

2011 Survey of resource efficiency policies in EEA member and cooperating countries

COUNTRY PROFILE:

Belgium



Country information on resource efficiency policies,
instruments, objectives, targets and indicators,
institutional setup and information needs

September 2011

Note: With the federal structure of Belgium and the delegation of various responsibilities for environmental policies, separate responses were provided by the authorities at the Federal level, the Brussels region, the Flanders region, and the Walloon region. This country profile provides information within each section for the Federal level first, followed alphabetically by the Brussels region, the Flanders region and the Walloon region.

Information presented in this document was provided by:

Federal level – by Federal Public Service Public Health, Food Chain Safety and Environment

Brussels region – by Brussels Environment – Bruxelles Environnement (IBGE)

Flanders region - by Jorn Verbeeck, OVAM , in consultation with Patrick Wilmots, OVAM, and Ludo Vanongeval, LNE)

Walloon region – by A.Bellayachi, I.Buccella and V.Brahy, SPW-DGO3

This country profile was prepared as part of the EEA-ETC/SCP 2011 survey of resource efficiency policies, which aims to collect, analyze and disseminate information about national experience in the development and implementation of resource efficiency policies in EEA member and collaborating countries. The work resulted in the following outcomes:

- **Short ‘country profiles’ (this document)** - self assessments prepared by countries, describing the current status of resource efficiency policies, including key strategies and action plans, policy objectives, instruments, targets and indicators used, institutional setup and information needs.
- **Summary report** - prepared by the EEA and ETC/SCP, the report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies information needs and knowledge gaps.
- A session on resource efficiency policies during the 2011 EIONET workshop to discuss further needs and to facilitate information sharing and experience exchange among EIONET members.

More information about resource efficiency policies, including an analytical report “Resource efficiency in Europe” and thirty one country profiles, can be found at:

<http://www.eea.europa.eu/resource-efficiency>

1 Resource use in Belgium – facts and figures

1.1 General Facts and figures about the country



Source:
<https://www.cia.gov/library/publications/the-world-factbook/index.html>

Population (projected inhabitants for 2010) [1]	10,839,905
➤ Percent of total EEA-32	1.85%
Surface area (km ²) [2]	30,528
➤ Percent of total EEA-32	0.54%
GDP at market prices – Purchasing Power Standard – Current Prices (Million Euro, 2009) [3]	295,214
➤ Percent of total EEA-32 (minus Liechtenstein)	2.26%
GDP per capita in Purchasing Power Standards (PPS) [4] EU27=100 (2009)	116
Urban population (rate of pop., 2009) [5]	97.4%
Main economic sectors and their share in total GDP (2009 est.) [2]	
Agriculture	0.7%
Industry	22.1%
Services	77.2%
EU accession date [6]	Founding member (1.1.1958)

Additional relevant background information on Belgium (and on 37 other EEA member and cooperating countries) can be found at the SOER2010 website:

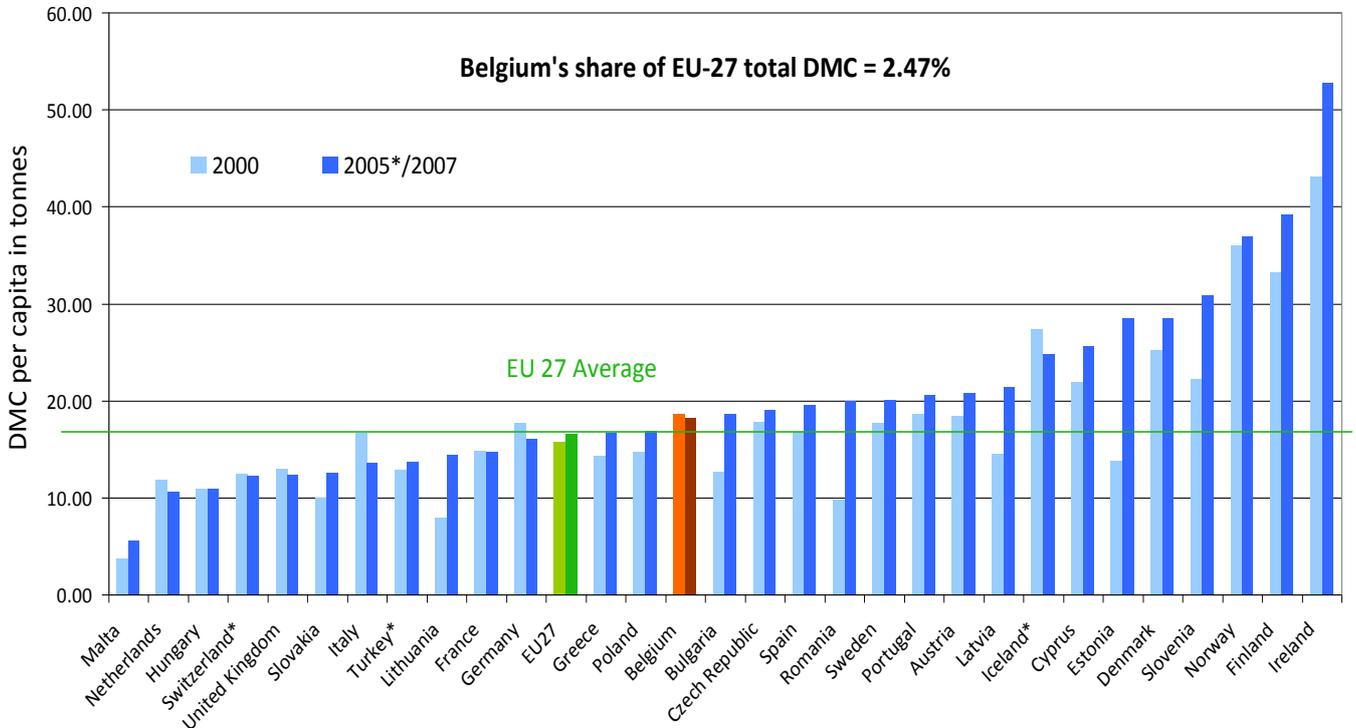
<http://www.eea.europa.eu/soer/countries/be>

