

Part III . THEMATIC AREAS

A. ATMOSPHERE/AIR POLLUTION

Government focal point(s): _____
 Responding ministry/office(s): _____

Decision-Making: Strategies, policies, programmes and plans, legislation, policy instruments and the regulatory framework; involvement of Major Groups

1. Assessing ambient air quality and the levels of air pollution

Belgium

The three Belgian Regions (Flanders, Brussels Capital Region and Wallonia) are responsible for the managing of the telemetric air quality networks. Each of the Regions publishes annual air quality reports. As long as the telemetric networks are concerned, the Belgian interregional Cell for the Environment (IRCEL-CELINE) (created in 1994 by an official agreement between the Belgian Regions) operates a common air quality database, publishes real time air quality data measured in the three Regions at the website <http://www.irceline.be>, publishes survey reports, assures the coordination of assessment and reporting of air quality at the international level, follows up high pollution episodes and informs the public when EU thresholds are exceeded. Besides that an interregional calibration laboratory at IRCEL acts as a reference laboratory for telemetric sampling and monitoring methods.

2. Control of air pollution (e.g. for stationary, mobile, area and other pollution sources).

- **Analysis of costs and benefits**
- **Institutional changes made.**

Flemish region

In the last years, a lot of study work has been done to investigate the costs of further reduction measures (from 2000 on) for, primarily, the pollutants for the European NEC-directive (SO₂, NO_x, VOCs and NH₃) in industry. For each sector, marginal cost curves were drawn up, which will be used in an intersectoral weighing, taking into account socio-economic parameters. This weighing will be the basis for further policy decisions (see also the case study for more detailed information).

Similar study work has been initiated for emissions of particulate matter.

Besides this, the RAINS model is an important source of information for costs of control of air pollution.

Walloon Region

The Walloon Region regularly achieves an update of her analysis of the costs of the implementation of the reduction measures.

Brussels Capital Region

The control of air pollution is carried out by the “Laboratoire de Recherche en Environnement “. Its last report is available on

<http://www.ibgebim.be/francais/contenu/content.asp?ref=1888> .

The Brussels Plan for the improvement of air quality and for struggle against climate change 2002-2010 (“*Plan d'amélioration structurelle de la qualité de l'air et de lutte contre le réchauffement climatique 2002-2010*”, approved on 13th November 2002) includes 81 actions to improve air quality and to reduce the emissions of greenhouse gases, air pollutants and fluorinated ozone-depleting gases

(http://www.ibgebim.be/francais/pdf/air/planac_complet.pdf). The prescription 72 recommends a cost and benefits analyse. A first analyse has been carried out in 2004 over the emissions abatement actions.

3. Plan(s) to deal with severe air pollution incidents.

Flemish Region

Major accidents with dangerous substances, including those causing severe air pollution, are part of the subject of the Seveso directive 96/82/EG. The group of the upper tier Seveso companies have made safety reports. These are dealing with risk evaluation, preventive and mitigating safety measures, management safety system, emergency planning, etc. Also land use planning in the Flemish region takes the risk of Seveso companies into account by using a specific type of safety reports, so called "land use safety reports". One of the goals of these reports is to assure a sufficient safe distance between Seveso companies and urban areas. So, in case of a major accident at a Seveso company the number and the severity of damage of casualties should be limited. According to the Belgian legislation all (lower and upper tier) Seveso II establishments have to draw up internal emergency plans. One of the objectives of the plans is containing and controlling incidents so as to minimize the effects and to limit damage to man, the environment and property. The severe air pollution incidents are included as far as dangerous substances viewed by the Seveso II directive are involved. For the upper tier establishments external emergency plans have to be drawn up as well (this is a federal competence). The safety reports of the upper tier establishments should demonstrate that the internal emergency plans have been drawn up and must contain descriptions of the areas where a major accident may occur. Inspections are performed to check compliance with these obligations.

According to the decree on environmental permits the operator of the establishments considered to be a nuisance must notify every incident that can cause (air) pollution to the environmental inspectorate. In case of an incident the operator has to take all necessary mitigating measures. These obligations imply a systematic and planned approach.

Inspections are performed to check compliance with these obligations.

Walloon Region

The Walloon Region develops several plans to deal with severe air pollution incidents as the ozone plan...

Brussels Capital Region

The Brussels Capital Region currently develops plans of alarm for the winter episodes of peaks of pollution.

