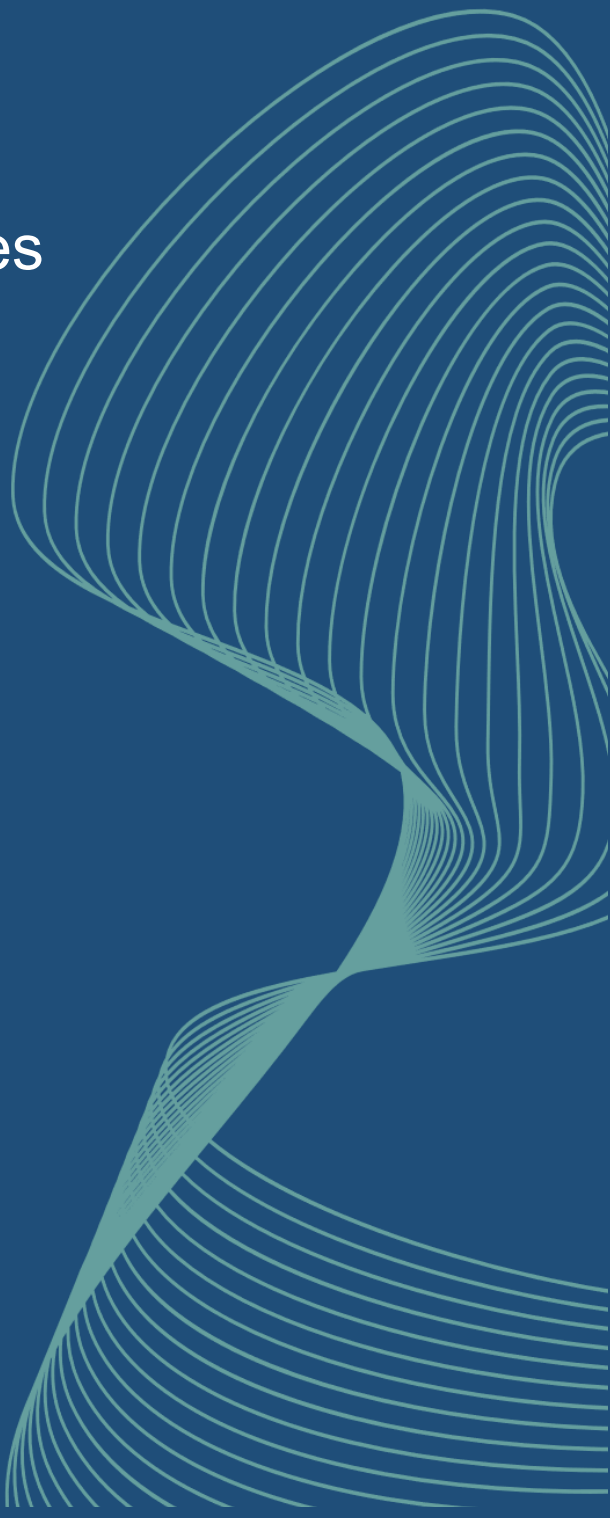
The Kyrgyz Republic National Inventory Report on GHG emissions by sources and removals by sinks for 1990-2020



Bishkek, 2024

The National GHG Inventory Report of the Kyrgyz Republic for the period 1990-2020 was prepared as a result of the fourth National Greenhouse Gas Inventory (NGHGI) conducted within the framework of the project "Support to the Kyrgyz Republic in the preparation of the first Biennial Update Report (BUR 1) and the Fourth National Communication (NC 4) under the UNFCCC" implemented by the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic and the UN Environment Programme with the financial support of the Global Environment Facility.

Reference to the document

Name:	National Inventory Report on the greenhouse gases emissions and removals in the Kyrgyz Republic for the period 1990-2020.
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Participants and stakeholders engaged into the NGHGI process

Representatives of the following organizations participated in the process of conducting the NGHGI fourth round:

- Government bodies:
  - Ministry of Economy,
  - Ministry of Finance,
  - Ministry of Foreign Affairs,
  - Ministry of Agriculture, Processing Industry and Land Reclamation,
  - Ministry of Transport and Roads of the Kyrgyz Republic,
  - Ministry of Emergency Situations,
  - Ministry of Health,
  - Ministry of Education and Science,
  - State Committee for Industry, Energy and Subsoil Use,
  - National Statistical Committee,
  - State Agency for Environmental Protection and Forestry under the Government of the Kyrgyz Republic,
  - State Agency for Regulation of the Fuel and Energy Complex under the Government of the Kyrgyz Republic,
  - State Agency for Land Resources under the Government of the Kyrgyz Republic,
  - State Agency for Architecture, Construction and Housing and Public Utilities under the Government of the Kyrgyz Republic,
  - State Agency for Water Resources under the Government of the Kyrgyz Republic,
  - State Inspectorate for Environmental and Technical Safety under the Government of the Kyrgyz Republic,
  - State Customs Service,
  - Hydrometeorology Agency of the Ministry of Emergency Situations of the Kyrgyz Republic,
  - Climate Finance Centre.
- Research and educational institutions:
  - Central Asian Institute of 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 of the Kyrgyz Republic,
  - Research Institute of Energy and Economics of the Kyrgyz Republic,
  - Kyrgyz Research Institute of Animal Husbandry and Pastures of the KNAU named after K.I. Scriabin,
  - Scientific and Production Center for Forest Research of the Institute of Biology of the National Academy of Sciences of the Kyrgyz Republic,
  - Institute of Physics of the National Academy of Sciences of the Kyrgyz Republic,
  - International Higher School of Medicine International University of Kyrgyzstan,
  - Institute of Water Problems and Hydropower of the National Academy of Sciences of the Kyrgyz Republic,
  - Scientific and Production Center "Preventive Medicine" of the Ministry of Health of the Kyrgyz Republic.
- Private structures and manufacturing sector:

    - LLC Gazprom Kyrgyzstan,
    - JSC "Electric Stations",
    - OJSC Kyrgyzenergoholding,
    - OJSC Kyrgyzneftegaz,
    - JSC "Kant Cement Plant",
    - Thermo Power Plant Bishkek,
    - LLC Metal Rolling Plant named after. M.V. Frunze,
    - CJSC "South Kyrgyz Cement"
    - Interglass LLC,
    - LLC Belovodsky brick factory,
    - State Enterprise Kyrgyzkomur,
    - CJSC "South Kyrgyz Cement".
- Civil society organizations:
    - Public Foundation Center for Development of Renewable Energy Sources 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,
- Municipal organizations and enterprises:
    - Bishkek City Hall,
    - ME BishkekAsphaltService,
    - ME Bishkekvodokanal,
    - ALE "First Bishkek Recycling Company",
    - ME Tazalyk,
    - Center for State Sanitary and Epidemiological Surveillance of Bishkek City.

List of abbreviations

EFDB	Emission Factors Database
SAEPF	State Agency for Environmental Protection and Forestry under the Government of the Kyrgyz Republic
SCEC	State Committee on Ecology and Climate
SE	State enterprise
GA	Government agency
GEF	Global Environment Facility
AD	Activity data
BUR	Biennial update report on the United Nations Framework Convention on Climate Change
EEA	European Environment Agency
EMEP	Cooperative Programme for Monitoring and Evaluation of the Long-Range Transport of Air Pollutants in Europe
MRV	Measurement, Reporting and Verification System
EF	Emission factors
KR	Kyrgyz Republic
COP	Conference of the Parties
CCDGECC	Coordination Council for the Development of Green Economy and Climate Change
FOLU	Forestry and other land use
IPCC	Intergovernmental Panel on Climate Change
ME	Municipal enterprise
MAFILR	Ministry of Agriculture, Food Industry and Land Reclamation
MES	Ministry of Emergency Situations
NAS KR	National Academy of Sciences of the Kyrgyz Republic
NGHGI	National Greenhouse Gas Inventory
NC	National Communication of the Kyrgyz Republic to the UN Framework Convention on Climate Change
NIR	National Inventory Report
NSC	National Statistical Committee
C/O JSC	Closed/Open Joint Stock Company
QA&QQ	Quality Assurance and Quality Control
PIU	Project Implementation Unit
LLC	Limited Liability Company
ALE	Association of legal entities
GHG	Greenhouse gases
SW	Software
IPPU	Industrial Processes and Product Use
UNFCCC	UN Framework Convention on Climate Change
AFOLU	Agriculture, forestry and other land use
TEG	Technical Expert Group of the Project
CSRSEPES	Center for State Regulation in the Sphere of Environmental Protection and Ecological Safety
CFC	Climate Finance Centre
UNEP	UNEP United Nations Environment Programme

Chemical formula and units of measurement used

CO_2	Carbon dioxide
CH_4	Methane
N_2O	Nitrous oxide
HFC	Hydrofluorocarbons (HFCs)
PFC	Perfluorocarbons (PFCs)
SF_6	Sulfur hexafluoride
CO	Carbon monoxide
NMVOC	Non-methane volatile organic compounds (NMVOCs)
NO_x	Nitrogen oxides
SO_2	Sulfur dioxide
Gg	Gigagrams = 1 thousand tons

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1. Introduction

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

According to Article 4, paragraph 1, point a) on the Commitments of the Parties and Article 12, paragraph 1 (a) on the provision of information relevant to the implementation of the Convention, each Party to the Convention is expected to submit regularly to the Conference of the Parties (COP) "national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol [1], to the extent permitted by its capabilities, using comparable methodologies approved by the Conference of the Parties."

The main mechanism for providing information on a country's activities under the UNFCCC is National Communications (NC). Guidelines for the preparation of national communications by countries not included in Annex I were adopted at the Conference of the Parties in 1996 in Geneva (Decision 10/CP 2). The 8th Conference of the Parties (New Delhi, 2002) adopted new Guidelines for National Communications for countries not included in Annex I of the Convention (Decision 17/CP 8). These documents define the mandatory provision by countries participating in the Convention of information on emissions and absorption of greenhouse gases. At the same time, each new communication, according to the guidelines, assumes a constant improvement in the quality of calculations and coverage of NGHGI.

In accordance with these UNFCCC Guidelines and within the framework of the United Nations Development Programme (UNDP) project "Assistance to Kyrgyzstan in the Preparation of the First National Communication in Response to Commitments under the United Nations Framework Convention on Climate Change" with the financial support of the Global Environment Facility (GEF), in 2003 the Kyrgyz Republic developed its First National Communication (NC 1) under the Convention. As part of the preparation of NC 1, the process of the first National Greenhouse Gas Inventory (NGHI 1) was organized and conducted, which resulted in the compilation of the National Inventory of GHG Emissions and Removals for the period 1990–2000. The NGHGI 1 process was described in the relevant section of NC 1, and the Inventory is presented as its Appendix. NC 1 was approved by the Resolution of the Government of the Kyrgyz Republic dated 10 April 2003, No. 200.

The Second National Communication (NC 2) of the Kyrgyz Republic under the UNFCCC was also developed within the framework of the UNDP project with financial support from the GEF in 2009. In the process of its preparation, the second round of NGHGI was conducted, during which GHG emissions and removals for the period 1990-2005 were recalculated and the corresponding Inventory was compiled, which was presented in the Appendix to NC 2. NC 2 was approved by the Resolution of the Government of the Kyrgyz Republic dated 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. The results of the NGHGI 3 and the corresponding Inventory of GHG emissions and removals for the period 1990-2010

[1] Montreal Protocol on Substances that Deplete the Ozone Layer -international protocol to Vienna Convention for the Protection of the Ozone Layer as of 1985, developed for the purpose of protection ozone layer by eliminating certain chemicals that destroy the ozone layer. The protocol was prepared for signature on September 16,1987and came into force on January 1st, 1989. Since then, the protocol has been revised and amended eight times: in 1990 (London), 1991 (Nairobi), 1992 (Copenhagen), 1993 (Bangkok), 1995 (Vein), 1997 (Montreal), 1999 (Beijing) and in 2016 (Kigali). If the countries that signed the protocol adhere to it in the future, then we can hope that the ozone layer will be restored by2050. Kyrgyzstan joined this convention and protocol on 31.05.2000 and has consistently ratified all its amendments.

are presented in Appendix 3 of Kyrgyzstan's NC 3. This document was also approved by the Resolution of the Government of the Kyrgyz Republic dated October 13, 2016 No. 546.

This document presents the results of the fourth round of NGHGI of emissions by sources and removals by sinks of the Kyrgyz Republic in the period of 1990-2020, which was compiled based on the results of the NGHGI 4 conducted in 2019-2020 by the Project Implementation Unit under 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. Improvements in NGHGI 4

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

- Revised IPCC Guidelines for National Greenhouse Gas Inventories (1996 IPCC Guidelines)[2]
- Good practice guidance and uncertainty management in national greenhouse gas inventories.[3]
- Good practice guidelines for land use, land-use change and forestry.[4]

Taken together, they provide internationally agreed methodologies that countries currently use to estimate greenhouse gas inventories for country reporting to the United Nations Framework Convention on Climate Change (UNFCCC).

The 1996 IPCC Guidelines, set out in three volumes, define the scope of a national inventory in terms of gases and categories of emissions by sources and removals by sinks, and all other guides provide additional guidance on the choice of estimation methodology and the improvement of methods, as well as advice on cross-cutting issues including uncertainty assessment, time series consistency, quality assurance and quality control.

More recent 2006 IPCC Guidelines for National Greenhouse Gas Inventories[5]are built on this working foundation in an evolutionary manner, allowing for as direct a transition from previous guidelines to the new ones as possible. These guidelines include new sources and gases, as well as updates to previously published methods whenever scientific and technical knowledge has improved since the previous guidelines were published. The content of the five volumes that make up the 2006 IPCC Guidelines has significantly expanded the coverage of anthropogenic emissions that contribute to climate change.

Greenhouse gas inventories are based on a few key concepts, united by a common understanding. This helps ensure that inventories are comparable across countries, do not contain double counting or omissions, and reflect actual emissions changes in the time series.

The term "Anthropogenic emissions and removals" means that the greenhouse gas emissions and removals included in national inventories are the result of human activity. The distinction

[2] Intergovernmental Panel on Climate Change (IPCC) (1997). Houghton JT, Meira Filho LG, Lim B, Tréanton K, Mamaty I, Bonduki Y, Griggs DJ and Callander BA (Eds). Revised 1996 IPCC Guidelines for National Greenhouse Inventories. IPCC/OECD/IEA, Paris, France.

[3] 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.

[4] 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

[5] Prepared by the IPCC National Greenhouse Gas Inventories Programme, Eagleston, H.S., Buendia, L., Miwa, K., Ngara, T. and Tanabe, K. (eds.), Institute for Global Environmental Strategies 2108-11, Kamiyamaguchi Hayama, Kanagawa, Japan, 240-0115

between natural and anthropogenic emissions and removals follows directly from the data used to quantify such activity.

National Inventories contain estimates of emissions and removals for the calendar year in which emissions to (or removals from) the atmosphere occur. Where suitable data are not available to comply with this principle, emissions/removals may be estimated using data for other years using appropriate methods such as averaging, interpolation and extrapolation. A sequence of annual greenhouse gas inventory estimates (e.g., for each year from 1990 to 2020) is called a time series. Because of the importance of observing emission trends over time, countries should ensure that the time series of estimates are as consistent as possible.

Inventory Reporting - The National Inventory Report consists of a set of standard reporting tables covering all relevant gases, categories and years, and a written report that documents the methodologies and data used to prepare the estimates. The 2006 Guidelines provide standardized reporting tables, but the actual nature and content of the tables and the written report may vary.

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

- Transition to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (hereinafter referred to as the 2006 Guidelines)[6];
- Application of IPCC Inventory Software Ver. 2.54, released in June 2017.[7]
- Using the "EMEP/EEA emission inventory guidebook. Technical guidelines for the preparation of national emission inventories. European Environment Agency. Report No 13/2019".[8]

The Inventory presents the results of the fourth national inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks for the Fourth National Communication of the Kyrgyz Republic to the UNFCCC for the period 2018-2020 and recalculation from 1990 to 2020.

The fourth national GHG inventory was conducted in accordance with the provisions of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (hereinafter referred to as the 2006 Guidelines) and covers emissions and removals of six direct greenhouse gases: CO2 (carbon dioxide), CH4 (methane), N2O (nitrous oxide), HFCs (hydrofluorocarbons - HFCs), PFCs (perfluorocarbons - PFCs), and SF6 (sulfur hexafluoride) and four precursor gases: CO (carbon monoxide), NOx (nitrogen oxides), NMVOCs (non-methane volatile organic compounds - NMVOCs) and SO2 (sulfur dioxide).

3. Institutional arrangement for NGHGI 4

Legal framework for conducting inventory of anthropogenic emissions from sources and absorption by sinks of greenhouse gases (hereinafter referred to as 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 of July 23, 2001 No. 369 "On measures to implement the UN Framework Convention on Climate Change".

According to Article 13 of the said law, the country is conducting the state accounting of indicators in the field of emissions and absorption of greenhouse gases, which includes the collection and generalization of the results of inventory and monitoring in order to obtain reliable information.

[6] UNFCCC.https://www.ipcc-nggip.iges.or.jp/public/2006gl/russian/pdf/
[7] IPCC website.https://www.ipcc-nggip.iges.or.jp/software/index
[8] EEA Site:https://www.eea.europa.eu/publications/emep-eea-guidebook-2019/#additional-files
[9] Law of the Kyrgyz Republic of May 25, 2007 No. 71.

And Article 14 indicates that the state Inventory of emissions and absorption of greenhouse gases is a single and comprehensive register of emissions and absorption of greenhouse gases in the territory of the Kyrgyz Republic, and the procedure for its maintenance is approved by the Government of the Kyrgyz Republic.

As noted above, since the preparation of the First Biennial Update Report and the Fourth National Communication under the UNFCCC was started in 2018 by the State Agency for Environmental Protection and Forestry under the Government of the Kyrgyz Republic (SAEPF). It was decided that SAEPF and its Center for State Regulation in the Sphere of Environmental Protection and Ecological Safety (CSRSEPES) would develop both documents, including the national greenhouse gas inventory.

In accordance with the Decree of the Government of the Kyrgyz Republic "About the Coordination Council for the Development of Green Economy and Climate Change" dated January 30, 2020 No. 46 the main body managing the process of development, periodic updating and provision of the necessary reporting on the implementation of international obligations of the Kyrgyz Republic in the field of climate change, including the inventory of greenhouse gases, was established as the Coordination Council for the Development of Green Economy and Climate Change.

Following the reorganization of the Kyrgyz Government in 2021, the overall management of the fourth national GHG inventory was carried out by the State Committee on Ecology and Climate and the GEF-UNEP Project Implementation Unit (PIU) under CSREPES. For the purposes of technical support for the activities on conducting a national GHG inventory and compiling the corresponding GHG Inventory, an intersectoral GHG inventory working group was created, which included several Technical Expert Groups (TEG). Each TEG included experts in GHG inventory of sectors (two experts: the Head of the TEG and a leading specialist), specialists in sectoral statistics and representatives of line ministries and departments. Thus, the direct executor of the national GHG inventory wis the PIU under CSREPES and its GHG Inventory Group, which consisted of the following TEGs:

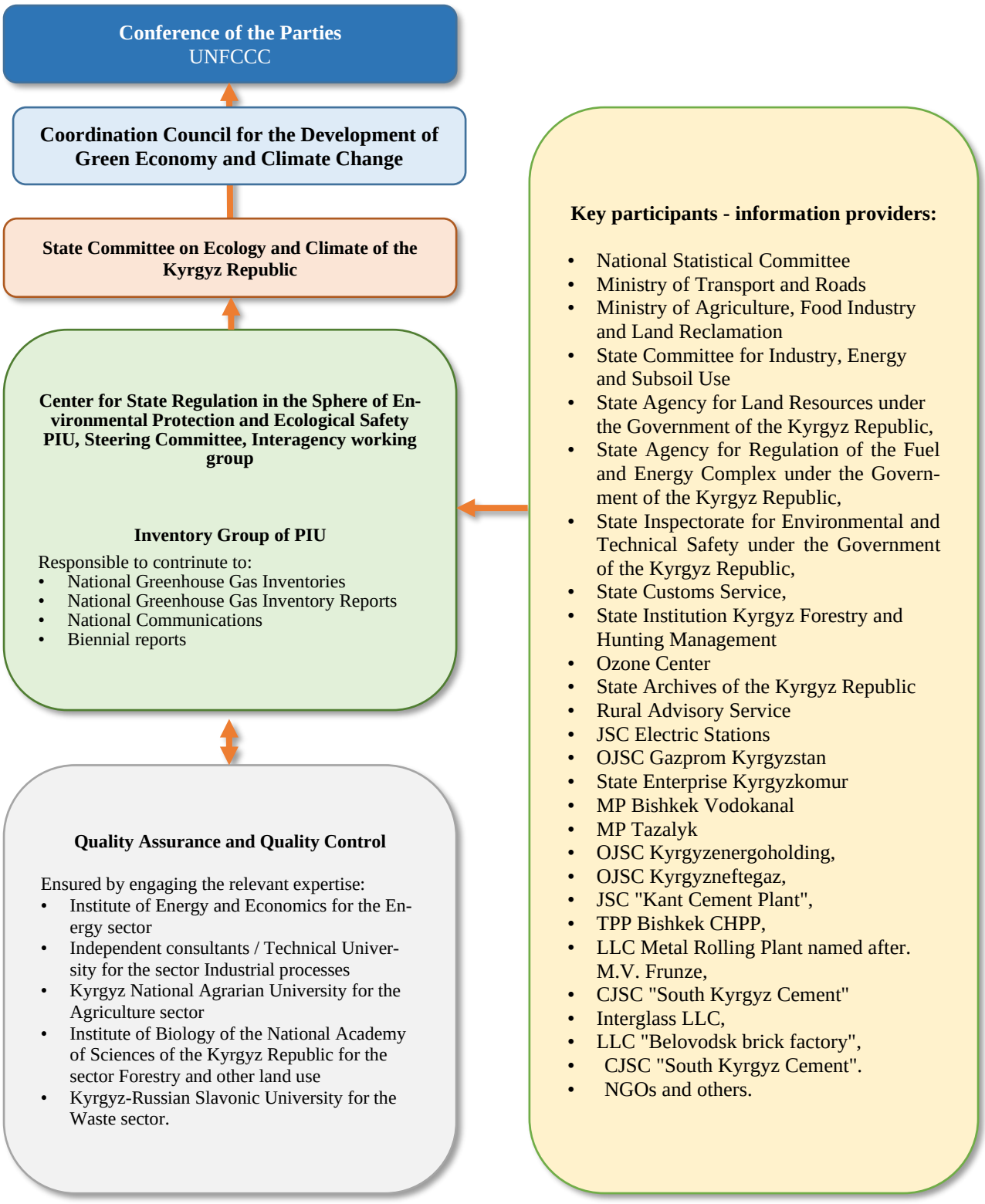
1. Energy (the combustion of all types of fossil fuels in all sectors, including transport and all other sectors, as well as fugitive emissions (evaporations) from various types of fuel).
2. Industrial processes and product use.
3. Agriculture (livestock, rice growing, soils).
4. Forestry and other land uses (6 types of land use).
5. Waste (solid waste and wastewater).

The technical planning, coordination and quality control of the group's work under the general supervision of the project manager and the project coordinator was carried out by the Head of Technical Expert Groups, who provided ongoing control of the inventory process and technical advisory support.

The information and data required to conduct the National GHG Inventory were provided by a number of organizations. Priority was given to using official statistical data of the Kyrgyz Republic, which was provided by ministries and departments, administrative bodies, the state archive, state institutions and enterprises, and private business structures. The general scheme of the institutional organization of conducting the NGHGI 4 is presented in Fig. 3.1 below.

Figure 3.1. Institutional arrangements for the national GHG Inventory in the Kyrgyz Republic.[10]

[10] Developed by the authors.



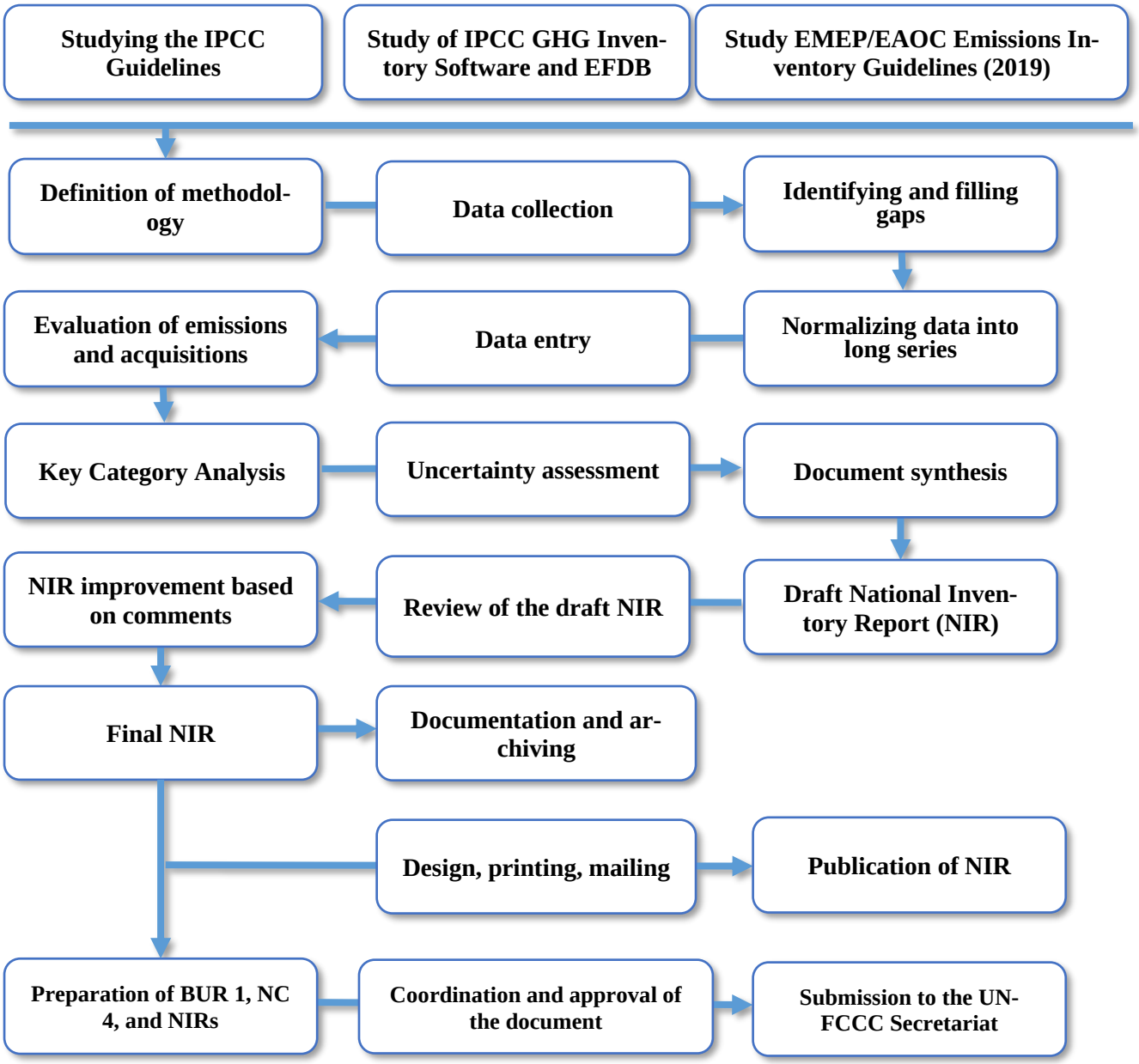
The Director of the State Agency for Environmental Protection and Forestry carried out the overall management of the greenhouse gas inventory process and ensured the necessary interaction with all stakeholders in the process. The Project Coordinator - Director of the Center for Environmental Protection and Forestry ensured the ongoing management of the GHG inventory process, ensuring communication between the PIU and the suppliers of the necessary information. The Project Manager ensured the daily management of the PIU, the deadlines for the implementation of each stage of the NGHI process, the preparation and distribution of requests for information to sources and the timely receipt of responses to requests, as well as the organization and implementation of all project activities.

4. The Fourth National GHG Inventory Process

The process of conducting the fourth national greenhouse gas inventory was carried out in accordance with the recommendations of the relevant UNFCCC and IPCC Guidelines within the national legal framework and institutional organization of the process presented above. In addition, the time frame for the inventory was determined by the project document and the GEF-UNEP Project Implementation Plan, in close coordination with the UNEP office in Nairobi.

The main performers of the GHG inventory were the GHG Inventory Group created in the project's OP, the project team and the head of the technical expert groups. The main stages of the process are presented in Figure 4.1 below.

Figure 4.1. Scheme of the process of national GHG inventory in the Kyrgyz Republic[11]



The Head of the Sectoral NGHGI TEGs for 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 assessment for National

[11] Developed by authors

GHG Inventory, ensuring the integrity and quality of the inventory by presenting it in the corresponding Chapters “National GHG Inventory” in BUR 1 and NC 4.

Estimating emissions by individual sources and removals by individual sinks is the responsibility of the national inventory experts who, together with the TEG leader, decided on the most appropriate methodology to use and collected the activity data needed to estimate the emissions. Since the new IPCC 2006 Guidelines and new software were used to carry out the current emission assessment, long time series of activity data had to be generated again and emissions had to be recalculated for all categories.

