

**THEMATIC AREA “ATMOSPHERE/AIR POLLUTION”**

**Decision-Making:** The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in Bonn is a fully-fledged member of the National Co-ordination Mechanism for Sustainable Development and is responsible for the protection of the atmosphere. Germany ratified the Montreal Protocol on Substances that Deplete the Ozone Layer in 1988. Germany also ratified all four amendments, the latest (Beijing) in 2002. The United Nations Framework Convention on Climate Change (UNFCCC) was ratified on 9 December 1993. The first National Communication to the UNFCCC Secretariat was submitted in 1994, the fourth National Communication is in preparation. In addition an annually reporting obligation on greenhouse gas emissions has been established, starting from the base year 1990 up to the most recent years. After the agreements reached in Bonn and Marrakech on the regulatory framework for implementing the Kyoto Protocol, the EU including all member states ratified the Kyoto Protocol on 31 May 2002. After the ratification of the Kyoto Protocol by the Russian Federation on 18 November 2004 the Protocol entered into force on 16 February 2005. In order to achieve the Kyoto target, the government adopted the National Climate Protection Programme on 18 October 2000 and implemented many measures to combat climate change. A revised National Climate Protection Programme has been adopted on 13 July 2005. Germany is a signatory to the 1979 United Nations Economic Commission for Europe (ECE) Geneva Convention on Long Range Transboundary Air Pollution (LRTAP) and its protocols.

The government promotes policies and programmes in the fields of: energy saving and efficiency; renewables; environmentally sound and efficient transportation; and industrial pollution control, among others. Non-governmental organizations, the private sector, and other major groups have supported activities to strengthen the scientific basis for decision-making and promote sustainable development, prevent stratospheric ozone depletion, and reduce transboundary atmospheric pollution.

**Programmes and Projects:** There are the following support programmes for renewable energies, coordinated by the Federal Ministry of Environment: The Market Incentives Programme for Renewable Energies, promoting the use of geothermal, biomass and solar

energy as well as small hydropower through grants or low-interest investment loans. The “100,000 roofs solar electricity” programme provided low interest investment loans for photovoltaic systems between January 1999 and July 2003. As a consequence a capacity of 300 MW of solar-generated electricity was created.<sup>1</sup> The public institution KfW (Kreditanstalt für Wiederaufbau) supports programmes to save energy in old buildings (programme to subsidize energy renovation of building stock via loans from the KfW at subsidized interest rates). Additionally, it supports the renovation of energy-inefficient multi-family buildings as identified by “heating surveys” (see also chapter **Cooperation**).

**Status:** The following legislation and actions have been undertaken to protect the atmosphere:

**Air Pollution Control Measures:**

- Since the middle of the 70's Germany developed a comprehensive system of regulations for air pollution control. All important emitters of pollutants (old and new) are covered and have to control emissions using state of the art measures. An overview for this gives the German reporting for the UN ECE Convention on Long-range Transboundary Air Pollution (Questionnaire on Strategies and Policies for the 2004 Compliance Review), that is available at <http://www.umweltbundesamt.de/uba-info-daten-e/daten-e/emissionshoechstmengen.htm>. Recently, amendments to the Ordinance on Large Combustion Plants (Thirteenth Ordinance on the Implementation of the Federal Immission Control Act), to the Ordinance on Incinerators for Waste and Similar Combustible Material (Seventeenth Ordinance on the Implementation of the Federal Immission Control Act), and to the Technical Instructions on Air Quality Control – TA Luft (First General Administrative Regulation Pertaining to the Federal Immission Control Act) have been made which require lower emission limit values for new and existing installations.
- The government has strengthened early warning systems and response mechanisms for air pollution resulting from industrial accidents, including transboundary air pollution. Accidents are reported to a special centre at the Federal Ministry of the Interior (Lagezentrum des BMI). From there they are transmitted to the stand-by service of the Ministry for the Environment, Nature Conservation and Nuclear Safety and the responsible institutions of the federal states to coordinate necessary prevention measures.

**Measures for the Protection of the Global Climate**

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<sup>1</sup> <http://www.100000daecher.de/index.php?id=3>