4. Programmes designed to reduce indoor air pollution.

Flemish Region

Subsidy for adaptation works on the heating- or ventilation system to reduce indoor CO poisoning. More information: <http://www.bouwenenwonen.be>.

A study is ongoing to detect the influence of outdoor pollution on the indoor human exposure and to determine which environmental policy measures can improve the indoor air pollution level.

The Decree of the 21st of November 2003 concerning the preventive health policy states: "The Flemish government may take initiatives for the prevention of illnesses caused by physical or chemical factors. Those factors are situated indoor as well as outdoor (art. 51).

One initiative that has already been taken is the decision of the Flemish government concerning the control of health risks caused by pollution of the indoor environment. All persons responsible for construction, maintenance or the equipment of houses or public buildings leave no stone unturned in order to minimize the indoor health risks for residents and users of the buildings. The environmental health specialists in the local network for health promotion and the Flemish Public Health office are authorized to examine the potential indoor health risks and health complaints caused by the indoor environment and to give advice or take action for sanitation.

Walloon Region

The Walloon Region asked the University of Liège to make a study.

A WHO program was developed first and the Walloon Region made its about two years ago.

Brussels Capital Region

Referring to the health objectives of the framework action plan on air quality for the Brussels-Capital Region ("*Plan d'amélioration structurelle de la qualité de l'air et de lutte contre le réchauffement climatique 2002-2010*") several actions are designed in order to reduce indoor air pollution and related health effects. They are based on the design of a service to complement medical diagnosis and support housing improvement (green ambulance) and actions toward its promotion.

Prescription 63: Further implementation of regional green ambulance, indoor air scheme towards intervention (global diagnosis and sources search) in complement to medical prescription.

Prescription 64: Empower family doctors and capacity building in relationship with indoor pollution and the use of "green ambulance".

Prescription 65: Citizens awareness raising by a green line telephone and visits for inhabitants who are annoyed or scared of indoor air pollution. That scheme is completed by general awareness campaigns.

As an output of the program towards indoor air reduction, results of indoor diagnosis should support the preparation of a strategic action plan for sustainable construction.

Among those actions:

Prescription 66: training of professionals of construction,

Prescription 67: support the implementation of a plan for housing ("*code du logement*") and integration of indoor air guidelines,

Prescription 68: integration indoor air within guidelines and good practices for building and refurbishing.

5. Policy measures taken to improve the quality of fuels.

Federal Government

By the Royal Decrees of 20/3/2000, the fuels distributed in Belgium are in accordance with the requirements of the directive 1998/70/EC concerning the quality of the gasoline and Diesel oil in the stage 2005, namely 50 PPM for sulphur in Diesel oil and gasoline and 35% for the aromatics in the gasoline. A law proposal which fiscally promotes the 10 ppm motor fuels is currently being discussed.

The European Commission allows individual member states to take measures for the fiscal measures in order to promote low sulphur fuels. The Royal Decree of 29/10/2001, published in the *Moniteur Belge/Belgisch Staatsblad* of 1/11/2001, initiated a series of executive decrees of the federal financial services increasing the excises on gasoil and diesel with 350 ppm sulphur for road vehicles and gasoline 98. In 2003, controls of FAPETRO demonstrated that some brands distributed 95 RON gasoline with 50 ppm of sulphur, despite the absence of fiscal incentives.

Moreover, the gasolines 95 RON and 98 RON comply with all the specifications of the European EN 228 standard and the diesel oil complies with all the specifications of the European EN 590 standard.

In accordance with the directive 1999/32/EC gasoil for heating and marine diesel oil contain maximally 0,2% sulphur and heavy fuel contains maximally 1% sulphur.

In 2002 a new Royal Decree introduced "gasoil for heating – extra". This fuel, meeting the technical specifications for gasoil for road transport (i.e. diesel) as in the NBN EN 590 standard and thus with a sulphur content of 50 ppm in stead of 2000 ppm, offers the owner of gasoil-heating, and more specifically condensating boilers, an alternative for traditional gasoil-heating. This product is, due to the absence of fiscal incentives, more expensive than the traditional product, but guarantees a better combustion and is more environmental friendly.

In august 2003 the federal government has increased energy taxes and excises on fossil fuels. Taxes on traditional gasoil for heating were raised with 60% and those for natural gas decreased by 5%. In accordance with the sector, it was decided to gradually decrease the levy for the gasoil "extra" in order to recover financial neutrality between this "extra" fuel and natural gas after a period of 4 years. A first decrease has been carried out; a second one has been postponed due to insufficient budgetary space.