Decisions on the selection of emission assessment parameters, collection of the most necessary information and data, selection of the most adequate emission levels and coefficients, emission calculation, uncertainty assessment, verification of results for quality assurance and quality control by independent scientific institutes and experts, ministries and departments, private entities were made jointly by the project manager, the head of the TEG and national inventory experts. National experts also prepared explanatory text on the conducted studies on emission assessment, as well as all the used bibliography.

In addition, national experts prepared summary tables of emissions by sector, category and subcategory, carried out uncertainty analysis, and carried out quality assurance and quality control (QAQC) 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 reviewing the inventory is to obtain 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 factors, and activity data. The comments received were studied and appropriate adjustments were made.

After completing the final editing of the National Inventory of Greenhouse Gases integrating the comments received during the review, the PIU prepared the final version in electronic format for approval by the State Agency for Environmental Protection and Forestry. This version was then used for publication.

Following the publication of the inventory, its data were included in BUR 1 and NC 4, which were duly approved by the Government of the Kyrgyz Republic and submitted to the UNFCCC Secretariat.

5. Methodology

National Inventory

According to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, inventories are based on a few key concepts, united by a common understanding. This helps ensure that inventories are comparable across countries, do not contain double counting or omissions, and reflect actual emission changes in the time series.

The term "Anthropogenic emissions and removals" means that the greenhouse gas emissions and removals included in national inventories are the result of human activities. The distinction between natural and anthropogenic emissions and removals follows directly from the data used to quantify such activities. In the Agriculture, Forestry and Other Land Use (AFOLU) sector, emissions and removals on managed lands are taken as a proxy for anthropogenic emissions and removals, and interannual variations in natural emission and removal conditions, although they may be significant, are assumed to be time-averaged.

National inventories include emissions and removals of greenhouse gases that occur within countries' national territories and in offshore areas under their jurisdiction. For example, emissions from fuel use in road transport are included in the emissions of the country in which the fuel was sold, rather than the country in which the vehicle was driven, because fuel sales statistics are widely available and usually much more accurate.

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

Greenhouse gas inventory reports include a set of standard reporting tables covering all relevant gases, categories and years, and a written report that documents the methodologies and data used to prepare the estimates. The 2006 Guidelines provide standardized reporting tables, but the actual nature and content of the tables, as well as the written report, may vary, for example depending on the country's commitments as a Party to the UNFCCC.

According to the 2006 IPCC Guidelines, the inventory covers the following greenhouse gases:

1. Carbon dioxide (CO2)
2. Methane (CH4)
3. Nitrous oxide (N2O)
4. Hydrofluorocarbons (HFCs)
5. Perfluorocarbons (PFCs)
6. Sulfur hexafluoride (SF6)
7. Nitrogen trifluoride (NF3)
8. Trifluoromethyl sulfur pentafluoride (SF5CF3)
9. Halogenated ethers (e.g. C4F9OC2H5, CHF2OCF2OC2F4OCHF2, CHF2OCF2OCHF2)
10. and other Halocarbons not covered by the Montreal Protocol, including CF3I, CH2Br2 CHCl3, CH3Cl, CH2Cl2.

In the context of Kyrgyzstan, the 4th national GHG inventory (NIGI) covered the first 4 categories, since emissions from the fifth and sixth categories were recognized as negligible, thus, not estimated during the previous 3rd NGHGI, and emissions of the remaining GHGs do not occur in Kyrgyzstan.

The gases listed above have global warming potentials (GWPs) determined by the IPCC before the 2006 Guidelines were finalized. A GWP compares the radiative forcing of a ton of a greenhouse gas over a given period of time (e.g., 100 years) to the forcing of a ton of CO_2.

The 2006 IPCC Guidelines also provide for the estimation of emissions of the following precursor gases: Nitrogen oxides (NOx), Ammonia (NH_3), Non-methane volatile organic compounds (NMVOCs), Carbon monoxide (CO) and Sulphur dioxide (SO_2), although methods for estimating emissions of these gases are not provided. The IPCC guidance on these gases refers to the EMEP/EEA air pollutant emission inventory guidebook of the European Environment Agency, which is updated periodically. The 2016 version of this guidebook was used in the 4th NGHGI in Kyrgyzstan.

According to the 2006 IPCC Guidelines, estimates 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 land use (AFOLU)

- Waste.

Energy

In modern economies, energy systems are largely driven by the combustion of fossil fuels. In this process, the carbon and hydrogen from fossil fuels are converted primarily into carbon dioxide (CO2) and water (H2O), releasing the chemical energy of the fuel and converting it into heat. This heat is typically used either directly or (with some conversion losses) to produce mechanical energy, most often for electricity or for transportation.

The energy sector is usually the most important sector in the greenhouse gas emissions inventory, accounting for more than 90 percent of CO2 emissions and 75 percent of total greenhouse gas emissions in developed countries. About half of these emissions are due to combustion in the energy industries, mainly in power plants and refineries. Mobile combustion (cars and other vehicles) accounts for about a quarter of the energy sector's emissions.

The energy sector mainly includes the following:

- exploration and production of primary energy sources,
- conversion of primary energy sources into more usable forms of energy in refineries and power and heat plants.
- transmission and distribution of fuel.
- stationary and mobile use (combustion) of fuel.

Emissions arising from these activities from the combustion of solid, liquid and gaseous fuels, as well as in the form of fugitive emissions, are the subject of national inventories of greenhouse gas emissions from the energy sector.

Industrial processes and product use

Many types of industrial production are associated with greenhouse gas emissions. The main sources of emissions are emissions from industrial processes of chemical or physical processing of materials (e.g., blast furnaces in the steel industry; ammonia and other chemical products from fossil fuels used as chemical feedstocks; cement production are the most important examples of industrial processes associated with significant CO_2 emissions). 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 found in products such as refrigerators, foams, and aerosol cans. 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 a number of products used in industry (e.g., SF_6 in electrical equipment, N_2O as a propellant in aerosol products mainly in the food industry) and in end-use products (e.g., SF_6 in sneakers, N_2O for anesthesia). A distinctive feature of such product use is that in almost all cases there is a fairly long time between the production of the product and the release of the greenhouse gas. This delay time can vary from several weeks (e.g., for aerosol cans) to several decades (for rigid foams). In some applications (e.g., refrigeration), the greenhouse gas fraction contained in the product can be recovered at the end of the product's life and then reused or destroyed.

Product use is grouped together with industrial processes in the IPCC guidance because in many cases production, import and export data are needed to estimate emissions from products; and because - in addition to use in non-industrial sectors (retail, services, households) - product use may be part of industrial production.[12]Accordingly, this sector is called Industrial Processes and Product Use (IPPU).

Agriculture, forestry and other land uses

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

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 special features with respect to the development of inventory methods. There are many processes leading to greenhouse gas emissions and removals, which can be widely distributed in space and highly variable in time. The factors driving emissions and removals can be both natural and anthropogenic (direct or indirect), and it can be difficult to clearly distinguish between causal factors.

For the AFOLU sector, anthropogenic greenhouse gas emissions and removals are defined as all emissions and removals occurring on "managed land". Managed land is land on which human interventions and activities occur to perform productive, environmental and social functions. All land definitions and classifications should be established at the national level, described in a clear way and applied consistently over time. No information on emissions/removals should be provided for unmanaged land. However, it is good practice for countries to quantify and track the area of unmanaged land over time to ensure consistent accounting of areas as land use changes.

The main sources of emissions in the sector are:

- CO_2 emissions and removals due to changes in carbon stocks in biomass
- CO_2 and non-CO_2 gas emissions from fires on all managed lands;
- CH_4 emissions from domestic animals (enteric fermentation);
- CH_4 and N_2O emissions from manure management systems
- N_2O emissions from all cultivated soils;
- CH_4 emissions from rice cultivation.

Due to the complex nature and specificity of each component, the AFOLU sector is divided into two – Agriculture and Forestry and Other Land Use – and analyzed separately. The results of these two analyses are then combined in a single report.

Waste

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

- Solid waste removal;
- Biological treatment of solid waste;
- Incineration and open burning of waste;
- Wastewater treatment and discharge (Chapter 6).

Each sector is made up of individual categories and subcategories. Countries ultimately begin their inventory at the subcategory level, as this is how the IPCC methodology is presented, and total emissions are calculated by summing up. The national total is calculated by summing up emissions and removals for each gas. The exception here are emissions from fuel use in ships and aircraft engaged in international transport, which are not included in the national total but are reported separately. In order to calculate the national total, a method must be chosen. For this purpose, countries may choose any of the approaches reflected in the Guidelines. The reporting procedure is generally structured and organized according to the sector in which the emissions or removals actually occur.

The estimated emissions of methane, nitrous oxide and HFCs are then converted to CO_2 equivalents using Global Warming Potential values (or factors). Global Warming Potential (GWP) was developed to allow comparison of the global warming impacts of different gases. It assigns a value to the amount of heat trapped by a given mass of gas compared to the amount of heat trapped by a similar mass of carbon dioxide over a given unit of time. The reference gas is carbon dioxide (CO_2), which has a GWP of 1. The effect of emissions is assessed over a specified period of time – a time horizon, which is typically 100 years. To enable comparison with

previous inventory data, the values given in the IPCC Second Assessment Report were used. (See Table 5.1).

Table 5.1. GWP values taken into account in this document.[13]

Gases	Chemical formula	Global warming potential with a 100-year time horizon
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310
Hydrofluorocarbon – 23	CHF3	11700
GFU-32	CH2F2	650
GFU-41	CH3F	150
GFU-43-10mee	C5H2F10	1300
GFU-125	C2HF5	2800
GFU-134	C2H2F4	1000
GFU-134a	CH2FCF3	1300
GFU-152a	C2H4F2	140
GFU-143	C2H3F3	300
GFU-143a	C2H3F3	3800
HFC-227ea	C3HF7	2900
GFU-236fa	C3H2F6	6300
GFU-245ca	C3H3F5	560
Sulfur hexafluoride	SF_6	23900

In the 2006 Guidelines and the 2000 IPCC Good Practice Guidance, the most common simple methodological approach to conducting national GHG inventories is to combine information on the amounts and scale of human activities (called "activity data" or AD) with factors that quantify the amount of emissions or removals per unit of activity. Such factors are called emission factors (EFs). The basic equation is thus:

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

Under certain conditions, the basic equation can be modified to include estimation parameters other than emission factors. The 2006 Guidelines also provide for more sophisticated modelling approaches, particularly at higher tiers. Despite the widespread use of this simple equation, the 2006 Guidelines also include methods based on mass balance estimates, such as stock change methods used in the AFOLU sector, which estimate CO_2 emissions from the change in carbon content of living biomass and dead organic matter pools over time.

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

The 2006 Guidelines provide three tiers of methodologies for conducting national GHG inventories. The tier represents the degree of methodological sophistication. Tier 1 is the basic method, Tier 2 is intermediate, and Tier 3 is the most complex in terms of difficulty and data requirements. Tiers 2 and 3 are sometimes referred to as higher tier methods and are generally considered more accurate.

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

[13] IPCC. Second Synthesis Report. 1995.

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 the absolute level of emissions and removals, the trend in emissions and removals, or the uncertainty in emissions and removals. Key categories should be prioritized by countries during inventory resource allocation for data collection, aggregation, quality assurance/quality control, and reporting.

The IPCC guidance documents also provide so-called decision trees for each category. These help inventory compilers navigate the guidance and select the appropriate tiered methodology for their circumstances based on their assessment of the key categories. In general, it is good practice to use higher-tier methods for key categories unless resource requirements prohibit this.

5.1 Emission factors and time series data

The transition to a new methodology and the use of new software led to the choice of a simpler methodological level 1 for almost all categories of emissions and removals. And 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. In many cases, the experts had to deal with the presence of only periodic data, gaps in the data, the presence of several data variants or no data at all.

In case of absence or unavailability of national information, international databases (International Energy Agency, World Bank, Food and Agriculture Organization of the United Nations, etc.) were used. The definition and use of methodology and parameters, prerequisites, sources of information and inventory results were discussed at regular meetings with the participation of representatives of interested ministries and departments, educational and scientific institutions, non-governmental organizations and the business sector. In case of irreparable gaps in the initial data, interpolation was used. Interpolation algorithms are described in the relevant sectoral sections on GHG inventory in BUR 1.

The information used consists of three main groups:

- activity data, mainly fuel consumption volumes and production volumes;
- emission and sink factors for GHGs 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 state and/or departmental statistics, as well as enterprise reporting. The indicators of this group are contained in officially published sources or were collected at the request of ministries, departments and organizations.

The following emission factors were used:

- values given as default in the IPCC Guidelines and in the IPCC Emission Factors Online Database;
- values given in other international guideline documents, such as the EMEP/EAEC Air Pollutant Emission Inventory Guidebook, European Environment Agency 2019;
- values used in the national system of inventory and regulation of emissions of pollutants into the environment or obtained as a result of previously conducted studies (in the sectors - "Industrial processes" and "Land use, land-use change and forestry").

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

6. Key categories

Chapter 4, v.1 of the 2006 IPCC Guidelines defines a key category as a category "that has priority within a national inventory system because its estimate has a significant impact on the overall national greenhouse gas inventory in terms of the absolute level, trend, or uncertainty in emissions and removals. Whenever a key category is used, it includes both source and sink categories."[14]

This section presents an analysis of key sources/sinks of GHG emissions and absorption in the Kyrgyz Republic for the period 1990-2020 by absolute values of emissions/removals (analysis of the level, as well as by trends.

To determine the key source/sink categories, the share of individual categories (convertible into CO_2 equivalent) in the total emissions/removals is calculated according to the overall level of emissions/removals (level estimate). After calculating the percentage contribution of each source/sink category, they are summed in descending order to a 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 a source category is calculated for each emission/removal category as the difference in the emission/removal values derived from that source/sink category between the current and base year of the inventory, divided by the emission/removal value of the current year. 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 current year.

In order to assess the actual significance of the differences between a source category and the overall trends in the overall inventory results, these differences are weighted according to the estimated proportion of the absolute value of emissions in the source category, i.e., a level estimate is made. Specifically, the overall emission trend is subtracted from the estimated trend of the source category and multiplied by the value of the level (proportion) obtained for this source category by the "level estimate" calculated for the base year. The resulting values for all source categories are summed and the proportion of each category as a proportion of this total is calculated. Thus, a key source category will be a source category for which 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 Best Practice Guidance (Volume 1, Chapter 4) presents methods, called "approaches", that are used to identify key categories. These methods identify key categories using a single-year inventory analysis of emission levels of individual categories (level assessment) and a time-series analysis of inventory data (trend assessment), as well as a detailed analysis of inventory data with an estimate of errors (Tier 2 and trend assessment, taking into account uncertainties).

During the fourth NGHGI, the analysis of key categories was carried out according to the procedure of Approach 1 for assessing the level of GHG emissions in the Kyrgyz Republic for 2020 as the last reporting year. In accordance with IPCC documents, this analysis was carried out taking into account both emissions by sources and absorption by sinks.

Since this phase of the fourth national GHG inventory covers the period 1990-2020, 1990 is considered the base year for assessing trends. The results were presented in descending order and totals were calculated. Sources for which totals were equal to or greater than 95% of all emissions (in CO2 equivalent) were identified as key source categories for trends.

[14] IPCC. Guidelines for National Greenhouse Gas Inventories. 2006, Vol. 1, Chapter 4, p. 4.5.

Among the tools of the IPCC Software v. 2.54 software used in the fourth national GHG inventory there is the possibility of conducting an analysis of key categories of GHG emission sources 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 sources of GHG emissions and removals in 2020 by level.[15]

A	B	C	D	E	F	G
Category code	IPCC Categories	Greenhouse gas	2020 Ex,t(Gg CO2 eq.)	|Ex,t|(Gg CO2 eq.)	Lx,t	Summary total for column F
3.B.1.a	Forest areas remaining forested	CO2	-7490,450	7490,450	0.292	0.292
3.B.2.a	Cultivated land remaining cultivated	CO2	-3469,650	3469,650	0.135	0.427
1.A.3.b	Road transport	CO2	2961,466	2961,466	0.115	0.542
3.A.1	Enteric fermentation	CH4	2810,239	2810,239	0.109	0.652
3.C.4	Direct N2O emissions from managed soils	N2O	1508,876	1508,876	0.059	0.711
1.A.4	Other Sectors - Solid Fuels	CO2	1437,588	1437,588	0.056	0.767
1.A.1	Energy industry - Solid fuel	CO2	1199,483	1199,483	0.047	0.813
2.A.1	Cement production	CO2	854,266	854,266	0.033	0.847
3.C.5	Indirect N2O emissions from managed soils	N2O	610,462	610,462	0.024	0,870
1.A.3.e	Other types of transport	CO2	362,773	362,773	0,014	0.884
1.A.2	Industry and construction - Solid fuel	CO2	359,318	359,318	0,014	0.898
4.A	Solid waste disposal	CH4	340,938	340,938	0,013	0.912
1.A.4	Other Sectors - Gaseous Fuels	CO2	332,286	332,286	0,013	0.925
1.B.2.a	Oil	CH4	176,164	176,164	0,007	0.932
3.A.2	Manure management	N2O	171,633	171,633	0,007	0.938
1.A.1	Energy industry - Gaseous fuels	CO2	170,990	170,990	0,007	0.945
2.F.1	Refrigerators and air conditioners	HFCs	157,856	157,856	0.006	0.951

As can be seen from Table 6.1. in 2020, the analysis of key categories for assessing the level of contribution to the total volume of GHG emissions and removal included 17 categories, the emissions and removal of which, by the absolute value of emissions in 2020, amounted to 66.5%. Table 6.2. below presents 18 key categories of GHG emission and absorption sources based on the assessment of change trends in 2020 compared to GHG emissions of the base year 1990.

Table 6.2. Key categories of sources of inventory of PG KR by trends[16]

A	B	C	D	E	F	G	H
Category code	IPCC Category	Greenhouse gas	1990 year of estimationEx0(Gg CO2 eq.)	2020 estimates (Gg CO2 eq.)	Trend Rating (Txt)	% contribution to trend	Summary total for column G
3.B.1.a	Forest areas remaining forested	CO2	-6850,850	-7490,450	0.124	0.262	0.262
3.B.2.a	Cultivated land remaining cultivated	CO2	-3415,270	-3469,650	0.069	0.145	0.407
1.A.3.b	Road transport	CO2	2824,570	2961,466	0.062	0,130	0.537
3.A.1	Enteric fermentation	CH4	2510,217	2810,239	0.059	0.125	0.662
3.C.4	Direct N2O emissions from managed soils	N2O	2633,558	1508,876	0.025	0.053	0.715
2.A.1	Cement production	CO2	591,522	854,266	0,019	0,040	0.755

[15] MNRETS. IPCC Inventory Software V2.54 Database
[16] MNRETS. IPCC Inventory Software V2.54 Database

A	B	C	D	E	F	G	H
Cate-gory code	IPCC Category	Green-house gas	1990 year of estima-tionEx0(Gg CO2 eq.)	2020 esti-mates (Gg CO2 eq.)	Trend Rat-ing (Txt)	% con-tribu-tion to trend	Summary total for column G
1.A.1	Energy industry - Solid fuel	CO2	2889,157	1199,483	0,016	0.033	0.788
1.A.1	Energy industry - Liquid fuels	CO2	2575,481	106,026	0,011	0.024	0.811
3.C.5	Indirect N2O emissions from managed soils	N2O	909,996	610,462	0,011	0.023	0.834
1.A.4	Other Sectors - Solid Fuels	CO2	5049,286	1437,588	0,010	0,021	0.856
1.A.1	Energy industry - Gaseous fuels	CO2	2648,369	170,990	0,010	0,021	0.876
1.A.2	Industry and construction - Solid fuel	CO2	262,017	359,318	0.008	0,017	0.893
4.A	Solid waste disposal	CH4	218,446	340,938	0.008	0,016	0.909
1.A.4	Other Sectors - Gaseous Fuels	CO2	390,187	332,286	0,007	0,014	0.923
2.F.1	Refrigerators and air con-ditioners	HFCs	0,000	157,856	0.004	0,009	0.932
1.B.2.a	Oil	CH4	113,678	176,164	0.004	0.008	0.940
1.A.3.e	Other types of transport	CO2	1108,646	362,773	0.003	0,007	0.947
3.A.2	Manure management	N2O	200,620	171,633	0.003	0,007	0.954

7. Quality Control and Quality Assurance

Quality control and quality assurance were carried out within the framework of the institutional arrangements for the fourth national GHG inventory, determined by the national context and in full compliance with the recommendations of the 2006 IPCC Guidelines. According to these Guidelines, national inventories should be transparent, consistent, comparable, assessed for uncertainty, well documented, and subject to verification and a quality assurance and control (QA/QC) process. The 2006 IPCC Guidelines define QA/QC as follows:

- Quality control (QC) is a system of routine technical actions to measure and control the quality of inventory during its development. A basic quality control system should provide routine and consistent checks to ensure the integrity, correctness, and completeness of data; identify and correct errors and omissions; document and archive inventory materials; and record all QC activities.
- Quality assurance (QA) involves a planned system of verification procedures carried out by specialists not directly involved in the process of cadastral compilation and inventory.[17]

Data quality assurance and quality control of the NGHGI 4 calculations were carried out in accordance with the provisions of the 2006 IPCC Guidelines and the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, 2000.

To ensure the quality of the project's PIU, a corresponding Quality Assurance and Quality Control Work Plan and tabular forms were developed to be filled in during the quality control process of the inventory by sectors.

It should be noted that the QA/QC process has been improved based on the results of the self-assessment of previous National Communications preparation conducted in 2018.[18]Thus, to

[17] IPCC. Guidelines for National Greenhouse Gas Inventories. 2006, Vol. 1, Chapter 6, p. 6.5.
[18] Kadoeva Zh., Rodina E.M., Temirbekov A.M., Shevchenko V. Preparation of National Communications of the Kyrgyz Republic under the UN Framework Convention on Climate Change. Assessment Report. –B. 2018.

ensure quality and in full compliance with the requirements of the Enhanced Transparency Framework, all products developed and adopted at internal coordination meetings of sectoral TEGs were then discussed during sectoral consultations in the form of round tables with all stakeholders, where all decisions taken were documented in minutes and accepted for implementation.

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

- At the first stage, the methodology was defined and the parameters proposed by the 2006 IPCC Guidelines were selected. For this purpose, each sectoral TEG prepared proposals justifying the choice of the level, parameters, required set of activity data and other necessary parameters required for conducting a national GHG inventory. These proposals were then discussed and agreed upon at coordination meetings of all sectoral TEGs on inventory in the ORP, finalized and submitted for discussion at sectoral Round Tables, where consultations were held with representatives of all stakeholders, on the basis of which agreed decisions were made on the selected methodology for conducting a national GHG inventory.
- The second stage was devoted to data collection and reconciliation. At this stage, the completeness, comparability and consistency of the time series of initial data coming from various sources were checked. All sources of initial information – data providers were ranked by the degree of trust in the following order of priority:
    - official publications and online resources of the National Statistical Committee;
    - official publications and online resources of ministries and departments;
    - data from the State Archives of the Kyrgyz Republic;
    - information from international sources;
    - information from national experts;
    - information obtained by calculation;
    - information from various Internet resources.

  In case of discrepancies between data from different sources, the information from the source with the highest priority was used. To resolve problematic issues, additional requests were made and/or additional meetings were held with different data providers, and the decisions made were documented in the minutes.

- At the third stage, long time series were formed and gaps in the data were identified, on which the necessary calculations were carried out. The obtained figures were entered into the series and the data were normalized into a uniform required format of units of measurement. The methods of calculation and data normalization were checked and agreed upon at coordination meetings between the TEGs of the PIU. The obtained time series of activity data from 1990 to 2020 for assessing GHG emissions and sinks were then also submitted to industry round tables, where they were agreed upon with all stakeholders. The decisions taken to reconcile the data were recorded in the relevant minutes.
- The fourth stage consisted of checking and agreeing on the obtained preliminary results of the sectoral assessment of emissions by categories and subcategories and for all gases. Since, in connection with the transition to the new methodology, the sectoral groups recalculated emissions starting from 1990. To ensure quality, a comparison was made with the results of the third national inventory of GHG emissions and removals for the period 1990-2010 within the PIU at coordination meetings of the sectoral TEGs of the inventory. Then, the obtained results of the comparative analysis were presented at sectoral round tables to all interested parties.

- In the fifth stage, the uncertainty assessment was carried out by level and trends. Since the inventory was carried out at level 1, the corresponding uncertainty assessment was carried out for all sectors for the three main GHGs: CO_2, N_2O and CH_4, as well as the completeness assessment for other gases, for which a calculation was made using the CORINAIR emission factors of the European Environment Agency. The results of the uncertainty and completeness assessment for gases were presented at the coordination meetings of all sectoral TEGs in the PIU for quality control.
- At the final sixth stage, all data were compiled into tables of the UNFCCC common reporting format and the obtained emission results for various types of GHG were converted into CO_2 equivalent format using Global Warming Potential (GWP) factors.[19]. GWP represents the coefficients determining the degree of impact of different greenhouse gases on global warming. Carbon dioxide, whose GWP is equal to 1, is taken as the initial one. The GWP effect 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 (AR2) of the IPCC, in order to ensure comparability and the possibility of analyzing 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 AR2 values. Then, the results of total GHG emissions and sinks were presented at a national workshop with the participation of all stakeholders.

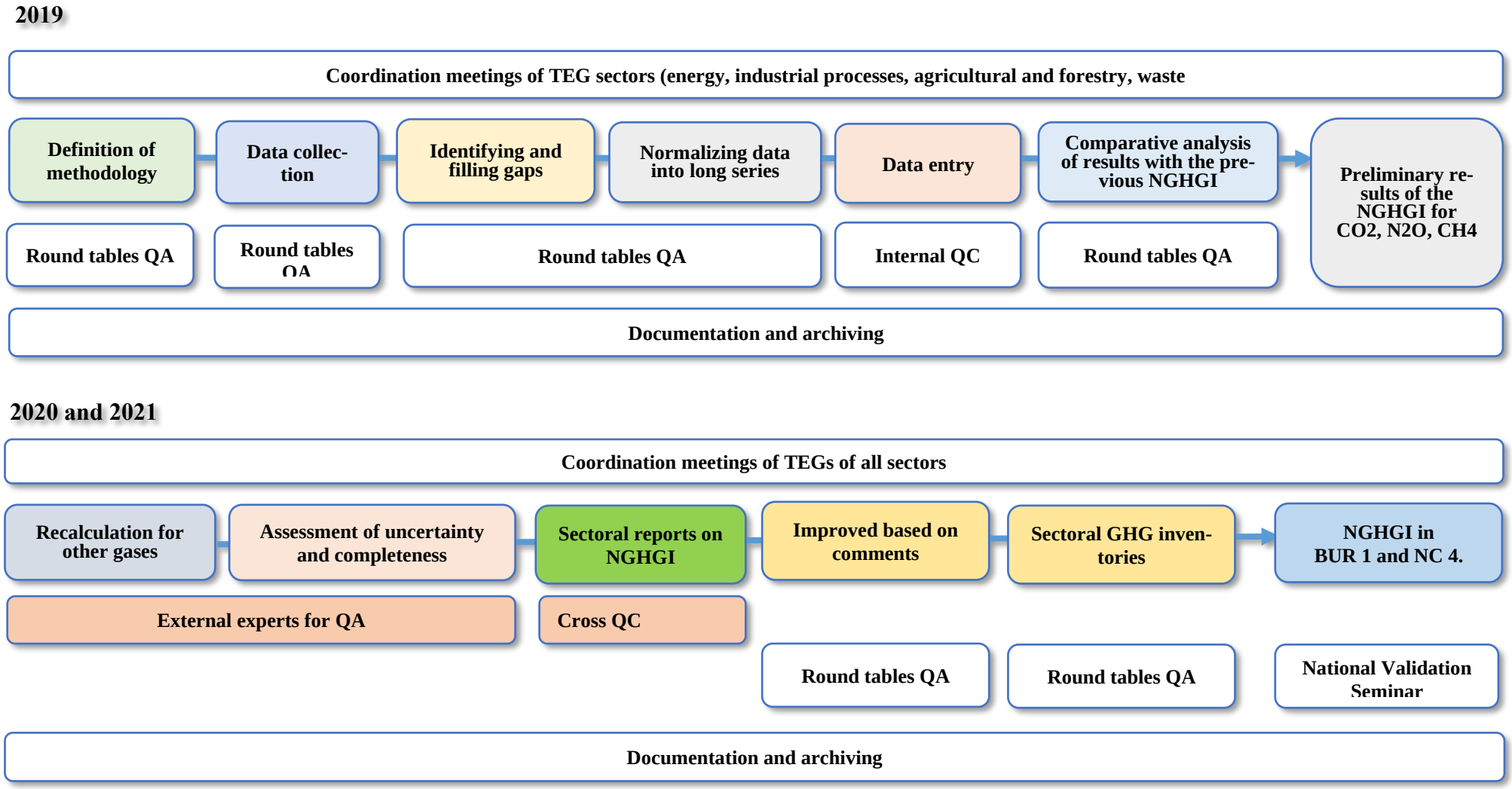
The Quality Control of all results of the fourth NGHGI was also carried out by cross-checking by the TEGs themselves within the PIU. Thus, the TEG Energy checked the results of the GHG inventory of the Waste sector, and vice versa, the TEG Waste checked the correctness of the emissions inventory of the Energy sector. The TEG Forestry checked the inventory data of the TEG Industrial Processes and Product Use (IPPU), and the TEG IPPU checked the results of the TEG Agriculture and Forestry and Other Land Use.