Factsheet on national waste policies for Belgium is available at:

http://scp.eionet.europa.eu/facts/factsheets_waste/2009_edition/factsheet?country=BE

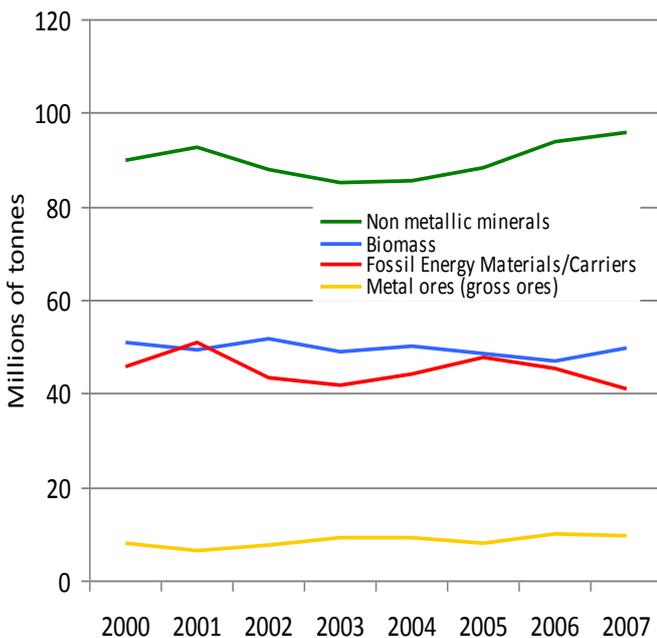
1.2 Facts and figures on resource efficiency for Belgium

Use of resources per capita 2000 and 2007 [tonnes DMC/capita]



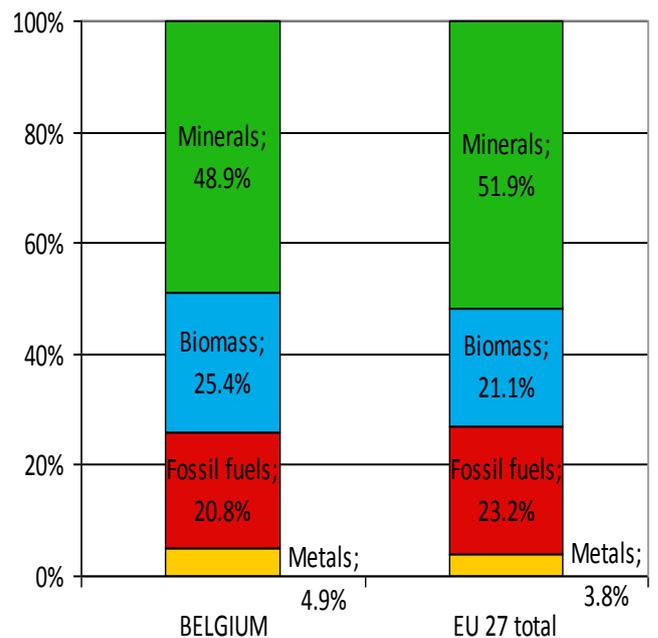
Source: Eurostat, OECD and Total Economy Database [7] * = For these countries data is for 2000 and 2005.

