

# Scoreboard of the Walloon Environment 2004

## Summary



**Ministry of the Walloon Region**  
**Directorate-General for Natural Resources**  
**and the Environment**



RÉGION WALLONNE

*This brochure is a summary of the Scoreboard of the Walloon Environment 2004. It presents the major trends that came out of the analysis of the 58 environmental indicators covered in the complete report.*

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## Collaboration

The *Scoreboard of the Walloon Environment* is the fruit of a mammoth undertaking that involved more than 200 people from the Walloon Region's ministries, scientific circles and various other bodies. The team responsible for putting this report together would like to express their gratitude to all these contributors.

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# From environmental management to the challenge of sustainable development

**T**he notion of environment goes back to the sixties. At that time, an increasing number of voices were raised against its deterioration.

Fifteen or so years went by before the first environmental policies were implemented. The environment was then a separate matter, a rather marginal one, a subject that needed to be better understood and explained to the public.

In the nineties, a new concept came to light: sustainable development. From then on, the environment had to form an integral part of other policies; it took on a global dimension and no longer concerned only “everyday” management but aimed at future generations.

Such an outlook means that every citizen of the world is entitled to benefit from a healthy environment and has a correlative

duty to contribute to its conservation, in a process of active involvement.

The Rio Declaration in 1992 consecrates that stage: the citizens' right to participate in decision making and to be previously informed.

In 1993, in Belgium, that principle entered the Constitution. The Walloon Region included it in most of its environmental legislation. It is actually no longer conceivable to improve the environment without informing all citizens and without their support. Citizens must take part in environmental management, in respect for the environment and in its protection by integrating it into their acts and behaviours.

Consequently, environmental evaluation is a key tool, which belongs to Society. Every year, the Walloon Region publishes a report on the state of its environment, which is dis-

tributed as widely as possible. The 2004 Scoreboard of the Walloon Environment provides an overview and a summary of the state of our environment. It is published in an edition of 6000 copies and is put on line on the Region's website.

The objective of this summary is to make this information accessible to the greatest number.

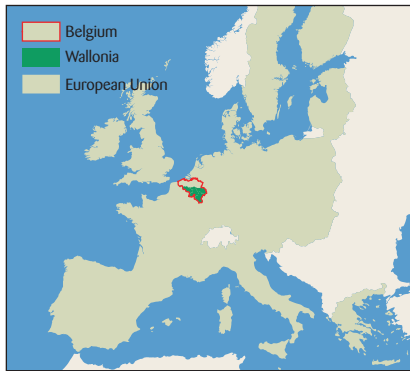
My wish is that this report provides an opportunity for citizens to evaluate their efforts and persuades them even further to participate in the adjustment measures required to assure and achieve sustainable development and improve the quality of life, for us, for our children and for Humanity.

**Benoît LUTGEN**

*Minister of Agriculture, Rurality,  
Environment and Tourism  
of the Walloon Region*

# The Walloon Region's Business Card

## The Walloon Region in Europe



## Institutional framework

- The Walloon Region is one of the three regions that make up the Belgian Federal State.
- Its official languages are French and German (German-speaking Community).
- Following the Belgian State's reorganisation into regions, the Walloon Region acquired widespread powers in environmental matters, for example.



## Population

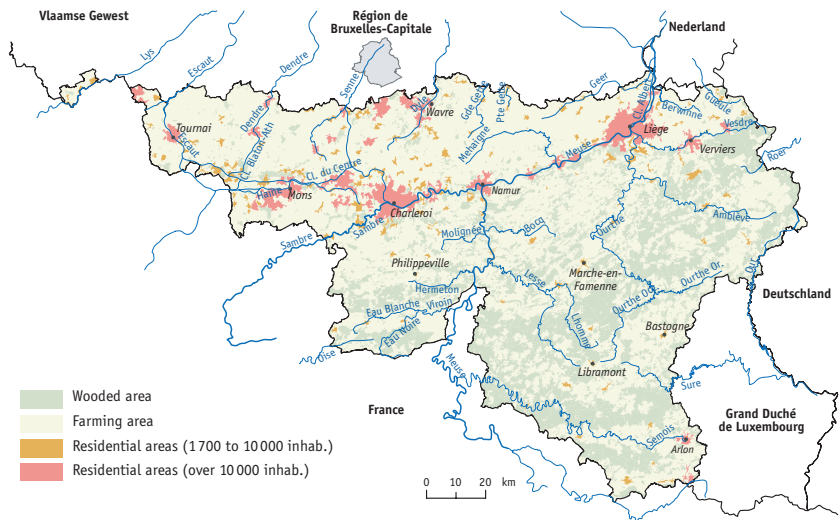
- The 3 368 250 inhabitants (counted as of 1/1/2003) make up about one-third of the country's population.
- The gross domestic product per capita (€ 18 617/inhab/yr in 2002) is about 25 % below the EU-15 mean (€ 24 061/inhab/yr).



## Territory

- The Walloon Region covers 16 844 km<sup>2</sup>, or more than half of Belgium.
- Farmland covers more than 50 % and woodland about 30 % of its surface area. The Sambre-Meuse "furrow" (the Sambre and Meuse/Maas river valleys), along with its extension towards the Scheldt sub-basin to the west, is a densely populated and industrialised area. The population density, density of towns, number of industries and degree of agricultural activity north of this line are greater than south of this line, where forests predominate.

## Land use



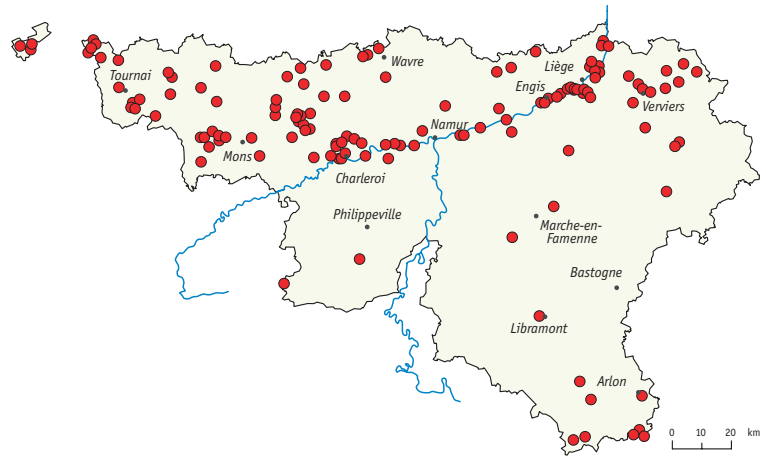
Sources: INS; MRW-DGRNE; MRW-DGATLP



## Economic activity

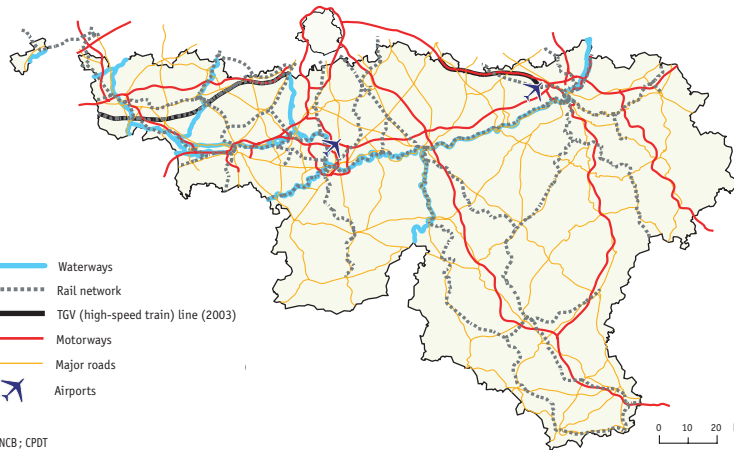
Wallonia's industrial past is marked by coal mines, steel mills, and chemicals. All the region's coal mines have been closed. In contrast, some major steelworks continue to operate and the chemical concerns, which continue to abound in the region, are diversifying into biotechnology and pharmaceuticals as well. As in other regions of Europe, Wallonia's tertiary sector is booming.

## Main industries



Sources: ONSS; INASTI (according to the ICEDD, 2003)

## Main transport infrastructures



Sources: MET; SNCB; CPDT



## Transport infrastructures

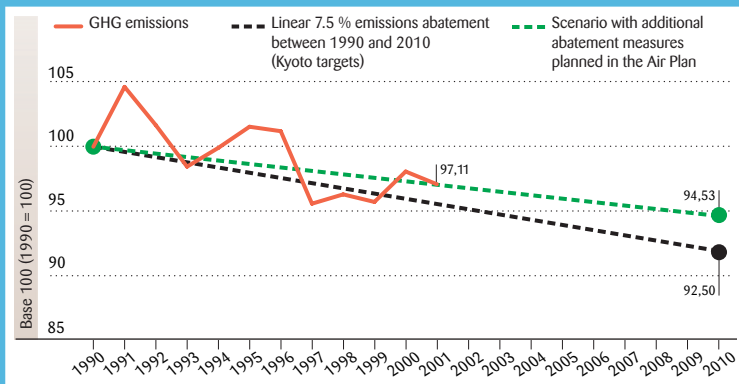
The region has a very dense network of transport arteries, located as it is at the crossroads of two major European economic axes (one north/south, the other east/west).

The ambient air is a fundamental resource. Its quality depends on the discharges of pollutants into the air. The levels of air pollution in the Walloon Region and their impacts on health and the environment depend not only on local pollution emissions, but also on emissions outside the region's borders. That is why most of its air quality and pollution control policies are developed on the European and international levels.

In ratifying the Kyoto Protocol and under the terms of a Belgian commitment distribution agreement, the Walloon Region has committed itself to reducing its greenhouse gas



## Greenhouse gas emissions in the Walloon Region compared with Kyoto targets and emissions forecasts for 2010



Sources: MRW – DGRNE – DPA – Cellule Air ; Rapport national des inventaires belges de gaz à effet de serre (1990-2001) (Avril 2003)

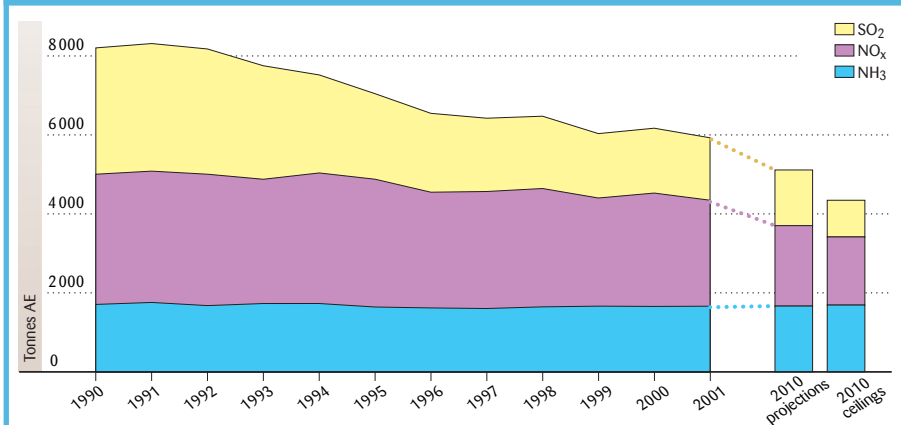
emissions 7.5% below its 1990 levels by 2010. The Walloon Region is on target, for it reduced its emissions 2.9% between 1990 and 2001, despite unfavourable developments in the transport sector. The implementation of the measures that are currently being considered should result in an overall abatement of 5.5% in 2010. This means that the region will probably have to buy emissions permits from other countries to meet its international commitments. Its acidifying substances emissions levels have also fallen (about 30% between 1990 and 2001).