In addition, to implement the Work Plan on QA/QC of the PIU, independent experts and specialists from research and educational institutes were involved, who carried out a full verification and audit of the documentation and result databases of the fourth national GHG inventory.

Finally, the data from the fourth NGHGI were compared with the results of international organizations (e.g., the International Energy Agency, official data from the World Bank, etc.) and the results of inventories in other countries, especially countries with similar natural, climatic and socio-economic conditions (the Central Asian region). Comparative calculations were also presented to all interested parties at sectoral round tables. QC&QA process is presented in Fig. 7.1 below.

[19] The GWP was introduced in 1997 in the Kyoto Protocol.

Figure 7.1. Quality Assurance and Quality Control Process for the Fourth National GHG Inventory[20]



[20] Developed by authors.

8. Uncertainty and coverage assessment

Uncertainty estimates are an essential element of a complete inventory of greenhouse gas emissions and removals. They must be obtained for both the national level and the trend assessment, as well as for their constituent parts, such as emission factors, activity data, and other estimation parameters for each category.[21]

In the absence of developed national emission factor values from published studies relevant to the country's circumstances, the 4th NGHGI used the default factors given in the sector volumes of the 2006 IPCC Guidelines, which are the most common. However, there are uncertainties associated with the use of factors in circumstances unrelated to the original measurements. There can be considerable variability in how well the overall default values reflect the conditions of the actual population of activities in a particular country.

The methods for using default factors represent a compromise between the level of detail that would be needed to produce accurate estimates for each country and the input data likely to be available or readily available in most countries. It is clear that default methods are often simplifications and may introduce greater uncertainty into the national estimate.

Activity data are more closely linked 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 reconcile distributions and estimate uncertainty. However, activity data typically 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 estimate the uncertainty associated with their data as part of their data collection procedures and publish the data themselves.[22]

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 numbers, waste volumes, forest and agricultural land areas. However, such important long time series of data for the GHG inventory as the number of different types of motor vehicles and the fuel they consume, industrial output volumes, waste morphological composition, etc. are missing.

The uncertainty information is not intended to cast doubt on 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 efforts of the Kyrgyzstan national inventory team to produce emission estimates with the highest possible accuracy, various uncertainties were present across all sectors, but with varying percentages. Insufficient or missing data, use of default emission factors, or incomplete understanding of how emissions are generated by source are the main factors increasing the uncertainty around the reported emission estimates.

It should be noted that the IPCC software for national GHG inventories, among other tools, also provides the ability to analyze uncertainty both for individual sectors and for all data of the obtained GHG inventory as a whole. The largest percentage of uncertainty is associated with the IPCC default emission factors used, the percentage of uncertainty of which is automatically set in the range from several units to several hundred percent for each specific source of emissions and removal. Thus, according to the software package, for all values filled in during the fourth NGHGI, the uncertainty of activity data was 5 - 35%, and the uncertainty of the emission factors adopted by the IPCC by default is presented in the range from 3.1 to 999%.

[21] IPCC. Guidelines for National Greenhouse Gas Inventories. 2006, Vol. 1, Chapter 3.
[22] Ibid.

The high uncertainty as observed in FOLU and Waste sectors. In general, the uncertainty of the NGHGI inventory of the Kyrgyz Republic obtained as a result of the fourth NGHGI, according to the IPCC software package, is determined to be 61.255%, and the uncertainty of trends is 22.882%.

The full uncertainty table of the fourth NGHGI is presented in Appendix 1. The uncertainty of the sector inventories is presented below in the relevant sections.

The coverage of the fourth national GHG inventory of the sector was consistent with the IPCC methodology and the corresponding calculations were carried out for the following greenhouse gases: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O) and hydrofluorocarbons (HFCs), as well as for precursor gases: carbon monoxide (CO); nitrogen oxides (NOx); non-methane volatile organic compounds (NMVOC); and sulfur dioxide (SO_2).

To estimate total country and sector emissions, CH_4 and N_2O emissions were converted to CO_2 equivalent (CO_2eq) using Global Warming Potential (GWP) values provided in the IPCC Second Assessment Report on Climate Change 1995.[23]. The values of the recalculation equivalents are entered by default in the IPCC software package.

9. Recalculation and improvements

The transition to the new IPCC methodology and the use of the new IPCC software product in the process of the fourth national GHG inventory necessitated the recalculation of the estimates of the third national GHG inventory presented in the Third National Communication. Therefore, the inventory team recalculated the entire time series from 1990 to 20208 for all greenhouse gases and precursor gases. In addition, a new round of activity data collection was conducted and the archive of long data series was updated, which significantly expanded the primary data base. Undoubtedly, this improved the quality, accuracy, coverage and reliability of the obtained estimates of emissions by sources and removals by sinks in the process of the 4th NIGI. The final results of the recalculation of the estimates of GHG emissions by main sources and removals by sinks are presented in Table 9.1.

Table 9.1. Results of recalculation of the assessment of GHG emissions and absorption for the period 1990-2020 (Gg CO2 eq.)[24]

Year	Net CO2	CH4	N2O	HFC-CO2 eq	NOx	CO	NMVOC	SO2
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

[23] https://archive.ipcc.ch/publications_and_data/publications_and_data_reports.shtml
[24] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.

Year	Net CO2	CH4	N2O	HFC-CO2 eq	NOx	CO	NMVOC	SO2
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
2019	-2282,911	178,983	8,174	208,221	29,276	224,106	35,380	30,092
2020	-2896,028	183,610	8,270	227,723	27,160	223,276	33,248	48,329

Results of recalculation of GHG emissions by sources and absorption by sinks (minus values) by global warming potential in Gg CO_2 eq. presented in Table 9.2.

Table 9.2. Recalculation of GHG emissions by sources and absorption by sinks for the period 1990–2020.[25]

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

[25] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.

Year	Energy	IPPU	Agriculture	FOLU	Waste	Net CO2 eq.
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
2019	8179,574	1160,496	5240,242	-10954,624	592,087	4217,776
2020	7648,189	1132,175	5329,990	-10960,100	600,936	3751,190

As it can be seen from Table 9.2, the decade from 1995 to 2005 was a period of negative GHG emissions for the Kyrgyz Republic.

The use of the new methodology has led to significant discrepancies in the final results. This is primarily due to the expansion of coverage and more thorough assessment of not only emissions by sources, but also absorption by sinks. The rejection of the outdated biomass growth factors of the Forest Institute of the National Academy of Sciences of the Kyrgyz Republic from the late 1990s and the use of the 2006 IPCC Guidelines when recalculating carbon sinks have led to a more than 10-fold increase in the values of carbon absorption by forests and perennial crops in the country.

Accordingly, the assessment of the volumes of GHG emissions of Kyrgyzstan has also significantly decreased. The difference in the results obtained for the 3rd and 4th NGHGI is presented below in Table 9.3.

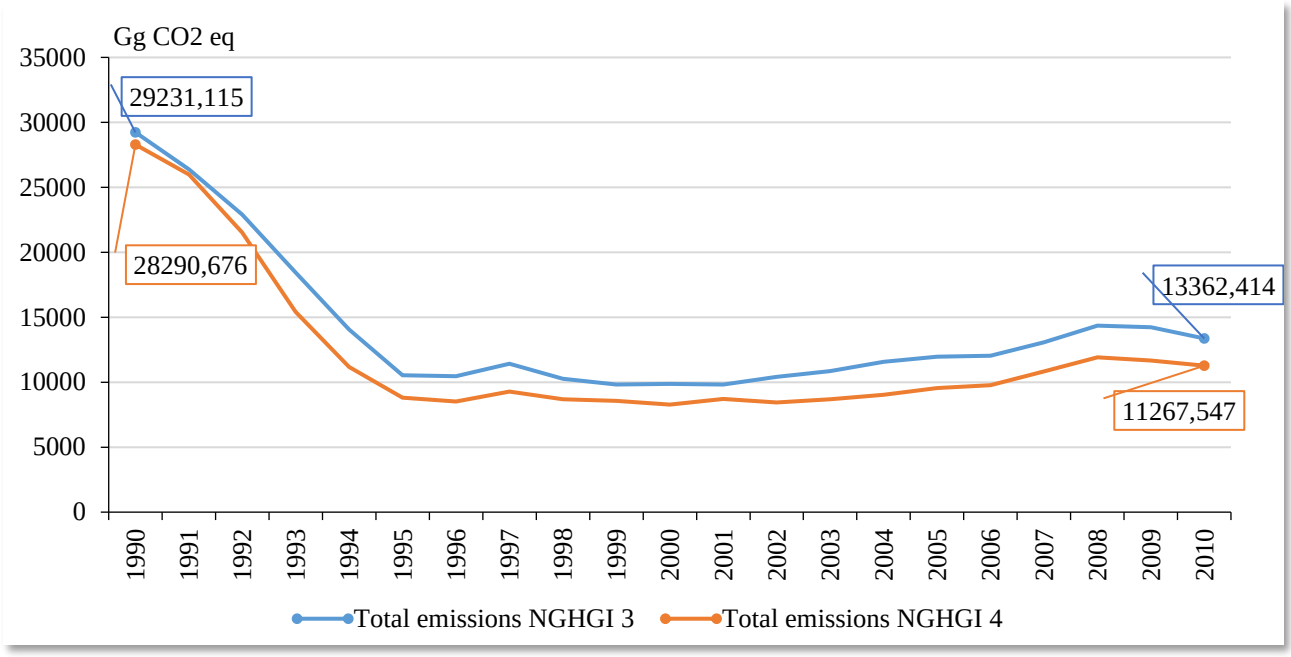
Table 9.3. The difference between the results of the third and fourth NGHGI estimates for total "net" GHG emissions in the period 1990-2010 in Gg CO2 eq. and %.[26]

Indicator	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, %	-3.22	-1.50	-6.02	-16.37	-20.58	-16.44	-18.54
Indicator	**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, %	-18.75	-15.27	-12.73	-16.11	-11.24	-18.90	-20.03
Indicator	**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, %	-21.93	-20,21	-18.69	-17,16	-16.96	-17.99	-15.68

The table shows that the difference in the estimated total GHG emissions for the period 1990-2010 between the 3rd and 4th NGHGIs varies for each year with a maximum negative value from minus 21.93% in the 2004 emissions to a maximum of minus 1.5% in the 1991 emissions estimate.

[26] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.

Figure 9.1. The difference in the estimates of the 3rd and 4th NGHGI of the national total GHG emissions of Kyrgyzstan for the period 1990-2010.[27]



The transition to the new methodology of the 2006 IPCC Guidelines using the IPCC default biomass expansion factors has led to significant changes in the assessment of carbon sequestration in the Forestry and Other Land Use (FOLU) category and the assessment of carbon dioxide (CO_2) sinks in forest biomass and perennial cropland plantations. The difference in the estimates of FOLU removals based on the results of the 3rd and 4th NGHGI is presented in Table 9.4.

Table 9.4: Difference in estimates for the third and fourth NIPG for CO2 sinks in the period 1990-2010.[28]

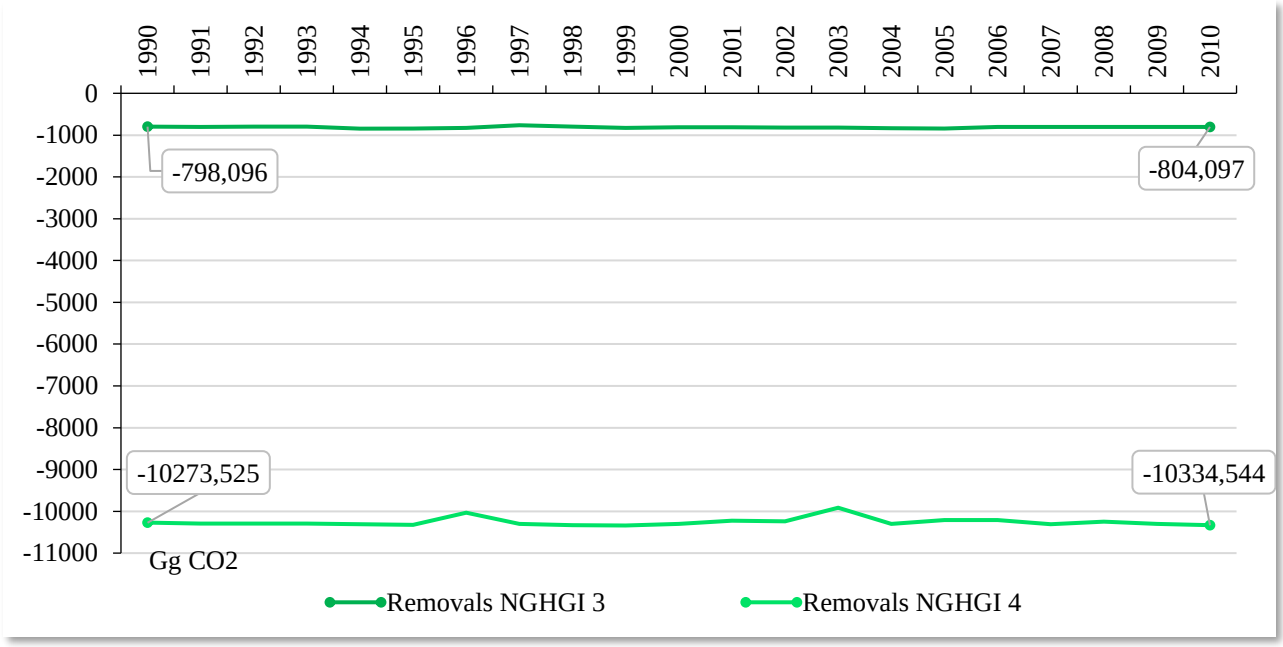
	1990	1991	1992	1993	1994	1995	1996
NGHGI 4	-10273,525	-10294,483	-10289,530	-10293,574	-10309,734	-10323,647	-10032,159
NGHGI 3	-798,096	-803,823	-798,788	-797,073	-845,476	-841.7	-828,167
Difference, Gg	-9475,429	-9490,660	-9490,742	-9496,501	-9464,258	-9481,947	-9203,992
Difference, %	1187.25	1180,69	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 it can be seen, the difference in the estimates of carbon sinks in forests in the 3rd and 4th NGHGI is significant, which is associated with the use of new data on forest area and new biomass growth

[27] Based on MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[28] Ibid.

factors from the 2006 IPCC Guidelines. The dynamics of CO_2 absorption in the forestry sector in the period 1990-2010 in the estimates of the 3rd and 4th NGHGI is presented in Figure 9.2.

Figure 9.2. CO_2 absorption in the FOLU sector in the period 1990-2010.[29]



10. Planning for improvement of the future NGHGI

It should be noted that Kyrgyzstan has never prepared a National (GHG) Inventory Improvement Plan (NIIP) before. At the same time, the preparation and submission of the improvement plan is in line with the UNFCCC reporting requirements under the Enhanced Transparency Framework (ETF).[30]"To facilitate continuous improvement, countries should identify, regularly update and report on areas for improvement. In addition to the areas noted above, improvements should also address capacity constraints associated with the use of flexibilities and, in the future, respond to improvements identified by technical expert groups."[31]

Taking into account the UNFCCC-recommended workbook template developed by the US Environmental Protection Agency, "Developing a National Greenhouse Gas Inventory System"[32], the preliminary NIIP was developed in accordance with the proposed template, including the following sections:

1. Institutional organization
2. Methods and data documentation
3. Quality Assurance and Quality Control Procedures
4. Archiving system
5. Key Category Analysis
6. National Inventory Improvement Plan

The National Inventory Improvement Plan (NIIP) of Kyrgyzstan presents options for improving the national GHG inventory system to support the production of a high-quality inventory in accordance

[29] Based on MNRETS, GEF-UNEP. IPCC Inventory Software V2.54 Database. – B., 2021.
[30] 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).
[31] UNFCCC. https://unfccc.int/sites/default/files/resource/Template_7._National_Inventory_Improvement_Plan.pdf
[32] US Environment Protection Agency.https://www.epa.gov/ghgemissions/toolkit-building-national-ghg-inventory-systems

with the 2006 IPCC Guidelines. The NIIP will guide future efforts to improve the transparency, consistency, comparability, completeness and accuracy of future inventories. It will also serve as a basis for overall improvement of the national GHG inventory in the coming years. These improvements will be identified through documentation of existing institutional arrangements, review of methods and data by category, QA/QC procedures, key categories and archiving system, and recommendations formulated as needed. Once completed, this NIIP will be renovated for NGHGI fifth round.

11. Emissions and Removals Report

The time frame of the NGHGI 4 results presented in this document covers the period of 2018-2020. At the same time, the estimates of GHG emissions by sources and removals by sinks were also recalculated for the entire period 1990-2020. These results, in accordance with the adopted coverage of the main greenhouse gases and precursor gases, are presented in tabular form in the generally accepted metric units for GHG emissions - gigagrams (Gg).

The assessment of emissions of various types of GHG by the main emitters and sinks for 2020 is presented in Table 11.1.

Table 11.1. Emissions and removals by main categories of sources and sinks in 2020 (Gg)[33]

Sources \ Gases	Net CO2	CH4	N2O	HFC-32	HFC-125	HFC-134a	HFC-143a	HFC-227ea
Total emissions and absorption	**-2896,028**	**183,610**	**8,270**	**6,975**	**64,449**	**81,332**	**54,773**	**20,194**
1 – Energy	7155,292	18,478	0.338	NO*	NO	NO	NO	NO
2 – PPIP	904,452	0,000	0,000	6,975	64,449	81,332	54,773	20,194
3 – AFOLU	-10960,100	140,741	7,659	NO	NO	NO	NO	NO
4 – Waste	4,328	24,392	0.272	NO	NO	NO	NO	NO
International Aviation Bunker	224,220	0.002	0.006	NO	NO	NO	NO	NO

NO – not occur.

The results of the assessment of precursor gas emissions in 2020 are presented in Table 11.2.

Table 11.2. Emissions of precursor gases by source in 2020 (Gg).[34]

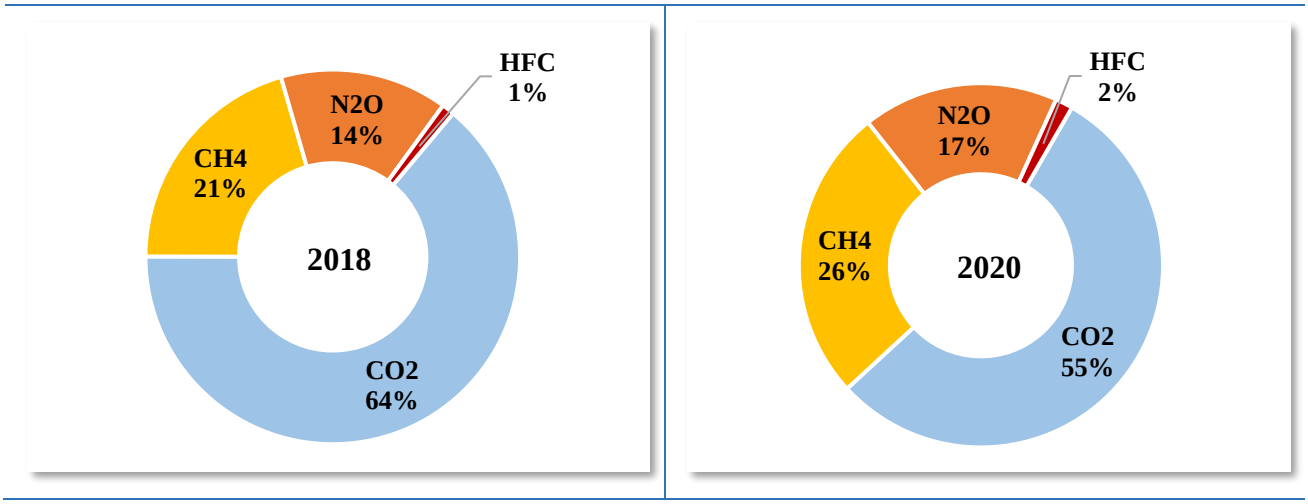
Sources \Gases	NOx	CO	NMVOC	SO2
Total emissions and absorption	**27,160**	**223,276**	**33,248**	**48,329**
1 – Energy	26,401	201,391	31,911	48,312
2 – PPIP	0.006	0.032	1,220	0.006
3 – AFOLU	0.448	16,495	0,000	0,000
4 – Waste	0.305	5,358	0.118	0,011
International Aviation Bunker	1,017	0.672	0.134	0,060

According to the 4th NGHGI data for 2020, recalculated into CO_2 equivalent, most of the emissions were due to carbon dioxide (55%), the share of methane in the total GHG emissions was 26%, nitrous

[33] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[34] Ibid.

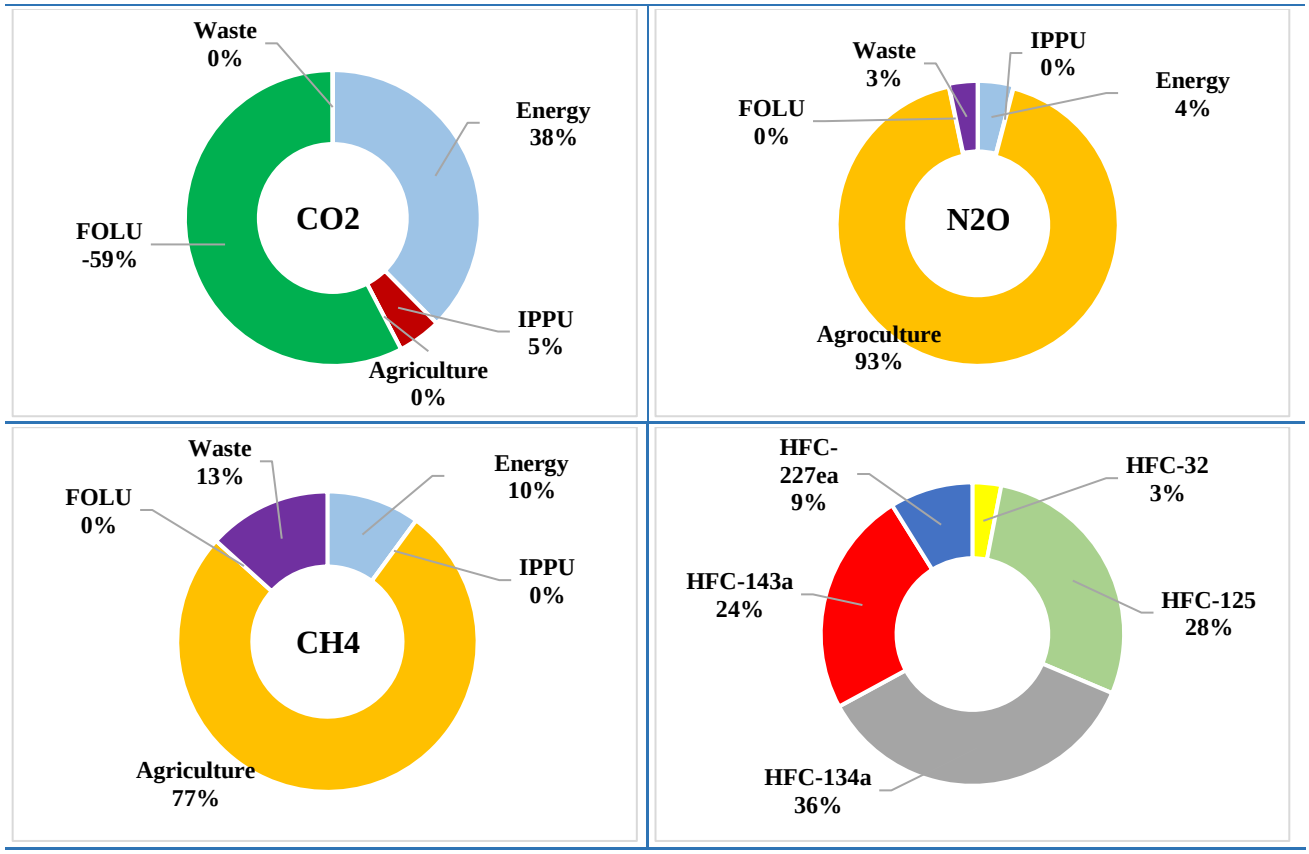
oxide - 17%, the share of HFCs - 7%. There were no emissions of PFCs and SF6 in 2018. The structure of emissions by gas types is presented in Fig. 11.1.

Figure 11.1. Structure of GHG emissions by gases in 2018 and 2020 in CO2 eq.[35]



The results of the inventory for the main categories of sources and gases in CO2 equivalent in 2020 are presented in Fig. 11.2.

Figure 11.2. Distribution of GHG emissions in 2020 by main sources[36]

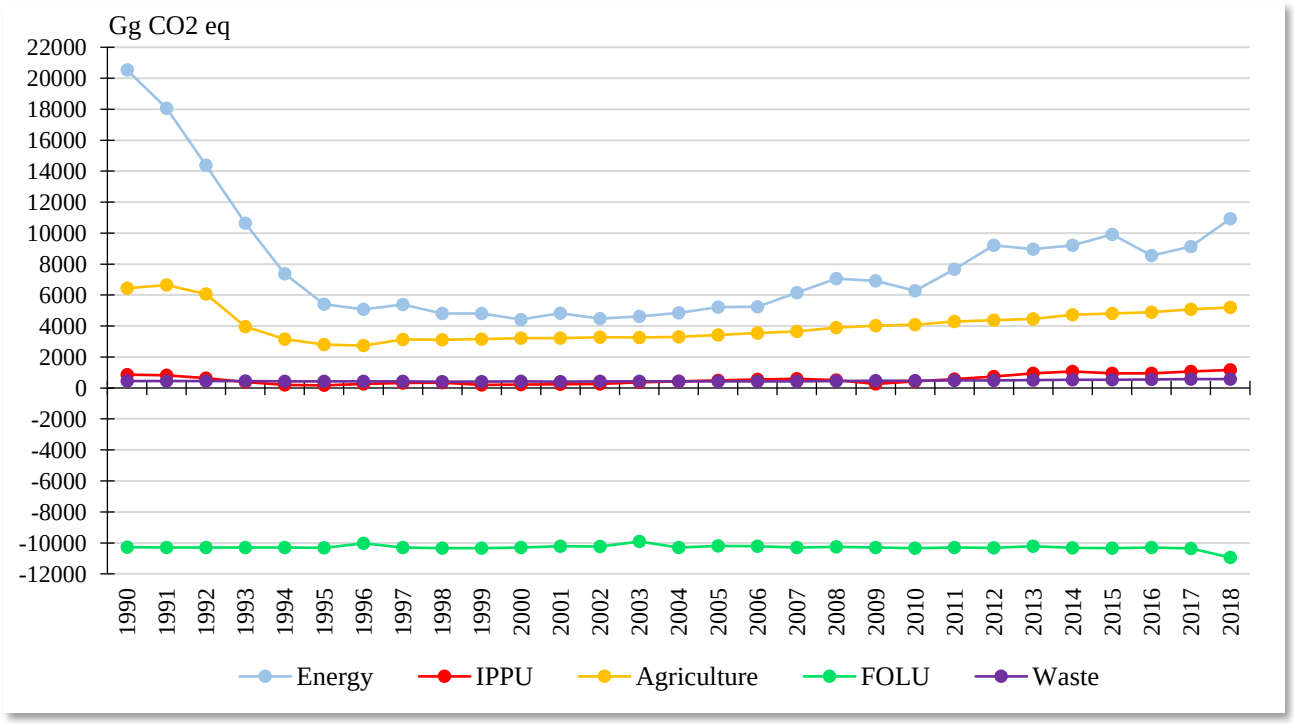


* Emissions of all types of HFCs occur in the PPIP sector

[35] Based on MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[36] Ibid.

The general dynamics of GHG emissions and absorption in CO_2 equivalent by sources for the period 1990-2020 is presented in Fig. 11.3.

Figure 11.3. Dynamics of GHG emissions and absorption in CO_2 eq. by sources for the period 1990-2020.[37]



In terms of contribution to total annual GHG emissions by sector between 1990 and 2020, the largest share falls on the Energy sector. Thus, emissions from the energy sector ranged from a maximum of 20,529.719 Gg CO2 eq. in 1990 to a minimum of 4,421.042 Gg CO2 eq. in 2000.

The second source of GHG emissions in the period under review was the agricultural sector, whose emissions peaked in 1991 at 6,641.579 Gg CO2 eq and dropped to a minimum of 2,734.142 Gg CO_2 eq in 1996.