Domestic Material Consumption by category over time, Belgium



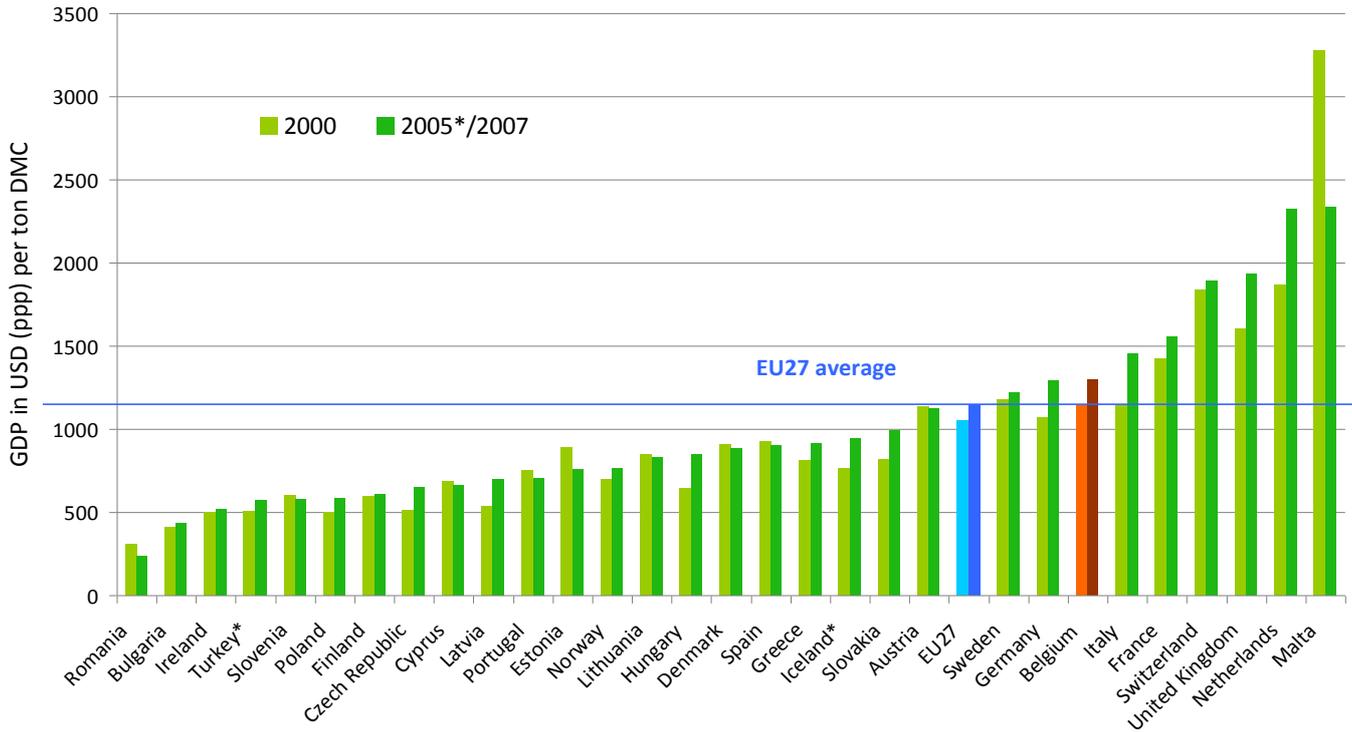
Source: Eurostat [8]

Breakdown of DMC by type of materials (2007)



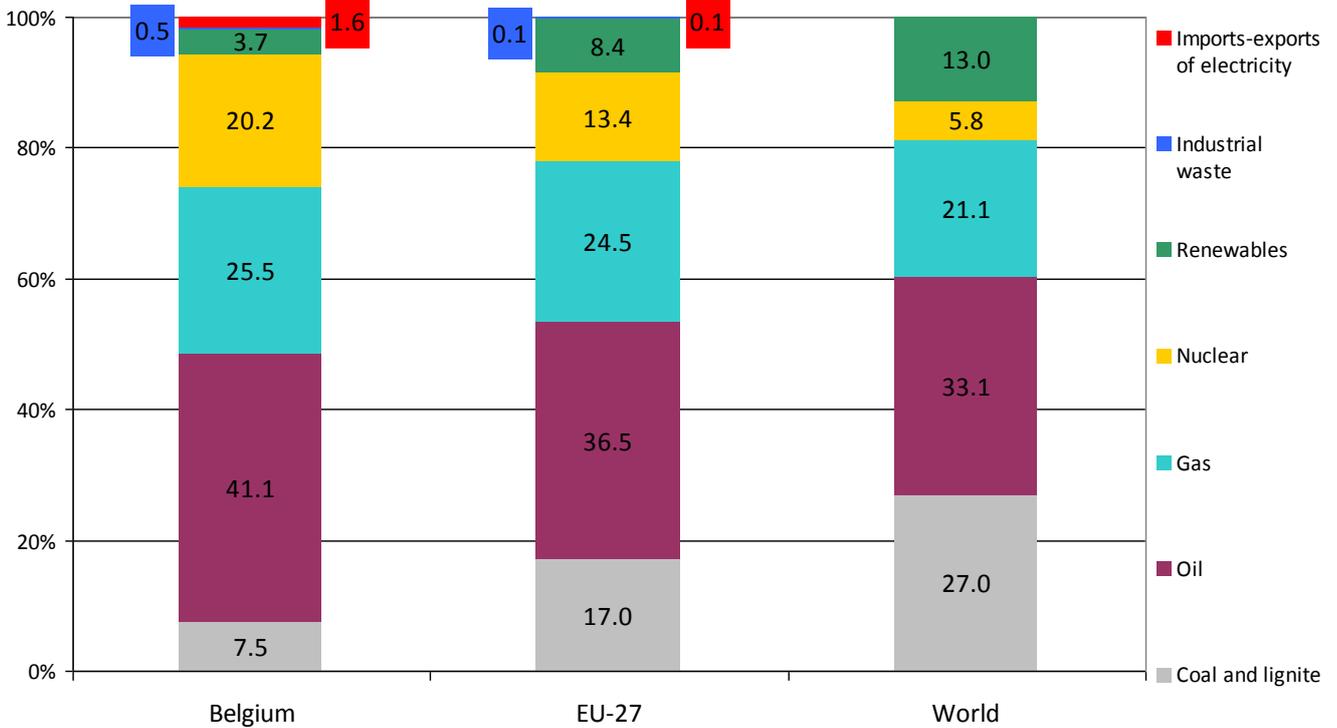
Source: Eurostat [8]

Material productivity 2000 and 2007 [USD ppp/ton DMC]



Source: The Conference Board, Total Economy Database, Eurostat [9]
 * = For these countries data is for 2000 and 2005.