Gasoil for heating complies with the Royal Decree of 7/3/2001 and the Belgian Standard NBN T 52-716.

Marine diesel oil complies with the Royal Decree of 7/3/2001 and the Belgian Standard NBN T 52-703.

Heavy fuel complies with the Royal Decree of 7/3/2001 and the Belgian Standard NBN T 52-717.

The Royal Decree of 4 March 2005 allows biofuels to be mixed with fossil fuels. This improvement in quality (biomass fuels) will reduce greenhouse gas emissions that cause climate change.

6. Specific policy measures designed to reduce the level of lead in gasoline.

Federal Government

The commercialising of leaded gasoline is prohibited since 1/1/2000.

7. Policies promoting cleaner transportation measures and technology (e.g. vehicular technology, mass transit systems, reduced demand in vehicle-miles-traveled, modal shifts).

Federal Government

Since 2002, the Environment Directorate-General has published an annual guide of new passenger cars put on the market. This guide aims at raising awareness among consumers on passenger cars that consume less fuel and, hence, emit less CO₂. The so-called "hybrid vehicles", for example, are among the most fuel-efficient cars.

www.environment.fgov.be

A federal plan for sustainable transport is under way. In this plan a federal plan for promoting the bicycle is integrated.

Every year the federal government takes part in the European event « In town, without my car! » of 22 September, which initiates the week of mobility. A series of actions to raise public awareness and to promote sustainable mobility is coupled to these events.

The enterprises of the public and private sector with more than 100 employees will have to make a diagnostics every 3 year for the commuting between home and office of their employees. The first diagnostics will be available on 30 April 2006. This diagnostics will be an input into the federal policy of cleaner transport.

The traffic regulations are changed in order to make it possible to reserve a section of the road for the public transport and private cars with more than 1 person.

Several decisions are taken to promote teleworking.

Two pilot projects are running to evaluate the impact on the speed of the bus on the highway if the bus is driving on the shoulder of the highway.

Different measures are taken by different stakeholders to promote the railways:

- Increasing punctuality of the trains
- Customer-oriented price policy (stimulating modal shift to environment-friendly transport)
- Increasing and modernizing the infrastructure of the railways
- Decreasing the fleet of diesel trains and increasing the fleet of electric trains
- Improving the reception of the train passenger

- R & D to promote the economical use of energy and raw materials
- Environmental plan by the railway company
- Studies to improve the transport in the suburbs

A study is running to analyse shortsea shipping.

Flemish Region

A specific web site has been developed to inform consumers how environmental friendly a new car is. A label has been developed based on all regulated pollutants. Information on all new cars available in Belgium is provided on the web (www.milieuvriendelijkvoertuig.be). This web site contains also information on the influence of driver behaviour.

A campaign is carried out to influence driving behaviour. A brochure, sticker, radio broadcast and a website (www.ikbenrob.be) are part of this campaign.

A brochure "Mobiliteit en milieu" (Mobility and environment) has been published with information on the environmental impact of transport and the policy answers in the Flemish region.

Together with the development of the mobility plan for Flanders a strategic environmental assessment has been conducted. The entire SEA can be downloaded from the web site www.vlaanderen.be/lucht. The mobility plan for Flanders aims at reducing road transport and improving public transport and inland shipping and rail for goods transport. The measures in this plan are gradually implemented.

Recently a study on environmental friendly vehicles was carried out. The study improved the methodology to evaluate vehicles on their environmental performance.

The methodology has been implemented on the website www.milieuvriendelijkvoertuig.be. The study also established implementation pathways to promote the use of environmental friendly vehicles. Measures taken into account are fiscal measures, financial incentives, green public fleets, green private fleets, information and local measures.

The results of all studies carried out for the Flemish Government about transport and emissions can be downloaded from the website www.vlaanderen.be/lucht.

In April 1996 a system of concluding mobility contracts between the Flemish Region, the local governments and the public transport company 'De Lijn' was started. This program is still running. Local mobility plans are developed. Specific modules with agreements on measures to be taken are included in the contracts. The evaluation of the measures is done in a commission representing all partners. The mobility contracts foresee in a specific module to promote public transport.

In 2002 transport was included in the environment contracts between the Flemish region and local governments. Local authorities can subscribe to one of the three stages. Stage 1 contains support for purchase of clean vehicles, campaigns on transport and environment and implementation of transport plans for the municipalities. To comply with stage 1 local authorities also have to report on cooperation between transport service and environment service. Stage 2 is linked with the mobility contracts. To comply with stage 2 local authorities have to evaluate their local transport plan on environmental issues. This evaluation will then be integrated in an overall evaluation of the local transport plan. Also measures are linked. A project submitted in the mobility

contract with an environmental link will also be subsidised through the environment contract.