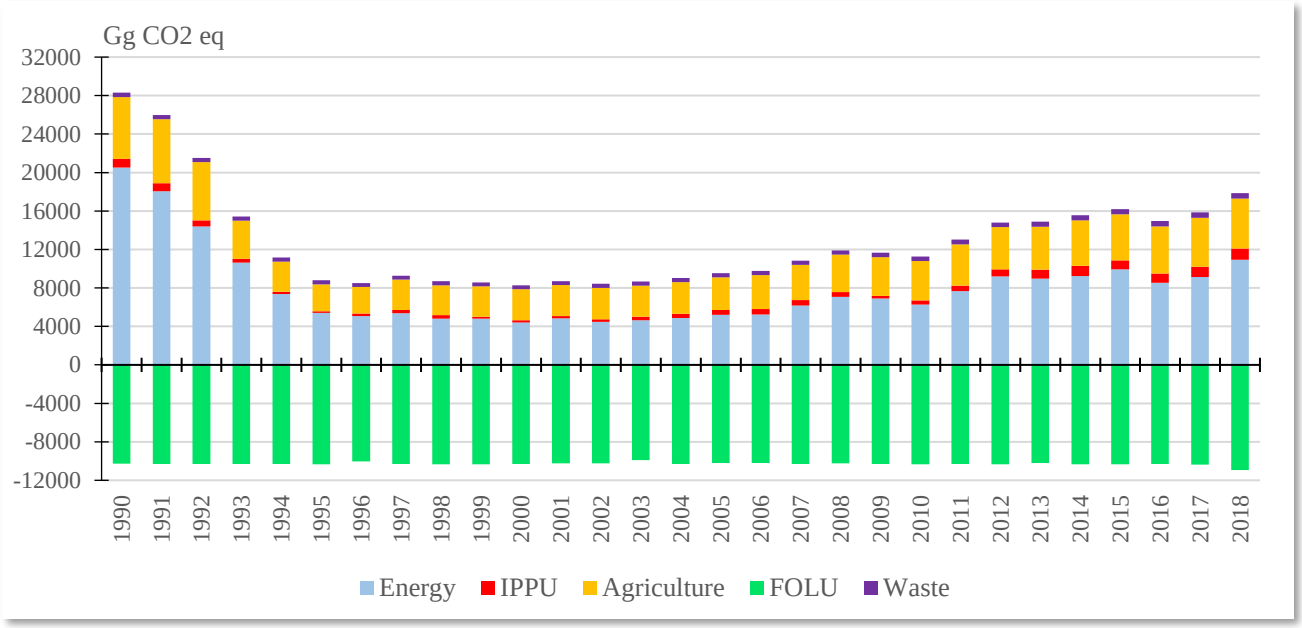
The situation is completely different with emissions in the "Industrial processes and product use" sector, where the maximum emissions occurred in 2088 and amounted to 1,162.533 Gg CO2 eq. and the minimum in 1995 - 169.149 Gg CO2 eq.

The Waste sector maintained a relatively stable and steady growth in emissions in the period before the review, so that the maximum value of emissions in it was 600,936Gg CO2 eq. in 2020, and the minimum was 413.694 Gg CO2 eq. in 1999.

Carbon dioxide (CO_2) was absorbed by the Forestry and Other Land Use sector. The amount of carbon dioxide absorbed by forests and permanent cropland remained stable throughout the period under consideration at around 10,000 Gg CO_2 annually. (Figure 11.4).

Figure 11.4. Emissions and absorption of GHG in the period 1990 - 2020 by sectors of emitters and absorbers[38]

[37] MNRETS. GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[38] Ibid.



12. GHG emissions by trends

In the period 1990-2020, GHG emissions in the Kyrgyz Republic generally showed a downward trend. Total GHG emissions decreased by 48.00% from 28,290.676 Gg CO2 eq. in 1990 to 14,711.290 Gg CO_2 eq. in 2020. The removal volume increased by 6.68% from 10,273.525 Gg CO_2 eq. in 1990 to 10,960.100 Gg CO_2 in 2020. Net emissions in 2020 amounted to 3,751.190 Gg CO2 eq. compared to 18,017.151 Gg CO_2 eq. in 1990, thus demonstrating a decrease of 79.18%.

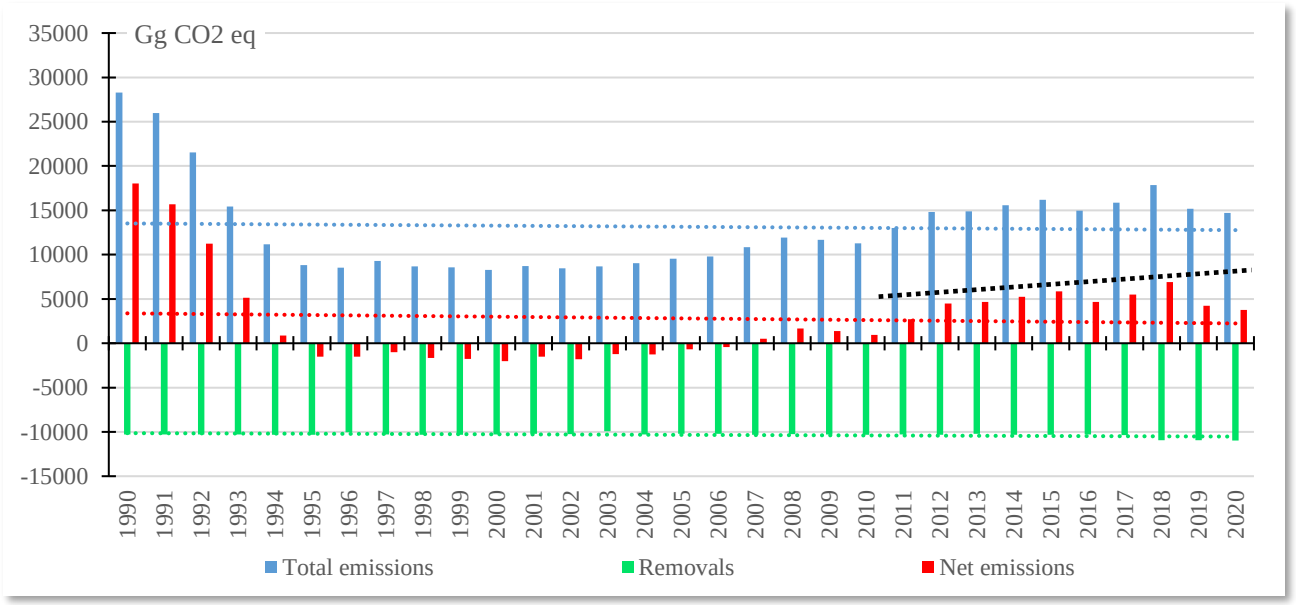
Greenhouse gas emissions in the Energy sector decreased by 62.75% from 20,529.719 Gg CO2 eq. in 1990 to 7,648.189 Gg CO2 eq. in 2020, greenhouse gas emissions of the second-largest emitting sector, Agriculture, decreased by 17.21% from 6,437.637 Gg CO2 eq. in 1990 to 5,329.990 Gg CO2 eq. in 2020.

At the same time, emissions from the Industrial Processes and Product Use sector increased by 29.89% from 871.638 Gg CO2 eq. in 1990 to 1,132.175 Gg CO2 eq. in 2020, and GHG emissions from the Waste sector increased by 33.04% from 451.682 Gg CO2 eq. in 1990 to 600.936 Gg CO2 eq. in 2020.

The dynamics of total and net GHG emissions and removals for 1990–2020 and the corresponding linear trends are presented in Fig. 12.1.

Figure 12.1. Dynamics and trends of total and net GHG emissions and absorption in the period 1990-2020.[39]

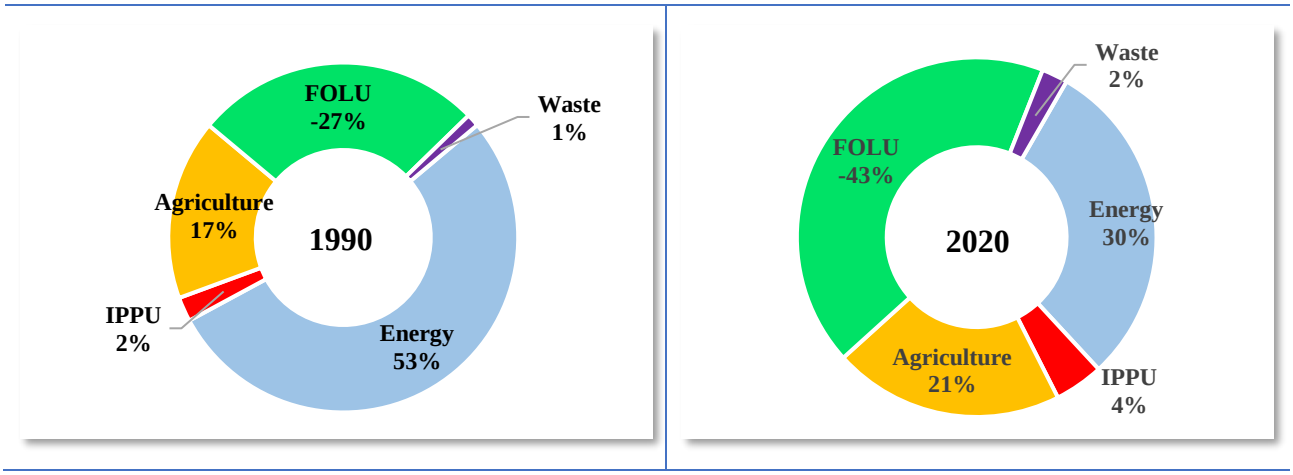
[39] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.



As shown in Figure 12.1, despite the overall downward trend in both total and net emissions from 1990 to 2020, the trend over the past 10 years has turned towards increasing emissions. The growth of total GHG emissions in 2020 increased by 30.56% compared to 2010 (see the trend in black), which determines the need to develop strategies to reduce emissions for all emission source categories in emitting sectors and to increase carbon dioxide absorption by sinks.

The distribution of GHG emissions by main source categories and the volume of emissions also changed over the period 1990-2020. Figure 12.2 shows the distribution of GHG emissions in CO2 eq. by main sources, comparing the situations in 1990 and 2020.

Figure 12.2. Distribution of GHG emissions by sources in 1990 and 2020[40]



The figure shows that by 2020, the share of emissions from the Energy sector had decreased due to an increase 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 the main categories of GHG emissions for the period 1990-2020, carried out during the 4th NGHGI, the level of various GHG emissions has significantly decreased in the following categories of emission sources:

[40] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.

- CO_2 emissions in the category Fuel combustion 1.A.1 "Energy industries" - liquid fuel by 95.88%, and in the same category for gaseous fuel - by 93.54%;
- CO_2 emissions in the category Fuel combustion 1.A.4 "Other sectors - solid fuels" - by 71.53%;
- CO_2 emissions by category1.A.3.e “Other transport” - by 67.28%;
- CO_2 emissions in the category Fuel combustion 1.A.1 "Energy industries" - solid fuel - by 58.48%;
- N_2O emissions in category 3.C.4 "Direct N2O emissions from managed soils" - by 42.71%;
- N_2O emissions in category 3.C.5 "Indirect N2O emissions from managed soils" - by 32.92%;
- CO_2 emissions in category Fuel combustion 1.A.4 "Other sectors" - gaseous fuels - by 14.84%;
- N_2O emissions in category 3.A.2 "Manure management" - by 14.45%.

Despite the overall downward trend in GHG emissions, a comparative analysis of emissions in 1990 and 2020 by category showed an increase in emissions from the following sources:

- Emissions of HFCs in category 2.F.1 "Refrigeration and air conditioning" increased from 0 to 157,856 thousand tons, which is due to the lack of data on activities at the beginning of the 90s of the last century;
- CH_4 emissions in category 4.A "Solid waste disposal" - by 57.06%;
- CH_4 emissions in the category Volatile emissions 1.B.2.a "Oil" - by 54.97%;
- CO_2 emissions in category 2.A.1 "Cement production" - by 44.42%;
- CO_2 emissions in the category Fuel combustion 1.A.2 "Industry and construction" - solid fuel - by 37.14%;
- CH_4 emissions in category 3.A.1 "Enteric fermentation" - by 11.95%;
- CO_2 emissions in the category Fuel combustion 1.A.3.b "Road transport" - by 4.85%.

The rate of CO_2 sequestration also increased between 1990 and 2020:

- in category 3.B.1.a "Forest lands remaining forest lands" by 9.34%; and
- in category 3.B.2.a. Arable land remaining arable land, by 1.59%.[41]

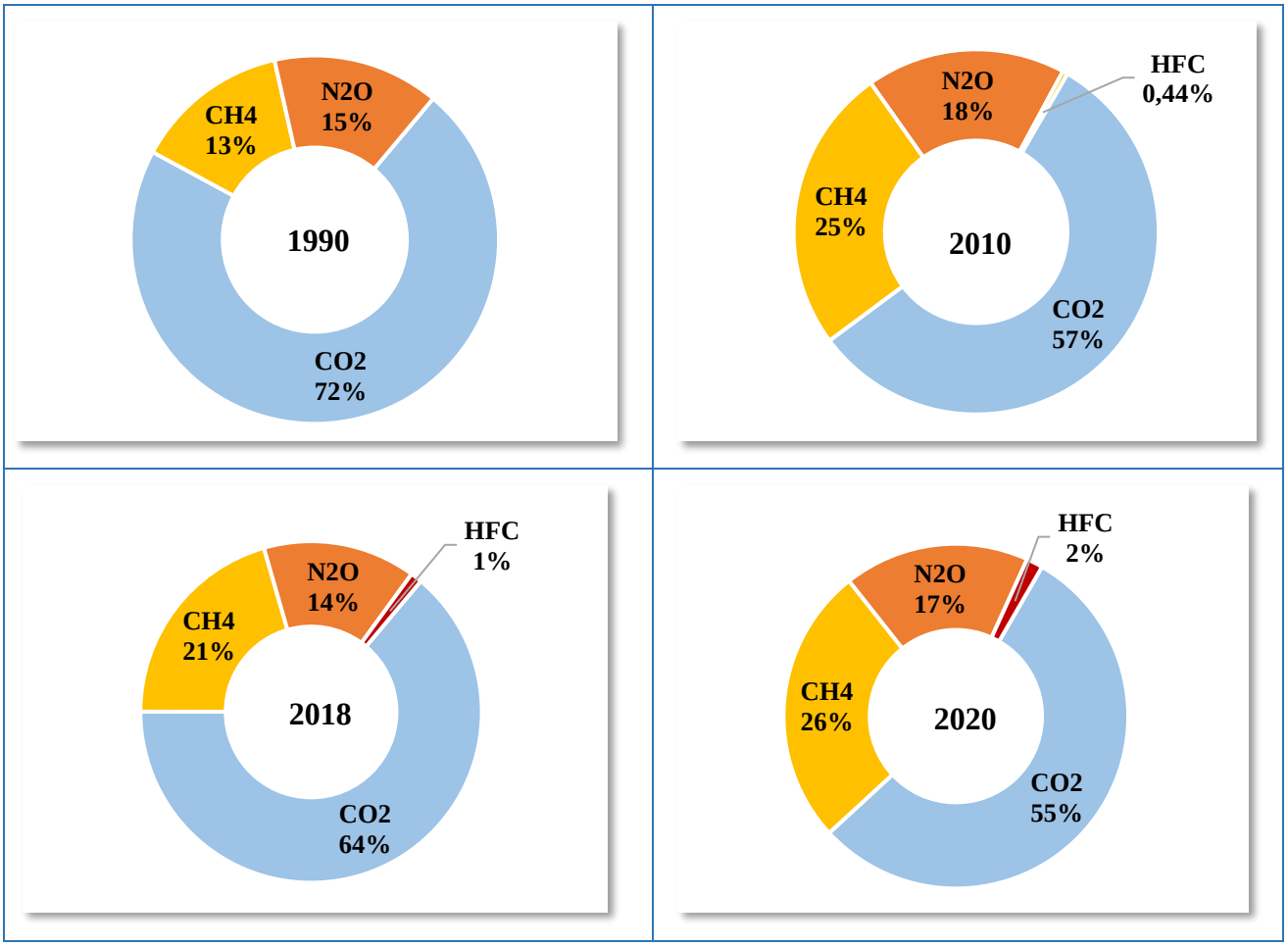
13. GHG emissions and absorption by gas types

Emissions of the main GHGs changed during the reporting period 2018 - 2020. Thus, carbon dioxide emissions in 2020 compared to 2018 decreased by 29.36%, methane emissions increased by 5.30%, nitrous oxide emissions decreased by 0.91%, and HFC emissions increased by 17.57%. At the same time, emissions of the same gases in 2020 compared to 1990 levels decreased by 60.28% for CO_2 and by 38.06% for N_2O, and slightly increased by 0.23% for CH_4.[42]

The composition of GHG emissions for the same period 2018-2020 has changed little, but the ratio of the main greenhouse gases compared to 1990 has changed due to a decrease in the share of carbon dioxide emissions by 12%, nitrous oxide by 1%, and an increase in methane emissions by 8%. (See Fig. 13.1).

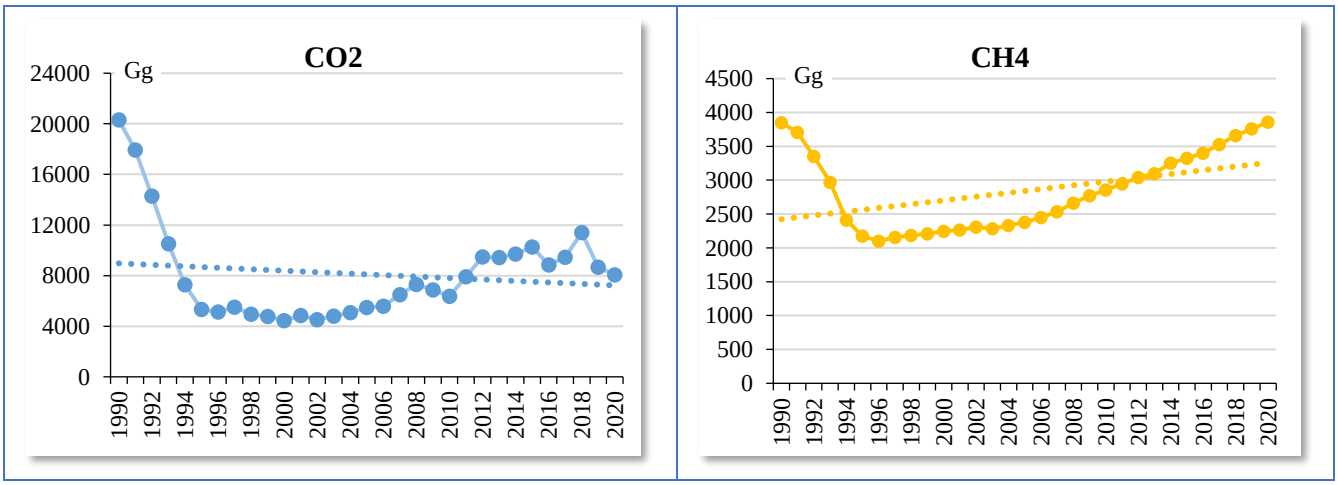
Figure 13.1. Structural composition of emissions by type of gases in 1990, 2010, 2018 and 2020 (in CO_2 eq.)[43]

[41] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[42] Ibid.
[43] Ibid.

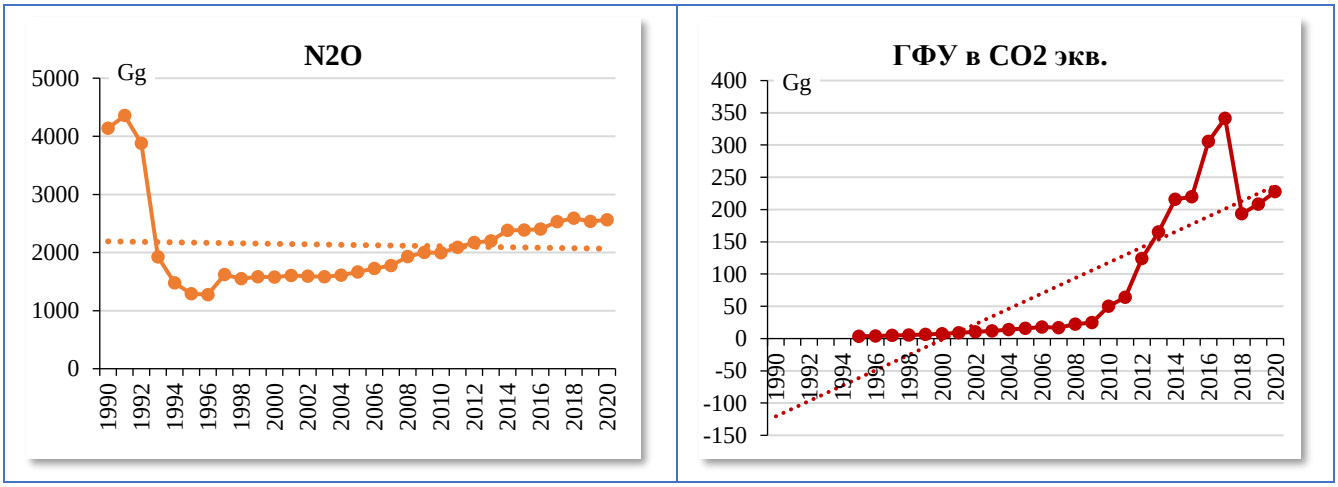


The dynamics and linear trends of emissions of the main types of GHG in the Kyrgyz Republic in the period 1990-2020 are presented in Fig. 13.2.

Figure 13.2. Dynamics and trends of emissions of main greenhouse gases for the period 1990-2020.[44]



[44] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.



The resulting data from the recalculation of the 4th NGHGI for long time series of various types of GHGs for the period 1990-2020 are presented in Table 13.1.

Table13.1.Direct greenhouse gas emissions in the Kyrgyz Republic for the period 1990-2020 (Gg)[45]

Gas / Year	1990	1991	1992	1993	1994	1995	1996	1997
CO2	20304.8	17925,71	14295,31	10523,65	7277,614	5332,956	5136,61	5506,409
CH4	183,188	176,404	159,665	141,486	114,784	103,647	99,976	102,633
N2O	13,351	14,053	12,519	6.21	4.77	4,169	4,114	5,218
HFC-32	NE*	NE	NE	NE	NE	NE	NE	NE
HFC-125	NE	NE	NE	NE	NE	NE	NE	NE
HFC-134a	NE	NE	NE	NE	NE	0.003	0.003	0.004
HFC-143a	NE	NE	NE	NE	NE	NE	NE	NE
HFC-227ea	NE	NE	NE	NE	NE	NE	NE	NE
Gas / Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
CO2	4951,275	4771,128	4448,403	4840,439	4530,101	4795,254	5083,202	5486,498
CH4	104,081	105,204	106,913	107,877	109,852	108,794	110,945	113,182
N2O	4,995	5.11	5,082	5,171	5.14	5.11	5,188	5,361
HFC-32	NE	NE	NE	NE	NE	NE	NE	NE
HFC-125	NE	NE	NE	NE	NE	NE	NE	NE
HFC-134a	0.004	0,005	0.006	0,007	0.008	0,009	0,011	0,012
HFC-143a	NE	NE	NE	NE	NE	NE	NE	NE
HFC-227ea	NE	NE	NE	NE	NE	NE	NE	NE
Gas / Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
CO2	5588,4	6502,903	7297,916	6875,947	6367,899	7912,95	9474,134	9422,457
CH4	116,538	120,728	126.85	131,879	136,033	140,261	144,668	147,567
N2O	5,568	5.73	6,214	6,454	6,429	6,745	6,997	7,096
HFC-32	NE	NE	NE	NE	0,001	0.004	0,005	0,005
HFC-125	NE	NE	NE	NE	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	NE	NE	NE	NE	0,001	0.003	0.004	0.006
HFC-227ea	NE	NE	NE	NE	NE	NE	0,015	0.027
Gas / Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	
CO2	9705,698	10275,01	8840,465	9449,068	11415,86	8672	8064	
CH4	154,857	158.22	161,831	167,874	174,361	178,983	183,610	
N2O	7,682	7,696	7,758	8,157	8,346	8,174	8,270	
HFC-32	0.006	0.006	0,007	0,007	0,007	0,009	0,011	

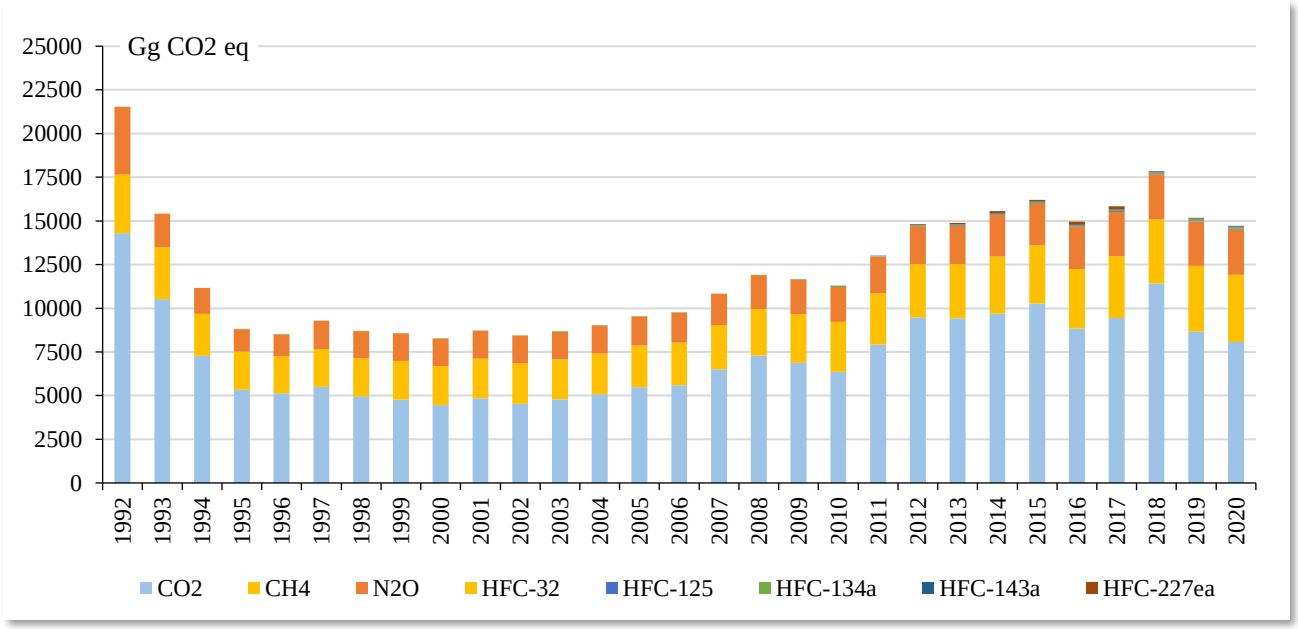
[45] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022

HFC-125	0,012	0,013	0,015	0,017	0,018	0.02	0.023
HFC-134a	0.033	0.035	0,041	0.044	0.048	0.055	0.063
HFC-143a	0,007	0,009	0.01	0,011	0,012	0,014	0,014
HFC-227ea	0.038	0.034	0.058	0.066	0.01	0.008	0,007

NE – not estimated due to lack of data

The dynamics of emissions of various types of GHG in CO_2 equivalent for the period 1990-2020 is presented in Fig. 13.3.

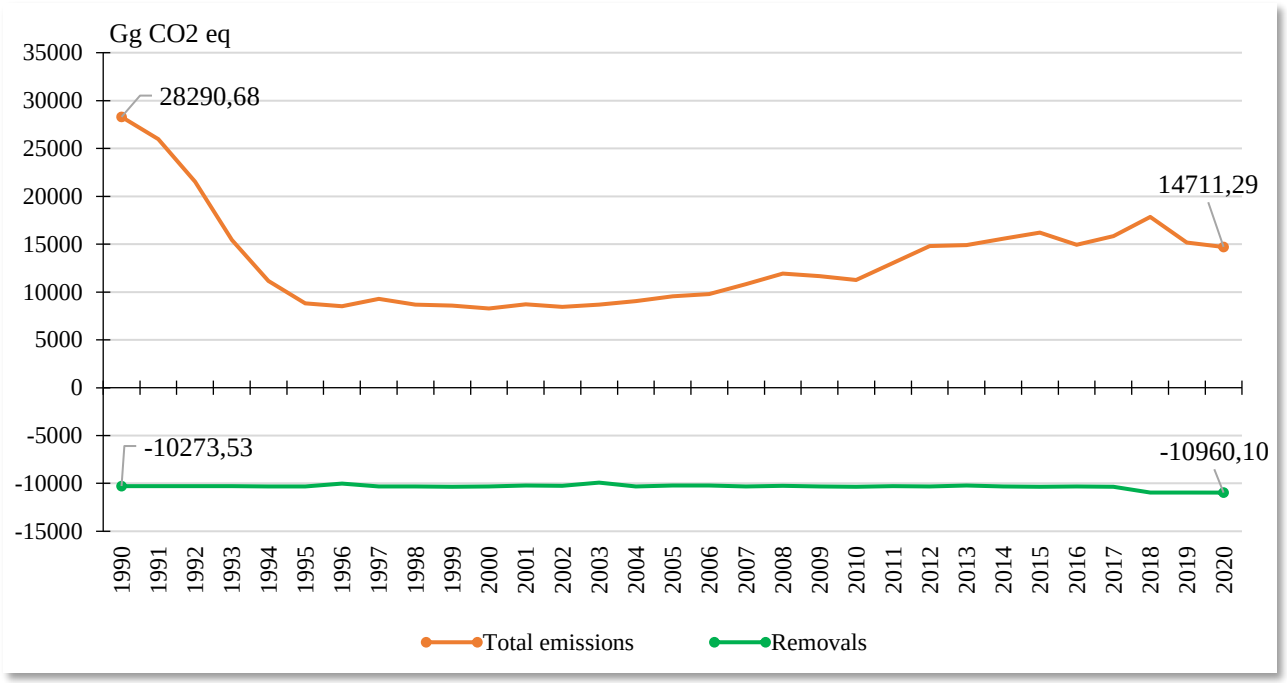
Figure 13.3. Emissions of different types of greenhouse gases in the period 1990-2020.[46]



Along with the change in GHG emissions in the period 1990-2020, Kyrgyzstan maintains a stable level of GHG absorption due to CO_2 absorption in the biomass of forests and perennial plantings. Preservation of the total forest area is the most important stabilizing factor for the carbon balance and low-carbon green economy. (See Fig. 13.4).