Nevertheless, the abatement effort must continue to reach the targets set for 2010.

When it comes to air quality, high ozone peaks were recorded in the summer of 2003, which was marked by unusually high temperatures and levels of sunshine. This confirms how hard it is to control this type of pollution. The same goes for suspended particles (PM<sub>10</sub>), the concentrations of which still exceed health protection threshold values in some spots, especially in the country's most sensitive industrial areas. In contrast, the situation is improving for sulphur, lead, and heavy metals, the air concentrations of which have been falling steadily.

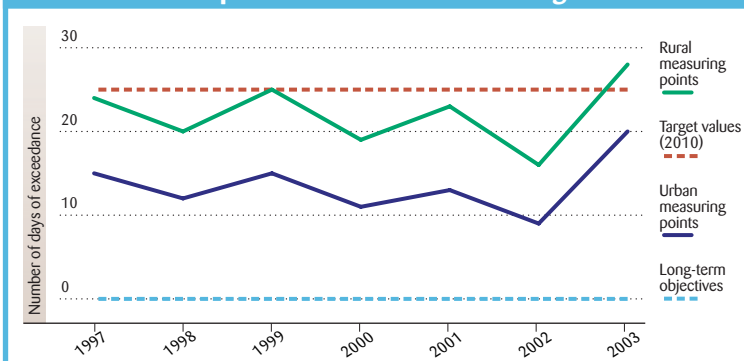
At the end of 2003 the Walloon Region adopted an "Action Plan for Air Quality for 2010". This "Air Quality Plan" proposes some structural changes (changes in legislation and infrastructure) and changes in individuals' behaviour. It also embodies the initiatives launched by the European institutions to control air pollution and combat climate change. The Regional CO<sub>2</sub> Quota Allocation Plan was thus drawn up in this context to enable the region to participate in the European CO<sub>2</sub> emissions trading market as of 1 January 2005.

### Emissions of acidifying substances in the Walloon Region and projections compared with emissions ceilings set for 2010



Source: MRW – DGRNE – DPA – Cellule Air

### Exceedances of tropospheric ozone concentration thresholds for human health protection\* in the Walloon Region



\* Directive 2002/3/EC relating to ozone in ambient air.

Sources: ISSeP (telemetrics network); FPMs (Air Quality data base)

The higher values in rural areas are due to the sparser traffic (and thus lower concentrations of nitrogen monoxide emissions, which inhibit the formation of tropospheric ozone) and greater density of vegetation (which naturally produces volatile organic compounds that are precursors of tropospheric ozone) than in urban areas.

# Water

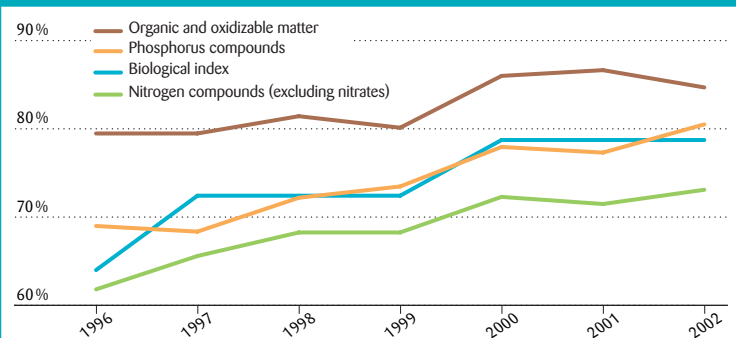
Despite Wallonia's high population density, the region's water resources are not over-utilised, at least not on the regional scale. Still, the amounts drawn off each year nevertheless amount to approximately two-thirds of the region's renewable ground water reserves.

The Walloon Region must also monitor and preserve the quality of its water. The state of its surface waters has improved over the past few years, especially when it comes to organic pollution and eutrophication (nitrogen and phosphorus levels). This drop in pollution has led to a generalised rise in the biological quality of the region's watercourses and

improvement in bathing water quality to the point where three-fourths of the region's official bathing areas meet European standards. This positive development results mainly from reductions in the discharges of industrial wastewaters and huge collective and individual sewage treatment efforts. The region's public wastewater treatment plants' capacity effectively almost doubled over a decade to tip the scales at 2.5 million inhabitant equivalents in 2003. The situation is more problematic for the region's ground water, where nitrogen and pesticide concentrations are continuing their steady rises in certain areas.

The European Water Framework Directive advocates more comprehensive and integrated water management by river basin and

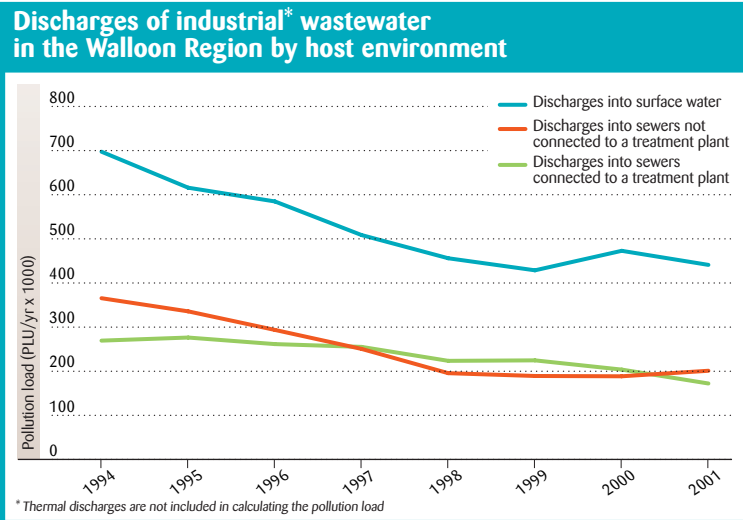
**Proportion of measuring stations where water quality is good to very good in the Walloon Region**



Sources: MRW – DGRNE – DE – Direction des Eaux de Surface (AQUAPHYC, SEQ – ESU – Aptitude à la biologie (Suitability for life) data base); MRW – DGRNE – CRNFB – Direction de la Nature, de la Chasse et de la Pêche (IBGN = Standardised Comprehensive Biological Index)

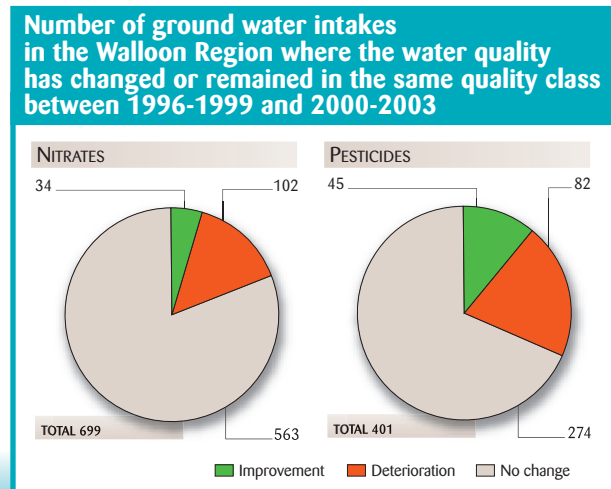


sub-basin. The aim is to have all of the bodies of water of the European Community achieve good quality by 2015. Consequently, Wallonia has been divided into fifteen river sub-basins that henceforward constitute the management units for quality objectives, river contracts, fish management, sewer system planning and wastewater treatment. This new management approach has led the Walloon Region to reorganise the water supply and distribution sector and adapt its surveillance networks. More integrated action plans have also been developed, notably in the areas of flood control and the sustainable management of nitrogen in agriculture.

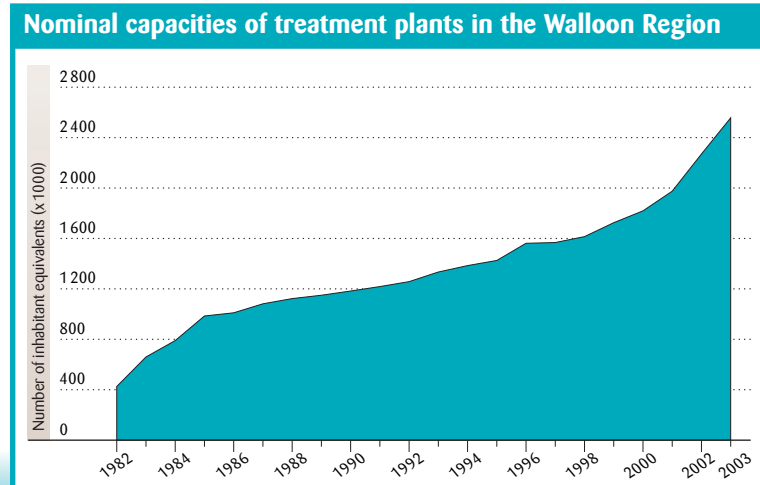


The Pollution Load Unit (PLU) reflects both the discharge volumes and their pollutant concentrations.

Source: MRW – DGRNE – DE – Direction de la Taxe et de la Redevance




Source: MRW – DGRNE – DE – Direction des eaux souterraines (SEQ – ESO – Heritage State)



Sources: SPGE ; MRW – DGRNE – DE – Direction des eaux de Surface

# Soils



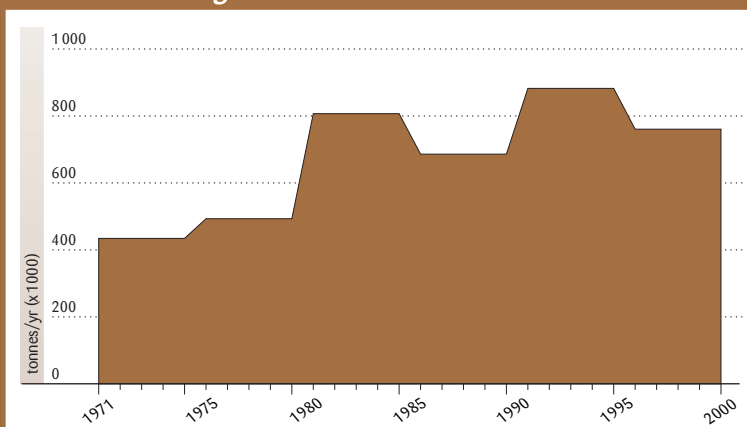
The soil is a resource that is not easily renewable. Its deterioration in Europe results mainly from erosion and local and disseminated pollution. These phenomena play a part in reducing the soil's ecological functions and fertility and contaminating watercourses, notably through build-ups of sediment and associated substances (nutrients, pesticides, and so on).

According to estimates, the region's watercourses carry some 750 000 tonnes of eroded soil particles out of Wallonia each year. These quantities allegedly increased 14 to 155 per cent, depending on the river sub-basin, over

the past thirty years. This trend is explained notably by increasingly erosive rainfall and increasingly exposed farmland during the period of the year that is most critical for water erosion.

When it comes to local ground pollution, the Walloon Region has compiled an inventory of some 6 000 potentially contaminated sites. Great progress has been made in the past few years in characterising and securing the most

**Eroded soil particles exported to waterways in the Walloon Region**



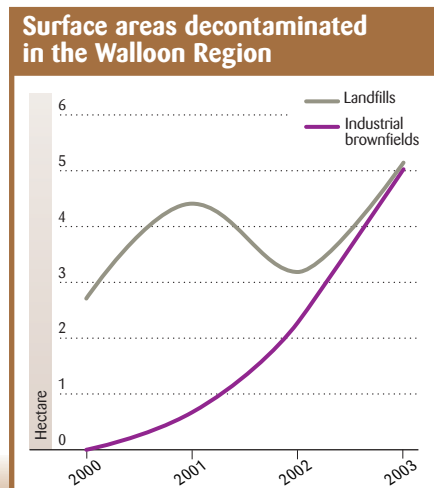
polluted sites. The areas that have been decontaminated practically quadrupled between 2000 and 2003, thanks notably to the substantial financial means made available for this purpose. Today, the risks of soil's being contaminated by risky industrial activities are low as a rule. Indeed, the amounts of dust and metallic trace elements that are deposited near these industries are on average below the acceptable limit values for such substances.

