8,941				8,941
2.C - Metal Industry	**11,459**	**0,000**	**0,000**	**0,000**	**11,459**
2.C.1 - Iron and Steel Production	0,034	0,000			0,034
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**8,893**	**8,893**
2.F.1 - Refrigeration and Air Conditioning				8,893	8,893
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10221,398**	**1739,205**	**1487,372**	**0,000**	**-6994,820**
3.A - Livestock	**0,000**	**1700,050**	**103,722**	**0,000**	**1803,772**
3.A.1 - Enteric Fermentation		1649,542			1649,542
3.A.2 - Manure Management		50,508	103,722		154,231
3.B - Land	**-10219,422**	**0,000**	**0,000**	**0,000**	**-10219,422**
3.B.1 - Forest land	-6830,883				-6830,883
3.B.2 - Cropland	-3388,539				-3388,539
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**39,155**	**1383,650**	**0,000**	**1422,805**
3.C.1 - Emissions from biomass burning		13,910	5,334		19,244
3.C.4 - Direct N2O Emissions from managed soils			952,826		952,826
3.C.5 - Indirect N2O Emissions from managed soils			378,440		378,440
3.C.6 - Indirect N2O Emissions from manure management			47,051		47,051
3.C.7 - Rice cultivations		25,245			25,245

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.D - Other	**-1,976**	**0,000**	**0,000**	**0,000**	**-1,976**
3.D.1 - Harvested Wood Products	-1,976				-1,976
4 - Waste	**4,210**	**353,726**	**58,327**	**0,000**	**416,263**
4.A - Solid Waste Disposal	0,000	235,108	0,000	0,000	235,108
4.B - Biological Treatment of Solid Waste	0,000	2,621	2,321	0,000	4,942
4.C - Incineration and Open Burning of Waste	4,210	12,737	3,384	0,000	20,331
4.D - Wastewater Treatment and Discharge	0,000	103,261	52,622	0,000	155,882
Memo Items					
International Bunkers	113,435	0,017	0,984	0,000	114,435
1.A.3.a.i - International Aviation (International Bunkers)	113,435	0,017	0,984		114,435
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2002

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-5709,159**	**2306,882**	**1593,301**	**10,357**	**-1798,619**
1 - Energy	**4266,942**	**179,324**	**32,579**	**0,000**	**4478,844**
1.A - Fuel Combustion Activities	**4262,005**	**55,013**	**32,579**	**0,000**	**4349,597**
1.A.1 - Energy Industries	2020,533	0,662	6,089		2027,284
1.A.2 - Manufacturing Industries and Construction	251,040	0,195	0,398		251,633
1.A.3 - Transport	804,908	5,659	22,023		832,591
1.A.4 - Other Sectors	1185,524	48,496	4,069		1238,089
1.B - Fugitive emissions from fuels	**4,936**	**124,310**	**0,000**	**0,000**	**129,247**
1.B.1 - Solid Fuels	2,411	18,094	0,000		20,505
1.B.2 - Oil and Natural Gas	2,525	106,216	0,000		108,742
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**258,904**	**0,000**	**0,000**	**10,357**	**269,261**
2.A - Mineral Industry	**248,186**	**0,000**	**0,000**	**0,000**	**248,186**
2.A.1 - Cement production	227,327				227,327
2.A.2 - Lime production	7,314				7,314
2.A.3 - Glass Production	4,994				4,994
2.A.4 - Other Process Uses of Carbonates	8,550				8,550
2.C - Metal Industry	**10,718**	**0,000**	**0,000**	**0,000**	**10,718**
2.C.1 - Iron and Steel Production	0,027	0,000			0,027
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**10,357**	**10,357**
2.F.1 - Refrigeration and Air Conditioning				10,357	10,357
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10239,260**	**1771,163**	**1499,048**	**0,000**	**-6969,049**
3.A - Livestock	**0,000**	**1727,585**	**105,042**	**0,000**	**1832,627**
3.A.1 - Enteric Fermentation		1676,181			1676,181
3.A.2 - Manure Management		51,405	105,042		156,447
3.B - Land	**-10237,451**	**0,000**	**0,000**	**0,000**	**-10237,451**
3.B.1 - Forest land	-6827,891				-6827,891
3.B.2 - Cropland	-3409,560				-3409,560
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**43,578**	**1394,006**	**0,000**	**1437,583**
3.C.1 - Emissions from biomass burning		13,116	5,047		18,163
3.C.4 - Direct N2O Emissions from managed soils			959,780		959,780
3.C.5 - Indirect N2O Emissions from managed soils			381,280		381,280
3.C.6 - Indirect N2O Emissions from manure management			47,899		47,899
3.C.7 - Rice cultivations		30,461			30,461
3.D - Other	**-1,809**	**0,000**	**0,000**	**0,000**	**-1,809**
3.D.1 - Harvested Wood Products	-1,809				-1,809
4 - Waste	**4,255**	**356,395**	**61,674**	**0,000**	**422,325**
4.A - Solid Waste Disposal	0,000	233,645	0,000	0,000	233,645
4.B - Biological Treatment of Solid Waste	0,000	2,633	2,332	0,000	4,966
4.C - Incineration and Open Burning of Waste	4,255	12,873	3,421	0,000	20,549
4.D - Wastewater Treatment and Discharge	0,000	107,244	55,921	0,000	163,165
Memo Items					
International Bunkers	396,187	0,058	3,435	0,000	399,681
1.A.3.a.i - International Aviation (International Bunkers)	396,187	0,058	3,435		399,681
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2003

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-5119,062**	**2284,670**	**1583,977**	**11,990**	**-1238,425**
1 - Energy	**4432,933**	**163,062**	**29,345**	**0,000**	**4625,340**
1.A - Fuel Combustion Activities	**4428,703**	**56,408**	**29,345**	**0,000**	**4514,456**
1.A.1 - Energy Industries	1782,520	0,590	5,331		1788,442
1.A.2 - Manufacturing Industries and Construction	236,190	0,202	0,423		236,816
1.A.3 - Transport	996,796	7,266	19,496		1023,558
1.A.4 - Other Sectors	1413,196	48,349	4,095		1465,640
1.B - Fugitive emissions from fuels	**4,230**	**106,654**	**0,000**	**0,000**	**110,884**
1.B.1 - Solid Fuels	1,957	14,629	0,000		16,586
1.B.2 - Oil and Natural Gas	2,273	92,026	0,000		94,299
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2 - Industrial Processes and Product Use	**358,022**	**0,000**	**0,000**	**11,990**	**370,012**
2.A - Mineral Industry	**350,848**	**0,000**	**0,000**	**0,000**	**350,848**
2.A.1 - Cement production	319,207				319,207
2.A.2 - Lime production	6,756				6,756
2.A.3 - Glass Production	12,095				12,095
2.A.4 - Other Process Uses of Carbonates	12,789				12,789
2.C - Metal Industry	**7,174**	**0,000**	**0,000**	**0,000**	**7,174**
2.C.1 - Iron and Steel Production	0,026	0,000			0,026
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**11,990**	**11,990**
2.F.1 - Refrigeration and Air Conditioning				11,990	11,990
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-9914,316**	**1762,740**	**1491,471**	**0,000**	**-6660,105**
3.A - Livestock	**0,000**	**1722,649**	**103,355**	**0,000**	**1826,004**
3.A.1 - Enteric Fermentation		1671,764			1671,764
3.A.2 - Manure Management		50,885	103,355		154,240
3.B - Land	**-9912,145**	**0,000**	**0,000**	**0,000**	**-9912,145**
3.B.1 - Forest land	-6813,973				-6813,973
3.B.2 - Cropland	-3098,172				-3098,172
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**40,091**	**1388,116**	**0,000**	**1428,207**
3.C.1 - Emissions from biomass burning		12,130	4,663		16,793
3.C.4 - Direct N2O Emissions from managed soils			956,264		956,264
3.C.5 - Indirect N2O Emissions from managed soils			378,680		378,680
3.C.6 - Indirect N2O Emissions from manure management			48,509		48,509
3.C.7 - Rice cultivations		27,961			27,961
3.D - Other	**-2,171**	**0,000**	**0,000**	**0,000**	**-2,171**
3.D.1 - Harvested Wood Products	-2,171				-2,171
4 - Waste	**4,299**	**358,868**	**63,161**	**0,000**	**426,328**
4.A - Solid Waste Disposal	0,000	231,912	0,000	0,000	231,912
4.B - Biological Treatment of Solid Waste	0,000	2,646	2,344	0,000	4,990
4.C - Incineration and Open Burning of Waste	4,299	13,006	3,456	0,000	20,760
4.D - Wastewater Treatment and Discharge	0,000	111,304	57,362	0,000	168,666
Memo Items					
International Bunkers	522,259	0,077	4,529	0,000	526,865
1.A.3.a.i - International Aviation (International Bunkers)	522,259	0,077	4,529		526,865

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2004

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-5219,664**	**2329,855**	**1608,294**	**13,661**	**-1267,855**
1 - Energy	**4657,377**	**168,212**	**33,530**	**0,000**	**4859,120**
1.A - Fuel Combustion Activities	**4653,386**	**58,485**	**33,530**	**0,000**	**4745,401**
1.A.1 - Energy Industries	1544,509	0,518	4,574		1549,600
1.A.2 - Manufacturing Industries and Construction	220,707	0,208	0,446		221,360
1.A.3 - Transport	1245,145	9,518	24,385		1279,047
1.A.4 - Other Sectors	1643,026	48,242	4,126		1695,394
1.B - Fugitive emissions from fuels	**3,991**	**109,727**	**0,000**	**0,000**	**113,718**
1.B.1 - Solid Fuels	1,567	11,547	0,000		13,114
1.B.2 - Oil and Natural Gas	2,424	98,180	0,000		100,604
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**421,470**	**0,000**	**0,000**	**13,661**	**435,130**
2.A - Mineral Industry	**412,001**	**0,000**	**0,000**	**0,000**	**412,001**
2.A.1 - Cement production	370,784				370,784
2.A.2 - Lime production	7,972				7,972
2.A.3 - Glass Production	16,931				16,931
2.A.4 - Other Process Uses of Carbonates	16,314				16,314
2.C - Metal Industry	**9,469**	**0,000**	**0,000**	**0,000**	**9,469**
2.C.1 - Iron and Steel Production	0,034	0,000			0,034
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**13,661**	**13,661**
2.F.1 - Refrigeration and Air Conditioning				13,661	13,661
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10302,866**	**1797,570**	**1510,478**	**0,000**	**-6994,818**
3.A - Livestock	**0,000**	**1757,947**	**106,271**	**0,000**	**1864,219**
3.A.1 - Enteric Fermentation		1705,596			1705,596
3.A.2 - Manure Management		52,351	106,271		158,623
3.B - Land	**-10301,114**	**0,000**	**0,000**	**0,000**	**-10301,114**
3.B.1 - Forest land	-6827,798				-6827,798
3.B.2 - Cropland	-3473,316				-3473,316
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**39,622**	**1404,207**	**0,000**	**1443,829**
3.C.1 - Emissions from biomass burning		11,917	4,567		16,484

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C.4 - Direct N2O Emissions from managed soils			965,012		965,012
3.C.5 - Indirect N2O Emissions from managed soils			384,658		384,658
3.C.6 - Indirect N2O Emissions from manure management			49,970		49,970
3.C.7 - Rice cultivations		27,705			27,705
3.D - Other	**-1,752**	**0,000**	**0,000**	**0,000**	**-1,752**
3.D.1 - Harvested Wood Products	-1,752				-1,752
4 - Waste	**4,355**	**364,073**	**64,285**	**0,000**	**432,714**
4.A - Solid Waste Disposal	0,000	232,609	0,000	0,000	232,609
4.B - Biological Treatment of Solid Waste	0,000	2,665	2,360	0,000	5,025
4.C - Incineration and Open Burning of Waste	4,355	13,176	3,501	0,000	21,033
4.D - Wastewater Treatment and Discharge	0,000	115,623	58,423	0,000	174,046
Memo Items					
International Bunkers	593,287	0,087	5,145	0,000	598,519
1.A.3.a.i - International Aviation (International Bunkers)	593,287	0,087	5,145		598,519
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2005

