

PART III:

**GREENHOUSE
GAS EMISSIONS**

PARTIE III :

**EMISSIONS DE GAZ
A EFFET DE SERRE**

1. SHARES AND TRENDS IN GREENHOUSE GAS EMISSIONS

The information in Part III (with the exception of CO₂ emissions from fuel combustion) has been provided by Dr. Jos G.J. Olivier from the Netherlands Environmental Assessment Agency (MNP) based on the EDGAR 3.2 database, the 32FT2000 dataset and preliminary data from the EDGAR 4.0 dataset developed jointly by JRC and MNP as part of and in cooperation with the *Global Exchange and Interactions Activity (GEIA)* of IGBP and the *ACCENT Network of Excellence*. Country data have been provided for 1990, 1995, 2000 and 2005. Please see Chapter 2 for further details. Emission trends for gases and sources are provided in this discussion through 2005.

CO₂ emissions from fuel combustion constitute the majority of anthropogenic greenhouse (GHG) emissions. However, comprehensive analysis of emissions and emission trends considers other sources of CO₂ as well as other gases.

To complement work regarding the emissions of CO₂ from fuel combustion, the IEA elected to include the EDGAR data on other CO₂ sources and on five other greenhouse gases; CH₄, N₂O and the fluorinated gases (or “F-gases”) HFCs, PFCs and SF₆. These gases are addressed by the Kyoto Protocol.

When considering comparative shares and trends in greenhouse gas emissions, data on gases and sources other than CO₂ from fuel combustion are

much more uncertain. Country-specific estimates of CO₂ from biomass burning and F-gas emissions are particularly difficult to ascertain.

Shares by Gas

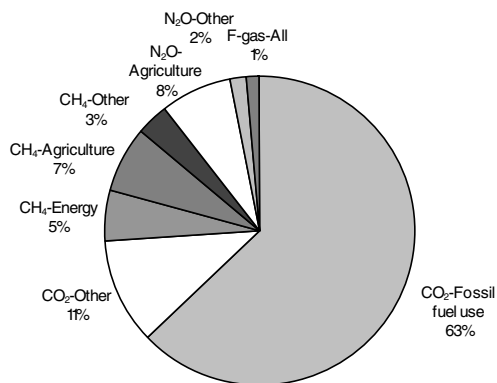
The contribution of non-CO₂ gases to total emissions can be estimated by expressing the emissions of all the gases in CO₂-equivalent units. For a given gas, emissions expressed in mass are multiplied by its specific weighting factor, the Global Warming Potential (GWP), an estimate of the relative contribution of a kilogramme of that gas to global radiative forcing, as compared to the same amount of CO₂, integrated over a fixed period of time (e.g. 100 years).

The UN Framework Convention on Climate Change (UNFCCC), following the Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), uses the 100-year GWPs of 21 for CH₄, 310 for N₂O and 23 900 for SF₆. For the most common HFCs, GWPs vary between 140 and 3 000 (1 300 for HFC-134a). For the by-product HFC-23, the GWP is 11 700. The GWPs for PFCs vary between 6 500 (CF₄) to 9 200 (C₂F₆). These two PFCs, the ones most commonly used, are also significant sources of by-product emissions. This chapter expresses all emission data in CO₂-equivalents using these GWP values.

In 2005, CO₂ contributed 74% of global greenhouse gas emissions, CH₄ about 16%, N₂O about 9% and the combined F-gases about 1% (Figure 1).

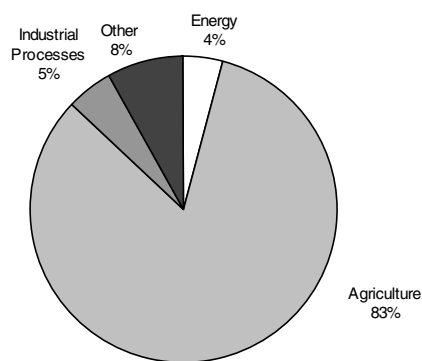
In 2005, the largest sources of GHG emissions were the sectors of energy (69%, mainly CO₂ fossil fuel use), and agriculture (14%, mainly CH₄ and N₂O, in comparable amounts). Other sources of GHGs were CO₂ from biomass burning (7%, mostly deforestation in Non-Annex I countries), and CO₂ from cement production (3%, of which 45% originated in China).

Figure 1. Global Greenhouse Gas Emissions by Gas/Source in 2005



For **nitrous oxide** (N₂O), agriculture contributed 83% of emissions in 2005, mainly from synthetic fertilisers and animal waste dropped on soils (either as animal manure or by animals during grazing) and agricultural waste burning (see Figure 3). Another smaller source was N₂O from industry (5%), mostly in Annex I countries.

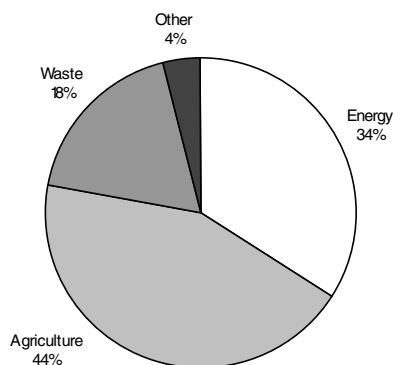
Figure 3. Global N₂O Emissions in 2005



As seen in Figure 2, on an individual gas basis, the major global sources for **methane** (CH₄) in 2005 were:

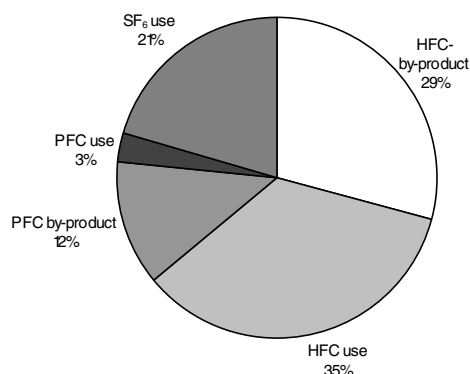
- agriculture (44%), mainly from enteric fermentation by animals and animal waste, from rice cultivation and from savannah burning;
- energy production and transmission (34%), mainly from coal production and gas production and transmission;
- waste (18%), from landfills and wastewater.

Figure 2. Global CH₄ Emissions in 2005



For the **fluorinated gases** (see Figure 4), emissions are split between “use” and “by-products” because of the different ways they are produced. HFC use represented about one third of the total in 2005, of which HFC 134a alone represented about half. Total by-product emissions of HFC contributed about 30% and of PFCs 12%. SF₆ use represented one fifth, while PFC use represented the remaining 3%. Most F-gas emissions are emitted by Annex I countries.

Figure 4. Global F-gas Emissions in 2005



Shares by Region

In 2005, most **methane** emissions originated in Non-Annex I regions such as Asia including China (37%) and Latin America (12%). Emissions from Annex I countries contributed 32%, largely driven by emissions from the former USSR and North America.

For methane, emissions from animals and their waste dominate sources in Latin America and South Asia, while emissions from rice cultivation are common in South, East and Southeast Asia. Coal production emissions are concentrated in East Asia (mainly China), North America, and EIT countries¹, while emissions from gas systems are concentrated in the former USSR and North America. Methane from landfills stems mainly from Annex I countries, whereas methane emissions from wastewater disposal originate predominantly in Non-Annex I countries.

Non-Annex I regions produced two-thirds of global **nitrous oxide** emissions in 2005: Asia including China (32%), Latin America (15%) and Africa (15%). N₂O emissions from Annex I countries contributed 32% to the global total, with most emissions originating in Annex II North America (13%) and Annex II Europe (10%).

Of all nitrous oxide sources, animal waste emissions occur predominantly in the Non-Annex I regions of Latin America, Africa and South Asia; N₂O from fertiliser use is largest in East Asia (mainly China) and Latin America followed by North America, Annex II Europe and South Asia (mainly India). N₂O emissions from crop production are largest in North America, Latin America, South Asia and East Asia. Industrial processes also emit significant volumes of N₂O.

The shares of Annex I countries in total CH₄ and total N₂O emissions were relatively low compared to their share in global CO₂ emissions (46%).

In 2005, most **fluorinated gas** emissions originated in Annex II Europe (26%) and Annex II North America (20%). Total Annex I countries contributed about 70% to global F-gas emissions. In Annex I the shares for F-gases are high relative to the shares of the other two non-CO₂ gases.

Total Greenhouse Gas Emission Trends

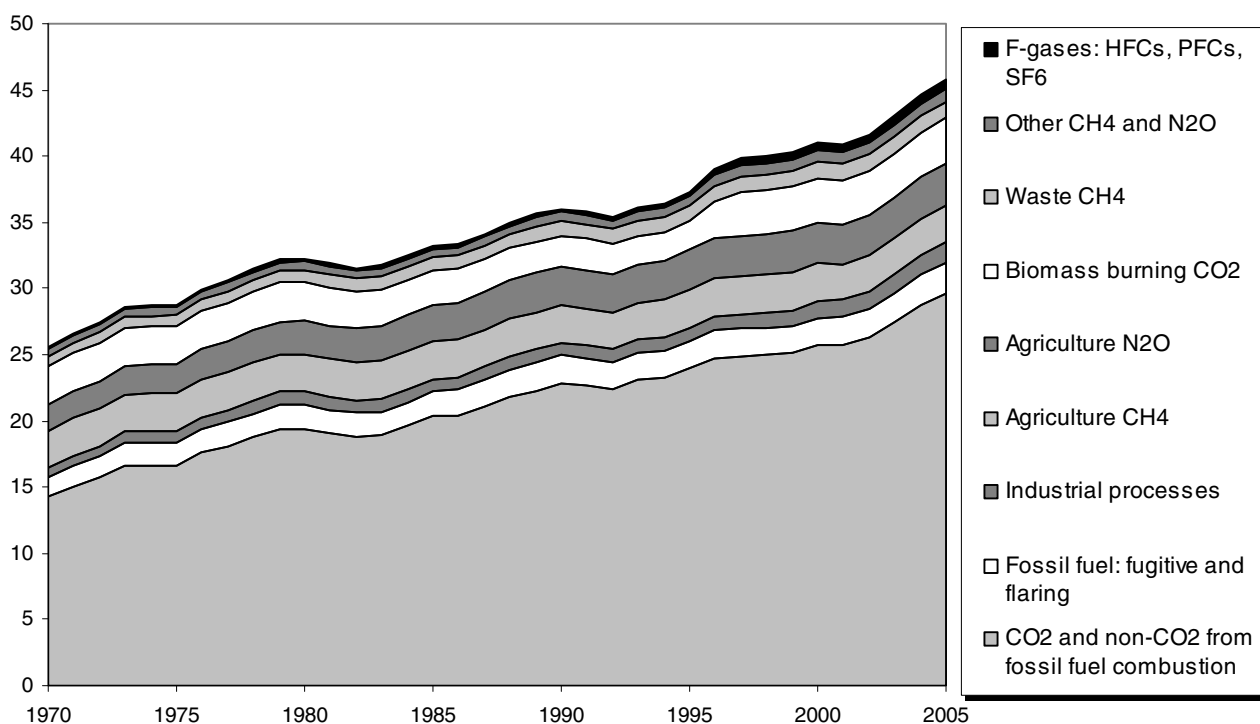
Emissions related to fossil-fuels dominate the global trend in total greenhouse gas emissions. Between 1970 and 2005, global anthropogenic CO₂ emissions increased by about 90%, CH₄ by about 35%, N₂O by about 45% and the F-gases by about 500%. Total emissions of all greenhouse gases - weighted by their GWP - increased by about 80% since 1970.

According to the EDGAR 3.2 and 32FT2000 datasets, supplemented with preliminary EDGAR 4.0 data, global total greenhouse gas emissions increased by 26% during the 1990-2005 period (see Figure 5). A 29% growth in CO₂ emissions from fuel combustion drove much of this increase. Over the same period, CO₂ from biomass burning – based on satellite observations between 1997 and 2002 – is assumed to have increased by about 40%. Increases in CO₂ emissions from cement production (about 90%), N₂O emissions from agriculture (12%) and the F-gases (125%, mainly from HFC use) also contributed to the total increase. The F-gases, for which 1995 generally serves as base year, increased their share of global emissions from 0.8% in 1990 to 1.0% in 1995 and to 1.4% in 2005.

Between 2000 and 2005, emission trends for all sources except CO₂ emissions from fossil fuel combustion and fugitive sources and CO₂, N₂O and HFC-23 emissions from industrial processes were based on global total activity data and global emission factor trends (MNP, 2007).

1. In this chapter, economies in transition covers former USSR and Eastern European countries.

Figure 5. Trend in Global Greenhouse Gas Emissions 1970-2005

Gigatonnes of CO₂-eq.

Source: EDGAR 3.2 and FT2000.

CO₂ Emission Trends

Energy dominates the trend in CO₂ emissions, accounting for 85% of the global total CO₂ emissions in 2005. About 7% less in 1970, this share now varies between 90 and 99% in most Annex I countries. Within Non-Annex I countries, the energy share in CO₂ emissions varies more widely. Indeed, in some African, Latin American and Asian countries, it can be lower than 10%.

Over the 1990-2005 period, total fossil fuel combustion emissions of CO₂ increased about 29% worldwide (2% in Annex I countries and 86% in Non-Annex I countries). Emissions from electricity and heat production and from road transport dominated global trends. Between 1990 and 2005, CO₂ emissions from electricity and heat production increased by 27% for Annex II countries and by 63% in the rest

of the world. Over the same period, road transport emissions rose 29% in Annex II countries and 61% in the other countries. By 2005, these two sectors together accounted for about 58% of global total CO₂ emissions from fuel combustion. The chapter “The Energy – Climate Challenge” at the beginning of the publication provides a more complete discussion of trends in energy-related CO₂ emissions.

In 2005, deforestation accounted for about 8% of CO₂ emissions (or 10% including unsustainable biofuel use). According to the FAO dataset of areas deforested in the 1970s and satellite observations in the late 1990s, the share of deforestation in global emissions was one-quarter less for the late 1990s than in 1970. In 2005, CO₂ emissions from cement production represent over 3% of total emissions worldwide. Between 1990 and 2005, CO₂ from cement production increased by about 100%, with the increase in China more than offsetting the decrease in the former USSR.

CH₄ Emission Trends

Between 1970 and 2005, global methane emissions rose about 35%. In the 1980s, emissions rose about 10%, driven by growth of emissions in the former USSR from gas production and transmission (see Figure 6). In addition, enteric fermentation by ruminants and wastewater disposal contributed to the increased emissions, particularly in Non-Annex I regions.

Emissions from rice cultivation are estimated to have decreased due to changes in types of rice and to other organic amendment practices. Furthermore, coal production shifted to incorporate more surface mining, which releases much less methane than underground mines. The economic decline of former USSR countries in the early 1990s strongly influenced global methane trends. The emissions from coal production, from gas transmission and from animals (enteric fermentation) decreased substantially between 1990 and 1995. It should be stressed, however, that detailed statistics for this region are rather uncertain in this period.

Based on country-specific trends of activity data and emission factors for the 1995-2000 period (Olivier et al., 2005; Van Aardenne et al., 2005) and global sector trends for 2000-2005 (MNP, 2007), global total

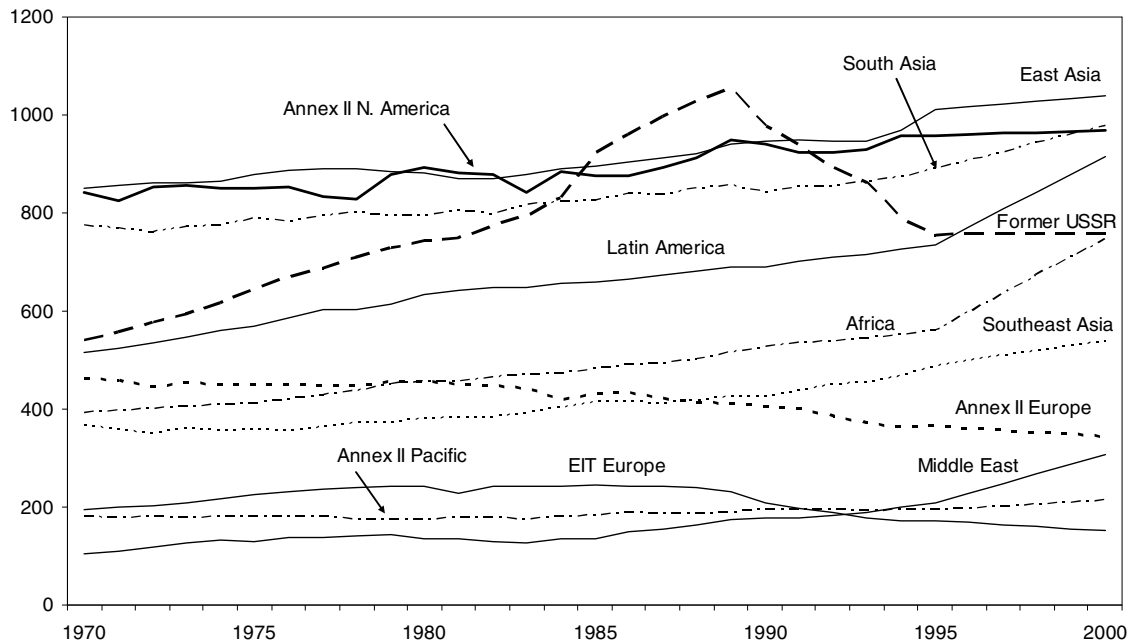
methane emissions are estimated to have effectively increased by about 7% between 1990 and 2005.

Between 1990 and 2005, emissions in Non-Annex I countries increased about 25%, with the largest growth in Latin America and Asia. Emissions in Annex I countries decreased by about 15%, mainly driven by the countries of the former Soviet Union. Annex II emissions as a whole decreased by almost 10%. Annex II Europe decreased by about 25%, mainly as a result of the policies of the United Kingdom and Germany. These two countries reduced their domestic coal production and increased methane recovery from coal mines, entailing a reduction in methane emissions from coal of more than 50%. In Annex II North America and Annex II Europe, methane emissions from landfills also decreased more than 15% due to enhanced methane recovery.

In the 1990s, emissions increased from gas production (particularly in the Middle East and North America), from waste handling sectors (particularly landfills in Latin America and wastewater in South Asia), from large-scale biomass burning in developing countries and from coal production in China. These increases were partly offset by decreases in fugitive emissions from coal production and methane emissions from animals in EIT countries.

Figure 6. Trends in Global and Regional CH₄ Emissions

Million tonnes of CO₂-eq.



Source: EDGAR 3.2 and FT2000.

N₂O Emission Trends

Between 1970 and 2005, global emissions of N₂O increased by more than 40%. In the 1980s, increased use of synthetic fertilisers and manure from livestock caused agricultural emissions in South Asia and East Asia to increase by 2-3% annually. These regional emission trends continued into the 1990s (see Figure 7). Emissions from Latin America and Africa also increased in the 1990s, predominantly from the same sources and from deforestation.

In contrast, N₂O emissions from industrial processes have decreased by 30% during the 1980s. This decrease resulted from the gradual upgrade of global production facilities for nitric acid. In 1990 about 20% of the facilities were equipped for non-selective catalytic reduction limiting NO_x emissions while simultaneously reducing N₂O emissions.

During the 1980s, North America and Japan introduced catalytic converters in gasoline-fired cars to reduce emissions of precursors of tropospheric ozone. However, the catalytic converters contributed to the increase in N₂O emissions in these countries.

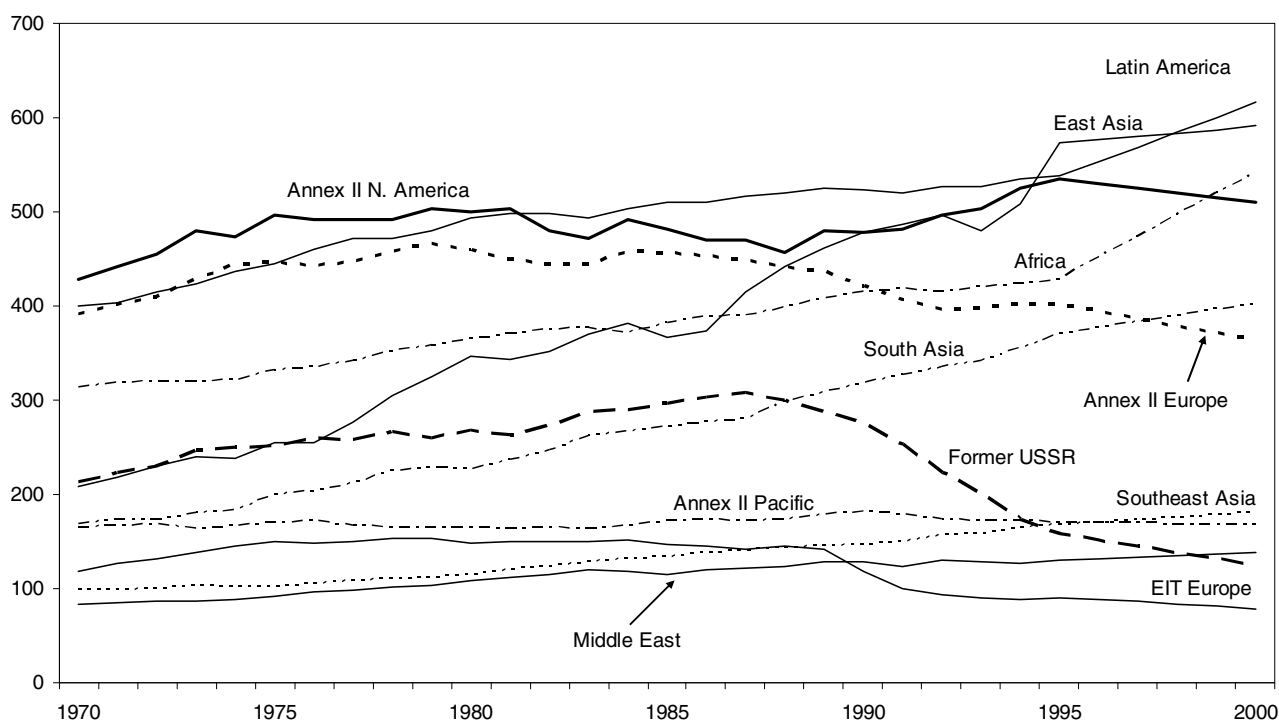
Based on country-specific trends of activity data and emission factors for the 1995-2000 period (Olivier et al., 2005; Van Aardenne et al., 2005) and global sector trends for 2000-2005 (MNP, 2007), global N₂O emissions are estimated to have increased by 14% between 1990 and 2005. The three-quarter reduction in industrial emissions from adipic acid manufacturing particularly limited this increase.

Between 1990 and 2005, emissions in Non-Annex I countries increased by about 30%, mainly in the agricultural sector in South Asia, East Asia and Latin America. This increase was partially offset by decreasing emissions in the former USSR countries (about -60%) and, to a lesser extent, in other EIT countries. In Annex II Europe, N₂O decreased by almost 10% since 1990, mainly due to emission abatement in the chemical industry and to a decrease in the use of nitrogen fertilisers.

When considering these trends, one should note that the uncertainties in annual emissions of most sources of N₂O are very large, e.g. the uncertainty for agricultural sources may sometimes exceed 100%.

Figure 7. Trends in Global and Regional N₂O Emissions

Million tonnes of CO₂-eq



Source: EDGAR 3.2 and FT2000.

HFC, PFC and SF₆ Emission Trends

Between 1990 and 2005, the emissions of F-gases increased by about 125%, mainly due to an increase of over 400% in HFC emissions. During the same period, PFC emissions increased by 15% while SF₆ emissions increased by 10%. Annex I regions and East Asia both experienced large growth in F-gas emissions, with average increases on the order of 100-200%, except in North America (15%). In the other Non-Annex I regions, total F-gas emission trends varied between +50% and -50%, with decreases mainly due to decreasing emissions of PFC and SF₆.

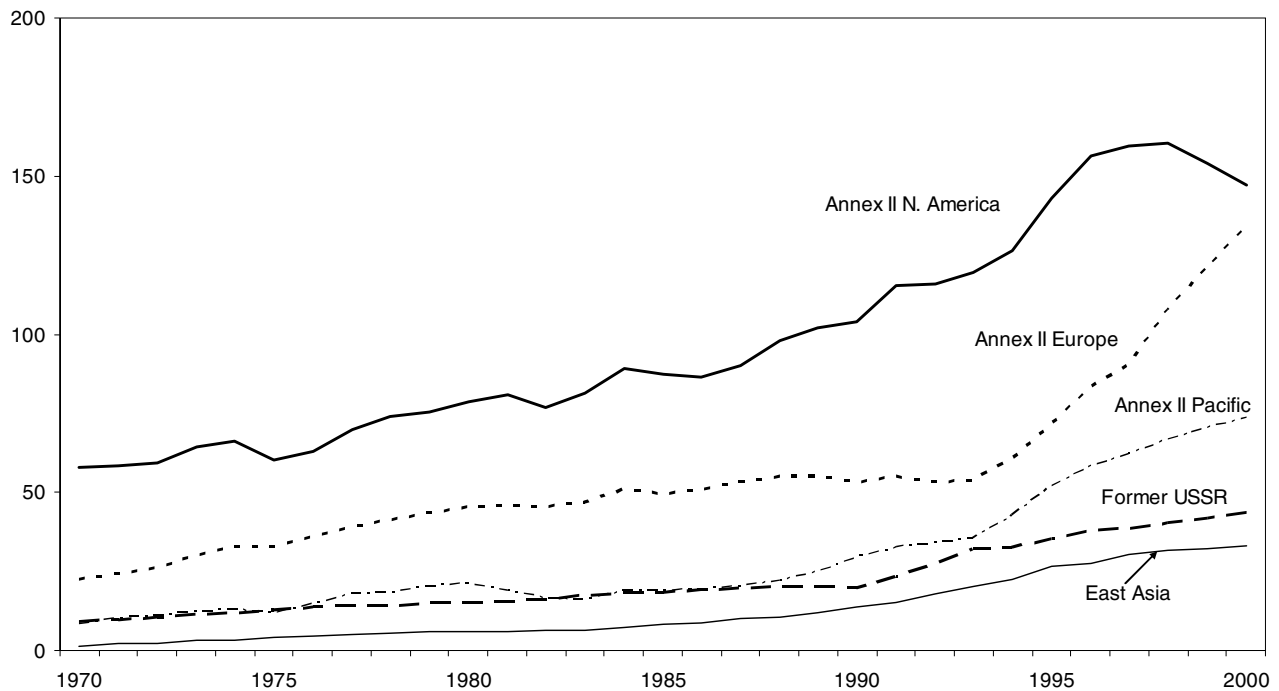
Based on country-specific activity data and emission factor trends for the 1995-2005 period (Olivier et al.,

2005; Van Aardenne et al., 2005) and global sector trends for 2000-2005 (MNP, 2007), global F-gas emissions are estimated to have increased by about 65% between 1995 and 2005. The increase of over 200% in HFC emissions more than offset the 13% reduction in SF₆ emissions and the reduction in PFC emissions. The reductions in SF₆ were mainly due to reductions in emissions from manufacture and use of switchgear for the electricity sector. At present, global emissions of HFCs other than HFC-134a exceed emissions of HFC-134a, widely used for refrigeration and air-conditioning.

When considering these trends, one should note that the uncertainties in annual emissions of most sources of F-gases are very large, e.g. at a country level they may well exceed 100%. Therefore, the figures provided for individual countries should only be considered as order-of-magnitude estimates.

Figure 8. Trends in Regional* F-gas Emissions

Million tonnes of CO₂-eq.



* Only regions with significant emissions of F-gases have been included in this figure.

Source: EDGAR 3.2 and FT2000.

2. SOURCES AND METHODS

When looking at GHG emission trends, limiting the emissions to CO₂ from fuel combustion means that the estimates give an incomplete picture of total greenhouse gas emissions. Therefore, to put the CO₂ emissions from fuel combustion into context, information has been added from the emissions model “EDGAR”, developed by the Netherlands Environmental Assessment Agency (MNP), the Joint Research Centre (JRC) and the Netherlands Organisation for Applied Scientific Research (TNO), to provide global anthropogenic emissions of greenhouse gases to be used as a reference database for policy applications.

The information in Part III (with the exception of CO₂ emissions from fossil fuel combustion) has been provided by Dr. Jos G.J. Olivier from MNP based on the EDGAR 3.2 and EDGAR 3.2 Fast Track 2000 (32FT2000) datasets, supplemented with preliminary EDGAR 4.0 data for selected sources. MNP and TNO (Dr. Tinus Pulles) are responsible for the calculation of the EDGAR 3.2 estimates and MNP and JRC (Dr. John A. van Aardenne) are responsible for the EDGAR 32FT2000 estimates for 2000 and for the EDGAR 4.0 data. Please see below for further details.

Background on MNP, JRC and TNO

The **Netherlands Environmental Assessment Agency (MNP)**, is a government-funded agency that supports national and international policymakers by analysing the environmental impact of policies and of trends in society. MNP provides independent integrated assessments on topics such as sustainable development, energy and climate change, biodiversity, transport, land use and air quality. MNP acts as an

interface between science and policy and provides the Dutch government and international organisations such as EU/EEA, UN, OECD and the World Bank with sound, evidence-based assessments. MNP employs about 225 people and works in close collaboration with national and international partners, to assess future policies and the effects of policies already in place. MNP analyses interrelated environmental issues and their interaction with economic and social developments. This ranges from Dutch problems in the European and global context to global topics such as climate change, as well as European and global sustainability issues.