Since 2001 the European Union has developed a thematic strategy for soil protection.

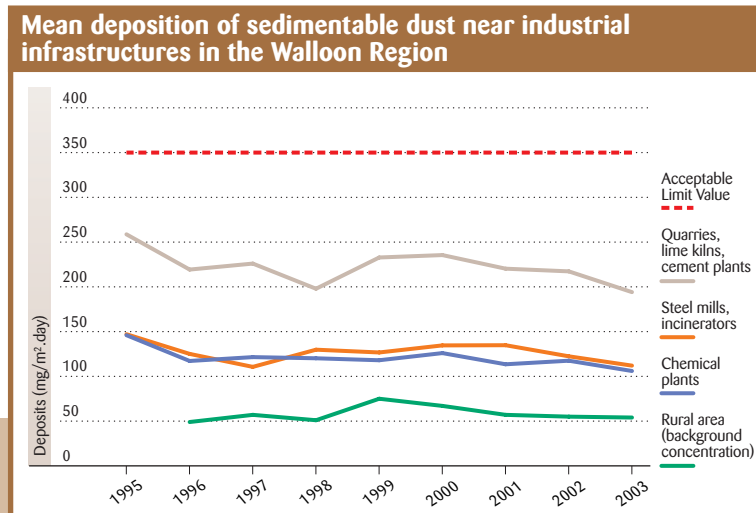


This strategy advocates the development of a surveillance network and better integration of soil protection in local and sectoral policies. The Walloon Region's brand-new "Soils Decree" ties in with this strategy. It aims pri-

marily to speed up land remediation procedures and makes it possible to designate the parties responsible for soil pollution (past and present) and those that will have to bear the cost of decontaminating the land.



Source: SPAQuE (2003 Activity Report)



Mean values from a network of 115 Owen gauges.

Source: ISSeP (Sedimentable Dust Network)

# Land use

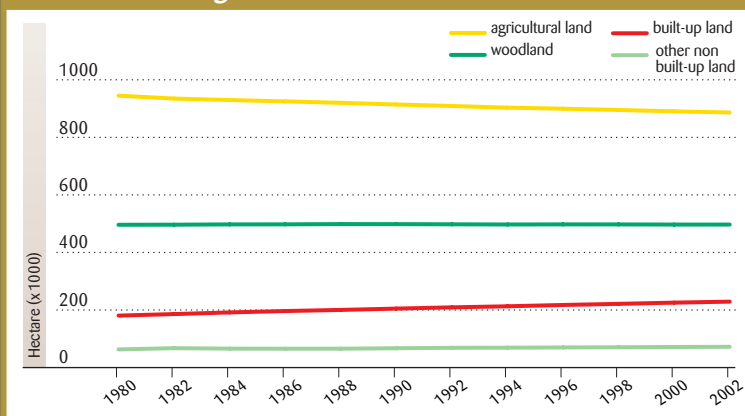
With a total surface area of 16 844 km<sup>2</sup>, the Walloon Region has a population density of 200 people per km<sup>2</sup> (or 2 people per ha), which makes it one of the most densely populated regions in the European Union. Half of the population lives in urban areas where the population density exceeds 25 per ha (these areas cover about 3% of the territory). Urbanisation has engulfed an additional 48 000 ha (+27%) since 1980, mainly at the expense of agricultural land.

The scattered siting of housing, industry, shops, and public services (in other words, built-up areas) has led to the development of

infrastructure and facilities that in turn create environmental pressure. So, the resulting fragmentation of land units and deterioration of specific sensitive environments are detrimental to biodiversity, whilst the increase in transport due to the spatial dispersal of activities has contributed to the rise in energy use and polluting emissions.

Area plans are the legal basis for assigning land use (areas for urban expansion, agricultural zones, wooded zones, etc.). Since these plans were first implemented more than twenty years ago they have undergone various changes, mainly to benefit urbanisation. So, in 2004 the Walloon Government adopted a thematic revision of the area plans allowing the designation of thirty-five new areas of economic activity for a total surface area of 1 600 hectares. In the same vein, following the 1997 amendment of the Walloon Land-use

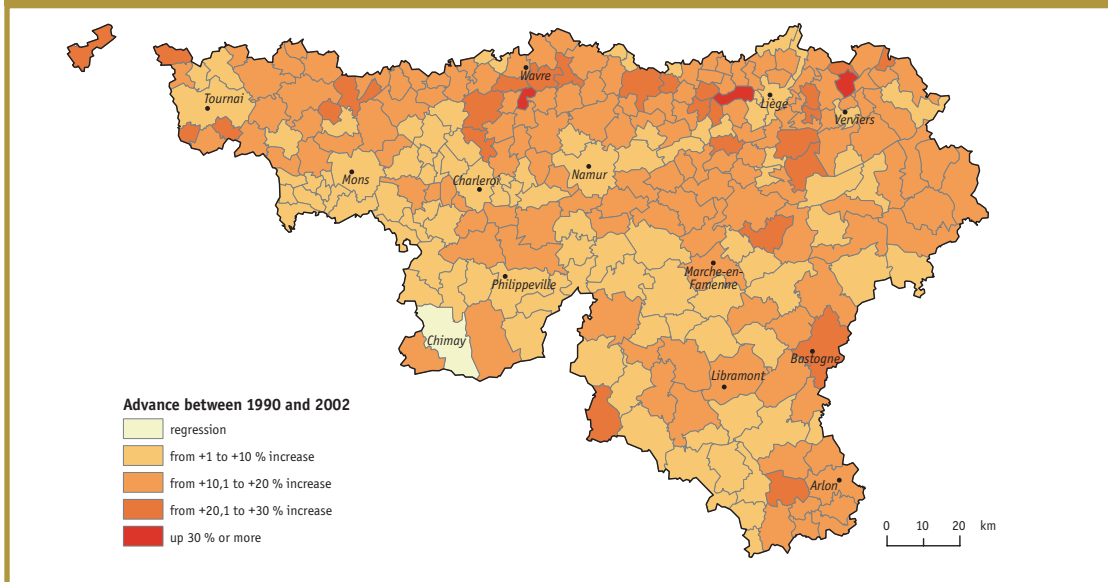
Surface areas of the major land use categories in the Walloon Region



Source: CPDT (based on land registry data)



## Evolution des superficies des terres bâties en Région wallonne



Source: CPDT (based on land registry data)

Planning, Town Planning and Heritage Code (CWATUP), the so-called "housing extension areas" have been relabelled "areas for future development". This concerns 18 500 hectares – slightly more than 1% of the region's territory – that the municipalities may assign to all types of urbanisation. If additional measures are not taken, this urbanisation potential is likely to increase the pressure that is exerted on the environment.



The apparent regression in the municipality of Chimay comes from the fact that several properties unregistered with the land registry (previously classified as roadways and transport infrastructure) have become.

### For more on this topic

The Standing Conference on Territorial Development (CPDT) published its first Territorial Development Scoreboard (*Tableau de bord du développement territorial – TBDT*) in the spring of 2004. This appraisal gives a number of indicators that are relevant to the subject.  
<http://cpdt.wallonie.be>

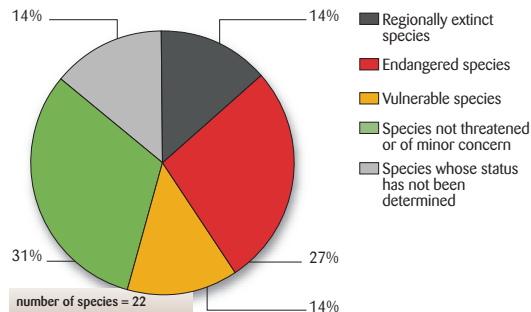
# Fauna, Flora & Habitats

As in many other parts of the world, biodiversity is continuing to decline in the Walloon Region. So, 422, or about 28%, of the total of 1491 animal and plant species studied are threatened with extinction in the region. Fish, butterflies, and reptiles are in the most precarious position, for 55, 66 and 71 percent of the fish, butterfly, and reptile species, respectively, have disappeared from or are threatened in the region. Conservation measures for these groups thus fall short of the mark.

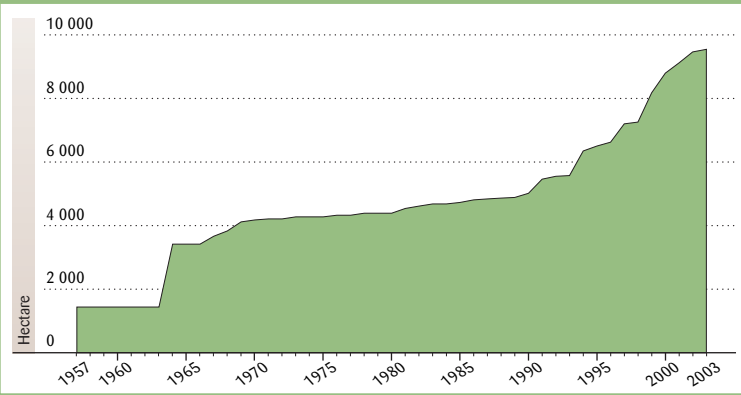
The main causes of this situation are the disappearance of, fragmentation of, and changes in habitats (including nutrient influxes). The colonisation of specific habi-

tats by alien species remains a localised phenomenon, but one that can also upset the local animal populations or environments greatly. Nature management that fails to allow sufficiently for the interactions amongst the various species that the areas harbour can also lead to critical situations. So, the rises in the forests' deer and wild boar populations jeopardise not only the success of natural regeneration (depending on the tree species, approximately 20 to 30 percent of the regenerating stands are damaged by these ungulates), but also underbrush biodiversity. Finally, climate change is a tangible threat that is likely to affect the less mobile species in particular.

**Status of amphibia and reptiles in the Walloon Region** (evaluation 2004)



## Surface areas subject to strict protection in the Walloon Region



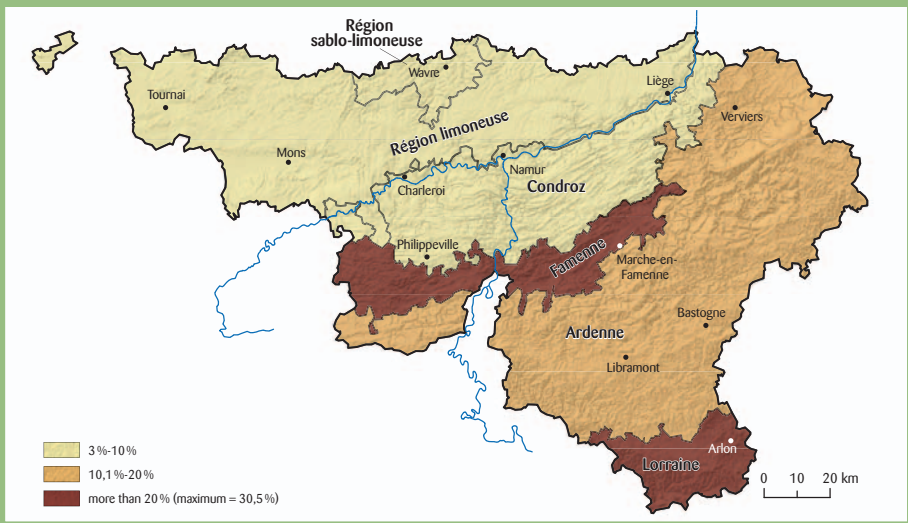
Concerns the forest reserves, state nature reserves, chartered nature reserves, and wetlands of biological interest, plus 57 underground cavities of scientific interest.