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-4719,488**	**2376,823**	**1661,905**	**15,759**	**-665,001**
1 - Energy	**5014,913**	**151,879**	**46,523**	**0,000**	**5213,316**
1.A - Fuel Combustion Activities	**5011,436**	**46,549**	**46,523**	**0,000**	**5104,509**
1.A.1 - Energy Industries	2047,397	0,607	7,377		2055,381
1.A.2 - Manufacturing Industries and Construction	787,310	0,491	0,969		788,770
1.A.3 - Transport	1258,639	9,000	34,838		1302,477
1.A.4 - Other Sectors	918,091	36,451	3,339		957,880
1.B - Fugitive emissions from fuels	**3,477**	**105,330**	**0,000**	**0,000**	**108,807**
1.B.1 - Solid Fuels	1,297	9,620	0,000		10,918
1.B.2 - Oil and Natural Gas	2,179	95,710	0,000		97,889
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**467,171**	**0,000**	**0,000**	**15,759**	**482,930**
2.A - Mineral Industry	**461,269**	**0,000**	**0,000**	**0,000**	**461,269**
2.A.1 - Cement production	415,120				415,120
2.A.2 - Lime production	6,515				6,515
2.A.3 - Glass Production	18,892				18,892
2.A.4 - Other Process Uses of Carbonates	20,742				20,742
2.C - Metal Industry	**5,902**	**0,000**	**0,000**	**0,000**	**5,902**
2.C.1 - Iron and Steel Production	0,035	0,000			0,035
2.D - Non-Energy Products from Fuels and Solvent Use	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Lubricant Use	0,000				0,000
2.D.2 - Paraffin Wax Use	0,000				0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**15,759**	**15,759**
2.F.1 - Refrigeration and Air Conditioning				15,759	15,759
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10205,986**	**1866,002**	**1548,774**	**0,000**	**-6791,210**
3.A - Livestock	**0,000**	**1827,471**	**108,606**	**0,000**	**1936,077**
3.A.1 - Enteric Fermentation		1773,976			1773,976
3.A.2 - Manure Management		53,495	108,606		162,101
3.B - Land	**-10204,269**	**0,000**	**0,000**	**0,000**	**-10204,269**
3.B.1 - Forest land	-6849,918				-6849,918
3.B.2 - Cropland	-3354,351				-3354,351
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**38,531**	**1440,168**	**0,000**	**1478,699**
3.C.1 - Emissions from biomass burning		12,191	4,691		16,881
3.C.4 - Direct N2O Emissions from managed soils			991,088		991,088
3.C.5 - Indirect N2O Emissions from managed soils			393,569		393,569
3.C.6 - Indirect N2O Emissions from manure management			50,820		50,820
3.C.7 - Rice cultivations		26,341			26,341
3.D - Other	**-1,717**	**0,000**	**0,000**	**0,000**	**-1,717**
3.D.1 - Harvested Wood Products	-1,717				-1,717
4 - Waste	**4,414**	**358,942**	**66,608**	**0,000**	**429,963**
4.A - Solid Waste Disposal	0,000	231,649	0,000	0,000	231,649
4.B - Biological Treatment of Solid Waste	0,000	2,806	2,485	0,000	5,291
4.C - Incineration and Open Burning of Waste	4,414	13,352	3,548	0,000	21,314
4.D - Wastewater Treatment and Discharge	0,000	111,135	60,575	0,000	171,710
Memo Items					
International Bunkers	400,450	0,059	3,472	0,000	403,981
1.A.3.a.i - International Aviation (International Bunkers)	400,450	0,059	3,472		403,981
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2006

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-4620,528**	**2447,291**	**1726,037**	**17,896**	**-429,305**
1 - Energy	**5045,606**	**147,189**	**46,476**	**0,000**	**5239,271**
1.A - Fuel Combustion Activities	**5042,739**	**48,212**	**46,476**	**0,000**	**5137,427**
1.A.1 - Energy Industries	1939,744	0,563	7,140		1947,447
1.A.2 - Manufacturing Industries and Construction	864,543	0,510	0,976		866,030

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A.3 - Transport	1311,231	9,136	35,009		1355,376
1.A.4 - Other Sectors	927,221	38,003	3,350		968,574
1.B - Fugitive emissions from fuels	**2,867**	**98,977**	**0,000**	**0,000**	**101,844**
1.B.1 - Solid Fuels	1,109	8,181	0,000		9,290
1.B.2 - Oil and Natural Gas	1,757	90,796	0,000		92,553
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**538,331**	**0,000**	**0,000**	**17,896**	**556,227**
2.A - Mineral Industry	**529,281**	**0,000**	**0,000**	**0,000**	**529,281**
2.A.1 - Cement production	485,220				485,220
2.A.2 - Lime production	7,588				7,588
2.A.3 - Glass Production	16,814				16,814
2.A.4 - Other Process Uses of Carbonates	19,659				19,659
2.C - Metal Industry	**3,301**	**0,000**	**0,000**	**0,000**	**3,301**
2.C.1 - Iron and Steel Production	0,036	0,000			0,036
2.D - Non-Energy Products from Fuels and Solvent Use	**5,749**	**0,000**	**0,000**	**0,000**	**5,749**
2.D.1 - Lubricant Use	5,463				5,463
2.D.2 - Paraffin Wax Use	0,285				0,285
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**17,896**	**17,896**
2.F.1 - Refrigeration and Air Conditioning				17,896	17,896
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10208,929**	**1936,994**	**1612,585**	**0,000**	**-6659,351**
3.A - Livestock	**0,000**	**1896,640**	**112,671**	**0,000**	**2009,311**
3.A.1 - Enteric Fermentation		1841,284			1841,284
3.A.2 - Manure Management		55,357	112,671		168,027
3.B - Land	**-10207,372**	**0,000**	**0,000**	**0,000**	**-10207,372**
3.B.1 - Forest land	-6880,279				-6880,279
3.B.2 - Cropland	-3327,093				-3327,093
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**40,353**	**1499,914**	**0,000**	**1540,267**
3.C.1 - Emissions from biomass burning		11,862	4,549		16,411
3.C.4 - Direct N2O Emissions from managed soils			1032,752		1032,752
3.C.5 - Indirect N2O Emissions from managed soils			409,865		409,865
3.C.6 - Indirect N2O Emissions from manure management			52,748		52,748
3.C.7 - Rice cultivations		28,491			28,491
3.D - Other	**-1,557**	**0,000**	**0,000**	**0,000**	**-1,557**
3.D.1 - Harvested Wood Products	-1,557				-1,557
4 - Waste	**4,464**	**363,108**	**66,977**	**0,000**	**434,549**
4.A - Solid Waste Disposal	0,000	231,587	0,000	0,000	231,587
4.B - Biological Treatment of Solid Waste	0,000	2,927	2,593	0,000	5,520
4.C - Incineration and Open Burning of Waste	4,464	13,505	3,589	0,000	21,558

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
4.D - Wastewater Treatment and Discharge	0,000	115,088	60,795	0,000	175,883
Memo Items					
International Bunkers	856,080	0,126	7,423	0,000	863,629
1.A.3.a.i - International Aviation (International Bunkers)	856,080	0,126	7,423		863,629
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Категории	Нетто CO2	CH4	N2O	ГФУ	Все э
Общие национальные выбросы и поглощения	**-4620,528**	**2455,072**	**1724,387**	**17,896**	
1 - Энергетика	**5045,606**	**147,189**	**46,476**	**0,000**	
1.A - Деятельность по сжиганию топлива	5042,739	48,212	46,476	0,000	
1.A.1 - Энергетическая отрасль	1939,744	0,563	7,140	0,000	
1.A.2 - Промышленность и строительство	864,543	0,510	0,976	0,000	
1.A.3 - Транспорт	1311,231	9,136	35,009	0,000	
1.A.4 - Прочие секторы	927,221	38,003	3,350	0,000	
1.B - Летучие эмиссии от топлива	2,867	98,977	0,000	0,000	
2 - Промышленные процессы и использование продуктов	**538,331**	**0,000**	**0,000**	**17,896**	
2.A - Производство минеральных материалов	529,281	0,000	0,000	0,000	
2.B - Химическая промышленность	0,000	0,000	0,000	0,000	
2.C - Металлургическая промышленность	3,301	0,000	0,000	0,000	
2.D - Использование растворителей и не энергетических продуктов из топлива	5,749	0,000	0,000	0,000	
2.E - Электронная промышленность	0,000	0,000	0,000	0,000	
2.F - Использование заменителей озоноразрушающих веществ	0,000	0,000	0,000	17,896	
2.G - Производство и использование других продуктов	0,000	0,000	0,000	0,000	
3 - Сельское хозяйство, лесное хозяйство и другие виды землепользования	**-10208,929**	**1936,994**	**1612,585**	**0,000**	
3.A - Домашние животные	0,000	1896,640	112,671	0,000	
3.B - Земля	-10207,372	0,000	0,000	0,000	
3.C - Агрегированные источники и источники выбросов газов от почв кроме CO2	0,000	40,353	1499,914	0,000	
3.D - Прочее	-1,557	0,000	0,000	0,000	
4 - Отходы	**4,464**	**370,889**	**65,327**	**0,000**	
4.A - Удаление твердых отходов	0,000	231,587	0,000	0,000	
4.B - Биологическая обработка твердых отходов	0,000	10,149	8,989	0,000	
4.C - Инсинерация и открытое сжигание отходов	4,464	13,505	3,589	0,000	
4.D - Очистка и сброс сточных вод	0,000	115,647	52,749	0,000	
К сведению					
Международные бункеры	**856,080**	**0,126**	**7,423**	**0,000**	
1.A.3.a.i - Международная авиация	856,080	0,126	7,423	0,000	
1.A.3.d.i - Международная водная навигация	0,000	0,000	0,000	0,000	
1.A.5.c - Многосторонние операции	**0,000**	**0,000**	**0,000**	**0,000**	

Inventory year: 2007

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-3806,999**	**2535,281**	**1776,335**	**16,660**	**521,277**
1 - Energy	**5929,608**	**152,411**	**78,382**	**0,000**	**6160,400**
1.A - Fuel Combustion Activities	**5927,153**	**56,707**	**78,382**	**0,000**	**6062,241**
1.A.1 - Energy Industries	1913,848	0,551	7,078		1921,477

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A.2 - Manufacturing Industries and Construction	892,331	0,572	1,100		894,002
1.A.3 - Transport	2081,902	13,496	66,360		2161,757
1.A.4 - Other Sectors	1039,072	42,088	3,844		1085,004
1.B - Fugitive emissions from fuels	**2,455**	**95,704**	**0,000**	**0,000**	**98,159**
1.B.1 - Solid Fuels	1,004	7,268	0,000		8,273
1.B.2 - Oil and Natural Gas	1,451	88,436	0,000		89,887
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**568,775**	**0,000**	**0,000**	**16,660**	**585,435**
2.A - Mineral Industry	**560,478**	**0,000**	**0,000**	**0,000**	**560,478**
2.A.1 - Cement production	509,661				509,661
2.A.2 - Lime production	9,888				9,888
2.A.3 - Glass Production	18,769				18,769
2.A.4 - Other Process Uses of Carbonates	22,160				22,160
2.C - Metal Industry	**6,463**	**0,000**	**0,000**	**0,000**	**6,463**
2.C.1 - Iron and Steel Production	0,055	0,000			0,055
2.D - Non-Energy Products from Fuels and Solvent Use	**1,834**	**0,000**	**0,000**	**0,000**	**1,834**
2.D.1 - Lubricant Use	1,797				1,797
2.D.2 - Paraffin Wax Use	0,037				0,037
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**16,660**	**16,660**
2.F.1 - Refrigeration and Air Conditioning				16,660	16,660
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10309,902**	**2019,682**	**1632,239**	**0,000**	**-6657,982**
3.A - Livestock	**0,000**	**1981,061**	**117,481**	**0,000**	**2098,542**
3.A.1 - Enteric Fermentation		1923,578			1923,578
3.A.2 - Manure Management		57,482	117,481		174,963
3.B - Land	**-10307,978**	**0,000**	**0,000**	**0,000**	**-10307,978**
3.B.1 - Forest land	-6841,592				-6841,592
3.B.2 - Cropland	-3466,386				-3466,386
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**38,621**	**1514,758**	**0,000**	**1553,378**
3.C.1 - Emissions from biomass burning		10,938	4,201		15,139
3.C.4 - Direct N2O Emissions from managed soils			1039,968		1039,968
3.C.5 - Indirect N2O Emissions from managed soils			415,749		415,749
3.C.6 - Indirect N2O Emissions from manure management			54,839		54,839
3.C.7 - Rice cultivations		27,683			27,683
3.D - Other	**-1,923**	**0,000**	**0,000**	**0,000**	**-1,923**
3.D.1 - Harvested Wood Products	-1,923				-1,923
4 - Waste	**4,520**	**363,188**	**65,715**	**0,000**	**433,423**
4.A - Solid Waste Disposal	0,000	231,970	0,000	0,000	231,970
4.B - Biological Treatment of Solid Waste	0,000	2,969	2,630	0,000	5,599

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
4.C - Incineration and Open Burning of Waste	4,520	13,675	3,634	0,000	21,828
4.D - Wastewater Treatment and Discharge	0,000	114,574	59,451	0,000	174,025
Memo Items					
International Bunkers	750,450	0,110	6,507	0,000	757,067
1.A.3.a.i - International Aviation (International Bunkers)	750,450	0,110	6,507		757,067
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2008

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-2952,789**	**2663,859**	**1926,465**	**22,139**	**1659,674**
1 - Energy	**6808,575**	**180,996**	**81,208**	**0,000**	**7070,779**
1.A - Fuel Combustion Activities	**6805,527**	**81,238**	**81,208**	**0,000**	**6967,973**
1.A.1 - Energy Industries	2281,734	0,623	8,945		2291,303
1.A.2 - Manufacturing Industries and Construction	825,610	0,451	0,842		826,903
1.A.3 - Transport	2267,416	15,095	65,606		2348,118
1.A.4 - Other Sectors	1430,767	65,068	5,815		1501,649
1.B - Fugitive emissions from fuels	**3,048**	**99,758**	**0,000**	**0,000**	**102,806**
1.B.1 - Solid Fuels	1,421	10,370	0,000		11,791
1.B.2 - Oil and Natural Gas	1,628	89,388	0,000		91,016
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**484,779**	**0,000**	**0,093**	**22,139**	**507,011**
2.A - Mineral Industry	**471,827**	**0,000**	**0,000**	**0,000**	**471,827**
2.A.1 - Cement production	435,264				435,264
2.A.2 - Lime production	6,669				6,669
2.A.3 - Glass Production	15,151				15,151
2.A.4 - Other Process Uses of Carbonates	14,743				14,743
2.C - Metal Industry	**5,636**	**0,000**	**0,000**	**0,000**	**5,636**
2.C.1 - Iron and Steel Production	0,030	0,000			0,030
2.D - Non-Energy Products from Fuels and Solvent Use	**7,316**	**0,000**	**0,000**	**0,000**	**7,316**
2.D.1 - Lubricant Use	7,313				7,313
2.D.2 - Paraffin Wax Use	0,003				0,003
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**22,139**	**22,139**
2.F.1 - Refrigeration and Air Conditioning				22,139	22,139
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,093**	**0,000**	0,093
2.G.3 - N2O from Product Uses			0,093		
3 - Agriculture, Forestry, and Other Land Use	**-10250,705**	**2116,287**	**1776,807**	**0,000**	**-6357,611**
3.A - Livestock	**0,000**	**2077,563**	**122,907**	**0,000**	**2200,471**
3.A.1 - Enteric Fermentation		2017,821			2017,821