Primary energy consumption



Source: Eurostat [10]

2. Evolution and main drivers for the development of resource efficiency policies

Belgium – Federal level

Following institutional reform carried out during the 90s, the federal level became responsible for regulating market access for products on environmental grounds. The federal government has therefore introduced the 1998 "standard of products" law, which allows it to set standards for products to promote sustainable production and consumption and protect the environment and health. This law allows for example to:

- Regulate, suspend or prohibit the placing of a product on the market;
- Establish characteristics, composition, packaging, presentation and preparation for the placing on the market;
- Determine what information about a product or product category must or may be given before placing on the market;
- Determine specific rules for the labelling of a product;

This law has thus enabled the regulation of priority products. These priority products were identified through a study conducted in 2001. The results of this study were then confirmed by the "Environmental Impact of Products (EIPRO)" and "Environmental Improvement of Products (IMPRO) studies conducted at European level. From there, strategies for implementation in Belgium of an integrated product policy took place within the context of European developments (e.g.: Green Paper on Integrated Product Policy (2003), Communication on the PMDC, strategy on natural resources, etc.).

Moreover, the willingness of Belgium to work on resource efficiency also comes because of the strong dependence of its economy relatively to increasingly imported resources.

Brussels Capital Region

Evolution Regional Waste prevention and management plans(1992)

Since 1992, every 5 years, the Region adopts a "waste prevention and management plan", in short "waste plan". It includes all the means and actions foreseen in order to minimize waste and manage waste products in a sustainable way, and is followed by an evaluation of its implementation. The fourth waste plan has been approved in March 2010, and is accompanied by an environmental impact assessment, has an indeterminate duration, and will be evaluated every 2 years (instead of 5 years).

The former regional waste prevention and management plans made mention of waste prevention and eco-consumption. In the first waste plan priority was given to selective waste collection, the second plan gave priority to waste prevention. The third waste plan was built around the concept of dematerialization and reuse.

The fourth waste plan frames in the European context of the new Waste Directive (Framework Directive 2008/98/EG), that sets out an order of priority for the waste policy. Priority is given to prevention, followed by reuse, recycling, other recovery and disposal. For the draft of the plan an environmental impact report was prepared, and both documents were the subject of a public consultation.

Flanders region

In Flanders, the first generation of specific environmental policy was end-of-pipe oriented, which was mainly concentrated on the safe and environmentally sound treatment of household and industrial waste. Therefore a decree on the prevention and management of waste streams was made up in 1981, and a new department, the Flemish Waste Agency, was established which would be responsible for the implementation of the decree. Key drivers in the decree were environmental protection and public health and safety. The focus then was mainly on final treatment and emissions (incineration and landfill, environmental permits).

In the second generation of environmental policy, the focus shifted to the optimization of levels of recycling and the prevention of waste. Recycling levels for selected streams in household waste (vegetable-fruit-green waste, plastics, metals and cans, paper & carton board, glass, and non-recyclable waste, green waste, small hazardous waste and electric & electronic appliances) have significantly improved, to European top levels, and considerable progress was also made for industrial waste, though not yet to the same extent. Environment policies at this time also explicitly recognized the link with raw materials, as Sustainable Materials Management was added to the priorities of the Flemish Waste Agency. Specific implementation plans for materials management or resource efficiency were not yet developed.

The work on Sustainable Materials Management paved the way for the third generation of environmental policy in which system innovation and sustainable transition platforms are being put forward as new instruments to move towards a more sustainable society and to help implementing an efficient and effective Sustainable Materials Management. Experience and insight developed during the first generations of environment policy demonstrated that structural challenges could no longer be solved by existing structures or models, nor by individual policy fields and departments. Therefore a more integral and more integrated approach, which recognizes the cross-links between the ecologic, economic and social aspects, is envisioned to bring about a shift in thinking, producing, consuming, trading and governing, thereby maximally safeguarding the environmental impact.

Currently the Flemish Government is preparing a Sustainable Materials Management Programme which aims to set up guidelines for the implementation and operationalisation within regional, federal and European context. Given the contemporary complex global society, a transition model should also be scaled up to European level to have a significant impact. One of the instruments therefore used is Plan C (see infra). The programme is intended to be worked out by the end of 2011.

Walloon region

Like in other EU countries, scarcity of resources, concerns over the degradation of the environment and the need to protect public health are the original drivers of resource efficiency related policies in Wallonia.

The legacy of Wallonia's industrial past (including the overexploitation of geological resources and soil pollution) has also had a major impact on the orientation of resource efficiency policies.

In particular, the intensive exploitation of aquifers (Wallonia exports \pm 40 % of its water that can be made drinkable to the regions of Brussels and Flanders) has led the Walloon Government to develop a strategy for better using this resource.