Promotion campaigns are held to promote public transport by information panels, information pamphlets for certain bus routes, ... The information panels are also used to promote carpooling, biking,

Monthly a newsletter "Uitweg" is published and distributed in public places. This newsletter contains information on all mobility aspects.

A brochure with information on air pollution and tips for a better environment has been published. The brochure contains tips for a sustainable transport, for better energy use and for environmental products in and around the house.

Walloon Region

The Walloon Region is working at developing an action plan aiming at reducing her main pollutants for 2010. The Walloon Region also made a sensibilization programme of one year with several advertising spots and articles designated for children and teenagers, but also for adults. A 'call for projects in the field of proximity actions' in order to touch the public was integrated in this programme.

Brussels Capital Region

The *Brussels Clean Air Act* (March 1999) forces the regional administrations to own a minimum of 20% of clean vehicles in its fleet at the horizon 2008. An executive decree (July 2003) gives a precise definition for clean cars. In summary, it's a car using alternatives propulsions: LPG, natural gas, hybrid, biofuels,... or it's a car consuming traditional fuels (petrol, diesel) which "*Euro-norm for air pollutants*" is more stringent than legally required.

Every year, the Brussels-Capital Region participates actively to the European car free day, which initiates the week of the mobility. A series of awareness and promoting actions for sustainable mobility is coupled to these events and all over the year. (<http://www.ibgebim.be/francais/contenu/content.asp?ref=2058> , <http://www.ibgebim.be/francais/contenu/content.asp?ref=2000>, <http://www.ibgebim.be/francais/contenu/content.asp?ref=2043>).

8. Emission limits on vehicular exhaust.

Federal Government

European emission standards apply in Belgium for new mobile sources.

From 1 January 2005 Euro 4 (European Directive) is compulsory in Belgium for new cars.

In the period 1 January 2002 – 1 January 2005 a tax reduction was applicable for new cars complying already with Euro 4.

Greening of the public purchase of the governmental fleet is implemented by the purchase of vehicles with lower exhaust.

9. Role played by air pollution in urban planning, especially related to transportation.

Flemish Region

Problems related to air pollution and transport have been analyzed in detail. The impact of highways and some main roads on air quality have been calculated as well as some policy measures to reduce the problem. The Flemish government didn't have the necessary information to calculate the impact of each road in Flanders. However, a frame work for local roads has been established. On the basis of this frame work, a model - which will be made available for all municipalities in Flanders - and guidelines concerning the analysis and concerning possible measures, municipalities will be able to carry out analysis themselves and make local policy plans to reduce the impact of local roads on local air quality aiming at respecting European guidelines on NO₂ and PM concentrations.

Brussels Capital Region

In the Brussels Plan for the improvement of air quality and for struggle against climate change 2002-2010, twenty prescriptions are related to mobility and have as target a reduction of 20% of vehicles-km-travelled in 2010 in comparison with 1999. This target is initially fixed by the Regional Development Plan (PRD, 2002).

10. Economic and market-based incentives to meet national air quality goals.

Federal Government

En 1996, the Ministry of Economic Affairs created a fund for the analysis of petroleum products, charged with the control of the environmental and non environmental specifications of fuels and gasoil for road transport. Details on the activities and results of the analyses can be found on the website:

http://www.mineco.fgov.be/energy/index_fr.htm

The Fund for Analysis of Oil Products (*Fonds d'Analyse des Produits Pétroliers*) is managed by a committee which includes representatives of the oil industry, the government and professional organisations. Its main task is to carry out systematic on-the-spot checks of the quality of oil products on the Belgian market. The fund is financed through the distribution margin foreseen in the Programme Agreement and thus paid by the sector.

Since September 2002 FAPETRO checks the quality of motor fuels not only in public service stations but also equally at the level of the private owned pumps (freight companies, bus companies, etc). FAPETRO is currently working out the sampling method for heating oil

In 2003 only 3.63% of the analysed samples from public service stations showed some kind of non-conformity with the product specifications. In 1995 this percentage was 19,05 %. In the beginning of its creation, about 90 % of the negative quality checks concerned diesel oil, resulting essentially from the mixing of heating oil and light oils, for which excise duties are not paid, with diesel oils, which are subject to the duties. This has over the years significantly decreased. The most recurrent problem today has to do with the flashpoint in the diesel oil, which refers to the presence of gasoline in diesel oil. Few problems have been detected with the quality of different types of gasoline. From 2005 on, sulphur content is limited to 50 PPM for the two qualities of gasoline's (95 RON and 98 RON) and road diesel.