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.A.2 - Manure Management		59,742	122,907		182,650
3.B - Land	**-10248,144**	**0,000**	**0,000**	**0,000**	**-10248,144**
3.B.1 - Forest land	-6900,723				-6900,723
3.B.2 - Cropland	-3347,421				-3347,421
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**38,724**	**1653,899**	**0,000**	**1692,623**
3.C.1 - Emissions from biomass burning		11,674	4,494		16,168
3.C.4 - Direct N2O Emissions from managed soils			1140,001		1140,001
3.C.5 - Indirect N2O Emissions from managed soils			452,768		452,768
3.C.6 - Indirect N2O Emissions from manure management			56,636		56,636
3.C.7 - Rice cultivations		27,050			27,050
3.D - Other	**-2,561**	**0,000**	**0,000**	**0,000**	**-2,561**
3.D.1 - Harvested Wood Products	-2,561				-2,561
4 - Waste	**4,562**	**366,576**	**68,357**	**0,000**	**439,495**
4.A - Solid Waste Disposal	0,000	237,494	0,000	0,000	237,494
4.B - Biological Treatment of Solid Waste	0,000	3,074	2,723	0,000	5,797
4.C - Incineration and Open Burning of Waste	4,562	13,802	3,667	0,000	22,031
4.D - Wastewater Treatment and Discharge	0,000	112,207	61,967	0,000	174,174
Memo Items					
International Bunkers	882,882	0,130	7,656	0,000	890,667
1.A.3.a.i - International Aviation (International Bunkers)	882,882	0,130	7,656		890,667
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2009

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-3427,456**	**2769,460**	**2000,723**	**24,606**	**1367,333**
1 - Energy	**6630,005**	**167,141**	**114,442**	**0,000**	**6911,588**
1.A - Fuel Combustion Activities	**6626,909**	**81,728**	**114,442**	**0,000**	**6823,079**
1.A.1 - Energy Industries	2127,978	0,713	8,687		2137,379
1.A.2 - Manufacturing Industries and Construction	476,170	0,397	0,940		477,508
1.A.3 - Transport	2618,649	16,918	99,057		2734,624
1.A.4 - Other Sectors	1404,112	63,699	5,757		1473,568
1.B - Fugitive emissions from fuels	**3,096**	**85,413**	**0,000**	**0,000**	**88,509**
1.B.1 - Solid Fuels	1,611	11,691	0,000		13,302
1.B.2 - Oil and Natural Gas	1,485	73,722	0,000		75,207
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**241,296**	**0,000**	**0,279**	**24,606**	**266,180**
2.A - Mineral Industry	**226,682**	**0,000**	**0,000**	**0,000**	**226,682**
2.A.1 - Cement production	213,015				213,015
2.A.2 - Lime production	3,603				3,603
2.A.3 - Glass Production	0,320				0,320

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.A.4 - Other Process Uses of Carbonates	9,744				9,744
2.C - Metal Industry	**6,282**	**0,000**	**0,000**	**0,000**	**6,282**
2.C.1 - Iron and Steel Production	0,096	0,000			0,096
2.D - Non-Energy Products from Fuels and Solvent Use	**8,332**	**0,000**	**0,000**	**0,000**	**8,332**
2.D.1 - Lubricant Use	8,304				8,304
2.D.2 - Paraffin Wax Use	0,028				0,028
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**24,606**	**24,606**
2.F.1 - Refrigeration and Air Conditioning				24,606	24,606
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				0,000	0,000
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,279**	**0,000**	0,279
2.G.3 - N2O from Product Uses			0,279		
3 - Agriculture, Forestry, and Other Land Use	**-10303,402**	**2219,100**	**1814,722**	**0,000**	**-6269,580**
3.A - Livestock	**0,000**	**2178,906**	**129,487**	**0,000**	**2308,393**
3.A.1 - Enteric Fermentation		2116,505			2116,505
3.A.2 - Manure Management		62,401	129,487		191,888
3.B - Land	**-10301,426**	**0,000**	**0,000**	**0,000**	**-10301,426**
3.B.1 - Forest land	-6862,298				-6862,298
3.B.2 - Cropland	-3439,128				-3439,128
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**40,194**	**1685,235**	**0,000**	**1725,429**
3.C.1 - Emissions from biomass burning		11,986	4,601		16,587
3.C.4 - Direct N2O Emissions from managed soils			1157,891		1157,891
3.C.5 - Indirect N2O Emissions from managed soils			463,477		463,477
3.C.6 - Indirect N2O Emissions from manure management			59,265		59,265
3.C.7 - Rice cultivations		28,208			28,208
3.D - Other	**-1,976**	**0,000**	**0,000**	**0,000**	**-1,976**
3.D.1 - Harvested Wood Products	-1,976				-1,976
4 - Waste	**4,646**	**383,218**	**71,280**	**0,000**	**459,145**
4.A - Solid Waste Disposal	0,000	253,218	0,000	0,000	253,218
4.B - Biological Treatment of Solid Waste	0,000	3,154	2,794	0,000	5,948
4.C - Incineration and Open Burning of Waste	4,646	14,057	3,735	0,000	22,438
4.D - Wastewater Treatment and Discharge	0,000	112,790	64,751	0,000	177,541
Memo Items					
International Bunkers	1027,927	0,151	8,913	0,000	1036,991
1.A.3.a.i - International Aviation (International Bunkers)	1027,927	0,151	8,913		1036,991
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2010

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-3966,646**	**2856,693**	**1992,973**	**49,983**	**933,003**
1 - Energy	**5980,971**	**192,516**	**99,869**	**0,000**	**6273,356**
1.A - Fuel Combustion Activities	**5977,503**	**102,894**	**99,869**	**0,000**	**6180,267**
1.A.1 - Energy Industries	1627,627	0,497	6,616		1634,739
1.A.2 - Manufacturing Industries and Construction	589,175	0,485	1,223		590,883
1.A.3 - Transport	2341,589	14,471	82,365		2438,424
1.A.4 - Other Sectors	1419,113	87,442	9,666		1516,221
1.B - Fugitive emissions from fuels	**3,467**	**89,622**	**0,000**	**0,000**	**93,089**
1.B.1 - Solid Fuels	1,453	10,509	0,000		11,962
1.B.2 - Oil and Natural Gas	2,015	79,113	0,000		81,127
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**381,894**	**0,000**	**0,000**	**49,983**	**431,877**
2.A - Mineral Industry	**368,722**	**0,000**	**0,000**	**0,000**	**368,722**
2.A.1 - Cement production	354,024				354,024
2.A.2 - Lime production	4,982				4,982
2.A.3 - Glass Production	0,405				0,405
2.A.4 - Other Process Uses of Carbonates	9,311				9,311
2.C - Metal Industry	**6,483**	**0,000**	**0,000**	**0,000**	**6,483**
2.C.1 - Iron and Steel Production	0,105	0,000			0,105
2.D - Non-Energy Products from Fuels and Solvent Use	**6,688**	**0,000**	**0,000**	**0,000**	**6,688**
2.D.1 - Lubricant Use	6,688				6,688
2.D.2 - Paraffin Wax Use	0,000				0,000
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**49,983**	**49,983**
2.F.1 - Refrigeration and Air Conditioning				46,263	46,263
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				3,720	3,720
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10334,544**	**2267,723**	**1821,705**	**0,000**	**-6245,117**
3.A - Livestock	**0,000**	**2226,942**	**133,238**	**0,000**	**2360,179**
3.A.1 - Enteric Fermentation		2163,425			2163,425
3.A.2 - Manure Management		63,516	133,238		196,754
3.B - Land	**-10332,755**	**0,000**	**0,000**	**0,000**	**-10332,755**
3.B.1 - Forest land	-6869,834				-6869,834
3.B.2 - Cropland	-3462,921				-3462,921
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**40,781**	**1688,467**	**0,000**	**1729,248**
3.C.1 - Emissions from biomass burning		11,218	4,309		15,527
3.C.4 - Direct N2O Emissions from managed soils			1156,890		1156,890
3.C.5 - Indirect N2O Emissions from managed soils			466,586		466,586
3.C.6 - Indirect N2O Emissions from manure management			60,681		60,681
3.C.7 - Rice cultivations		29,564			29,564
3.D - Other	**-1,790**	**0,000**	**0,000**	**0,000**	**-1,790**
3.D.1 - Harvested Wood Products	-1,790				-1,790

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
4 - Waste	**5,034**	**396,454**	**71,399**	**0,000**	**472,887**
4.A - Solid Waste Disposal	0,000	264,616	0,000	0,000	264,616
4.B - Biological Treatment of Solid Waste	0,000	2,705	2,396	0,000	5,100
4.C - Incineration and Open Burning of Waste	5,034	15,229	4,047	0,000	24,310
4.D - Wastewater Treatment and Discharge	0,000	113,904	64,957	0,000	178,861
Memo Items					
International Bunkers	781,981	0,115	6,781	0,000	788,877
1.A.3.a.i - International Aviation (International Bunkers)	781,981	0,115	6,781		788,877
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2011

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-2382,824**	**2945,485**	**2090,930**	**64,092**	**2717,682**
1 - Energy	**7403,129**	**193,383**	**62,140**	**0,000**	**7658,652**
1.A - Fuel Combustion Activities	**7399,077**	**102,125**	**62,140**	**0,000**	**7563,343**
1.A.1 - Energy Industries	1690,632	0,515	7,077		1698,223
1.A.2 - Manufacturing Industries and Construction	598,303	0,550	1,290		600,143
1.A.3 - Transport	3231,938	20,487	46,381		3298,806
1.A.4 - Other Sectors	1878,205	80,574	7,392		1966,170
1.B - Fugitive emissions from fuels	**4,052**	**91,258**	**0,000**	**0,000**	**95,310**
1.B.1 - Solid Fuels	1,807	12,921	0,000		14,728
1.B.2 - Oil and Natural Gas	2,245	78,337	0,000		80,582
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**504,957**	**0,000**	**0,031**	**64,092**	**569,079**
2.A - Mineral Industry	**494,315**	**0,000**	**0,000**	**0,000**	**494,315**
2.A.1 - Cement production	479,036				479,036
2.A.2 - Lime production	1,993				1,993
2.A.3 - Glass Production	0,441				0,441
2.A.4 - Other Process Uses of Carbonates	12,846				12,846
2.C - Metal Industry	**2,230**	**0,000**	**0,000**	**0,000**	**2,230**
2.C.1 - Iron and Steel Production	0,051	0,000			0,051
2.D - Non-Energy Products from Fuels and Solvent Use	**8,412**	**0,000**	**0,000**	**0,000**	**8,412**
2.D.1 - Lubricant Use	8,404				8,404
2.D.2 - Paraffin Wax Use	0,008				0,008
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**64,092**	**64,092**
2.F.1 - Refrigeration and Air Conditioning				38,357	38,357
2.F.2 - Foam Blowing Agents				0,000	0,000
2.F.6 - Other Applications (please specify)				25,735	25,735
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,031**	**0,000**	0,031
2.G.3 - N2O from Product Uses			0,031		

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3 - Agriculture, Forestry, and Other Land Use	**-10295,774**	**2344,769**	**1957,239**	**0,000**	**-5993,766**
3.A - Livestock	**0,000**	**2304,500**	**138,478**	**0,000**	**2442,979**
3.A.1 - Enteric Fermentation		2238,959			2238,959
3.A.2 - Manure Management		65,541	138,478		204,019
3.B - Land	**-10294,539**	**0,000**	**0,000**	**0,000**	**-10294,539**
3.B.1 - Forest land	-6830,232				-6830,232
3.B.2 - Cropland	-3464,307				-3464,307
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**40,268**	**1818,761**	**0,000**	**1859,029**
3.C.1 - Emissions from biomass burning		11,284	4,336		15,620
3.C.4 - Direct N2O Emissions from managed soils			1260,449		1260,449
3.C.5 - Indirect N2O Emissions from managed soils			491,281		491,281
3.C.6 - Indirect N2O Emissions from manure management			62,695		62,695
3.C.7 - Rice cultivations		28,985			28,985
3.D - Other	**-1,235**	**0,000**	**0,000**	**0,000**	**-1,235**
3.D.1 - Harvested Wood Products	-1,235				-1,235
4 - Waste	**4,864**	**407,334**	**71,519**	**0,000**	**483,717**
4.A - Solid Waste Disposal	0,000	276,626	0,000	0,000	276,626
4.B - Biological Treatment of Solid Waste	0,000	3,373	2,987	0,000	6,360
4.C - Incineration and Open Burning of Waste	4,864	14,715	3,910	0,000	23,488
4.D - Wastewater Treatment and Discharge	0,000	112,620	64,622	0,000	177,243
Memo Items					
International Bunkers	219,730	0,032	1,905	0,000	221,668
1.A.3.a.i - International Aviation (International Bunkers)	219,730	0,032	1,905		221,668
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2012