Figure13.4. Dynamics of GHG emissions and absorption in the period 1990-2020 (CO_2 eq.)[47]

[46] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[47] Ibid.



Recalculation of GHG removals according to the new IPCC methodology using biomass growth factors increased the CO_2 removal values for IPCC removal source category 3.B "Land". The time series of CO_2 removal 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)[48]

1990	1991	1992	1993	1994	1995	1996	1997
-10273,5	-10294,5	-10289,5	-10293.6	-10309.7	-10323,65	-10032,16	-10303,3
1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
-10331,5	-10339,1	-10303,9	-10221.4	-10239.3	-9914,316	-10302.87	-10206
2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
-10208,9	-10309.9	-10250,7	-10303,4	-10334,5	-10295,77	-10324,34	-10216,2
2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	
-10327,7	-10336,5	-10302,5	-10367,3	-10941,4	-10954,624	-10960,100	

The results of the assessment of precursor gas emissions for the reporting period 2018-2020 indicate an increase in emissions of all gases. Thus, emissions of nitrogen oxides (NOx) decreased in 2020 compared to 2018 by 24.40%, carbon monoxide (CO) - by 16.28%, non-methane volatile organic compounds (NMVOC) - by 17.36%, and emissions of sulfur dioxide (SO2) increased by 13.30%. Updated long series of precursor gas emissions in the country for the period 1990-2020 are presented in Table 13.3 below.

Table 13.3 Emissions of precursor gases for the period 1990-2020 (Gg)[49]

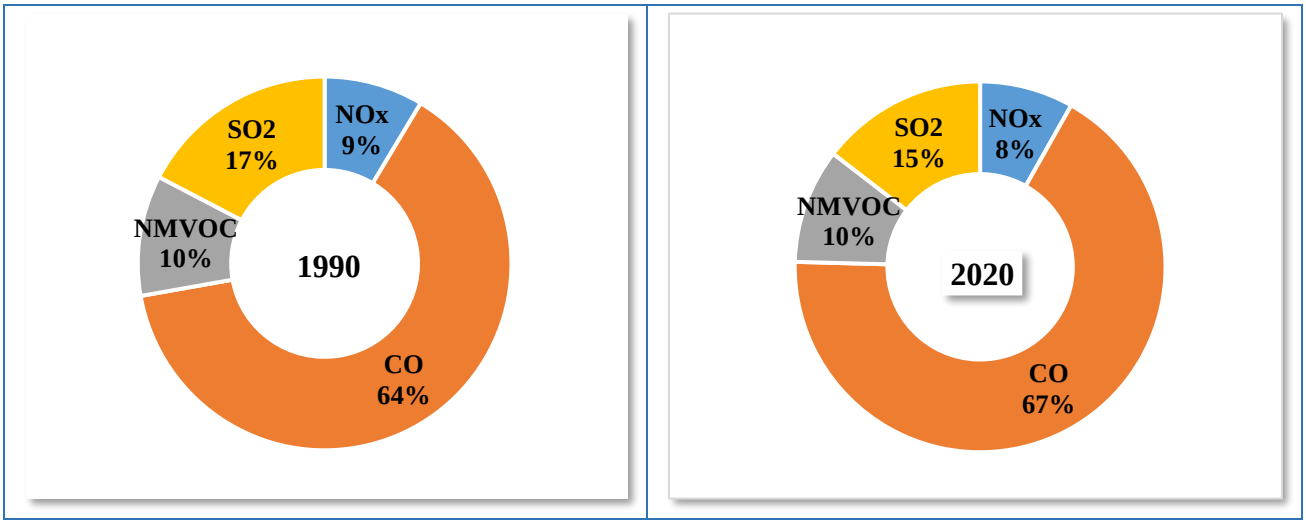
Gas	1990	1991	1992	1993	1994	1995	1996	1997
NOx	50,255	42,884	33,312	23,599	16,565	12,185	13,040	13,689
CO	371,469	310,618	261,844	183,287	120,212	64,104	71,148	84,283
NMVOC	60,966	53,265	40,465	30,711	21,772	14,317	15,247	15,091
SO2	101,326	86,024	71,628	56,662	46,888	24,833	22,582	19,972
Gas	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
NOx	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

[48] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[49] 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**	**2019**	**2020**	
NOx	31,218	32,980	29,768	32,334	35,924	29,276	27,160	
CO	229,551	237,888	234,538	237,129	266,697	224,106	223,276	
NMVOC	30,890	31,632	33,735	35,788	40,232	35,380	33,248	
SO2	53,243	61,052	40,525	38,570	42,656	30,092	48,329	

Compared with precursor gas emissions in 1990, their emissions in 2020 have decreased: NOx emissions - by 45.96%; CO emissions - by 39.89%; NMVOC emissions - by 45.46% and SO2 emissions - by 52.90%. The composition of annual precursor gas emissions in the Kyrgyz Republic has not changed significantly and has always been dominated by carbon monoxide or carbon monoxide, which is a combustion product. (See Fig. 13.5).

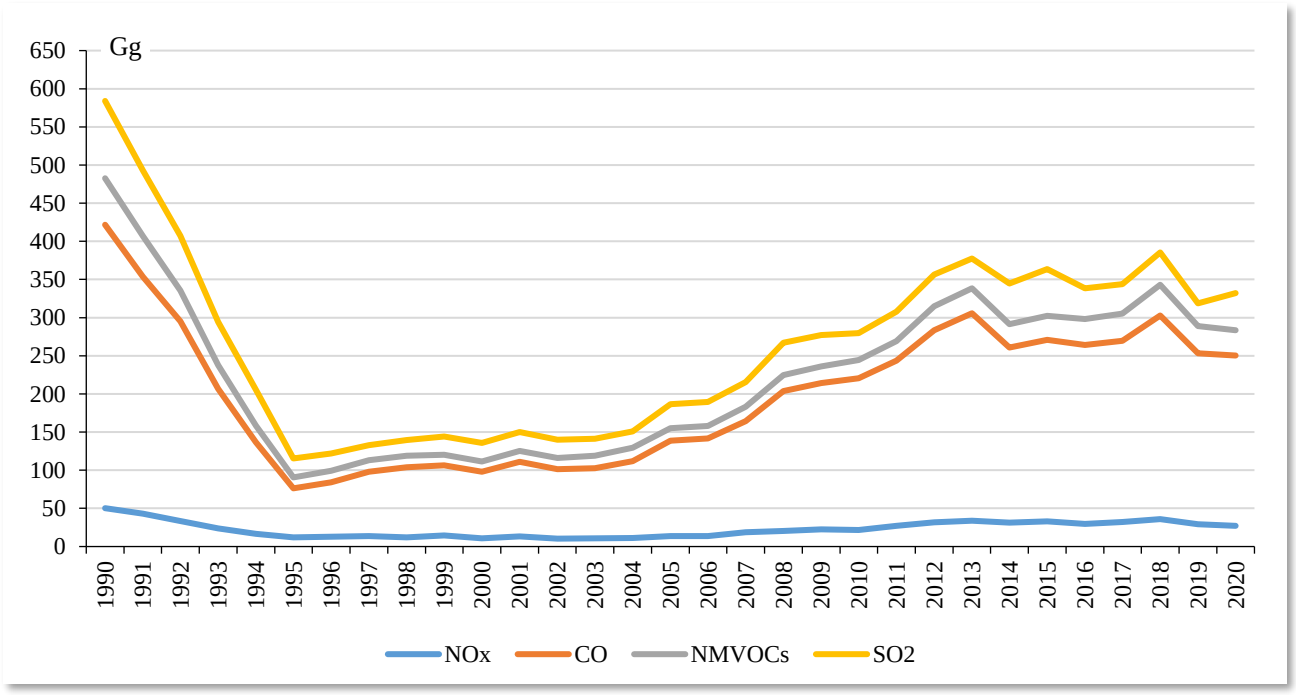
Figure 13.5. Comparison of the composition of precursor gas emissions in 1990 and 2020.[50]



The dynamics of emissions of various types of precursor gases in the period 1990-2020 is presented in Fig. 13.6.

Figure 13.6. Dynamics of emissions of precursor gases in the Kyrgyz Republic in the period 1990-2020.[51]

[50] MNRETS, GEF-UNEP. IPCC Inventory Software V2.54. – B., 2022.
[51] Ibid.


Gg
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NOx
CO
NMVOCs
SO2

14. Inventory of GHG emissions and precursor gases by sources and removals by sinks for the period 1990-2020.

Inventory year: 1990

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	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 activity	19388,791	17,605	0.746	0,000	49,619	355,392	40,373	101,306
1.A.1 - Energy industry	8113,007	0.177	0,070		14,060	9,267	2,034	50,527
1.A.2 - Industry 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.B - Fugitive emissions from fuel	40,841	23,762	0,000	0,000	0,000	0,000	13,907	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	144,710				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents								
2.D.4 - Other (specify)								
2.E - Electronics industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 eq.	NOx	CO	NMVOCs	SO2
2.F.6 - Other uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	6,579	0,000
3 - Agriculture, forestry and other land uses	-10273,525	123,711	12,386	0,000	0.307	11,295	0,000	0,000
3.A - Pets	0,000	123,114	0.647	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10266,120	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6850,850				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3415,270				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	0.598	11,739	0,000	0.307	11,295	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
4.D - Wastewater Treatment and Discharge	0,000	7,094	0.204	0,000	0,000	0,000	0,000	0,000
For your information								
International bunkers	366,257	0.003	0,010	0,000	1,661	1,097	0.218	0.098
1.A.3.ai - International Aviation	366,257	0.003	0,010		1,661	1,097	0.218	0.098
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	17054,719	14,406	0,630	0,000	42,246	294,395	33,731	86,005
1.A.1 - Energy industry	7697,909	0.157	0.072		12,289	7,966	1,726	44,524
1.A.2 - Industry 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.B - Fugitive emissions from fuel	37,594	22,538	0,000	0,000	0,000	0,000	12,859	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	146,487				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.H.1 - Pulp and paper industry	0,000	0,000			0,005	0.262	0,009	0,010
2.H.2 - Food and beverage production	0,000	0,000			0,000	0,000	6,568	0,000
3 - Agriculture, forestry and other land uses	-10294,483	121,080	13,222	0,000	0.301	11,089	0,000	0,000
3.A - Pets	0,000	120,380	0.624	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10287,797	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6864,058				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3423,739				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	0,700	12,599	0,000	0.301	11,089	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information								
International bunkers	111,845	0,001	0.003	0,000	0.993	0.656	0.131	0.058
1.A.3.ai - International Aviation	111,845	0,001	0.003		0.993	0.656	0.131	0.058
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	13628,190	11,259	0.419	0,000	32,666	239,722	27,337	70,722

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.A.1 - Energy industry	5970,588	0.124	0.054		10,518	6,665	1,419	38,520
1.A.2 - Industry 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.B - Fugitive emissions from fuel	27,245	17,185	0,000	0,000	0,000	0,000	9,218	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	58,679				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	7,732	0,000	0,000	0,000	0,000	4,924	0,000	0.889
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	3,799	0,000
3 - Agriculture, forestry and other land uses	-10289,530	113,440	11,899	0,000	0.335	12,332	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.A - Pets	0,000	112,676	0.572	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10284,340	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6859,755				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3424,584				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	0.763	11,328	0,000	0.335	12,332	0,000	0,000
3.C.1 - Emissions from biomass combustion		0.362	0,009		0.335	12,332	0,000	0,000
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 cultivation		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
For your information								
International bunkers	179,212	0,001	0,005	0,000	0.813	0.537	0.107	0.048
1.A.3.ai - International Aviation	179,212	0,001	0,005		0.813	0.537	0.107	0.048
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	10107,609	7,735	0.252	0,000	22,918	156,955	17,454	55,367
1.A.1 - Energy industry	4907,816	0.098	0.046		8,747	5,364	1,111	32,516
1.A.2 - Industry 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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.B - Fugitive emissions from fuel	18,822	12,499	0,000	0,000	0,000	0,000	7,712	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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
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 processes using carbonates	25,859				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	11,153	0,000	0,000	0,000	0,000	7,103	0,000	1,282
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents								
2.D.4 - Other (specify)								
2.E - Electronics industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	5,438	0,000
3 - Agriculture, forestry and other land uses	-10293,574	103,468	5,758	0,000	0.392	14,420	0,000	0,000
3.A - Pets	0,000	102,519	0.497	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10290,681	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6850,699				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.B.2 - Cultivated lands	-3439,983				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	0.949	5,261	0,000	0.392	14,420	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	43,321	0,000	0,001	0,000	0.197	0,130	0.026	0,012
1.A.3.ai - International Aviation	43,321	0,000	0,001		0.197	0,130	0.026	0,012
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	7052,076	4,514	0.127	0,000	15,914	96,928	10,842	46,035
1.A.1 - Energy industry	3855,193	0.072	0.037		8,747	5,364	1,111	32,516
1.A.2 - Industry 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.B - Fugitive emissions from fuel	11,464	8,673	0,000	0,000	0,000	0,000	5,850	0,000
1.B.1 - Solid fuel	8,266	2,999	0,000		0,000	0,000	1,352	0,000
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 - Transport and storage of carbon dioxide	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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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 processes using carbonates	12,631				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	7,326	0,000	0,000	0,000	0,000	4,665	0,000	0.842
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				0,000	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	4,975	0,000
3 - Agriculture, forestry and other land uses	-10309,734	84,314	4,463	0,000	0.377	13,879	0,000	0,000
3.A - Pets	0,000	83,258	0.375	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral fermentation		80,881			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		2,377	0.375		0,000	0,000	0,000	0,000
3.B - Earth	-10306,606	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6858,848				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3447,758				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,056	4,088	0,000	0.377	13,879	0,000	0,000
3.C.1 - Emissions from biomass combustion		0.408	0,011		0.377	13,879	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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 cultivation		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
For your information								
International bunkers	33,480	0,000	0,001	0,000	0.152	0,100	0,020	0,009
1.A.3.ai - International Aviation	33,480	0,000	0,001		0.152	0,100	0,020	0,009
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	5157,491	1,506	0.191	0,000	11,508	40,100	4,277	24,023
1.A.1 - Energy industry	2811,543	0.046	0,030		5,204	2,762	0.496	20,509
1.A.2 - Industry and construction	214,573	0,009	0,001		0,460	0.584	0,111	0.493
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.B - Fugitive emissions from fuel	6,125	6,872	0,000	0,000	0,000	0,000	5,253	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	12,509				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical industry	6,990	0,000	0,000	0,000	0.004	4,452	0,000	0,800

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.C.1 - Iron and steel production	0.031	0,000			0.004	0,020	0,000	0,000
2.C.7 - Other (specify)	6,959	0,000	0,000	0,000	0,000	4,432	0,000	0,800
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	3,637	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				3,637	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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
2.H.1 - Pulp and paper industry	0,000	0,000			0,001	0.003	0,001	0,001
2.H.2 - Food and beverage production	0,000	0,000			0,000	0,000	4,682	0,000
3 - Agriculture, forestry and other land uses	-10323,647	78,158	3,785	0,000	0.402	14,812	0,000	0,000
3.A - Pets	0,000	76,767	0.337	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10321,216	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6873,306				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3447,911				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,391	3,448	0,000	0.402	14,812	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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
For your information								
International bunkers	173,906	0,001	0,005	0,000	0.789	0.046	0.521	0.104
1.A.3.ai - International Aviation	173,906	0,001	0,005		0.789	0.046	0.521	0.104
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	4860,514	1,327	0.154	0,000	12,257	40,581	5,065	21,273
1.A.1 - Energy industry	2777,823	0.047	0.027		4,916	2,685	0.599	18,056
1.A.2 - Industry 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.B - Fugitive emissions from fuel	5,086	6,819	0,000	0,000	0,000	0,000	4,994	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	13,405				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	11,289	0,000	0,000	0,000	0,000	7,189	0,000	1,297
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (specify)	0,000				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.E - Electronics industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	4,094	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				4,094	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	5,081	0,000
3 - Agriculture, forestry and other land uses	-10032,159	74,538	3,770	0,000	0.503	18,528	0,000	0,000
3.A - Pets	0,000	72,847	0.310	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10029,454	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6861,825				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3167,629				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,691	3,461	0,000	0.503	18,528	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	209,688	0,001	0.006	0,000	0.951	0.628	0.125	0.056
1.A.3.ai - International Aviation	209,688	0,001	0.006		0.951	0.628	0.125	0.056

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	5170,492	1,408	0.143	0,000	12,826	50,555	6,749	18,604
1.A.1 - Energy industry	2761,256	0.049	0.023		4,629	2,610	0.702	15,609
1.A.2 - Industry 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.B - Fugitive emissions from fuel	4,703	6,578	0,000	0,000	0,000	0,000	5,154	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	13,554				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	11,807	0,000	0,000	0,000	0,000	7,519	0,000	1,357
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	4,718	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				4,718	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 eq.	NOx	CO	NMVOC	SO2
2.F.6 - Other uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	3,079	0,000
3 - Agriculture, forestry and other land uses	-10303,286	77,462	4,897	0,000	0.578	21,275	0,000	0,000
3.A - Pets	0,000	75,534	0.321	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10301,190	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6859,905				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3441,286				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,928	4,577	0,000	0.578	21,275	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	115,449	0,001	0.003	0,000	0.524	0.031	0.069	0.346
1.A.3.ai - International Aviation	115,449	0,001	0.003		0.524	0.031	0.069	0.346
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	SO2
Total National Emissions and Removals	-5380,236	104,081	4,995	5,510	12,052	91,966	15,033	20,585

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1 - Energy	4606,177	8,069	0.124	0,000	11,204	58,469	11,859	19,158
1.A - Fuel combustion activity	4602,044	1,908	0.124	0,000	11,204	58,469	7,242	19,158
1.A.1 - Energy industry	2211,897	0,040	0,020		3,833	2,163	0.531	14,694
1.A.2 - Industry 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.B - Fugitive emissions from fuel	4,133	6,161	0,000	0,000	0,000	0,000	4,617	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	15,019				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	12,485	0,000	0,000	0,000	0,000	7,849	0,000	1,416
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	5,510	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				5,510	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	3,063	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3 - Agriculture, forestry and other land uses	-10331,511	79,155	4,686	0,000	0.561	20,647	0,000	0,000
3.A - Pets	0,000	77,379	0.328	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10329,239	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6884,336				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3444,903				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,776	4,358	0,000	0.561	20,647	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information								
International bunkers	159,925	0,001	0.004	0,000	1,661	1,097	0.218	0.098
1.A.3.ai - International Aviation	159,925	0,001	0.004		1,661	1,097	0.218	0.098
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	4566,878	2,340	0.223	0,000	13,657	58,214	7,301	22,186
1.A.1 - Energy industry	1982,930	0.034	0,021		3,665	1,978	0.363	16,239
1.A.2 - Industry 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.B - Fugitive emissions from fuel	4,523	5,292	0,000	0,000	0,000	0,000	4,589	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	11,912				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical industry	12,505	0,000	0,000	0,000	0.002	7,964	0,000	1,435
2.C.1 - Iron and steel production	0,020	0,000			0.002	0,013	0,000	0,000
2.C.7 - Other (specify)	12,485	0,000	0,000	0,000	0,000	7,951	0,000	1,435
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	6,469	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				6,469	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	1,959	0,000
3 - Agriculture, forestry and other land uses	-10339,095	80,884	4,697	0,000	0.564	20,744	0,000	0,000
3.A - Pets	0,000	78,977	0.333	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10336,867	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6871,174				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3465,693				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,907	4,364	0,000	0.564	20,744	0,000	0,000
3.C.1 - Emissions from biomass combustion		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
3.C.6 - Indirect N2O emissions from manure management			0.129		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivation		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
For your information								
International bunkers	112,952	0,001	0.003	0,000	0.512	0.338	0.067	0,030
1.A.3.ai - International Aviation	112,952	0,001	0.003		0.512	0.338	0.067	0,030
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	4218,936	2,424	0.093	0,000	10,076	53,377	6,457	22,871
1.A.1 - Energy industry	2102,956	0.034	0.022		3,834	1,997	0.414	16,352
1.A.2 - Industry 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.B - Fugitive emissions from fuel	4,970	5,584	0,000	0,000	0,000	0,000	4,610	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.A.2 - Lime production	6,285				0,000	0,000	0,000	0,000
2.A.3 - Glass production	0.431				0,000	0,000	0,000	0,000
2.A.4 - Other processes using carbonates	9,782				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	10,703	0,000	0,000	0,000	0,000	6,816	0,000	1,230
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	7,597	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				7,597	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,159	0,000
3 - Agriculture, forestry and other land uses	-10303,877	81,958	4,803	0,000	0.593	21,840	0,000	0,000
3.A - Pets	0,000	79,945	0.335	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10301,640	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6817,929				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3483,711				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,013	4,468	0,000	0.593	21,840	0,000	0,000
3.C.1 - Emissions from biomass combustion		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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 cultivation		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
For your information								
International bunkers	112,952	0,001	0.003	0,000	0.512	0.338	0.067	0,030
1.A.3.ai - International Aviation	112,952	0,001	0.003		0.512	0.338	0.067	0,030
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	4603,048	2,681	0.184	0,000	12,360	62,680	7,543	23,564
1.A.1 - Energy industry	2258,863	0.035	0.022		4,004	2,016	0.465	16,465
1.A.2 - Industry 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.B - Fugitive emissions from fuel	5,102	5,533	0,000	0,000	0,000	0,000	4,649	0,000
1.B.1 - Solid fuel	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
1.C - Transport and storage of carbon dioxide	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 processes using carbonates	8,941				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.C.7 - Other (specify)	11,426	0,000	0,000	0,000	0,000	7,276	0,000	1,313
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	8,893	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				8,893	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	1,910	0,000
3 - Agriculture, forestry and other land uses	-10221,398	82,819	4,798	0,000	0.613	22,557	0,000	0,000
3.A - Pets	0,000	80,955	0.335	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10219,422	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6830,883				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3388,539				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,865	4,463	0,000	0.613	22,557	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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
For your information								
International bunkers	113,435	0,001	0.003	0,000	0.514	0.340	0.068	0,030
1.A.3.ai - International Aviation	113,435	0,001	0.003		0.514	0.340	0.068	0,030
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	4262,005	2,620	0.105	0,000	9,446	57,630	6,876	22,561
1.A.1 - Energy industry	2020,533	0.032	0,020		3,574	1,814	0,420	15,416
1.A.2 - Industry 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
1.B - Fugitive emissions from fuel	4,936	5,920	0,000	0,000	0,000	0,000	4,584	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	8,550				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	10,691	0,000	0,000	0,000	0,000	6,809	0,000	1,229
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0.714	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0.713	0,000
2.D.4 - Other (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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.F - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	10,357	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				10,357	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,546	0,000
3 - Agriculture, forestry and other land uses	-10239,260	84,341	4,836	0,000	0.577	21,248	0,000	0,000
3.A - Pets	0,000	82,266	0.339	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10237,451	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6827,891				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3409,560				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,075	4,497	0,000	0.577	21,248	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	396,187	0.003	0,011	0,000	0,000	0,000	0,000	0,000
1.A.3.ai - International Aviation	396,187	0.003	0,011		0,000	0,000	0,000	0,000
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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
1.A - Fuel combustion activity	4428,703	2,686	0.095	0,000	9,836	62,497	7,494	21,576
1.A.1 - Energy industry	1782,520	0.028	0,017		3,143	1,613	0.374	14,367
1.A.2 - Industry 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.B - Fugitive emissions from fuel	4,230	5,079	0,000	0,000	0,000	0,000	4,208	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	12,789				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	7,148	0,000	0,000	0,000	0,000	4,552	0,000	0.822
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0.821	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0.820	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	11,990	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				11,990	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	3,477	0,000
3 - Agriculture, forestry and other land uses	-9914,316	83,940	4,811	0,000	0.534	19,657	0,000	0,000
3.A - Pets	0,000	82,031	0.333	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-9912,145	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6813,973				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3098,172				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,909	4,478	0,000	0.534	19,657	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	522,259	0.004	0,015	0,000	2,369	1,564	0.311	0.139
1.A.3.ai - International Aviation	522,259	0.004	0,015		2,369	1,564	0.311	0.139
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	4653,386	2,785	0.108	0,000	10,517	69,639	8,452	20,579

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.A.1 - Energy industry	1544,509	0.025	0,015		2,713	1,411	0.329	13,319
1.A.2 - Industry 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.B - Fugitive emissions from fuel	3,991	5,225	0,000	0,000	0,000	0,000	4,515	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	16,314				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	9,435	0,000	0,000	0,000	0,000	6,008	0,000	1,084
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	13,661	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				13,661	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	3,511	0,000
3 - Agriculture, forestry and other land uses	-10302,866	85,599	4,873	0,000	0.525	19,329	0,000	0,000
3.A - Pets	0,000	83,712	0.343	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.A.1 - Enteral 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 - Earth	-10301,114	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6827,798				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3473,316				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,887	4,530	0,000	0.525	19,329	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	593,287	0.004	0,017	0,000	2,691	1,777	0.354	0.158
1.A.3.ai - International Aviation	593,287	0.004	0,017		2,691	1,777	0.354	0.158
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	5011,436	2,217	0,150	0,000	12,834	95,885	8,046	30,800
1.A.1 - Energy industry	2047,397	0.029	0.024		3,918	1,792	0.303	24,025
1.A.2 - Industry 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.B - Fugitive emissions from fuel	3,477	5,016	0,000	0,000	0,000	0,000	4,503	0,000
1.B.1 - Solid fuel	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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.B.3 - Other emissions from energy production	0,000	0,000	0,000		0,000	0,000	0,000	0,000
1.C - Transport and storage of carbon dioxide	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 processes using carbonates	20,742				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	5,867	0,000	0,000	0,000	0,000	3,736	0,000	0.674
2.D - Use of solvents and non-energy products from fuels	0,000	0,000	0,000	0,000	0,000	0,000	1,100	0,000
2.D.1 - Use of lubricants	0,000				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,097	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	15,759	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				15,759	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,881	0,000
3 - Agriculture, forestry and other land uses	-10205,986	88,857	4,996	0,000	0.537	19,749	0,000	0,000
3.A - Pets	0,000	87,022	0.350	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10204,269	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6849,918				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3354,351				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.B.5 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,835	4,646	0,000	0.537	19,749	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information								
International bunkers	400,450	0.003	0,011	0,000	1,816	1,199	0.239	0.107
1.A.3.ai - International Aviation	400,450	0.003	0,011		1,816	1,199	0.239	0.107
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	5042,739	2,296	0,150	0,000	12,950	101,043	8,220	31,035
1.A.1 - Energy industry	1939,744	0.027	0.023		3,735	1,713	0.268	24,042
1.A.2 - Industry 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.B - Fugitive emissions from fuel	2,867	4,713	0,000	0,000	0,000	0,000	4,122	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.A.4 - Other processes using carbonates	19,659				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	3,265	0,000	0,000	0,000	0,000	2,079	0,000	0.375
2.D - Use of solvents and non-energy products from fuels	5,749	0,000	0,000	0,000	0,000	0,000	1,167	0,000
2.D.1 - Use of lubricants	5,463				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.285				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,165	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	17,896	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				17,896	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,689	0,000
3 - Agriculture, forestry and other land uses	-10208,929	92,238	5,202	0,000	0.523	19,237	0,000	0,000
3.A - Pets	0,000	90,316	0.363	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10207,372	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6880,279				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3327,093				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,922	4,838	0,000	0.523	19,237	0,000	0,000
3.C.1 - Emissions from biomass combustion		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.C.7 - Rice cultivation		1,357			0,000	0,000	0,000	0,000
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
For your information								
International bunkers	856,080	0.006	0.024	0,000	3,883	2,564	0.510	0.228
1.A.3.ai - International Aviation	856,080	0.006	0.024		3,883	2,564	0.510	0.228
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	5927,153	2,700	0.253	0,000	17,746	118,247	10,732	31,747
1.A.1 - Energy industry	1913,848	0.026	0.023		3,688	1,661	0.261	23,793
1.A.2 - Industry 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.B - Fugitive emissions from fuel	2,455	4,557	0,000	0,000	0,000	0,000	4,121	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	22,160				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	6,408	0,000	0,000	0,000	0,000	4,081	0,000	0.736
2.D - Use of solvents and non-energy products from fuels	1,834	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.D.1 - Use of lubricants	1,797				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.037				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	16,660	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				16,660	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,392	0,000
3 - Agriculture, forestry and other land uses	-10309,902	96,175	5,265	0,000	0.482	17,729	0,000	0,000
3.A - Pets	0,000	94,336	0.379	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10307,978	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6841,592				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3466,386				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,839	4,886	0,000	0.482	17,729	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
4.D - Wastewater Treatment and Discharge	0,000	5,456	0.192	0,000	0,000	0,000	0,000	0,000
For your information								
International bunkers	750,450	0,005	0,021	0,000	3,403	2,248	0.448	0,200
1.A.3.ai - International Aviation	750,450	0,005	0,021		3,403	2,248	0.448	0,200
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	6805,527	3,868	0.262	0,000	19,546	155,038	13,323	41,902
1.A.1 - Energy industry	2281,734	0,030	0.029		4,505	1,987	0.255	30,870
1.A.2 - Industry 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.B - Fugitive emissions from fuel	3,048	4,750	0,000	0,000	0,000	0,000	4,405	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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
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 processes using carbonates	14,743				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	5,606	0,000	0,000	0,000	0,000	3,570	0,000	0.644
2.D - Use of solvents and non-energy products from fuels	7,316	0,000	0,000	0,000	0,000	0,000	1,229	0,000
2.D.1 - Use of lubricants	7,313				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.003				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,227	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	22,139	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				22,139	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	1,912	0,000
3 - Agriculture, forestry and other land uses	-10250,705	100,776	5,732	0,000	0.514	18,908	0,000	0,000
3.A - Pets	0,000	98,932	0.396	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10248,144	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6900,723				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3347,421				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,844	5,335	0,000	0.514	18,908	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	882,882	0.006	0.025	0,000	4,004	2,644	0.526	0.235
1.A.3.ai - International Aviation	882,882	0.006	0.025		4,004	2,644	0.526	0.235
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	6626,909	3,892	0.369	0,000	21,671	162,593	13,921	40,206
1.A.1 - Energy industry	2127,978	0.034	0.028		4,365	2,197	0.213	29,944
1.A.2 - Industry 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.B - Fugitive emissions from fuel	3,096	4,067	0,000	0,000	0,000	0,000	4,901	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	9,744				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	6,186	0,000	0,000	0,000	0,000	3,939	0,000	0.711
2.D - Use of solvents and non-energy products from fuels	8,332	0,000	0,000	0,000	0,000	0,000	0.986	0,000
2.D.1 - Use of lubricants	8,304				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.028				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0.983	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	24,606	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				24,606	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				0,000	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (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 eq.	NOx	CO	NMVOC	SO2
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 beverage production	0,000	0,000			0,000	0,000	1,942	0,000
3 - Agriculture, forestry and other land uses	-10303,402	105,671	5,854	0,000	0.528	19,430	0,000	0,000
3.A - Pets	0,000	103,757	0.418	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10301,426	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6862,298				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3439,128				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,914	5,436	0,000	0.528	19,430	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	1027,927	0,007	0.029	0,000	4,662	3,079	0.613	0.274
1.A.3.ai - International Aviation	1027,927	0,007	0.029		4,662	3,079	0.613	0.274
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	5977,503	4,900	0.322	0,000	20,912	170,266	14,992	34,184
1.A.1 - Energy industry	1627,627	0.024	0,021		3,335	1,482	0.172	22,426
1.A.2 - Industry and construction	589,175	0.023	0.004		2,590	0.982	0.248	0.802