Especially rare or fragile sites, such as open habitats and wetlands in particular, require stricter protection, for they are key elements of ecological networks, in which they serve as species population reservoirs. At the end of 2003 the Walloon Region had slightly more than 9 500 ha of strictly protected land. This is about 0.5 % of the region's surface area.

Source: MRW – DGRNE – DNF – Direction de la Nature

The European Union has set its sights on halting the decline in biodiversity by 2010. To achieve this goal, it has opted to try to strike a balance between the various uses of a plot of land and wildlife and habitat protection, rather than trying to separate nature from humankind's activities. The Natura 2000 network, which covers some 13 % of the Walloon Region's territory, is taking shape in just such a spirit. Whilst its main aim is to conserve threatened plant and animal species and habitats, all human activities are not banned for all that.

## Proportions of natural regions in the Walloon Region proposed for Natura 2000 status



Sources: MRW – DGRNE – CRNFB – Direction de la Nature, de la Chasse et de la Pêche; MRW – DGRNE – DNF – Direction des Ressources forestières

# Households

According to opinion polls, the great majority of Wallonia's population is concerned about the environment's deterioration and is willing to make efforts to prevent this. Yet, when it comes to action, environmentally friendly practices continue to remain limited.

Households' impacts on the environment depend on many factors, to wit:

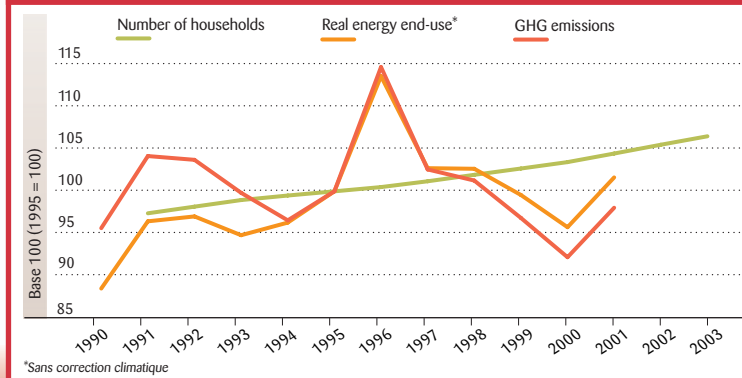
- economic factors: the household's budget; cost of food, goods and services; housing and transportation costs, etc.;
- demographic factors: age classes, number, size, and type of household;
- technological factors: energy efficiency of vehicles and household appliances and

machinery, insulation of buildings, characteristics of products, etc.;

- behavioural factors: perceptions, consumer choices, etc.

Between 1991 and 2003 the number of households in Wallonia increased by close to 10% compared with a roughly 3% increase in the population. The average size of the region's households thus fell from 2.51 to 2.37 people. This trend has influenced residential energy consumption, for example. Since the number of housing units depends on the number of households, the latter's rise has effectively entailed a general increase in the number of household appliances and heating

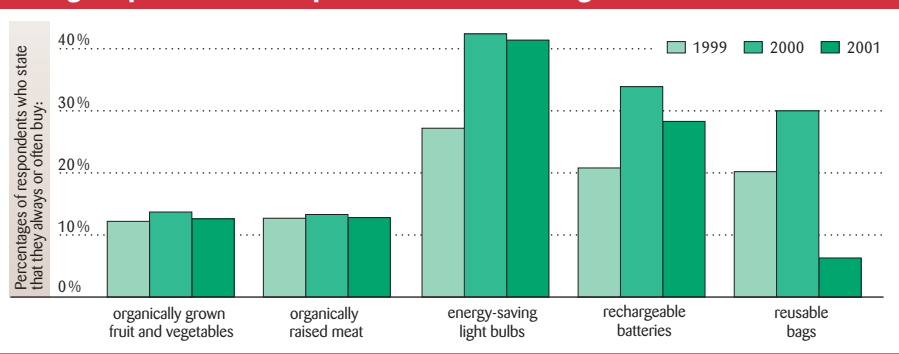
## Residential energy consumption and greenhouse gas emissions in the Walloon Region



The particularly cold winter of 1996 led to high energy consumption for heating and thus an unusual spike in the region's GHG emissions.

Sources: INS (National registry); ICN (Comptes régionaux); MRW - DGTRE; MRW - DGRNE - DPA - Cellule Air

## Ecological product consumption in the Walloon Region



Source: Eco-consumption Network (based on CRIOC's annual surveys)

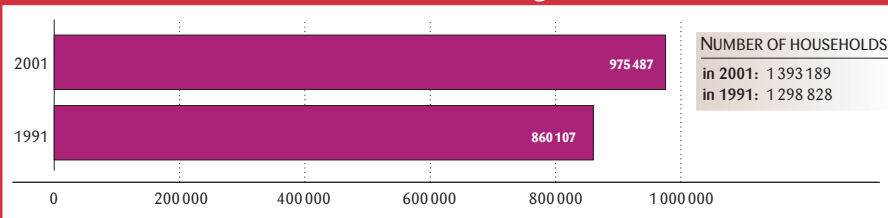
installations. In contrast, the residential greenhouse gas emissions and water consumption trends are encouraging, for they remained stable until 2001. On the other hand, more than three-quarters of the distances travelled to get to work, schools and shops, and for leisure activities, are travelled by car.

The tools used by the government to limit the households' negative environmental impacts include taxation, regulations, the promotion of more eco-efficient technologies, information, and awareness raising. A number of policies are currently being conducted with a view to changing behaviour through awareness-raising campaigns and education and

the implementation of measures to encourage environmentally friendly choices such as labels and rebates.



## At least one-car households in the Walloon Region



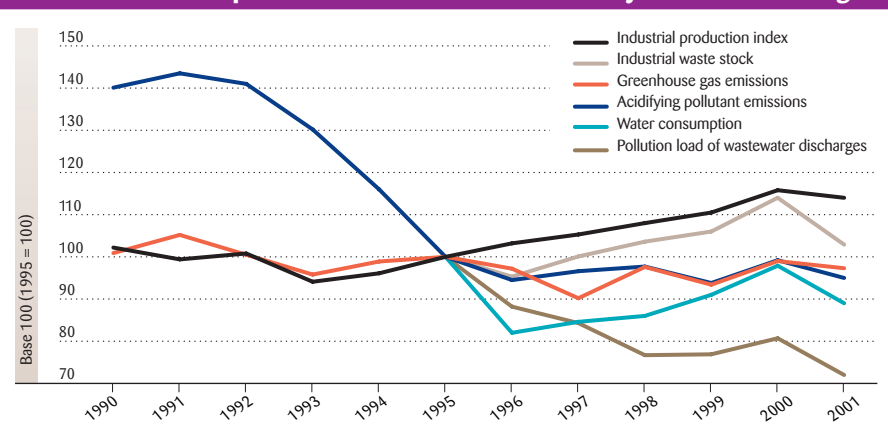
# Business

Economic activity gives rise to various types of environmental pressure. These are linked primarily to the consumption of resources (energy, water and raw materials) and generation of waste.

In the Walloon Region, three-quarters of the wealth that is created (GDP) comes from the services sector. This sector's growth has gone hand in hand with a rise in its energy needs. Industry accounts for close to half of the region's end-user energy consumption. Gradual reconversion to producing less energy-intensive outputs and the use of cleaner fuels have neverthe-



**Main environmental pressures linked to industrial activity in the Walloon Region**



less helped to lower the discharges of greenhouse gases and acidifying substances from combustion into the air. Total consumption of water, most of which is used for cooling systems, has followed the production index. Industrial wastewater treatment has also enabled the region's businesses to reduce their effluents' pollution loads by roughly 30% in just a few years. The region's stock of industrial waste increased until 2000, but more than 80% of the waste generated by its large and medium-sized enterprises is recovered and reused (mainly physical reclamation).

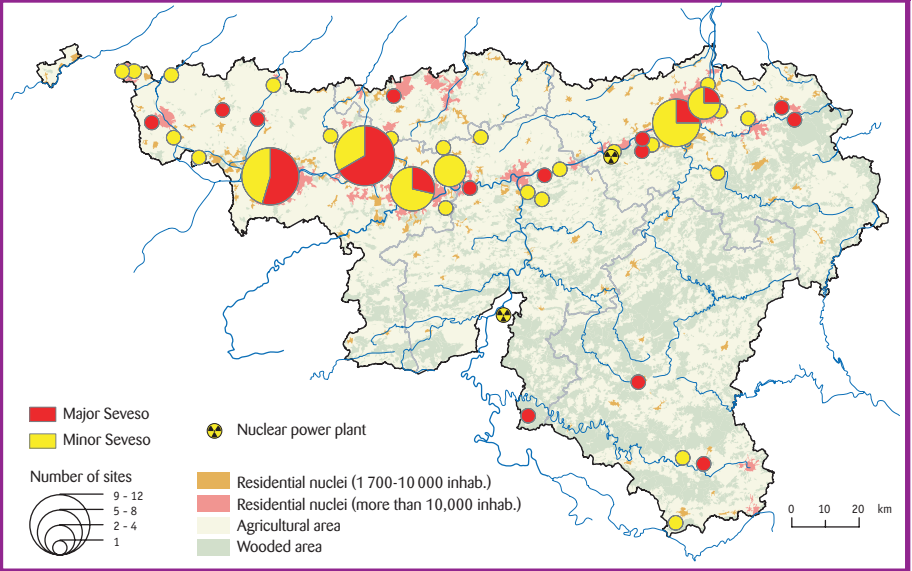
Sources: MRW - DGRNE - DCE (Rapport sur l'industrie wallonne 2004); Walloon Energy Statistics Compendium); MRW - DGRNE - DPA - Cellule Air

Some industrial activities and the transport and storage of hazardous materials can moreover generate major risks for the environment and/or human health. Specific surveillance and monitoring schemes have been set up to handle such cases. Very few incidents were reported on the 81 identified sites at risk of a major accident in the Walloon Region in 2003.

The gradual inclusion of environmental concerns in the region's enterprises' operations is also reflected in their management choices. For example, environmental investments are increasingly integrated with their production processes. On the other hand, proactive approaches such as voluntary commitments to improve environmental performance (branch agreements and certification schemes) are on the rise, even though such certification as yet concerns only a small proportion of the region's enterprises.