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-850,206**	**3038,023**	**2169,013**	**123,821**	**4480,652**
1 - Energy	**8858,302**	**218,973**	**128,538**	**0,000**	**9205,812**
1.A - Fuel Combustion Activities	**8853,107**	**116,000**	**128,538**	**0,000**	**9097,645**
1.A.1 - Energy Industries	1778,997	0,512	7,455		1786,964
1.A.2 - Manufacturing Industries and Construction	800,441	0,772	1,697		802,910
1.A.3 - Transport	4442,712	29,091	111,851		4583,654
1.A.4 - Other Sectors	1830,956	85,625	7,535		1924,116
1.B - Fugitive emissions from fuels	**5,195**	**102,973**	**0,000**	**0,000**	**108,168**
1.B.1 - Solid Fuels	2,804	20,215	0,000		23,019
1.B.2 - Oil and Natural Gas	2,390	82,758	0,000		85,148
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**611,162**	**0,000**	**0,186**	**123,821**	**735,169**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.A - Mineral Industry	**609,270**	**0,000**	**0,000**	**0,000**	**609,270**
2.A.1 - Cement production	582,273				582,273
2.A.2 - Lime production	2,070				2,070
2.A.3 - Glass Production	12,048				12,048
2.A.4 - Other Process Uses of Carbonates	12,879				12,879
2.C - Metal Industry	**1,485**	**0,000**	**0,000**	**0,000**	**1,485**
2.C.1 - Iron and Steel Production	0,041	0,000			0,041
2.D - Non-Energy Products from Fuels and Solvent Use	**0,407**	**0,000**	**0,000**	**0,000**	**0,407**
2.D.1 - Lubricant Use	0,400				0,400
2.D.2 - Paraffin Wax Use	0,007				0,007
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**123,821**	**123,821**
2.F.1 - Refrigeration and Air Conditioning				47,098	47,098
2.F.2 - Foam Blowing Agents				44,759	44,759
2.F.6 - Other Applications (please specify)				31,964	31,964
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,186**	**0,000**	0,186
2.G.3 - N2O from Product Uses			0,186		
3 - Agriculture, Forestry, and Other Land Use	**-10324,340**	**2400,466**	**1969,329**	**0,000**	**-5954,545**
3.A - Livestock	**0,000**	**2356,687**	**141,638**	**0,000**	**2498,325**
3.A.1 - Enteric Fermentation		2289,738			2289,738
3.A.2 - Manure Management		66,949	141,638		208,587
3.B - Land	**-10323,169**	**0,000**	**0,000**	**0,000**	**-10323,169**
3.B.1 - Forest land	-6856,630				-6856,630
3.B.2 - Cropland	-3466,539				-3466,539
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**43,779**	**1827,691**	**0,000**	**1871,470**
3.C.1 - Emissions from biomass burning		11,172	4,295		15,467
3.C.4 - Direct N2O Emissions from managed soils			1254,372		1254,372
3.C.5 - Indirect N2O Emissions from managed soils			504,882		504,882
3.C.6 - Indirect N2O Emissions from manure management			64,142		64,142
3.C.7 - Rice cultivations		32,607			32,607
3.D - Other	**-1,171**	**0,000**	**0,000**	**0,000**	**-1,171**
3.D.1 - Harvested Wood Products	-1,171				-1,171
4 - Waste	**4,671**	**418,584**	**70,960**	**0,000**	**494,216**
4.A - Solid Waste Disposal	0,000	283,986	0,000	0,000	283,986
4.B - Biological Treatment of Solid Waste	0,000	3,759	3,329	0,000	7,088
4.C - Incineration and Open Burning of Waste	4,671	14,132	3,755	0,000	22,558
4.D - Wastewater Treatment and Discharge	0,000	116,707	63,876	0,000	180,583
Memo Items					
International Bunkers	602,567	0,088	5,225	0,000	607,881
1.A.3.a.i - International Aviation (International Bunkers)	602,567	0,088	5,225		607,881
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2013

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-793,734**	**3098,900**	**2199,645**	**165,184**	**4669,995**
1 - Energy	**8632,260**	**185,630**	**140,877**	**0,000**	**8958,767**
1.A - Fuel Combustion Activities	**8625,587**	**72,950**	**140,877**	**0,000**	**8839,414**
1.A.1 - Energy Industries	1455,953	0,387	6,358		1462,698
1.A.2 - Manufacturing Industries and Construction	871,082	1,197	2,656		874,935
1.A.3 - Transport	4644,764	28,903	124,796		4798,463
1.A.4 - Other Sectors	1653,787	42,463	7,067		1703,317
1.B - Fugitive emissions from fuels	**6,673**	**112,680**	**0,000**	**0,000**	**119,353**
1.B.1 - Solid Fuels	3,997	29,147	0,000		33,144
1.B.2 - Oil and Natural Gas	2,676	83,533	0,000		86,209
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**785,075**	**0,000**	**0,295**	**165,184**	**950,554**
2.A - Mineral Industry	**773,342**	**0,000**	**0,000**	**0,000**	**773,342**
2.A.1 - Cement production	735,029				735,029
2.A.2 - Lime production	1,916				1,916
2.A.3 - Glass Production	20,589				20,589
2.A.4 - Other Process Uses of Carbonates	15,808				15,808
2.C - Metal Industry	**1,398**	**0,000**	**0,000**	**0,000**	**1,398**
2.C.1 - Iron and Steel Production	0,035	0,000			0,035
2.D - Non-Energy Products from Fuels and Solvent Use	**10,336**	**0,000**	**0,000**	**0,000**	**10,336**
2.D.1 - Lubricant Use	10,292				10,292
2.D.2 - Paraffin Wax Use	0,044				0,044
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**165,184**	**165,184**
2.F.1 - Refrigeration and Air Conditioning				50,402	50,402
2.F.2 - Foam Blowing Agents				77,010	77,010
2.F.6 - Other Applications (please specify)				37,773	37,773
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,295**	**0,000**	0,295
2.G.3 - N2O from Product Uses			0,295		
3 - Agriculture, Forestry, and Other Land Use	**-10216,191**	**2474,282**	**1984,956**	**0,000**	**-5756,953**
3.A - Livestock	**0,000**	**2427,292**	**146,290**	**0,000**	**2573,582**
3.A.1 - Enteric Fermentation		2358,474			2358,474
3.A.2 - Manure Management		68,817	146,290		215,108
3.B - Land	**-10215,273**	**0,000**	**0,000**	**0,000**	**-10215,273**
3.B.1 - Forest land	-6866,986				-6866,986
3.B.2 - Cropland	-3348,287				-3348,287
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**46,991**	**1838,665**	**0,000**	**1885,656**
3.C.1 - Emissions from biomass burning		11,511	4,436		15,947
3.C.4 - Direct N2O Emissions from managed soils			1267,259		1267,259
3.C.5 - Indirect N2O Emissions from managed soils			500,776		500,776
3.C.6 - Indirect N2O Emissions from manure management			66,194		66,194

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C.7 - Rice cultivations		35,480			35,480
3.D - Other	**-0,919**	**0,000**	**0,000**	**0,000**	**-0,919**
3.D.1 - Harvested Wood Products	-0,919				-0,919
4 - Waste	**5,122**	**438,987**	**73,518**	**0,000**	**517,627**
4.A - Solid Waste Disposal	0,000	294,956	0,000	0,000	294,956
4.B - Biological Treatment of Solid Waste	0,000	3,007	2,664	0,000	5,671
4.C - Incineration and Open Burning of Waste	5,122	15,495	4,117	0,000	24,735
4.D - Wastewater Treatment and Discharge	0,000	125,529	66,737	0,000	192,266
Memo Items					
International Bunkers	226,544	0,033	1,964	0,000	228,542
1.A.3.a.i - International Aviation (International Bunkers)	226,544	0,033	1,964		228,542
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2014

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-622,020**	**3252,003**	**2381,406**	**215,743**	**5227,132**
1 - Energy	**8842,901**	**240,266**	**138,043**	**0,000**	**9221,209**
1.A - Fuel Combustion Activities	**8834,461**	**116,258**	**138,043**	**0,000**	**9088,762**
1.A.1 - Energy Industries	2503,491	0,920	9,632		2514,043
1.A.2 - Manufacturing Industries and Construction	842,667	1,487	3,326		847,480
1.A.3 - Transport	3671,101	22,307	117,082		3810,490
1.A.4 - Other Sectors	1817,202	91,544	8,002		1916,748
1.B - Fugitive emissions from fuels	**8,439**	**124,008**	**0,000**	**0,000**	**132,447**
1.B.1 - Solid Fuels	5,775	42,397	0,000		48,171
1.B.2 - Oil and Natural Gas	2,665	81,611	0,000		84,276
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**857,763**	**0,000**	**0,000**	**215,743**	**1073,505**
2.A - Mineral Industry	**853,588**	**0,000**	**0,000**	**0,000**	**853,588**
2.A.1 - Cement production	816,244				816,244
2.A.2 - Lime production	2,376				2,376
2.A.3 - Glass Production	19,601				19,601
2.A.4 - Other Process Uses of Carbonates	15,366				15,366
2.C - Metal Industry	**0,962**	**0,000**	**0,000**	**0,000**	**0,962**
2.C.1 - Iron and Steel Production	0,034	0,000			0,034
2.D - Non-Energy Products from Fuels and Solvent Use	**3,213**	**0,000**	**0,000**	**0,000**	**3,213**
2.D.1 - Lubricant Use	3,187				3,187
2.D.2 - Paraffin Wax Use	0,026				0,026
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**215,743**	**215,743**
2.F.1 - Refrigeration and Air Conditioning				65,319	65,319
2.F.2 - Foam Blowing Agents				109,407	109,407

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.F.6 - Other Applications (please specify)				41,017	41,017
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10327,718**	**2564,698**	**2167,697**	**0,000**	**-5595,322**
3.A - Livestock	**0,000**	**2516,848**	**151,291**	**0,000**	**2668,138**
3.A.1 - Enteric Fermentation		2445,579			2445,579
3.A.2 - Manure Management		71,268	151,291		222,559
3.B - Land	**-10326,798**	**0,000**	**0,000**	**0,000**	**-10326,798**
3.B.1 - Forest land	-6862,692				-6862,692
3.B.2 - Cropland	-3464,106				-3464,106
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**47,850**	**2016,407**	**0,000**	**2064,257**
3.C.1 - Emissions from biomass burning		11,392	4,397		15,788
3.C.4 - Direct N2O Emissions from managed soils			1388,175		1388,175
3.C.5 - Indirect N2O Emissions from managed soils			555,569		555,569
3.C.6 - Indirect N2O Emissions from manure management			68,265		68,265
3.C.7 - Rice cultivations		36,459			36,459
3.D - Other	**-0,920**	**0,000**	**0,000**	**0,000**	**-0,920**
3.D.1 - Harvested Wood Products	-0,920				-0,920
4 - Waste	**5,034**	**447,040**	**75,667**	**0,000**	**527,741**
4.A - Solid Waste Disposal	0,000	301,501	0,000	0,000	301,501
4.B - Biological Treatment of Solid Waste	0,000	2,850	2,524	0,000	5,374
4.C - Incineration and Open Burning of Waste	5,034	15,231	4,047	0,000	24,312
4.D - Wastewater Treatment and Discharge	0,000	127,458	69,095	0,000	196,554
Memo Items					
International Bunkers	189,637	0,028	1,644	0,000	191,309
1.A.3.a.i - International Aviation (International Bunkers)	189,637	0,028	1,644		191,309
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2015

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-61,516**	**3322,620**	**2385,888**	**219,883**	**5866,874**
1 - Energy	**9546,003**	**245,362**	**128,741**	**0,000**	**9920,106**
1.A - Fuel Combustion Activities	**9538,713**	**112,652**	**128,741**	**0,000**	**9780,106**
1.A.1 - Energy Industries	3140,439	1,146	12,416		3154,001
1.A.2 - Manufacturing Industries and Construction	671,989	1,031	2,388		675,407
1.A.3 - Transport	3863,181	23,421	106,085		3992,686
1.A.4 - Other Sectors	1863,105	87,054	7,852		1958,011
1.B - Fugitive emissions from fuels	**7,289**	**132,711**	**0,000**	**0,000**	**140,000**
1.B.1 - Solid Fuels	4,548	32,729	0,000		37,277

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.B.2 - Oil and Natural Gas	2,741	99,982	0,000		102,723
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**724,017**	**0,000**	**0,171**	**219,883**	**944,071**
2.A - Mineral Industry	**714,074**	**0,000**	**0,000**	**0,000**	**714,074**
2.A.1 - Cement production	683,421				683,421
2.A.2 - Lime production	3,833				3,833
2.A.3 - Glass Production	13,899				13,899
2.A.4 - Other Process Uses of Carbonates	12,921				12,921
2.C - Metal Industry	**0,888**	**0,000**	**0,000**	**0,000**	**0,888**
2.C.1 - Iron and Steel Production	0,008	0,000			0,008
2.D - Non-Energy Products from Fuels and Solvent Use	**9,055**	**0,000**	**0,000**	**0,000**	**9,055**
2.D.1 - Lubricant Use	9,019				9,019
2.D.2 - Paraffin Wax Use	0,037				0,037
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**219,883**	**219,883**
2.F.1 - Refrigeration and Air Conditioning				77,333	77,333
2.F.2 - Foam Blowing Agents				99,607	99,607
2.F.6 - Other Applications (please specify)				42,943	42,943
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,171**	**0,000**	0,171
2.G.3 - N2O from Product Uses			0,171		
3 - Agriculture, Forestry, and Other Land Use	**-10336,530**	**2620,802**	**2182,216**	**0,000**	**-5533,512**
3.A - Livestock	**0,000**	**2570,970**	**154,380**	**0,000**	**2725,350**
3.A.1 - Enteric Fermentation		2498,201			2498,201
3.A.2 - Manure Management		72,769	154,380		227,149
3.B - Land	**-10335,815**	**0,000**	**0,000**	**0,000**	**-10335,815**
3.B.1 - Forest land	-6885,509				-6885,509
3.B.2 - Cropland	-3450,306				-3450,306
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**49,832**	**2027,836**	**0,000**	**2077,668**
3.C.1 - Emissions from biomass burning		11,179	4,388		15,566
3.C.4 - Direct N2O Emissions from managed soils			1393,952		1393,952
3.C.5 - Indirect N2O Emissions from managed soils			559,633		559,633
3.C.6 - Indirect N2O Emissions from manure management			69,863		69,863
3.C.7 - Rice cultivations		38,654			38,654
3.D - Other	**-0,716**	**0,000**	**0,000**	**0,000**	**-0,716**
3.D.1 - Harvested Wood Products	-0,716				-0,716
4 - Waste	**4,995**	**456,455**	**74,761**	**0,000**	**536,210**
4.A - Solid Waste Disposal	0,000	309,974	0,000	0,000	309,974
4.B - Biological Treatment of Solid Waste	0,000	2,499	2,213	0,000	4,712
4.C - Incineration and Open Burning of Waste	4,995	15,111	4,015	0,000	24,120
4.D - Wastewater Treatment and Discharge	0,000	128,872	68,532	0,000	197,404
Memo Items					
International Bunkers	258,322	0,038	2,240	0,000	260,600