The particularly heavy road traffic resulting from the central geographical position of the country in the EU and the high population density are two additional key factors that have contributed to the definition of different resource efficiency policies.

3. Overall Policy Approach for Resource Efficiency

Belgium – Federal level

The federal level does not have a specific resource efficiency strategy. This issue is part of several federal strategies, actions plans and policy initiatives, such as:

- **The Federal Plan for Sustainable Development**, though obviously much broader than resource efficiency as such, lists several measures and actions aimed at improving resource efficiency and at managing natural resources more responsibly.
- **The Federal Products Plan (2009-2012)** : This plan gathers a series of transversal measures (valid for all categories of products) and a series of measures addressing itself to categories of specific products such as the products and equipments for building, energy consuming equipment, the equipment and rolling stocks, the biomaterials and biofuels and food products. The objective of this plan is to improve environmental quality of products put on the market. With this intention, various political instruments are used: obligatory standards for products, standardization, sector agreements, economic incentives, certification and labelling, actions of communication and sensitizing, etc. The whole of the environmental impacts are taken into account, including the resources efficiency management.
www.health.belgium.be/filestore/19059047_FR/PlanProduit_fr.pdf
- **The Federal Air Plan (2009-2012)** : This plan aims to promote the development of a market for products having a reduced impact on outside and interior air quality. It calls on the same political instruments as the Products Plan. The emphasis is placed on vehicles, fuels, appliances for heating, and products having an influence on indoor air quality (painting, air freshener, cleaning products,...).
http://www.health.belgium.be/internet2Prd/groups/public/@public/@dg5/documents/ie2divers/18076922_fr.pdf

- At national level, the national **Biodiversity Strategy 2006-2016** (revision process is ongoing) include operational objective aiming at ‘Avoiding or minimising the risk for biodiversity posed by production and consumption, and products and services’.

The Federal level has developed different transversal plans that address directly or indirectly resource efficiency, like the **Federal Action Plan for the integration of biodiversity in four key sectors** (economy, development cooperation, transport and science).

The plan includes actions to integrate the concept of ‘biodiversity and ecosystem services’ within the Federal policy, and include actions aiming at supporting the supply of relevant ecosystem services (e.g. promote consumption patterns favourable to biodiversity, develop ‘business and biodiversity’ partnerships, etc.).

In addition, other actions and policies are carried out by other Federal Public Services (Finances, Economy, Mobility/Transport) in order to increase indirectly the effectiveness of resources (primarily energy). Examples:

- Reductions and tax deductions can be granted for investments saving energy (insulation of the dwellings, purchases of new boilers, installation of cisterns, etc) or for the purchase of personal vehicles of low fuel consumption;
- a national plan of energy efficiency is currently under development;
- the system of the green certificates is a support mechanism for the renewable electrical production starting from sustainable energy sources and co-generation;
- support for the development of offshore wind energy.

Brussels Capital Region

The Brussels region has not elaborated a specific resource efficiency strategy. This issue is incorporated in the Regional policy statement, and mainly through the Regional Waste prevention and management plan.

- **Regional policy statement 2009-2014:** This aims to enable Brussels to become a role model in sustainable development. On the subject of resource efficiency, the regional policy statement gives priority to energy efficiency, an efficient water management, and waste prevention and management, through different measures.
<http://www.brussel.irisnet.be/files-fr/a-propos-de-la-region/competences-regionales/declaration-gouvernementale-2009-2014/view>
- **Regional Waste Management and Prevention Plan:** Since 1992, every 5 years, the Region adopts a “waste prevention and management plan”, in short “waste plan”. It includes all the means and actions foreseen in order to minimize waste and manage waste products in a sustainable way, and is followed by an evaluation of its implementation. The fourth waste plan has been approved in March 2010, and is accompanied by an environmental impact assessment, has an indeterminate duration, and will be evaluated every 2 years (instead of 5 years).

This fourth Waste Plan takes into account the impact of waste on climate change and the consumption of resources. Priority is therefore given to waste prevention and eco-consumption. It aims to achieve measurable prevention targets of numerous waste streams for 2020. Those reductions concern specific waste streams (food, paper, superfluous packaging, gadgets and superfluous purchases, organic waste) and specific segments of the society (e.g. households, workers, pupils). The waste plan foresees also the pursuing of an ambitious sustainable purchasing policy, through the promotion of objective research on sustainable consumption, implementing partnerships with distribution and commerce and supporting 'good behaviour'. The reuse, repairing and second-hand sector are likewise seen as prior sectors to further develop.

[http://www.bruxellesenvironnement.be/uploadedFiles/Contenu_du_site/Professionnels/Informations_et_séminaires/Conférence_Pre-waste_2011_\(actes\)/w-brusselsenvironnement-wasteplanEN.pdf?langtype=2060](http://www.bruxellesenvironnement.be/uploadedFiles/Contenu_du_site/Professionnels/Informations_et_séminaires/Conférence_Pre-waste_2011_(actes)/w-brusselsenvironnement-wasteplanEN.pdf?langtype=2060)

- The Brussels-Capital Region also participates in the campaign '-100 kg/inhab/an', coordinated by the ACR+, whose objectives are translated in the above mentioned plan.
- Moreover, the Brussels Capital Region participates in the "European Waste Reduction Week", a LIFE+ project.