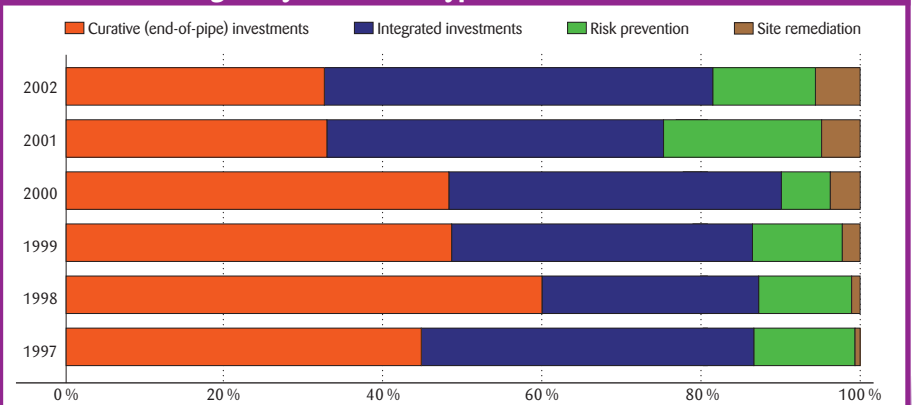
Based on a survey of 220 industrial sites in the Walloon Region

### Major accident hazard facilities (Seveso class) and nuclear power plants in the Walloon Region (2003)\*



Source: MRW – DGRNE – DPA

### Breakdown of enterprises' environmental investments in the Walloon Region by investment type



Source: MRW – DGRNE – DCE (Environmental balance sheet of companies in 2004)

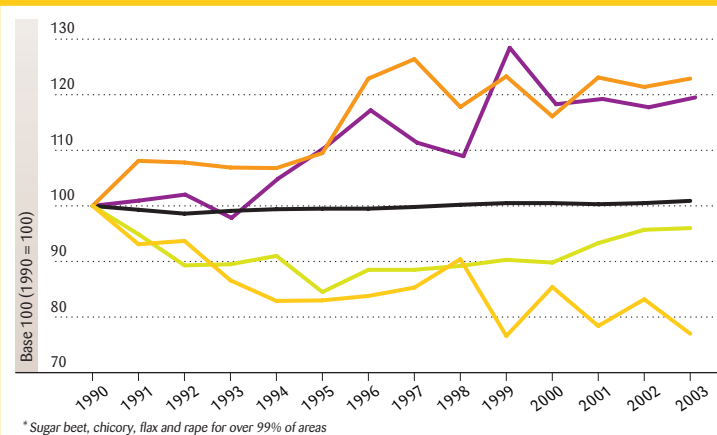
# Agriculture

The agricultural sector, which covers half of the Walloon Region's surface area, is a major player when it comes to developing and managing rural areas. The pressure that it exerts on the environment is linked mainly to the intensification of production (mechanisation and utilisation of inputs), which is relatively high compared with the European mean, and changes in land use patterns. The latter have resulted in an overall reduction in the agricultural acreage that is under plant cover (meadows and winter field crops) during the winter. Farming is also concentrated on an ever smaller number of farms.

In this context, the main environmental problems stemming from agriculture are the risks of diffuse pollution due to nitrates in the region's surface and ground water, the need to control the impacts of pesticide use on the environment's various compartments, and reduced biodiversity in agricultural areas.

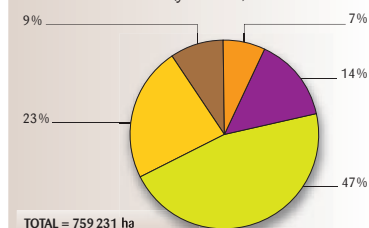
Various tools have been adopted to limit these pressures on the environment. They include agri-environmental measures (AEMs), the Sustainable Nitrogen Management Programme (including livestock effluents), the environment permit, and the Natura 2000 network. The Europe-wide reform of the

## Agricultural land in production in the Walloon Region

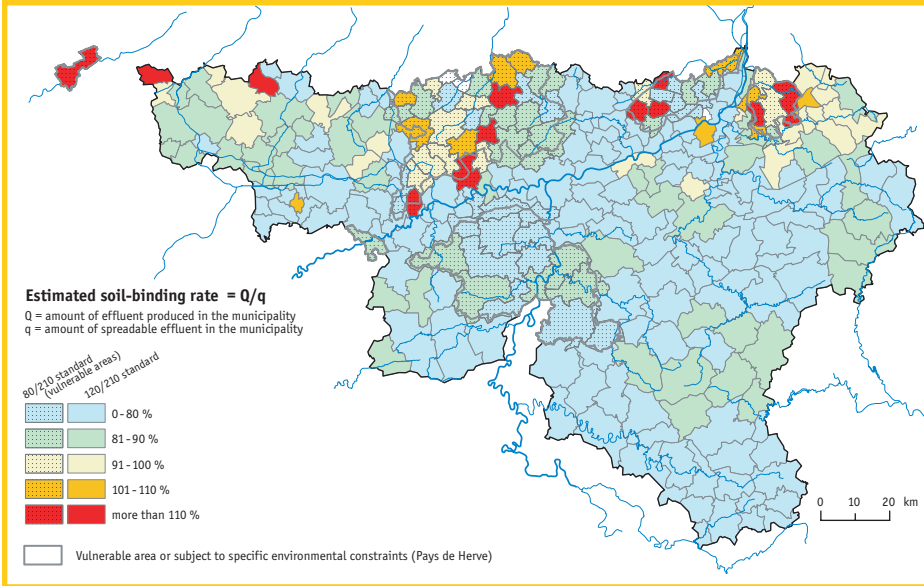


- Forage maize
- Cultures industrielles\* et pommes de terre
- Total utilised agricultural area (UAA)
- Permanent meadows
- Winter corn
- Autres utilisations du sol

### Breakdown of UAA (year 2003)



## Soil binding rates of animal husbandry by municipality in the Walloon Region (estimates for 2000)



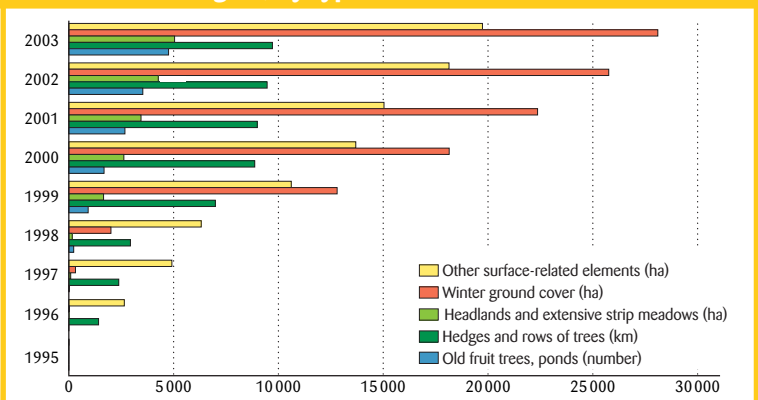
Source: MRW – DGRNE – DE – Direction de la Taxe et de la Redevance

European Common Agricultural Policy, moreover, institutes a partial uncoupling of farm subsidies from production, with a switch to meeting certain environmental criteria, and the refinancing of rural development actions. Voluntary approaches and diversification are also encouraged. These include support for organic farming, farm tourism, farm certification schemes and labels, and non-food crops such as biofuels, for example. Several challenges of great scope are already looming on the horizon, for example, the European



Union's enlargement, genetically modified organisms, and Natura 2000's actual implementation.

## Agri-environmental measures implemented in the Walloon Region, by type of measure



Source: (CEEW computations)

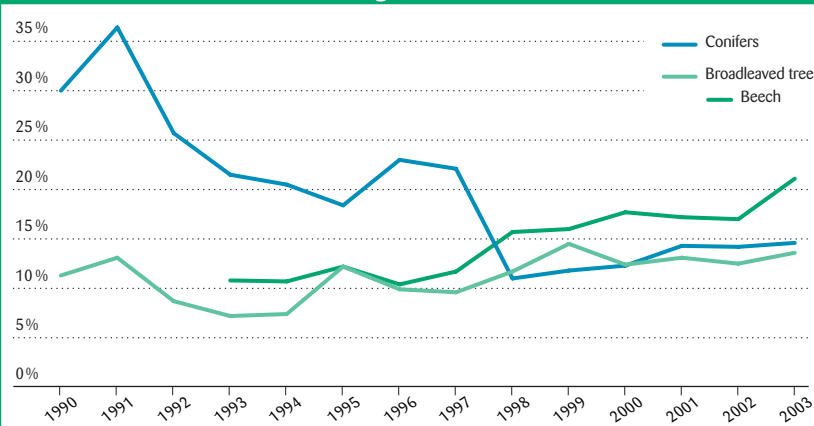
# Forest management

Forests cover some 545 000 hectares or one-third of the Wallonia Region. Together with the agricultural areas they are a major component of the rural area and landscape. Given their perennial nature, forests protect the ground from erosion, regularise the flow of water, serve as buffers in various element cycles – notably that of CO<sub>2</sub> – and offer prime habitats for some plants and animals.

In the past, forest management in Wallonia focused mainly on logging. As a result, the region's forests are currently little diversified. So, 64% of the forestland is covered by monospecific forests of spruce (31%), oak



**Proportion of trees in the Wallonia Region for which the defoliation rate is greater than 25%**



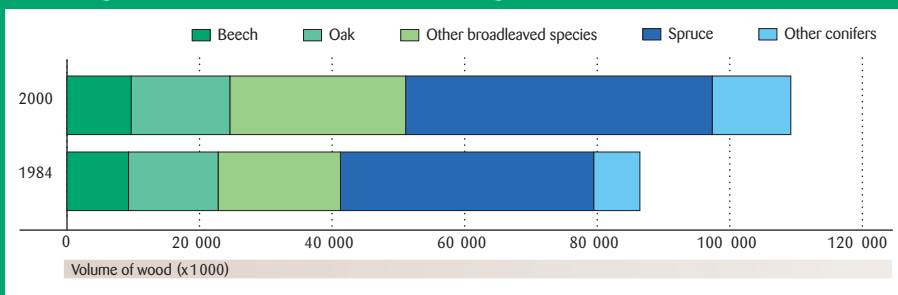
(21%), or beech (11%). Close to 90% of Wallonia's forestland participates more or less intensively in timber production. The rest includes biotopes such as moors, fens, and ponds, which are often of great interest for the animals and plants that they harbour. The

forest must also cope with various problems such as disease (scolytids and bark beetles (*Ips* spp.)), decline, and high game densities, without forgetting some cases of pressure linked to tourism. Overall, the trees' bill of health has improved, even though the situation remains worrisome for some species.

On the regional scale, timber production remains a major function of the forest. It is indispensable to ensure the continuity of forest management in a context of reduced profitability as well as to ensure the continuation of a lumber industry in the Walloon Region. Currently, growth is outstripping the cull rates. The net result is thus an increase in the overall volume of standing wood.

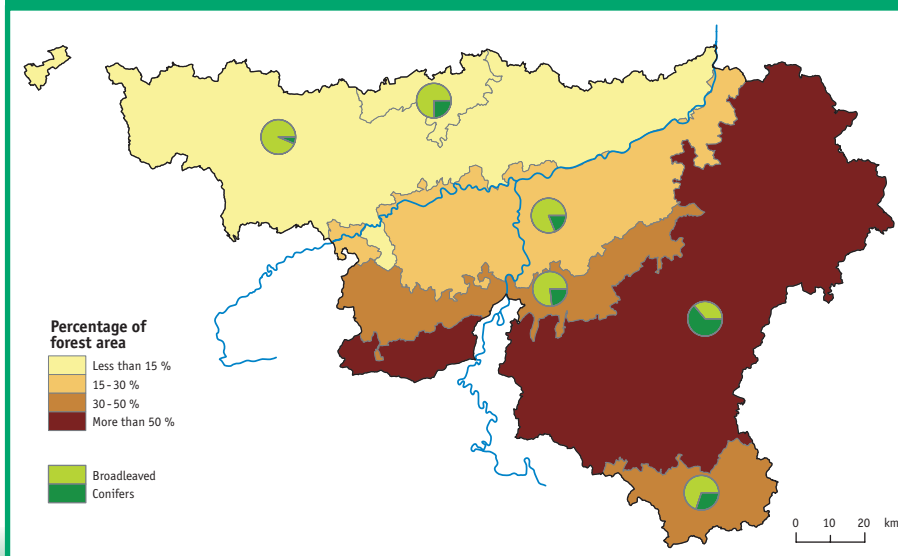
Forest management is gradually changing to meet today's environmental concerns. Wallonia's forests, for example, have entered a certification process aimed at promoting economically viable, environmentally friendly, and socially beneficial forest management. Slightly more than one-third of the region's forests have been certified so far. In addition, the planting of quality species that are adapted to local conditions and sufficiently diversified is also encouraged.