The **Joint Research Centre (JRC)** is a Directorate General of the European Commission (EC), which is a European centre of scientific and technical reference to support EU policies. JRC employs about 2000 people. The Institute for Environment and Sustainability (IES) is one of seven institutes of JRC, located in Ispra (Italy), whose aim is to provide scientific and technical support to European Union strategies for the protection of the environment, contributing to a sustainable development of Europe. The IES is engaged in five main fields of activity: global change; emissions, air quality and health; water; terrestrial and natural resources; and renewable energies. The IES covers the entire environmental sciences with particular competences in the field of earth observation and remote sensing. The main customers are several Directorates General of the European Commission. The IES has a core staff of about 250 and visiting staff of about 125.

The **Netherlands Organisation for Applied Scientific Research (TNO)** is an independent contract research organisation, whose main task is to apply technological knowledge with the aim of strengthening the innovative power of industry and government. TNO's activities are organised in five core areas with

different areas of expertise, in which about 5000 people are employed. TNO Environment and Geosciences (TNO-BO) is an expert centre and contract research unit for businesses and government agencies in the field of sustainable development and environmentally oriented process innovation. This unit employs about 750 people, which are active in the following core areas: (a) sustainable development; (b) emissions to air and water and emissions from waste; (c) chain analysis to assess the effects at production and process levels; (d) evaluation of the environmental impact: the consequences of emissions for the environment; and (e) scenarios using scenario analysis. TNO has considerable expertise with emission inventories including national greenhouse gas inventories, CORINAIR and entity-level monitoring systems.

Both MNP and TNO participate in the Topic Centre on Air and Climate Change of the European Environmental Agency (EEA), whose aim is to support EU policy on air pollution and climate change, together with 12 other organisations in Europe. MNP has been designated to lead the Centre. TNO contributes significantly to the assessment of the EU data submissions from the member states to UNFCCC, UNECE/CLRTAP and the EU monitoring mechanism for greenhouse gas emissions. Both organisations were also involved in the work of the IPCC's National Greenhouse Gas Inventory Programme (NGGIP). The Institute for Environment and Sustainability of JRC cooperates with other European bodies like the European Environment Agency (EEA) and the European Space Agency (ESA), with authorities and other institutions in the EU member states and with international organizations such as UN-ECE, WHO, IPCC and NASA.

General Note on EDGAR

The *Emission Database for Global Atmospheric Research*, in short the *EDGAR 3.2 system*, has been developed jointly by the Netherlands Organisation for Applied Scientific Research (TNO) and the Netherlands Environmental Assessment Agency (MNP), which was part of the National Institute of Public Health and the Environment (RIVM), with financial support from the Dutch Ministry of the Housing,

Spatial Planning and Environment (VROM) and the Dutch National Research Programme on Global Air Pollution and Climate Change (NRP). The aim of the EDGAR system, which was started in 1992, is to provide global anthropogenic emissions of greenhouse gases CO₂, CH₄, N₂O, HFCs, PFCs and SF₆ and of precursor gases CO, NO_x, NMVOC and SO₂, per source category, both at country/region levels as well as on a 1x1 degree grid. It is meant to serve as a reference database for policy applications, e.g. to provide MNP's integrated global change model IMAGE 2 with emissions data and for assessments of potentials for emission reductions, as well as for scientific studies by providing gridded emissions as input for atmospheric models. The latter function is part of the *Global Exchange and Interactions Activity* (GEIA), that combines efforts to produce gridded inventories for all compounds relevant for the modeling activities within the *Analysis, Integration and Modeling of the Earth System* (AIMES) project of the *International Geosphere-Biosphere Programme* (IGBP) and of ACCENT, a Network of Excellence funded by the EC, 6th Framework Programme (FP6), Priority 1.1.6.3 Global Change and Ecosystems.

Activity data were mostly taken from international statistical data sources and emission factors were selected mostly from international publications to ensure a consistent approach across countries. MNP, TNO and JRC have made all reasonable efforts to ensure that the information was generated correctly, but it is the responsibility of the EDGAR consortium to modify activity data when required to arrive at complete time series and for selecting the emission factors. It is stressed that the uncertainty in the resulting dataset at national level may be substantial, especially for methane and nitrous oxide, and even more so for the F-gases. The uncertainty is caused by the limited accuracy of international activity data used and in particular of emission factors selected for calculating emissions on a country level (Olivier et al., 1999, 2001; Olivier and Berdowski, 2001; Olivier, 2002; Olivier et al., 2005). However, since the methods used are comparable with IPCC methodologies (see below) and global totals comply with budgets used in atmospheric studies and the data were based on international information sources, this dataset provides a sound basis for comparability. For estimating the 2000 emissions a special Fast Track method was applied to estimate the emissions consistent with

the detailed estimates made for 1995 (see below). For estimating the 2005 emissions per country an extrapolation method was applied to estimate for the most significant source categories the emissions consistent with the more detailed country-specific estimates made for 2000 (see below). Moreover, for some sources the country tables have been updated for all years using preliminary EDGAR 4.0 data: CO₂ emissions from fugitive sources (venting/flaring in oil and gas production) and industrial processes (cement and lime production) and N₂O and HFC-23 emissions from industrial processes.

Although this dataset has been constructed with great care, MNP, TNO and JRC do not accept any liability from using the data provided in this report including any inaccuracies or omissions in the data provided. For details on uncertainty and caveats identified in the dataset, as well as more detailed source category estimates, we refer to the EDGAR v4 website at <http://edgar.jrc.it> and EDGAR v3 website at <http://www.mnp.nl/edgar>.

Source Definitions

For carbon dioxide:

Fuel combustion refers to fossil fuel combustion and the unstored fraction of non-energy/feedstock use (IPCC Source/Sink Category 1A) estimated using the IPCC Sectoral Approach from the *Revised 1996 IPCC Guidelines*;

Fugitive refers to flaring of associated gas in oil and gas production (including indirect CO₂ from methane venting) (IPCC Source/Sink Category 1B);

Industrial Processes refers to cement production and lime production (IPCC Source/Sink Category 2); and

Other refers to direct emissions from tropical forest fires plus 10% of biofuel combustion emissions, which is the fraction assumed to be produced unsustainably (IPCC Source/Sink Category 5).

Please note that CO₂ emissions from decay (decomposition) of aboveground biomass that remains after logging and deforestation and CO₂ from peat fires and decay of drained peat soils are not included. Also CO₂ from fossil fuel fires, notably coal fires, are excluded.

For methane:

Energy comprises production, handling, transmission and combustion of fossil fuels and biofuels (IPCC Source/Sink Categories 1A and 1B);

Agriculture comprises animals, animal waste, rice production, agricultural waste burning (non-energy, on-site) and savannah burning (IPCC Source/Sink Category 4);

Waste comprises landfills, wastewater treatment, human wastewater disposal and waste incineration (non-energy) (IPCC Source/Sink Category 6); and

Others includes industrial process emissions and tropical and temperate forest fires and other vegetation fires (IPCC Source/ Sink Categories 2 and 5).

For nitrous oxide:

Energy comprises combustion of fossil fuels and biofuels (IPCC Source/Sink Categories 1A and 1B);

Agriculture comprises fertiliser use (synthetic and animal manure), animal waste management, agricultural waste burning (non-energy, on-site) and savannah burning (IPCC Source/Sink Category 4);

Industrial Processes comprises non-combustion emissions from manufacturing of adipic acid and nitric acid (IPCC Source/Sink Category 2); and

Others includes N₂O usage, tropical and temperate forest fires and other vegetation fires, and human sewage discharge and waste incineration (non-energy) (IPCC Source/Sink Categories 3, 5 and 6).

For fluorinated gases:

HFC emissions comprise by-product emissions of HFC-23 from HCFC-22 manufacture and the use of HFCs (IPCC Source/Sink Categories 2E and 2F);

PFC emissions comprise by-product emissions of CF₄ and C₂F₆ from primary aluminium production and the use of PFCs, in particular for semiconductor manufacture (IPCC Source/Sink Categories 2C, 2E and 2F); and *SF₆ emissions* stem from various sources of SF₆ use, of which the largest is the use and manufacture of Gas Insulated Switchgear (GIS) used in the electricity distribution networks (IPCC Source/Sink Categories 2C and 2F).

Data Sources and Methodology for EDGAR 3.2 (1970-1995)

Energy / Fugitive / Biofuel

CO₂ emissions from fuel combustion were calculated by the International Energy Agency based on *Energy Balances of OECD Countries* and *Energy Balances of Non-OECD Countries* (IEA/OECD, 2005) using the Sectoral Approach from the *Revised 1996 IPCC Guidelines* (IPCC, 1997).

The data sources for **fugitive CO₂ emissions** and **CH₄ and N₂O from energy** are listed below. Data for fossil fuel production and use for 112 countries are taken from the IEA energy statistics for OECD and Non-OECD countries 1970-1995 (extended energy balances, in ktoe units) (IEA/OECD, 1997). For the countries of the former USSR a modified dataset was used to achieve a complete time series for the new countries for 1970-1995 of which the sum converges to the older dataset for the total former USSR. For another 71 countries, the aggregated IEA data for the regions 'Other America', 'Other Africa' and 'Other Asia' have been split using the sectoral IEA data per region and total production and consumption figures per country of hard coal, brown coal, gas and oil from UN energy statistics (UN, 1998). Note that the EDGAR 3.0 data are based on IEA statistics published in 1997 and thus may differ somewhat from more recent IEA datasets; in particular for countries of the former USSR since the IEA data have been updated considerably. Moreover, for estimating CH₄ emissions, hard coal and brown coal production data have been split into surface and underground mining based on various national reports.

Biofuel data for developing countries in 1990 have been based on Hall *et al.* (1994), with biofuel type splits from EDGAR 2.0 (Olivier *et al.*, 1996, 1999), which includes vegetal waste used as fuel. Data for the time series 1970-1995 were based on the trend per country in urban and rural populations. However, for Latin American countries, biofuel statistics from OLADE were used (OLADE, 1999, personal communication). Fuelwood and charcoal consumption (also production) in Annex II and EIT countries were based on FAO (1998b), thereby replacing any IEA data for biofuel combustion in the 'Other sector' in these countries. For biofuel combustion in industry and

power generation in Annex II countries, the data come from the IEA dataset (IEA, 1997). However these data were often not provided for all years and all countries.

Emission factors for CO₂, CH₄ and N₂O from fossil fuel production and use are described in Olivier *et al.* (1999), except for CO₂ from gas flaring/venting, which were based on data compiled by CDIAC (Marland, 1998, personal communication) from data collected by the U.S. Geological Survey and CH₄ from coal mining (Olivier, 2002). For N₂O from gasoline cars in road transport, the fraction of cars equipped with a catalytic converter was taken into account (based on data from Eurostat and others). The factors for biofuel combustion and charcoal production are based on a review made for the *Revised 1996 IPCC Guidelines*. For CO₂ from biofuels, it was assumed that 10% was produced unsustainably. For methane emissions from coal mining, the methane recovery for ten countries amounted to about 1 Tg in 1990 (of which about half was allocated to the United States and Germany). Recovery in 1995 was estimated at 2 Tg (Thakur *et al.*, 1996; Bibler *et al.*, 1998; and national reports to Climate Convention; as described in Olivier, 2002).

Industrial Processes

Production data of cement, nitric acid, iron and steel, and various chemicals were based on UN Industrial Commodity Statistics (UN, 1998). However, for many countries interpolations and extrapolations were necessary to arrive at complete time series per country for 1970-1995. Special attention had to be given to new EIT countries, in particular to former USSR countries, to match the older totals for the former countries. Cement production data were supplemented with data from the USGS. For adipic acid, production data were taken from SRI (1998) (smoothed and averaged); steel production was split into different technologies using data from IISI (1997), supplemented with UN data. For nitric acid, production data are primary based on UN statistics. However, since industry estimates of global total production are substantially higher, the data set has been expanded, first by adding countries not included in the UN nitric acid statistics, for which the amount of N in the production of nitrogen fertilisers according to FAO statistics was used as an estimate for nitric acid production, secondly by increasing the official UN production statistics of nitric acid by 40% to arrive at the estimated global industry total of about 55 Mt of HNO₃.

Global annual total production of HCFC-22 and consumption of HFC-134a are based on AFEAS (1997). Primary aluminium production statistics per country from UN (1998) were combined with smelters types characterised by one of five process types according to Aluminium Verlag (1998). Global consumption data of PFCs for semiconductors are taken from Mocella (1993) and for SF₆ per application from S&PS (1997) and Smythe (2000). These global totals were distributed over individual countries using related variables and statistics such as CFC consumption per country, per country semiconductor production and electricity use.

Emission factors for CO₂, CH₄ and N₂O are described in Olivier et al. (1999). Note that emissions of CO₂ from cement production are only a proxy for cement clinker production. The emission factors for NA production are based on IPCC (2000), assuming that in 1990, 20% of global total production is equipped with Non-Selective Catalytic Reduction (NSCR) technology, all in Annex II countries, and that for other plants the emission factor in 1990 is the average of the IPCC default for non-NSCR plants, whereas the emission factors for 1975 and before have been assumed to be equal to the IPCC default for “old plants”. The emission factors for the F-gases were taken from various sources (Olivier and Bakker, 2000). We note that both the variables for distributing global total consumption and the emission factor may vary widely between different plants. This means the emissions at country level of the F-gases should more or less be considered as an order of magnitude estimate.

Solvent and other product use

For N₂O from the use of anaesthesia in hospitals, a fixed amount of N₂O per capita in Annex II countries was used, tentatively set at 25 g/cap/year, based on Kroeze (1994).

Agriculture

Activity data for livestock numbers were taken from FAO (2000), which were combined with information on animal waste generated per head in IPCC (1997) to estimate the total amount of animal waste. Net crop production was also taken from FAO (2000), with harvested areas of rice production split over different ecology types (rainfed, irrigated, deep water and upland) using the draft version of March 1977 the

RICE-ECO database of FAO (Van Gnuu, 1997, personal communication). In addition, the total harvested area of rice production in China was increased by 40%, due to recognition that official harvested rice area statistics of China are largely underestimating the actual area (Denier van der Gon, personal communication, 2000).

The fraction of agricultural waste associated with net crop production was based on a recent study by Smill (1999), whereas the fraction of agricultural residues burned on-site have been based on an analysis made by Bouwman (1997) and data reported in the Second National Communications. For Annex II countries 5% was assumed, for EIT countries 20% and for developing regions 30% - including amounts used as biofuel in developing countries, except for Annex II Europe, where a decreasing trend from 40% in 1970 to 5% in 1995 was assumed.

Emission factors for CH₄ and N₂O for enteric fermentation, animal waste (confined and outside), N-fixing crops were taken from the *Revised 1996 IPCC Guidelines*, where a 1x1 degree grid map for non-dairy cattle from Lerner et al. (1988) and the annual average temperature per grid cell from New et al. (1999) was used to calculate the fraction of the countries in the three climate zones (cold, temperate, warm). Other additional information, such as factors for indirect emissions of N₂O from agriculture, were taken from IPCC (1997) but were replaced by values updated in IPCC (2000). However, the emission factors for CH₄ from rice production in 1990 were taken from a review by Neue (1997); for the period 1970-1990 an emission factor improvement based on data of Denier van der Gon (1999, 2000) was assumed. For agricultural biomass burning the emission factors for CH₄ and N₂O were based on IPCC (1997).

Large-scale biomass burning

Biomass burning data (large-scale vegetation fires) were based on FAO reports providing ten-year or five-year averaged estimates per country of the change in forested areas for the 1970s, 1980s and the first half of the 1990s (FAO, 1993, 1995, 1998). Following the methodology described in the *Revised 1996 IPCC Guidelines*, these data were used as a proxy for estimating the amount of biomass being burned in tropical countries. Since there is no time-series data per country on this subject readily available, a smoothing function to construct a continuous time

series per country for the 1970-1995 period was used. Tentatively, it was assumed that 50% of the biomass removed is burned. Given the uncertainty of this figure, the fraction oxidised is assumed to be 1. For Annex II and EIT countries, forest fire statistics for 1986-1997 have been included based on UN/ECE statistics of annual area burned (UN-ECE/FAO, 1996) combined with forest biomass densities per hectare from FAO (1995). There is a large uncertainty in the assumption for the carbon density of 0.5 and the fraction of carbon that is actually being burned of 0.5, and thus in the amount of burned carbon. The data selected, although often criticised for their limited accuracy are, however, well known and relatively well documented.

Emissions of CO₂ from deforestation and temperate vegetation fires are calculated according to IPCC (1997) and include only direct burning effects (thus no emissions due to decay of biomass). For large-scale biomass burning the emission factors for CH₄ and N₂O were also based on IPCC (1997), except for CH₄ from deforestation fires, where the GEIA value proposed by Veldt and Berdowski (1995) was used, and N₂O where post-burn emissions (Bouwman *et al.*, 1997) were used. The emission factors of CH₄ and N₂O used for temperate vegetation fires are the same that are used for other large-scale biomass burning activities. For accounting purposes, net CO₂ emissions from temperate vegetation fires and savannah fires have been assumed to be zero (organic carbon in a short cycle).

Waste handling

For solid waste generation, the 1970-1995 trend in activity data per country has been based on a fit with international waste generation figures per capita for 1990 - as published by IPCC and EPA and references mentioned therein - with per capita income per country. This fit was also used to estimate the activity data for 1990, for countries not mentioned in IPCC (1997) and in an EPA report by Adler (1994). Country-specific fractions of total MSW generated that is disposed of in landfills were based on IPCC (1997). For most countries it was assumed that this fraction has remained constant over time. Many other parameters, such as the fraction of Degradable Organic Carbon (DOC) were also based on the *Revised 1996 IPCC Guidelines*; in addition, many others were estimated through consultation of experts (Olivier *et al.*, 2001). The methodology used for the calculation

of CH₄ emissions from landfills in EDGAR 3.0 is a *first order decay model* resembling the description in the *Revised 1996 IPCC Guidelines* of the more complex Tier 2 method, taking into account that the generation of methane from landfills is not an instantaneous process. Thus, the methodology calculates emissions in a specific year as the sum of delayed emissions from all MSW deposited in past years. A 40-year integration period was used, assuming emissions from MSW deposited more than 40 years ago are negligible. Based on national reports submitted to the Climate Convention, methane recovery amounts for eight OECD countries were included, amounting to about 2 Tg in 1990 and 4 Tg in 1995, about half of which was allocated to the United States (Olivier, 2002).

For domestic and industrial wastewater discharged in city sewers and subsequently treated by municipal Wastewater Treatment Plants (WWTP), an approach based on per capita organics loading and industrial wastewater generation was used, selected by Doorn *et al.* (1997), since information on domestic wastewater generation rates are very sparse and because it is essentially the same as the default IPCC methodology (IPCC, 1997). Estimates were based on population data from the UN (1999), whereas wastewater generation was based on industrial production statistics of the United Nations (1998) combined with wastewater generation rates of Doorn *et al.* (1997). It is well known that in OECD countries, which cover about 60% of this source, a large fraction of the methane generated in municipal WWTPs is generally recovered. Therefore methane recovery for municipal WWTPs in Annex II countries was assumed to be 75%, effectively reducing the total emissions of OECD countries in 1990 by 0.6 Tg.

For untreated domestic wastewater handling, treatment and disposal emission factors and other factors were based on Doorn *et al.* (1999), who distinguished disposal in septic tanks, latrines and sewers. The later was divided into sewage with municipal wastewater treatment and open sewers. Emission factors for CH₄ from domestic wastewater in latrines or open pits and septic tanks and from stagnant open sewers (untreated wastewater) were based on Doorn *et al.* (1999) following the same approach as for domestic WWTPs, but distinguishing national population into three population groups: rural and urban, with urban population further split into high and low income groups. For each of four municipal wastewater disposal types, region- and country-specific utilisation

fractions were estimated for each of these three population categories. The emissions from open sewers were increased by 25% to account for the global amount of industrial wastewater annually discharged in municipal sewers. Globally, according to the assumptions of Doorn et al. (1999) this source of CH₄ appears to be as large as emissions from landfills.

For N₂O from human sewage the default IPCC methodology was used, with protein intake per country for various years from FAO (2000); for the small emissions of N₂O from DOC in wastewater from the meat processing industry the emission factor provided by Doorn et al. (1997) was used.

In addition, for domestic waste burning (i.e. by households for non-energetic purposes) a fixed amount per capita burned per year by *urban households* in less developed countries was used. In rural areas of the less-developed countries, it was assumed that there was no uncontrolled burning in addition to the agricultural residue burning and biofuel use that is already accounted for in other source categories. In contrast, for industrialised countries, it was assumed that domestic waste burning only occurs in rural areas, where waste incineration regulation is less well controlled.

Data Sources and Methodology for EDGAR 3.2 FT2000 (2000)

In general, activity data for the year 2000 have been included following the EDGAR 3.2 method as described above. The selection of emission factors was based on the assumption of unchanged control technologies compared to 1995, resulting in application of the emission factors as included in version 3.2. However, to take into account emission reductions that have occurred due to control measures implemented since 1995, “implied” emission factors have been used for those countries for which information on emission reductions were available (mainly countries that were members of the OECD in 1990; hereafter referred to as “OECD”). Implied emission factors are constructed by division of annual emissions by activity selected for the extrapolation. In general these emission factors have been taken from the CRF emission data files which are part of the National Inventory Reports (NIR) to the UNFCCC (Olivier et al., 2005; Van Aardenne et al., 2005).

Energy / Fugitive / Biofuel

Activity data for **fossil fuel production and use** are taken from IEA statistics for OECD and Non-OECD (IEA/OECD, 2003) countries. For countries included in the aggregated IEA data for the three “other” regions the totals have been split into country data using population density figures from FAO (2005a). For other countries, for which no data are presented in the IEA statistics (mostly very small islands), the EDGAR 3.2 1990-1995 trend has been extrapolated to the year 2000. Data on hard coal and brown coal production have been split into surface and underground mining as included in EDGAR 3.2. Discontinuities with the EDGAR 3.2 data may be found due to (i) updated IEA energy statistics, in particular for former USSR countries and specific developing countries and (ii) distribution of country data included in the “other regions” of IEA using population statistics instead of data from the UN statistics applied in EDGAR 3.2.

Emission factors for 2000 have in general been taken from the EDGAR 3.2 data for 1995, except in OECD countries for which control measures have been included using so-called implied emission factors. This refers in particular to non-CO₂ combustion emissions from road transport, industrial combustion and power generation. Exceptions to the above-mentioned activity data and emission factors are gas flaring emissions, methane emissions from fossil fuel production and international shipping emissions. Gas flaring emissions have been calculated by combining the EDGAR 3.2 values for 1995 with the 1995-2000 CO₂ trends from CDIAC (Marland et al., 2003). For some countries, for which CDIAC did not report CO₂ flaring emissions in the year 2000 and for which it seems unrealistic that gas flaring did not occur (e.g. Nigeria, Norway and China), constant 1995 emissions have been applied. To calculate methane emissions from fossil fuel production and distribution country-specific trends reported to the UNFCCC have been used.

For **biofuel combustion** in the residential/commercial sector, to maintain consistency with the 1995 emissions data, the same trend estimation procedure was used as for EDGAR 3.2: for industrialised countries the total population trend was used; for developing countries the weighted trends of rural and urban population (see Olivier et al., 2001). However, for biofuel use in industry and power generation for the

year 2000, data from IEA statistics for OECD and Non-OECD countries were used (IEA/OECD, 2003). Due to lack of data, for charcoal production and biofuel use in road transport, constant 1995 values have been applied. Under the assumption of unchanged control technologies in the production and use of biofuels, emission factors have been assumed to remain constant from 1995 to 2000.

Industrial Processes / Solvent Use

Production data on iron and steel (by technology) have been taken from IISI (2004). Production data of the non-ferrous industry are based on USGS (2004), while for PFCs from primary aluminium production the fractional contribution of different processes from EDGAR 3.2 has been applied. Industrial production data for the chemical industry are from the UN commodity statistics (UN, 2004). For those countries where no UN data were available, constant 1995 values are assumed. An exception was made for N₂O emissions from adipic acid and nitric acid manufacture from OECD countries, which were extrapolated from 1995 using the country-specific 1995-2000 trends reported to the UNFCCC. For the other industrial source categories the following data sources have been used: cement (USGS, 2004), paper and pulp (FAO, 2005b), food (FAO, 2005b) or constant values for countries with no data in FAO. For NMVOC from solvents, the trend in total population was used (FAO, 2005b). Emission factors have been assumed to remain constant from 1995 to 2000 except for country-specific trends of N₂O emissions from adipic acid manufacture in OECD countries which showed an average emission decrease of about 75%.

For the largest sources of HFC, PFC and SF₆ emissions, country-specific or OECD-average trends reported to the UNFCCC were used for OECD countries, while reported global total emissions, production or consumption trends were used as a proxy for Non-OECD countries. HFC-23 byproduct emissions from HCFC-22 manufacturing from OECD countries were extrapolated from 1995 using the country-specific 1995-2000 trend reported to the UNFCCC. For Non-OECD countries the global total HCFC-22 production trend reported by AFEAS (2005) of 0% was used. Emissions from HFC-134a use were dealt with in the same way, using a 1995-2000 trend factor of 2.7 for non-reporting OECD countries. For Non-OECD countries the global total HFC-134a emissions trend reported by AFEAS was used. For emissions from

other HFC use from OECD countries the same procedure was followed. PFC by-product emissions from aluminium production from OECD countries were extrapolated from 1995 using the country-specific 1995-2000 emission trend reported to the UNFCCC. For Non-OECD countries the 1995 emissions were extrapolated using the 1995-2000 trend of country-specific primary aluminium production reported by USGS. PFC emissions from semiconductor manufacture and from PFC use as solvent from OECD countries were extrapolated from 1995 using the country-specific 1995-2000 trend reported to the UNFCCC; for all other countries the reported OECD total trend was used. PFC emissions from all other sources were assumed to remain constant. SF₆ emissions from semiconductor manufacture and from use in magnesium production from OECD countries were extrapolated from 1995 using the country-specific 1995-2000 trend reported to the UNFCCC. For Non-OECD countries the global total consumption trend reported by RAND was used (Smythe, 2004), except for magnesium production where the UNFCCC trend for OECD countries was used as a proxy.

Agriculture

To calculate N₂O emissions from fertiliser application, the IFA nitrogen fertiliser consumption trend (FAO, 2005b) and the amount of animal waste used for fertiliser scaled with the livestock numbers from FAO (2005a) have been used. CH₄ emissions from rice cultivation and from ruminants are based on total harvest area trends and total cattle trend data, respectively, from FAO (2005b). Nitrous oxide emissions from confined animal waste have also been scaled to total cattle trend data from FAO (2005b). N₂O emissions from crop production and crop residues have been scaled using selected FAO crop data (FAO, 2005a). Indirect N₂O emissions from atmospheric deposition and from leaching and run-off are scaled to the trend in the sum of N₂O emissions from fertiliser application, confined animal waste and crop residues. Emissions from agricultural waste burning are discussed under large-scale biomass burning. All emission factors have been assumed to remain constant from 1995 to 2000.

Large-scale biomass burning

Large-scale biomass burning emissions have been taken from the *Global Fire Emissions Database* (GFED; Van der Werf et al., 2003), except for

agricultural waste burning which was scaled to trends in the production of selected FAO crops (EDGAR 3.2 method). The ecosystem database of Olson et al. (1983) was aggregated into five classes: shrub/bush, forest, agriculture and other (e.g. urban regions/deserts). GFED 1.0 data in agricultural regions were attributed to savannah and grassland fires. There is an insignificant overlap with the EDGAR category for agricultural waste burning, which is presented separately with constant 1995 emissions. In addition, for N₂O the indirect post-burn emissions from tropical forest fires have been extrapolated using the calculated 1995-2000 trend in direct N₂O emissions from that source category. Given the structural difference in both activity data and emission factors of the GFED-based emission dataset and EDGAR 3.2 biomass burning emissions, four variants of large-scale biomass burning are included in the dataset. This allows for comparison with EDGAR 3.2 estimates for earlier years (Van Aardenne et al., 2005). Here the GFED with multi-year (1997-2002) averaged activity data and EDGAR 3.2 emission factors were used for 2000.

Waste handling

Landfill emissions (net CH₄) from OECD countries and a few EIT countries were extrapolated from 1995 onwards using the country-specific 1995-2000 trends reported to the UNFCCC. For Non-OECD countries, where methane recovery is assumed to be insignificant, the 1990-1995 emission trend was extrapolated since annual landfill emissions are less sensitive to recent changes in activity data as they are the sum of emissions from waste which was deposited several decades ago. Wastewater treatment and disposal emissions of net CH₄ have been extrapolated using the 1995-2000 trend of total national population, except for wastewater treatment by OECD countries for which country-specific 1995-2000 trends reported to the UNFCCC were used or the reported OECD total trend. N₂O from wastewater treatment from OECD countries and a few EIT countries was extrapolated using the country-specific 1995-2000 trend reported to the UNFCCC. For Non-OECD countries the 1995 emissions were extrapolated using the 1995-2000 trend of total national population. N₂O from wastewater disposal was extrapolated using the 1995-2000 trend of total national population. Finally, emissions from uncontrolled waste incineration were kept constant.

Data Sources and Methodology for 2005 (EDGAR 4.0, 1970-2005)

In general, emissions for the year 2005 have been estimated using either preliminary EDGAR 4.0 data for selected sources or extrapolations from 2000 for main sources. The latter was done using reported emission trends for Annex I countries (e.g. coal mining, landfills, F-gases), trends in key activity data (e.g. cattle numbers for livestock, population for landfills), and extrapolation using the 1995-2000 trend (N₂O from energy and agriculture). The smaller sources have been assumed to remain at the 2000 level (e.g. the three "Other" subcategories and SF₆ emissions).

To take into account emission reductions that have occurred due to control measures implemented since 2000, officially reported emissions were used for Annex I countries (mainly countries that were members of the OECD in 1990). These emission trends have been taken from the CRF emission data files which are part of the National Inventory Reports (NIR) to the UNFCCC.