Flanders region

The Flanders region does not have a specific regional resource efficiency strategy, but resource efficiency is part of several policy initiatives, such as:

- **'Flanders in Action'-plan and the resulting 'Pact 2020'**: in 2006, the long term action plan 'Flanders in Action' was launched. This plan aims to transform Flanders into one of the top regions of Europe by 2020 in the field of economy, innovation, social well-being, the environment and biodiversity. To achieve this goal, 20 well defined objectives (the so-called 'Pact 2020') were agreed among the Flemish Government and the social partners. One objective focuses on the improvement of eco-efficiency of the Flemish economy. This should be realized amongst others by a further increase of material and energy efficiency within the different sectors, and is based on several indicators mentioned below. As in the past, focus has so far foremost been on the process towards a more resource efficient economy and on business models, using a broad scope of materials and sectors – taking into account the small scale of the region on EU and world level (albeit with rather high productivity and quite a large share of production for export). Key areas are SMEs, logistics & infrastructure, innovation and knowledge economy, energy and eco-efficiency. In the upcoming Sustainable Materials Management Strategy, a more concrete prioritisation for short term actions will be taken up as a further roll-out of the pact 2020.
- In 2009 a new **Strategic Policy Plan 2010 – 2015 on Waste, Materials and Soil Management** was adopted. Up to now, however, the general objectives formulated in the Flemish implementation plan for the environmentally sound management of household waste already go beyond waste management sensu stricto, as the following principles are taken up in several specific and overall strategies :
 - Minimum use of finite resources
 - Optimal use of renewable resources

- Maximum prevention of the generation of waste
- Maximum use of waste as secondary resource
- Minimum environmental impact when treating waste
- **Flemish Reform Programme:** in November 2010 the Flemish Government has given her approval of the 'Flemish Reform Programme' which will be used as an implementation tool for the priorities listed by the EU2020 Strategy. Sustainable Materials Management has been taken up as a priority. As there are no targets in the Resource Efficiency flagship, no specific resources or targets are yet defined and attention has foremost been given to the legally binding targets. Resource Efficiency is seen as a way to ensure security of supply, but also as a trigger to further improve the optimisation of waste treatment facilities and instigator of innovation and new economic markets.
- **New Industrial Policy:** in October 2010 the Flemish Government approved a Green Paper for a New Industrial Policy (NIB), including aspects of energy and material efficiency. This arises from the process of the States-General for Industry and will transform the economy to accelerate a new integrated industrial policy. The focus therein mainly is innovative strategies to reform our productivity models. New models are based on latent productivity gains within a knowledge economy, wherein spillovers and unused creative potential is used more efficiently. The New Industrial Policy is an integrated policy to accelerate necessary industrial transformations with attention to the economic and social aspect. No specific resources are mentioned so far. A white paper will be presented in spring 2011.
- **4th Environmental Policy Plan (MINA-4) 2011-2015:** in the MINA4-plan (final draft) actions are foreseen to stimulate environmental friendly production and consumption. The plan includes a series of objectives for 2015 on eco-efficiency, the consumption of materials, natural resources and energy, the use of substitutes and renewable energy. With regard to biological resources, the MINA-4 policy plan includes actions to integrate the concept of 'ecosystem services' within the Flemish policy context, and to develop instruments to support the supply of relevant ecosystem services.
- **Sustainable Materials Management Strategy:** in 2011 the Flemish Government has planned to translate the council conclusions on SMM/SCP of the Belgian EU presidency into an operational programme on Sustainable Materials Management. Main focus will be the organization and management of sustainable material cycles and thus the maximisation of secondary raw materials in the production processes, as well as the minimisation of impacts on the environment, resulting from raw material mining and processing. The Sustainable Materials Management Programme has a clear focus on implementation by optimizing cooperation between all involved stakeholders, ranging from government to industry level, but also including the social partners. The programme is intended to be published by mid 2012.
- **Energy Efficiency Action Plan:** the second Flemish energy efficiency action plan 2011-2016, to be adopted in 2011, will contain new targets on energy savings in accordance to the EU climate and energy package. The plan will also list up actions to be taken by different sectors in order to reach the goals.

Walloon region

The Walloon Region has not elaborated a specific resource efficiency strategy. This issue is incorporated in the environmental strategy of the Region, through different plans, projects and current policies (see some examples below).

- **Regional policy statement 2009-2014:** The Walloon Government through its "Regional policy statement 2009-2014" wants to ensure a balanced and sustainable development of the different economic sectors for which the region detains natural resources (forests, underground, renewable energy (wind, biomass...), water and agricultural soils).

In this perspective, the Walloon region has developed different transversal plans (Plan for Environment and Sustainable Development (PEDD), Air-Climate Plan, Energy Management Plan, etc) and taken legislative measures (New Forest Code, Fiscal decree, etc) which will reinforce this orientation.