Since 1 January 2005, all natural persons benefit a tax reduction of € 3280 on the purchase of a car that emits less than 105 grams of CO₂ per kilometre and a reduction of

€ 750 for a car emitting between 105 and 115 grams of CO₂/km. This measure relates to the Guide on Fuel Consumption and CO₂ Emissions. Since 1 January 2005, an annual tax is being raised on company cars according to the amount of CO₂ they emit. A distinction is made between petrol engines and diesel engines.

Following economic measure promoting less polluting transport is taken. Commuting between home and office by train:

1. for the federal official: free of charge
2. for the employee of the private sector : 80% of the season ticket is paid by the employer.

The federal government will aid during the period 2003-2007 the railways for the domestic transport.

Flemish region

Studywork is being done to investigate the possibilities for the use of economic instruments for the reduction of emissions of NO_x, SO₂ and VOCs. These studies will have to lead to social and political discussions on the implementation of these instruments; the desirability of these instruments will depend a.o. of the progress that can be made with the classic instruments in achieving the NEC-ceilings.

The Flemish government offers financial incentives for investments that aim at reducing the energy consumption of households and companies.

Brussels Capital Region

The federal government is the authority competent for fuels and mobile sources. Concerning the stationary sources, the Regional Government offers incentives for the purchase of low energy consumption equipments (household and heating appliances).

11. Nature and impacts of transboundary air pollution (including pollutants emitted within your country as well as those received from nearby countries).

Belgium

Different model studies (eg. the Unified EMEP model) are indicating that 50 till 80 % of particulate matter and ozone pollution in Belgium has transboundary origins. Source-receptor matrices and so called 'country-to-country blame matrices' (available at the EMEP website) are showing that Belgium does not only "receive" air pollution, but also transports an important part of its own emissions to nearby countries.

Walloon Region

The Walloon Region follows the CAFE Program.

12. Programmes designed to reduce ozone-depleting substances and promote alternatives under the Montreal Protocol.

Federal Government

Belgium is part of the Montreal Protocol and fully complies with the European Regulation 2037/2000 on substances that deplete the ozone layer, what means stopping or controlling the production of CFC, consumption and production of HCFC, HBFC, Carbon tetrachloride and Methylchloroform with some exceptions for essential uses. The use of Methyl Bromide as treatments is currently phasing out and

is subject of a strong control, reduction of use (quantities and concentration). It also participates constructively to debates about extending the measures applied under the Protocol (shortening of the phasing out schedule).

The Belgian administration is taking an active part of discussion at the International level by participating to the Meeting of the Parties and the Open-ended Working Group and at the European level by taking part in the Management Committee and the National Experts. It is reporting each year, through the EC of progress of the national implementation.

Belgium also participates to the Multilateral Fund for the implementation of the Montreal Protocol, which is funding projects to help developing countries to reduce or stop their use of ozone depleting substances, to start technology switches and modernizing.

Flemish Region

The most important legislation in this framework is:

- Article 5.16.3.3 of title II of VLAREM, the Decree of the Flemish Government of 1 June 1995 concerning the general and sectoral matters of environmental hygiene contains provisions for the exploitation of refrigeration and air-conditioning installations (Belgisch staatsblad, 31 July 1995).

This article contains very specific exploitation provisions for refrigeration and airconditioning installations.

The most stringent conditions of the legislation for refrigerating systems (also airco's and heat pumps that contain a refrigerant) focus on installations with a nominal refrigerant capacity of 3 kg or more and that contain ozone depleting substances and/or f-gases.