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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.B - Fugitive emissions from fuel	3,467	4,268	0,000	0,000	0,000	0,000	5,196	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	9,311				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	6,379	0,000	0,000	0,000	0,000	4,062	0,000	0.733
2.D - Use of solvents and non-energy products from fuels	6,688	0,000	0,000	0,000	0,000	0,000	1,290	0,000
2.D.1 - Use of lubricants	6,688				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,000				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,288	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	49,983	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				46,263	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				3,720	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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	2,412	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 beverage production	0,000	0,000			0,000	0,000	2,407	0,000
3 - Agriculture, forestry and other land uses	-10334,544	107,987	5,876	0,000	0.494	18,181	0,000	0,000
3.A - Pets	0,000	106,045	0,430	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.B - Earth	-10332,755	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6869,834				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3462,921				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,942	5,447	0,000	0.494	18,181	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	781,981	0,005	0.022	0,000	3,546	2,342	0.466	0.208
1.A.3.ai - International Aviation	781,981	0,005	0.022		3,546	2,342	0.466	0.208
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	7399,077	4,863	0,200	0,000	26,442	190,382	16,750	38,273
1.A.1 - Energy industry	1690,632	0.025	0.023		3,539	1,507	0.165	24,235
1.A.2 - Industry 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.B - Fugitive emissions from fuel	4,052	4,346	0,000	0,000	0,000	0,000	5,269	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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 processes using carbonates	12,846				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	2,178	0,000	0,000	0,000	0,000	1,387	0,000	0,250
2.D - Use of solvents and non-energy products from fuels	8,412	0,000	0,000	0,000	0,000	0,000	1,423	0,000
2.D.1 - Use of lubricants	8,404				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.008				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,421	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	64,092	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				38,357	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				0,000	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				25,735	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,214	0,000
3 - Agriculture, forestry and other land uses	-10295,774	111,656	6,314	0,000	0.497	18,286	0,000	0,000
3.A - Pets	0,000	109,738	0.447	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10294,539	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6830,232				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3464,307				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	1,918	5,867	0,000	0.497	18,286	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	219,730	0.002	0.006	0,000	0.997	0.658	0.131	0.059
1.A.3.ai - International Aviation	219,730	0.002	0.006		0.997	0.658	0.131	0.059
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	8853,107	5,524	0.415	0,000	31,031	226,961	21,311	41,494
1.A.1 - Energy industry	1778,997	0.024	0.024		3,721	1,514	0.173	25,904
1.A.2 - Industry 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.B - Fugitive emissions from fuel	5,195	4,903	0,000	0,000	0,000	0,000	5,880	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	12,879				0,000	0,000	0,000	0,000
2.A.5 - Other (specify)	0,000	0,000	0,000		0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.B - Chemical industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.C - Metallurgical 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 (specify)	1,444	0,000	0,000	0,000	0,000	0.920	0,000	0.166
2.D - Use of solvents and non-energy products from fuels	0.407	0,000	0,000	0,000	0,000	0,000	1,628	0,000
2.D.1 - Use of lubricants	0,400				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,007				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,626	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	123,821	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				47,098	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				44,759	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				31,964	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,281	0,000
3 - Agriculture, forestry and other land uses	-10324,340	114,308	6,353	0,000	0.492	18,104	0,000	0,000
3.A - Pets	0,000	112,223	0.457	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10323,169	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6856,630				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3466,539				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,085	5,896	0,000	0.492	18,104	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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
For your information								
International bunkers	602,567	0.004	0,017	0,000	2,733	1,805	0.359	0.161
1.A.3.ai - International Aviation	602,567	0.004	0,017		2,733	1,805	0.359	0.161
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	8625,587	3,474	0.454	0,000	33,112	246,038	20,459	38,586
1.A.1 - Energy industry	1455,953	0,018	0,021		3,129	1,112	0.123	21,970
1.A.2 - Industry 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.B - Fugitive emissions from fuel	6,673	5,366	0,000	0,000	0,000	0,000	6,507	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	15,808				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	1,363	0,000	0,000	0,000	0,000	0.868	0,000	0.157
2.D - Use of solvents and non-energy products from fuels	10,336	0,000	0,000	0,000	0,000	0,000	3,227	0,000
2.D.1 - Use of lubricants	10,292				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.044				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.D.3 - Use of solvents	0,000				0,000	0,000	3,225	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	165,184	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				50,402	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				77,010	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				37,773	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,311	0,000
3 - Agriculture, forestry and other land uses	-10216,191	117,823	6,403	0,000	0.507	18,639	0,000	0,000
3.A - Pets	0,000	115,585	0.472	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10215,273	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6866,986				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3348,287				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,238	5,931	0,000	0.507	18,639	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information								

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
International bunkers	226,544	0.002	0.006	0,000	1,027	0.679	0.135	0,060
1.A.3.ai - International Aviation	226,544	0.002	0.006		1,027	0.679	0.135	0,060
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	8834,461	5,536	0.445	0,000	30,355	204,254	19,332	53,119
1.A.1 - Energy industry	2503,491	0.044	0.031		5,188	2,284	0.367	32,717
1.A.2 - Industry 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.B - Fugitive emissions from fuel	8,439	5,905	0,000	0,000	0,000	0,000	7,076	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	15,366				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical industry	0.962	0,000	0,000	0,000	0.004	0.613	0,000	0.107
2.C.1 - Iron and steel production	0.034	0,000			0.004	0.022	0,000	0,000
2.C.7 - Other (specify)	0.928	0,000	0,000	0,000	0,000	0.591	0,000	0.107
2.D - Use of solvents and non-energy products from fuels	3,213	0,000	0,000	0,000	0,000	0,000	2,214	0,000
2.D.1 - Use of lubricants	3,187				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.026				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	2,213	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	215,743	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				65,319	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				109,407	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				0,000	0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	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 uses				41,017	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,126	0,000
3 - Agriculture, forestry and other land uses	-10327,718	122,128	6,993	0,000	0.501	18,438	0,000	0,000
3.A - Pets	0,000	119,850	0.488	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10326,798	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6862,692				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3464,106				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,279	6,505	0,000	0.501	18,438	0,000	0,000
3.C.1 - Emissions from biomass combustion		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
3.C.6 - Indirect N2O emissions from manure management			0.220		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivation		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
For your information								
International bunkers	189,637	0,001	0,005	0,000	0,860	0.568	0.113	0.051
1.A.3.ai - International Aviation	189,637	0,001	0,005		0,860	0.568	0.113	0.051
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	9538,713	5,364	0.415	0,000	32,135	213,092	19,496	60,933
1.A.1 - Energy industry	3140,439	0.055	0,040		6,493	3,136	0.396	42,967
1.A.2 - Industry 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.B - Fugitive emissions from fuel	7,289	6,320	0,000	0,000	0,000	0,000	8,535	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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
2.A.3 - Glass production	13,899				0,000	0,000	0,000	0,000
2.A.4 - Other processes using carbonates	12,921				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	0,880	0,000	0,000	0,000	0,000	0.590	0,000	0.101
2.D - Use of solvents and non-energy products from fuels	9,055	0,000	0,000	0,000	0,000	0,000	1,496	0,000
2.D.1 - Use of lubricants	9,019				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.037				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,493	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	219,883	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				77,333	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				99,607	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				42,943	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,001	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,001		0,000	0,000	0,000	0,000
2.G.4 - Other (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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.H.2 - Food and beverage production	0,000	0,000			0,000	0,000	1,964	0,000
3 - Agriculture, forestry and other land uses	-10336,530	124,800	7,039	0,000	0.489	18,002	0,000	0,000
3.A - Pets	0,000	122,427	0.498	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10335,815	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6885,509				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3450,306				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,373	6,541	0,000	0.489	18,002	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	258,322	0.002	0,007	0,000	1,172	0.774	0.154	0.069
1.A.3.ai - International Aviation	258,322	0.002	0,007		1,172	0.774	0.154	0.069
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	8180,658	4,072	0.368	0,000	28,044	200,051	18,787	40,393
1.A.1 - Energy industry	1779,270	0.027	0.023		3,784	1,379	0.222	24,767
1.A.2 - Industry 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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.B - Fugitive emissions from fuel	7,019	7,573	0,000	0,000	0,000	0,000	10,347	0,000
1.B.1 - Solid fuel	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
1.C - Transport and storage of carbon dioxide	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 processes using carbonates	12,632				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	0.967	0,000	0,000	0,000	0,000	0.615	0,000	0,111
2.D - Use of solvents and non-energy products from fuels	8,270	0,000	0,000	0,000	0,000	0,000	1,857	0,000
2.D.1 - Use of lubricants	8,238				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.032				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	1,855	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	305,900	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				92,482	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				168,297	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				45,121	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,266	0,000
3 - Agriculture, forestry and other land uses	-10302,540	127,595	7,135	0,000	0.459	16,887	0,000	0,000
3.A - Pets	0,000	124,981	0.507	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10301,950	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6835,627				0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
3.B.2 - Cultivated lands	-3466,324				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,614	6,628	0,000	0.459	16,887	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information								
International bunkers	331,081	0.002	0,009	0,000	1,502	0.992	0.197	0.088
1.A.3.ai - International Aviation	331,081	0.002	0,009		1,502	0.992	0.197	0.088
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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 activity	8701,105	5,759	0.402	0,000	31,545	214,847	20,602	38,551
1.A.1 - Energy industry	1364,533	0,019	0,018		2,892	0.846	0.196	18,339
1.A.2 - Industry 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
1.B - Fugitive emissions from fuel	6,601	8,386	0,000	0,000	0,000	0,000	11,794	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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 processes using carbonates	14,174				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical 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 (specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Use of solvents and non-energy products from fuels	9,672	0,000	0,000	0,000	0,000	0,000	0.485	0,000
2.D.1 - Use of lubricants	9,614				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.058				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents					0,000	0,000	0.483	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	341,548	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				105,269	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				190,155	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				46,124	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	2,371	0,000
3 - Agriculture, forestry and other land uses	-10367,314	130,768	7,510	0,000	0.443	16,286	0,000	0,000
3.A - Pets	0,000	127,998	0.516	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10366,814	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-6900,206				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3466,608				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,769	6,995	0,000	0.443	16,286	0,000	0,000
3.C.1 - Emissions from biomass combustion		0.479	0,013		0.443	16,286	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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 cultivation		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
For your information								
International bunkers	341,089	0.002	0,010	0,000	1,547	1,022	0.203	0.091
1.A.3.ai - International Aviation	341,089	0.002	0,010		1,547	1,022	0.203	0.091
1.A.3.di - International Water Navigation	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 eq.	NOx	CO	NMVOC	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
1.A - Fuel combustion activity	10434,200	6,452	0.442	0,000	35,152	244,524	24,816	42,638
1.A.1 - Energy industry	1458,662	0.022	0,018		2,802	0.619	0.166	19,069
1.A.2 - Industry 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.B - Fugitive emissions from fuel	8,393	9,924	0,000	0,000	0,000	0,000	12,078	0,000
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	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 processes using carbonates	12,929				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical industry	0.049	0,000	0,000	0,000	0.006	0.031	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.C.1 - Iron and steel production	0.049	0,000			0.006	0.031	0,000	0,000
2.C.7 - Other (specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Use of solvents and non-energy products from fuels	11,131	0,000	0,000	0,000	0,000	0,000	0.002	0,000
2.D.1 - Use of lubricants	11,095				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.036				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	193,688	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				117,459	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				29,894	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				46,335	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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 beverage production	0,000	0,000			0,000	0,000	3,210	0,000
3 - Agriculture, forestry and other land uses	-10941,371	134,478	7,653	0,000	0.453	16,681	0,000	0,000
3.A - Pets	0,000	131,560	0.527	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral 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 - Earth	-10940,831	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-7471,735				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3469,096				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,918	7,126	0,000	0.453	16,681	0,000	0,000
3.C.1 - Emissions from biomass combustion		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 cultivation		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
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
For your information								
International bunkers	340,613	0.002	0,010	0,000	0,000	0,000	0,000	0,000
1.A.3.ai - International Aviation	340,613	0.002	0,010		0,000	0,000	0,000	0,000
1.A.3.di - International Water Navigation	0,000		0,000		0,000	0,000	0,000	0,000

Inventory year: 2019

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
Total National Emissions and Removals	-2282,911	178,983	8,174	208,221	29,276	224,106	35,380	30,092
1 - Energy	7718,313	16,572	0.365	0,000	28,530	202,583	33,532	30,077
1.A - Fuel combustion activity	7709,459	5,380	0.365	0,000	28,530	202,583	19,607	30,077
1.A.1 - Energy industry	1228,968	0.022	0,014		2,129	0.937	0.166	13,356
1.A.2 - Industry and construction	530,347	0.038	0.006		1,224	2,130	1,593	1,931
1.A.3 - Transport	3839,814	0.967	0.317		23,033	67,656	9,468	0.029
1.A.4 - Other sectors	2110,330	4,352	0.029		2,145	131,860	8,380	14,762
1.B - Fugitive emissions from fuel	8,853	11,192	0,000	0,000	0,000	0,000	13,924	0,000
1.B.1 - Solid fuel	5,914	2,020	0,000		0,000	0,000	2,085	0,000
1.B.2 - Oil and Natural Gas	2,940	9,172	0,000		0,000	0,000	11,840	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 - Transport and storage of carbon dioxide	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial processes and product use	949,191	0,000	0,010	208,221	0,007	0.036	1,733	0,005
2.A - Mineral industry	934,663	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	886,867				0,000	0,000	0,000	0,000
2.A.2 - Lime production	3,916				0,000	0,000	0,000	0,000
2.A.3 - Glass production	23,396				0,000	0,000	0,000	0,000
2.A.4 - Other processes using carbonates	20,485				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical industry	0.037	0,000	0,000	0,000	0,005	0.024	0,000	0,000
2.C.1 - Iron and steel production	0.037	0,000			0,005	0.024	0,000	0,000
2.C.7 - Other (specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Use of solvents and non-energy products from fuels	14,490	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	14,447				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0.044				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (specify)	0,000	0,000			0,000	0,000	0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
2.E - Electronics industry	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.F - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	208,221	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				138,876	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				22,876	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 uses				46,469	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,010	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,010		0,000	0,000	0,000	0,000
2.G.4 - Other (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	1,733	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 beverage production	0,000	0,000			0,000	0,000	1,729	0,000
3 - Agriculture, forestry and other land uses	-10954,624	138,269	7,537	0,000	0.442	16,277	0,000	0,000
3.A - Pets	0,000	135,374	0.539	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral fermentation		131,558			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,816	0.539		0,000	0,000	0,000	0,000
3.B - Earth	-10954,185	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-7489,241				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3464,945				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	2,895	6,999	0,000	0.442	16,277	0,000	0,000
3.C.1 - Emissions from biomass combustion		0.478	0,012		0.442	16,277	0,000	0,000
3.C.4 - Direct N2O emissions from managed soils			5,046		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O emissions from managed soils			1,694		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O emissions from manure management			0.246		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivation		2,416			0,000	0,000	0,000	0,000
3.D - Other	-0.438	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested wood products	-0.438				0,000	0,000	0,000	0,000
4 - Waste	4,209	24,142	0.261	0,000	0.297	5,210	0.115	0,010
4.A - Solid Waste Disposal	0,000	15,893	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological treatment of solid waste	0,000	0,079	0,005	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and open burning of waste	4,209	0.606	0,011	0,000	0.297	5,210	0.115	0,010
4.D - Wastewater Treatment and Discharge	0,000	7,564	0.245	0,000	0,000	0,000	0,000	0,000
For your information								
International bunkers	300,054	0.002	0.008	0,000	1,361	0.899	0.179	0,080
1.A.3.ai - International Aviation	300,054	0.002	0.008		1,361	0.899	0.179	0,080

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
1.A.3.di - International Water Navigation	0,000		0,000		0,000	0,000	0,000	0,000

Inventory year: 2020

Categories	Net CO2	CH4	N2O	HFCs in CO2 eq.	NOx	CO	NMVOC	SO2
Total National Emissions and Removals	-2896,028	183,610	8,270	227,723	27,160	223,276	33,248	48,329
1 - Energy	7155,292	18,478	0.338	0,000	26,401	201,391	31,911	48,312
1.A - Fuel combustion activity	7137,417	4,848	0.338	0,000	26,401	201,391	17,721	48,312
1.A.1 - Energy industry	1476,499	0,019	0,019		4,046	1,655	0.169	29,609
1.A.2 - Industry and construction	506,995	0,041	0.006		0.754	4,059	0.387	3,924
1.A.3 - Transport	3353,405	0.894	0.286		19,458	63,995	8,803	0.024
1.A.4 - Other sectors	1800,518	3,893	0.027		2,143	131,681	8,363	14,754
1.B - Fugitive emissions from fuel	17,875	13,629	0,000	0,000	0,000	0,000	14,190	0,000
1.B.1 - Solid fuel	15,031	4,196	0,000		0,000	0,000	1,991	0,000
1.B.2 - Oil and Natural Gas	2,845	9,433	0,000		0,000	0,000	12,199	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 - Transport and storage of carbon dioxide	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2 - Industrial processes and product use	904,452	0,000	0,000	227,723	0.006	0.032	1,220	0.006
2.A - Mineral industry	892,999	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.A.1 - Cement production	854,266				0,000	0,000	0,000	0,000
2.A.2 - Lime production	4,518				0,000	0,000	0,000	0,000
2.A.3 - Glass production	22,487				0,000	0,000	0,000	0,000
2.A.4 - Other processes using carbonates	11,728				0,000	0,000	0,000	0,000
2.A.5 - Other (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 - Metallurgical industry	0.024	0,000	0,000	0,000	0.003	0,015	0,000	0,000
2.C.1 - Iron and steel production	0.024	0,000			0.003	0,015	0,000	0,000
2.C.7 - Other (specify)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D - Use of solvents and non-energy products from fuels	11,429	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.D.1 - Use of lubricants	11,411				0,000	0,000	0,000	0,000
2.D.2 - Use of paraffins	0,018				0,000	0,000	0,000	0,000
2.D.3 - Use of solvents	0,000				0,000	0,000	0,000	0,000
2.D.4 - Other (specify)	0,000	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 - Use of substitutes for ozone-depleting substances	0,000	0,000	0,000	227,723	0,000	0,000	0,000	0,000
2.F.1 - Cooling and air conditioning				157,856	0,000	0,000	0,000	0,000
2.F.2 - Foaming agents				20,194	0,000	0,000	0,000	0,000
2.F.3 - Fire extinguishers				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 eq.	NOx	CO	NMVOC	SO2
2.F.6 - Other uses				49,673	0,000	0,000	0,000	0,000
2.G - Production and use of other products	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
2.G.3 - N2O from product use			0,000		0,000	0,000	0,000	0,000
2.G.4 - Other (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	1,220	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 beverage production	0,000	0,000			0,000	0,000	1,214	0,000
3 - Agriculture, forestry and other land uses	-10960,100	140,741	7,659	0,000	0.448	16,495	0,000	0,000
3.A - Pets	0,000	137,704	0.554	0,000	0,000	0,000	0,000	0,000
3.A.1 - Enteral fermentation		133,821			0,000	0,000	0,000	0,000
3.A.2 - Manure Management		3,883	0.554		0,000	0,000	0,000	0,000
3.B - Earth	-10960,100	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.B.1 - Forest lands	-7490,450				0,000	0,000	0,000	0,000
3.B.2 - Cultivated lands	-3469,650				0,000	0,000	0,000	0,000
3.B.3 - Pastures	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 - Populated areas	0,000				0,000	0,000	0,000	0,000
3.B.6 - Other lands	0,000				0,000	0,000	0,000	0,000
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	0,000	3,036	7,106	0,000	0.448	16,495	0,000	0,000
3.C.1 - Emissions from biomass combustion		0.485	0,013		0.448	16,495	0,000	0,000
3.C.4 - Direct N2O emissions from managed soils			4,867		0,000	0,000	0,000	0,000
3.C.5 - Indirect N2O emissions from managed soils			1,969		0,000	0,000	0,000	0,000
3.C.6 - Indirect N2O emissions from manure management			0.257		0,000	0,000	0,000	0,000
3.C.7 - Rice cultivation		2,551			0,000	0,000	0,000	0,000
3.D - Other	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
3.D.1 - Harvested wood products	0,000				0,000	0,000	0,000	0,000
4 - Waste	4,328	24,392	0.272	0,000	0.305	5,358	0.118	0,011
4.A - Solid Waste Disposal	0,000	16,235	0,000	0,000	0,000	0,000	0,000	0,000
4.B - Biological treatment of solid waste	0,000	0.075	0,005	0,000	0,000	0,000	0,000	0,000
4.C - Incineration and open burning of waste	4,328	0.624	0,011	0,000	0.305	5,358	0.118	0,011
4.D - Wastewater Treatment and Discharge	0,000	7,458	0.256	0,000	0,000	0,000	0,000	0,000
For your information								
International bunkers	224,220	0.002	0.006	0,000	1,017	0.672	0.134	0,060
1.A.3.ai - International Aviation	224,220	0.002	0.006		1,017	0.672	0.134	0,060
1.A.3.di - International Water Navigation	0,000		0,000		0,000	0,000	0,000	0,000

15. Summary of GHG and precursor gas emissions for the period 1990-2020

All data in the summary tables below is presented in gigagrams.

Year	Total CO2	Net CO2	CH4	N2O	HFC 32	HFC 125	HFC 134a	HFC 143a	HFC 227ea	NOx	CO	NMVOC	SO2
1990	20304,803	10031,278	183,188	13,351	NE	NE	NE	NE	NE	50,255	371,469	60,966	101,326
1991	17925,708	7631,225	176,404	14,053	NE	NE	NE	NE	NE	42,884	310,618	53,265	86,024
1992	14295,314	4005,783	159,665	12,519	NE	NE	NE	NE	NE	33,312	261,844	40,465	71,628
1993	10523,650	230,076	141,486	6,210	NE	NE	NE	NE	NE	23,599	183,287	30,711	56,662
1994	7277,614	-3032,120	114,784	4,770	NE	NE	NE	NE	NE	16,565	120,212	21,772	46,888
1995	5332,956	-4990,691	103,647	4,169	NE	NE	0.003	NE	NE	12,185	64,104	14,317	24,833
1996	5136,610	-4895,548	99,976	4,114	NE	NE	0.003	NE	NE	13,040	71,148	15,247	22,582
1997	5506,409	-4796,877	102,633	5,218	NE	NE	0.004	NE	NE	13,689	84,283	15,091	19,972
1998	4951,275	-5380,236	104,081	4,995	NE	NE	0.004	NE	NE	12,052	91,966	15,033	20,585
1999	4771,128	-5567,967	105,204	5,110	NE	NE	0,005	NE	NE	14,512	92,000	13,962	23,631
2000	4448,403	-5855,474	106,913	5,082	NE	NE	0.006	NE	NE	10,966	87,200	13,341	24,111
2001	4840,439	-5380,959	107,877	5,171	NE	NE	0,007	NE	NE	13,275	97,746	14,217	24,887
2002	4530,101	-5709,159	109,852	5,140	NE	NE	0.008	NE	NE	10,329	90,986	14,841	23,805
2003	4795,254	-5119,062	108,794	5,110	NE	NE	0,009	NE	NE	10,679	92,060	16,122	22,413
2004	5083,202	-5219,664	110,945	5,188	NE	NE	0,011	NE	NE	11,356	100,404	17,589	21,679
2005	5486,498	-4719,488	113,182	5,361	NE	NE	0,012	NE	NE	13,688	124,867	16,655	31,490
2006	5588,400	-4620,528	116,538	5,568	NE	NE	0,014	NE	NE	13,795	127,924	16,326	31,427
2007	6502,903	-3806,999	120,728	5,730	NE	NE	0,013	NE	NE	18,557	145,702	18,744	32,500
2008	7297,916	-2952,789	126,850	6,214	NE	NE	0,017	NE	NE	20,388	183,194	20,997	42,561
2009	6875,947	-3427,456	131,879	6,454	NE	NE	0,019	NE	NE	22,540	191,786	21,882	40,931
2010	6367,899	-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	7912,950	-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	9474,134	-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	9422,457	-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	9705,698	-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	10275,014	-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	8840,465	-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	9449,068	-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	11415,855	474,484	174,361	8,346	0,007	0,018	0.048	0,012	0,010	35,924	266,697	40,232	42,656
2019	8671,712	-2282,911	178,983	8,174	0,009	0,020	0.055	0,014	0.008	29,276	224,106	35,380	30,092
2020	8064,072	-2896,028	183,610	8,270	0,011	0.023	0.063	0,014	0,007	27,160	223,276	33,248	48,329

NE – not estimated due to lack of data.

16. Estimated emissions and removals of carbon dioxide (CO2), methane (CH4) and nitrous oxide (N2O) for the period 1990-2020 by sources

All data in the table are given in Gigagrams.