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A.3.a.i - International Aviation (International Bunkers)	258,322	0,038	2,240		260,600
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2016

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-1462,075**	**3398,443**	**2405,133**	**305,900**	**4647,400**
1 - Energy	**8187,677**	**244,547**	**114,150**	**0,000**	**8546,374**
1.A - Fuel Combustion Activities	**8180,658**	**85,520**	**114,150**	**0,000**	**8380,327**
1.A.1 - Energy Industries	1779,270	0,560	7,267		1787,096
1.A.2 - Manufacturing Industries and Construction	569,410	0,887	2,038		572,335
1.A.3 - Transport	3878,251	24,969	97,571		4000,791
1.A.4 - Other Sectors	1953,727	59,103	7,275		2020,105
1.B - Fugitive emissions from fuels	**7,019**	**159,027**	**0,000**	**0,000**	**166,047**
1.B.1 - Solid Fuels	4,251	30,529	0,000		34,780
1.B.2 - Oil and Natural Gas	2,769	128,498	0,000		131,267
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**647,359**	**0,000**	**0,000**	**305,900**	**953,259**
2.A - Mineral Industry	**638,107**	**0,000**	**0,000**	**0,000**	**638,107**
2.A.1 - Cement production	604,572				604,572
2.A.2 - Lime production	4,829				4,829
2.A.3 - Glass Production	16,074				16,074
2.A.4 - Other Process Uses of Carbonates	12,632				12,632
2.C - Metal Industry	**0,982**	**0,000**	**0,000**	**0,000**	**0,982**
2.C.1 - Iron and Steel Production	0,015	0,000			0,015
2.D - Non-Energy Products from Fuels and Solvent Use	**8,270**	**0,000**	**0,000**	**0,000**	**8,270**
2.D.1 - Lubricant Use	8,238				8,238
2.D.2 - Paraffin Wax Use	0,032				0,032
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**305,900**	**305,900**
2.F.1 - Refrigeration and Air Conditioning				92,482	92,482
2.F.2 - Foam Blowing Agents				168,297	168,297
2.F.6 - Other Applications (please specify)				45,121	45,121
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10302,540**	**2679,488**	**2211,810**	**0,000**	**-5411,242**
3.A - Livestock	**0,000**	**2624,602**	**157,153**	**0,000**	**2781,755**
3.A.1 - Enteric Fermentation		2550,357			2550,357
3.A.2 - Manure Management		74,246	157,153		231,398
3.B - Land	**-10301,950**	**0,000**	**0,000**	**0,000**	**-10301,950**
3.B.1 - Forest land	-6835,627				-6835,627
3.B.2 - Cropland	-3466,324				-3466,324
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**54,885**	**2054,658**	**0,000**	**2109,543**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C.1 - Emissions from biomass burning		10,419	4,002		14,421
3.C.4 - Direct N2O Emissions from managed soils			1412,113		1412,113
3.C.5 - Indirect N2O Emissions from managed soils			567,386		567,386
3.C.6 - Indirect N2O Emissions from manure management			71,157		71,157
3.C.7 - Rice cultivations		44,467			44,467
3.D - Other	**-0,590**	**0,000**	**0,000**	**0,000**	**-0,590**
3.D.1 - Harvested Wood Products	-0,590				-0,590
4 - Waste	**5,428**	**474,408**	**79,173**	**0,000**	**559,009**
4.A - Solid Waste Disposal	0,000	315,417	0,000	0,000	315,417
4.B - Biological Treatment of Solid Waste	0,000	2,348	2,079	0,000	4,427
4.C - Incineration and Open Burning of Waste	5,428	16,422	4,364	0,000	26,214
4.D - Wastewater Treatment and Discharge	0,000	140,221	72,729	0,000	212,950
Memo Items					
International Bunkers	331,081	0,049	2,871	0,000	334,000
1.A.3.a.i - International Aviation (International Bunkers)	331,081	0,049	2,871		334,000
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2017

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-918,246**	**3525,350**	**2528,815**	**341,548**	**5477,467**
1 - Energy	**8707,705**	**297,030**	**124,768**	**0,000**	**9129,504**
1.A - Fuel Combustion Activities	**8701,105**	**120,933**	**124,768**	**0,000**	**8946,805**
1.A.1 - Energy Industries	1364,533	0,393	5,434		1370,359
1.A.2 - Manufacturing Industries and Construction	776,013	1,204	2,736		779,952
1.A.3 - Transport	4207,615	24,022	107,248		4338,885
1.A.4 - Other Sectors	2352,944	95,314	9,350		2457,609
1.B - Fugitive emissions from fuels	**6,601**	**176,098**	**0,000**	**0,000**	**182,698**
1.B.1 - Solid Fuels	3,875	27,588	0,000		31,463
1.B.2 - Oil and Natural Gas	2,726	148,510	0,000		151,235
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**736,549**	**0,000**	**0,000**	**341,548**	**1078,098**
2.A - Mineral Industry	**726,843**	**0,000**	**0,000**	**0,000**	**726,843**
2.A.1 - Cement production	684,356				684,356
2.A.2 - Lime production	5,059				5,059
2.A.3 - Glass Production	23,254				23,254
2.A.4 - Other Process Uses of Carbonates	14,174				14,174
2.C - Metal Industry	**0,035**	**0,000**	**0,000**	**0,000**	**0,035**
2.C.1 - Iron and Steel Production	0,035	0,000			0,035
2.D - Non-Energy Products from Fuels and Solvent Use	**9,672**	**0,000**	**0,000**	**0,000**	**9,672**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.D.1 - Lubricant Use	9,614				9,614
2.D.2 - Paraffin Wax Use	0,058				0,058
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**341,548**	**341,548**
2.F.1 - Refrigeration and Air Conditioning				105,269	105,269
2.F.2 - Foam Blowing Agents				190,155	190,155
2.F.6 - Other Applications (please specify)				46,124	46,124
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10367,314**	**2746,121**	**2328,247**	**0,000**	**-5292,946**
3.A - Livestock	**0,000**	**2687,962**	**159,865**	**0,000**	**2847,827**
3.A.1 - Enteric Fermentation		2611,931			2611,931
3.A.2 - Manure Management		76,031	159,865		235,896
3.B - Land	**-10366,814**	**0,000**	**0,000**	**0,000**	**-10366,814**
3.B.1 - Forest land	-6900,206				-6900,206
3.B.2 - Cropland	-3466,608				-3466,608
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**58,159**	**2168,382**	**0,000**	**2226,541**
3.C.1 - Emissions from biomass burning		10,069	3,896		13,965
3.C.4 - Direct N2O Emissions from managed soils			1495,674		1495,674
3.C.5 - Indirect N2O Emissions from managed soils			595,954		595,954
3.C.6 - Indirect N2O Emissions from manure management			72,858		72,858
3.C.7 - Rice cultivations		48,089			48,089
3.D - Other	**-0,500**	**0,000**	**0,000**	**0,000**	**-0,500**
3.D.1 - Harvested Wood Products	-0,500				-0,500
4 - Waste	**4,813**	**482,199**	**75,801**	**0,000**	**562,812**
4.A - Solid Waste Disposal	0,000	320,091	0,000	0,000	320,091
4.B - Biological Treatment of Solid Waste	0,000	1,947	1,724	0,000	3,671
4.C - Incineration and Open Burning of Waste	4,813	14,560	3,869	0,000	23,242
4.D - Wastewater Treatment and Discharge	0,000	145,601	70,207	0,000	215,808
Memo Items					
International Bunkers	341,089	0,050	2,958	0,000	344,097
1.A.3.a.i - International Aviation (International Bunkers)	341,089	0,050	2,958		344,097
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

Inventory year: 2018

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**474,484**	**3661,573**	**2587,295**	**193,688**	**6917,040**
1 - Energy	**10442,593**	**343,907**	**136,980**	**0,000**	**10923,480**
1.A - Fuel Combustion Activities	**10434,200**	**135,502**	**136,980**	**0,000**	**10706,682**
1.A.1 - Energy Industries	1458,662	0,471	5,597		1464,729

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A.2 - Manufacturing Industries and Construction	853,816	1,506	3,396		858,718
1.A.3 - Transport	4846,560	27,664	116,177		4990,401
1.A.4 - Other Sectors	3275,162	105,862	11,811		3392,834
1.B - Fugitive emissions from fuels	**8,393**	**208,405**	**0,000**	**0,000**	**216,798**
1.B.1 - Solid Fuels	5,435	38,998	0,000		44,433
1.B.2 - Oil and Natural Gas	2,957	169,407	0,000		172,364
1.C - Carbon dioxide Transport and Storage	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial Processes and Product Use	**968,864**	**0,000**	**0,000**	**193,688**	**1162,553**
2.A - Mineral Industry	**957,684**	**0,000**	**0,000**	**0,000**	**957,684**
2.A.1 - Cement production	915,983				915,983
2.A.2 - Lime production	6,515				6,515
2.A.3 - Glass Production	22,257				22,257
2.A.4 - Other Process Uses of Carbonates	12,929				12,929
2.C - Metal Industry	**0,049**	**0,000**	**0,000**	**0,000**	**0,049**
2.C.1 - Iron and Steel Production	0,049	0,000			0,049
2.D - Non-Energy Products from Fuels and Solvent Use	**11,131**	**0,000**	**0,000**	**0,000**	**11,131**
2.D.1 - Lubricant Use	11,095				11,095
2.D.2 - Paraffin Wax Use	0,036				0,036
2.F - Product Uses as Substitutes for Ozone Depleting Substances	**0,000**	**0,000**	**0,000**	**193,688**	**193,688**
2.F.1 - Refrigeration and Air Conditioning				117,459	117,459
2.F.2 - Foam Blowing Agents				29,894	29,894
2.F.6 - Other Applications (please specify)				46,335	46,335
2.G - Other Product Manufacture and Use	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from Product Uses			0,000		
3 - Agriculture, Forestry, and Other Land Use	**-10941,371**	**2824,034**	**2372,307**	**0,000**	**-5745,029**
3.A - Livestock	**0,000**	**2762,758**	**163,387**	**0,000**	**2926,145**
3.A.1 - Enteric Fermentation		2684,639			2684,639
3.A.2 - Manure Management		78,118	163,387		241,505
3.B - Land	**-10940,831**	**0,000**	**0,000**	**0,000**	**-10940,831**
3.B.1 - Forest land	-7471,735				-7471,735
3.B.2 - Cropland	-3469,096				-3469,096
3.C - Aggregate sources and non-CO2 emissions sources on land	**0,000**	**61,276**	**2208,920**	**0,000**	**2270,197**
3.C.1 - Emissions from biomass burning		10,305	3,977		14,282
3.C.4 - Direct N2O Emissions from managed soils			1539,647		1539,647
3.C.5 - Indirect N2O Emissions from managed soils			590,657		590,657
3.C.6 - Indirect N2O Emissions from manure management			74,639		74,639
3.C.7 - Rice cultivations		50,971			50,971
3.D - Other	**-0,540**	**0,000**	**0,000**	**0,000**	**-0,540**
3.D.1 - Harvested Wood Products	-0,540				-0,540
4 - Waste	**4,398**	**493,632**	**78,008**	**0,000**	**576,037**
4.A - Solid Waste Disposal	0,000	325,958	0,000	0,000	325,958
4.B - Biological Treatment of Solid Waste	0,000	1,827	1,618	0,000	3,445

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
4.C - Incineration and Open Burning of Waste	4,398	13,305	3,535	0,000	21,238
4.D - Wastewater Treatment and Discharge	0,000	152,543	72,854	0,000	225,397
Memo Items					
International Bunkers	340,613	0,050	2,954	0,000	343,616
1.A.3.a.i - International Aviation (International Bunkers)	340,613	0,050	2,954		343,616
1.A.3.d.i - International water-borne navigation (International bunkers)	0,000	0,000	0,000		0,000