- These installations have to undergo a leaktightness-test at least each 12 month period (more than 30 kg: each 6 months; more than 300kg: every three months). When there are indications that leakage occurs, this test has to be done with a method that meets certain sensitivity criteria (5 ppm or 7g/year) .
- Owners have to keep a logbook (installation-bound, they have to fill in the refrigerant usage (quantities added, removed,), details and results of the leakage inspections,....)
- The installations must meet a certain target of leaktightness. An owner must proof that he has done everything that is reasonable to make his installation as leaktight as possible. At least, his installation can't have a leakage rate of more than 5%. For instance: if an installation is designed to contain 100 kg of refrigerant for normal performance, the owner has to do everything reasonable to limit the emissions to a maximum of 5kg of refrigerant on a yearly basis (Calculation of the relative loss of refrigerant is based on the amounts of recharged refrigerant as noted in the logbook. For the calculation, the amounts lost or charged over a period of 2 years can be taken into account). a transition regime for existing installations has been included in the legislation. When leakages of 5% or more take place, the owner immediately has to take measures (in the course of 30 days). if the leakage is more than 10%, he even has to shutdown the installation or isolate the refrigerant in a part of the installation that doesn't leak and can be separated

from the leak-source. Refrigerant can only be added when reparation is completed. Within three months a new leakage test has to be performed.

- All handlings on an installation with a risk of emission of refrigerant (working on the refrigerant circuit, adding refrigerant, removing refrigerant,...) must be done by competent refrigerant technicians.
- The Flemish regulation concerning the prevention and management of waste (VLAREA, Belgisch staatsblad, 16 April 1998)
This regulation categorise ozonedepleting substances as hazardous once they become waste products and are being disposed of. This means that users of ODS have to hand the products or recovered CFCs over to recognised collectors with a governmental permission for collecting hazardous waste (Art. 5.1.2.1). The latter have to pass it on to special treatment centres where the substances are either recycled or destroyed.
A duty of acceptance has been introduced with respect to domestic refrigerators. Reaching their end of life, these refrigerators are collected and dismantled and the CFCs (in the cooling circuit and in the isolation foam) are recuperated for destruction.
A similar recuperation system has been put in place for cars.
- In Preparation: A certification obligation scheme for installation and maintenance firms and technicians of refrigeration and airconditioning installations.

Furthermore, a voluntary agreement was concluded between the federal government and the federation of the manufacturers of foamed plastics "FECHIPLAST" (1991) to phase out the use of five CFCs by 1995. The agreement also included a reporting obligation of the industry involved.

An inspection campaign on the usage of ozone depletions substances and fluorinated greenhouse gases is running since 1998. The experience from the flemish environment inspection is that a lot of the installations have a very high leakage rate, that no or incomplete necessary documentation is present, that there is no proof of leakage test being performed. Sometimes forbidden refrigerant is still present in the installations.

For sensibilising, a website with information about environmentally friendly alternatives for the usage of ozone depleting substances has been set up.

<http://www.emis.vito.be/ozon/default.asp>

Brussels Capital Region

The Brussels Plan for the improvement of air quality and for struggle against climate change 2002-2010 include 81 actions to reduce particularly the emissions of greenhouse gases, air pollutants and fluorinated ozone-depleting gases

(<http://www.ibgebim.be/english/contenu/content.asp?ref=463>, prescriptions 53 and 54, followed by regional decrees of 25/09/2003 and 20/11/2003).

Capacity-Building, Information, Research and Development

13. Availability of data concerning: a) the impacts of air pollution on human health and ecosystems; and b) the levels of pollution in different industries.

Flemish region

- a) Since 2002, every year a MIRA-T report has been published. MIRA stands for environmental report, whereas the T stands for “themes”. For every theme (industry, households, acidification, heavy metals, climate change, ...) an overview is given of policy measures, the evolution of typical indicators (as f.e. the emissions of a number of pollutants) and the effects on environmental quality, ecosystems and human health.
- b) Yearly a report ‘Lozingen in de Lucht’ (‘Emissions in the air’) is published by the VMM, de Flemish Environmental Agency. This report gives an overview of all major emissions to the air, both by theme and by source (all industrial sectors, transport, residential sector, tertiary sector, agriculture, ...).
- Both reports are presented to major stakeholders and the press and are made available to the public in a printed form and through a website (www.milieurapport.be and www.vmm.be)

Walloon Region

The Walloon Region follows the CAFE Program.

Brussels Capital Region

a) The impact of air pollution on human health and ecosystems

Several actions have been taken in order to collect such data. Those actions correspond to prescriptions of the framework action plan on air quality for the Brussels-Capital Region.

- Participation to the pilot project PEOPLE on the integrated exposure to benzene (100 persons and various exposure situations) (Prescription 60)
- Development of a network of informed medical doctors (“médecins vigies”) in order to collect data on health problems (in development)
- Analysis of data collected via the "green ambulance" scheme, health problems related to indoor air exposure (around 500 enquiries)
- Development of a methodology in order to study the health effects of air pollution (prescription 61). A first step towards the achievement of that prescription is the participation of the Brussels-Capital Region to the European APHEIS program (modelling of health impact of particulate matter exposure).

c) The levels of pollution in different industries.