CO2

Year	Energy	PPIP	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
2019	7718,313	949,191	4,209
2020	7155,292	904,452	4,328

CH4

Year	Energy	Agricul-ture	Waste
1990	41,368	123,711	18,109
1991	36,944	121,080	18,380
1992	28,444	113,440	17,781
1993	20,234	103,468	17,783
1994	13,187	84,314	17,283
1995	8,377	78,158	17,112
1996	8,145	74,538	17,292
1997	7,985	77,462	17,186
1998	8,069	79,155	16,857
1999	7,632	80,884	16,688
2000	8,008	81,958	16,946
2001	8,214	82,819	16,844
2002	8,539	84,341	16,971
2003	7,765	83,940	17,089
2004	8,010	85,599	17,337
2005	7,232	88,857	17,092
2006	7,009	92,238	17,291
2007	7,258	96,175	17,295
2008	8,619	100,776	17,456
2009	7,959	105,671	18,248
2010	9,167	107,987	18,879
2011	9,209	111,656	19,397
2012	10,427	114,308	19,933
2013	8,840	117,823	20,904
2014	11,441	122,128	21,288
2015	11,684	124,800	21,736
2016	11,645	127,595	22,591
2017	14,144	130,768	22,962
2018	16,377	134,478	23,506
2019	16,572	138,269	24,142
2020	18,478	140,741	24,392

N2O

Year	Energy	PPIP	Agricul-ture
1990	0.746	NO	12,386
1991	0,630	NO	13,222
1992	0.419	NO	11,899
1993	0.252	NO	5,758
1994	0.127	NO	4,463
1995	0.191	NO	3,785
1996	0.154	NO	3,770
1997	0.143	NO	4,897
1998	0.124	NO	4,686
1999	0.223	NO	4,697
2000	0.093	NO	4,803
2001	0.184	NO	4,798
2002	0.105	NO	4,836
2003	0.095	NO	4,811
2004	0.108	NO	4,873
2005	0,150	NO	4,996
2006	0,150	NO	5,202
2007	0.253	NO	5,265
2008	0.262	0,0003	5,732
2009	0.369	0,0009	5,854
2010	0.322	NO	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	NO	6,993
2015	0.415	0,0006	7,039
2016	0.368	NO	7,135
2017	0.402	NO	7,510
2018	0.442	NO	7,653
2019	0.365	0,0100	7,537
2020	0.338	NO	7,659

NO – not occurring

17. Estimated hydrofluorocarbon (HFC) emissions from the IPPU sector for the period 1990-2020.

HFC, Gg

Year	HFC 32	HFC 125	HFC 134a	HFC 143a	HFC 227ea
GWP*	650	2800	1300	3800	2900
1995	NE	NE	0.003	NE	NE
1996	NE	NE	0.003	NE	NE
1997	NE	NE	0.004	NE	NE
1998	NE	NE	0.004	NE	NE
1999	NE	NE	0,005	NE	NE
2000	NE	NE	0.006	NE	NE
2001	NE	NE	0,007	NE	NE
2002	NE	NE	0.008	NE	NE
2003	NE	NE	0,009	NE	NE
2004	NE	NE	0,011	NE	NE
2005	NE	NE	0,012	NE	NE
2006	NE	NE	0,014	NE	NE
2007	NE	NE	0,013	NE	NE
2008	NE	NE	0,017	NE	NE
2009	NE	NE	0,019	NE	NE
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
2019	0,009	0,020	0.055	0,014	0.008
2020	0,011	0.023	0.063	0,014	0,007

HFC, Gg CO2 eq.

Year	HFC -32	HFC -125	HFC -134a	HFC -143a	HFC-227ea	Total
GWP*	650	2800	1300	3800	2900	
1995	NE	NE	3,637	NE	NE	3,637
1996	NE	NE	4,094	NE	NE	4,094
1997	NE	NE	4,718	NE	NE	4,718
1998	NE	NE	5,510	NE	NE	5,510
1999	NE	NE	6,469	NE	NE	6,469
2000	NE	NE	7,597	NE	NE	7,597
2001	NE	NE	8,893	NE	NE	8,893
2002	NE	NE	10,357	NE	NE	10,357
2003	NE	NE	11,990	NE	NE	11,990
2004	NE	NE	13,661	NE	NE	13,661
2005	NE	NE	15,759	NE	NE	15,759
2006	NE	NE	17,896	NE	NE	17,896
2007	NE	NE	16,660	NE	NE	16,660
2008	NE	NE	22,139	NE	NE	22,139
2009	NE	NE	24,606	NE	NE	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
2019	5,530	56,162	72,042	51,611	22,876	208,221
2020	6,975	64,449	81,332	54,773	20,194	227,723

* Global warming potential according to the IPCC Second Assessment Report (coefficient of conversion to CO2 equivalent).
NE – not estimated due to lack of data.

18. Estimated emissions of precursor gases for the period 1990-2020.

The data in the table is given in Gigagrams

Year	NOx	CO	NMVOCs	SO2
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
2019	29,276	224,106	35,380	30,092
2020	27,160	223,276	33,248	48,329

19. Estimated emissions of precursor gases for the period 1990-2020 by emitting sectors

Estimation of nitrogen oxide (NOx) emissions, Gg

Year	Energy	PPIP	Agricul-ture	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
2019	28,530	0,007	0.441	0.00105	0.297
2020	26,401	0.006	0.446	0,00190	0.305

Carbon monoxide (CO) emissions assessment, Gg

Year	Energy	PPIP	Agricul-ture	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
2019	202,583	0.036	16,240	0.0375	5,210
2020	201,391	0.032	16,428	0.0678	5,358

Estimation of non-methane volatile organic compounds emissions (NMVOC), Gg

Year	Energy	PPIP	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
2019	33,532	1,733	0.115
2020	31,911	1,220	0.118

Estimation of Sulfur dioxide (SO2) emissions, Gg

Year	Energy	PPIP	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
2019	30,077	0,005	0,010
2020	48,312	0.006	0,011

20. Inventory of GHG by sources and removals by sinks in Gg CO2 equivalent for the period 1990-2020.

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 activity	**19388,791**	**369,714**	**231,366**	**0,000**	**19989,871**
1.A.1 - Energy industry	8113,007	3,719	21,599		8138,325
1.A.2 - Industry 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 fuel	**40,841**	**499,006**	**0,000**	**0,000**	**539,848**
1.B.1 - Solid fuel	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 - Transport and storage of carbon di-oxide	**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 processes using carbonates	144,710				144,710
2.C - Metallurgical 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 - Use of solvents and non-energy prod-ucts from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Cooling and air conditioning				0,000	0,000
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10273,525**	**2597,936**	**3839,700**	**0,000**	**-3835,889**
3.A - Pets	**0,000**	**2585,386**	**200,620**	**0,000**	**2786,007**
3.A.1 - Enteral fermentation		2510,217			2510,217
3.A.2 - Manure Management		75,170	200,620		275,790
3.B - Earth	**-10266,120**	**0,000**	**0,000**	**0,000**	**-10266,120**
3.B.1 - Forest lands	-6850,850				-6850,850
3.B.2 - Cultivated lands	-3415,270				-3415,270
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**12,550**	**3639,080**	**0,000**	**3651,630**
3.C.1 - Emissions from biomass combustion		6,961	2,664		9,625
3.C.4 - Direct N2O emissions from man-aged soils			2633,558		2633,558
3.C.5 - Indirect N2O emissions from man-aged soils			909,996		909,996
3.C.6 - Indirect N2O emissions from ma-nure management			92,861		92,861
3.C.7 - Rice cultivation		5,589			5,589
3.D - Other	**-7,405**	**0,000**	**0,000**	**0,000**	**-7,405**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
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
For your information					
International bunkers	366,257	0.054	3,176	0,000	369,487
1.A.3.ai - International Aviation	366,257	0.054	3,176		369,487
1.A.3.di - International Water Navigation	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 activity	**17054,719**	**302,524**	**195,384**	**0,000**	**17552,627**
1.A.1 - Energy industry	7697,909	3,289	22,242		7723,440
1.A.2 - Industry 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 fuel	**37,594**	**473,301**	**0,000**	**0,000**	**510,895**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	146,487				146,487
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Cooling and air conditioning				0,000	0,000
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10294,483**	**2542,684**	**4098,895**	**0,000**	**-3652,903**
3.A - Pets	**0,000**	**2527,975**	**193,325**	**0,000**	**2721,300**
3.A.1 - Enteral fermentation		2454,496			2454,496
3.A.2 - Manure Management		73,479	193,325		266,803
3.B - Earth	**-10287,797**	**0,000**	**0,000**	**0,000**	**-10287,797**
3.B.1 - Forest lands	-6864,058				-6864,058

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.B.2 - Cultivated lands	-3423,739				-3423,739
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**14,709**	**3905,571**	**0,000**	**3920,279**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	111,845	0,016	0.970	0,000	112,832
1.A.3.ai - International Aviation	111,845	0,016	0.970		112,832
1.A.3.di - International Water Navigation	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 activity	**13628,190**	**236,431**	**129,814**	**0,000**	**13994,435**
1.A.1 - Energy industry	5970,588	2,602	16,637		5989,827
1.A.2 - Industry 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
1.B - Fugitive emissions from fuel	**27,245**	**360,887**	**0,000**	**0,000**	**388,132**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	58,679				58,679
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of 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 - Cooling and air conditioning				0,000	0,000
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10289,530**	**2382,232**	**3688,832**	**0,000**	**-4218,466**
3.A - Pets	**0,000**	**2366,206**	**177,244**	**0,000**	**2543,450**
3.A.1 - Enteral fermentation		2299,012			2299,012
3.A.2 - Manure Management		67,194	177,244		244,438
3.B - Earth	**-10284,340**	**0,000**	**0,000**	**0,000**	**-10284,340**
3.B.1 - Forest lands	-6859,755				-6859,755
3.B.2 - Cultivated lands	-3424,584				-3424,584
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**16,026**	**3511,589**	**0,000**	**3527,614**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	179,212	0.026	1,554	0,000	180,793
1.A.3.ai - International Aviation	179,212	0.026	1,554		180,793
1.A.3.di - International Water Navigation	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 activity	**10107,609**	**162,438**	**78,076**	**0,000**	**10348,122**
1.A.1 - Energy industry	4907,816	2,058	14,200		4924,074
1.A.2 - Industry 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 fuel	**18,822**	**262,484**	**0,000**	**0,000**	**281,306**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
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 processes using carbonates	25,859				25,859
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Cooling and air conditioning				0,000	0,000
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10293,574**	**2172,831**	**1785,031**	**0,000**	**-6335,712**
3.A - Pets	**0,000**	**2152,908**	**154,049**	**0,000**	**2306,957**
3.A.1 - Enteral fermentation		2092,111			2092,111
3.A.2 - Manure Management		60,797	154,049		214,846
3.B - Earth	**-10290,681**	**0,000**	**0,000**	**0,000**	**-10290,681**
3.B.1 - Forest lands	-6850,699				-6850,699
3.B.2 - Cultivated lands	-3439,983				-3439,983
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**19,923**	**1630,982**	**0,000**	**1650,905**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	43,321	0.006	0.376	0,000	43,703
1.A.3.ai - International Aviation	43,321	0.006	0.376		43,703
1.A.3.di - International Water Navigation	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**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A - Fuel combustion activity	**7052,076**	**94,789**	**39,419**	**0,000**	**7186,284**
1.A.1 - Energy industry	3855,193	1,514	11,446		3868,153
1.A.2 - Industry 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 fuel	**11,464**	**182,141**	**0,000**	**0,000**	**193,605**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	12,631				12,631
2.C - Metallurgical industry	**7,368**	**0,000**	**0,000**	**0,000**	**7,368**
2.C.1 - Iron and steel production	0.042	0,000			0.042
2.D - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.F.1 - Cooling and air conditioning				0,000	0,000
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10309,734**	**1770,603**	**1383,508**	**0,000**	**-7155,623**
3.A - Pets	**0,000**	**1748,420**	**116,369**	**0,000**	**1864,790**
3.A.1 - Enteral fermentation		1698,494			1698,494
3.A.2 - Manure Management		49,926	116,369		166,296
3.B - Earth	**-10306,606**	**0,000**	**0,000**	**0,000**	**-10306,606**
3.B.1 - Forest lands	-6858,848				-6858,848
3.B.2 - Cultivated lands	-3447,758				-3447,758
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**22,183**	**1267,139**	**0,000**	**1289,322**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
International bunkers	33,480	0,005	0.290	0,000	33,775
1.A.3.ai - International Aviation	33,480	0,005	0.290		33,775
1.A.3.di - International Water Navigation	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**
1.A - Fuel combustion activity	**5157,491**	**31,618**	**59,135**	**0,000**	**5248,243**
1.A.1 - Energy industry	2811,543	0.973	9,334		2821,850
1.A.2 - Industry 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 fuel	**6,125**	**144,307**	**0,000**	**0,000**	**150,432**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	12,509				12,509
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**3,637**	**3,637**
2.F.1 - Cooling and air conditioning				3,637	3,637
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10323,647**	**1641,315**	**1173,342**	**0,000**	**-7508,990**
3.A - Pets	**0,000**	**1612,107**	**104,543**	**0,000**	**1716,650**
3.A.1 - Enteral fermentation		1565,027			1565,027
3.A.2 - Manure Management		47,080	104,543		151,624
3.B - Earth	**-10321,216**	**0,000**	**0,000**	**0,000**	**-10321,216**
3.B.1 - Forest lands	-6873,306				-6873,306
3.B.2 - Cultivated lands	-3447,911				-3447,911
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**29,208**	**1068,799**	**0,000**	**1098,007**
3.C.1 - Emissions from biomass combustion		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C.6 - Indirect N2O emissions from manure management			43,968		43,968
3.C.7 - Rice cultivation		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
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
For your information					
International bunkers	173,906	0.026	1,508	0,000	175,439
1.A.3.ai - International Aviation	173,906	0.026	1,508		175,439
1.A.3.di - International Water Navigation	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 activity	**4860,514**	**27,866**	**47,735**	**0,000**	**4936,115**
1.A.1 - Energy industry	2777,823	0.997	8,225		2787,044
1.A.2 - Industry 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 fuel	**5,086**	**143,189**	**0,000**	**0,000**	**148,274**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	13,405				13,405
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**4,094**	**4,094**
2.F.1 - Cooling and air conditioning				4,094	4,094
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10032,159**	**1565,303**	**1168,839**	**0,000**	**-7298,016**
3.A - Pets	**0,000**	**1529,797**	**96,074**	**0,000**	**1625,871**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.A.1 - Enteral fermentation		1484,892			1484,892
3.A.2 - Manure Management		44,905	96,074		140,979
3.B - Earth	**-10029,454**	**0,000**	**0,000**	**0,000**	**-10029,454**
3.B.1 - Forest lands	-6861,825				-6861,825
3.B.2 - Cultivated lands	-3167,629				-3167,629
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**35,506**	**1072,765**	**0,000**	**1108,271**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	209,688	0.031	1,818	0,000	211,537
1.A.3.ai - International Aviation	209,688	0.031	1,818		211,537
1.A.3.di - International Water Navigation	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 activity	**5170,492**	**29,559**	**44,402**	**0,000**	**5244,453**
1.A.1 - Energy industry	2761,256	1,026	7,132		2769,414
1.A.2 - Industry 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 fuel	**4,703**	**138,135**	**0,000**	**0,000**	**142,838**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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
2.A.3 - Glass production	5,282				5,282
2.A.4 - Other processes using carbonates	13,554				13,554
2.C - Metallurgical industry	**11,847**	**0,000**	**0,000**	**0,000**	**11,847**
2.C.1 - Iron and steel production	0,040	0,000			0,040

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.D - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**4,718**	**4,718**
2.F.1 - Cooling and air conditioning				4,718	4,718
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10303,286**	**1626,695**	**1518,146**	**0,000**	**-7158,445**
3.A - Pets	**0,000**	**1586,209**	**99,382**	**0,000**	**1685,591**
3.A.1 - Enteral fermentation		1539,642			1539,642
3.A.2 - Manure Management		46,567	99,382		145,949
3.B - Earth	**-10301,190**	**0,000**	**0,000**	**0,000**	**-10301,190**
3.B.1 - Forest lands	-6859,905				-6859,905
3.B.2 - Cultivated lands	-3441,286				-3441,286
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**40,486**	**1418,764**	**0,000**	**1459,250**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	115,449	0,017	1,001	0,000	116,467
1.A.3.ai - International Aviation	115,449	0,017	1,001		116,467
1.A.3.di - International Water Navigation	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 activity	**4602,044**	**40,074**	**38,349**	**0,000**	**4680,466**
1.A.1 - Energy industry	2211,897	0.835	6,108		2218,840
1.A.2 - Industry 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 fuel	**4,133**	**129,378**	**0,000**	**0,000**	**133,511**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	15,019				15,019
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**5,510**	**5,510**
2.F.1 - Cooling and air conditioning				5,510	5,510
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10331,511**	**1662,259**	**1452,554**	**0,000**	**-7216,698**
3.A - Pets	**0,000**	**1624,968**	**101,655**	**0,000**	**1726,623**
3.A.1 - Enteral fermentation		1577,063			1577,063
3.A.2 - Manure Management		47,906	101,655		149,561
3.B - Earth	**-10329,239**	**0,000**	**0,000**	**0,000**	**-10329,239**
3.B.1 - Forest lands	-6884,336				-6884,336
3.B.2 - Cultivated lands	-3444,903				-3444,903
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**37,291**	**1350,899**	**0,000**	**1388,190**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information					
International bunkers	159,925	0.023	1,387	0,000	161,335
1.A.3.ai - International Aviation	159,925	0.023	1,387		161,335
1.A.3.di - International Water Navigation	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 activity	**4566,878**	**49,142**	**68,991**	**0,000**	**4685,011**
1.A.1 - Energy industry	1982,930	0.708	6,485		1990,124
1.A.2 - Industry 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 fuel	**4,523**	**111,122**	**0,000**	**0,000**	**115,645**
1.B.1 - Solid fuel	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 - Transport and storage of carbon di-oxide	**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 processes using carbonates	11,912				11,912
2.C - Metallurgical 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 - Use of solvents and non-energy prod-ucts from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**6,469**	**6,469**
2.F.1 - Cooling and air conditioning				6,469	6,469
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10339,095**	**1698,567**	**1455,948**	**0,000**	**-7184,580**
3.A - Pets	**0,000**	**1658,519**	**103,157**	**0,000**	**1761,677**
3.A.1 - Enteral fermentation		1609,096			1609,096
3.A.2 - Manure Management		49,423	103,157		152,581
3.B - Earth	**-10336,867**	**0,000**	**0,000**	**0,000**	**-10336,867**
3.B.1 - Forest lands	-6871,174				-6871,174
3.B.2 - Cultivated lands	-3465,693				-3465,693
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**40,047**	**1352,790**	**0,000**	**1392,838**
3.C.1 - Emissions from biomass combustion		12,791	4,904		17,695
3.C.4 - Direct N2O emissions from man-aged soils			934,835		934,835
3.C.5 - Indirect N2O emissions from man-aged soils			373,013		373,013
3.C.6 - Indirect N2O emissions from ma-nure management			40,039		40,039
3.C.7 - Rice cultivation		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
4.D - Wastewater Treatment and Discharge	0,000	98,403	53,705	0,000	152,108
For your information					
International bunkers	112,952	0,017	0.979	0,000	113,948
1.A.3.ai - International Aviation	112,952	0,017	0.979		113,948
1.A.3.di - International Water Navigation	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 activity	**4218,936**	**50,912**	**28,964**	**0,000**	**4298,812**
1.A.1 - Energy industry	2102,956	0.721	6,665		2110,342
1.A.2 - Industry 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 fuel	**4,970**	**117,260**	**0,000**	**0,000**	**122,230**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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**
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 processes using carbonates	9,782				9,782
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**7,597**	**7,597**
2.F.1 - Cooling and air conditioning				7,597	7,597
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10303,877**	**1721,125**	**1488,919**	**0,000**	**-7093,833**
3.A - Pets	**0,000**	**1678,847**	**103,835**	**0,000**	**1782,683**
3.A.1 - Enteral fermentation		1628,789			1628,789
3.A.2 - Manure Management		50,058	103,835		153,893
3.B - Earth	**-10301,640**	**0,000**	**0,000**	**0,000**	**-10301,640**
3.B.1 - Forest lands	-6817,929				-6817,929
3.B.2 - Cultivated lands	-3483,711				-3483,711
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**42,277**	**1385,084**	**0,000**	**1427,361**
3.C.1 - Emissions from biomass combustion		13,463	5,156		18,620
3.C.4 - Direct N2O emissions from managed soils			954,028		954,028

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
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 cultivation		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
For your information					
International bunkers	112,952	0,017	0.979	0,000	113,948
1.A.3.ai - International Aviation	112,952	0,017	0.979		113,948
1.A.3.di - International Water Navigation	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 activity	**4603,048**	**56,304**	**57,158**	**0,000**	**4716,510**
1.A.1 - Energy industry	2258,863	0.735	6,847		2266,445
1.A.2 - Industry 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 fuel	**5,102**	**116,191**	**0,000**	**0,000**	**121,292**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	8,941				8,941
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**8,893**	**8,893**
2.F.1 - Cooling and air conditioning				8,893	8,893
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3 - Agriculture, forestry and other land uses	**-10221,398**	**1739,205**	**1487,372**	**0,000**	**-6994,820**
3.A - Pets	**0,000**	**1700,050**	**103,722**	**0,000**	**1803,772**
3.A.1 - Enteral fermentation		1649,542			1649,542
3.A.2 - Manure Management		50,508	103,722		154,231
3.B - Earth	**-10219,422**	**0,000**	**0,000**	**0,000**	**-10219,422**
3.B.1 - Forest lands	-6830,883				-6830,883
3.B.2 - Cultivated lands	-3388,539				-3388,539
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**39,155**	**1383,650**	**0,000**	**1422,805**
3.C.1 - Emissions from biomass combustion		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 cultivation		25,245			25,245
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
For your information					
International bunkers	113,435	0,017	0.984	0,000	114,435
1.A.3.ai - International Aviation	113,435	0,017	0.984		114,435
1.A.3.di - International Water Navigation	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 activity	**4262,005**	**55,013**	**32,579**	**0,000**	**4349,597**
1.A.1 - Energy industry	2020,533	0.662	6,089		2027,284
1.A.2 - Industry 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 fuel	**4,936**	**124,310**	**0,000**	**0,000**	**129,247**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	8,550				8,550
2.C - Metallurgical industry	**10,718**	**0,000**	**0,000**	**0,000**	**10,718**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.C.1 - Iron and steel production	0.027	0,000			0.027
2.D - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**10,357**	**10,357**
2.F.1 - Cooling and air conditioning				10,357	10,357
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10239,260**	**1771,163**	**1499,048**	**0,000**	**-6969,049**
3.A - Pets	**0,000**	**1727,585**	**105,042**	**0,000**	**1832,627**
3.A.1 - Enteral fermentation		1676,181			1676,181
3.A.2 - Manure Management		51,405	105,042		156,447
3.B - Earth	**-10237,451**	**0,000**	**0,000**	**0,000**	**-10237,451**
3.B.1 - Forest lands	-6827,891				-6827,891
3.B.2 - Cultivated lands	-3409,560				-3409,560
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**43,578**	**1394,006**	**0,000**	**1437,583**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	396,187	0.058	3,435	0,000	399,681
1.A.3.ai - International Aviation	396,187	0.058	3,435		399,681
1.A.3.di - International Water Navigation	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 activity	**4428,703**	**56,408**	**29,345**	**0,000**	**4514,456**
1.A.1 - Energy industry	1782,520	0.590	5,331		1788,442
1.A.2 - Industry 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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.B - Fugitive emissions from fuel	**4,230**	**106,654**	**0,000**	**0,000**	**110,884**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
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 processes using carbonates	12,789				12,789
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**11,990**	**11,990**
2.F.1 - Cooling and air conditioning				11,990	11,990
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-9914,316**	**1762,740**	**1491,471**	**0,000**	**-6660,105**
3.A - Pets	**0,000**	**1722,649**	**103,355**	**0,000**	**1826,004**
3.A.1 - Enteral fermentation		1671,764			1671,764
3.A.2 - Manure Management		50,885	103,355		154,240
3.B - Earth	**-9912,145**	**0,000**	**0,000**	**0,000**	**-9912,145**
3.B.1 - Forest lands	-6813,973				-6813,973
3.B.2 - Cultivated lands	-3098,172				-3098,172
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**40,091**	**1388,116**	**0,000**	**1428,207**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	522,259	0,077	4,529	0,000	526,865
1.A.3.ai - International Aviation	522,259	0,077	4,529		526,865
1.A.3.di - International Water Navigation	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 activity	**4653,386**	**58,485**	**33,530**	**0,000**	**4745,401**
1.A.1 - Energy industry	1544,509	0.518	4,574		1549,600
1.A.2 - Industry 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 fuel	**3,991**	**109,727**	**0,000**	**0,000**	**113,718**
1.B.1 - Solid fuel	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 - Transport and storage of carbon di-oxide	**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 processes using carbonates	16,314				16,314
2.C - Metallurgical 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 - Use of solvents and non-energy prod-ucts from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**13,661**	**13,661**
2.F.1 - Cooling and air conditioning				13,661	13,661
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10302,866**	**1797,570**	**1510,478**	**0,000**	**-6994,818**
3.A - Pets	**0,000**	**1757,947**	**106,271**	**0,000**	**1864,219**
3.A.1 - Enteral fermentation		1705,596			1705,596
3.A.2 - Manure Management		52,351	106,271		158,623
3.B - Earth	**-10301,114**	**0,000**	**0,000**	**0,000**	**-10301,114**
3.B.1 - Forest lands	-6827,798				-6827,798
3.B.2 - Cultivated lands	-3473,316				-3473,316
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**39,622**	**1404,207**	**0,000**	**1443,829**
3.C.1 - Emissions from biomass combus-tion		11,917	4,567		16,484
3.C.4 - Direct N2O emissions from man-aged soils			965,012		965,012
3.C.5 - Indirect N2O emissions from man-aged soils			384,658		384,658
3.C.6 - Indirect N2O emissions from ma-nure management			49,970		49,970
3.C.7 - Rice cultivation		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
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
For your information					
International bunkers	593,287	0.087	5,145	0,000	598,519
1.A.3.ai - International Aviation	593,287	0.087	5,145		598,519
1.A.3.di - International Water Navigation	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 activity	**5011,436**	**46,549**	**46,523**	**0,000**	**5104,509**
1.A.1 - Energy industry	2047,397	0.607	7,377		2055,381
1.A.2 - Industry 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 fuel	**3,477**	**105,330**	**0,000**	**0,000**	**108,807**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	20,742				20,742
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2.D.1 - Use of lubricants	0,000				0,000
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**15,759**	**15,759**
2.F.1 - Cooling and air conditioning				15,759	15,759
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10205,986**	**1866,002**	**1548,774**	**0,000**	**-6791,210**
3.A - Pets	**0,000**	**1827,471**	**108,606**	**0,000**	**1936,077**
3.A.1 - Enteral fermentation		1773,976			1773,976
3.A.2 - Manure Management		53,495	108,606		162,101
3.B - Earth	**-10204,269**	**0,000**	**0,000**	**0,000**	**-10204,269**
3.B.1 - Forest lands	-6849,918				-6849,918
3.B.2 - Cultivated lands	-3354,351				-3354,351
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**38,531**	**1440,168**	**0,000**	**1478,699**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	400,450	0.059	3,472	0,000	403,981
1.A.3.ai - International Aviation	400,450	0.059	3,472		403,981
1.A.3.di - International Water Navigation	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 activity	**5042,739**	**48,212**	**46,476**	**0,000**	**5137,427**
1.A.1 - Energy industry	1939,744	0.563	7,140		1947,447
1.A.2 - Industry and construction	864,543	0.510	0.976		866,030
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 fuel	**2,867**	**98,977**	**0,000**	**0,000**	**101,844**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	19,659				19,659
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**5,749**	**0,000**	**0,000**	**0,000**	**5,749**
2.D.1 - Use of lubricants	5,463				5,463
2.D.2 - Use of paraffins	0.285				0.285
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**17,896**	**17,896**
2.F.1 - Cooling and air conditioning				17,896	17,896
2.F.2 - Foaming agents				0,000	0,000