### Standing wood volumes in the Walloon Region



Source: MRW – DGRNE – DNF – Direction des Ressources forestières (IPRFW)

### Forest coverage rate by natural region in the Walloon Region (year 2000)



Source: MRW – DGRNE – DNF – Direction des Ressources forestières (IPRFW)

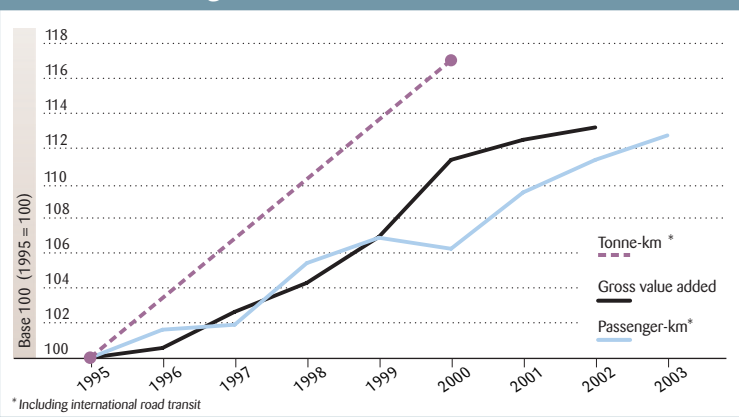
# Transport

The demand for passenger and freight transport depends on factors such as economic growth, the service sector's development, and land-use planning, without forgetting our households' behaviour patterns.

The roads carry the bulk of passengers and goods in the Walloon Region, accounting for more than 90 and 80 percent of the passenger and goods transport demand, respectively. These are amongst the highest road transport use rates in Europe and are due in part to the influence of international transit. Although the trains and waterways are less important than the roads, their shares in the region's



**Transport demand and economic activity indices in the Walloon Region**



transport volumes are growing. Air traffic, for its part, is continuing to climb at the regional airports at Bierset (Liège) and Gosselies (Charleroi).

The intensification of transport by all these means has generated pressure on the environment. This takes the form of increased energy consumption (up 21% since 1990), higher emissions of greenhouse gases (up 23% since 1990) and other pollutants, fragmentation of the territory, and deterioration of ecosystems. Some of this pressure (particulate emissions,

Sources: ICN (regional accounts) ; SPF Mobilité et Transports (Federal Government Department of Mobility & Transport) ; MET - D112 ; MET - D212 ; CPDT ; SNCB (Belgian National Railways)

noise, etc.) is detrimental to human health to various degrees. The increases in car and lorry traffic also have more specific impacts on health and the environment, such as traffic jams, traffic accidents, and stress.

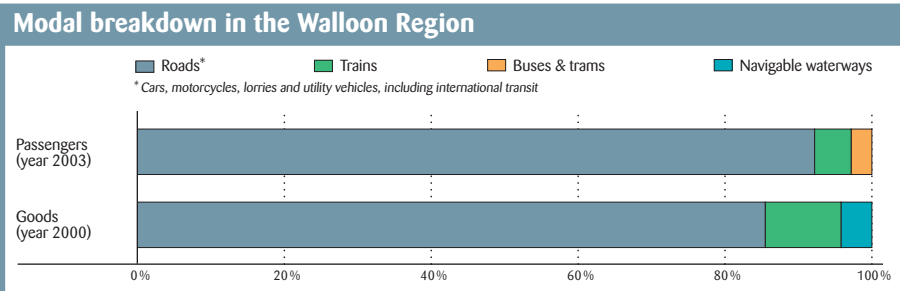
Although current technological developments have made it possible to minimise the pressure that certain types of transport exert on the environment, these benefits are jeopardised by the general increase in the number of vehicles on the road and distances travelled. The combined effects of several European Directives have nevertheless resulted in reducing acidifying substances emissions from road transport in Wallonia (down 26% from

1990 levels). In addition, branch agreements have been signed with the automotive industry to reduce the greenhouse gas emissions of new vehicles. However, additional efforts are necessary, notably when it comes to land-use

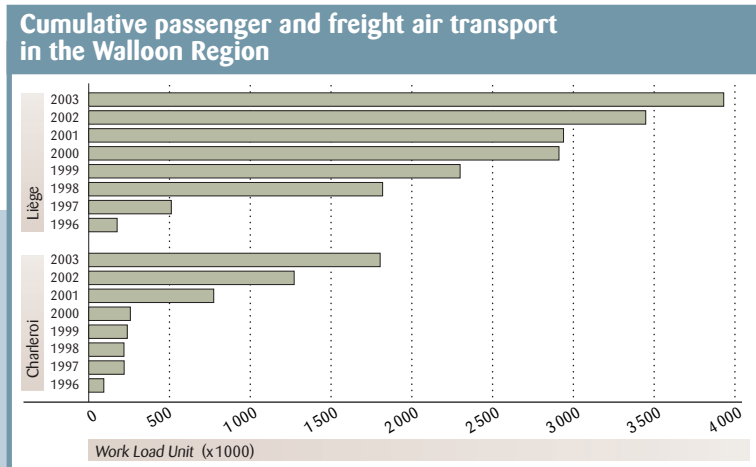
planning, individual behaviour and the organisation of mass transportation in order to control the rising transport demand and boost the use of less environmentally-damaging means of transport.



The Work Load Unit (WLU) is used to aggregate passenger and freight traffic data in order to compare airports with each other. (1 passenger equals 1 WLU and 1 tonne of freight equals 10 WLUs).



Sources: SPF Mobilité et Transports Transports (Federal Government Department of Mobility & Transport); MET - D112; MET - D212; CPDT; SNCB (Belgian National Railways)



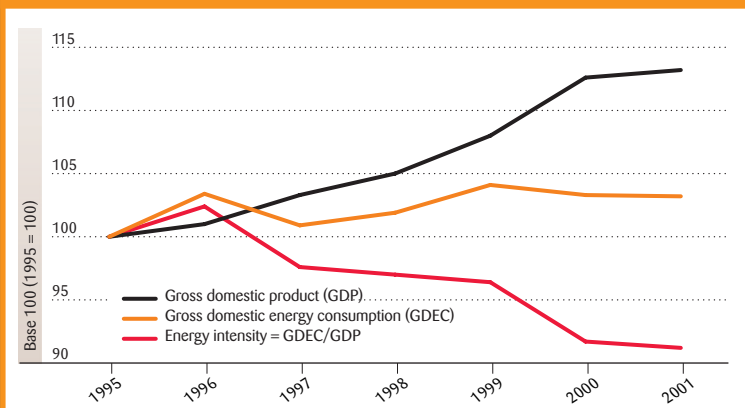
Source: MET - Walloon Airport Portal

# Energy

The Walloon Region has one of the highest ratios of total energy consumption to creation of wealth (energy intensity ratio) in Europe. This is explained notably by the historical importance of heavy industry in Wallonia's economic landscape. The region's overall energy intensity is nevertheless tending to drop, thanks to the emergence of less energy-intensive industrial and service activities with higher added value and improvements in the energy efficiency of existing production processes. In the case of electricity, the rise in consumption is linked mainly to the rise in electrical appliances (services sector and households) and the growth of specific branches of industry.

When it comes to energy sources, we see a major drop in the consumption of the most polluting fossil fuels (coal and its derivatives) and a rise in the use of natural gas. This trend was responsible for a great reduction in the emissions linked to electricity generation. The region's electricity continues to be produced for the most part by nuclear power plants, which discharge practically no pollutants into the air. On the other hand, they generate radioactive waste. The rise in the region's consumption of oil products is linked in particular to the rise in the demand for transport. Finally, whilst the share of renewable energy sources is rising, it still covers only 2.1% of the region's total energy needs.

Energy intensity of activity in the Walloon Region



Sources: ICN (Regional accounts); MRW - DGTRE - DE (Recueil de statistiques énergétiques wallonnes/Walloon Energy Statistics Compendium); (CEW computations)

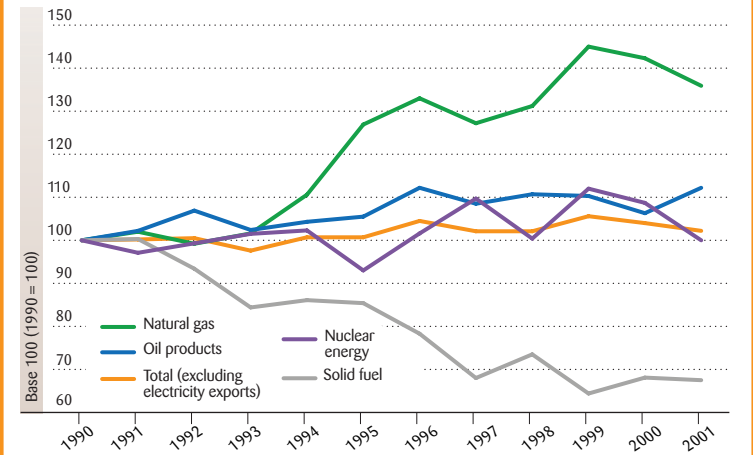
Given this context, the region's main energy policy aims are to cap the demand for energy





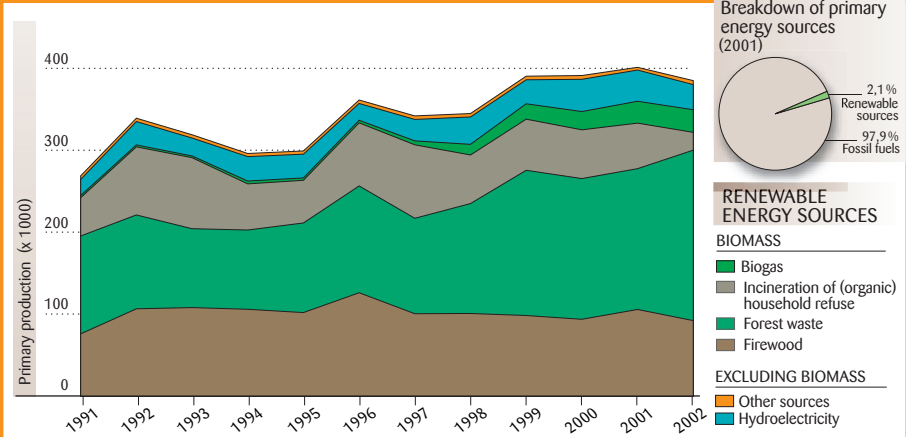
in the various sectors (industry, services, and households) and to boost the use of less polluting fuels and renewable energy sources. A mechanism to support electricity production from renewable sources (the green certificates market) and the promotion of rational use of energy (RUE) policies for industry (environmental pacts and branch agreements), the services sector, and households (awareness-raising and bonuses) are some of the means adopted to achieve these ends.