The emissions are measured in situ or estimated by study or values of reference from literature.

The website of the Brussels Institute for Management of the Environment gives an overview of emissions in the air by source (industrial, residential, tertiary sectors, transport... <http://www.ibgebim.be/francais/contenu/content.asp?ref=1868>, <http://www.ibgebim.be/francais/contenu/content.asp?ref=1869>).

14. Capacity to carry out air dispersion modeling.

Belgium

The most important air quality dispersion models used by the Regions and/or at the Belgian Interregional Cell for the Environment (IRCEL) are :

- the OPS (“Operational Priority Substances”) model : a Lagrangian trajectory model for long range transport of air pollution. The model is intended for the simulation of time-averaged concentrations and depositions (SO₂, NO_x, ..) on a local to regional scale due to atmospheric emissions.
- The belEUROS model : an eulerian model used to simulate hourly concentrations of O₃, SO₂, NO_x and (with a new developed module) particulate matter (primary, secondary organic and secondary inorganic aerosol) on a regional and european scale.
- The CHIMERE model : similar as the belEUROS model, but with other chemistry module and advection scheme.
- Different Gaussian plume models to model dispersion on a local scale : eg. the IFDM model developed at the Flemish institute for technological research (VITO)

15. Programmes designed to increase citizens’ awareness about the impacts of indoor air pollution.

Flemish Region

A brochure with information on indoor pollution, impact on health and advises for a better indoor environment has been published. The brochure focuses on how to build a healthy house (advises on ventilation, use of materials, ...). More information: <http://www.milieuengezondheid.be>.

A folder on the importance of ventilation for human health and the principles of a good ventilation strategy. More information: <http://www.energiesparen.be>.

An information spot on TV on the health importance of ventilation and the principles of a good ventilation strategy.

A communication strategy on ‘Environment and health’ is in progress, with an important chapter on indoor pollution. One of the objectives is to have an efficient communication towards citizens/target groups and to give advise to get a better indoor environment with strong involvement of all actors so they could help to communicate the messages.

Brussels Capital Region

Actions have been taken in the framework action plan on air quality for the Brussels-Capital Region. (Prescription 65) The actions include information campaigns, folders and green telephone line. A NGO is financed to answer to individual questions, perform site visits in houses and dwellings where inhabitants feel anxiety or annoyance about indoor air quality. They perform audits in order to prevent CO intoxication and give advices on indoor air management.

16. Internet websites related specifically to the issues contained in these Atmosphere/Air Pollution Guidelines, providing homepage addresses (URL).

Belgium

www.irceline.be – website of Ircel, the “interregional cell for environment”; with a.o. information on real time air quality data for the whole of Belgium The website also provides forecast tables and maps of ozone and PM10 based on different forecasting models.

Federal Government

www.environment.fgov.be – website of the federal environmental administration

Flemish region

We repeat the main websites here; in the answers to the previous questions, reference is made to some other websites too.

www.vlaanderen.be/lucht – the website of the section on air policy for the Flemish environmental administration Aminoal

www.mina.be/amv.html – the website of the department of the Flemish environmental administration Aminoal responsible for environmental permits and the environmental legislation

www.vmm.be - website of the Flemish environmental agency with a.o. emission inventories

www.milieurapport.be – website for the environmental reports

www.emis.vito.be – energy and environment information system, with a.o. information on environmental legislation and BATs (both for Flanders and European BREFs)

www.emis.vito.be/ozon/default.asp - information about environmentally friendly alternatives for the usage of ozone depleting substances

www.milieuengezondheid.be – website with information on indoor air quality

Brussels Capital Region

<http://www.ibgebim.be> website of the Brussels Institute for Management of the Environment.

17.R & D programmes in the areas of: atmospheric conditions; air quality management; air pollution control technology; clean fuels technology; environmental economics; environmental impact assessment; and remote sensing.

Federal government

A study is carried out to evaluate the impact of a 24 hours economy on transport, taking into account the economic, social and environmental pillars of sustainable development. The federal Belgian Science Policy finances different studies in the framework of “Science and Sustainable Development”. These studies include the themes acidification and ground-level ozone.