For EDGAR 4.0 the same method as for EDGAR 3.2 as described above was applied, however, taking more explicitly into account changes of emission factors over time due to the application of control technology or other emission reduction measures.

Preliminary EDGAR 4.0 data have been used in the country tables for all years for fugitive CO₂ emissions from flaring/venting in oil and gas production (including indirect CO₂ from venting of methane) and for industrial processes: CO₂ emissions from cement and lime production, N₂O emissions from adipic acid and nitric acid production and HFC-23 by-product emissions from HCFC-22 manufacture.

We note that new EDGAR 4.0 estimates for all sources have been made for all years, some of which were not yet available at the time of printing of this report. For final data of the EDGAR 4.0 dataset, including more detailed source category estimates per country for the period 1970-2005 we refer to the EDGAR v4 website at <http://edgar.jrc.it>.

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TOTAL GREENHOUSE GAS EMISSIONS

TOTAL DES EMISSIONS DE GAZ A EFFET DE SERRE

1990 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1990

 millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Monde *	21 024.4	201.6	732.0	2 401.3	24 359.2	87.1%	2 268.6	2 821.7	1 098.5	148.5	6 337.4	35.8%
<i>Parties de l'Annexe I</i>	<i>13 912.9</i>	<i>49.9</i>	<i>346.1</i>	<i>56.0</i>	<i>14 365.0</i>	<i>97.2%</i>	<i>1 357.0</i>	<i>684.3</i>	<i>499.8</i>	<i>35.2</i>	<i>2 576.3</i>	<i>52.7%</i>
<i>Parties de l'Annexe II</i>	<i>9 811.8</i>	<i>21.4</i>	<i>226.6</i>	<i>41.8</i>	<i>10 101.7</i>	<i>97.3%</i>	<i>656.9</i>	<i>446.0</i>	<i>406.7</i>	<i>25.4</i>	<i>1 534.9</i>	<i>42.8%</i>
<i>Amérique du Nord</i>	<i>5 279.2</i>	<i>12.4</i>	<i>54.5</i>	<i>29.5</i>	<i>5 375.7</i>	<i>98.4%</i>	<i>502.6</i>	<i>167.8</i>	<i>255.0</i>	<i>15.3</i>	<i>940.7</i>	<i>53.4%</i>
<i>Europe</i>	<i>3 193.5</i>	<i>8.3</i>	<i>118.9</i>	<i>9.7</i>	<i>3 330.4</i>	<i>96.1%</i>	<i>113.8</i>	<i>177.5</i>	<i>107.8</i>	<i>6.0</i>	<i>405.2</i>	<i>28.1%</i>
<i>Pacifique</i>	<i>1 339.1</i>	<i>0.7</i>	<i>53.2</i>	<i>2.6</i>	<i>1 395.6</i>	<i>96.0%</i>	<i>40.6</i>	<i>100.6</i>	<i>43.8</i>	<i>4.1</i>	<i>189.1</i>	<i>21.4%</i>
<i>Annexe I EET</i>	<i>3 972.6</i>	<i>28.5</i>	<i>106.4</i>	<i>14.2</i>	<i>4 121.7</i>	<i>97.1%</i>	<i>696.2</i>	<i>220.5</i>	<i>88.0</i>	<i>9.6</i>	<i>1 014.4</i>	<i>68.6%</i>
<i>Parties non Annexe I</i>	<i>6 462.1</i>	<i>151.6</i>	<i>385.8</i>	<i>2 345.3</i>	<i>9 344.8</i>	<i>70.8%</i>	<i>911.6</i>	<i>2 137.4</i>	<i>598.7</i>	<i>113.3</i>	<i>3 761.0</i>	<i>24.2%</i>
<i>Parties Kyoto (Annexe I)</i>	<i>8 566.1</i>	<i>41.4</i>	<i>279.8</i>	<i>26.5</i>	<i>8 913.8</i>	<i>96.6%</i>	<i>856.3</i>	<i>436.0</i>	<i>253.4</i>	<i>22.7</i>	<i>1 568.3</i>	<i>54.6%</i>
Soutes internat.	649.4	-	-	-	649.4	100%	-	-	-	-	-	-
Total Non-OCDE	9 283.4	177.6	440.1	2 322.0	12 223.1	77.4%	1 492.1	2 271.8	634.4	119.9	4 518.2	33.0%
Total OCDE	11 091.6	24.0	291.9	79.3	11 486.8	96.8%	776.5	549.9	464.2	28.6	1 819.2	42.7%
Canada	428.8	4.4	7.6	0.7	441.4	98.1%	35.3	18.7	24.7	4.4	83.0	42.5%
Mexique	293.2	2.6	16.7	35.2	347.7	85.1%	22.9	43.6	27.5	1.8	95.8	23.9%
Etats-Unis	4 850.5	8.1	47.0	28.8	4 934.3	98.5%	467.3	149.2	230.3	10.9	857.7	54.5%
OCDE Amérique du N.	5 572.4	15.0	71.2	64.7	5 723.4	97.6%	525.4	211.5	282.5	17.1	1 036.5	50.7%
Australie	259.7	0.4	4.4	0.6	265.0	98.1%	23.2	70.1	9.3	1.5	104.0	22.3%
Japon	1 058.0	0.0	48.5	2.0	1 108.4	95.4%	15.7	8.0	31.4	2.6	57.7	27.2%
Corée	227.1	-	16.9	1.5	245.6	92.5%	6.9	10.4	9.5	0.6	27.4	25.2%
Nouvelle-Zélande	21.4	0.3	0.4	0.0	22.1	98.1%	1.7	22.5	3.2	0.0	27.4	6.2%
OCDE Pacifique	1 566.2	0.7	70.1	4.1	1 641.1	95.5%	47.5	111.0	53.4	4.7	216.5	21.9%
Autriche	57.8	-	3.7	0.3	61.7	93.6%	0.9	4.5	2.7	0.1	8.2	11.0%
Belgique	108.8	-	5.0	0.2	113.9	95.5%	1.6	5.5	2.8	0.3	10.2	15.4%
République tchèque	154.0	-	4.4	0.1	158.5	97.2%	12.3	5.9	3.9	0.2	22.2	55.1%
Danemark	50.7	0.2	0.9	0.1	51.9	98.0%	0.4	4.4	0.8	0.0	5.7	6.5%
Finlande	55.0	-	1.0	1.3	57.2	96.1%	0.6	2.5	4.3	0.1	7.4	7.4%
France	355.4	0.3	15.3	4.1	375.1	94.8%	10.3	35.2	10.3	0.9	56.7	18.2%
Allemagne	967.6	1.2	26.1	1.0	995.9	97.3%	52.2	35.3	21.4	0.9	109.9	47.5%
Grèce	70.6	0.1	6.9	0.2	77.7	90.9%	0.5	3.1	2.5	0.3	6.4	7.9%
Hongrie	70.6	-	2.6	0.3	73.4	96.1%	6.9	4.0	3.3	0.1	14.2	48.8%
Islande	1.9	-	0.1	0.0	2.0	97.1%	0.0	0.2	0.1	-	0.3	1.5%
Irlande	30.9	-	0.9	0.0	31.8	97.2%	0.8	9.3	1.4	0.0	11.6	6.9%
Italie	398.4	-	22.9	0.6	421.8	94.4%	4.8	19.0	17.7	0.9	42.3	11.3%
Luxembourg	10.5	-	0.3	0.0	10.9	97.0%	0.1	-	0.1	0.1	0.2	22.3%
Pays-Bas	158.1	0.8	1.8	0.1	160.8	98.8%	3.3	9.5	6.3	0.2	19.3	17.3%
Norvège	28.7	1.1	0.7	0.1	30.6	97.4%	2.9	2.1	2.7	0.0	7.6	37.8%
Pologne	349.4	-	8.6	0.2	358.2	97.5%	63.5	19.3	6.9	0.3	90.0	70.6%
Portugal	39.6	0.0	3.7	0.1	43.5	91.2%	0.2	3.8	2.7	0.7	7.4	3.2%
République slovaque	57.0	-	3.0	0.1	60.1	94.8%	3.2	2.9	1.3	0.1	7.5	42.4%
Espagne	207.4	0.2	14.8	0.4	222.8	93.2%	5.8	14.6	10.1	1.2	31.6	18.3%
Suède	53.3	0.1	2.9	0.8	57.1	93.5%	0.5	3.3	3.8	0.1	7.7	6.8%
Suisse	41.3	0.0	2.6	0.4	44.3	93.3%	0.3	3.3	1.1	0.0	4.8	6.6%
Turquie	128.6	0.0	13.1	-	141.7	90.8%	3.9	17.8	5.1	0.2	27.0	14.6%
Royaume-Uni	557.6	4.3	9.4	0.0	571.3	98.4%	28.6	21.8	17.0	0.4	67.7	42.2%
OCDE Europe	3 953.0	8.3	150.5	10.5	4 122.2	96.1%	203.6	227.4	128.3	6.9	566.1	36.0%
<i>Union européenne - 27</i>	<i>4 101.1</i>	<i>7.1</i>	<i>146.7</i>	<i>11.3</i>	<i>4 266.3</i>	<i>96.3%</i>	<i>229.4</i>	<i>231.5</i>	<i>127.1</i>	<i>7.0</i>	<i>595.0</i>	<i>38.5%</i>

* Total Monde inclue le Total Non-OCDE, le Total OCDE ainsi que les soutes internationales.

 Sources: AIE, méthode sectorielle pour les émissions de CO₂ dues à la combustion d'énergie. Base de données EDGAR 3.2 pour les autres émissions.

 En général, pour les émissions autres que celles de CO₂ dues à la combustion d'énergie, les estimations sont sujettes à une incertitude significativement plus grande.

1990 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1990

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
135.3	2 919.1	201.2	208.2	3 463.8	3.9%	74.2	80.5	113.4	34 428.5	68.6%	World *
66.8	1 098.3	192.8	75.1	1 433.0	4.7%	67.6	61.2	84.2	18 587.4	82.8%	Annex I Parties
52.4	783.1	153.6	67.9	1 057.1	5.0%	65.2	41.1	80.7	12 880.7	81.8%	Annex II Parties
36.1	342.3	47.1	37.8	463.4	7.8%	34.2	20.5	49.4	6 883.9	84.7%	North America
10.8	288.2	97.0	25.6	421.7	2.6%	19.8	15.5	18.1	4 210.6	79.0%	Europe
5.5	152.6	9.5	4.5	172.0	3.2%	11.3	5.2	13.1	1 786.2	77.6%	Pacific
13.9	272.0	39.0	6.7	331.7	4.2%	2.4	19.5	1.3	5 490.9	85.8%	Annex I EIT
68.5	1 820.8	8.4	133.1	2 030.8	3.4%	6.7	19.3	29.2	15 191.8	50.0%	Non-Annex I Parties
31.0	631.8	154.0	37.9	854.6	3.6%	33.2	45.9	37.2	11 453.1	82.9%	Annex I Kyoto Parties
-	-	-	-	-	-	-	-	-	649.4	100.0%	Internat. Bunkers
78.2	1 973.1	52.5	136.0	2 239.8	3.5%	7.4	36.6	25.7	19 050.8	57.9%	Non-OECD Total
57.1	946.0	148.7	72.2	1 224.0	4.7%	66.8	43.9	87.7	14 728.3	81.1%	OECD Total
2.4	34.3	12.2	1.7	50.7	4.8%	0.5	6.9	5.4	587.9	80.1%	Canada
1.2	66.0	0.9	2.1	70.2	1.8%	0.7	0.5	0.6	515.7	62.0%	Mexico
33.7	308.0	34.9	36.1	412.7	8.2%	33.7	13.5	44.1	6 295.9	85.1%	United States
37.4	408.3	48.0	40.0	533.7	7.0%	34.9	21.0	50.1	7 399.5	83.1%	OECD N. America
1.3	103.9	0.6	0.3	106.1	1.2%	0.7	1.2	0.7	477.8	59.6%	Australia
4.1	14.9	8.9	4.1	32.0	12.9%	10.6	3.7	12.3	1 224.7	88.0%	Japan
0.8	7.8	0.9	0.1	9.5	8.0%	0.9	0.5	4.1	287.9	81.6%	Korea
0.1	33.8	0.0	0.0	33.9	0.2%	0.0	0.3	0.1	83.8	28.0%	New Zealand
6.2	160.3	10.4	4.5	181.5	3.4%	12.1	5.7	17.2	2 074.1	78.1%	OECD Pacific
0.2	4.7	0.8	0.1	5.7	2.8%	0.0	1.0	0.3	76.8	76.6%	Austria
0.3	6.1	3.6	1.3	11.2	2.4%	0.0	0.0	0.1	135.5	81.6%	Belgium
0.5	8.9	1.1	0.3	10.7	4.7%	0.0	0.0	0.0	191.5	87.1%	Czech Republic
0.2	8.1	1.0	0.7	10.0	2.0%	0.0	0.0	0.2	67.8	75.9%	Denmark
0.3	3.8	1.5	0.4	6.0	4.5%	0.0	0.0	0.2	70.9	78.7%	Finland
1.2	59.5	21.7	6.1	88.4	1.3%	5.4	1.3	4.1	531.0	69.1%	France
3.7	57.0	8.9	7.9	77.5	4.8%	2.9	1.5	6.8	1 194.5	85.8%	Germany
0.3	11.9	0.7	0.2	13.1	2.3%	0.6	0.1	0.1	98.0	72.9%	Greece
0.2	8.3	3.2	0.3	11.9	1.8%	0.0	0.7	0.0	100.4	77.4%	Hungary
0.0	0.4	0.0	0.0	0.4	1.7%	-	0.8	0.0	3.5	54.5%	Iceland
0.1	11.1	0.9	0.6	12.8	0.8%	0.0	0.0	0.1	56.3	56.5%	Ireland
1.0	27.4	6.7	0.5	35.6	2.7%	2.3	0.5	2.0	504.5	80.1%	Italy
0.0	-	0.0	0.0	0.0	43.0%	0.0	-	0.0	11.2	95.1%	Luxembourg
0.4	11.0	6.4	1.6	19.3	1.9%	3.3	2.3	0.4	205.4	79.1%	Netherlands
0.1	2.9	2.1	0.2	5.3	2.0%	0.0	4.2	0.8	48.5	67.6%	Norway
1.4	25.3	4.4	0.5	31.6	4.4%	0.0	0.4	0.0	480.3	86.3%	Poland
0.1	5.9	0.6	0.3	6.9	2.1%	0.0	0.0	0.1	58.0	69.1%	Portugal
0.2	3.4	0.5	0.5	4.7	3.4%	0.0	0.0	0.0	72.2	83.5%	Slovak Republic
0.7	31.0	2.3	1.3	35.3	2.0%	2.3	1.6	0.5	294.1	72.8%	Spain
0.3	4.7	0.8	0.5	6.3	4.3%	0.0	0.7	0.3	72.1	75.2%	Sweden
0.2	2.7	0.2	0.1	3.2	6.8%	0.0	0.2	0.5	53.0	79.0%	Switzerland
0.4	43.3	0.1	0.5	44.3	0.9%	0.0	0.6	2.3	215.8	61.6%	Turkey
1.8	39.9	22.9	3.8	68.5	2.7%	3.0	1.2	1.6	713.4	83.0%	United Kingdom
13.5	377.3	90.3	27.7	508.8	2.7%	19.8	17.2	20.5	5 254.7	79.5%	OECD Europe
14.0	365.9	96.1	27.8	503.8	2.8%	19.8	13.5	16.9	5 415.3	80.4%	European Union - 27

* Total World includes Non-OECD Total, OECD Total as well as international bunkers.

Sources: IEA, Sectoral Approach for CO₂ emissions from fuel combustion. EDGAR 3.2 database for other emissions. In general, estimates for emissions other than CO₂ from fuel combustion are subject to significantly larger uncertainties.

1990 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1990

 millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Total Non-OCDE	9 283.4	177.6	440.1	2 322.0	12 223.1	77.4%	1 492.1	2 271.8	634.4	119.9	4 518.2	33.0%
Algérie	54.7	8.7	3.2	4.2	70.8	89.6%	11.4	3.6	3.4	0.2	18.6	61.2%
Angola	4.1	1.8	0.2	13.8	19.8	29.5%	2.9	9.0	1.0	0.7	13.6	21.5%
Bénin	0.3	-	0.1	2.6	3.1	8.3%	0.4	1.6	0.5	0.1	2.7	16.0%
Botswana	2.9	-	-	0.3	3.2	91.1%	0.0	0.1	0.0	-	0.1	11.3%
Cameroun	2.7	-	0.3	16.6	19.6	13.6%	2.1	6.0	1.5	0.9	10.5	20.2%
Congo	0.7	-	0.0	9.0	9.7	7.2%	1.3	0.5	0.3	0.5	2.7	48.1%
Rép. dém. du Congo	3.0	0.2	0.3	157.0	160.5	2.0%	2.9	11.9	4.2	8.8	27.7	10.4%
Côte d'Ivoire	2.6	-	0.2	5.4	8.3	31.8%	1.0	2.7	1.5	0.2	5.4	18.8%
Egypte	79.2	2.2	7.0	4.2	92.5	87.9%	7.8	9.1	6.4	0.0	23.2	33.4%
Erythrée	..	-	0.0	0.3	..	..	0.2	1.6	0.3	-	2.1	11.0%
Ethiopie	2.2	-	0.2	12.1	14.5	15.3%	3.7	30.6	4.4	0.4	39.1	9.3%
Gabon	0.9	3.4	0.1	23.3	27.6	15.5%	1.5	0.2	0.1	1.3	3.1	46.6%
Ghana	2.7	-	0.3	9.8	12.9	21.0%	0.7	2.3	1.8	0.5	5.3	13.8%
Kenya	6.3	-	0.8	4.8	11.9	53.3%	3.0	13.9	2.5	0.0	19.4	15.7%
Libye	27.4	7.2	1.5	0.2	36.3	95.2%	6.9	1.0	0.8	-	8.7	79.1%
Maroc	19.6	-	2.7	2.0	24.3	80.7%	0.6	5.2	3.2	0.1	9.1	6.2%
Mozambique	1.1	-	0.0	10.4	11.5	9.4%	1.6	5.8	1.5	0.5	9.4	17.5%
Namibie	..	-	0.0	1.6	..	..	0.2	3.9	0.2	0.1	4.3	3.7%
Nigéria	29.2	38.4	1.5	34.7	103.7	65.1%	28.2	20.2	10.6	0.6	59.7	47.3%
Sénégal	2.1	-	0.2	3.3	5.7	37.3%	0.2	4.2	0.9	0.2	5.6	4.5%
Afrique du Sud	254.6	-	4.6	8.9	268.2	95.0%	27.4	16.3	8.2	0.4	52.3	52.4%
Soudan	5.5	-	0.1	29.5	35.1	15.7%	8.5	27.5	2.6	1.2	39.8	21.4%
Rép. unie de Tanzanie	1.7	-	0.3	23.0	25.0	6.8%	5.7	17.8	2.6	0.7	26.9	21.3%
Togo	0.6	-	0.2	1.7	2.4	23.5%	0.3	1.0	0.4	0.1	1.8	18.3%
Tunisie	12.1	0.0	2.6	0.8	15.5	77.8%	1.0	1.6	1.2	0.0	3.7	26.3%
Zambie	2.6	-	0.4	18.4	21.4	12.2%	0.8	7.1	0.9	1.0	9.8	8.2%
Zimbabwe	16.0	-	0.5	4.2	20.7	77.3%	2.4	7.1	1.2	0.2	10.8	22.2%
Autres pays d'Afrique	15.1	-	0.5	78.9	94.4	16.0%	12.1	82.5	12.1	3.6	110.2	10.9%
Afrique	549.8	61.8	27.8	481.2	1 120.5	54.6%	134.9	294.5	74.2	22.2	525.8	25.7%
Bahrein	11.7	0.0	0.1	0.0	11.8	99.2%	1.5	0.0	0.1	-	1.6	93.0%
Rép. islamique d'Iran	175.3	21.8	7.6	7.2	211.9	93.0%	27.1	17.9	9.4	0.3	54.7	49.6%
Irak	52.9	8.0	6.5	0.9	68.2	89.2%	4.9	3.1	3.2	-	11.1	44.1%
Israël	33.6	-	1.6	0.0	35.2	95.5%	0.1	0.5	0.4	0.0	1.0	7.4%
Jordanie	9.2	-	0.9	0.2	10.3	89.5%	0.1	0.3	0.7	0.0	1.1	11.4%
Koweït	25.6	1.3	0.4	0.1	27.4	98.1%	6.3	0.1	0.4	-	6.8	92.8%
Liban	6.4	-	0.5	0.4	7.3	87.8%	0.1	0.1	0.5	0.0	0.7	11.6%
Oman	9.9	1.4	0.0	0.1	11.4	99.2%	1.4	0.3	0.3	0.0	2.0	71.4%
Qatar	14.4	-	0.1	0.0	14.5	99.0%	2.0	0.1	0.1	0.0	2.2	91.3%
Arabie saoudite	159.3	0.5	5.9	0.6	166.3	96.1%	35.2	1.8	2.7	0.0	39.7	88.6%
Syrie	31.0	4.1	1.5	1.0	37.6	93.3%	1.5	2.4	1.8	0.0	5.8	26.1%
Emirats arabes unis	50.1	2.0	1.6	0.2	53.9	96.7%	18.5	0.3	0.3	-	19.1	97.0%
Yémen	6.4	-	0.4	0.5	7.3	88.1%	1.1	1.9	1.6	-	4.6	23.9%
Moyen-Orient	585.8	39.1	27.1	11.2	663.1	94.2%	99.9	28.7	21.5	0.4	150.6	66.4%
Albanie	6.3	0.0	0.3	0.2	6.8	92.5%	0.4	1.5	0.3	0.0	2.2	18.5%
Bosnie-Herzégovine	23.7	0.7	0.2	0.0	24.5	99.4%	0.3	1.3	0.4	0.0	2.0	15.1%
Bulgarie	75.2	-	3.5	0.1	78.8	95.4%	3.0	4.7	1.8	0.0	9.6	31.7%
Croatie	21.7	3.1	1.5	0.3	26.5	93.5%	1.5	1.5	0.9	0.0	4.0	39.1%
Chypre	3.9	-	0.6	-	4.4	87.3%	0.0	0.1	0.1	0.0	0.3	3.4%
Gibraltar	0.2	-	-	-	0.2	100.0%	0.0	-	0.0	-	0.0	7.2%
ex-RY de Macédoine	9.2	0.3	0.3	0.2	10.0	94.5%	0.2	0.6	0.2	0.1	1.2	18.9%
Malte	2.3	-	0.0	0.0	2.3	99.8%	0.0	0.0	0.0	-	0.1	3.3%
Roumanie	166.9	-	4.7	0.5	172.1	97.0%	24.0	14.1	3.9	0.2	42.3	56.8%
Serbie et Monténégro	58.8	3.6	2.2	0.0	64.6	96.6%	1.5	10.1	1.2	0.1	12.9	11.3%
Slovénie	12.5	-	0.8	0.1	13.4	93.7%	0.3	1.0	0.4	0.0	1.7	16.6%
Europe Non-OCDE	380.6	7.6	14.0	1.4	403.5	96.2%	31.3	35.0	9.4	0.5	76.2	41.1%

1990 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1990

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
78.2	1 973.1	52.5	136.0	2 239.8	3.5%	7.4	36.6	25.7	19 050.8	57.9%	Non-OECD Total
0.2	8.0	0.4	0.2	8.8	2.3%	-	-	0.2	98.4	76.2%	Algeria
0.1	4.1	-	0.9	5.1	2.9%	-	-	0.0	38.5	23.2%	Angola
0.1	1.9	-	0.1	2.1	2.9%	-	-	0.0	7.9	9.5%	Benin
0.0	4.4	-	0.0	4.4	0.9%	-	-	0.0	7.8	38.5%	Botswana
0.2	7.1	-	1.0	8.3	1.9%	-	0.8	0.0	39.2	12.6%	Cameroon
0.0	0.2	-	0.6	0.8	4.0%	-	-	0.0	13.2	15.2%	Congo
0.4	8.5	-	10.5	19.4	2.1%	-	-	0.0	207.6	3.1%	Dem. Rep. of Congo
0.2	2.0	-	0.3	2.5	6.5%	-	-	0.0	16.1	23.6%	Côte d'Ivoire
0.5	15.0	1.4	0.0	17.0	3.2%	0.0	1.4	0.9	135.0	66.4%	Egypt
0.0	1.3	-	0.0	1.3	2.8%	-	-	0.0	..	..	Eritrea
0.6	49.7	-	0.4	50.7	1.2%	-	-	0.0	104.3	6.2%	Ethiopia
0.0	0.2	-	1.6	1.9	1.8%	-	-	0.0	32.6	17.7%	Gabon
0.1	3.8	-	0.6	4.5	2.6%	-	0.2	0.0	22.9	15.5%	Ghana
0.5	21.3	-	0.0	21.8	2.2%	-	-	0.0	53.1	18.6%	Kenya
0.1	2.8	-	0.0	2.9	3.3%	-	-	0.1	48.0	86.6%	Libya
0.1	14.2	-	0.1	14.4	0.7%	-	-	0.0	47.8	42.5%	Morocco
0.3	2.1	-	0.6	2.9	8.5%	-	-	0.0	23.9	12.5%	Mozambique
0.0	4.1	-	0.1	4.2	0.6%	-	-	0.0	..	..	Namibia
2.7	24.7	-	0.7	28.1	9.6%	-	-	0.1	191.6	51.4%	Nigeria
0.1	6.0	-	0.2	6.2	1.0%	-	-	0.0	17.5	13.9%	Senegal
1.4	23.3	1.0	0.8	26.5	5.3%	0.0	0.1	1.3	348.3	81.4%	South Africa
0.9	37.1	-	1.4	39.4	2.4%	-	-	0.0	114.3	13.1%	Sudan
1.1	21.3	-	0.9	23.3	4.9%	-	-	0.0	75.2	11.4%	United Rep. of Tanzania
0.1	1.9	-	0.1	2.0	2.6%	-	-	0.0	6.2	15.3%	Togo
0.1	3.7	0.4	0.0	4.3	1.9%	0.0	-	0.0	23.5	55.9%	Tunisia
0.1	3.5	-	1.2	4.8	2.9%	-	-	0.0	36.0	9.8%	Zambia
0.2	8.0	0.5	0.2	9.0	2.6%	-	-	0.0	40.5	46.0%	Zimbabwe
1.7	92.5	-	4.3	98.5	1.7%	-	-	0.0	303.1	9.5%	Other Africa
11.9	372.6	3.7	26.8	415.0	2.9%	0.0	2.5	2.7	2 066.5	36.7%	Africa
0.0	0.0	-	0.0	0.1	49.3%	-	1.9	0.0	15.3	86.1%	Bahrain
0.7	47.3	0.3	0.3	48.6	1.4%	-	0.1	2.1	317.4	70.9%	Islamic Rep. of Iran
0.2	6.3	-	0.0	6.6	3.7%	-	-	0.4	86.3	76.4%	Iraq
0.1	1.5	0.3	0.0	1.9	5.7%	0.0	0.0	0.8	38.9	86.8%	Israel
0.0	1.1	-	0.0	1.2	3.5%	-	-	0.0	12.5	74.8%	Jordan
0.1	0.2	-	0.0	0.2	25.8%	-	-	0.2	34.7	95.9%	Kuwait
0.0	0.7	-	0.0	0.7	4.3%	-	-	0.0	8.7	74.4%	Lebanon
0.0	0.8	-	0.0	0.9	2.9%	-	-	0.0	14.3	89.4%	Oman
0.0	0.2	-	0.0	0.2	9.1%	-	-	0.0	17.0	97.0%	Qatar
0.4	7.8	-	0.0	8.2	5.2%	-	-	2.3	216.5	90.3%	Saudi Arabia
0.1	7.5	0.2	0.0	7.9	1.9%	-	-	0.0	51.2	71.7%	Syria
0.1	0.8	-	0.0	0.9	9.4%	-	0.1	0.2	74.2	95.4%	United Arab Emirates
0.1	5.0	-	0.0	5.1	1.1%	-	-	0.0	17.0	44.6%	Yemen
2.0	79.3	0.8	0.4	82.5	2.4%	0.0	2.0	5.9	904.2	80.4%	Middle East
0.0	2.3	-	0.0	2.3	1.7%	0.0	-	0.0	11.3	59.2%	Albania
0.1	1.1	-	0.0	1.1	4.9%	0.0	0.5	0.0	28.1	87.9%	Bosnia-Herzegovina
0.2	9.5	3.4	0.2	13.2	1.6%	0.0	-	0.0	101.6	77.2%	Bulgaria
0.1	2.3	0.9	0.1	3.4	2.8%	0.0	0.7	0.0	34.5	76.5%	Croatia
0.0	0.5	-	0.0	0.5	3.1%	-	-	0.0	5.3	74.3%	Cyprus
0.0	-	-	-	0.0	100.0%	-	-	0.0	0.2	96.9%	Gibraltar
0.1	0.8	-	0.0	0.9	6.2%	0.0	-	0.0	12.1	80.4%	FYR of Macedonia
0.0	0.0	-	0.0	0.1	17.2%	-	-	0.0	2.4	94.4%	Malta
0.4	19.2	4.8	0.3	24.7	1.5%	0.0	1.5	0.0	240.6	79.5%	Romania
0.3	8.0	0.7	0.1	9.1	3.2%	0.0	0.3	0.0	86.9	73.8%	Serbia and Montenegro
0.0	1.0	-	0.1	1.1	4.4%	0.0	0.6	0.0	16.7	76.7%	Slovenia
1.2	44.8	9.7	0.8	56.5	2.1%	0.0	3.5	0.0	539.7	77.9%	Non-OECD Europe