### Main fuels used to cover the Walloon Region's gross domestic energy consumption



Source: MRW – DGTR – DE (Recueil de statistiques énergétiques wallonnes/Walloon Energy Statistics Compendium)

### Renewable energy sources in the Walloon Region



Sources: MRW – DGTR – DE (Bilan énergétique wallon, volet Energies renouvelables/Walloon Energy Balance-sheet, Renewable Energy chapter) MRW – DGTR – DE (Recueil de statistiques énergétiques wallonnes/Walloon Energy Statistics Compendium)

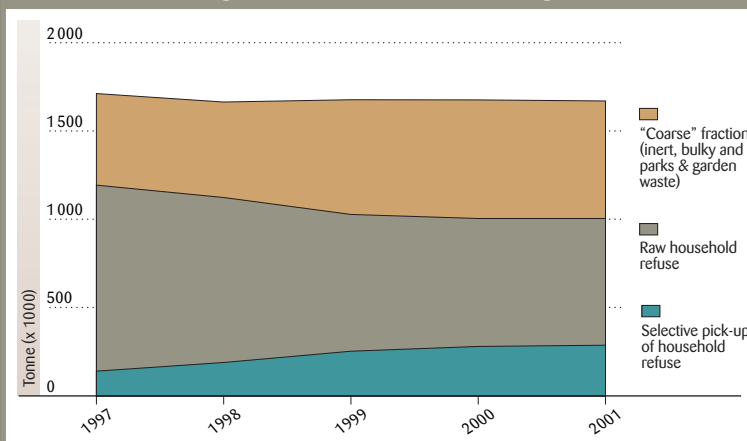
# Waste

To avoid wasting resources as well as generating various nuisances and pollution, the region's waste management policy gives priority to preventing and more particularly reducing the amount of waste that is generated. In practice, however, the prevention measures that have been implemented so far have not been effective enough to counter the total rise in waste that accompanies economic growth. Indeed, whilst the region's stock of domestic waste is almost stable, the volumes of hazardous waste and wastewater treatment plant sludges are rising. On the other hand, major progress has been made in the area of waste recovery and reuse.



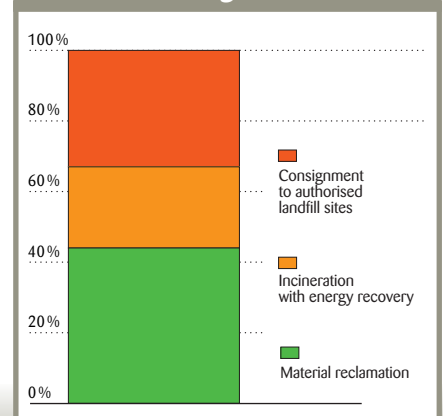
First, the very high proportion of industrial waste that is recovered and recycled has outstripped targets. Second, selective refuse collection is on the rise, with the amount of household waste recovered and reutilised doubling between 1997 and 2002. The institution and development of mechanisms requiring specific types of waste (vehicles no longer fit for service, tyres, batteries, packaging, etc.)

Household refuse generated in the Walloon Region



Source: MRW – DGRNE – OWD – Direction de la Prévention et de la Gestion des Déchets (forms filled out by municipalities; intermunicipal companies' reports; CEEW computations)

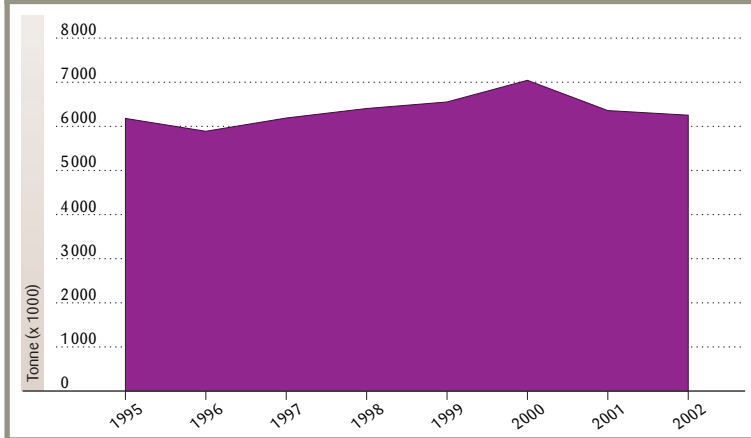
Household refuse management in the Walloon Region (2002)



Source: MRW – DGRNE – OWD – Direction de la Prévention et de la Gestion des Déchets Déchets (Estimates from intermunicipal companies' reports; CEEW computations)



## Waste generated by manufacturing and power generation in the Walloon Region



Source: MRW – DGRNE – DCE & OWD – Direction de la Prévention et de la Gestion des Déchets (Bilan environnemental des entreprises en Région wallonne, 2004/Environmental balance sheet of companies in the Walloon Region in 2004)

Given the drop in the response rate from the companies surveyed, the reliability of extrapolating the results for 2001 and 2002 must be confirmed.

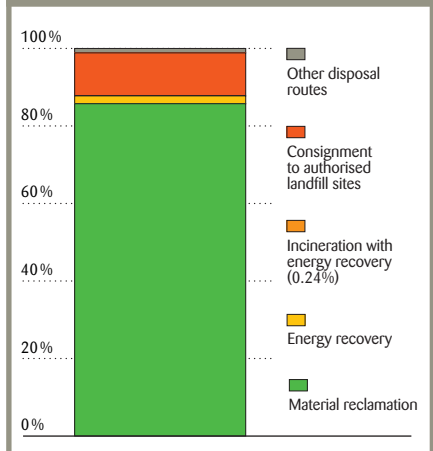
to be taken back should improve these performance figures even more. Nevertheless, all the reclamation, recovery and re-utilisation targets have not been reached. The reclamation and recovery rate of hazardous waste in the Walloon Region remains below the set objectives (but these include reclamation and recovery abroad), whilst that of the region's sewage treatment plants has declined since 1999.

As for waste disposal, close to 4 million tonnes of waste are still dumped in authorised landfills each year. More than 30% of the

region's residential waste and close to half of its hazardous waste are disposed of in this way. To reduce these percentages, the regional government has adopted a timetable for phasing out waste disposal in authorised landfills.

On another front, if the region's huge backlog of watercourse dredging and cleansing operations is to be made up, 732 000 cubic metres of sediment will have to be handled annually for twenty years.

## Management of waste generated by manufacturing and power generation in the Walloon Region (2002)



Source: MRW – DGRNE – DCE & OWD – Direction de la Prévention et de la Gestion des Déchets (Bilan environnemental des entreprises en Région wallonne, 2004/Environmental balance sheet of companies in the Walloon Region in 2004)

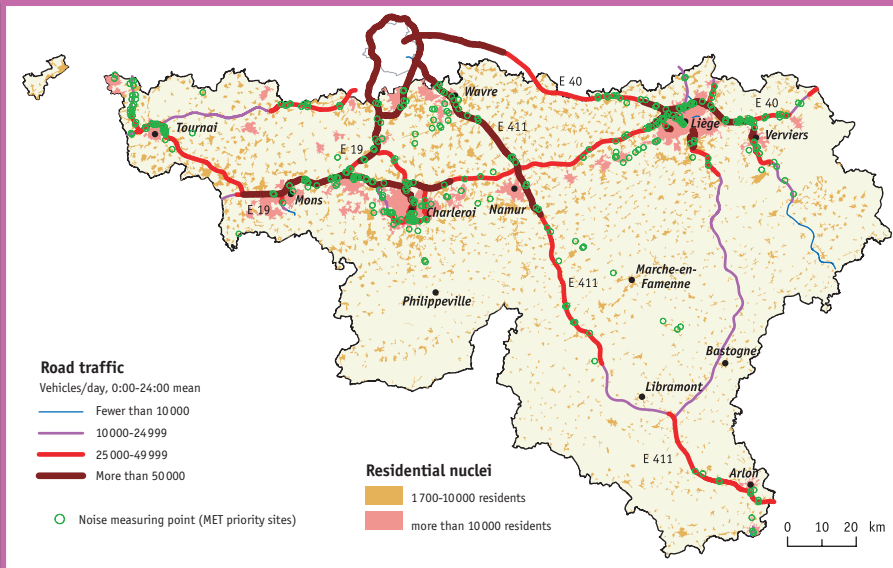
# Noise

*Some environmental issues are still insufficiently documented to allow accurate appraisal, even though they are highly sensitive. This is the case for the three topics covered below.*

Daily exposure to sound levels above 55 decibels (A) (weighted average of day and night levels) is detrimental to people's quality of life and health. Such exposure can lead to nervousness, sleep disorders and speech pathologies, for example. In Europe, the population's noise exposure levels are continuing to rise, due in particular to the development of means of transport.

The noisy areas in the Walloon Region are located mainly in the large towns such as Liège, Mons, and Namur; along certain segments of motorways and railway lines; and around Liège-Bierset and Brussels South Charleroi airports. However, a precise noise map is not yet available, nor are estimates of the population's noise exposure levels available. The European Noise Directive's transposition into regional law will result in this information's being available by 2007 at the latest.

Source of noise linked to road traffic in the Walloon Region (2003)



Sources: MET D-112; MET D-113

## Environnem

The rises in certain diseases such as allergies and cancers could be the consequences of daily exposure to pollutants in our surroundings. However, it is difficult to establish the links between cause and effect.

# Tourism



There are very few measurements of tourism's incidence on the environment in the Walloon Region. The data that are available concern mainly accommodation, whereas the environmental pressure that tourism exerts is also linked largely to one-day excursions (problems of road traffic, local crowds, peak periods of use, etc.) and leisure activities (pressure on the natural environments, noise, and so on).

In 2003, a total of 8 627 000 tourist overnight stays were recorded in the Walloon Region. Whereas the tourists stay primarily in hotels, a survey conducted by the Walloon Tourism

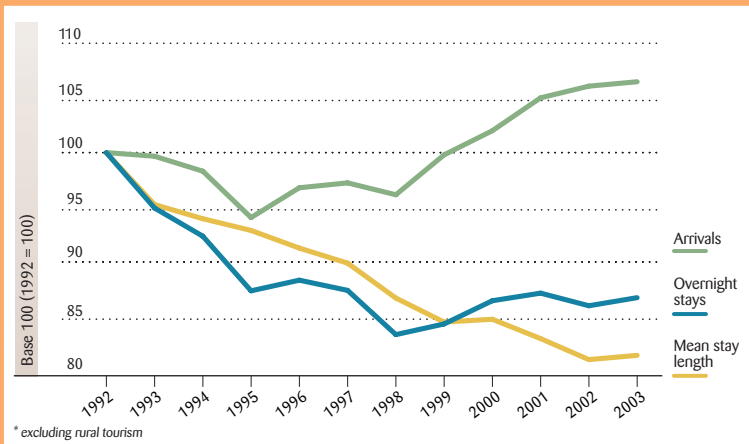


Observatory underscores rural tourism's relatively large share in the region's tourist accommodation (close to 20% of the total number of overnight stays in 2003). The areas south-east of the Meuse River garnered the largest number of visitors. According to a recent study, campsites allegedly account for about two-thirds of the local discharges of effluents from tourism accommodation into Wallonia's surface waters (the level of these discharges is higher in the Meuse sub-basin).

# ent-Health

The Walloon Region has set up a dedicated team (the environment & health scientific platform, based within ISSeP) to collect data to improve our knowledge in this regard. The team's findings will be included in the coming editions of Wallonia's environmental scoreboard.