<http://gouvernement.wallonie.be/publication/declaration-de-politique-regionale-2009-2014>

- **Marshall Plan 2.green:** A plan developed for boosting the Walloon economy. It is based on a combination of training, research and development and territorial management. The goals are to incorporate Wallonia into the energy revolution and to be more attractive. The willingness to "green" the production and consumption patterns through a better use of available natural resources in the Walloon Region is increasing, with the recognition of the positive consequences on the environment, people's welfare and the region's competitiveness. That's why one of the three working themes of the Walloon Marshall Plan 2.green is entitled "*Creating activity and employment through companies, research and development*". One of its two transversal axes is "*Incorporating Wallonia in the energy revolution*" (considering that the environmental challenge is an opportunity).
<http://gouvernement.wallonie.be/sites/default/files/nodes/story/1103-integralfr.pdf>

Waste prevention and waste management

A new **Walloon Waste Plan 2020** is in preparation. This plan will participate in reducing emissions of greenhouse gas emissions and contribute actively to the reduction of environmental impact of waste generation and treatment. In this context, the Government is conducting a study to assess the potential cost-benefit of the re-use, recycling, and others forms of recovery including energy, economical, social and environmental impacts.

Green Public Procurement

The Walloon Region is working on a regional decree allowing the inclusion of ethic, social and ecological specifications in public procurement.

Four thematic bills have been already approved describing ecological criteria to be respected for public procurement of lubricants for hydraulic works, cars, exotic species eradication (it's a natural resource) and printing paper.

A working group inside the *Service public de Wallonie* (SPW) was elaborate in 2010 in order to think how ethic, social and ecological specifications can be integrated in tender documents.

Energy

The **Walloon Plan for Sustainable use of energy** (as well as the Climate-Air Plan) proposes directions to increase the market share of renewable energy and co-generation.

Forest

The **Plan for a Sustainable Management of Walloon Forests** tries to give directions regarding the scheduling and organization of forest works in order to avoid overexploitation and ensure forests' multi-functionality (e.g. species diversification).

Air

The **Walloon Air-Climate** contains a series of quantitative objectives and 104 actions for all sectors aiming to reduce air pollution and help in the fight against global warming towards 2020. One of the actions that have been defined concerns the promotion of cleaner production and consumption (subsidies granted by the Walloon Region for reducing energy consumption or using renewable energy, revision of the automobile tax system).

Water management

The **River Basin Management Plans of the Walloon Region** contain several measures that aim at improving sustainable water consumption in order to find a long term balance between water abstractions and natural groundwater recharges (stream flow regulation, permits, abstraction's quotas, cooling systems in closed circuits).

4. Strategies or action plans to improve resource efficiency for individual economic sectors, products or product groups

Belgium – Federal level

The federal **Products Plan (2009-2012)** as well as the federal **Air Plan (2009-2012)** mentioned in above, are articulated around the principal categories of priority products which are:

- Products and equipment for building (including heating appliances);
- Energy consuming equipment;
- Products and substances for domestic use (e.g.: cleaning products, paintings, interior airfreshners, etc);
- Vehicles and rolling stocks;
- Biomaterials and biofuels
- Food products

For each one of these categories of products, a strategy was developed in order to limit their environmental impacts. Resources management, in the broad sense, plays a significant part in there.

Brussels Capital Region

Priority is given to energy efficiency. Besides a sustainable energy policy, the regional waste plan foresees a resource efficient policy for the construction sector, and specific approaches by other waste streams. The Brussels Capital Region also leads a green public procurement policy, which is translated in a ministerial circular that mentions the product and service groups for which green criteria has to be taken into account for public procurement. The water management plan foresees a sustainable management of water resources in the Brussels region. Finally, a sustainable food plan (without legal character) resumes all the measures taken to promote sustainable food.

Energy efficiency policy

The Brussels Region has an ambitious policy vis-à-vis energy policy. Several instruments (including economic instruments) have been established. The overall energy policy and instruments can be found:

- for households:
<http://www.bruxellesenvironnement.be/Templates/Particuliers/Niveau2.aspx?id=108&langtype=2060>
- for professionals:
<http://www.bruxellesenvironnement.be/Templates/Professionnels/Niveau2.aspx?id=4038&langtype=2060>
- for schools:
<http://www.bruxellesenvironnement.be/Templates/Ecoles/informer.aspx?id=86&langtype=2060>

Eco-construction policy

The fourth waste plan foresees the development of an integrated 'eco-construction' approach, to minimize the impact of construction on the environment through all phases of life by prevention, reuse and recycling. The objective is to achieve 90% (by weight) recycling of construction and demolition waste.

Priority is given to prevention, to avoid the use of resources and generation of waste, by promoting renovation rather than new construction; by the promotion of the most efficient use of materials and the encouragement of sustainable materials. After promoting prevention, priority is given to the endorsement of reuse without prior treatment, the recycling of wastes into secondary raw materials and the recovering of wastes as fuels or other means of producing energy. The disposal of the waste is seen as last measure.

The waste plan also provides support for selective deconstruction, and a requirement to sort and reuse construction and demolition waste.

Approaches in the waste prevention and management plan by stream:

- Packaging
- Batteries and accumulators without lead and lead starter batteries
- End-of-life vehicles (ELV)
- Tyres
- Waste electrical and electronic equipment
- Paper
- Medications
- Used edible oils and fats
- Mineral oils
- Photographic waste

Green public procurement policy

The GPP-policy of the Brussels region consists of a ministerial circular, adopted in February 2009. Regional public authorities are required to insert green criteria for the purchase of supplies and services for the following products and services: office equipment, food, storage and paper supplies, cleaning and household products, furniture, lighting, household appliances, paints and varnishes, packaging, computers, vehicles, clothing, energy.