1990 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1990

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Arménie	20.6	-	0.7	0.2	21.5	95.7%	1.9	0.7	0.5	0.0	3.1	60.5%
Azerbaïdjan	62.9	3.0	0.5	0.4	66.8	98.7%	9.5	4.0	1.0	0.0	14.5	65.5%
Bélarus	108.1	-	1.9	0.2	110.2	98.1%	6.3	11.2	1.7	0.0	19.2	32.5%
Estonie	36.1	-	0.6	0.1	36.8	98.0%	1.0	1.3	0.4	0.0	2.6	36.6%
Géorgie	28.8	0.0	0.3	0.3	29.4	98.2%	2.6	2.4	0.8	0.0	5.8	44.7%
Kazakhstan	233.2	0.3	5.1	0.1	238.6	97.8%	29.4	23.0	2.5	0.4	55.3	53.2%
Kirghizistan	22.9	0.0	0.7	0.2	23.8	95.9%	0.4	3.8	0.5	-	4.7	8.0%
Lettonie	18.5	-	0.7	0.3	19.4	95.2%	1.3	2.4	0.6	0.0	4.3	31.2%
Lituanie	33.3	-	1.9	0.3	35.5	93.9%	3.3	3.8	0.7	0.0	7.7	42.1%
République de Moldavie	30.3	-	1.3	0.2	31.8	95.3%	2.0	2.1	0.6	0.0	4.8	42.5%
Russie	2 188.6	21.8	53.2	9.0	2 272.6	97.3%	473.7	98.7	51.9	7.1	631.4	75.0%
Tadjikistan	11.7	-	0.6	0.3	12.6	93.0%	0.4	2.7	0.6	-	3.7	10.3%
Turkménistan	46.8	0.1	0.6	0.2	47.7	98.3%	30.0	2.7	0.5	0.0	33.2	90.4%
Ukraine	680.9	0.1	17.7	2.7	701.4	97.1%	94.7	40.6	9.6	1.5	146.4	64.7%
Ouzbékistan	120.2	0.0	3.6	1.1	124.9	96.2%	27.7	11.5	2.4	-	41.6	66.6%
Ex-URSS	3 642.7	25.3	89.5	15.5	3 773.0	97.2%	684.2	210.9	74.3	9.0	978.4	69.9%
Argentine	100.4	5.3	1.8	27.5	135.0	78.3%	7.3	63.0	10.2	1.6	82.1	8.9%
Bolivie	5.4	0.8	0.3	74.0	80.5	7.7%	0.6	9.4	1.3	4.2	15.6	3.7%
Brésil	192.7	2.3	17.0	465.1	677.1	28.8%	9.3	204.8	44.8	26.8	285.7	3.2%
Chili	31.9	0.4	2.0	9.5	43.8	73.8%	2.5	5.9	5.3	0.5	14.2	17.7%
Colombie	45.0	0.8	4.1	50.0	99.9	45.8%	6.4	31.4	8.6	2.7	49.2	13.0%
Costa Rica	2.6	-	0.3	7.0	9.9	26.3%	0.1	2.6	0.6	0.4	3.7	3.9%
Cuba	27.6	-	2.0	3.9	33.5	82.4%	0.2	6.8	2.7	0.1	9.9	2.2%
République dominicaine	7.6	-	0.6	3.3	11.5	66.6%	0.2	3.4	1.5	0.2	5.3	3.5%
Equateur	13.2	1.7	0.9	33.9	49.6	30.0%	1.6	6.5	2.2	1.9	12.2	13.1%
El Salvador	2.2	-	0.3	0.8	3.3	65.8%	0.2	1.5	1.0	0.0	2.7	8.8%
Guatemala	3.3	-	0.5	12.9	16.7	19.8%	0.7	2.9	1.6	0.7	5.9	12.3%
Haiti	0.9	-	0.2	0.5	1.6	58.3%	0.2	1.7	1.0	0.0	2.9	7.7%
Honduras	2.1	-	0.2	10.7	13.0	16.5%	0.3	3.3	0.8	0.6	5.0	6.5%
Jamaïque	7.2	-	0.3	2.9	10.4	69.2%	0.0	0.5	0.5	0.2	1.2	2.1%
Antilles néerlandaises	2.9	-	-	0.0	2.9	99.2%	0.0	0.0	0.1	-	0.1	34.8%
Nicaragua	1.8	-	0.1	21.6	23.5	7.8%	0.2	2.5	0.7	1.2	4.7	4.8%
Panama	2.5	-	0.2	11.9	14.5	16.9%	0.1	1.7	0.5	0.7	3.0	3.4%
Paraguay	1.9	-	0.2	18.7	20.9	9.2%	0.3	9.5	0.9	1.0	11.7	2.9%
Pérou	19.2	0.4	1.1	47.3	68.0	28.8%	1.5	7.5	5.6	2.6	17.3	8.7%
Trinité-et-Tobago	11.4	2.5	0.3	0.5	14.6	94.6%	2.0	0.1	0.4	0.0	2.5	77.6%
Uruguay	3.7	-	0.2	0.3	4.3	86.4%	0.1	12.9	1.1	0.0	14.1	0.7%
Vénézuéla	105.1	7.5	3.0	83.5	199.1	56.6%	14.3	15.9	6.5	4.8	41.5	34.4%
Autres Amérique Latine	11.7	-	1.1	8.1	20.9	55.9%	0.5	2.3	2.0	0.4	5.2	10.4%
Amérique latine	602.4	21.6	36.5	894.0	1 554.5	40.1%	48.8	396.2	99.9	50.6	595.6	8.2%
Bangladesh	13.6	-	0.2	18.8	32.6	41.6%	8.9	58.8	13.8	0.1	81.6	10.9%
Brunei Darussalam	3.4	0.1	0.0	0.6	4.1	83.3%	1.6	0.0	0.0	0.0	1.6	94.5%
Cambodge	..	..	..	..	..	..	..	..	..	..	..	..
Inde	586.9	10.0	23.4	102.3	722.5	82.6%	82.3	425.8	116.6	0.8	625.4	13.2%
Indonésie	141.6	9.1	8.1	217.9	376.7	40.0%	63.8	78.3	27.3	10.8	180.2	35.4%
Rép. pop. dém. de Corée	113.8	-	7.9	2.4	124.1	91.7%	2.0	4.6	3.1	0.1	9.8	20.3%
Malaisie	49.0	3.1	2.9	93.2	148.1	35.1%	8.8	4.9	2.7	4.9	21.3	41.5%
Mongolie	12.7	-	0.3	0.2	13.2	95.7%	0.1	6.3	0.3	0.6	7.4	1.9%
Myanmar	4.0	0.0	0.2	75.8	80.0	5.0%	3.4	27.0	5.7	4.0	40.2	8.6%
Népal	0.9	-	0.1	9.7	10.7	8.3%	2.8	28.1	2.6	0.3	33.8	8.4%
Pakistan	59.0	-	3.7	19.4	82.1	71.9%	10.7	55.8	16.0	0.3	82.8	12.9%
Philippines	36.0	-	3.2	64.0	103.2	34.9%	4.8	21.9	9.0	3.2	38.8	12.3%
Singapour	28.8	-	0.9	-	29.7	96.9%	0.1	0.0	0.6	-	0.7	11.8%
Sri Lanka	3.7	-	0.3	4.1	8.1	46.2%	1.2	6.6	2.4	0.1	10.3	11.5%
Taipei chinois	113.8	-	8.7	1.9	124.4	91.5%	1.9	-	3.3	0.2	5.4	35.9%
Thaïlande	78.6	-	9.1	42.6	130.3	60.3%	3.5	55.3	7.8	2.3	68.9	5.1%
Viêt-Nam	17.0	-	1.7	29.1	47.8	35.5%	5.5	37.2	9.2	1.2	53.0	10.3%
Autres pays d'Asie	15.6	0.1	0.1	109.7	125.6	12.5%	3.4	20.9	4.9	4.6	33.7	10.0%
Asie	1 278.2	22.3	70.9	791.8	2 163.2	60.1%	204.8	831.6	225.1	33.6	1 295.1	15.8%
Rép. populaire de Chine	2 210.9	-	173.4	126.9	2 511.2	88.0%	288.1	474.9	128.8	3.5	895.4	32.2%
Hong Kong, Chine	33.0	-	0.9	0.0	33.9	97.3%	0.0	0.0	1.1	-	1.2	2.7%
Chine	2 243.9	-	174.3	126.9	2 545.2	88.2%	288.2	474.9	129.9	3.5	896.5	32.1%

1990 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1990

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
0.1	0.8	-	0.0	0.9	6.4%	0.0	-	-	25.5	88.3%	Armenia
0.1	3.9	-	0.0	4.1	2.9%	0.0	0.2	-	85.6	88.3%	Azerbaijan
0.4	11.5	3.1	0.3	15.3	2.8%	0.0	-	-	144.7	79.3%	Belarus
0.2	1.4	-	0.0	1.6	10.7%	0.0	-	0.0	41.1	90.7%	Estonia
0.1	2.6	0.7	0.0	3.4	1.7%	0.0	-	-	38.5	81.6%	Georgia
0.7	22.6	-	0.3	23.6	2.8%	0.0	-	-	317.5	83.0%	Kazakhstan
0.1	4.1	-	0.0	4.2	1.6%	0.0	-	-	32.8	71.1%	Kyrgyzstan
0.1	2.5	-	0.1	2.7	3.6%	0.0	-	-	26.4	75.4%	Latvia
0.3	3.8	-	0.1	4.2	6.8%	0.0	-	-	47.4	77.8%	Lithuania
0.2	3.0	-	0.1	3.3	4.8%	0.0	-	-	39.9	81.5%	Republic of Moldova
7.6	114.6	4.0	3.0	129.2	5.9%	2.4	15.8	1.2	3 052.6	88.2%	Russia
0.0	3.1	-	0.0	3.1	1.3%	0.0	0.1	-	19.5	62.3%	Tajikistan
0.1	3.9	0.1	0.0	4.2	1.9%	0.0	-	-	85.1	90.5%	Turkmenistan
2.1	53.3	13.0	0.9	69.4	3.1%	0.0	0.1	-	917.2	84.8%	Ukraine
0.2	14.0	0.1	0.0	14.3	1.3%	0.0	-	-	180.9	81.9%	Uzbekistan
12.1	245.3	21.0	4.9	283.4	4.3%	2.4	16.1	1.2	5 054.6	86.3%	Former USSR
0.2	62.9	0.1	1.9	65.1	0.3%	0.1	1.5	0.3	284.1	39.8%	Argentina
0.0	9.2	-	5.1	14.3	0.3%	-	-	0.0	110.4	6.2%	Bolivia
2.0	188.0	4.0	33.8	227.8	0.9%	0.9	3.2	1.2	1 195.8	17.2%	Brazil
0.2	7.3	0.0	0.6	8.2	2.9%	-	-	0.0	66.2	53.0%	Chile
0.4	17.4	0.1	3.3	21.1	1.8%	0.0	-	0.2	170.4	30.8%	Colombia
0.0	2.8	0.1	0.5	3.4	1.4%	-	-	0.0	17.1	16.4%	Costa Rica
0.3	12.4	0.7	0.3	13.6	2.1%	0.0	-	0.0	57.0	49.3%	Cuba
0.1	3.9	-	0.2	4.1	1.6%	-	-	0.0	20.9	37.8%	Dominican Republic
0.1	6.4	-	2.3	8.8	1.1%	-	-	0.0	70.6	23.4%	Ecuador
0.1	2.0	-	0.0	2.0	3.3%	-	-	0.0	8.1	30.6%	El Salvador
0.2	3.8	-	0.8	4.8	3.2%	-	-	0.0	27.4	15.3%	Guatemala
0.0	2.4	-	0.0	2.5	1.8%	-	-	0.0	7.0	17.4%	Haiti
0.1	2.8	-	0.7	3.6	2.4%	-	-	0.0	21.6	11.8%	Honduras
0.0	1.0	-	0.2	1.2	2.0%	-	-	0.0	12.8	56.4%	Jamaica
0.0	0.0	-	0.0	0.0	44.6%	-	-	0.0	3.0	96.7%	Netherlands Antilles
0.1	2.2	-	1.5	3.8	1.6%	-	-	0.0	32.0	6.6%	Nicaragua
0.0	1.7	-	0.8	2.5	1.1%	-	-	0.0	20.0	12.9%	Panama
0.1	8.7	-	1.2	10.0	0.8%	-	-	0.0	42.5	5.5%	Paraguay
0.2	10.8	0.2	3.1	14.3	1.6%	0.0	-	0.0	99.5	21.4%	Peru
0.0	0.3	-	0.0	0.3	3.5%	-	-	0.0	17.5	90.4%	Trinidad and Tobago
0.0	15.1	-	0.0	15.2	0.2%	-	-	0.0	33.6	11.5%	Uruguay
0.2	15.8	0.0	5.7	21.7	0.8%	0.5	0.6	0.3	263.6	48.2%	Venezuela
0.2	3.8	-	0.4	4.5	5.4%	-	0.3	0.0	30.9	40.4%	Other Latin America
4.6	380.5	5.2	62.4	452.8	1.0%	1.5	5.5	2.0	2 611.9	25.9%	Latin America
1.7	20.6	-	0.1	22.4	7.5%	-	-	0.0	136.6	17.7%	Bangladesh
0.0	0.0	-	0.0	0.1	11.8%	-	-	0.0	5.8	85.6%	Brunei Darussalam
..	..	..	..	..	-	..	..	..	..	..	Cambodia
12.5	211.0	1.1	0.6	225.2	5.6%	0.8	1.7	5.5	1 581.2	43.7%	India
3.6	43.4	0.1	13.0	60.2	6.0%	-	0.2	1.2	618.6	35.3%	Indonesia
0.7	8.5	-	0.0	9.2	8.0%	-	-	0.3	143.4	81.3%	DPR of Korea
1.0	4.8	-	5.9	11.6	8.3%	-	-	1.0	182.0	34.0%	Malaysia
0.0	9.9	-	0.1	10.0	0.3%	-	-	-	30.6	41.9%	Mongolia
0.6	9.0	-	4.8	14.4	4.2%	-	-	0.0	134.6	6.0%	Myanmar
0.5	4.8	-	0.3	5.7	9.2%	-	-	0.0	50.2	8.5%	Nepal
1.6	52.8	0.6	0.4	55.4	2.9%	-	-	0.7	221.0	32.3%	Pakistan
1.1	13.1	-	3.7	18.0	6.4%	-	-	0.1	160.1	26.2%	Philippines
0.1	0.1	-	0.0	0.2	69.7%	0.0	0.1	0.3	31.0	93.4%	Singapore
0.2	2.0	-	0.1	2.4	9.4%	-	-	0.0	20.8	24.8%	Sri Lanka
0.6	0.0	0.1	0.0	0.7	77.7%	-	-	0.0	130.5	89.1%	Chinese Taipei
0.5	18.1	-	2.8	21.3	2.4%	-	-	1.6	222.2	37.2%	Thailand
1.0	11.6	-	1.4	13.9	6.8%	-	-	0.0	114.7	20.4%	Vietnam
0.6	17.4	-	5.5	23.5	2.4%	-	0.3	1.9	185.0	10.6%	Other Asia
26.4	427.0	2.0	38.9	494.3	5.3%	0.8	2.3	12.6	3 968.3	38.6%	Asia
19.8	423.5	10.0	1.8	455.2	4.4%	2.8	4.6	1.2	3 870.4	65.1%	People's Rep. of China
0.2	0.0	-	0.0	0.2	84.2%	-	-	0.0	35.3	94.1%	Hong Kong, China
20.0	423.6	10.0	1.8	455.4	4.4%	2.8	4.6	1.2	3 905.7	65.3%	China

1995 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1995

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Monde *	21 807.8	196.3	891.9	2 195.7	25 091.7	87.7%	2 202.9	2 816.0	1 168.9	152.5	6 340.3	34.7%
<i>Parties de l'Annexe I</i>	<i>13 161.0</i>	<i>38.7</i>	<i>295.7</i>	<i>59.9</i>	<i>13 555.3</i>	<i>97.4%</i>	<i>1 179.9</i>	<i>607.1</i>	<i>488.2</i>	<i>50.1</i>	<i>2 325.3</i>	<i>50.7%</i>
<i>Parties de l'Annexe II</i>	<i>10 187.6</i>	<i>28.6</i>	<i>221.7</i>	<i>44.7</i>	<i>10 482.6</i>	<i>97.5%</i>	<i>638.9</i>	<i>434.5</i>	<i>391.9</i>	<i>45.7</i>	<i>1 510.9</i>	<i>42.3%</i>
<i>Amérique du Nord</i>	<i>5 570.3</i>	<i>20.0</i>	<i>58.8</i>	<i>31.4</i>	<i>5 680.5</i>	<i>98.4%</i>	<i>501.6</i>	<i>178.3</i>	<i>241.3</i>	<i>36.9</i>	<i>958.0</i>	<i>52.4%</i>
<i>Europe</i>	<i>3 171.9</i>	<i>7.9</i>	<i>107.5</i>	<i>9.9</i>	<i>3 297.2</i>	<i>96.4%</i>	<i>93.7</i>	<i>160.8</i>	<i>105.0</i>	<i>5.0</i>	<i>364.5</i>	<i>25.7%</i>
<i>Pacifique</i>	<i>1 445.4</i>	<i>0.6</i>	<i>55.4</i>	<i>3.3</i>	<i>1 504.8</i>	<i>96.1%</i>	<i>43.6</i>	<i>95.4</i>	<i>45.6</i>	<i>3.8</i>	<i>188.4</i>	<i>23.1%</i>
<i>Annexe I EET</i>	<i>2 818.0</i>	<i>9.9</i>	<i>56.3</i>	<i>15.1</i>	<i>2 899.3</i>	<i>97.5%</i>	<i>537.7</i>	<i>156.2</i>	<i>90.8</i>	<i>4.2</i>	<i>788.9</i>	<i>68.2%</i>
<i>Parties non Annexe I</i>	<i>7 936.3</i>	<i>157.6</i>	<i>596.2</i>	<i>2 135.8</i>	<i>10 825.9</i>	<i>74.8%</i>	<i>1 023.0</i>	<i>2 208.9</i>	<i>680.8</i>	<i>102.4</i>	<i>4 015.1</i>	<i>25.5%</i>
<i>Parties Kyoto (Annexe I)</i>	<i>7 556.9</i>	<i>22.7</i>	<i>220.8</i>	<i>28.3</i>	<i>7 828.7</i>	<i>96.8%</i>	<i>687.9</i>	<i>358.5</i>	<i>256.0</i>	<i>43.9</i>	<i>1 346.3</i>	<i>51.1%</i>
Soutes internat.	710.5	-	-	-	710.5	100%	-	-	-	-	-	-
Total Non-OCDE	9 528.0	163.8	591.1	2 117.9	12 400.8	78.2%	1 455.0	2 290.8	711.8	103.7	4 561.3	31.9%
Total OCDE	11 569.3	32.4	300.8	77.8	11 980.3	96.8%	747.9	525.3	457.1	48.8	1 779.1	42.0%
Canada	461.4	4.5	7.0	0.9	473.8	98.3%	44.0	20.5	25.9	32.2	122.6	35.9%
Mexique	310.2	3.7	17.4	29.6	360.9	87.0%	22.8	41.8	32.3	1.5	98.4	23.2%
Etats-Unis	5 108.9	15.5	51.9	30.5	5 206.7	98.4%	457.5	157.8	215.4	4.7	835.4	54.8%
OCDE Amérique du N.	5 880.5	23.8	76.3	61.0	6 041.5	97.7%	524.4	220.0	273.6	38.4	1 056.5	49.6%
Australie	280.0	0.3	4.4	0.8	285.5	98.2%	25.2	65.6	9.4	1.3	101.5	24.8%
Japon	1 141.0	0.1	50.6	2.4	1 194.1	95.6%	16.6	8.1	33.5	2.5	60.6	27.3%
Corée	362.0	-	27.9	2.1	392.0	92.3%	4.5	10.3	11.7	0.9	27.3	16.5%
Nouvelle-Zélande	24.5	0.3	0.4	0.1	25.3	97.9%	1.9	21.7	2.7	0.0	26.3	7.1%
OCDE Pacifique	1 807.4	0.6	83.3	5.5	1 896.8	95.3%	48.1	105.6	57.3	4.7	215.7	22.3%
Autriche	60.5	-	3.2	0.5	64.2	94.3%	1.0	4.2	2.9	0.1	8.2	11.9%
Belgique	114.7	-	5.3	0.2	120.2	95.4%	1.1	5.5	3.0	0.3	9.9	11.3%
République tchèque	121.3	-	3.3	0.1	124.7	97.3%	8.9	3.6	3.5	0.2	16.2	55.0%
Danemark	57.9	0.3	1.4	0.2	59.8	97.3%	0.6	4.3	0.9	0.0	5.7	9.7%
Finlande	56.5	-	0.7	1.6	58.9	96.1%	0.5	2.1	4.5	0.1	7.3	7.4%
France	357.3	0.3	12.0	2.0	371.6	96.2%	8.3	32.7	8.6	0.6	50.1	16.5%
Allemagne	880.9	1.1	25.8	1.3	909.0	97.0%	40.4	27.6	23.8	0.9	92.6	43.6%
Grèce	73.2	0.0	6.9	0.3	80.4	91.1%	0.5	3.1	2.7	0.2	6.5	8.2%
Hongrie	59.0	-	1.8	0.5	61.3	96.3%	6.4	2.4	3.4	0.0	12.2	52.5%
Islande	2.0	-	0.0	0.0	2.0	98.0%	0.0	0.2	0.1	-	0.3	1.5%
Irlande	33.2	-	0.8	0.0	34.1	97.6%	0.7	9.7	1.5	0.0	11.9	6.1%
Italie	410.7	-	19.3	0.7	430.6	95.4%	5.4	15.6	18.6	0.4	40.1	13.5%
Luxembourg	8.2	-	0.4	0.0	8.6	95.8%	0.1	-	0.1	0.0	0.2	30.8%
Pays-Bas	171.6	0.4	1.7	0.2	173.9	98.9%	3.7	8.9	5.6	0.2	18.3	20.1%
Norvège	33.1	0.8	0.9	0.2	35.0	97.0%	5.1	2.1	2.9	0.0	10.1	50.3%
Pologne	333.0	-	8.8	0.5	342.3	97.3%	60.3	14.6	7.6	0.2	82.7	72.9%
Portugal	48.8	0.1	3.9	0.1	52.8	92.5%	0.2	3.6	2.9	0.9	7.5	2.0%
République slovaque	40.7	-	2.2	0.1	43.0	94.7%	2.8	1.7	1.3	0.1	5.9	47.4%
Espagne	235.8	0.2	14.2	0.7	250.9	94.1%	5.2	13.7	11.3	0.9	31.0	16.8%
Suède	58.2	0.1	1.4	1.1	60.8	95.8%	0.5	3.2	3.9	0.1	7.7	6.8%
Suisse	41.6	0.0	2.0	0.5	44.2	94.2%	0.3	3.2	1.2	0.0	4.7	7.4%
Turquie	155.4	0.1	17.7	0.2	173.4	89.7%	3.3	16.5	5.5	0.1	25.5	13.0%
Royaume-Uni	527.5	4.6	7.7	0.3	540.1	98.5%	20.2	21.2	10.6	0.4	52.3	38.6%
OCDE Europe	3 881.4	8.1	141.2	11.3	4 042.0	96.2%	175.4	199.6	126.2	5.7	507.0	34.6%
<i>Union européenne - 27</i>	<i>3 879.4</i>	<i>7.1</i>	<i>127.7</i>	<i>12.2</i>	<i>4 026.4</i>	<i>96.5%</i>	<i>187.7</i>	<i>193.6</i>	<i>124.6</i>	<i>5.8</i>	<i>511.6</i>	<i>36.7%</i>

* Total Monde inclue le Total Non-OCDE, le Total OCDE ainsi que les soutes internationales.

Sources: AIE, méthode sectorielle pour les émissions de CO₂ dues à la combustion d'énergie. Base de données EDGAR 3.2 pour les autres émissions.

En général, pour les émissions autres que celles de CO₂ dues à la combustion d'énergie, les estimations sont sujettes à une incertitude significativement plus grande.

1995 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1995

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
144.5	2 985.2	188.7	210.6	3 529.0	4.1%	120.1	98.6	143.5	35 323.2	68.9%	World *
111.2	1 484.8	251.3	153.0	2 000.2	5.6%	110.6	79.3	111.9	18 182.5	79.7%	Annex I Parties
101.0	1 288.4	220.2	149.7	1 759.2	5.7%	105.3	54.1	102.0	14 014.1	78.2%	Annex II Parties
38.0	369.3	44.1	57.3	508.7	7.5%	55.4	26.8	58.4	7 287.8	84.1%	North America
56.4	782.2	165.5	88.2	1 092.3	5.2%	31.9	13.4	24.2	4 823.5	69.0%	Europe
6.5	136.9	10.6	4.1	158.2	4.1%	18.0	14.0	19.5	1 902.8	78.6%	Pacific
9.7	158.2	25.5	2.8	196.2	5.0%	5.2	24.5	8.5	3 922.7	86.0%	Annex I EIT
33.3	1 500.4	- 62.6	57.7	1 528.8	2.2%	9.5	19.3	31.6	16 430.2	55.7%	Non-Annex I Parties
73.3	1 018.7	201.0	100.9	1 394.0	5.3%	55.0	58.3	57.4	10 739.7	77.7%	Annex I Kyoto Parties
-	-	-	-	-	-	-	-	-	710.5	100.0%	Internat. Bunkers
83.2	2 059.2	48.5	118.8	2 309.7	3.6%	12.1	40.9	36.5	19 361.3	58.0%	Non-OECD Total
61.2	926.0	140.2	91.8	1 219.3	5.0%	108.0	57.7	107.0	15 251.4	81.4%	OECD Total
2.5	41.1	2.8	6.3	52.7	4.8%	1.4	7.7	6.2	664.4	77.1%	Canada
1.3	61.0	1.5	2.1	65.9	1.9%	0.9	0.3	0.5	527.0	64.1%	Mexico
35.5	328.2	41.3	51.1	456.0	7.8%	54.0	19.1	52.2	6 623.4	84.8%	United States
39.3	430.3	45.6	59.4	574.5	6.8%	56.3	27.1	58.9	7 814.8	82.8%	OECD N. America
1.7	92.0	1.1	0.3	95.1	1.8%	1.4	1.2	1.0	485.7	63.2%	Australia
4.7	13.7	9.5	3.8	31.7	14.9%	16.4	12.4	18.3	1 333.6	87.2%	Japan
1.0	8.9	3.1	0.1	13.1	7.8%	1.1	1.8	3.0	438.3	83.9%	Korea
0.1	31.2	0.0	0.0	31.4	0.3%	0.1	0.3	0.1	83.5	32.0%	New Zealand
7.5	145.8	13.7	4.3	171.3	4.4%	19.1	15.7	22.5	2 341.0	79.6%	OECD Pacific
0.3	4.5	0.8	0.1	5.6	4.5%	0.3	0.1	0.3	78.6	78.5%	Austria
0.4	6.3	0.6	1.6	8.8	4.0%	0.4	0.0	0.3	139.6	83.2%	Belgium
0.4	5.4	1.0	0.2	6.9	5.7%	0.2	0.0	0.0	148.1	88.2%	Czech Republic
0.2	6.6	0.9	0.8	8.6	2.9%	0.3	0.0	0.2	74.6	79.1%	Denmark
0.3	3.4	1.4	0.5	5.6	5.1%	0.1	0.0	0.2	72.1	79.5%	Finland
1.3	58.8	9.6	6.5	76.1	1.7%	3.3	1.4	4.2	506.8	72.4%	France
3.7	50.0	10.8	5.1	69.6	5.3%	6.9	2.2	10.7	1 091.1	84.9%	Germany
0.4	12.0	0.6	0.2	13.2	2.8%	0.9	0.1	0.1	101.2	73.3%	Greece
0.2	5.8	1.4	0.2	7.5	2.3%	0.2	0.3	0.0	81.5	80.4%	Hungary
0.0	0.4	0.2	0.0	0.6	1.3%	0.0	0.0	0.0	3.0	66.2%	Iceland
0.1	12.2	0.8	0.6	13.8	0.9%	0.1	0.1	0.1	60.1	56.7%	Ireland
1.1	27.2	7.5	0.5	36.4	3.2%	5.0	0.4	2.3	514.8	81.1%	Italy
0.0	0.4	0.0	0.0	0.5	7.0%	0.0	0.0	0.0	9.3	89.7%	Luxembourg
0.5	10.7	6.9	1.9	20.0	2.4%	4.7	0.9	0.4	218.2	80.8%	Netherlands
0.1	3.0	1.7	0.3	5.1	2.8%	0.1	3.6	0.9	54.6	71.6%	Norway
1.4	22.2	5.4	0.4	29.4	4.6%	0.2	0.5	0.0	455.2	86.7%	Poland
0.2	5.9	0.8	0.5	7.4	2.4%	0.1	0.0	0.1	68.0	72.3%	Portugal
0.1	2.3	0.6	0.2	3.2	3.2%	0.1	0.0	0.0	52.2	83.6%	Slovak Republic
0.9	28.4	2.2	3.7	35.1	2.5%	3.7	1.8	0.7	323.2	74.9%	Spain
0.3	4.8	0.8	0.5	6.5	5.4%	0.2	0.7	0.6	76.5	77.4%	Sweden
0.3	2.6	0.2	0.1	3.2	8.8%	0.3	0.1	0.6	53.0	79.7%	Switzerland
0.5	38.2	5.6	0.6	44.8	1.1%	0.0	0.6	1.4	245.7	64.9%	Turkey
1.9	38.9	21.1	3.9	65.8	2.8%	5.6	1.9	2.4	668.1	82.9%	United Kingdom
14.4	350.0	80.8	28.2	473.4	3.0%	32.6	14.9	25.7	5 095.6	80.1%	OECD Europe
14.5	327.4	79.6	27.7	449.1	3.2%	32.4	12.1	22.9	5 054.5	80.9%	European Union - 27

* Total World includes Non-OECD Total, OECD Total as well as international bunkers.