Overnight stays, arrivals and mean stay length indices in the Walloon Region\*

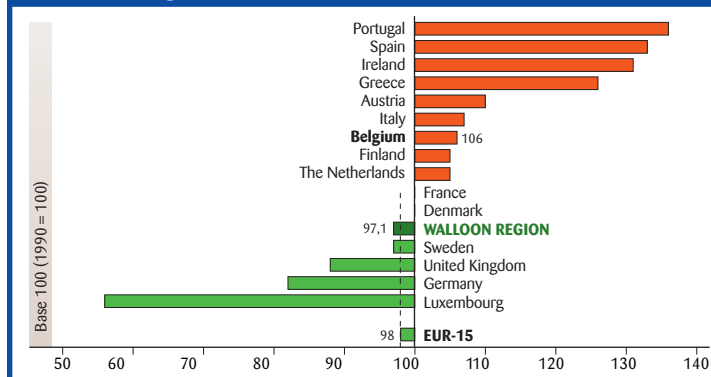


\* excluding rural tourism

# The Walloon Region's position in the European Union: environment-related structural indicators

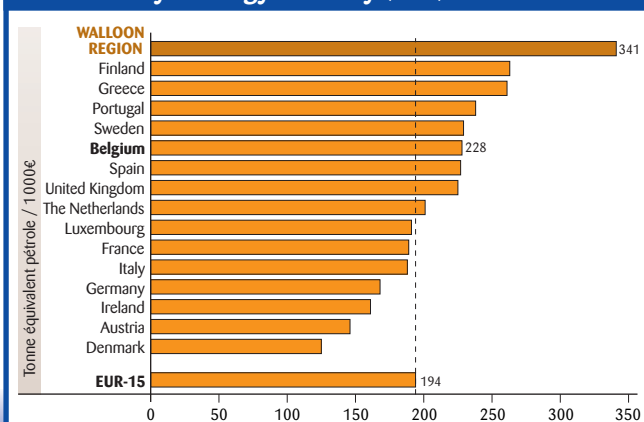
The European Commission has devised a set of structural indicators to assess the Member States' performances within the framework of the strategy of economic, social and environmental renewal adopted in Lisbon (in 2000) and Göteborg (in 2002). These indicators cover five major areas, one of which is the environment. The three environmental indicators that are considered to be the most important compose the "short list" (see page 32), whereas the more comprehensive list is known as the "long list" (see page 33).

## Greenhouse gas emissions (2001)



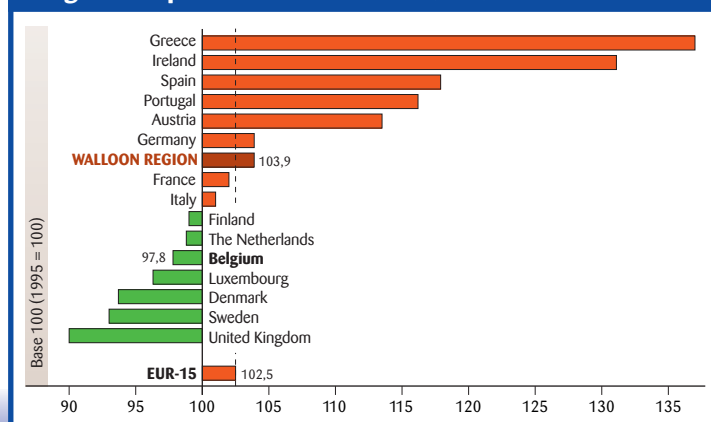
Sources: Eurostat; MRW – DGRNE – DPA – Cellule Air

## The economy's energy intensity (2001)



Sources: Eurostat; ICN (Regional accounts); MRW – DGTRÉ (Recueil de statistiques énergétiques wallonnes/Walloon Energy Statistics Compendium)

## Freight transport volume over GDP (2000)



Sources: Eurostat; ICN (Regional accounts); SPF Mobilité et Transports (Federal Government Department of Mobility & Transport); MET – D212; CPDT; SNCB (Belgian National Railways)

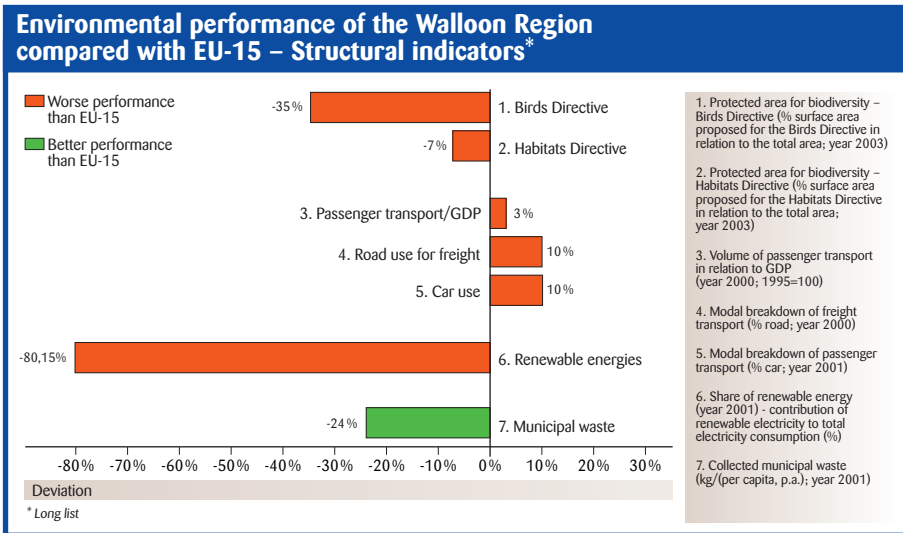
The Walloon Region's greenhouse gas (GHG) emissions fell 2.9% between 1990 and 2001, which is comparable to the abatement seen for Europe as a whole.

GHG emissions are affected by energy intensity (the Walloon Region has one of the highest energy intensities in Europe), the level of transport and the share of renewable energy sources in power generation, to name the big three. The region's high energy intensity value is mainly the result of the historical importance of heavy industry in Wallonia's industrial landscape, despite the spread of less energy-intensive activities in the more recent past. Its transport volume, for its part, has been increasing sharply, especially when it comes to road haulage of freight. This situation is explained by a number of factors, not the least of which are the region's high population density, scattered settlement pattern, and location at the heart of Europe, making it a busy international transit zone. Moreover, cars account for a relatively high proportion of passenger transport in the region. Finally, the contribution of electricity generated from renewable sources to the region's total elec-

tricity consumption remains well below the European mean, despite recent developments in setting up wind farms, for example.

On the other hand, the Walloon Region's record is good when it comes to municipal waste, for its per capita collection rate is the lowest in Europe.

Finally, despite the region's high population density and relatively cramped dimensions, 13% of its territory has been proposed to the European Commission for inclusion in the Natura 2000 network. This percentage results from the combination of areas protected under the "Habitats" and "Birds" Directives.



Sources: Eurostat; ICN (Regional accounts); SPF Mobilité et Transports (Federal Government Department of Mobility & Transport); MET – D112; MET – D212; CPDT; SNCB (Belgian National Railways); MRW – DGTRE – Division de l'énergie; MRW – DGRNE – OWD – Direction de la Prévention et de la Gestion des Déchets (Calculs CEEW); MRW – DGRNE – CRNFB – Direction de la Nature, de la Chasse et de la Pêche

# Acronyms and abbreviations

## Institutions

<b>CEDD</b>	Centre d'Etudes du Développement Durable (Centre for Studies on Sustainable Development)
<b>CEEW</b>	Cellule Etat de l'Environnement Wallon (State of the Walloon Environment Unit)
<b>CPDT</b>	Conférence Permanente du Développement Territorial (Standing Conference on Territorial Development)
<b>CRIOC</b>	Centre de Recherche et d'Information des Organisations de Consommateurs (Research and Information Centre for Consumer Organisations)
<b>CRNFB</b>	Centre de Recherche de la Nature, des Forêts et du Bois (Research Centre on Nature, Forests, and Wood)
<b>DCE</b>	Direction de la Coordination de l'Environnement (Environmental Coordination Unit)
<b>DE</b>	Division de l'Eau (de la DGRNE) (Water Division of the DGRNE)
<b>DE</b>	Division de l'Energie (de la DGTRE) (Energy Division of the DGTRE)
<b>DGA</b>	Direction Générale de l'Agriculture (Directorate-General for Agriculture)
<b>DGRNE</b>	Direction Générale des Ressources Naturelles et de l'Environnement (Directorate-General for Natural Resources and the Environment)
<b>DGTRE</b>	Direction Générale des Technologies, de la Recherche et de l'Energie (Directorate-General for Technology, Research, and Energy)
<b>DNF</b>	Division de la Nature et des Forêts (Nature and Forestry Division)
<b>DPA</b>	Division de la Prévention et des Autorisations (Prevention and Authorisations Division)
<b>EC</b>	European Commission

<b>FPMs</b>	Faculté Polytechnique de Mons (Mons Polytech)
<b>FUSAGx</b>	Faculté Universitaire des Sciences Agronomiques de Gembloux (Gembloux Agricultural College)
<b>ICN</b>	Institut des Comptes Nationaux (National Accounts Institute)
<b>IGEAT</b>	Institut de Gestion de l'Environnement et d'Aménagement du Territoire (Institute of Environmental Management and Land-use Planning)
<b>INS</b>	Institut National de Statistique (National Statistics Institute)
<b>ISSeP</b>	Institut Scientifique de Service Public (Scientific Institute for Public Service)
<b>MET</b>	Ministère wallon de l'Équipement et des Transports (Walloon Ministry of Public Works and Transport)
<b>MRW</b>	Ministère de la Région Wallonne (Ministry of the Walloon Region)
<b>OTW</b>	Observatoire du Tourisme Wallon (Walloon Tourism Observatory)
<b>OWD</b>	Office Wallon des Déchets (Walloon Office for Waste)
<b>SNCB</b>	Société Nationale des Chemins de fer Belges (Belgian national railways)
<b>SPAQuE</b>	Société Publique d'Aide à la Qualité de l'Environnement (public environmental improvement company)
<b>SPF</b>	Service Public Fédéral (Federal Government Department)
<b>SPGE</b>	Société Publique de Gestion des Eaux (public water management company)
<b>TEC</b>	Sociétés de Transport En Commun (public transport corporations in Wallonia)
<b>UHAGx</b>	Unité d'Hydrologie et Hydraulique Agricole (Hydrology and Agricultural Hydraulics Unit)
<b>ULB</b>	Université Libre de Bruxelles (Brussels Free University – French-speaking)

## Abbreviations

<b>CEEW</b>	Cellule Etat de l'Environnement Wallon (State of the Walloon Environment Unit)
<b>EUR-15</b>	EU-15 Member States
<b>IPRFW</b>	Inventaire Permanent des Ressources Forestières de Wallonie (Permanent Inventory of Wallonia's Forest Resources)
<b>UAA</b>	Utilised Agricultural Area
<b>SEQ-ESO</b>	Système d'Évaluation de la Qualité des Eaux SOuterraines (French Water Quality Evaluation System for Ground Water)
<b>SEQ-ESU</b>	Système d'Évaluation de la Qualité des Eaux de SUrface (French Water Quality Evaluation System for Surface Water)

## Technical terms

<b>CO<sub>2</sub></b>	Carbon dioxide
<b>NH<sub>3</sub></b>	Ammonia
<b>NO<sub>x</sub></b>	Nitrogen oxides
<b>PM<sub>10</sub></b>	Particulate matter with a mean aerodynamic diameter less than or equal to 10 microns
<b>SO<sub>2</sub></b>	Sulphur dioxide

## Units and prefixes

<b>€</b>	Euro
<b>ha</b>	hectare
<b>inhab</b>	inhabitant
<b>d</b>	day
<b>k</b>	kilo
<b>Mio</b>	Million

# For more information

- ▶ **If you wish to**
  - consult the full report;
  - consult the latest update of the Environmental Scoreboard, along with additional information;
  - know the data sources and methods for calculating the indicators;
  - consult the bibliography and legislation;
  - find Internet sites related to the environment and the scoreboards of other countries;
  
- ▶ **go to the following site**  
<http://environnement.wallonie.be/eew>

# Ministry of the Walloon Region

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<http://environnement.wallonie.be>

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