21. Summary table of GHG emissions in CO_2 eq in 1990-2018

Year	CO2 emissions	CO2 removals	CH4	N2O	HFC-32	HFC-125	HFC-134a	HFC-143a	HFC-227ea	Total Emissions	Net Emissions
1990	20304,803	-10273,525	3846,941	4138,931	0,000	0,000	0,000	0,000	0,000	28290,676	18017,151
1991	17925,708	-10294,483	3704,488	4356,357	0,000	0,000	0,000	0,000	0,000	25996,726	15702,243
1992	14295,314	-10289,530	3352,959	3880,880	0,000	0,000	0,000	0,000	0,000	21539,438	11249,907
1993	10523,650	-10293,574	2971,196	1924,974	0,000	0,000	0,000	0,000	0,000	15430,097	5136,523
1994	7277,614	-10309,734	2410,472	1478,600	0,000	0,000	0,000	0,000	0,000	11177,030	867,295
1995	5332,956	-10323,647	2176,591	1292,486	0,000	0,000	3,637	0,000	0,000	8816,306	-1507,341
1996	5136,610	-10032,159	2099,492	1275,408	0,000	0,000	4,094	0,000	0,000	8526,588	-1505,570
1997	5506,409	-10303,286	2155,286	1617,677	0,000	0,000	4,718	0,000	0,000	9295,150	-1008,136
1998	4951,275	-10331,511	2185,710	1548,408	0,000	0,000	5,510	0,000	0,000	8703,303	-1628,208
1999	4771,128	-10339,095	2209,280	1584,082	0,000	0,000	6,469	0,000	0,000	8582,206	-1756,889
2000	4448,403	-10303,877	2245,169	1575,327	0,000	0,000	7,597	0,000	0,000	8283,408	-2020,468
2001	4840,439	-10221,398	2265,426	1602,858	0,000	0,000	8,893	0,000	0,000	8726,221	-1495,177
2002	4530,101	-10239,260	2306,882	1593,301	0,000	0,000	10,357	0,000	0,000	8453,251	-1786,009
2003	4795,254	-9914,316	2284,670	1583,977	0,000	0,000	11,990	0,000	0,000	8688,967	-1225,349
2004	5083,202	-10302,866	2329,855	1608,294	0,000	0,000	13,661	0,000	0,000	9046,496	-1256,370
2005	5486,498	-10205,986	2376,823	1661,905	0,000	0,000	15,759	0,000	0,000	9553,947	-652,039
2006	5588,400	-10208,929	2447,291	1726,037	0,000	0,000	17,896	0,000	0,000	9785,756	-423,173
2007	6502,903	-10309,902	2535,281	1776,335	0,000	0,000	16,660	0,000	0,000	10846,729	536,827
2008	7297,916	-10250,705	2663,859	1926,465	0,000	0,000	22,139	0,000	0,000	11925,575	1674,870
2009	6875,947	-10303,402	2769,460	2000,723	0,000	0,000	24,606	0,000	0,000	11687,085	1383,683
2010	6367,899	-10334,544	2856,693	1992,973	0,459	3,827	43,157	2,539	0,000	11282,251	947,707
2011	7912,950	-10295,774	2945,485	2090,930	2,576	18,742	32,929	9,845	0,000	13031,327	2735,553
2012	9474,134	-10324,340	3038,023	2169,013	3,100	23,404	36,443	16,116	44,759	14821,598	4497,258
2013	9422,457	-10216,191	3098,900	2199,645	3,263	28,012	34,527	22,374	77,010	14900,008	4683,817
2014	9705,698	-10327,718	3252,003	2381,406	3,845	33,328	42,285	26,877	109,407	15572,361	5244,643
2015	10275,014	-10336,530	3322,620	2385,888	4,026	37,695	45,923	32,633	99,607	16218,535	5882,005
2016	8840,465	-10302,540	3398,443	2405,133	4,277	42,011	53,505	37,810	168,297	14962,241	4659,700
2017	9449,068	-10367,314	3525,350	2528,815	4,485	46,471	56,920	43,518	190,155	15868,040	5500,726
2018	11415,855	-10941,371	3661,573	2587,295	4,556	49,282	62,523	47,433	29,894	17858,411	6917,040

22. Summary table of GHG emissions in CO_2 eq by sectors in 1990-2018

Year	Energy	IPPU	Agriculture	FOLU	Waste	Total CO2 eq	Net CO2 eq.
1990	20529,719	871,638	6437,637	-10273,525	451,682	28290,676	18017,151
1991	18063,523	829,765	6641,579	-10294,483	451,686	25986,553	15692,070
1992	14382,567	636,145	6071,064	-10289,530	439,378	21529,154	11239,623
1993	10629,428	393,427	3957,862	-10293,574	439,104	15419,821	5126,247
1994	7379,889	210,270	3154,111	-10309,734	422,415	11166,686	856,952
1995	5398,675	169,149	2814,657	-10323,647	423,188	8805,669	-1517,978
1996	5084,389	271,207	2734,142	-10032,159	425,864	8515,603	-1516,555
1997	5387,290	331,971	3144,841	-10303,286	419,987	9284,089	-1019,196
1998	4813,977	346,578	3114,813	-10331,511	415,535	8690,903	-1640,609
1999	4800,656	202,095	3154,514	-10339,095	413,694	8570,960	-1768,135
2000	4421,042	227,930	3210,044	-10303,877	417,481	8276,497	-2027,380
2001	4837,803	236,972	3226,578	-10221,398	416,263	8717,616	-1503,781
2002	4478,844	269,261	3270,211	-10239,260	422,325	8440,641	-1798,619
2003	4625,340	370,012	3254,211	-9914,316	426,328	8675,891	-1238,425
2004	4859,120	435,130	3308,048	-10302,866	432,714	9035,011	-1267,855
2005	5213,316	482,930	3414,776	-10205,986	429,963	9540,985	-665,001
2006	5239,271	556,227	3549,578	-10208,929	434,549	9779,624	-429,305
2007	6160,400	585,435	3651,920	-10309,902	433,423	10831,179	521,277
2008	7070,779	507,011	3893,094	-10250,705	439,495	11910,379	1659,674
2009	6911,588	266,180	4033,822	-10303,402	459,145	11670,735	1367,333
2010	6273,356	431,877	4089,427	-10334,544	472,887	11267,547	933,003
2011	7658,652	569,079	4302,008	-10295,774	483,717	13013,456	2717,682
2012	9205,812	735,169	4369,795	-10324,340	494,216	14804,992	4480,652
2013	8958,767	950,554	4459,238	-10216,191	517,627	14886,187	4669,995
2014	9221,209	1073,505	4732,395	-10327,718	527,741	15554,850	5227,132
2015	9920,106	944,071	4803,018	-10336,530	536,210	16203,405	5866,874
2016	8546,374	953,259	4891,298	-10302,540	559,009	14949,940	4647,400
2017	9129,504	1078,098	5074,368	-10367,314	562,812	15844,781	5477,467
2018	10923,480	1162,553	5196,342	-10941,371	576,037	17858,411	6917,040

The GWP values used for conversion to CO_2 equivalent are taken from the IPCC Second Assessment Report to ensure comparability with the previous 3rd NGHGI output data.

Annex 1. Assessment of uncertainty in total 1990-2018 inventory

Base year for assessment of uncertainty in a trend: 1990, Year T: 2018

A	B	C	D	E	F	G	H	I	J	K	L	M
2006 IPCC Categories	Gas	Base Year emissions or removals (Gg CO2 eq)	Year T emissions or removals (Gg CO2 eq)	Activity Data Uncertainty (%)	Emission Factor Uncertainty (%)	Combined Uncertainty (%)	Contribution to Variance by Category in Year T	Type A Sensitivity (%)	Type B Sensitivity (%)	Uncertainty in trend in national emissions introduced by emission factor uncertainty (%)	Uncertainty in trend in national emissions introduced by activity data uncertainty (%)	Uncertainty introduced into the trend in total national emissions (%)
1.A - Fuel Combustion Activities												
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Liquid Fuels	CO2	583,548	171,630	5	6,136	7,915	0,035	0,003	0,009	0,019	0,066	0,005
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Liquid Fuels	CH4	0,477	0,140	5	228,788	228,843	0,000	0,000	0,000	0,001	0,000	0,000
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Liquid Fuels	N2O	1,407	0,412	5	228,788	228,843	0,000	0,000	0,000	0,002	0,000	0,000
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Solid Fuels	CO2	1016,562	1060,279	5	12,412	13,381	3,808	0,036	0,057	0,443	0,405	0,360
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Solid Fuels	CH4	0,220	0,224	5	200,000	200,062	0,000	0,000	0,000	0,001	0,000	0,000
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Solid Fuels	N2O	4,880	4,967	5	222,222	222,278	0,023	0,000	0,000	0,037	0,002	0,001
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Gaseous Fuels	CO2	1091,392	44,054	5	3,922	6,354	0,001	0,021	0,002	0,081	0,017	0,007
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Gaseous Fuels	CH4	0,409	0,016	5	200,000	200,062	0,000	0,000	0,000	0,002	0,000	0,000
1.A.1.a.ii - Combined Heat and Power Generation (CHP) - Gaseous Fuels	N2O	0,603	0,024	5	200,000	200,062	0,000	0,000	0,000	0,002	0,000	0,000
1.A.1.a.iii - Heat Plants - Liquid Fuels	CO2	1991,933	49,712	5	6,136	7,915	0,003	0,039	0,003	0,242	0,019	0,059
1.A.1.a.iii - Heat Plants - Liquid Fuels	CH4	1,621	0,040	5	228,788	228,843	0,000	0,000	0,000	0,007	0,000	0,000
1.A.1.a.iii - Heat Plants - Liquid Fuels	N2O	4,787	0,119	5	228,788	228,843	0,000	0,000	0,000	0,022	0,000	0,000
1.A.1.a.iii - Heat Plants - Solid Fuels	CO2	1872,595	0,000	5	12,412	13,381	0,000	0,040	0,000	0,492	0,000	0,242
1.A.1.a.iii - Heat Plants - Solid Fuels	CH4	0,409	0,000	5	200,000	200,062	0,000	0,000	0,000	0,002	0,000	0,000
1.A.1.a.iii - Heat Plants - Solid Fuels	N2O	9,061	0,000	5	222,222	222,278	0,000	0,000	0,000	0,043	0,000	0,002
1.A.1.a.iii - Heat Plants - Gaseous Fuels	CO2	1556,977	132,987	5	3,922	6,354	0,014	0,026	0,007	0,101	0,051	0,013
1.A.1.a.iii - Heat Plants - Gaseous Fuels	CH4	0,583	0,050	5	200,000	200,062	0,000	0,000	0,000	0,002	0,000	0,000
1.A.1.a.iii - Heat Plants - Gaseous Fuels	N2O	0,860	0,073	5	200,000	200,062	0,000	0,000	0,000	0,003	0,000	0,000
1.A.2.a - Iron and Steel - Liquid Fuels	CO2	0,000	0,027	5	6,136	7,915	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.a - Iron and Steel - Liquid Fuels	CH4	0,000	0,000	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.a - Iron and Steel - Liquid Fuels	N2O	0,000	0,000	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.a - Iron and Steel - Solid Fuels	CO2	0,000	0,171	5	12,460	13,426	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.a - Iron and Steel - Solid Fuels	CH4	0,000	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.a - Iron and Steel - Solid Fuels	N2O	0,000	0,001	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.c - Chemicals - Liquid Fuels	CO2	0,000	0,239	5	6,136	7,915	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.c - Chemicals - Liquid Fuels	CH4	0,000	0,000	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.c - Chemicals - Liquid Fuels	N2O	0,000	0,001	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.d - Pulp, Paper and Print - Solid Fuels	CO2	0,000	2,136	5	12,460	13,426	0,000	0,000	0,000	0,001	0,001	0,000
1.A.2.d - Pulp, Paper and Print - Solid Fuels	CH4	0,000	0,005	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.d - Pulp, Paper and Print - Solid Fuels	N2O	0,000	0,010	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000

A	B	C	D	E	F	G	H	I	J	K	L	M
2006 IPCC Categories	Gas	Base Year emissions or removals (Gg CO2 eq)	Year T emissions or removals (Gg CO2 eq)	Activity Data Uncertainty (%)	Emission Factor Uncertainty (%)	Combined Uncertainty (%)	Contribution to Variance by Category in Year T	Type A Sensitivity (%)	Type B Sensitivity (%)	Uncertainty in trend in national emissions introduced by emission factor uncertainty (%)	Uncertainty in trend in national emissions introduced by activity data uncertainty (%)	Uncertainty introduced into the trend in total national emissions (%)
1.A.2.d - Pulp, Paper and Print - Gaseous Fuels	CO2	0,000	5,665	5	3,922	6,354	0,000	0,000	0,000	0,001	0,002	0,000
1.A.2.d - Pulp, Paper and Print - Gaseous Fuels	CH4	0,000	0,002	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.d - Pulp, Paper and Print - Gaseous Fuels	N2O	0,000	0,003	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Liquid Fuels	CO2	0,000	16,311	5	6,136	7,915	0,000	0,001	0,001	0,005	0,006	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Liquid Fuels	CH4	0,000	0,013	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Liquid Fuels	N2O	0,000	0,039	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Solid Fuels	CO2	0,000	29,385	5	12,460	13,426	0,003	0,002	0,002	0,020	0,011	0,001
1.A.2.e - Food Processing, Beverages and Tobacco - Solid Fuels	CH4	0,000	0,064	5	200,000	200,062	0,000	0,000	0,000	0,001	0,000	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Solid Fuels	N2O	0,000	0,141	5	222,222	222,278	0,000	0,000	0,000	0,002	0,000	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Gaseous Fuels	CO2	0,000	36,351	5	3,922	6,354	0,001	0,002	0,002	0,008	0,014	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Gaseous Fuels	CH4	0,000	0,014	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.e - Food Processing, Beverages and Tobacco - Gaseous Fuels	N2O	0,000	0,020	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.f - Non-Metallic Minerals - Liquid Fuels	CO2	0,000	3,305	5	6,136	7,915	0,000	0,000	0,000	0,001	0,001	0,000
1.A.2.f - Non-Metallic Minerals - Liquid Fuels	CH4	0,000	0,003	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.f - Non-Metallic Minerals - Liquid Fuels	N2O	0,000	0,008	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.f - Non-Metallic Minerals - Solid Fuels	CO2	0,000	176,868	5	12,460	13,426	0,107	0,010	0,010	0,119	0,068	0,019
1.A.2.f - Non-Metallic Minerals - Solid Fuels	CH4	0,000	0,371	5	200,000	200,062	0,000	0,000	0,000	0,004	0,000	0,000
1.A.2.f - Non-Metallic Minerals - Solid Fuels	N2O	0,000	0,822	5	222,222	222,278	0,001	0,000	0,000	0,010	0,000	0,000
1.A.2.f - Non-Metallic Minerals - Gaseous Fuels	CO2	0,000	3,367	5	3,922	6,354	0,000	0,000	0,000	0,001	0,001	0,000
1.A.2.f - Non-Metallic Minerals - Gaseous Fuels	CH4	0,000	0,001	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.f - Non-Metallic Minerals - Gaseous Fuels	N2O	0,000	0,002	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.g - Transport Equipment - Solid Fuels	CO2	0,000	1,633	5	12,460	13,426	0,000	0,000	0,000	0,001	0,001	0,000
1.A.2.g - Transport Equipment - Solid Fuels	CH4	0,000	0,004	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.g - Transport Equipment - Solid Fuels	N2O	0,000	0,008	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.h - Machinery - Solid Fuels	CO2	0,000	0,013	5	12,460	13,426	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.h - Machinery - Solid Fuels	CH4	0,000	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.h - Machinery - Solid Fuels	N2O	0,000	0,000	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.h - Machinery - Gaseous Fuels	CO2	0,000	17,046	5	3,922	6,354	0,000	0,001	0,001	0,004	0,007	0,000
1.A.2.h - Machinery - Gaseous Fuels	CH4	0,000	0,006	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.h - Machinery - Gaseous Fuels	N2O	0,000	0,009	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.i - Mining (excluding fuels) and Quarrying - Liquid Fuels	CO2	0,000	1,059	5	6,136	7,915	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.i - Mining (excluding fuels) and Quarrying - Liquid Fuels	CH4	0,000	0,001	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000