Sources: IEA, Sectoral Approach for CO₂ emissions from fuel combustion. EDGAR 3.2 database for other emissions. In general, estimates for emissions other than CO₂ from fuel combustion are subject to significantly larger uncertainties.

1995 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1995

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Total Non-OCDE	9 528.0	163.8	591.1	2 117.9	12 400.8	78.2%	1 455.0	2 290.8	711.8	103.7	4 561.3	31.9%
Algérie	59.3	15.6	3.1	3.5	81.5	91.9%	12.5	3.5	3.9	0.2	20.2	62.2%
Angola	4.0	1.7	0.1	16.0	21.9	26.3%	3.2	9.1	1.2	0.8	14.4	22.4%
Bénin	0.2	-	0.2	2.5	2.9	7.5%	0.5	1.8	0.6	0.1	3.0	16.0%
Botswana	3.3	-	-	-	3.3	100.0%	0.0	0.1	0.0	-	0.1	11.5%
Cameroun	2.5	4.4	0.3	17.2	24.4	28.3%	1.8	6.2	1.8	0.9	10.8	16.8%
Congo	0.5	-	0.0	10.2	10.8	4.9%	1.4	0.5	0.4	0.6	2.9	48.2%
Rép. dém. du Congo	2.1	0.2	0.1	158.8	161.1	1.4%	3.4	12.0	5.1	8.8	29.3	11.7%
Côte d'Ivoire	3.2	-	0.2	2.4	5.8	55.0%	1.2	2.9	1.8	0.0	5.9	20.2%
Egypte	84.0	2.1	7.6	4.6	98.2	87.6%	9.2	10.9	7.1	0.0	27.3	33.6%
Erythrée	0.8	-	0.0	0.4	1.2	65.5%	0.3	1.6	0.3	-	2.2	11.4%
Ethiopie	2.3	-	0.3	14.5	17.2	13.7%	4.2	31.9	5.3	0.5	41.9	10.1%
Gabon	1.3	3.2	0.1	20.1	24.7	18.5%	1.9	0.2	0.2	1.1	3.5	56.2%
Ghana	3.3	-	0.7	9.2	13.2	25.1%	0.8	3.0	2.1	0.5	6.5	12.9%
Kenya	7.3	-	0.8	5.2	13.3	54.8%	3.4	13.1	3.0	0.0	19.5	17.5%
Libye	35.1	3.4	1.3	0.3	40.1	96.0%	7.0	0.8	1.0	-	8.7	79.7%
Maroc	25.4	-	3.2	1.3	29.9	85.2%	0.7	4.8	3.6	0.1	9.1	7.2%
Mozambique	1.1	-	0.1	10.1	11.3	10.1%	1.9	5.8	1.9	0.4	10.1	19.3%
Namibie	1.8	-	0.0	1.6	3.4	53.7%	0.2	3.7	0.2	0.1	4.1	4.3%
Nigéria	30.4	47.7	0.8	38.0	116.9	66.8%	32.1	24.5	12.8	0.6	70.0	45.8%
Sénégal	2.5	-	0.3	3.4	6.2	40.2%	0.3	4.7	1.1	0.2	6.2	4.6%
Afrique du Sud	276.7	-	4.9	5.1	286.8	96.5%	29.0	15.6	8.8	0.2	53.6	54.0%
Soudan	4.6	-	0.1	26.6	31.3	14.6%	9.2	29.2	3.0	0.9	42.4	21.7%
Rép. unie de Tanzanie	2.5	-	0.4	22.3	25.2	10.0%	6.6	18.5	3.1	0.6	28.8	23.0%
Togo	0.6	-	0.2	1.6	2.4	24.4%	0.4	1.0	0.5	0.1	1.9	19.3%
Tunisie	14.3	0.3	2.9	0.8	18.3	79.8%	1.1	1.9	1.3	0.0	4.3	26.3%
Zambie	2.0	-	0.3	15.4	17.7	11.6%	0.9	7.4	1.0	0.8	10.1	8.7%
Zimbabwe	14.8	-	0.5	4.1	19.4	76.4%	2.7	5.9	1.4	0.1	10.0	26.6%
Autres pays d'Afrique	17.3	-	0.6	81.7	99.6	17.4%	13.0	83.9	13.9	3.7	114.5	11.4%
Afrique	603.4	78.6	29.1	476.7	1 187.9	57.4%	148.9	304.8	86.5	21.2	561.4	26.5%
Bahrein	11.6	-	0.1	0.0	11.7	99.0%	1.6	0.0	0.1	-	1.7	92.3%
Rép. islamique d'Iran	249.3	22.5	8.4	7.0	287.3	94.6%	36.5	19.4	11.2	0.3	67.3	54.1%
Irak	71.8	0.1	8.9	1.0	81.8	87.8%	2.3	2.9	3.5	-	8.7	26.4%
Israël	46.3	-	2.5	0.0	48.9	94.8%	0.1	0.5	0.5	0.0	1.1	8.4%
Jordanie	12.1	-	1.7	0.3	14.1	86.1%	0.2	0.4	0.8	0.0	1.4	12.2%
Koweït	41.5	1.0	1.0	0.1	43.5	97.5%	6.9	0.1	0.4	-	7.4	93.7%
Liban	12.6	-	1.7	0.6	14.9	84.1%	0.1	0.2	0.6	0.0	0.9	12.6%
Oman	14.4	0.7	0.0	0.1	15.2	99.4%	1.8	0.3	0.4	0.0	2.4	72.7%
Qatar	19.1	-	0.3	0.0	19.4	98.4%	2.5	0.1	0.2	0.0	2.8	91.1%
Arabie saoudite	202.5	0.5	7.8	0.6	211.4	96.0%	45.5	2.1	3.2	0.0	50.7	89.7%
Syrie	38.6	3.9	2.2	1.1	45.9	92.8%	2.1	2.2	2.1	0.0	6.4	32.6%
Emirats arabes unis	67.8	0.7	3.0	0.2	71.7	95.6%	25.6	0.3	0.4	-	26.3	97.2%
Yémen	9.3	-	0.5	0.6	10.5	89.2%	1.8	1.9	2.1	-	5.8	31.7%
Moyen-Orient	797.0	29.4	38.2	11.6	876.2	94.3%	127.0	30.3	25.4	0.4	183.0	69.4%
Albanie	1.9	-	0.1	0.2	2.2	86.6%	0.2	1.8	0.4	0.0	2.3	8.7%
Bosnie-Herzégovine	3.5	-	0.1	0.0	3.6	96.9%	0.5	0.6	0.3	0.0	1.4	34.0%
Bulgarie	53.5	-	1.4	0.2	55.1	97.1%	2.6	2.0	1.8	0.1	6.5	40.0%
Croatie	15.9	-	1.0	0.4	17.2	92.3%	1.5	1.1	0.8	0.0	3.4	42.7%
Chypre	5.3	-	0.5	0.0	5.8	91.2%	0.0	0.1	0.1	0.0	0.3	3.7%
Gibraltar	0.3	-	-	0.0	0.3	100.0%	0.0	-	0.0	-	0.0	11.7%
ex-RY de Macédoine	8.8	-	0.3	0.3	9.4	94.0%	0.3	0.9	0.3	0.0	1.4	18.2%
Malte	2.4	-	0.0	0.0	2.4	99.8%	0.0	0.0	0.0	-	0.1	3.5%
Roumanie	116.9	-	3.4	0.7	121.0	96.7%	15.8	9.1	3.9	0.2	29.0	54.5%
Serbie et Monténégro	41.5	-	1.2	0.0	42.7	97.3%	1.2	7.1	1.3	0.0	9.6	12.1%
Slovénie	13.0	-	1.1	0.1	14.3	91.5%	0.3	0.9	0.5	0.0	1.6	17.3%
Europe Non-OCDE	263.1	-	9.0	1.8	274.0	96.0%	22.3	23.6	9.5	0.3	55.6	40.0%

1995 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1995

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
83.2	2 059.2	48.5	118.8	2 309.7	3.6%	12.1	40.9	36.5	19 361.3	58.0%	Non-OECD Total
0.2	7.8	0.1	0.1	8.3	2.8%	-	-	0.1	110.1	79.6%	Algeria
0.2	4.3	-	1.0	5.5	3.1%	-	-	0.0	41.8	21.9%	Angola
0.1	2.2	-	0.1	2.4	2.9%	-	-	0.0	8.4	9.2%	Benin
0.0	4.3	-	0.0	4.3	0.9%	-	-	0.0	7.8	43.4%	Botswana
0.2	7.6	-	1.1	8.8	2.0%	-	0.7	0.0	44.6	19.9%	Cameroon
0.0	0.2	-	0.7	0.9	4.0%	-	-	0.0	14.7	13.5%	Congo
0.5	8.9	-	10.6	19.9	2.5%	-	-	0.0	210.3	2.9%	Dem. Rep. of Congo
0.2	2.4	-	0.1	2.6	7.1%	-	-	0.0	14.4	32.0%	Côte d'Ivoire
0.6	18.9	3.2	0.0	22.7	2.5%	0.0	0.5	0.8	149.6	64.0%	Egypt
0.0	1.4	-	0.0	1.4	2.9%	-	-	0.0	4.8	22.2%	Eritrea
0.7	51.7	-	0.6	52.9	1.3%	-	-	0.0	112.0	6.5%	Ethiopia
0.0	0.3	-	1.4	1.7	2.2%	-	-	0.0	29.8	21.9%	Gabon
0.1	6.0	-	0.5	6.7	2.0%	-	0.2	0.0	26.4	16.2%	Ghana
0.5	19.7	-	0.0	20.2	2.7%	-	-	0.0	53.1	21.2%	Kenya
0.1	2.1	-	0.0	2.3	5.4%	-	-	0.3	51.4	88.7%	Libya
0.1	13.3	-	0.1	13.5	1.0%	-	-	0.0	52.5	49.9%	Morocco
0.3	2.1	-	0.5	2.9	10.0%	-	-	0.0	24.3	13.9%	Mozambique
0.0	3.6	-	0.1	3.7	0.7%	-	-	0.0	11.2	18.0%	Namibia
3.0	27.9	-	0.7	31.6	9.6%	-	-	0.1	218.7	51.8%	Nigeria
0.1	7.2	-	0.2	7.5	1.0%	0.0	-	0.0	19.8	14.3%	Senegal
1.6	21.1	2.9	0.4	26.0	6.1%	0.4	0.1	0.9	367.8	83.5%	South Africa
1.0	40.1	-	1.1	42.2	2.4%	-	-	0.0	115.8	12.7%	Sudan
1.3	22.2	-	0.7	24.3	5.5%	-	-	0.0	78.3	13.4%	United Rep. of Tanzania
0.1	1.9	-	0.1	2.1	2.9%	-	-	0.0	6.3	15.9%	Togo
0.1	4.2	0.4	0.0	4.7	1.9%	0.0	-	0.0	27.3	57.8%	Tunisia
0.2	3.8	0.5	1.0	5.4	2.9%	-	-	0.0	33.3	9.3%	Zambia
0.2	6.4	-	0.2	6.8	3.7%	0.0	-	0.0	36.2	49.0%	Zimbabwe
1.8	93.3	-	4.4	99.5	0.9%	0.0	-	0.0	313.6	10.2%	Other Africa
13.4	384.6	7.2	25.6	430.8	3.1%	0.4	1.5	2.3	2 184.3	38.7%	Africa
0.0	0.0	-	0.0	0.1	43.2%	-	0.2	0.0	13.7	96.8%	Bahrain
0.8	51.3	0.4	0.3	52.7	1.4%	-	0.1	1.3	408.8	75.6%	Islamic Rep. of Iran
0.3	5.7	-	0.0	5.9	4.3%	-	-	0.4	96.8	76.8%	Iraq
0.2	1.6	-	0.0	1.7	8.9%	0.1	0.1	0.6	52.5	88.7%	Israel
0.1	1.4	-	0.0	1.5	3.6%	0.0	-	0.0	16.9	73.0%	Jordan
0.1	0.2	-	0.0	0.3	27.3%	-	-	0.4	51.5	95.9%	Kuwait
0.1	0.9	-	0.0	1.0	5.3%	-	-	0.0	16.8	75.6%	Lebanon
0.0	0.9	-	0.0	0.9	2.8%	-	-	0.0	18.5	91.1%	Oman
0.0	0.3	-	0.0	0.3	6.8%	-	-	0.0	22.5	96.2%	Qatar
0.5	7.6	-	0.0	8.1	5.8%	-	-	1.4	271.7	91.6%	Saudi Arabia
0.2	7.8	0.1	0.0	8.2	2.1%	-	-	0.0	60.5	74.1%	Syria
0.1	1.3	-	0.0	1.4	7.3%	-	0.1	0.3	99.8	94.4%	United Arab Emirates
0.1	4.8	-	0.0	4.9	1.5%	-	-	0.0	21.2	53.2%	Yemen
2.2	83.8	0.5	0.4	87.0	2.6%	0.1	0.5	4.5	1 151.3	83.0%	Middle East
0.0	1.9	-	0.0	1.9	1.4%	0.0	-	0.0	6.4	32.6%	Albania
0.0	0.6	-	0.0	0.6	8.0%	0.0	0.1	0.0	5.8	69.7%	Bosnia-Herzegovina
0.3	4.1	2.9	0.0	7.4	4.7%	0.1	-	0.0	69.2	81.7%	Bulgaria
0.2	2.0	0.8	0.0	3.1	5.3%	0.0	0.3	0.0	24.0	73.0%	Croatia
0.0	0.5	-	0.0	0.6	3.5%	-	-	0.0	6.6	79.7%	Cyprus
0.0	-	-	-	0.0	100.0%	-	-	0.0	0.3	98.2%	Gibraltar
0.1	1.1	-	0.0	1.2	5.5%	0.0	-	0.0	12.0	76.3%	FYR of Macedonia
0.0	0.1	-	0.0	0.1	15.1%	-	-	0.0	2.5	94.0%	Malta
0.3	12.3	3.6	0.2	16.4	1.8%	0.0	1.3	0.0	167.6	79.4%	Romania
0.2	5.9	0.4	0.0	6.6	3.4%	0.1	0.1	0.0	59.2	72.6%	Serbia and Montenegro
0.0	1.0	-	0.0	1.1	4.4%	0.0	0.3	0.0	17.2	77.5%	Slovenia
1.3	29.6	7.7	0.4	38.9	3.2%	0.3	2.0	0.1	370.9	77.3%	Non-OECD Europe

1995 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1995

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Arménie	3.4	-	0.1	0.1	3.6	94.4%	0.6	0.6	0.5	0.0	1.7	33.7%
Azerbaïdjan	31.0	-	0.1	0.2	31.3	99.1%	5.5	3.4	1.0	0.0	9.9	55.7%
Bélarus	59.8	-	0.9	0.2	60.9	98.1%	6.0	8.8	1.9	0.0	16.6	35.9%
Estonie	16.0	-	0.2	0.1	16.4	97.9%	0.5	0.8	0.4	0.0	1.6	28.4%
Géorgie	7.1	-	0.1	0.1	7.3	97.4%	0.7	1.6	0.8	0.0	3.1	22.8%
Kazakhstan	162.1	1.1	1.4	0.1	164.7	99.1%	17.9	21.5	2.6	0.2	42.1	42.4%
Kirghizistan	4.6	-	0.2	0.1	4.9	94.6%	0.5	3.1	0.6	-	4.1	11.3%
Lettonie	8.7	-	0.1	0.3	9.2	95.4%	0.7	1.0	0.5	0.0	2.2	30.6%
Lituanie	14.2	-	0.4	0.3	14.9	95.2%	1.2	2.1	0.7	0.0	4.0	30.6%
République de Moldavie	11.0	-	0.0	0.1	11.1	98.7%	1.3	1.8	0.6	-	3.6	34.4%
Russie	1 588.9	9.9	25.0	10.4	1 634.1	97.8%	371.4	70.1	53.9	2.7	498.1	74.6%
Tadjikistan	5.3	-	0.0	0.1	5.5	96.7%	0.5	2.6	0.6	-	3.8	13.7%
Turkménistan	34.5	-	0.2	0.1	34.8	99.1%	15.6	3.1	0.6	0.0	19.2	81.0%
Ukraine	376.8	0.0	6.7	1.3	384.8	97.9%	58.6	31.8	9.8	0.7	100.9	58.1%
Ouzbékistan	101.8	-	1.9	0.5	104.2	97.7%	31.5	10.9	2.8	-	45.2	69.7%
Ex-URSS	2 425.3	11.0	37.4	14.0	2 487.8	97.9%	512.3	163.1	77.2	3.6	756.3	67.7%
Argentine	115.4	4.0	2.8	13.3	135.5	88.1%	10.3	63.6	11.9	0.8	86.6	11.9%
Bolivie	8.2	1.9	0.4	71.1	81.6	12.4%	0.7	9.9	1.6	4.1	16.3	4.4%
Brésil	238.8	2.3	18.2	369.0	628.4	38.4%	9.2	217.4	53.6	21.4	301.6	3.0%
Chili	39.1	0.3	2.4	6.2	48.0	82.0%	1.9	6.5	7.8	0.3	16.4	11.5%
Colombie	58.1	0.7	5.5	41.1	105.4	55.7%	7.9	33.2	10.4	2.2	53.7	14.8%
Costa Rica	4.4	-	0.5	6.2	11.1	40.1%	0.1	2.2	0.8	0.3	3.4	2.0%
Cuba	22.0	-	0.9	3.6	26.5	83.1%	0.2	5.4	2.8	0.1	8.6	2.8%
République dominicaine	11.4	-	0.7	2.8	14.9	76.2%	0.2	3.5	1.7	0.1	5.6	3.9%
Equateur	16.2	1.5	1.1	29.5	48.3	36.6%	2.1	7.7	2.6	1.7	14.1	14.6%
El Salvador	4.7	-	0.5	1.1	6.3	74.9%	0.4	1.6	1.1	0.0	3.1	12.5%
Guatemala	6.0	-	0.7	13.1	19.7	30.4%	0.8	2.6	1.8	0.7	5.8	13.0%
Haiti	0.9	-	0.2	0.5	1.6	56.9%	0.2	1.8	1.1	0.0	3.2	7.7%
Honduras	3.9	-	0.2	10.2	14.2	27.3%	0.3	2.8	1.0	0.5	4.7	7.1%
Jamaïque	8.3	-	0.4	2.1	10.9	76.9%	0.0	0.6	0.5	0.1	1.3	2.4%
Antilles néerlandaises	3.0	-	-	0.0	3.0	99.2%	0.0	0.0	0.1	-	0.1	35.8%
Nicaragua	2.5	-	0.2	23.9	26.6	9.4%	0.3	2.6	0.8	1.3	5.0	5.1%
Panama	4.1	-	0.3	11.9	16.3	25.1%	0.1	1.7	0.6	0.7	3.1	3.6%
Paraguay	3.4	-	0.4	16.6	20.4	16.9%	0.3	9.4	1.1	0.9	11.7	2.7%
Pérou	23.7	0.4	1.9	41.5	67.5	35.7%	1.6	8.3	6.5	2.3	18.7	8.4%
Trinité-et-Tobago	12.3	2.0	0.3	0.4	14.9	95.1%	2.2	0.1	0.6	0.0	2.9	75.5%
Uruguay	4.5	-	0.3	0.3	5.1	88.6%	0.1	15.3	1.2	0.0	16.7	0.6%
Vénézuela	118.3	12.3	3.5	75.2	209.3	62.4%	19.6	17.5	8.0	4.3	49.4	39.7%
Autres Amérique Latine	12.4	-	1.0	7.8	21.2	58.3%	0.6	2.7	2.2	0.3	5.7	9.9%
Amérique latine	721.7	25.3	42.4	747.5	1 536.9	48.6%	59.1	416.4	119.9	42.3	637.7	9.3%
Bangladesh	20.5	-	0.2	18.0	38.7	52.9%	9.9	59.7	15.0	0.0	84.6	11.6%
Brunei Darussalam	4.7	1.0	0.0	0.8	6.5	87.5%	1.9	0.0	0.1	0.0	2.0	94.7%
Cambodge	1.4	-	-	26.5	27.9	5.0%	0.8	9.0	1.4	1.7	12.8	5.9%
Inde	779.6	3.0	33.7	101.9	918.2	85.2%	94.4	431.8	128.7	0.5	655.5	14.4%
Indonésie	194.0	9.6	11.6	207.5	422.7	48.2%	85.5	86.8	32.3	10.1	214.7	39.8%
Rép. pop. dém. de Corée	74.7	-	8.4	2.6	85.7	87.2%	1.9	4.7	3.4	0.1	10.0	18.8%
Malaisie	78.7	5.4	5.3	94.4	183.8	45.8%	11.3	5.1	3.0	4.9	24.4	46.5%
Mongolie	10.1	-	0.1	0.3	10.4	96.6%	0.1	7.1	0.4	0.6	8.2	1.8%
Myanmar	6.7	0.0	0.3	75.0	82.0	8.2%	3.9	35.6	6.2	3.9	49.6	7.8%
Népal	1.7	-	0.1	10.4	12.3	14.2%	3.2	27.7	2.9	0.3	34.1	9.5%
Pakistan	80.1	-	3.9	20.0	104.0	77.0%	12.3	61.3	18.6	0.3	92.5	13.3%
Philippines	59.5	-	5.2	58.9	123.6	48.1%	5.1	26.5	10.0	2.8	44.5	11.5%
Singapour	38.0	-	1.6	-	39.6	96.0%	0.4	0.0	0.7	-	1.1	35.1%
Sri Lanka	5.5	-	0.4	3.8	9.8	56.5%	1.2	6.8	2.5	0.1	10.7	11.6%
Taipei chinois	158.7	-	10.8	1.9	171.4	92.6%	2.4	-	3.7	0.2	6.2	38.0%
Thaïlande	141.3	-	17.1	32.2	190.6	74.1%	4.9	58.1	8.4	1.7	73.1	6.7%
Viêt-Nam	27.5	0.5	3.3	29.9	61.2	45.8%	6.8	41.0	10.2	1.2	59.1	11.4%
Autres pays d'Asie	13.1	-	0.1	74.6	87.9	14.9%	3.3	12.1	4.6	3.8	23.8	14.0%
Asie	1 695.8	19.5	102.3	758.6	2 576.2	66.6%	249.2	873.3	252.0	32.3	1 406.9	17.7%
Rép. populaire de Chine	2 985.8	-	332.6	107.6	3 426.0	87.2%	336.2	479.1	140.0	3.6	958.9	35.1%
Hong Kong, Chine	35.8	-	-	-	35.8	100.0%	0.0	0.0	1.3	-	1.3	2.8%
Chine	3 021.7	-	332.6	107.6	3 461.9	87.3%	336.3	479.1	141.3	3.6	960.2	35.0%

1995 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 1995

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
0.0	0.5	-	0.0	0.5	3.5%	0.0	-	-	5.9	68.2%	Armenia
0.3	2.8	-	0.0	3.1	9.5%	0.0	0.0	-	44.3	83.1%	Azerbaijan
0.2	7.7	2.3	0.1	10.4	1.8%	0.1	-	-	88.0	74.9%	Belarus
0.1	0.7	-	0.0	0.8	10.0%	0.0	-	0.0	18.8	88.1%	Estonia
0.0	1.3	0.5	0.0	1.8	1.1%	0.0	-	-	12.2	64.3%	Georgia
0.7	17.5	-	0.1	18.3	3.9%	0.0	-	-	225.2	80.7%	Kazakhstan
0.0	3.0	-	0.0	3.1	0.9%	0.0	-	-	12.1	42.4%	Kyrgyzstan
0.1	1.1	-	0.0	1.1	5.2%	0.0	-	-	12.5	75.7%	Latvia
0.1	1.8	-	0.0	1.9	3.8%	0.0	-	-	20.8	74.3%	Lithuania
0.0	2.3	-	0.0	2.4	1.7%	0.1	-	-	17.2	71.2%	Republic of Moldova
4.9	56.6	2.5	1.0	65.0	7.5%	4.0	21.9	8.4	2 231.5	88.5%	Russia
0.0	2.3	-	0.0	2.3	1.1%	0.0	0.1	-	11.6	50.3%	Tajikistan
0.0	3.7	0.3	0.0	4.1	1.1%	0.1	-	-	58.2	86.1%	Turkmenistan
1.4	30.3	4.6	0.3	36.6	3.7%	0.2	0.1	-	522.6	83.6%	Ukraine
0.2	10.2	0.0	0.0	10.4	1.8%	0.2	-	-	160.0	83.5%	Uzbekistan
8.0	141.8	10.3	1.7	161.9	5.0%	4.6	22.1	8.4	3 441.1	85.9%	Former USSR
0.3	66.0	0.1	0.9	67.2	0.4%	0.2	0.1	0.2	289.8	44.8%	Argentina
0.1	10.1	-	4.9	15.0	0.3%	-	-	0.0	112.9	9.6%	Bolivia
2.3	207.0	6.8	28.4	244.5	0.9%	1.2	2.9	1.0	1 179.6	21.4%	Brazil
0.3	8.6	0.2	0.3	9.4	3.1%	-	-	0.0	73.9	56.3%	Chile
0.5	18.0	0.2	2.6	21.3	2.3%	0.0	-	0.1	180.6	37.2%	Colombia
0.0	2.8	0.2	0.4	3.4	1.1%	-	-	0.0	17.9	25.4%	Costa Rica
0.2	7.7	0.7	0.3	8.9	2.3%	0.0	-	0.0	44.1	51.0%	Cuba
0.1	4.0	-	0.2	4.2	1.8%	-	-	0.0	24.8	47.2%	Dominican Republic
0.1	7.8	-	2.0	9.9	1.1%	-	-	0.0	72.3	27.4%	Ecuador
0.1	1.9	-	0.0	2.1	5.2%	-	-	0.0	11.4	45.5%	El Salvador
0.2	4.1	-	0.8	5.1	3.2%	-	-	0.0	30.6	22.6%	Guatemala
0.0	2.5	-	0.0	2.6	1.9%	-	-	0.0	7.4	16.3%	Haiti
0.1	2.7	-	0.7	3.5	2.5%	-	-	0.0	22.4	19.2%	Honduras
0.0	1.0	-	0.1	1.2	3.4%	-	-	0.0	13.3	63.1%	Jamaica
0.0	0.0	-	0.0	0.0	51.3%	-	-	0.0	3.2	96.7%	Netherlands Antilles
0.1	2.3	-	1.6	4.0	1.7%	-	-	0.0	35.6	7.9%	Nicaragua
0.0	1.8	-	0.8	2.6	1.5%	-	-	0.0	22.1	19.3%	Panama
0.1	8.8	-	1.1	9.9	0.9%	-	-	0.0	42.0	9.2%	Paraguay
0.3	11.9	0.2	2.7	15.0	1.7%	0.0	-	0.0	101.3	25.6%	Peru
0.0	0.2	-	0.0	0.3	4.9%	-	-	0.0	18.1	90.6%	Trinidad and Tobago
0.0	16.4	-	0.0	16.5	0.2%	0.0	-	0.0	38.3	12.2%	Uruguay
0.2	17.5	0.0	5.2	22.9	1.0%	0.6	0.3	0.2	282.7	53.2%	Venezuela
0.3	3.8	-	0.4	4.5	6.1%	-	0.1	0.0	31.5	41.8%	Other Latin America
5.3	407.0	8.3	53.5	474.1	1.1%	2.1	3.4	1.7	2 655.9	30.6%	Latin America
1.8	27.5	-	0.0	29.3	6.1%	-	-	0.0	152.6	21.0%	Bangladesh
0.0	0.0	-	0.0	0.1	16.9%	-	-	0.0	8.5	88.7%	Brunei Darussalam
0.1	2.4	-	1.8	4.3	3.3%	-	-	-	45.0	5.1%	Cambodia
14.3	240.5	1.4	0.0	256.2	5.6%	1.0	1.5	4.6	1 836.9	48.5%	India
3.9	50.4	0.2	12.1	66.6	5.9%	-	0.3	0.7	705.0	41.6%	Indonesia
0.6	7.8	-	0.0	8.4	7.1%	-	-	0.7	104.9	73.6%	DPR of Korea
1.1	5.3	0.1	5.9	12.4	8.8%	-	0.0	0.5	221.1	43.7%	Malaysia
0.0	12.4	-	0.1	12.5	0.2%	-	-	-	31.2	32.8%	Mongolia
0.6	10.5	-	4.7	15.8	4.1%	-	-	0.0	147.5	7.6%	Myanmar
0.6	5.4	-	0.3	6.3	9.5%	-	-	0.0	52.7	10.6%	Nepal
1.8	65.2	0.6	0.3	67.9	2.7%	-	-	0.6	265.0	35.5%	Pakistan
1.3	13.9	0.0	3.3	18.5	6.8%	-	-	0.3	186.9	35.2%	Philippines
0.2	0.0	0.9	0.0	1.1	13.9%	0.1	0.3	0.4	42.6	90.4%	Singapore
0.2	2.3	-	0.1	2.7	9.1%	-	-	0.0	23.1	30.3%	Sri Lanka
0.8	0.0	0.2	0.0	1.0	78.8%	-	-	0.0	178.6	90.6%	Chinese Taipei
0.7	20.9	-	2.0	23.7	3.0%	-	-	0.9	288.2	51.0%	Thailand
1.1	18.0	-	1.4	20.5	5.2%	-	-	0.0	140.9	25.4%	Vietnam
0.6	19.9	-	4.7	25.2	2.3%	0.0	1.3	2.0	140.2	12.1%	Other Asia
29.7	502.6	3.4	37.0	572.7	5.2%	1.0	3.4	10.8	4 571.1	43.6%	Asia
23.2	509.7	11.2	0.2	544.2	4.3%	3.4	8.1	8.4	4 949.1	67.6%	People's Rep. of China
0.2	0.0	-	0.0	0.2	93.8%	-	-	0.3	37.7	95.7%	Hong Kong, China
23.4	509.7	11.2	0.2	544.5	4.3%	3.4	8.1	8.7	4 986.8	67.8%	China