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10208,929**	**1936,994**	**1612,585**	**0,000**	**-6659,351**
3.A - Pets	**0,000**	**1896,640**	**112,671**	**0,000**	**2009,311**
3.A.1 - Enteral fermentation		1841,284			1841,284
3.A.2 - Manure Management		55,357	112,671		168,027
3.B - Earth	**-10207,372**	**0,000**	**0,000**	**0,000**	**-10207,372**
3.B.1 - Forest lands	-6880,279				-6880,279
3.B.2 - Cultivated lands	-3327,093				-3327,093
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**40,353**	**1499,914**	**0,000**	**1540,267**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
4.D - Wastewater Treatment and Discharge	0,000	115,088	60,795	0,000	175,883
For your information					
International bunkers	856,080	0.126	7,423	0,000	863,629
1.A.3.ai - International Aviation	856,080	0.126	7,423		863,629
1.A.3.di - International Water Navigation	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 activity	**5927,153**	**56,707**	**78,382**	**0,000**	**6062,241**
1.A.1 - Energy industry	1913,848	0.551	7,078		1921,477
1.A.2 - Industry 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 fuel	**2,455**	**95,704**	**0,000**	**0,000**	**98,159**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.A.2 - Lime production	9,888				9,888
2.A.3 - Glass production	18,769				18,769
2.A.4 - Other processes using carbonates	22,160				22,160
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**1,834**	**0,000**	**0,000**	**0,000**	**1,834**
2.D.1 - Use of lubricants	1,797				1,797
2.D.2 - Use of paraffins	0.037				0.037
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**16,660**	**16,660**
2.F.1 - Cooling and air conditioning				16,660	16,660
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10309,902**	**2019,682**	**1632,239**	**0,000**	**-6657,982**
3.A - Pets	**0,000**	**1981,061**	**117,481**	**0,000**	**2098,542**
3.A.1 - Enteral fermentation		1923,578			1923,578
3.A.2 - Manure Management		57,482	117,481		174,963
3.B - Earth	**-10307,978**	**0,000**	**0,000**	**0,000**	**-10307,978**
3.B.1 - Forest lands	-6841,592				-6841,592
3.B.2 - Cultivated lands	-3466,386				-3466,386
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**38,621**	**1514,758**	**0,000**	**1553,378**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information					
International bunkers	750,450	0,110	6,507	0,000	757,067
1.A.3.ai - International Aviation	750,450	0,110	6,507		757,067
1.A.3.di - International Water Navigation	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 activity	**6805,527**	**81,238**	**81,208**	**0,000**	**6967,973**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.A.1 - Energy industry	2281,734	0.623	8,945		2291,303
1.A.2 - Industry 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 fuel	**3,048**	**99,758**	**0,000**	**0,000**	**102,806**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	14,743				14,743
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**7,316**	**0,000**	**0,000**	**0,000**	**7,316**
2.D.1 - Use of lubricants	7,313				7,313
2.D.2 - Use of paraffins	0.003				0.003
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**22,139**	**22,139**
2.F.1 - Cooling and air conditioning				22,139	22,139
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0.093**	**0,000**	0.093
2.G.3 - N2O from product use			0.093		
3 - Agriculture, forestry and other land uses	**-10250,705**	**2116,287**	**1776,807**	**0,000**	**-6357,611**
3.A - Pets	**0,000**	**2077,563**	**122,907**	**0,000**	**2200,471**
3.A.1 - Enteral fermentation		2017,821			2017,821
3.A.2 - Manure Management		59,742	122,907		182,650
3.B - Earth	**-10248,144**	**0,000**	**0,000**	**0,000**	**-10248,144**
3.B.1 - Forest lands	-6900,723				-6900,723
3.B.2 - Cultivated lands	-3347,421				-3347,421
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**38,724**	**1653,899**	**0,000**	**1692,623**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
International bunkers	882,882	0,130	7,656	0,000	890,667
1.A.3.ai - International Aviation	882,882	0,130	7,656		890,667
1.A.3.di - International Water Navigation	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 activity	**6626,909**	**81,728**	**114,442**	**0,000**	**6823,079**
1.A.1 - Energy industry	2127,978	0.713	8,687		2137,379
1.A.2 - Industry 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 fuel	**3,096**	**85,413**	**0,000**	**0,000**	**88,509**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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
2.A.4 - Other processes using carbonates	9,744				9,744
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**8,332**	**0,000**	**0,000**	**0,000**	**8,332**
2.D.1 - Use of lubricants	8,304				8,304
2.D.2 - Use of paraffins	0.028				0.028
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**24,606**	**24,606**
2.F.1 - Cooling and air conditioning				24,606	24,606
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				0,000	0,000
2.G - Production and use of other products	**0,000**	**0,000**	**0.279**	**0,000**	0.279
2.G.3 - N2O from product use			0.279		
3 - Agriculture, forestry and other land uses	**-10303,402**	**2219,100**	**1814,722**	**0,000**	**-6269,580**
3.A - Pets	**0,000**	**2178,906**	**129,487**	**0,000**	**2308,393**
3.A.1 - Enteral fermentation		2116,505			2116,505
3.A.2 - Manure Management		62,401	129,487		191,888
3.B - Earth	**-10301,426**	**0,000**	**0,000**	**0,000**	**-10301,426**
3.B.1 - Forest lands	-6862,298				-6862,298
3.B.2 - Cultivated lands	-3439,128				-3439,128
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**40,194**	**1685,235**	**0,000**	**1725,429**
3.C.1 - Emissions from biomass combustion		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

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C.6 - Indirect N2O emissions from manure management			59,265		59,265
3.C.7 - Rice cultivation		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
For your information					
International bunkers	1027,927	0.151	8,913	0,000	1036,991
1.A.3.ai - International Aviation	1027,927	0.151	8,913		1036,991
1.A.3.di - International Water Navigation	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 activity	**5977,503**	**102,894**	**99,869**	**0,000**	**6180,267**
1.A.1 - Energy industry	1627,627	0.497	6,616		1634,739
1.A.2 - Industry 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 fuel	**3,467**	**89,622**	**0,000**	**0,000**	**93,089**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	9,311				9,311
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**6,688**	**0,000**	**0,000**	**0,000**	**6,688**
2.D.1 - Use of lubricants	6,688				6,688
2.D.2 - Use of paraffins	0,000				0,000
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**49,983**	**49,983**
2.F.1 - Cooling and air conditioning				46,263	46,263
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				3,720	3,720
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10334,544**	**2267,723**	**1821,705**	**0,000**	**-6245,117**
3.A - Pets	**0,000**	**2226,942**	**133,238**	**0,000**	**2360,179**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.A.1 - Enteral fermentation		2163,425			2163,425
3.A.2 - Manure Management		63,516	133,238		196,754
3.B - Earth	**-10332,755**	**0,000**	**0,000**	**0,000**	**-10332,755**
3.B.1 - Forest lands	-6869,834				-6869,834
3.B.2 - Cultivated lands	-3462,921				-3462,921
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**40,781**	**1688,467**	**0,000**	**1729,248**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information					
International bunkers	781,981	0.115	6,781	0,000	788,877
1.A.3.ai - International Aviation	781,981	0.115	6,781		788,877
1.A.3.di - International Water Navigation	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 activity	**7399,077**	**102,125**	**62,140**	**0,000**	**7563,343**
1.A.1 - Energy industry	1690,632	0.515	7,077		1698,223
1.A.2 - Industry 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 fuel	**4,052**	**91,258**	**0,000**	**0,000**	**95,310**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	12,846				12,846
2.C - Metallurgical industry	**2,230**	**0,000**	**0,000**	**0,000**	**2,230**
2.C.1 - Iron and steel production	0.051	0,000			0.051

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.D - Use of solvents and non-energy products from fuels	**8,412**	**0,000**	**0,000**	**0,000**	**8,412**
2.D.1 - Use of lubricants	8,404				8,404
2.D.2 - Use of paraffins	0.008				0.008
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**64,092**	**64,092**
2.F.1 - Cooling and air conditioning				38,357	38,357
2.F.2 - Foaming agents				0,000	0,000
2.F.6 - Other uses				25,735	25,735
2.G - Production and use of other products	**0,000**	**0,000**	**0.031**	**0,000**	0.031
2.G.3 - N2O from product use			0.031		
3 - Agriculture, forestry and other land uses	**-10295,774**	**2344,769**	**1957,239**	**0,000**	**-5993,766**
3.A - Pets	**0,000**	**2304,500**	**138,478**	**0,000**	**2442,979**
3.A.1 - Enteral fermentation		2238,959			2238,959
3.A.2 - Manure Management		65,541	138,478		204,019
3.B - Earth	**-10294,539**	**0,000**	**0,000**	**0,000**	**-10294,539**
3.B.1 - Forest lands	-6830,232				-6830,232
3.B.2 - Cultivated lands	-3464,307				-3464,307
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**40,268**	**1818,761**	**0,000**	**1859,029**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	219,730	0.032	1,905	0,000	221,668
1.A.3.ai - International Aviation	219,730	0.032	1,905		221,668
1.A.3.di - International Water Navigation	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 activity	**8853,107**	**116,000**	**128,538**	**0,000**	**9097,645**
1.A.1 - Energy industry	1778,997	0.512	7,455		1786,964
1.A.2 - Industry 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 fuel	**5,195**	**102,973**	**0,000**	**0,000**	**108,168**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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**
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 processes using carbonates	12,879				12,879
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**0.407**	**0,000**	**0,000**	**0,000**	**0.407**
2.D.1 - Use of lubricants	0,400				0,400
2.D.2 - Use of paraffins	0,007				0,007
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**123,821**	**123,821**
2.F.1 - Cooling and air conditioning				47,098	47,098
2.F.2 - Foaming agents				44,759	44,759
2.F.6 - Other uses				31,964	31,964
2.G - Production and use of other products	**0,000**	**0,000**	**0.186**	**0,000**	0.186
2.G.3 - N2O from product use			0.186		
3 - Agriculture, forestry and other land uses	**-10324,340**	**2400,466**	**1969,329**	**0,000**	**-5954,545**
3.A - Pets	**0,000**	**2356,687**	**141,638**	**0,000**	**2498,325**
3.A.1 - Enteral fermentation		2289,738			2289,738
3.A.2 - Manure Management		66,949	141,638		208,587
3.B - Earth	**-10323,169**	**0,000**	**0,000**	**0,000**	**-10323,169**
3.B.1 - Forest lands	-6856,630				-6856,630
3.B.2 - Cultivated lands	-3466,539				-3466,539
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**43,779**	**1827,691**	**0,000**	**1871,470**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	602,567	0.088	5,225	0,000	607,881
1.A.3.ai - International Aviation	602,567	0.088	5,225		607,881
1.A.3.di - International Water Navigation	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 activity	**8625,587**	**72,950**	**140,877**	**0,000**	**8839,414**
1.A.1 - Energy industry	1455,953	0.387	6,358		1462,698
1.A.2 - Industry 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 fuel	**6,673**	**112,680**	**0,000**	**0,000**	**119,353**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	15,808				15,808
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**10,336**	**0,000**	**0,000**	**0,000**	**10,336**
2.D.1 - Use of lubricants	10,292				10,292
2.D.2 - Use of paraffins	0.044				0.044
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**165,184**	**165,184**
2.F.1 - Cooling and air conditioning				50,402	50,402
2.F.2 - Foaming agents				77,010	77,010
2.F.6 - Other uses				37,773	37,773
2.G - Production and use of other products	**0,000**	**0,000**	**0.295**	**0,000**	0.295
2.G.3 - N2O from product use			0.295		
3 - Agriculture, forestry and other land uses	**-10216,191**	**2474,282**	**1984,956**	**0,000**	**-5756,953**
3.A - Pets	**0,000**	**2427,292**	**146,290**	**0,000**	**2573,582**
3.A.1 - Enteral fermentation		2358,474			2358,474
3.A.2 - Manure Management		68,817	146,290		215,108
3.B - Earth	**-10215,273**	**0,000**	**0,000**	**0,000**	**-10215,273**
3.B.1 - Forest lands	-6866,986				-6866,986
3.B.2 - Cultivated lands	-3348,287				-3348,287
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**46,991**	**1838,665**	**0,000**	**1885,656**
3.C.1 - Emissions from biomass combustion		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
3.C.7 - Rice cultivation		35,480			35,480
3.D - Other	**-0.919**	**0,000**	**0,000**	**0,000**	**-0.919**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
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
For your information					
International bunkers	226,544	0.033	1,964	0,000	228,542
1.A.3.ai - International Aviation	226,544	0.033	1,964		228,542
1.A.3.di - International Water Navigation	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 activity	**8834,461**	**116,258**	**138,043**	**0,000**	**9088,762**
1.A.1 - Energy industry	2503,491	0.920	9,632		2514,043
1.A.2 - Industry 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 fuel	**8,439**	**124,008**	**0,000**	**0,000**	**132,447**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	15,366				15,366
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**3,213**	**0,000**	**0,000**	**0,000**	**3,213**
2.D.1 - Use of lubricants	3,187				3,187
2.D.2 - Use of paraffins	0.026				0.026
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**215,743**	**215,743**
2.F.1 - Cooling and air conditioning				65,319	65,319
2.F.2 - Foaming agents				109,407	109,407
2.F.6 - Other uses				41,017	41,017
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10327,718**	**2564,698**	**2167,697**	**0,000**	**-5595,322**
3.A - Pets	**0,000**	**2516,848**	**151,291**	**0,000**	**2668,138**
3.A.1 - Enteral fermentation		2445,579			2445,579
3.A.2 - Manure Management		71,268	151,291		222,559
3.B - Earth	**-10326,798**	**0,000**	**0,000**	**0,000**	**-10326,798**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.B.1 - Forest lands	-6862,692				-6862,692
3.B.2 - Cultivated lands	-3464,106				-3464,106
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**47,850**	**2016,407**	**0,000**	**2064,257**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	189,637	0.028	1,644	0,000	191,309
1.A.3.ai - International Aviation	189,637	0.028	1,644		191,309
1.A.3.di - International Water Navigation	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 activity	**9538,713**	**112,652**	**128,741**	**0,000**	**9780,106**
1.A.1 - Energy industry	3140,439	1,146	12,416		3154,001
1.A.2 - Industry 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 fuel	**7,289**	**132,711**	**0,000**	**0,000**	**140,000**
1.B.1 - Solid fuel	4,548	32,729	0,000		37,277
1.B.2 - Oil and Natural Gas	2,741	99,982	0,000		102,723
1.C - Transport and storage of carbon dioxide	**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 processes using carbonates	12,921				12,921
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**9,055**	**0,000**	**0,000**	**0,000**	**9,055**
2.D.1 - Use of lubricants	9,019				9,019

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.D.2 - Use of paraffins	0.037				0.037
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**219,883**	**219,883**
2.F.1 - Cooling and air conditioning				77,333	77,333
2.F.2 - Foaming agents				99,607	99,607
2.F.6 - Other uses				42,943	42,943
2.G - Production and use of other products	**0,000**	**0,000**	**0.171**	**0,000**	0.171
2.G.3 - N2O from product use			0.171		
3 - Agriculture, forestry and other land uses	**-10336,530**	**2620,802**	**2182,216**	**0,000**	**-5533,512**
3.A - Pets	**0,000**	**2570,970**	**154,380**	**0,000**	**2725,350**
3.A.1 - Enteral fermentation		2498,201			2498,201
3.A.2 - Manure Management		72,769	154,380		227,149
3.B - Earth	**-10335,815**	**0,000**	**0,000**	**0,000**	**-10335,815**
3.B.1 - Forest lands	-6885,509				-6885,509
3.B.2 - Cultivated lands	-3450,306				-3450,306
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**49,832**	**2027,836**	**0,000**	**2077,668**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	258,322	0.038	2,240	0,000	260,600
1.A.3.ai - International Aviation	258,322	0.038	2,240		260,600
1.A.3.di - International Water Navigation	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 activity	**8180,658**	**85,520**	**114,150**	**0,000**	**8380,327**
1.A.1 - Energy industry	1779,270	0,560	7,267		1787,096
1.A.2 - Industry 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 fuel	**7,019**	**159,027**	**0,000**	**0,000**	**166,047**
1.B.1 - Solid fuel	4,251	30,529	0,000		34,780

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
1.B.2 - Oil and Natural Gas	2,769	128,498	0,000		131,267
1.C - Transport and storage of carbon dioxide	**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 processes using carbonates	12,632				12,632
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**8,270**	**0,000**	**0,000**	**0,000**	**8,270**
2.D.1 - Use of lubricants	8,238				8,238
2.D.2 - Use of paraffins	0.032				0.032
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**305,900**	**305,900**
2.F.1 - Cooling and air conditioning				92,482	92,482
2.F.2 - Foaming agents				168,297	168,297
2.F.6 - Other uses				45,121	45,121
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10302,540**	**2679,488**	**2211,810**	**0,000**	**-5411,242**
3.A - Pets	**0,000**	**2624,602**	**157,153**	**0,000**	**2781,755**
3.A.1 - Enteral fermentation		2550,357			2550,357
3.A.2 - Manure Management		74,246	157,153		231,398
3.B - Earth	**-10301,950**	**0,000**	**0,000**	**0,000**	**-10301,950**
3.B.1 - Forest lands	-6835,627				-6835,627
3.B.2 - Cultivated lands	-3466,324				-3466,324
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**54,885**	**2054,658**	**0,000**	**2109,543**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
For your information					
International bunkers	331,081	0.049	2,871	0,000	334,000
1.A.3.ai - International Aviation	331,081	0.049	2,871		334,000
1.A.3.di - International Water Navigation	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 activity	**8701,105**	**120,933**	**124,768**	**0,000**	**8946,805**
1.A.1 - Energy industry	1364,533	0.393	5,434		1370,359
1.A.2 - Industry 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 fuel	**6,601**	**176,098**	**0,000**	**0,000**	**182,698**
1.B.1 - Solid fuel	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 - Transport and storage of carbon di-oxide	**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 processes using carbonates	14,174				14,174
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**9,672**	**0,000**	**0,000**	**0,000**	**9,672**
2.D.1 - Use of lubricants	9,614				9,614
2.D.2 - Use of paraffins	0.058				0.058
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**341,548**	**341,548**
2.F.1 - Cooling and air conditioning				105,269	105,269
2.F.2 - Foaming agents				190,155	190,155
2.F.6 - Other uses				46,124	46,124
2.G - Production and use of other prod-ucts	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10367,314**	**2746,121**	**2328,247**	**0,000**	**-5292,946**
3.A - Pets	**0,000**	**2687,962**	**159,865**	**0,000**	**2847,827**
3.A.1 - Enteral fermentation		2611,931			2611,931
3.A.2 - Manure Management		76,031	159,865		235,896
3.B - Earth	**-10366,814**	**0,000**	**0,000**	**0,000**	**-10366,814**
3.B.1 - Forest lands	-6900,206				-6900,206
3.B.2 - Cultivated lands	-3466,608				-3466,608
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**58,159**	**2168,382**	**0,000**	**2226,541**
3.C.1 - Emissions from biomass combus-tion		10,069	3,896		13,965
3.C.4 - Direct N2O emissions from man-aged soils			1495,674		1495,674
3.C.5 - Indirect N2O emissions from man-aged soils			595,954		595,954
3.C.6 - Indirect N2O emissions from ma-nure management			72,858		72,858
3.C.7 - Rice cultivation		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**

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
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
For your information					
International bunkers	341,089	0,050	2,958	0,000	344,097
1.A.3.ai - International Aviation	341,089	0,050	2,958		344,097
1.A.3.di - International Water Navigation	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 activity	**10434,200**	**135,502**	**136,980**	**0,000**	**10706,682**
1.A.1 - Energy industry	1458,662	0.471	5,597		1464,729
1.A.2 - Industry 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 fuel	**8,393**	**208,405**	**0,000**	**0,000**	**216,798**
1.B.1 - Solid fuel	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 - Transport and storage of carbon dioxide	**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 processes using carbonates	12,929				12,929
2.C - Metallurgical 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 - Use of solvents and non-energy products from fuels	**11,131**	**0,000**	**0,000**	**0,000**	**11,131**
2.D.1 - Use of lubricants	11,095				11,095
2.D.2 - Use of paraffins	0.036				0.036
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**193,688**	**193,688**
2.F.1 - Cooling and air conditioning				117,459	117,459
2.F.2 - Foaming agents				29,894	29,894
2.F.6 - Other uses				46,335	46,335
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10941,371**	**2824,034**	**2372,307**	**0,000**	**-5745,029**
3.A - Pets	**0,000**	**2762,758**	**163,387**	**0,000**	**2926,145**
3.A.1 - Enteral fermentation		2684,639			2684,639
3.A.2 - Manure Management		78,118	163,387		241,505
3.B - Earth	**-10940,831**	**0,000**	**0,000**	**0,000**	**-10940,831**
3.B.1 - Forest lands	-7471,735				-7471,735
3.B.2 - Cultivated lands	-3469,096				-3469,096

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**61,276**	**2208,920**	**0,000**	**2270,197**
3.C.1 - Emissions from biomass combustion		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 cultivation		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
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
For your information					
International bunkers	340,613	0,050	2,954	0,000	343,616
1.A.3.ai - International Aviation	340,613	0,050	2,954		343,616
1.A.3.di - International Water Navigation	0,000	0,000	0,000		0,000

Inventory year: 2019

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-2282,911**	**3758,653**	**2533,814**	**208,221**	**4217,776**
1 - Energy	**7718,313**	**348,020**	**113,241**	**0,000**	**8179,574**
1.A - Fuel combustion activity	**7709,459**	**112,987**	**113,241**	**0,000**	**7935,687**
1.A.1 - Energy industry	1228,968	0.468	4,278		1233,714
1.A.2 - Industry and construction	530,347	0.805	1,873		533,026
1.A.3 - Transport	3839,814	20,317	98,247		3958,379
1.A.4 - Other sectors	2110,330	91,396	8,843		2210,568
1.B - Fugitive emissions from fuel	**8,853**	**235,034**	**0,000**	**0,000**	**243,887**
1.B.1 - Solid fuel	5,914	42,430	0,000		48,344
1.B.2 - Oil and Natural Gas	2,940	192,603	0,000		195,543
1.C - Transport and storage of carbon dioxide	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial processes and product use	**949,191**	**0,000**	**3,085**	**208,221**	**1160,496**
2.A - Mineral industry	**934,663**	**0,000**	**0,000**	**0,000**	**934,663**
2.A.1 - Cement production	886,867				886,867
2.A.2 - Lime production	3,916				3,916
2.A.3 - Glass production	23,396				23,396
2.A.4 - Other processes using carbonates	20,485				20,485
2.C - Metallurgical industry	**0.037**	**0,000**	**0,000**	**0,000**	**0.037**
2.C.1 - Iron and steel production	0.037	0,000			0.037
2.D - Use of solvents and non-energy products from fuels	**14,490**	**0,000**	**0,000**	**0,000**	**14,490**
2.D.1 - Use of lubricants	14,447				14,447
2.D.2 - Use of paraffins	0.044				0.044

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**208,221**	**208,221**
2.F.1 - Cooling and air conditioning				138,876	138,876
2.F.2 - Foaming agents				22,876	22,876
2.F.6 - Other uses				46,469	46,469
2.G - Production and use of other products	**0,000**	**0,000**	**3,085**	**0,000**	**3,085**
2.G.3 - N2O from product use			3,085		3,085
3 - Agriculture, forestry and other land uses	**-10954,624**	**2903,648**	**2336,595**	**0,000**	**-5714,381**
3.A - Pets	**0,000**	**2842,862**	**166,965**	**0,000**	**3009,827**
3.A.1 - Enteral fermentation		2762,716			2762,716
3.A.2 - Manure Management		80,146	166,965		247,111
3.B - Earth	**-10954,185**	**0,000**	**0,000**	**0,000**	**-10954,185**
3.B.1 - Forest lands	-7489,241				-7489,241
3.B.2 - Cultivated lands	-3464,945				-3464,945
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**60,786**	**2169,629**	**0,000**	**2230,415**
3.C.1 - Emissions from biomass combustion		10,043	3,859		13,902
3.C.4 - Direct N2O emissions from managed soils			1564,254		1564,254
3.C.5 - Indirect N2O emissions from managed soils			525,236		525,236
3.C.6 - Indirect N2O emissions from manure management			76,280		76,280
3.C.7 - Rice cultivation		50,742			50,742
3.D - Other	**-0.438**	**0,000**	**0,000**	**0,000**	**-0.438**
3.D.1 - Harvested wood products	-0.438				-0.438
4 - Waste	**4,209**	**506,985**	**80,893**	**0,000**	**592,087**
4.A - Solid Waste Disposal	0,000	333,759	0,000	0,000	333,759
4.B - Biological treatment of solid waste	0,000	1,655	1,466	0,000	3,120
4.C - Incineration and open burning of waste	4,209	12,734	3,384	0,000	20,327
4.D - Wastewater Treatment and Discharge	0,000	158,837	76,044	0,000	234,881
For your information					
International bunkers	300,054	0.044	2,602	0,000	302,700
1.A.3.ai - International Aviation	300,054	0.044	2,602		302,700
1.A.3.di - International Water Navigation	0,000	0,000	0,000		0,000

Inventory year: 2020

Categories	Net CO2	CH4	N2O	HFCs in CO2 eqv	Total Net CO2 eqv
Total National Emissions and Removals	**-2896,028**	**3855,820**	**2563,675**	**227,723**	**3751,190**
1 - Energy	**7155,292**	**388,029**	**104,868**	**0,000**	**7648,189**
1.A - Fuel combustion activity	**7137,417**	**101,814**	**104,868**	**0,000**	**7344,098**
1.A.1 - Energy industry	1476,499	0.407	6,032		1482,937
1.A.2 - Industry and construction	506,995	0.862	1,912		509,769
1.A.3 - Transport	3353,405	18,783	88,529		3460,716
1.A.4 - Other sectors	1800,518	81,762	8,395		1890,675
1.B - Fugitive emissions from fuel	**17,875**	**286,216**	**0,000**	**0,000**	**304,091**
1.B.1 - Solid fuel	15,031	88,126	0,000		103,156
1.B.2 - Oil and Natural Gas	2,845	198,090	0,000		200,935

1.C - Transport and storage of carbon dioxide	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
2 - Industrial processes and product use	**904,452**	**0,000**	**0,000**	**227,723**	**1132,175**
2.A - Mineral industry	**892,999**	**0,000**	**0,000**	**0,000**	**892,999**
2.A.1 - Cement production	854,266				854,266
2.A.2 - Lime production	4,518				4,518
2.A.3 - Glass production	22,487				22,487
2.A.4 - Other processes using carbonates	11,728				11,728
2.C - Metallurgical industry	**0.024**	**0,000**	**0,000**	**0,000**	**0.024**
2.C.1 - Iron and steel production	0.024	0,000			0.024
2.D - Use of solvents and non-energy products from fuels	**11,429**	**0,000**	**0,000**	**0,000**	**11,429**
2.D.1 - Use of lubricants	11,411				11,411
2.D.2 - Use of paraffins	0,018				0,018
2.F - Use of substitutes for ozone-depleting substances	**0,000**	**0,000**	**0,000**	**227,723**	**227,723**
2.F.1 - Cooling and air conditioning				157,856	157,856
2.F.2 - Foaming agents				20,194	20,194
2.F.6 - Other uses				49,673	49,673
2.G - Production and use of other products	**0,000**	**0,000**	**0,000**	**0,000**	0,000
2.G.3 - N2O from product use			0,000		
3 - Agriculture, forestry and other land uses	**-10960,100**	**2955,552**	**2374,437**	**0,000**	**-5630,111**
3.A - Pets	**0,000**	**2891,786**	**171,633**	**0,000**	**3063,419**
3.A.1 - Enteral fermentation		2810,239			2810,239
3.A.2 - Manure Management		81,547	171,633		253,180
3.B - Earth	**-10960,100**	**0,000**	**0,000**	**0,000**	**-10960,100**
3.B.1 - Forest lands	-7490,450				-7490,450
3.B.2 - Cultivated lands	-3469,650				-3469,650
3.C - Aggregated sources and sources of emissions of gases from soils other than CO2	**0,000**	**63,766**	**2202,804**	**0,000**	**2266,570**
3.C.1 - Emissions from biomass combustion		10,187	3,926		14,113
3.C.4 - Direct N2O emissions from managed soils			1508,876		1508,876
3.C.5 - Indirect N2O emissions from managed soils			610,462		610,462
3.C.6 - Indirect N2O emissions from manure management			79,540		79,540
3.C.7 - Rice cultivation		53,579			53,579
3.D - Other	**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
3.D.1 - Harvested wood products	0,000				0,000
4 - Waste	**4,328**	**512,238**	**84,370**	**0,000**	**600,936**
4.A - Solid Waste Disposal	0,000	340,938	0,000	0,000	340,938
4.B - Biological treatment of solid waste	0,000	1,579	1,399	0,000	2,978
4.C - Incineration and open burning of waste	4,328	13,094	3,479	0,000	20,902
4.D - Wastewater Treatment and Discharge	0,000	156,627	79,491	0,000	236,118
For your information					
International bunkers	224,220	0.033	1,944	0,000	226,198
1.A.3.ai - International Aviation	224,220	0.033	1,944		226,198
1.A.3.di - International Water Navigation	0,000	0,000	0,000		0,000

21. Summary of greenhouse gas emissions in Gg CO_2 equivalent for the period 1990-2020.

Year	CO2 emissions	CO2 absorp-tion	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
2019	8671,712	-10954,624	3758,653	2533,814	5,530	56,162	72,042	51,611	22,876	15172,400	4217,776
2023	8064,072	-10960,100	3855,820	2563,675	6,975	64,449	81,332	54,773	20,194	14711,290	3751,190

The GWP values used for the conversion to CO2 equivalent are taken from the IPCC Second Assessment Report to ensure comparability with the previous 3rd NIGHG.

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22. Summary of GHG emissions by sources for the period 1990-2020 in Gg CO_2 equivalent

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
2019	8179,574	1160,496	5240,242	-10954,624	592,087	15172,400	4217,776
2020	7648,189	1132,175	5329,990	-10960,100	600,936	14711,290	3751,190

The GWP values used for the conversion to CO2 equivalent are taken from the IPCC Second Assessment Report to ensure comparability with the previous 3rd NIGHG.

Appendix 1. Uncertainty assessment of the NGHGI for the period of 1990-2020.[52]

Base year for assessing uncertainty in trend: 1990, Year T: 2020.

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

[52]IPCC GHG Software Database v.2.54.

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 - 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
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

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	CH4	0,000	0,001	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 - 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

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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.3.ai - 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
1.A.3.ai - 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.ai - 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

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.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
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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ci - 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.ai1 - 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.ai1 - 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.ai2 - 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.ai2 - 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.ai - 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.ai - 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.bi - 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

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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
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

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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
2.F.6 - Other Applications (please specify)	CF3CH3	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.ai - 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.ai - 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.ai - 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 cultivation	CH4	5,589	50,971	0	0,000	0,000	0,000	0.003	0.003	0,000	0,000	0,000

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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												
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 Wastewater 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 Wastewater 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 inventory of greenhouse gas emissions and removals of the Kyrgyz Republic for the period 1990-2020 presents an assessment of GHG and precursor gases emissions by sources and removals by sinks, prepared in the result of the 4th NGHGI in the period 2019-2022.

The inventory of greenhouse gas emissions and removals of the Kyrgyz Republic for the period 1990-2020 was prepared in full compliance with the 2006 Guidelines for National Greenhouse Gas Inventories using the IPCC Inventory Software v. 2.54 developed by the Intergovernmental Panel on Climate Change of the UNFCCC.

Ministry of Natural Resources, Ecology
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Global Environment Facility

UN Environment Programme