A	B	C	D	E	F	G	H	I	J	K	L	M
2006 IPCC Categories	Gas	Base Year emissions or removals (Gg CO2 eq)	Year T emissions or removals (Gg CO2 eq)	Activity Data Uncertainty (%)	Emission Factor Uncertainty (%)	Combined Uncertainty (%)	Contribution to Variance by Category in Year T	Type A Sensitivity (%)	Type B Sensitivity (%)	Uncertainty in trend in national emissions introduced by emission factor uncertainty (%)	Uncertainty in trend in national emissions introduced by activity data uncertainty (%)	Uncertainty introduced into the trend in total national emissions (%)
1.A.2.i - Mining (excluding fuels) and Quarrying - Liquid Fuels	N2O	0,000	0,003	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.i - Mining (excluding fuels) and Quarrying - Solid Fuels	CO2	0,000	1,250	5	12,460	13,426	0,000	0,000	0,000	0,001	0,000	0,000
1.A.2.i - Mining (excluding fuels) and Quarrying - Solid Fuels	CH4	0,000	0,003	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.i - Mining (excluding fuels) and Quarrying - Solid Fuels	N2O	0,000	0,006	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.k - Construction - Liquid Fuels	CO2	0,000	60,239	5	6,136	7,915	0,004	0,003	0,003	0,020	0,023	0,001
1.A.2.k - Construction - Liquid Fuels	CH4	0,000	0,047	5	228,788	228,843	0,000	0,000	0,000	0,001	0,000	0,000
1.A.2.k - Construction - Liquid Fuels	N2O	0,000	0,139	5	228,788	228,843	0,000	0,000	0,000	0,002	0,000	0,000
1.A.2.k - Construction - Solid Fuels	CO2	12,714	0,726	5	12,460	13,426	0,000	0,000	0,000	0,003	0,000	0,000
1.A.2.k - Construction - Solid Fuels	CH4	0,028	0,002	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.k - Construction - Solid Fuels	N2O	0,062	0,004	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.k - Construction - Gaseous Fuels	CO2	1,885	0,000	5	3,922	6,354	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.k - Construction - Gaseous Fuels	CH4	0,001	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.k - Construction - Gaseous Fuels	N2O	0,001	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Liquid Fuels	CO2	0,000	0,044	5	6,136	7,915	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Liquid Fuels	CH4	0,000	0,000	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Liquid Fuels	N2O	0,000	0,000	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Solid Fuels	CO2	0,000	2,283	5	12,460	13,426	0,000	0,000	0,000	0,002	0,001	0,000
1.A.2.l - Textile and Leather - Solid Fuels	CH4	0,000	0,005	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Solid Fuels	N2O	0,000	0,011	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Gaseous Fuels	CO2	0,000	1,041	5	3,922	6,354	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Gaseous Fuels	CH4	0,000	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.l - Textile and Leather - Gaseous Fuels	N2O	0,000	0,001	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.m - Non-specified Industry - Liquid Fuels	CO2	209,506	61,702	5	6,136	7,915	0,005	0,001	0,003	0,007	0,024	0,001
1.A.2.m - Non-specified Industry - Liquid Fuels	CH4	0,171	0,050	5	228,788	228,843	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.m - Non-specified Industry - Liquid Fuels	N2O	0,503	0,148	5	228,788	228,843	0,000	0,000	0,000	0,001	0,000	0,000
1.A.2.m - Non-specified Industry - Solid Fuels	CO2	249,303	414,418	5	12,460	13,426	0,586	0,017	0,022	0,213	0,158	0,070
1.A.2.m - Non-specified Industry - Solid Fuels	CH4	0,545	0,906	5	200,000	200,062	0,001	0,000	0,000	0,007	0,000	0,000
1.A.2.m - Non-specified Industry - Solid Fuels	N2O	1,206	2,005	5	222,222	222,278	0,004	0,000	0,000	0,018	0,001	0,000
1.A.2.m - Non-specified Industry - Gaseous Fuels	CO2	793,568	18,538	5	3,922	6,354	0,000	0,016	0,001	0,062	0,007	0,004
1.A.2.m - Non-specified Industry - Gaseous Fuels	CH4	0,297	0,007	5	200,000	200,062	0,000	0,000	0,000	0,001	0,000	0,000
1.A.2.m - Non-specified Industry - Gaseous Fuels	N2O	0,439	0,010	5	200,000	200,062	0,000	0,000	0,000	0,002	0,000	0,000
1.A.2.m - Non-specified Industry - Biomass	CO2	3,494	0,369	5	18,694	19,351	0,000	0,000	0,000	0,001	0,000	0,000
1.A.2.m - Non-specified Industry - Biomass	CH4	0,020	0,002	5	245,455	245,505	0,000	0,000	0,000	0,000	0,000	0,000
1.A.2.m - Non-specified Industry - Biomass	N2O	0,039	0,004	5	281,818	281,863	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.a.i - International Aviation (International Bunkers) - Liquid Fuels	CO2	366,257	340,613	5	4,698	6,861	0,103	0,011	0,018	0,050	0,130	0,019

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1.A.3.a.i - International Aviation (International Bunkers) - Liquid Fuels	CH4	0,054	0,050	5	100,000	100,125	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.a.i - International Aviation (International Bunkers) - Liquid Fuels	N2O	3,176	2,954	5	150,000	150,083	0,004	0,000	0,000	0,014	0,001	0,000
1.A.3.a.ii - Domestic Aviation - Liquid Fuels	CO2	46,805	32,440	5	5,000	7,071	0,001	0,001	0,002	0,004	0,012	0,000
1.A.3.a.ii - Domestic Aviation - Liquid Fuels	CH4	0,007	0,005	5	5,000	7,071	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.a.ii - Domestic Aviation - Liquid Fuels	N2O	0,406	0,281	5	5,000	7,071	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.b - Road Transportation - Liquid Fuels	CO2	2824,570	4354,582	5	3,068	5,866	12,345	0,175	0,235	0,537	1,662	3,052
1.A.3.b - Road Transportation - Liquid Fuels	CH4	20,953	26,000	5	244,693	244,744	0,766	0,001	0,001	0,235	0,010	0,055
1.A.3.b - Road Transportation - Liquid Fuels	N2O	42,073	66,282	5	209,938	209,997	3,665	0,003	0,004	0,564	0,025	0,319
1.A.3.c - Railways - Liquid Fuels	CO2	125,253	4,142	5	2,024	5,394	0,000	0,002	0,000	0,005	0,002	0,000
1.A.3.c - Railways - Liquid Fuels	CH4	0,147	0,005	5	150,602	150,685	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.c - Railways - Liquid Fuels	N2O	14,986	0,496	5	200,000	200,062	0,000	0,000	0,000	0,058	0,000	0,003
1.A.3.d.ii - Domestic Water-borne Navigation - Liquid Fuels	CO2	4,397	0,000	5	4,301	6,596	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.d.ii - Domestic Water-borne Navigation - Liquid Fuels	CH4	0,009	0,000	5	50,000	50,249	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.d.ii - Domestic Water-borne Navigation - Liquid Fuels	N2O	0,037	0,000	5	140,000	140,089	0,000	0,000	0,000	0,000	0,000	0,000
1.A.3.e.ii - Off-road - Liquid Fuels	CO2	1108,646	455,396	5	3,874	6,325	0,157	0,001	0,025	0,004	0,174	0,030
1.A.3.e.ii - Off-road - Liquid Fuels	CH4	3,357	1,654	5	150,219	150,302	0,001	0,000	0,000	0,003	0,001	0,000
1.A.3.e.ii - Off-road - Liquid Fuels	N2O	122,793	49,118	5	200,000	200,062	1,827	0,000	0,003	0,010	0,019	0,000
1.A.4.a - Commercial/Institutional - Liquid Fuels	CO2	0,000	249,822	5	6,136	7,915	0,074	0,013	0,013	0,083	0,095	0,016
1.A.4.a - Commercial/Institutional - Liquid Fuels	CH4	0,000	0,658	5	200,000	200,062	0,000	0,000	0,000	0,007	0,000	0,000
1.A.4.a - Commercial/Institutional - Liquid Fuels	N2O	0,000	0,583	5	228,788	228,843	0,000	0,000	0,000	0,007	0,000	0,000
1.A.4.a - Commercial/Institutional - Solid Fuels	CO2	0,000	319,189	5	12,460	13,426	0,347	0,017	0,017	0,215	0,122	0,061
1.A.4.a - Commercial/Institutional - Solid Fuels	CH4	0,000	0,686	5	200,000	200,062	0,000	0,000	0,000	0,007	0,000	0,000
1.A.4.a - Commercial/Institutional - Solid Fuels	N2O	0,000	1,518	5	217,778	217,835	0,002	0,000	0,000	0,018	0,001	0,000
1.A.4.a - Commercial/Institutional - Gaseous Fuels	CO2	0,000	71,594	5	3,922	6,354	0,004	0,004	0,004	0,015	0,027	0,001
1.A.4.a - Commercial/Institutional - Gaseous Fuels	CH4	0,000	0,134	5	200,000	200,062	0,000	0,000	0,000	0,001	0,000	0,000
1.A.4.a - Commercial/Institutional - Gaseous Fuels	N2O	0,000	0,040	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.4.a - Commercial/Institutional - Biomass	CO2	0,000	3,404	5	18,694	19,351	0,000	0,000	0,000	0,003	0,001	0,000
1.A.4.a - Commercial/Institutional - Biomass	CH4	0,000	0,191	5	227,273	227,328	0,000	0,000	0,000	0,002	0,000	0,000
1.A.4.a - Commercial/Institutional - Biomass	N2O	0,000	0,038	5	297,727	297,769	0,000	0,000	0,000	0,001	0,000	0,000
1.A.4.b - Residential - Liquid Fuels	CO2	459,663	784,012	5	6,136	7,915	0,728	0,033	0,042	0,200	0,299	0,130
1.A.4.b - Residential - Liquid Fuels	CH4	1,247	2,214	5	200,000	200,062	0,004	0,000	0,000	0,019	0,001	0,000
1.A.4.b - Residential - Liquid Fuels	N2O	1,105	1,961	5	236,364	236,417	0,004	0,000	0,000	0,019	0,001	0,000