2000 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2000

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Monde *	23 487.2	179.0	994.1	3 309.9	27 970.3	84.6%	2 354.5	2 896.9	1 221.1	268.1	6 740.6	34.9%
<i>Parties de l'Annexe I</i>	<i>13 762.1</i>	<i>28.6</i>	<i>305.1</i>	<i>52.4</i>	<i>14 148.2</i>	<i>97.5%</i>	<i>1 192.9</i>	<i>547.7</i>	<i>467.2</i>	<i>40.2</i>	<i>2 248.0</i>	<i>53.1%</i>
<i>Parties de l'Annexe II</i>	<i>11 007.9</i>	<i>19.7</i>	<i>233.0</i>	<i>38.3</i>	<i>11 298.9</i>	<i>97.6%</i>	<i>662.1</i>	<i>422.3</i>	<i>367.6</i>	<i>24.9</i>	<i>1 476.8</i>	<i>44.8%</i>
<i>Amérique du Nord</i>	<i>6 230.8</i>	<i>9.6</i>	<i>66.3</i>	<i>20.4</i>	<i>6 327.1</i>	<i>98.6%</i>	<i>524.3</i>	<i>172.6</i>	<i>232.4</i>	<i>12.0</i>	<i>941.3</i>	<i>55.7%</i>
<i>Europe</i>	<i>3 233.2</i>	<i>9.2</i>	<i>115.2</i>	<i>12.5</i>	<i>3 370.1</i>	<i>96.2%</i>	<i>89.0</i>	<i>149.6</i>	<i>91.3</i>	<i>3.4</i>	<i>333.3</i>	<i>26.7%</i>
<i>Pacifique</i>	<i>1 544.0</i>	<i>0.9</i>	<i>51.5</i>	<i>5.4</i>	<i>1 601.7</i>	<i>96.5%</i>	<i>48.8</i>	<i>100.1</i>	<i>43.9</i>	<i>9.4</i>	<i>202.2</i>	<i>24.1%</i>
<i>Annexe I EET</i>	<i>2 551.6</i>	<i>8.7</i>	<i>53.8</i>	<i>13.9</i>	<i>2 627.9</i>	<i>97.4%</i>	<i>526.9</i>	<i>110.5</i>	<i>93.5</i>	<i>15.2</i>	<i>746.0</i>	<i>70.6%</i>
<i>Parties non Annexe I</i>	<i>8 895.7</i>	<i>150.5</i>	<i>689.0</i>	<i>3 257.6</i>	<i>12 992.7</i>	<i>69.6%</i>	<i>1 161.6</i>	<i>2 349.2</i>	<i>753.9</i>	<i>227.9</i>	<i>4 492.5</i>	<i>25.9%</i>
<i>Parties Kyoto (Annexe I)</i>	<i>7 464.1</i>	<i>22.8</i>	<i>222.4</i>	<i>29.8</i>	<i>7 739.0</i>	<i>96.7%</i>	<i>677.3</i>	<i>301.9</i>	<i>244.1</i>	<i>26.0</i>	<i>1 249.3</i>	<i>54.2%</i>
Soutes internat.	829.4	-	-	-	829.4	100%	-	-	-	-	-	-
Total Non-OCDE	10 161.2	150.6	680.4	3 206.2	14 198.3	72.6%	1 591.6	2 385.6	780.6	237.0	4 994.8	31.9%
Total OCDE	12 496.6	28.5	313.7	103.8	12 942.6	96.8%	762.9	511.3	440.5	31.1	1 745.8	43.7%
Canada	530.2	4.6	8.1	1.0	544.0	98.3%	48.1	20.2	27.0	4.7	99.9	48.2%
Mexique	357.3	8.6	20.5	63.3	449.8	81.4%	26.7	45.8	37.0	4.6	114.1	23.4%
Etats-Unis	5 700.6	5.0	58.2	19.4	5 783.1	98.7%	476.2	152.4	205.4	7.3	841.4	56.6%
OCDE Amérique du N.	6 588.1	18.2	86.8	83.8	6 776.8	97.5%	551.0	218.4	269.4	16.6	1 055.4	52.2%
Australie	339.5	0.6	4.8	2.8	347.7	97.8%	28.3	71.5	9.6	6.7	116.0	24.4%
Japon	1 172.1	0.0	46.1	2.2	1 220.6	96.0%	17.4	7.4	31.9	2.7	59.5	29.3%
Corée	424.8	-	25.5	0.9	451.2	94.1%	5.8	9.5	13.7	0.9	29.9	19.4%
Nouvelle-Zélande	32.4	0.2	0.5	0.3	33.4	97.6%	3.1	21.2	2.4	0.0	26.7	11.5%
OCDE Pacifique	1 968.8	0.9	77.0	6.3	2 052.9	95.9%	54.6	109.7	57.6	10.3	232.1	23.5%
Autriche	63.7	-	3.4	0.5	67.5	94.4%	1.1	3.8	2.4	0.1	7.5	14.1%
Belgique	119.0	-	4.8	0.2	124.0	96.0%	1.3	5.1	2.3	0.3	9.0	14.4%
République tchèque	118.1	-	2.9	0.1	121.1	97.5%	9.3	2.9	3.1	0.2	15.4	60.4%
Danemark	50.1	0.4	1.1	0.4	52.0	97.2%	0.8	4.0	0.9	-	5.7	14.2%
Finlande	54.2	-	0.9	1.0	56.1	96.5%	0.6	1.8	3.9	0.1	6.3	8.8%
France	379.3	0.4	11.8	3.7	395.1	96.1%	6.2	32.4	8.2	0.5	47.3	13.1%
Allemagne	830.7	1.0	22.3	1.8	855.8	97.2%	36.8	25.6	12.9	0.9	76.3	48.3%
Grèce	87.7	0.0	7.7	0.3	95.7	91.7%	0.7	2.9	3.4	0.0	7.1	10.1%
Hongrie	55.6	-	2.0	0.3	57.9	96.0%	5.9	2.4	3.6	0.1	11.8	49.6%
Islande	2.2	-	0.1	0.0	2.2	96.8%	0.0	0.2	0.1	-	0.3	1.6%
Irlande	41.4	-	1.4	-	42.8	96.8%	0.9	1.2	1.4	0.0	3.5	25.6%
Italie	425.8	-	21.9	0.9	448.5	94.9%	7.0	15.6	18.4	0.5	41.6	16.9%
Luxembourg	8.1	-	0.4	0.0	8.5	95.5%	0.1	0.0	0.1	0.0	0.2	37.0%
Pays-Bas	173.5	0.3	1.7	0.4	175.9	98.8%	3.6	8.0	4.7	0.2	16.5	22.1%
Norvège	34.1	1.4	1.0	0.2	36.6	96.8%	7.7	1.9	3.1	0.0	12.6	60.8%
Pologne	292.9	-	9.2	0.6	302.7	96.8%	46.3	12.2	8.3	0.2	67.0	69.1%
Portugal	60.0	0.0	5.3	0.1	65.5	91.7%	0.6	3.7	2.7	0.1	7.1	8.1%
République slovaque	37.5	0.0	2.1	0.0	39.6	94.6%	2.9	1.3	1.3	0.1	5.5	52.3%
Espagne	285.6	0.2	20.0	0.7	306.4	93.3%	5.0	16.2	14.9	0.3	36.4	13.8%
Suède	53.6	0.1	1.7	1.0	56.4	95.1%	0.4	2.8	3.6	0.1	6.9	6.2%
Suisse	42.2	0.0	1.9	0.6	44.7	94.4%	0.4	2.9	1.1	0.0	4.4	8.3%
Turquie	202.6	0.2	18.4	0.1	221.4	91.6%	3.9	14.9	6.1	0.2	25.2	15.6%
Royaume-Uni	521.9	5.4	8.0	0.8	536.2	98.4%	15.8	21.4	7.1	0.4	44.7	35.3%
OCDE Europe	3 939.8	9.4	149.9	13.7	4 112.9	96.0%	157.3	183.2	113.6	4.2	458.3	34.3%
<i>Union européenne - 27</i>	<i>3 842.4</i>	<i>7.8</i>	<i>136.6</i>	<i>16.7</i>	<i>4 003.5</i>	<i>96.2%</i>	<i>163.5</i>	<i>176.7</i>	<i>111.3</i>	<i>4.2</i>	<i>455.7</i>	<i>35.9%</i>

* Total Monde inclue le Total Non-OCDE, le Total OCDE ainsi que les soutes internationales.

Sources: AIE, méthode sectorielle pour les émissions de CO₂ dues à la combustion d'énergie. Base de données EDGAR 32FT2000 pour les autres émissions. En général, pour les émissions autres que celles de CO₂ dues à la combustion d'énergie, les estimations sont sujettes à une incertitude significativement plus grande.

2000 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2000

million tonnes of CO₂ equivalent using GWP-100

		N ₂ O				HFCs PFCs SF ₆			Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
153.2	3 105.8	181.2	321.6	3 761.8	4.1%	286.1	108.1	124.7	38 991.6	67.1%	World *
68.2	965.0	132.6	95.8	1 261.7	5.4%	208.2	80.6	91.9	18 038.6	83.4%	Annex I Parties
58.9	796.6	98.0	90.7	1 044.2	5.6%	189.7	51.0	82.6	14 143.2	83.1%	Annex II Parties
37.6	377.3	29.5	58.2	502.6	7.5%	56.8	22.8	39.0	7 889.6	86.2%	North America
13.6	277.3	62.8	26.9	380.6	3.6%	100.6	10.7	19.3	4 214.7	79.4%	Europe
7.6	142.0	5.7	5.6	161.0	4.7%	32.3	17.5	24.3	2 039.0	78.5%	Pacific
8.7	128.3	29.8	4.6	171.3	5.1%	18.5	29.0	8.5	3 601.2	86.0%	Annex I EIT
85.0	2 140.7	48.6	225.8	2 500.1	3.4%	77.9	27.5	32.7	20 123.5	51.1%	Non-Annex I Parties
30.3	483.2	96.6	37.2	647.2	4.7%	151.1	60.7	56.0	9 903.2	82.7%	Annex I Kyoto Parties
-	-	-	-	-	-	-	-	-	829.4	100.0%	Internat. Bunkers
89.3	2 162.4	61.8	224.5	2 537.9	3.5%	88.9	52.9	38.0	21 910.8	54.7%	Non-OECD Total
64.0	943.4	119.4	97.2	1 223.9	5.2%	197.2	55.2	86.7	16 251.4	82.2%	OECD Total
2.6	42.8	2.1	1.8	49.3	5.3%	2.0	4.6	4.6	704.4	83.1%	Canada
1.4	64.4	1.0	5.0	71.8	1.9%	2.2	0.2	0.3	638.4	61.7%	Mexico
35.0	334.5	27.4	56.4	453.3	7.7%	54.8	18.2	34.4	7 185.2	86.5%	United States
39.0	441.7	30.5	63.2	574.5	6.8%	59.0	23.0	39.3	8 528.0	84.4%	OECD N. America
2.2	100.0	1.4	1.5	105.1	2.1%	2.1	1.1	0.7	572.7	64.7%	Australia
5.3	12.6	4.3	4.1	26.2	20.2%	29.9	16.3	23.5	1 376.0	86.8%	Japan
1.3	8.4	6.5	0.0	16.2	8.0%	2.5	2.8	2.8	505.4	85.5%	Korea
0.1	29.5	0.0	0.0	29.6	0.4%	0.3	0.2	0.1	90.3	39.7%	New Zealand
8.9	150.4	12.2	5.6	177.1	5.0%	34.8	20.4	27.1	2 544.4	79.9%	OECD Pacific
0.2	4.2	0.9	0.1	5.4	4.1%	1.8	0.1	0.2	82.6	78.7%	Austria
0.4	6.3	0.6	1.7	9.0	4.9%	5.4	0.0	0.2	147.6	81.8%	Belgium
0.4	5.2	1.0	0.2	6.7	6.0%	1.5	0.0	0.0	144.8	88.2%	Czech Republic
0.2	6.2	1.0	0.8	8.3	3.0%	1.0	0.0	0.1	67.1	76.9%	Denmark
0.3	3.3	1.3	0.4	5.3	6.1%	0.6	0.0	0.2	68.5	80.3%	Finland
1.7	59.5	10.0	6.2	77.4	2.1%	17.6	2.0	2.9	542.2	71.5%	France
3.6	50.8	5.7	5.3	65.3	5.5%	26.0	2.2	9.3	1 035.0	84.3%	Germany
0.5	12.0	0.6	0.2	13.2	3.5%	1.0	0.1	0.1	117.1	75.9%	Greece
0.1	6.2	1.8	0.2	8.3	1.8%	0.5	0.2	0.0	78.8	78.2%	Hungary
0.0	0.4	0.2	0.0	0.6	1.5%	0.0	0.0	0.0	3.3	67.0%	Iceland
0.1	11.8	0.8	0.7	13.4	1.1%	0.8	0.5	0.1	61.0	69.6%	Ireland
1.4	26.7	8.2	0.5	36.8	3.8%	20.1	0.7	1.6	549.3	79.0%	Italy
0.0	-	0.0	0.0	0.1	56.7%	0.0	0.0	0.0	8.8	93.3%	Luxembourg
0.6	9.6	5.9	1.9	18.0	3.2%	4.8	0.7	0.3	216.2	82.3%	Netherlands
0.2	2.7	1.7	0.3	4.8	3.2%	0.2	0.7	1.0	55.9	77.4%	Norway
1.2	20.5	5.6	0.4	27.6	4.2%	0.5	0.3	0.0	398.3	85.5%	Poland
0.2	5.8	0.7	0.4	7.1	3.2%	0.3	0.0	0.1	80.0	76.0%	Portugal
0.1	1.9	0.7	0.2	2.9	2.7%	0.3	0.0	0.0	48.3	83.7%	Slovak Republic
1.2	34.4	2.1	3.7	41.4	2.8%	10.7	0.9	0.5	396.3	73.7%	Spain
0.4	4.7	0.8	0.4	6.4	6.5%	0.4	0.5	0.5	71.1	76.7%	Sweden
0.3	2.4	0.2	0.1	3.0	10.3%	1.7	0.1	0.4	54.2	79.1%	Switzerland
0.6	40.2	4.8	0.6	46.1	1.4%	0.0	0.6	0.9	294.2	70.5%	Turkey
2.2	36.5	22.1	4.4	65.2	3.4%	8.2	2.1	1.8	658.2	82.9%	United Kingdom
16.1	351.2	76.7	28.3	472.3	3.4%	103.4	11.9	20.3	5 179.0	79.6%	OECD Europe
16.0	325.1	74.9	27.8	443.8	3.6%	101.9	12.1	18.1	5 035.1	80.0%	European Union - 27

* Total World includes Non-OECD Total, OECD Total as well as international bunkers.

Sources: IEA, Sectoral Approach for CO₂ emissions from fuel combustion. EDGAR 32FT2000 database for other emissions. In general, estimates for emissions other than CO₂ from fuel combustion are subject to significantly larger uncertainties.

2000 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2000

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Total Non-OCDE	10 161.2	150.6	680.4	3 206.2	14 198.3	72.6%	1 591.6	2 385.6	780.6	237.0	4 994.8	31.9%
Algérie	66.6	11.1	4.2	2.0	83.9	92.7%	16.1	3.7	4.3	0.1	24.2	66.5%
Angola	5.2	1.7	0.2	227.1	234.2	3.0%	4.3	14.4	1.4	16.8	36.9	11.7%
Bénin	1.4	-	0.1	18.7	20.3	7.0%	0.4	2.0	0.7	1.4	4.6	9.4%
Botswana	4.2	-	-	-	4.2	100.0%	0.9	2.9	0.3	0.2	4.2	20.8%
Cameroun	2.8	3.5	0.4	26.4	33.2	19.1%	2.7	8.4	2.1	1.8	15.0	18.1%
Congo	0.6	-	0.0	23.8	24.4	2.4%	2.9	0.7	0.5	1.7	5.7	49.8%
Rép. dém. du Congo	2.1	0.2	0.1	370.7	373.1	0.6%	3.9	12.9	5.9	27.2	49.9	7.7%
Côte d'Ivoire	6.1	-	0.3	115.4	121.9	5.0%	1.7	3.1	1.9	8.5	15.2	11.3%
Egypte	109.6	1.6	12.5	5.0	128.8	86.4%	10.3	12.3	7.9	0.1	30.5	33.7%
Erythrée	0.6	-	0.0	0.3	0.9	65.3%	0.2	2.1	0.4	-	2.6	7.0%
Ethiopie	3.2	-	0.4	7.4	11.0	28.9%	4.8	32.4	6.1	-	43.3	11.1%
Gabon	1.4	3.1	0.1	1.9	6.6	68.8%	1.6	0.1	0.2	0.1	2.0	80.5%
Ghana	5.2	-	1.0	14.3	20.5	25.5%	0.9	4.2	2.4	1.0	8.5	10.9%
Kenya	8.9	-	0.6	5.6	15.0	59.3%	3.7	11.9	3.4	-	19.0	19.3%
Libye	39.7	1.9	1.7	0.3	43.6	95.5%	6.6	0.8	1.1	0.0	8.5	78.1%
Maroc	29.5	-	4.0	0.4	34.0	86.9%	1.5	14.8	1.8	3.4	21.5	6.8%
Mozambique	1.3	-	0.1	23.6	25.1	5.1%	0.2	4.0	0.4	-	4.6	4.3%
Namibie	1.9	-	0.0	0.3	2.2	86.6%	0.2	3.3	0.2	0.0	3.7	5.4%
Nigéria	41.1	31.3	1.2	46.8	120.4	60.1%	35.7	25.6	14.8	1.2	77.2	46.2%
Sénégal	3.6	-	0.5	0.7	4.8	75.7%	0.3	4.7	1.2	-	6.2	4.9%
Afrique du Sud	298.5	-	5.0	5.2	308.7	96.7%	32.2	13.9	9.4	3.3	58.8	54.7%
Soudan	5.5	-	0.1	21.7	27.3	20.0%	14.5	48.0	3.4	-	65.9	22.0%
Rép. unie de Tanzanie	2.6	-	0.4	52.0	55.0	4.7%	8.0	21.6	3.5	2.8	35.9	22.3%
Togo	0.9	-	0.3	7.3	8.6	10.8%	0.4	1.4	0.5	0.5	2.8	14.8%
Tunisie	18.0	0.3	3.2	0.7	22.2	82.4%	1.4	1.7	1.4	0.0	4.5	31.2%
Zambie	1.7	-	0.3	43.8	45.8	3.7%	1.0	11.5	1.1	3.1	16.8	5.7%
Zimbabwe	12.7	-	0.5	1.9	15.1	84.4%	2.6	6.5	1.5	0.0	10.6	24.3%
Autres pays d'Afrique	20.1	1.8	0.8	161.5	184.2	11.9%	14.7	86.8	19.8	9.3	130.6	11.3%
Afrique	695.0	56.6	38.1	1 184.7	1 974.4	38.1%	173.5	355.5	97.6	82.4	709.1	24.5%
Bahrein	14.1	-	0.0	0.0	14.2	99.5%	1.8	0.0	0.1	-	2.0	92.8%
Rép. islamique d'Iran	304.8	24.2	13.4	2.6	345.0	95.3%	61.5	19.7	12.4	0.0	93.6	65.7%
Irak	75.9	1.8	1.0	1.0	79.8	97.4%	5.3	1.4	3.9	0.0	10.7	49.8%
Israël	55.5	-	3.6	0.0	59.2	93.8%	0.1	0.5	0.6	0.0	1.1	9.6%
Jordanie	14.3	-	1.3	0.2	15.8	90.5%	0.2	0.4	1.0	-	1.6	13.3%
Koweït	50.4	1.0	0.8	-	52.1	98.5%	10.5	0.1	0.5	-	11.1	94.5%
Liban	14.2	-	1.4	0.2	15.7	90.1%	0.1	0.2	0.6	0.0	0.9	12.8%
Oman	19.8	1.9	0.6	0.1	22.3	96.8%	3.2	0.5	0.4	-	4.2	77.9%
Qatar	26.9	-	0.5	0.0	27.4	98.1%	4.9	0.1	0.2	0.0	5.2	94.5%
Arabie saoudite	249.1	1.1	9.2	0.3	259.7	96.4%	58.3	1.1	3.8	-	63.1	92.4%
Syrie	45.8	0.8	2.4	0.6	49.6	94.0%	2.7	2.5	2.4	0.0	7.7	35.1%
Emirats arabes unis	83.2	3.1	3.1	0.2	89.5	96.4%	33.2	0.5	0.5	-	34.2	97.2%
Yémen	13.2	-	0.7	0.6	14.5	91.1%	4.0	2.2	2.5	-	8.7	46.0%
Moyen-Orient	967.1	33.8	38.1	5.8	1 044.8	95.8%	186.0	29.2	28.9	0.1	244.1	76.2%
Albanie	3.2	-	0.1	0.2	3.4	92.4%	0.2	1.7	0.4	0.0	2.3	10.6%
Bosnie-Herzégovine	12.8	-	0.2	0.0	13.0	98.4%	1.5	0.9	0.4	0.0	2.8	52.3%
Bulgarie	42.1	-	2.1	0.6	44.9	93.8%	2.0	2.0	1.9	0.1	6.0	32.8%
Croatie	17.8	-	1.6	0.4	19.8	89.8%	1.6	1.0	0.8	0.0	3.4	47.3%
Chypre	6.3	-	0.7	0.0	7.0	90.0%	0.0	0.2	0.1	-	0.3	4.4%
Gibraltar	0.4	-	-	-	0.4	100.0%	0.0	-	0.0	-	0.0	46.1%
ex-RY de Macédoine	8.5	-	0.3	0.3	9.0	93.6%	0.2	0.7	0.3	0.0	1.2	17.6%
Malte	2.2	-	0.0	0.0	2.3	99.8%	0.0	0.0	0.1	-	0.1	2.7%
Roumanie	86.5	-	3.0	1.1	90.6	95.5%	12.9	7.6	3.9	0.1	24.4	52.6%
Serbie et Monténégro	40.4	-	1.4	0.0	41.8	96.6%	1.1	5.1	1.4	0.1	7.7	14.4%
Slovénie	14.1	-	1.6	0.2	15.9	88.8%	0.3	0.8	0.5	-	1.6	21.1%
Europe Non-OCDE	234.3	-	10.9	2.9	248.1	94.4%	19.9	20.1	9.7	0.4	50.0	39.7%

2000 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2000

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
89.3	2 162.4	61.8	224.5	2 537.9	3.5%	88.9	52.9	38.0	21 910.8	54.7%	Non-OECD Total
0.3	8.5	0.6	0.0	9.4	3.2%	-	-	0.1	117.6	80.1%	Algeria
0.2	6.6	-	17.9	24.8	0.9%	-	-	0.0	295.9	3.9%	Angola
0.1	2.7	-	1.4	4.2	1.4%	-	-	0.0	29.0	6.5%	Benin
0.0	3.2	-	0.0	3.3	1.4%	-	-	0.0	11.6	43.8%	Botswana
0.2	9.7	-	2.0	11.8	1.7%	-	0.9	0.0	60.9	15.2%	Cameroon
0.0	0.3	-	1.9	2.2	1.7%	-	-	0.0	32.3	10.8%	Congo
0.6	8.9	-	29.0	38.5	1.5%	-	-	-	461.5	1.5%	Dem. Rep. of Congo
0.2	2.7	-	9.0	11.9	1.8%	-	-	0.0	149.0	5.4%	Côte d'Ivoire
0.7	21.2	3.3	0.0	25.2	2.7%	0.2	0.7	0.9	186.3	65.6%	Egypt
0.0	1.8	-	0.0	1.8	1.6%	-	-	0.0	5.3	15.3%	Eritrea
0.8	56.7	-	0.0	57.5	1.4%	-	-	0.0	111.7	7.8%	Ethiopia
0.0	0.3	-	0.1	0.4	10.3%	-	-	0.0	9.0	68.7%	Gabon
0.2	7.5	-	1.0	8.6	1.8%	-	0.2	0.0	37.7	16.7%	Ghana
0.6	19.0	-	0.0	19.6	3.1%	-	-	0.0	53.6	24.6%	Kenya
0.1	2.0	-	0.0	2.2	6.8%	-	-	0.3	54.5	88.8%	Libya
0.2	9.4	-	3.6	13.2	1.8%	-	-	0.0	68.6	45.5%	Morocco
0.0	7.7	-	0.0	7.8	0.5%	-	-	0.0	37.4	4.0%	Mozambique
0.0	4.1	-	0.0	4.1	0.8%	-	-	0.0	9.9	21.2%	Namibia
3.4	30.8	-	1.3	35.4	9.6%	-	-	0.1	233.1	47.8%	Nigeria
0.1	8.6	-	0.0	8.6	1.0%	0.0	-	0.0	19.6	20.3%	Senegal
1.7	22.6	1.5	1.0	26.8	6.5%	1.1	0.5	1.0	396.9	83.8%	South Africa
2.1	48.0	-	0.0	50.1	4.3%	-	-	0.0	143.4	15.4%	Sudan
1.6	24.4	-	3.0	29.0	5.6%	-	-	0.0	119.9	10.2%	United Rep. of Tanzania
0.1	3.1	-	0.5	3.7	1.8%	-	-	0.0	15.0	9.3%	Togo
0.1	5.3	0.4	0.0	5.8	1.8%	0.0	-	0.0	32.6	60.8%	Tunisia
0.2	5.3	0.5	3.4	9.3	1.9%	-	-	0.0	71.8	3.9%	Zambia
0.3	7.9	-	0.0	8.2	3.3%	0.0	-	0.0	33.8	45.9%	Zimbabwe
2.3	108.0	-	9.4	119.7	1.9%	0.0	-	0.0	434.6	8.9%	Other Africa
16.3	436.0	6.2	84.6	543.1	3.0%	1.4	2.3	2.4	3 232.7	29.1%	Africa
0.0	0.0	-	0.0	0.1	49.1%	-	0.2	0.0	16.4	97.4%	Bahrain
0.9	57.6	0.5	0.0	58.9	1.5%	-	0.2	1.4	499.1	78.4%	Islamic Rep. of Iran
0.3	4.6	-	0.0	4.9	5.5%	-	-	0.5	95.8	86.9%	Iraq
0.2	1.5	-	0.0	1.8	12.4%	0.3	0.2	0.7	63.2	88.4%	Israel
0.1	1.3	-	0.0	1.3	4.6%	0.0	-	0.0	18.7	77.9%	Jordan
0.1	0.3	-	0.0	0.4	22.4%	-	-	0.4	64.0	96.8%	Kuwait
0.1	0.9	-	0.0	1.0	5.6%	-	-	0.0	17.6	81.3%	Lebanon
0.0	1.0	-	0.0	1.0	3.0%	-	-	0.0	27.5	90.5%	Oman
0.0	0.3	-	0.0	0.3	9.7%	-	-	0.0	32.9	96.7%	Qatar
0.5	7.4	-	0.0	7.9	6.8%	-	-	1.5	332.2	93.0%	Saudi Arabia
0.2	8.4	0.2	0.0	8.8	2.2%	-	-	0.0	66.0	75.0%	Syria
0.2	1.8	-	0.0	2.0	11.0%	-	0.2	0.3	126.2	94.8%	United Arab Emirates
0.1	5.8	-	0.0	5.9	1.3%	-	-	0.0	29.2	59.4%	Yemen
2.7	90.8	0.7	0.0	94.2	2.8%	0.3	0.7	4.8	1 388.9	85.7%	Middle East
0.0	1.6	-	0.0	1.6	2.0%	0.1	-	0.0	7.5	46.4%	Albania
0.2	0.8	-	0.0	1.0	17.4%	0.1	0.8	0.0	17.8	81.1%	Bosnia-Herzegovina
0.3	4.0	1.7	0.1	6.0	5.2%	0.2	-	0.0	57.0	77.8%	Bulgaria
0.3	2.2	0.9	0.0	3.3	8.3%	0.1	0.1	0.0	26.8	73.6%	Croatia
0.0	0.6	-	0.0	0.6	4.1%	-	-	0.0	8.0	80.1%	Cyprus
0.0	-	-	-	0.0	100.0%	-	-	-	0.4	98.8%	Gibraltar
0.1	0.9	-	0.0	0.9	6.6%	0.1	-	0.0	11.3	77.3%	FYR of Macedonia
0.0	0.0	-	0.0	0.1	15.9%	-	-	0.0	2.4	94.0%	Malta
0.3	10.1	3.4	0.2	13.9	2.2%	0.1	1.6	0.0	130.6	76.3%	Romania
0.3	4.8	0.5	0.0	5.6	4.7%	0.4	0.5	0.0	56.0	74.6%	Serbia and Montenegro
0.1	1.0	-	0.0	1.1	6.5%	0.0	0.1	0.0	18.7	77.5%	Slovenia
1.5	25.8	6.4	0.4	34.2	4.5%	1.0	3.1	0.0	336.4	76.0%	Non-OECD Europe