- The Act on Renewable Energies with feed-in guarantees for electricity generated from renewable energy sources at guaranteed minimum feed-in tariffs; this act constitutes the most successful single instrument of German Climate Protection Policies and thus its principles were copied by multiple other countries.
- Energy Saving Act, which sets new energy efficiency standards for buildings based on primary energy consumption.
- Act on Protection and Extension of Combined Heat and Power Generation.
- Energy Consumption Labelling Ordinance, which requires the labelling of the energy consumption of cars and household appliances.
- Ordinance on the Prohibition of certain Ozone-depleting Halogenated Hydrocarbons – CFC/Halon Prohibition Ordinance.
- Ordinance on Emission Abatement of Volatile Halogenated Organic Compounds.
- The implementation of the EU Directive establishing a scheme of greenhouse gas emission allowance trading within the Community, covering 1,849 installations and about 58% of German CO<sub>2</sub> emissions. By reducing emissions by 2 million tonnes (0.4%) per year in the first trading period 2005-2007 the scheme gives incentives to fuel switch, energy efficiency investments and innovations in abatement technologies. EU wide trading allows installations to react flexible and in a cost-effective way.
- In March 1995, German industry presented a declaration on global warming, which was further specified in March 1996 and renewed in 2000 and 2002. Industry thereby, among other initiatives, undertakes special efforts to reduce its specific CO<sub>2</sub> emissions by 28 percent by the year 2005 compared to the reference year 1990. It was expected that this would lead to an absolute reduction of CO<sub>2</sub>-Emissions of 10 million tonnes in 2005 and a further 10 million tons in 2012, compared to 2000. Industry's progress in fulfilling its voluntary agreement is monitored by the Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI).
- Besides measures regarding CO<sub>2</sub>-emissions the German industry has also signed sector-specific Voluntary Commitments to reduce the emissions of the Kyoto-gases Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and SF<sub>6</sub>.

### **Financial Incentives:**

- The ecological tax reform, which caused gradual increases of mineral oil tax rates on motor and heating fuels and the introduction of the electricity tax. The most outweighing share of ecotax revenue is used for the discharge of the pension insurance. Other parts are used to promote renewable energies and CO<sub>2</sub>-oriented building renovation programs.
- In individual cases, tax law provides incentives to purchase environmentally friendly products and thus reinforces demand for products that lower pollution and save resources. Examples of tax benefits related to emissions and energy consumption include the following:
  - Lower mineral oil tax rates or exemptions for fuel and gas used in combined heat and power plants dependent on the efficiency;
  - Lower gasoline and diesel tax rate for sulphur free petrol (up to 10 ppm S);
  - Emission-based motor vehicle tax: The motor vehicle tax has taken greater account of pollutant emissions. Graduated motor vehicle tax rates for low-polluting and non-low-polluting passenger cars and trucks (Euro 1 to 5). In addition, so-called 3-litre consuming cars receive a tax exemption of €511,29.
  - Favourable framework conditions for gas-powered vehicles to be launched on the market: In order to create more protection of investment the low tax rate was extended. In order to create more protection of investment the low tax rate was extended, for compressed natural gas (CNG) until 2020. Criteria for a Blue Angel environment label for low-noise gas-powered commercial vehicles and buses were adopted. In the area of commercial business, all types of gas-powered vehicles and gas filling stations are being subsidized with favourable loan terms;
  - Reduced turnover tax for short-range passenger transport;
  - To improve their competitiveness rail traffic and local public passenger transport traffic are taxed with lower mineral oil and electricity tax rates.
  - Tax incentives for installation and thus manufacture of energy-saving equipment and designs.
  - Act on the Income Tax Law, where the fiscal provision favouring commuting by car was replaced by a level playing field for all means of transport, a distance-related allowance. In principle this gives incentives to switch from the use of private cars to means of public transport.

**Capacity-Building, Education, Training and Awareness-Raising:** See under **Status**.

**Information:** See under **Status**.

**Research and Technologies:** The government and the scientific community have carried out studies on likely and possible measures to combat climate change. They have also carried out studies on health effects resulting from air pollution. In the framework of the German Environmental Research Plan (UFOPLAN), in part under the umbrella of the German Action Programme Environment and Health, health aspects of sustainability are studied, too. Germany supports, e.g., work on Environmental Health Indicators carried out in cooperation between WHO Europe and CEC, studies on POPs in human and environmental samples and on possible effects of climate change on the distribution of vector borne diseases in Germany.

**Financing:** See under **Programmes and Projects** and **Status**.

**Cooperation:** Germany contributed to European and international strategies and conferences for the protection of the atmosphere. To enable developing countries like China and India to comply with the rules and regulations of the Montreal Protocol, bilateral support for phasing out CFCs is provided by, amongst others, using the environmentally advanced hydrocarbon technology on a model basis. Germany runs the largest bilateral ozone protection programme under the Multilateral Fund of the Montreal Protocol. The government has also agreed to participate in the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP), and respective monitoring and assessment programmes under the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea, the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic and ECE Conventions. The German government participates in strengthening the Global Climate Observing System (GCOS) at the national level. Three German institutions are operating and contributing to GCOS: the German Weather Service; the German Federal Environmental Agency; and the Alfred Wegener Institute. The Federal Ministry for Economic Cooperation and Development contributes with targeted programmes to the implementation of strategies to combat the warming of the earth's atmosphere in developing countries and has earmarked special funds for this purpose (€200 million per year for renewable energies and energy efficiency, and €125 million per year for forest conservation). The German government has been particularly active regarding the establishment of the Global Environment Facility (GEF) and is its third largest contributor.

The GEF is administered by the World Bank and jointly implemented by the Bank the United Nations Development Programme and the United Nations Environment Programme. It serves to finance additional (incremental) costs, which accrue to the developing countries in connection with environmental protection measures of global benefit. Since its inception, the GEF has invested US\$ 1.3 billion in climate change activities.

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