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1.A.4.b - Residential - Solid Fuels	CO2	5022,042	1601,240	5	12,460	13,426	8,743	0,020	0,086	0,248	0,611	0,435
1.A.4.b - Residential - Solid Fuels	CH4	329,229	100,745	5	200,000	200,062	7,685	0,002	0,005	0,308	0,038	0,096
1.A.4.b - Residential - Solid Fuels	N2O	24,300	7,436	5	222,222	222,278	0,052	0,000	0,000	0,025	0,003	0,001
1.A.4.b - Residential - Gaseous Fuels	CO2	356,257	242,752	5	3,922	6,354	0,045	0,006	0,013	0,022	0,093	0,009
1.A.4.b - Residential - Gaseous Fuels	CH4	0,667	0,454	5	200,000	200,062	0,000	0,000	0,000	0,002	0,000	0,000
1.A.4.b - Residential - Gaseous Fuels	N2O	0,197	0,134	5	200,000	200,062	0,000	0,000	0,000	0,001	0,000	0,000
1.A.4.b - Residential - Biomass	CO2	124,051	6,145	5	18,694	19,351	0,000	0,002	0,000	0,043	0,002	0,002
1.A.4.b - Residential - Biomass	CH4	6,978	0,346	5	227,273	227,328	0,000	0,000	0,000	0,029	0,000	0,001
1.A.4.b - Residential - Biomass	N2O	1,373	0,068	5	297,727	297,769	0,000	0,000	0,000	0,008	0,000	0,000
1.A.4.c.i - Stationary - Liquid Fuels	CO2	0,000	0,067	5	6,136	7,915	0,000	0,000	0,000	0,000	0,000	0,000
1.A.4.c.i - Stationary - Liquid Fuels	CH4	0,000	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.4.c.i - Stationary - Liquid Fuels	N2O	0,000	0,000	5	236,364	236,417	0,000	0,000	0,000	0,000	0,000	0,000
1.A.4.c.i - Stationary - Solid Fuels	CO2	27,244	6,486	5	12,460	13,426	0,000	0,000	0,000	0,003	0,002	0,000
1.A.4.c.i - Stationary - Solid Fuels	CH4	1,786	0,425	5	200,000	200,062	0,000	0,000	0,000	0,003	0,000	0,000
1.A.4.c.i - Stationary - Solid Fuels	N2O	0,132	0,031	5	222,222	222,278	0,000	0,000	0,000	0,000	0,000	0,000
1.A.4.c.i - Stationary - Gaseous Fuels	CO2	33,929	0,000	5	3,922	6,354	0,000	0,001	0,000	0,003	0,000	0,000
1.A.4.c.i - Stationary - Gaseous Fuels	CH4	0,064	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.4.c.i - Stationary - Gaseous Fuels	N2O	0,019	0,000	5	200,000	200,062	0,000	0,000	0,000	0,000	0,000	0,000
1.A.4.c.i - Stationary - Biomass	CO2	8,736	0,152	5	18,694	19,351	0,000	0,000	0,000	0,003	0,000	0,000
1.A.4.c.i - Stationary - Biomass	CH4	0,491	0,009	5	227,273	227,328	0,000	0,000	0,000	0,002	0,000	0,000
1.A.4.c.i - Stationary - Biomass	N2O	0,097	0,002	5	297,727	297,769	0,000	0,000	0,000	0,001	0,000	0,000
1.B.1 - Fugitive Emissions from Fuels - Solid Fuels												
1.B.1.a.i.1 - Mining	CO2	29,115	3,507	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.1.a.i.1 - Mining	CH4	223,854	26,960	0	0,000	0,000	0,000	0,003	0,001	0,000	0,000	0,000
1.B.1.a.i.2 - Post-mining seam gas emissions	CO2	2,620	0,316	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.1.a.i.2 - Post-mining seam gas emissions	CH4	20,147	2,426	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.1.a.ii.1 - Mining	CO2	1,181	1,210	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.1.a.ii.1 - Mining	CH4	9,079	9,301	0	0,000	0,000	0,000	0,000	0,001	0,000	0,000	0,000
1.B.1.a.ii.2 - Post-mining seam gas emissions	CO2	0,394	0,403	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.1.a.ii.2 - Post-mining seam gas emissions	CH4	0,303	0,310	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2 - Fugitive Emissions from Fuels - Oil and Natural Gas												
1.B.2.a.i - Venting	CO2	0,389	0,501	5	95,000	95,131	0,000	0,000	0,000	0,002	0,000	0,000
1.B.2.a.i - Venting	CH4	39,296	50,704	5	95,000	95,131	0,440	0,002	0,003	0,181	0,019	0,033
1.B.2.a.iii.2 - Production and Upgrading	CO2	0,450	0,580	5	800,000	800,016	0,004	0,000	0,000	0,017	0,000	0,000
1.B.2.a.iii.2 - Production and Upgrading	CH4	74,362	95,951	5	393,750	393,782	27,005	0,004	0,005	1,419	0,037	2,015
1.B.2.a.iii.3 - Transport	CO2	0,000	0,000	5	125,000	125,100	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2.a.iii.3 - Transport	CH4	0,020	0,026	5	150,000	150,083	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2.b.i - Venting	CO2	6,480	1,843	5	255,833	255,882	0,004	0,000	0,000	0,010	0,001	0,000
1.B.2.b.iii.2 - Production	CO2	0,009	0,003	5	160,417	160,495	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2.b.iii.2 - Production	CH4	24,575	6,989	5	160,821	160,899	0,024	0,000	0,000	0,023	0,003	0,001
1.B.2.b.iii.3 - Processing	CO2	0,002	0,001	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2.b.iii.3 - Processing	CH4	0,504	0,143	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2.b.iii.4 - Transmission and Storage	CO2	0,003	0,000	5	337,500	337,537	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2.b.iii.4 - Transmission and Storage	CH4	28,394	4,057	5	337,500	337,537	0,035	0,000	0,000	0,129	0,002	0,017

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1.B.2.b.iii.5 - Distribution	CO2	0,198	0,029	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
1.B.2.b.iii.5 - Distribution	CH4	78,473	11,537	0	0,000	0,000	0,000	0,001	0,001	0,000	0,000	0,000
1.C - CO2 Transport Injection and Storage												
2.A - Mineral Industry												
2.A.1 - Cement production	CO2	591,522	915,983	35	0,000	35,000	19,443	0,037	0,049	0,000	2,448	5,991
2.A.2 - Lime production	CO2	65,536	6,515	15	0,000	15,000	0,000	0,001	0,000	0,000	0,007	0,000
2.A.3 - Glass Production	CO2	69,275	22,257	5	0,000	5,000	0,000	0,000	0,001	0,000	0,008	0,000
2.A.4.a - Ceramics	CO2	144,710	12,929	0	0,000	0,000	0,000	0,002	0,001	0,000	0,000	0,000
2.B - Chemical Industry												
2.C - Metal Industry												
2.C.1 - Iron and Steel Production	CO2	0,596	0,049	10	0,000	10,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Non-Energy Products from Fuels and Solvent Use												
2.D.1 - Lubricant Use	CO2	0,000	11,095	10	0,000	10,000	0,000	0,001	0,001	0,000	0,008	0,000
2.D.2 - Paraffin Wax Use	CO2	0,000	0,036	10	0,000	10,000	0,000	0,000	0,000	0,000	0,000	0,000
2.E - Electronics Industry												
2.F - Product Uses as Substitutes for Ozone Depleting Substances												
2.F.1.a - Refrigeration and Stationary Air Conditioning	CH2F2	0,000	1,773	100	0,000	100,000	0,001	0,000	0,000	0,000	0,014	0,000
2.F.1.a - Refrigeration and Stationary Air Conditioning	CHF2CF3	0,000	26,728	100	0,000	100,000	0,135	0,001	0,001	0,000	0,204	0,042
2.F.1.a - Refrigeration and Stationary Air Conditioning	CH2FCF3	0,000	32,399	100	9,000	100,404	0,200	0,002	0,002	0,016	0,247	0,061
2.F.1.a - Refrigeration and Stationary Air Conditioning	CF3CH3	0,000	30,491	100	0,000	100,000	0,176	0,002	0,002	0,000	0,233	0,054
2.F.1.b - Mobile Air Conditioning	CHF2CF3	0,000	0,759	5	0,000	5,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1.b - Mobile Air Conditioning	CH2FCF3	0,000	24,095	5	0,000	5,000	0,000	0,001	0,001	0,000	0,009	0,000
2.F.1.b - Mobile Air Conditioning	CF3CH3	0,000	1,214	5	0,000	5,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.2 - Foam Blowing Agents	CF3CHFCF3	0,000	29,894	100	0,000	100,000	0,169	0,002	0,002	0,000	0,228	0,052
2.F.6 - Other Applications (please specify)	CH2F2	0,000	2,783	100	19,000	101,789	0,002	0,000	0,000	0,003	0,021	0,000
2.F.6 - Other Applications (please specify)	CHF2CF3	0,000	21,795	100	20,000	101,980	0,093	0,001	0,001	0,024	0,166	0,028
2.F.6 - Other Applications (please specify)	CH2FCF3	0,000	6,029	100	9,000	100,404	0,007	0,000	0,000	0,003	0,046	0,002

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2.F.6 - Other Applications (please specify)	CF3 CH3	0,000	15,728	100	21,000	102,181	0,049	0,001	0,001	0,018	0,120	0,015
2.G - Electrical Equipment												
3.A - Livestock												
3.A.1.a.i - Dairy Cows	CH4	648,390	1040,935	0	0,000	0,000	0,000	0,042	0,056	0,000	0,000	0,000
3.A.1.a.ii - Other Cattle	CH4	685,435	800,175	0	0,000	0,000	0,000	0,029	0,043	0,000	0,000	0,000
3.A.1.c - Sheep and goats	CH4	1046,784	647,635	0	0,000	0,000	0,000	0,013	0,035	0,000	0,000	0,000
3.A.1.e - Camels	CH4	0,193	0,238	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.1.f - Horses	CH4	118,192	188,503	0	0,000	0,000	0,000	0,008	0,010	0,000	0,000	0,000
3.A.1.g - Mules and Asses	CH4	2,961	6,078	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.1.h - Swine	CH4	8,262	1,077	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.a.i - Dairy cows	N2O	19,627	36,942	0	0,000	0,000	0,000	0,002	0,002	0,000	0,000	0,000
3.A.2.a.ii - Other cattle	N2O	21,181	21,539	0	0,000	0,000	0,000	0,001	0,001	0,000	0,000	0,000
3.A.2.c - Sheep and goats	N2O	132,734	82,121	0	0,000	0,000	0,000	0,002	0,004	0,000	0,000	0,000
3.A.2.e - Camels	N2O	0,007	0,009	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.f - Horses	N2O	12,122	19,334	0	0,000	0,000	0,000	0,001	0,001	0,000	0,000	0,000
3.A.2.g - Mules and Asses	N2O	0,300	0,615	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.h - Swine	N2O	11,606	1,512	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.i - Poultry	N2O	3,043	1,314	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.a.i - Dairy cows	CH4	21,259	34,129	0	0,000	0,000	0,000	0,001	0,002	0,000	0,000	0,000
3.A.2.a.ii - Other cattle	CH4	14,451	16,912	0	0,000	0,000	0,000	0,001	0,001	0,000	0,000	0,000
3.A.2.c - Sheep and goats	CH4	20,936	12,953	0	0,000	0,000	0,000	0,000	0,001	0,000	0,000	0,000
3.A.2.e - Camels	CH4	0,005	0,007	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.f - Horses	CH4	7,157	11,415	0	0,000	0,000	0,000	0,000	0,001	0,000	0,000	0,000
3.A.2.g - Mules and Asses	CH4	0,178	0,365	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.h - Swine	CH4	8,262	1,077	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.A.2.i - Poultry	CH4	2,922	1,262	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B - Land												
3.B.1.a - Forest land Remaining Forest land	CO2	-6850,850	-7471,735	32,1	34,000	46,759	2308,974	0,259	0,403	8,811	18,312	412,964
3.B.2.a - Cropland Remaining Cropland	CO2	-3415,270	-3469,096	18	75,000	77,130	1354,319	0,115	0,187	8,634	4,768	97,281
3.C - Aggregate sources and non-CO2 emissions sources on land												
3.C.1.a - Biomass burning in forest lands	CH4	0,000	0,075	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.C.1.a - Biomass burning in forest lands	N2O	0,000	0,061	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.C.1.b - Biomass burning in croplands	CH4	6,961	10,230	0	0,000	0,000	0,000	0,000	0,001	0,000	0,000	0,000
3.C.1.b - Biomass burning in croplands	N2O	2,664	3,915	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.C.4 - Direct N2O Emissions from managed soils	N2O	2633,558	1539,647	0	0,000	0,000	0,000	0,027	0,083	0,000	0,000	0,000
3.C.5 - Indirect N2O Emissions from managed soils	N2O	909,996	590,657	0	0,000	0,000	0,000	0,013	0,032	0,000	0,000	0,000
3.C.6 - Indirect N2O Emissions from manure management	N2O	92,861	74,639	0	0,000	0,000	0,000	0,002	0,004	0,000	0,000	0,000
3.C.7 - Rice cultivations	CH4	5,589	50,971	0	0,000	0,000	0,000	0,003	0,003	0,000	0,000	0,000
3.D - Other												
3.D.1 - Harvested Wood Products	CO2	-7,405	-0,540	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
4.A - Solid Waste Disposal												

A	B	C	D	E	F	G	H	I	J	K	L	M
2006 IPCC Categories	Gas	Base Year emissions or removals (Gg CO2 eq)	Year T emissions or removals (Gg CO2 eq)	Activity Data Uncertainty (%)	Emission Factor Uncertainty (%)	Combined Uncertainty (%)	Contribution to Variance by Category in Year T	Type A Sensitivity (%)	Type B Sensitivity (%)	Uncertainty in trend in national emissions introduced by emission factor uncertainty (%)	Uncertainty in trend in national emissions introduced by activity data uncertainty (%)	Uncertainty introduced into the trend in total national emissions (%)
4.A - Solid Waste Disposal	CH4	218,446	325,958	0	0,000	0,000	0,000	0,013	0,018	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste												
4.B - Biological Treatment of Solid Waste	CH4	2,169	1,827	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological Treatment of Solid Waste	N2O	1,921	1,618	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and Open Burning of Waste												
4.C.2 - Open Burning of Waste	CO2	3,533	4,398	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
4.C.2 - Open Burning of Waste	CH4	10,688	13,305	0	0,000	0,000	0,000	0,000	0,001	0,000	0,000	0,000
4.C.2 - Open Burning of Waste	N2O	2,840	3,535	0	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
4.D - Wastewater Treatment and Discharge												
4.D.1 - Domestic Wastewaster Treatment and Discharge	CH4	81,329	136,896	0	0,000	0,000	0,000	0,006	0,007	0,000	0,000	0,000
4.D.1 - Domestic Wastewaster Treatment and Discharge	N2O	63,104	72,854	0	0,000	0,000	0,000	0,003	0,004	0,000	0,000	0,000
4.D.2 - Industrial Wastewater Treatment and Discharge	CH4	67,652	15,647	0	0,000	0,000	0,000	0,001	0,001	0,000	0,000	0,000
Totally												
		Sum(C): 18522,919	**Sum(D): 7270,726**				**Sum(H): 3752,234**					**Sum(M): 523,575**
							Uncertainty in total Inventory: 61,255					**Trend uncertainty: 22,882**

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The National Greenhouse Gas Emission and Absorption Inventory Report of the Kyrgyz Republic for 1990-2018 provides an estimate of greenhouse gas and precursor gas emissions by source and absorption by sink, compiled as a result of the 4th NGHGI in 2019-2021.

The inventory of greenhouse gas emissions and removals of the Kyrgyz Republic for the period 1990-2018 was prepared in full compliance with the 2006 Guidelines for National Greenhouse Gas Inventories using the IPCC Inventory Software 2.54 developed by the Intergovernmental Panel on Climate Change (IPCC).