2000 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2000

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Arménie	3.4	-	0.1	0.1	3.6	94.3%	0.6	1.0	0.5	0.0	2.1	28.1%
Azerbaïdjan	28.3	12.6	0.1	0.2	41.1	99.3%	5.2	4.4	1.0	0.0	10.6	49.2%
Bélarus	55.4	-	1.4	0.2	57.0	97.2%	7.1	7.0	2.0	0.0	16.2	44.1%
Estonie	14.5	-	0.2	0.2	14.9	97.4%	0.5	0.5	0.4	0.0	1.3	38.6%
Géorgie	4.4	-	0.2	1.2	5.8	75.8%	1.3	2.0	0.8	0.0	4.1	31.4%
Kazakhstan	116.9	1.1	1.0	0.1	119.1	99.0%	13.9	8.3	2.8	0.6	25.6	54.2%
Kirghizistan	4.6	-	0.3	0.1	4.9	92.8%	0.4	2.3	0.6	0.0	3.2	11.4%
Lettonie	6.7	-	0.2	0.7	7.6	88.5%	0.9	0.7	0.6	0.0	2.2	41.2%
Lituanie	11.2	-	0.3	1.0	12.5	89.6%	1.6	1.6	0.7	0.0	3.9	41.2%
République de Moldavie	6.5	-	0.1	0.2	6.8	94.9%	1.1	1.0	0.6	0.0	2.7	41.1%
Russie	1 513.5	8.6	22.0	7.2	1 551.3	98.1%	381.6	48.2	55.8	13.2	498.8	76.5%
Tadjikistan	4.2	-	0.0	0.0	4.3	99.0%	0.3	2.1	0.7	0.0	3.1	10.7%
Turkménistan	36.3	-	0.2	0.0	36.5	99.3%	18.9	2.4	0.6	0.0	21.9	86.0%
Ukraine	285.8	0.0	5.3	1.3	292.4	97.7%	53.2	18.0	9.9	1.1	82.1	64.7%
Ouzbékistan	116.7	-	1.9	0.5	119.1	98.0%	36.1	9.6	3.2	0.0	48.9	73.8%
Ex-URSS	2 208.3	22.3	33.3	13.1	2 277.1	98.0%	522.7	109.1	80.2	15.0	727.0	71.9%
Argentine	134.3	1.1	4.5	2.9	142.8	94.8%	12.2	57.9	13.5	7.2	90.8	13.5%
Bolivie	7.6	0.5	0.5	200.9	209.6	3.9%	0.8	9.2	1.9	14.9	26.8	2.8%
Brésil	305.1	5.1	24.1	770.6	1 104.9	28.1%	12.7	240.9	61.9	58.8	374.4	3.4%
Chili	53.2	0.3	2.5	1.9	57.9	92.4%	2.4	5.7	10.0	0.5	18.5	12.8%
Colombie	60.7	1.0	5.8	63.3	130.8	47.2%	9.7	32.5	12.0	4.6	58.7	16.5%
Costa Rica	4.6	-	0.6	0.1	5.2	87.1%	0.0	1.8	0.9	-	2.8	1.3%
Cuba	24.8	0.2	0.9	1.3	27.1	92.1%	0.6	6.1	2.9	-	9.6	6.4%
République dominicaine	17.4	-	1.5	0.4	19.4	89.9%	0.2	3.5	1.9	-	5.6	4.3%
Equateur	17.9	1.5	1.4	1.1	21.9	88.7%	2.1	6.8	3.0	0.0	12.0	17.5%
El Salvador	5.2	-	0.5	0.8	6.6	79.3%	0.4	1.3	1.2	-	2.9	13.8%
Guatemala	8.8	-	0.9	27.8	37.6	23.5%	1.0	3.8	2.1	2.0	8.9	11.5%
Haiti	1.4	-	0.2	0.5	2.1	66.8%	0.2	2.3	1.2	-	3.7	6.5%
Honduras	4.4	-	0.5	0.6	5.6	79.3%	0.3	3.0	1.2	-	4.5	6.9%
Jamaïque	9.8	-	0.5	0.1	10.3	94.6%	0.0	0.5	0.6	-	1.1	3.3%
Antilles néerlandaises	3.2	-	-	0.0	3.2	99.3%	0.0	0.0	0.1	-	0.1	38.4%
Nicaragua	3.5	-	0.2	0.6	4.4	80.4%	0.3	4.8	0.9	-	6.1	5.0%
Panama	4.7	-	0.4	0.3	5.3	87.9%	0.1	1.9	0.7	-	2.7	4.8%
Paraguay	3.3	-	0.4	25.2	28.8	11.3%	0.3	12.7	1.2	3.5	17.7	1.7%
Pérou	26.4	0.3	2.0	23.5	52.2	51.2%	1.4	9.8	7.4	1.7	20.3	6.8%
Trinité-et-Tobago	17.9	4.3	0.4	0.0	22.7	98.1%	3.0	0.0	0.8	-	3.8	78.1%
Uruguay	5.3	-	0.4	0.2	5.8	90.7%	0.1	14.0	1.4	0.1	15.6	0.7%
Vénézuéla	128.3	3.4	4.5	70.2	206.5	63.8%	27.6	20.5	9.5	5.2	62.9	43.9%
Autres Amérique Latine	13.7	-	1.1	17.7	32.6	42.1%	0.7	3.4	2.3	1.2	7.6	8.7%
Amérique latine	861.6	17.7	53.8	1 210.2	2 143.3	41.0%	76.3	442.6	138.6	99.7	757.1	10.1%
Bangladesh	25.2	-	1.8	31.7	58.6	43.0%	10.7	63.5	16.8	1.0	91.9	11.6%
Brunei Darussalam	4.7	0.7	0.1	4.3	9.7	54.6%	1.7	0.0	0.1	0.3	2.1	80.5%
Cambodge	2.4	-	-	8.1	10.5	23.1%	0.8	9.1	1.6	1.9	13.4	6.0%
Inde	968.4	3.3	47.6	136.2	1 155.6	84.1%	104.7	473.6	141.1	2.9	722.4	14.5%
Indonésie	268.9	9.3	13.9	208.3	500.3	55.6%	81.2	92.2	36.6	13.1	223.1	36.4%
Rép. pop. dém. de Corée	68.7	-	2.0	2.6	73.2	93.8%	3.1	3.9	3.5	0.1	10.6	29.2%
Malaisie	112.7	5.9	5.7	31.6	155.9	76.1%	14.6	5.6	3.4	1.7	25.3	57.7%
Mongolie	8.8	-	0.1	0.3	9.1	96.4%	0.1	8.4	0.4	0.2	9.2	1.6%
Myanmar	8.1	0.2	0.2	106.0	114.5	7.2%	4.1	41.0	6.7	7.4	59.3	6.9%
Népal	3.1	-	0.2	6.4	9.6	31.9%	3.7	29.0	3.3	0.0	36.1	10.4%
Pakistan	97.8	-	4.9	16.9	119.6	81.8%	15.6	67.8	21.3	0.1	104.7	14.9%
Philippines	68.9	-	5.9	7.7	82.5	83.5%	3.6	29.9	11.1	0.0	44.6	8.0%
Singapour	38.1	-	0.6	-	38.7	98.5%	0.4	0.1	0.8	-	1.3	31.1%
Sri Lanka	10.8	-	0.5	2.3	13.6	79.4%	1.3	6.3	2.7	-	10.2	12.3%
Taipei chinois	215.0	-	9.3	1.9	226.1	95.1%	2.7	0.0	1.2	0.3	4.2	64.4%
Thaïlande	157.9	-	13.0	33.5	204.3	77.3%	7.4	58.3	9.1	2.3	77.1	9.6%
Viêt-Nam	43.8	0.7	7.3	17.9	69.7	63.9%	13.4	46.7	11.0	0.6	71.6	18.7%
Autres pays d'Asie	14.3	-	0.2	57.1	71.5	19.9%	3.1	15.2	5.0	2.5	25.8	12.0%
Asie	2 117.4	20.1	113.1	672.6	2 923.2	73.1%	272.1	950.6	275.6	34.4	1 532.8	17.8%
Rép. populaire de Chine	3 037.7	-	392.4	116.9	3 547.0	85.6%	340.7	478.4	149.5	5.2	973.7	35.0%
Hong Kong, Chine	39.7	-	0.6	0.0	40.4	98.4%	0.5	0.0	0.6	-	1.0	44.2%
Chine	3 077.4	-	393.1	116.9	3 587.4	85.8%	341.1	478.4	150.0	5.2	974.8	35.0%

2000 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2000

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
0.0	0.5	-	0.0	0.5	4.4%	0.0	-	-	6.2	64.8%	Armenia
0.3	3.3	-	0.0	3.5	7.6%	0.0	0.0	-	55.3	83.8%	Azerbaijan
0.1	7.2	2.5	0.1	9.9	1.1%	0.3	-	-	83.4	75.1%	Belarus
0.1	0.6	-	0.0	0.7	12.2%	0.0	-	0.0	17.0	89.0%	Estonia
0.1	1.5	0.6	0.0	2.3	6.5%	0.0	-	-	12.2	48.0%	Georgia
0.5	9.3	-	0.2	10.0	5.1%	-	-	-	154.8	85.5%	Kazakhstan
0.0	3.1	-	0.0	3.2	0.9%	0.0	-	-	11.4	43.8%	Kyrgyzstan
0.1	1.1	-	0.0	1.2	7.4%	0.0	-	-	11.1	69.5%	Latvia
0.1	2.2	-	0.0	2.3	5.8%	0.1	-	-	18.8	68.8%	Lithuania
0.0	1.5	-	0.0	1.5	2.5%	0.2	-	-	11.3	67.6%	Republic of Moldova
4.4	42.9	3.0	2.8	53.1	8.3%	14.0	26.1	8.4	2 151.7	88.7%	Russia
0.0	1.9	-	0.0	1.9	0.5%	0.0	0.1	-	9.4	48.5%	Tajikistan
0.0	3.0	0.5	0.0	3.6	1.0%	0.2	-	-	62.2	88.7%	Turkmenistan
0.9	19.5	8.8	0.3	29.6	3.2%	0.6	0.1	-	404.9	83.9%	Ukraine
0.2	12.1	0.0	0.0	12.4	1.6%	0.5	-	-	180.8	84.6%	Uzbekistan
7.0	109.8	15.4	3.6	135.8	5.2%	15.9	26.4	8.4	3 190.6	86.5%	Former USSR
0.3	73.3	0.1	1.4	75.2	0.4%	0.6	0.1	0.2	309.6	47.8%	Argentina
0.0	11.1	-	16.0	27.2	0.2%	-	-	0.0	263.5	3.4%	Bolivia
2.6	215.1	7.5	64.3	289.5	0.9%	3.1	3.1	1.0	1 776.0	18.3%	Brazil
0.4	9.8	0.7	0.1	11.0	3.4%	-	-	0.0	87.5	64.3%	Chile
0.4	18.6	0.2	4.9	24.0	1.6%	0.2	-	0.1	213.9	33.6%	Colombia
0.0	2.8	0.1	0.0	2.9	1.2%	-	-	0.0	10.9	42.4%	Costa Rica
0.2	7.5	0.6	0.1	8.5	2.6%	0.1	-	0.0	45.3	56.9%	Cuba
0.1	3.3	-	0.0	3.4	2.8%	-	-	0.0	28.4	62.5%	Dominican Republic
0.1	8.0	-	0.1	8.2	1.3%	-	-	0.0	42.1	51.3%	Ecuador
0.1	2.0	-	0.0	2.1	5.1%	-	-	0.0	11.6	49.3%	El Salvador
0.2	4.8	-	2.1	7.1	2.8%	-	-	0.0	53.6	18.8%	Guatemala
0.1	4.1	-	0.0	4.1	1.4%	-	-	0.0	9.9	17.2%	Haiti
0.1	3.2	-	0.0	3.3	2.5%	-	-	0.0	13.3	36.0%	Honduras
0.0	1.0	-	0.0	1.1	4.0%	-	-	0.0	12.5	78.8%	Jamaica
0.0	0.0	-	0.0	0.0	67.5%	-	-	0.0	3.4	96.8%	Netherlands Antilles
0.1	2.7	-	0.0	2.8	3.0%	-	-	0.0	13.2	29.6%	Nicaragua
0.1	1.9	-	0.0	2.0	2.7%	-	-	0.0	10.0	48.7%	Panama
0.1	9.6	-	2.2	11.9	0.8%	-	-	0.0	58.5	6.2%	Paraguay
0.2	14.1	0.0	1.8	16.1	1.5%	0.1	-	0.0	88.7	31.9%	Peru
0.0	0.3	-	0.0	0.3	5.3%	-	-	0.0	26.8	94.3%	Trinidad and Tobago
0.0	16.0	-	0.0	16.1	0.3%	0.0	-	0.0	37.5	14.5%	Uruguay
0.2	19.0	0.0	5.6	24.8	0.9%	1.5	0.3	0.2	296.2	53.9%	Venezuela
0.3	4.4	-	1.2	5.9	4.7%	-	0.1	0.0	46.1	31.8%	Other Latin America
5.8	432.5	9.4	99.9	547.5	1.1%	5.7	3.6	1.5	3 458.7	27.8%	Latin America
1.9	30.6	-	1.0	33.5	5.6%	-	-	0.0	184.1	20.5%	Bangladesh
0.0	0.0	-	0.3	0.4	3.7%	-	-	0.0	12.1	57.5%	Brunei Darussalam
0.2	2.5	-	0.8	3.5	4.4%	-	-	-	27.3	12.3%	Cambodia
15.8	259.3	1.4	2.3	278.7	5.7%	2.3	1.9	4.8	2 165.7	50.4%	India
4.4	50.6	0.2	13.9	69.1	6.4%	-	0.2	0.7	793.5	45.8%	Indonesia
0.6	13.3	-	0.0	13.9	4.2%	-	-	0.9	98.6	73.4%	DPR of Korea
1.2	5.8	0.5	1.8	9.3	12.9%	-	0.0	0.5	191.1	70.3%	Malaysia
0.0	16.8	-	0.1	16.9	0.2%	-	-	-	35.2	25.5%	Mongolia
0.7	13.5	-	7.9	22.1	3.0%	-	-	0.0	195.8	6.7%	Myanmar
0.7	5.8	-	0.0	6.5	10.8%	-	-	0.0	52.1	14.4%	Nepal
2.0	70.9	0.7	0.0	73.6	2.7%	-	-	0.6	298.6	38.6%	Pakistan
1.0	15.9	0.0	0.0	16.9	6.0%	-	-	0.3	144.4	50.9%	Philippines
0.3	0.1	5.6	0.0	5.9	4.3%	0.2	0.5	0.5	47.1	82.2%	Singapore
0.3	2.5	-	0.0	2.8	10.2%	-	-	0.0	26.7	46.4%	Sri Lanka
1.0	0.0	0.0	0.0	1.0	96.7%	0.0	2.1	2.6	236.1	92.6%	Chinese Taipei
0.7	22.7	0.2	2.5	26.0	2.8%	-	-	0.9	308.3	53.8%	Thailand
1.2	25.3	-	0.6	27.1	4.3%	-	-	0.0	168.4	35.1%	Vietnam
0.6	14.5	-	3.8	18.9	3.1%	0.0	-	0.0	116.3	15.4%	Other Asia
32.4	550.1	8.5	35.2	626.2	5.2%	2.6	4.7	12.1	5 101.6	47.9%	Asia
23.4	517.4	15.1	0.7	556.6	4.2%	62.0	12.1	8.4	5 159.9	65.9%	People's Rep. of China
0.2	0.0	-	0.0	0.2	94.2%	-	-	0.3	42.0	96.2%	Hong Kong, China
23.6	517.4	15.1	0.7	556.8	4.2%	62.0	12.1	8.8	5 201.9	66.2%	China

2005 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2005

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Monde *	27 136.4	173.4	1 342.3	3 309.9	31 962.0	85.4%	2 316.1	2 968.0	1 231.7	268.1	6 783.9	34.1%
<i>Parties de l'Annexe I</i>	14 182.7	42.9	336.7	52.4	14 614.8	97.3%	1 155.0	518.9	450.4	40.2	2 164.5	53.4%
<i>Parties de l'Annexe II</i>	11 342.6	18.6	244.5	38.3	11 644.0	97.6%	627.1	413.8	343.6	24.9	1 409.4	44.5%
<i>Amérique du Nord</i>	6 365.5	9.9	73.0	20.4	6 468.9	98.6%	505.1	171.9	225.1	12.0	914.1	55.3%
<i>Europe</i>	3 351.2	8.1	124.4	12.5	3 496.1	96.1%	74.4	140.2	79.5	3.4	297.5	25.0%
<i>Pacifique</i>	1 625.8	0.6	47.2	5.4	1 679.0	96.9%	47.6	101.7	39.1	9.4	197.8	24.1%
<i>Annexe I EET</i>	2 621.2	24.3	68.3	13.9	2 727.8	97.0%	524.3	91.3	101.2	15.2	732.0	71.6%
<i>Parties non Annexe I</i>	11 994.5	130.4	1 005.6	3 257.6	16 388.1	74.0%	1 161.1	2 449.1	781.3	227.9	4 619.4	25.1%
<i>Parties Kyoto (Annexe I)</i>	7 709.4	36.7	240.9	29.8	8 016.8	96.6%	658.8	277.8	235.0	26.0	1 197.6	55.0%
Soutes internat.	959.1	-	-	-	959.1	100%	-	-	-	-	-	-
Total Non-OCDE	13 267.5	146.7	1 010.7	3 206.2	17 631.2	76.1%	1 595.3	2 466.5	809.8	237.0	5 108.6	31.2%
Total OCDE	12 909.7	26.6	331.5	103.8	13 371.7	96.7%	720.8	501.5	421.9	31.1	1 675.3	43.0%
Canada	548.6	3.7	8.8	1.0	562.1	98.2%	48.3	23.0	27.8	4.7	103.8	46.6%
Mexique	389.4	8.0	22.1	63.3	482.8	82.3%	26.7	47.5	41.3	4.6	120.1	22.2%
Etats-Unis	5 817.0	6.2	64.2	19.4	5 906.8	98.6%	456.8	148.9	197.2	7.3	810.3	56.4%
OCDE Amérique du N.	6 755.0	17.9	95.1	83.8	6 951.7	97.4%	531.8	219.5	266.3	16.6	1 034.2	51.4%
Australie	376.8	-	5.6	2.8	385.2	97.8%	28.7	71.9	9.5	6.7	116.8	24.6%
Japon	1 214.2	-	41.1	2.2	1 257.5	96.6%	16.0	7.2	27.6	2.7	53.5	30.0%
Corée	448.9	-	26.0	0.9	475.8	94.3%	5.8	9.7	14.9	0.9	31.3	18.5%
Nouvelle-Zélande	34.9	0.6	0.6	0.3	36.3	97.6%	2.9	22.6	2.0	0.0	27.5	10.4%
OCDE Pacifique	2 074.8	0.6	73.2	6.3	2 154.8	96.3%	53.4	111.4	54.0	10.3	229.1	23.3%
Autriche	77.2	-	3.8	0.5	81.5	94.7%	1.0	3.6	2.4	0.1	7.2	14.5%
Belgique	111.7	-	5.2	0.2	117.0	95.4%	1.3	4.5	1.5	0.3	7.6	16.9%
République tchèque	118.1	-	2.9	0.1	121.1	97.5%	8.8	2.6	3.4	0.2	14.9	58.7%
Danemark	47.5	0.2	1.2	0.4	49.3	96.8%	0.8	3.3	0.8	-	4.9	16.3%
Finlande	55.4	-	1.0	1.0	57.4	96.5%	0.6	1.7	3.2	0.1	5.5	10.2%
France	388.4	0.3	13.1	3.7	405.5	95.9%	4.7	30.9	7.4	0.5	43.5	10.7%
Allemagne	813.5	1.1	20.2	1.8	836.6	97.4%	26.6	22.8	7.8	0.9	58.1	45.7%
Grèce	95.7	0.0	7.9	0.3	103.8	92.1%	0.7	2.9	3.8	0.0	7.4	9.8%
Hongrie	57.7	-	2.1	0.3	60.1	96.0%	5.8	2.0	3.2	0.1	11.1	52.5%
Islande	2.2	0.0	0.0	0.0	2.3	97.9%	0.0	0.2	0.1	-	0.3	1.7%
Irlande	43.8	-	2.1	-	45.8	95.5%	0.9	1.2	1.6	0.0	3.7	24.4%
Italie	454.0	-	26.4	0.9	481.3	94.3%	7.0	13.8	15.3	0.5	36.7	19.1%
Luxembourg	11.3	-	0.4	0.0	11.7	96.7%	0.1	0.0	0.1	0.0	0.2	40.3%
Pays-Bas	182.9	0.1	1.2	0.4	184.7	99.1%	3.6	7.5	4.0	0.2	15.2	23.7%
Norvège	37.0	0.8	0.8	0.2	38.8	97.5%	7.5	1.7	2.9	0.0	12.1	61.8%
Pologne	295.8	-	7.7	0.6	304.2	97.3%	40.2	11.0	8.6	0.2	60.1	67.0%
Portugal	63.0	0.0	4.6	0.1	67.8	93.0%	0.6	3.8	2.7	0.1	7.1	8.0%
République slovaque	38.3	0.0	2.4	0.0	40.7	94.2%	2.9	1.0	1.3	0.1	5.3	54.2%
Espagne	341.8	0.2	26.1	0.7	368.8	92.7%	4.3	16.8	16.7	0.3	38.0	11.3%
Suède	51.0	0.0	1.8	1.0	53.9	94.7%	0.4	2.7	3.3	0.1	6.5	6.6%
Suisse	45.0	0.0	1.3	0.6	47.0	95.9%	0.4	2.8	1.0	0.0	4.2	8.8%
Turquie	218.9	-0.0	23.8	0.1	242.9	90.1%	3.5	13.8	5.6	0.2	23.1	15.2%
Royaume-Uni	529.9	5.1	7.2	0.8	542.9	98.5%	14.1	20.0	5.0	0.4	39.4	35.7%
OCDE Europe	4 080.0	8.1	163.3	13.7	4 265.1	95.8%	135.6	170.6	101.6	4.2	411.9	32.9%
<i>Union européenne - 27</i>	<i>3 975.9</i>	<i>7.2</i>	<i>147.2</i>	<i>16.7</i>	<i>4 146.9</i>	<i>96.0%</i>	<i>141.8</i>	<i>164.6</i>	<i>100.3</i>	<i>4.2</i>	<i>410.9</i>	<i>34.5%</i>

* Total Monde inclue le Total Non-OCDE, le Total OCDE ainsi que les soutes internationales.

Sources: AIE, méthode sectorielle pour les émissions de CO₂ dues à la combustion d'énergie. Base de données EDGAR 4 et estimations pour les autres émissions. En général, pour les émissions autres que celles de CO₂ dues à la combustion d'énergie, les estimations sont sujettes à une incertitude significativement plus grande.

2005 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2005

million tonnes of CO₂ equivalent using GWP-100

		N ₂ O				HFCs PFCs SF ₆			Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
162.0	3 263.7	195.7	321.6	3 943.0	4.1%	385.4	93.0	124.7	43 291.9	68.8%	World *
69.8	962.8	133.8	95.8	1 262.2	5.5%	267.5	65.5	91.9	18 466.4	83.7%	Annex I Parties
60.8	814.1	97.3	90.7	1 062.9	5.7%	240.1	30.5	82.6	14 469.6	83.3%	Annex II Parties
36.6	385.5	27.2	58.2	507.6	7.2%	72.7	7.7	39.0	8 010.0	86.4%	North America
15.3	280.5	66.6	26.9	389.3	3.9%	130.4	8.1	19.3	4 340.7	79.5%	Europe
9.0	148.0	3.5	5.6	166.0	5.4%	37.0	14.7	24.3	2 118.8	79.4%	Pacific
8.1	106.5	32.2	4.6	151.3	5.4%	27.4	34.4	8.5	3 681.3	86.3%	Annex I EIT
92.2	2 300.9	61.9	225.8	2 680.8	3.4%	117.9	27.5	32.7	23 866.4	56.1%	Non-Annex I Parties
32.0	464.2	99.8	37.2	633.1	5.1%	194.4	59.7	56.0	10 157.6	83.1%	Annex I Kyoto Parties
-	-	-	-	-	-	-	-	-	959.1	100.0%	Internat. Bunkers
95.7	2 299.3	71.0	224.5	2 690.4	3.6%	133.3	58.2	38.0	25 659.7	58.9%	Non-OECD Total
66.4	964.4	124.6	97.2	1 252.6	5.3%	252.1	34.8	86.7	16 673.1	82.3%	OECD Total
2.7	44.6	2.3	1.8	51.4	5.2%	3.1	3.3	4.6	728.3	82.8%	Canada
1.5	68.0	0.9	5.0	75.5	2.0%	2.6	0.2	0.3	681.6	62.4%	Mexico
33.9	341.0	24.9	56.4	456.2	7.4%	69.6	4.4	34.4	7 281.7	86.7%	United States
38.1	453.6	28.2	63.2	583.1	6.5%	75.4	7.9	39.3	8 691.6	84.5%	OECD N. America
2.9	108.6	1.5	1.5	114.5	2.5%	3.1	0.8	0.7	621.1	65.8%	Australia
5.9	11.6	2.0	4.1	23.6	25.1%	33.4	13.6	23.5	1 405.1	88.0%	Japan
1.6	8.0	12.5	0.0	22.0	7.2%	3.1	2.8	2.8	537.8	84.8%	Korea
0.1	27.8	0.0	0.0	28.0	0.4%	0.5	0.2	0.1	92.6	41.5%	New Zealand
10.5	156.0	15.9	5.6	188.1	5.6%	40.1	17.5	27.1	2 656.6	80.5%	OECD Pacific
0.2	3.9	0.4	0.1	4.6	4.1%	2.9	0.2	0.2	96.6	81.2%	Austria
0.5	6.3	1.2	1.7	9.7	5.1%	9.2	0.0	0.2	143.7	79.0%	Belgium
0.4	4.9	1.1	0.2	6.6	6.2%	3.5	0.0	0.0	146.2	87.1%	Czech Republic
0.2	5.8	0.6	0.8	7.4	3.0%	1.3	0.0	0.1	63.1	77.3%	Denmark
0.4	3.2	1.4	0.4	5.3	6.7%	0.9	0.0	0.2	69.3	81.3%	Finland
2.1	60.3	9.4	6.2	78.1	2.7%	22.7	1.4	2.9	554.1	71.4%	France
3.5	51.5	9.2	5.3	69.5	5.0%	30.0	2.6	9.3	1 006.1	83.9%	Germany
0.5	12.0	0.4	0.2	13.1	4.2%	1.5	0.1	0.1	126.0	77.0%	Greece
0.1	6.7	1.8	0.2	8.8	1.5%	1.3	0.2	0.0	81.5	78.1%	Hungary
0.0	0.4	0.2	0.0	0.7	1.5%	0.1	0.0	0.0	3.4	67.4%	Iceland
0.2	11.4	0.0	0.7	12.3	1.6%	1.5	0.5	0.1	63.8	70.3%	Ireland
1.7	26.2	8.8	0.5	37.2	4.5%	25.8	0.3	1.6	582.9	79.4%	Italy
0.0	-	0.0	0.0	0.1	61.0%	0.0	0.0	0.0	12.0	95.2%	Luxembourg
0.6	8.7	5.7	1.9	16.8	3.3%	5.0	0.0	0.3	222.0	84.4%	Netherlands
0.2	2.5	1.8	0.3	4.7	3.5%	0.3	0.5	1.0	57.3	79.3%	Norway
1.0	18.9	5.8	0.4	26.1	3.8%	0.8	0.4	0.0	391.6	86.1%	Poland
0.3	5.7	0.7	0.4	7.0	3.9%	0.9	0.0	0.1	83.0	77.0%	Portugal
0.1	1.6	0.9	0.2	2.8	2.1%	0.6	0.1	0.0	49.4	83.4%	Slovak Republic
1.5	41.6	1.7	3.7	48.5	3.1%	14.0	0.5	0.5	470.4	73.9%	Spain
0.5	4.7	0.5	0.4	6.1	8.0%	0.6	0.5	0.5	68.0	76.3%	Sweden
0.3	2.2	0.2	0.1	2.8	11.9%	2.9	0.1	0.4	57.3	79.9%	Switzerland
0.9	42.2	4.3	0.6	48.0	1.8%	0.0	0.6	0.9	315.5	70.8%	Turkey
2.6	34.2	24.3	4.4	65.5	4.0%	10.7	1.5	1.8	661.9	83.3%	United Kingdom
17.7	354.8	80.6	28.3	481.4	3.7%	136.7	9.4	20.3	5 324.9	79.7%	OECD Europe
17.6	325.5	78.8	27.8	449.6	3.9%	134.6	10.5	18.1	5 170.6	80.1%	European Union - 27

* Total World includes Non-OECD Total, OECD Total as well as international bunkers.

Sources: IEA, Sectoral Approach for CO₂ emissions from fuel combustion. EDGAR 4 database plus estimates for other emissions. In general, estimates for emissions other than CO₂ from fuel combustion are subject to significantly larger uncertainties.