<http://www.belspo.be/>

Flemish Region

The Flemish Institute for technological research (VITO) conducts scientific research and carries out policy studies on the topics environment, raw materials and energy. Some

examples : research on techniques to reduce SO₂ emissions as part of the performance of BAT studies for different environmental sectors, modelling of emissions, measurements of deposition, clean fuels technology,

Demonstration projects are an essential element in the development and promotion of reduction techniques. PRODEM, a promotion, demonstration and advice centre, founded in 1996 and operating under VITO, offers SMEs logistic and technological support in the introduction of environmentally friendly and economically feasible technologies.

Besides this, several studies have been commissioned by the Flemish government on a.o.:

- making an inventory of emission reduction measures in industry, their potentials and costs
- measures on diffuse emissions
- the use of economic instruments in emission reduction policy
- identification of sources in regions where European air quality standards were exceeded, with inventory of possible measures
- the elaboration of the "milieukostenmodel" (environmental costs model); this model will allow to construct cost curves for the Flemish region, taking into account data on implementation of reduction measures and predictions for energetic and non-energetic activity levels.

Walloon Region

Research and development programme: subsidies or advances (regainable between 50 and 70%) for R&D programmes on the prevention of industrial pollution, recycling of effluents, emission control and methods for intervention in industrial pollution.

Brussels Capital Region

- Participation to the European APHEIS program (in progress)
- Participation to the CITEAIR program
- Current research on composition of particles in the Brussels environment...

Belgium

Belgium also participates in important European and international networks aimed at co-operation on environmental research. Examples within the scope of the EU : CADDET, the network of the International Energy Agency about demonstrated new technologies, OPET, the network about the energy demonstration programme THERMIE and participation in the performance of European BAT studies.

Financing

18. Financing for related programmes from bilateral or multilateral sources.

Belgium pays an annual obligatory contribution under EMEP / Geneva Protocol, 1984. For the year 2005 the amount to be paid by Belgium is estimated at 56.320,00 USDollars. Within Belgium this amount is divided between the Federal Government and the three Regions, according to the double key fixed by the 2002 "Financial Protocol with regard to mandatory contributions under

mixed multilateral environmental agreements” (a later addendum to an already existing Cooperation Agreement from 1995).

Experience has shown that the payment of this mandatory contribution tends to run more surely and smoothly than the payment of voluntary contributions under LRTAP by Belgium. (These contributions, again, are divided up between the Federal Government and the three Regions.) Due to a variety of reasons there has been a considerable backlog in Belgium’s voluntary contributions for the last five or six years, even in spite of decisions taken at the level of the Interministerial Conference for the Environment. Belgium’s voluntary contribution for the year 2005 is estimated at 56.460,00 USDollars, but again, its payment does not progress as hoped for.

The problem is not unique to LRTAP and LRTAP-related texts, but appears in a number of files related to voluntary contributions. This seems to be a particularly vulnerable subject matter.

In the meantime Belgium does not only contribute in money, but also “in natura”, by organising events, hosting workshops, participating in expert panels, and the like.

Cooperation

19. Efforts to establish or participate in regional, multilateral or bilateral agreements to address transboundary air pollution concerns.

Belgium is a Party to LRTAP and to a considerable number of protocols under LRTAP. Belgium participates in the different working group established in the framework of the LRTAP-treaty.

There is however a persistent problem.

Almost all new protocols coming in under LRTAP are to be considered as “mixed”, meaning falling under the competence of the Federal Authority and the three Regions. Under the Belgian Constitution and Belgian law this means that the signature and later the ratification of these protocols depends on actions to be taken by, and interactions between, the Federal Authority and all three of the Regions.

In order to achieve ratification the Federal Authority and all three of the Regions all need to gather the necessary autorisations, permits, approvals, advices, and so on; and they all need to approach their government and parliament with, according to the situation, the project of a “law”, a “decree” or an “ordonnance” approving the protocol. Normally this is supposed to happen more or less simultaneously. Afterwards the Federal Authority gathers and combines all these inputs, and proceeds with the last steps leading to the actual ratification.

This is a lengthy and fragile procedure ; or rather, it is a combination of FOUR lengthy and fragile produres. As a result Belgium tends to be slow in signing and ratifying the various protocols under LRTAP, even in cases where there is a positive political determination to become a Party.

In the spring of 2005 there remained a number of protocols still to be ratified by Belgium :

- the Aarhus protocol on heavy metals (prospects good),
- the Aarhus protocol on persistent organic pollutants (progress slow), and
- the Göteborg protocol on (...) and tropospheric ozon (progress slow).

The same problem also dogs other MEA's, such as for instance the Stockholm Convention on persistent organic pollutants (progress slow).