2005 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2005

 millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					Share of Energy
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	
Total Non-OCDE	13 267.5	146.7	1 010.7	3 206.2	17 631.2	76.1%	1 595.3	2 466.5	809.8	237.0	5 108.6	31.2%
Algérie	84.3	6.7	4.5	2.0	97.5	93.3%	16.1	3.7	4.4	0.1	24.3	66.3%
Angola	8.5	1.4	0.4	227.1	237.4	4.1%	4.3	14.5	1.4	16.8	37.0	11.7%
Bénin	2.5	-	0.1	18.7	21.4	11.8%	0.4	2.3	0.8	1.4	4.8	8.8%
Botswana	4.3	-	-	-	4.3	100.0%	0.8	3.2	0.3	0.2	4.5	17.8%
Cameroun	2.9	3.1	0.5	26.4	32.9	18.3%	2.7	8.5	2.1	1.8	15.1	17.9%
Congo	1.0	-	0.0	23.8	24.7	3.9%	2.9	0.7	0.5	1.7	5.7	49.7%
Rép. dém. du Congo	2.3	0.5	0.2	370.7	373.7	0.7%	3.9	13.3	6.0	27.2	50.3	7.7%
Côte d'Ivoire	6.3	-	0.3	115.4	122.0	5.1%	1.7	3.2	2.0	8.5	15.3	11.2%
Egypte	147.6	1.5	14.9	5.0	169.0	88.2%	10.3	14.6	8.1	0.1	33.0	31.2%
Erythrée	0.6	-	0.0	0.3	0.9	67.6%	0.2	1.9	0.4	-	2.4	7.5%
Ethiopie	4.8	-	0.8	7.4	13.0	37.2%	4.8	36.9	6.1	-	47.7	10.0%
Gabon	1.8	3.3	0.1	1.9	7.2	71.3%	1.6	0.1	0.2	0.1	2.0	80.2%
Ghana	7.1	-	0.9	14.3	22.3	31.7%	0.9	4.3	2.5	1.0	8.6	10.7%
Kenya	9.9	-	1.0	5.6	16.5	59.9%	3.7	13.2	3.4	-	20.3	18.0%
Libye	45.4	1.6	2.0	0.3	49.3	95.4%	6.6	0.8	1.2	0.0	8.5	77.7%
Maroc	41.3	-	5.4	0.4	47.2	87.6%	0.3	5.5	4.0	3.4	13.2	2.6%
Mozambique	1.5	-	0.2	23.6	25.3	5.9%	2.0	7.5	2.2	-	11.7	16.9%
Namibie	2.8	-	0.0	0.3	3.0	90.5%	0.2	3.8	0.2	0.0	4.3	4.7%
Nigéria	54.8	35.6	1.2	46.8	138.4	65.4%	35.7	26.4	15.1	1.2	78.3	45.5%
Sénégal	4.6	-	0.8	0.7	6.1	75.5%	0.3	4.8	1.2	-	6.3	4.8%
Afrique du Sud	330.3	-	7.5	5.2	343.0	96.3%	32.1	14.1	9.7	3.3	59.2	54.3%
Soudan	10.2	-	0.2	21.7	32.1	31.9%	14.5	49.3	3.5	-	67.3	21.5%
Rép. unie de Tanzanie	4.1	-	0.7	52.0	56.8	7.2%	8.0	25.1	3.6	2.8	39.5	20.3%
Togo	1.0	-	0.4	7.3	8.7	11.3%	0.4	1.4	0.5	0.5	2.8	14.7%
Tunisie	19.3	0.7	3.5	0.7	24.3	82.4%	1.4	1.5	1.5	0.0	4.4	32.1%
Zambie	2.2	-	0.3	43.8	46.3	4.7%	1.0	11.5	1.2	3.1	16.8	5.7%
Zimbabwe	10.3	-	0.2	1.9	12.4	83.4%	2.6	6.3	1.5	0.0	10.4	24.8%
Autres pays d'Afrique	23.3	2.5	1.2	161.5	188.5	13.7%	14.1	98.2	16.1	9.3	137.8	10.3%
Afrique	835.0	57.0	47.5	1 184.7	2 124.2	42.0%	173.5	376.3	99.6	82.4	731.7	23.7%
Bahrein	18.3	-	0.1	0.0	18.4	99.4%	1.8	0.0	0.1	-	2.0	92.6%
Rép. islamique d'Iran	407.1	13.9	18.0	2.6	441.6	95.3%	61.5	20.7	12.8	0.0	95.1	64.7%
Irak	84.6	1.2	1.5	1.0	88.4	97.1%	5.3	1.6	4.0	0.0	11.0	48.7%
Israël	59.9	-	2.4	0.0	62.3	96.1%	0.1	0.4	0.6	0.0	1.2	9.3%
Jordanie	17.9	-	2.0	0.2	20.1	89.0%	0.2	0.4	1.0	-	1.6	12.8%
Koweït	74.6	2.0	1.4	-	78.0	98.3%	10.5	0.2	0.5	-	11.2	93.9%
Liban	15.8	-	1.6	0.2	17.6	89.8%	0.1	0.2	0.7	0.0	1.0	12.1%
Oman	27.0	3.2	1.3	0.1	31.5	95.7%	3.2	0.6	0.5	-	4.3	76.1%
Qatar	36.4	0.5	0.7	0.0	37.6	98.1%	4.9	0.1	0.2	0.0	5.2	94.7%
Arabie saoudite	319.7	0.2	13.1	0.3	333.3	96.0%	58.3	1.2	4.0	-	63.5	91.8%
Syrie	47.8	0.8	2.0	0.6	51.1	94.9%	2.7	2.8	2.5	0.0	8.0	33.8%
Emirats arabes unis	110.4	0.9	4.0	0.2	115.5	96.4%	33.2	0.6	0.5	-	34.2	96.9%
Yémen	18.7	-	0.8	0.6	20.1	93.2%	4.0	2.5	2.5	-	9.0	44.5%
Moyen-Orient	1 238.1	22.7	48.9	5.8	1 315.5	95.8%	186.0	31.2	30.0	0.1	247.2	75.2%
Albanie	4.6	-	0.3	0.2	5.1	90.3%	0.2	1.5	0.4	0.0	2.2	11.3%
Bosnie-Herzégovine	15.9	-	0.5	0.0	16.5	96.7%	1.5	0.9	0.4	0.0	2.9	52.0%
Bulgarie	46.1	-	2.9	0.6	49.7	92.9%	2.0	2.0	2.1	0.1	6.1	31.9%
Croatie	20.8	-	1.9	0.4	23.1	89.7%	1.6	1.1	0.9	0.0	3.7	44.3%
Chypre	7.0	-	0.9	0.0	7.9	88.6%	0.0	0.2	0.1	-	0.3	4.1%
Gibraltar	0.5	-	-	-	0.5	100.0%	0.0	-	0.0	-	0.0	13.4%
ex-RY de Macédoine	8.3	-	0.4	0.3	9.0	92.4%	0.2	0.0	0.3	0.0	0.6	36.8%
Malte	2.6	-	0.0	0.0	2.6	99.8%	0.0	0.0	0.1	-	0.1	2.5%
Roumanie	91.0	-	3.5	1.1	95.5	95.2%	12.2	7.0	4.0	0.1	23.3	52.4%
Serbie et Monténégro	50.4	-	1.4	0.0	51.8	97.3%	1.1	4.0	1.5	0.1	6.7	16.4%
Slovénie	15.5	-	1.7	0.2	17.4	89.0%	0.3	0.8	0.5	-	1.6	21.2%
Europe Non-OCDE	262.7	-	13.5	2.9	279.1	94.1%	19.2	17.6	10.3	0.4	47.5	40.4%

2005 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2005

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
95.7	2 299.3	71.0	224.5	2 690.4	3.6%	133.3	58.2	38.0	25 659.7	58.9%	Non-OECD Total
0.4	9.2	0.7	0.0	10.3	3.7%	-	-	0.1	132.3	81.3%	Algeria
0.3	10.2	-	17.9	28.4	0.9%	-	-	0.0	302.7	4.8%	Angola
0.0	3.2	-	1.4	4.7	1.1%	-	-	0.0	30.9	9.7%	Benin
0.1	2.4	-	0.0	2.5	2.0%	-	-	0.0	11.2	45.8%	Botswana
0.2	12.4	-	2.0	14.5	1.6%	-	0.9	0.0	63.5	14.1%	Cameroon
0.0	0.4	-	1.9	2.3	1.7%	-	-	0.0	32.7	11.8%	Congo
0.6	9.0	-	29.0	38.7	1.7%	-	-	-	462.6	1.6%	Dem. Rep. of Congo
0.2	3.1	-	9.0	12.4	1.9%	-	-	0.0	149.7	5.5%	Côte d'Ivoire
0.8	23.8	3.2	0.0	27.8	2.9%	0.2	0.7	0.9	231.6	69.1%	Egypt
0.0	2.3	-	0.0	2.3	0.9%	-	-	0.0	5.7	14.5%	Eritrea
0.9	62.2	-	0.0	63.1	1.4%	-	-	0.0	123.8	8.5%	Ethiopia
0.1	0.2	-	0.1	0.4	12.1%	-	-	0.0	9.6	70.6%	Gabon
0.2	9.3	-	1.0	10.5	1.7%	-	0.2	0.0	41.6	19.6%	Ghana
0.7	18.4	-	0.0	19.1	3.6%	-	-	0.0	55.8	25.4%	Kenya
0.2	1.9	-	0.0	2.0	8.3%	-	-	0.3	60.2	89.5%	Libya
0.3	11.7	-	3.6	15.5	1.8%	-	-	0.0	76.0	55.2%	Morocco
0.0	9.9	-	0.0	9.9	0.4%	-	-	0.0	47.0	7.5%	Mozambique
0.0	4.6	-	0.0	4.6	0.9%	-	-	0.0	11.9	25.1%	Namibia
3.8	34.0	-	1.3	39.0	9.7%	-	-	0.1	255.8	50.8%	Nigeria
0.1	10.1	-	0.0	10.3	1.0%	0.0	-	0.0	22.7	22.1%	Senegal
1.9	24.2	2.1	1.0	29.3	6.5%	1.1	0.5	1.0	434.0	84.0%	South Africa
2.2	57.5	-	0.0	59.8	3.8%	-	-	0.0	159.2	16.9%	Sudan
2.0	26.7	-	3.0	31.7	6.3%	-	-	0.0	127.9	11.0%	United Rep. of Tanzania
0.1	4.9	-	0.5	5.5	1.4%	-	-	0.0	17.0	8.7%	Togo
0.1	6.8	0.3	0.0	7.2	1.6%	0.0	-	0.0	36.0	59.9%	Tunisia
0.2	7.4	0.4	3.4	11.4	1.7%	-	-	0.0	74.4	4.4%	Zambia
0.3	9.9	-	0.0	10.2	2.9%	0.0	-	0.0	33.0	40.0%	Zimbabwe
2.4	112.3	-	9.4	124.1	1.9%	0.0	-	0.0	450.4	9.4%	Other Africa
18.2	487.8	6.8	84.6	597.4	3.0%	1.4	2.3	2.4	3 459.4	31.3%	Africa
0.0	0.0	-	0.0	0.1	55.9%	-	0.2	0.0	20.7	97.7%	Bahrain
0.9	64.6	0.6	0.0	66.1	1.4%	-	0.2	1.4	604.3	80.0%	Islamic Rep. of Iran
0.3	3.7	-	0.0	4.0	7.0%	-	-	0.5	103.9	88.1%	Iraq
0.3	1.5	-	0.0	1.8	16.7%	0.3	0.2	0.7	66.4	90.7%	Israel
0.1	1.2	-	0.0	1.2	6.1%	0.0	-	0.0	23.0	79.2%	Jordan
0.1	0.4	-	0.0	0.5	19.0%	-	-	0.4	90.2	96.8%	Kuwait
0.1	1.0	-	0.0	1.0	6.2%	-	-	0.0	19.6	81.6%	Lebanon
0.0	1.1	-	0.0	1.1	3.2%	-	-	0.0	36.9	90.6%	Oman
0.0	0.2	-	0.0	0.3	13.4%	-	-	0.0	43.0	97.2%	Qatar
0.6	7.1	-	0.0	7.7	7.8%	-	-	1.5	406.1	93.3%	Saudi Arabia
0.2	9.0	0.3	0.0	9.4	2.3%	-	-	0.0	68.5	75.1%	Syria
0.3	2.5	-	0.0	2.7	9.7%	-	0.2	0.3	152.9	94.6%	United Arab Emirates
0.1	7.0	-	0.0	7.1	1.2%	-	-	0.0	36.2	63.0%	Yemen
3.0	99.3	0.9	0.0	103.2	2.9%	0.3	0.7	4.8	1 671.7	86.7%	Middle East
0.0	1.3	-	0.0	1.4	3.1%	0.1	-	0.0	8.7	56.1%	Albania
0.2	0.8	-	0.0	1.0	17.6%	-	0.8	0.0	21.2	83.0%	Bosnia-Herzegovina
0.3	3.8	1.8	0.1	5.9	4.7%	0.7	-	0.0	62.4	77.6%	Bulgaria
0.5	2.3	0.8	0.0	3.6	13.0%	0.6	0.1	0.0	31.1	73.4%	Croatia
0.0	0.6	-	0.0	0.6	5.0%	-	-	0.0	8.9	79.5%	Cyprus
0.0	-	-	-	0.0	100.0%	-	-	-	0.5	98.9%	Gibraltar
0.1	0.7	-	0.0	0.8	8.1%	0.1	-	0.0	10.4	82.3%	FYR of Macedonia
0.0	0.0	-	0.0	0.0	16.5%	-	-	0.0	2.8	94.9%	Malta
0.3	8.2	3.1	0.2	11.8	2.7%	0.1	2.1	0.0	132.8	77.9%	Romania
0.3	3.8	0.5	0.0	4.7	6.6%	0.4	0.5	0.0	64.0	80.8%	Serbia and Montenegro
0.1	1.0	-	0.0	1.1	9.7%	0.1	0.1	0.0	20.4	78.3%	Slovenia
1.8	22.6	6.1	0.4	30.9	5.9%	1.9	3.7	0.0	363.2	78.1%	Non-OECD Europe

2005 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2005

millions de tonnes d'équivalent CO₂ selon le PRC-100

	CO ₂						CH ₄					
	Fuel Comb.	Fugitive	Industrial processes	Other	Total	Share of Energy	Energy	Agricult.	Waste	Other	Total	Share of Energy
Arménie	4.1	-	0.3	0.1	4.5	91.3%	0.6	1.2	0.5	0.0	2.3	25.4%
Azerbaïdjan	31.3	12.6	0.8	0.2	44.8	97.9%	5.2	5.2	1.1	0.0	11.5	45.2%
Bélarus	60.7	-	2.1	0.2	63.1	96.3%	7.1	6.5	3.0	0.0	16.6	43.0%
Estonie	15.9	-	0.3	0.2	16.5	96.6%	0.5	0.4	0.3	0.0	1.2	42.6%
Géorgie	3.8	-	0.2	1.2	5.3	72.0%	1.3	2.2	0.8	0.0	4.3	29.7%
Kazakhstan	154.7	1.1	2.5	0.1	158.5	98.3%	13.9	10.7	3.0	0.6	28.3	49.1%
Kirghizistan	5.5	-	0.5	0.1	6.0	90.8%	0.4	2.5	0.6	0.0	3.5	10.4%
Lettonie	7.3	-	0.2	0.7	8.2	89.7%	0.9	0.7	0.7	0.0	2.3	40.3%
Lituanie	13.4	-	0.5	1.0	14.9	90.2%	1.6	1.4	0.6	0.0	3.6	44.1%
République de Moldavie	7.9	-	0.2	0.2	8.4	94.2%	1.1	0.8	0.6	0.0	2.6	43.7%
Russie	1 543.8	24.3	30.2	7.2	1 605.5	97.7%	387.4	39.7	61.0	13.2	501.4	77.3%
Tadjikistan	5.7	-	0.1	0.0	5.8	97.4%	0.3	2.2	0.7	0.0	3.3	10.2%
Turkménistan	41.5	-	0.2	0.0	41.7	99.4%	18.9	3.5	0.7	0.0	23.1	81.8%
Ukraine	296.8	-	10.2	1.3	308.3	96.3%	52.1	11.9	10.6	1.1	75.6	68.9%
Ouzbékistan	110.1	-	2.7	0.5	113.3	97.2%	36.1	12.0	3.4	0.0	51.5	70.1%
Ex-URSS	2 302.6	38.0	51.1	13.1	2 404.8	97.3%	527.5	101.0	87.7	15.0	731.2	72.1%
Argentine	140.9	1.6	5.6	2.9	151.0	94.4%	12.2	60.3	14.7	7.2	94.3	13.0%
Bolivie	11.9	0.4	0.7	200.9	213.8	5.7%	0.8	9.4	2.1	14.9	27.1	2.8%
Brésil	329.3	4.3	23.3	770.6	1 127.4	29.6%	12.7	283.1	67.2	58.8	421.8	3.0%
Chili	58.6	0.2	2.3	1.9	63.0	93.3%	2.4	5.9	10.9	0.5	19.6	12.1%
Colombie	59.9	0.7	5.9	63.3	129.8	46.7%	9.7	34.0	13.4	4.6	61.7	15.7%
Costa Rica	5.4	-	1.0	0.1	6.5	83.2%	0.0	1.4	1.0	-	2.5	1.5%
Cuba	23.8	0.2	0.7	1.3	25.9	92.3%	0.6	5.9	3.0	-	9.5	6.5%
République dominicaine	16.9	-	1.3	0.4	18.6	90.7%	0.2	3.7	2.0	-	6.0	4.0%
Equateur	23.4	1.8	1.5	1.1	27.9	90.5%	2.1	7.4	3.4	0.0	12.9	16.3%
El Salvador	5.9	-	0.7	0.8	7.5	79.5%	0.4	1.5	1.3	-	3.2	12.6%
Guatemala	10.5	-	1.2	27.8	39.5	26.5%	1.0	3.8	2.2	2.0	9.0	11.3%
Haiti	1.7	-	0.3	0.5	2.4	69.4%	0.2	2.3	1.2	-	3.7	6.4%
Honduras	6.4	-	1.0	0.6	8.0	80.1%	0.3	3.9	1.2	-	5.4	5.7%
Jamaïque	9.6	-	0.6	0.1	10.4	93.0%	0.0	0.5	0.6	-	1.2	3.1%
Antilles néerlandaises	3.8	-	-	0.0	3.9	99.4%	0.0	0.0	0.1	-	0.1	32.4%
Nicaragua	4.1	-	0.3	0.6	5.1	80.6%	0.3	5.1	1.0	-	6.4	4.8%
Panama	5.7	-	0.4	0.3	6.4	89.2%	0.1	2.2	0.7	-	3.0	4.2%
Paraguay	3.4	-	0.4	25.2	29.0	11.9%	0.3	12.6	1.4	3.5	17.7	1.7%
Pérou	28.4	0.4	2.3	23.5	54.6	52.7%	1.4	10.3	8.1	1.7	21.5	6.4%
Trinité-et-Tobago	23.3	-	0.4	0.0	23.7	98.2%	3.0	0.0	0.8	-	3.8	77.9%
Uruguay	5.2	-	0.5	0.2	6.0	88.0%	0.1	16.0	1.5	0.1	17.7	0.6%
Vénézuela	142.3	3.2	5.2	70.2	221.0	65.8%	27.6	22.1	10.8	5.2	65.7	42.0%
Autres Amérique Latine	17.2	-	1.1	17.7	36.1	47.7%	0.7	3.4	2.4	1.2	7.7	8.5%
Amérique latine	937.7	12.8	56.9	1 210.2	2 217.5	42.9%	76.3	494.8	150.7	99.7	821.5	9.3%
Bangladesh	36.3	-	2.5	31.7	70.5	51.5%	10.7	64.0	16.9	1.0	92.5	11.6%
Brunei Darussalam	5.1	0.7	0.1	4.3	10.2	56.7%	1.7	0.0	0.1	0.3	2.1	80.6%
Cambodge	3.7	-	-	8.1	11.8	31.5%	0.8	10.6	1.6	1.9	14.9	5.4%
Inde	1 147.5	1.8	72.3	136.2	1 357.8	84.6%	104.7	461.7	143.0	2.9	712.3	14.7%
Indonésie	341.0	6.5	18.5	208.3	574.3	60.5%	81.2	92.4	37.6	13.1	224.3	36.2%
Rép. pop. dém. de Corée	73.4	-	2.8	2.6	78.8	93.2%	3.1	3.9	3.6	0.1	10.6	29.0%
Malaisie	138.0	6.0	8.8	31.6	184.5	78.1%	14.6	5.7	3.5	1.7	25.5	57.2%
Mongolie	9.6	-	0.1	0.3	10.0	96.5%	0.1	4.1	0.4	0.2	4.8	3.0%
Myanmar	11.0	0.4	0.3	106.0	117.6	9.7%	4.1	42.6	6.7	7.4	60.8	6.8%
Népal	3.0	-	0.2	6.4	9.6	31.9%	3.7	29.0	3.3	0.0	36.0	10.4%
Pakistan	118.4	-	8.9	16.9	144.2	82.1%	15.6	73.2	21.5	0.1	110.3	14.1%
Philippines	76.4	0.3	6.4	7.7	90.9	84.5%	3.6	29.9	11.3	0.0	44.9	8.0%
Singapour	43.1	-	0.1	-	43.2	99.8%	0.3	0.1	0.9	-	1.3	27.0%
Sri Lanka	12.3	-	0.6	2.3	15.2	80.9%	1.3	6.4	2.7	-	10.3	12.2%
Taipei chinois	261.3	-	10.2	1.9	273.3	95.6%	2.7	0.0	1.5	0.3	4.4	60.3%
Thaïlande	214.3	-	19.1	33.5	266.9	80.3%	7.4	60.0	9.2	2.3	78.8	9.4%
Viêt-Nam	80.4	0.5	15.6	17.9	114.4	70.7%	13.4	50.1	11.0	0.6	75.1	17.8%
Autres pays d'Asie	16.2	-	0.3	57.1	73.6	22.0%	2.8	14.2	4.2	2.5	23.7	12.0%
Asie	2 591.0	16.3	166.8	672.6	3 446.7	75.6%	271.8	947.8	278.8	34.4	1 532.8	17.7%
Rép. populaire de Chine	5 059.9	-	625.4	116.9	5 802.2	87.2%	340.6	497.9	152.1	5.2	995.8	34.2%
Hong Kong, Chine	40.7	-	0.5	0.0	41.3	98.7%	0.4	0.0	0.6	-	1.1	40.6%
Chine	5 100.6	-	625.9	116.9	5 843.4	87.3%	341.1	497.9	152.7	5.2	996.8	34.2%

2005 Greenhouse Gas Emissions

Emissions de gaz à effet de serre pour 2005

million tonnes of CO₂ equivalent using GWP-100

N ₂ O						HFCs	PFCs	SF ₆	Total		
Energy	Agriculture	Industrial processes	Other	Total	Share of Energy	Industrial processes			Total	Share of Energy	
0.0	0.4	-	0.0	0.4	4.9%	0.0	-	-	7.3	65.1%	Armenia
0.3	3.8	-	0.0	4.0	6.4%	0.0	0.0	-	60.4	81.6%	Azerbaijan
0.1	6.8	3.3	0.1	10.4	0.9%	0.4	-	-	90.5	75.1%	Belarus
0.1	0.5	-	0.0	0.6	15.0%	0.1	-	0.0	18.4	89.9%	Estonia
1.1	1.7	0.6	0.0	3.4	33.1%	0.0	-	-	13.0	47.7%	Georgia
0.4	5.0	-	0.2	5.5	6.5%	-	-	-	192.3	88.4%	Kazakhstan
0.0	3.2	-	0.0	3.3	1.0%	0.1	-	-	12.8	45.6%	Kyrgyzstan
0.1	1.2	-	0.0	1.4	10.7%	0.1	-	-	12.0	70.2%	Latvia
0.2	2.6	-	0.0	2.9	8.7%	0.2	-	-	21.5	70.9%	Lithuania
0.0	0.9	-	0.0	1.0	3.8%	0.4	-	-	12.3	73.8%	Republic of Moldova
3.9	32.5	3.4	2.8	42.6	9.2%	17.6	30.7	8.4	2 206.2	88.8%	Russia
0.0	1.6	-	0.0	1.6	0.2%	0.0	0.1	-	10.8	55.6%	Tajikistan
0.0	2.5	0.6	0.0	3.2	0.8%	0.3	-	-	68.2	88.5%	Turkmenistan
0.7	12.6	9.7	0.3	23.3	2.9%	1.1	0.3	-	408.6	85.6%	Ukraine
0.2	14.4	0.0	0.0	14.7	1.3%	0.8	-	-	180.2	81.3%	Uzbekistan
7.2	89.7	17.7	3.6	118.2	6.1%	20.9	31.1	8.4	3 314.5	86.7%	Former USSR
0.3	81.5	0.2	1.4	83.4	0.4%	0.6	0.1	0.2	329.7	47.0%	Argentina
0.0	12.2	-	16.0	28.3	0.1%	-	-	0.0	269.2	4.8%	Bolivia
3.0	223.4	9.6	64.3	300.3	1.0%	3.7	3.1	1.0	1 857.3	18.8%	Brazil
0.5	11.2	0.9	0.1	12.6	3.6%	-	-	0.0	95.2	64.7%	Chile
0.3	19.1	0.2	4.9	24.5	1.3%	0.2	-	0.1	216.4	32.6%	Colombia
0.0	2.8	0.0	0.0	2.9	1.2%	-	-	0.0	11.8	46.5%	Costa Rica
0.3	7.3	0.7	0.1	8.3	3.0%	0.1	-	0.0	43.9	56.5%	Cuba
0.1	2.7	-	0.0	2.9	3.9%	-	-	0.0	27.4	62.8%	Dominican Republic
0.1	8.3	-	0.1	8.5	1.2%	-	-	0.0	49.2	55.7%	Ecuador
0.1	2.1	-	0.0	2.3	5.0%	-	-	0.0	12.9	49.9%	El Salvador
0.2	5.6	-	2.1	8.0	3.1%	-	-	0.0	56.5	20.8%	Guatemala
0.1	4.2	-	0.0	4.3	1.6%	-	-	0.0	10.4	19.0%	Haiti
0.1	3.8	-	0.0	3.9	2.0%	-	-	0.0	17.3	39.5%	Honduras
0.0	1.0	-	0.0	1.0	4.1%	-	-	0.0	12.5	77.4%	Jamaica
0.0	0.0	-	0.0	0.1	70.7%	-	-	0.0	4.0	97.2%	Netherlands Antilles
0.1	3.1	-	0.0	3.2	3.2%	-	-	0.0	14.6	30.7%	Nicaragua
0.1	2.0	-	0.0	2.1	2.8%	-	-	0.0	11.5	51.1%	Panama
0.1	10.5	-	2.2	12.9	0.8%	-	-	0.0	59.6	6.4%	Paraguay
0.2	16.7	-	1.8	18.7	1.3%	0.1	-	0.0	94.9	32.0%	Peru
0.0	0.3	-	0.0	0.4	6.0%	-	-	0.0	27.9	94.2%	Trinidad and Tobago
0.0	15.6	-	0.0	15.6	0.2%	0.0	-	0.0	39.3	13.7%	Uruguay
0.3	20.6	0.0	5.6	26.5	1.0%	1.8	0.3	0.2	315.5	55.0%	Venezuela
0.3	4.5	-	1.2	6.1	4.8%	-	0.1	0.0	50.0	36.4%	Other Latin America
6.3	458.7	11.6	99.9	576.5	1.1%	6.6	3.6	1.5	3 627.1	28.5%	Latin America
2.0	34.1	-	1.0	37.1	5.3%	-	-	0.0	200.2	24.5%	Bangladesh
0.0	0.0	-	0.3	0.4	3.8%	-	-	0.0	12.6	59.0%	Brunei Darussalam
0.2	2.8	-	0.8	3.8	4.3%	-	-	-	30.5	15.3%	Cambodia
17.4	279.5	1.5	2.3	300.7	5.8%	2.8	1.9	4.8	2 380.4	53.4%	India
5.0	50.8	0.2	13.9	69.9	7.1%	-	0.2	0.7	869.4	49.9%	Indonesia
0.6	22.6	-	0.0	23.2	2.4%	-	-	0.9	113.4	67.9%	DPR of Korea
1.3	6.4	0.4	1.8	9.9	13.3%	-	0.0	0.5	220.5	72.6%	Malaysia
0.0	22.8	-	0.1	22.8	0.1%	-	-	-	37.6	26.0%	Mongolia
0.7	17.3	-	7.9	25.9	2.7%	-	-	0.0	204.4	7.9%	Myanmar
0.8	6.3	-	0.0	7.1	11.5%	-	-	0.0	52.7	14.4%	Nepal
2.2	77.1	0.7	0.0	80.0	2.8%	-	-	0.6	335.2	40.6%	Pakistan
0.8	18.1	0.0	0.0	18.9	4.2%	-	-	0.3	155.0	52.3%	Philippines
0.3	0.1	7.6	0.0	8.0	3.5%	0.2	0.5	0.5	53.7	81.4%	Singapore
0.3	2.8	-	0.0	3.1	10.8%	-	-	0.0	28.6	48.5%	Sri Lanka
1.3	0.0	0.1	0.0	1.4	92.0%	0.0	2.1	2.6	284.0	93.4%	Chinese Taipei
0.7	24.6	0.2	2.5	28.0	2.6%	-	-	0.9	374.7	59.4%	Thailand
1.3	35.6	-	0.6	37.5	3.5%	-	-	0.0	226.9	42.1%	Vietnam
0.6	15.1	-	3.8	19.5	3.2%	-	-	0.0	116.8	16.8%	Other Asia
35.5	615.9	10.7	35.2	697.3	5.1%	3.0	4.7	12.1	5 696.6	51.2%	Asia
23.4	525.3	17.2	0.7	566.7	4.1%	99.2	12.1	8.4	7 484.3	72.5%	People's Rep. of China
0.2	0.0	-	0.0	0.2	94.1%	-	-	0.3	42.9	96.5%	Hong Kong, China
23.6	525.3	17.2	0.7	566.9	4.2%	99.2	12.1	8.8	7 527.2	72.6%	China