Water management plan

A draft of the future water management plan is currently in a public consultation process until August 2011. It is built around 8 priorities, with the sustainable use of water as one of them. The draft water management plan can be found here (in Dutch and French):

<http://www.bruxellesenvironnement.be/planeau/>

Sustainable Food Note

A note on the sustainable food strategy in the Brussels Capital Region has been adopted by the Brussels government in April 2011, although it has not a legal binding character. This plan foresees actions for the promotion of sustainable food for different target groups: the horeca sector, events, households, canteens and public authorities through GPP.

Flanders region**Specific Action Plans with focus on waste:**

Current action plans on Flemish level in which resource efficiency is taken up as one of the key drivers are:

- Implementation plan on environmentally responsible household waste management
- Implementation plan on biological waste

- Implementation plan on environmentally sound material use and waste management in the building industry
- Implementation plan on separated collection small company industrial waste
- Implementation plan on sludge treatment
- Implementation plan on high-calorie waste
- Implementation plan for dredging and spoil
- Market promotion of recycled materials
- Guidelines for sustainable waste management for 'wood waste', 'medical waste' and 'mow materials'.

Apart from these implementation plans already in place, actions plans with regard to food waste and textile are being developed.

Strategic Plans:

Resource efficiency is a key in a number of broad innovative strategies, such as the **Flemish Integral Water Management Policy**, but is also taken up in more resources-specific strategies at the Flemish Level.

Broad strategies for the Flemish Region:

- Revised **decree on waste & materials management**: the new decree will be adopted in 2011 and afterwards translated into an implementation programme. They will replace the existing decree, dating from 1981, on waste prevention & waste management. In this revision, a shift from traditional waste management issues such as landfilling, recovery, recycling, and incineration with energy recuperation towards a more integral life cycle approach is envisioned.
- **National Renewable Energy Action Plan**: the Flemish action plan on renewable energy will be actualized in line with the Flemish commitments within the National renewable energy action plan, which will be submitted to the European Commission in 2011.
- **Energy Renovation Programme 2020**: aims at improving energy performance of Flemish housing stock. Every citizen should live in an energy efficient house by 2020.
- **Energy Performance Regulation**: linked to the Renovation Programme, and used as instrument to increase and control the energy performance for buildings.
- **Energy Covenants**: agreements between the Flemish government and the industry with regard to energy efficiency.
- **Eco-efficiency Scan programme**: the eco-efficient scan programme seeks to encourage Flemish SMEs to invest in improving their eco-efficiency.

- **DuWoBo:** the abbreviation stands for Duurzaam Wonen en Bouwen / Sustainable Living and Building, and refers to an innovation platform which was developed in 2004 by the Flemish Government to translate the principles of sustainable development to one of Flanders major economic sectors, i.e. building and living. The platform unites more than 60 Flemish actors, including research and knowledge centres, governments and public agencies, environmental organisations, education and a large number of third-party stakeholders from the energy & environment sector. In unison they develop an innovative long term trajectory for the next 20 years.
- **Environment and Energy Technology Innovation Platform (MIP):** With this Programme the Flemish Region invests in eco-innovation and a green and sustainable economy by subsidising companies and research centres developing new and innovative sustainable technologies and products. The research and project grants programme focuses on innovative research projects running for two years (with possibility of 1-year extension) with regard to the design and development of sustainable products and processes. The materials used need to be maximally re-usable or need to fit into a closed cycle. The projects need to serve a clear economic and societal add-on.

Specific strategies:

- **Enhanced Landfill Mining (ELFM):** In 2008 a public-private consortium with multi-sector expertise was established in Flanders in order to explore potential pathways to develop an Enhanced Landfill Mining (ELFM) approach and to integrate landfilling in a more sustainable waste management practice (Enhanced Waste Management: EWM). The ELFM Consortium has been initiated together with an EU-EFRO Demonstration Project in this domain. In this new Waste/Materials Management concept, prevention and re-use/recycling become even more important, while the idea of landfills as 'a final solution' is discarded. In the ELFM Consortium's view, landfills can become part of EWM, provided they are considered as 'temporary storage places awaiting further treatment'. In this approach, landfills become future mines for materials, which cannot yet be recycled with existing technologies but which show potential to be recycled in a more effective way in the near future. Extended producer responsibility for the materials stored in such temporary storage places becomes part of this EWM view. This idea is related to the fact that today's practice of incineration eliminates the possibility for reuse of materials resulting in increased material costs and decreased welfare. An approach based on improved recycling and storage in view of recycling is a possible answer in order to increase re-use rates. This is the first pillar of EWM. The second pillar of EWM is the concept of Enhanced Landfill Mining (ELFM). As indicated above, the waste brought to new storage facilities needs to be mined after a limited time. The storage operation will be performed in such a way to make mining and valorisation as efficient as possible.
- **Chain Management:** Within its chain management approach the OVAM has defined four disciplines: 1) WEEE & metallurgy, 2) Transport, 3) Chemistry, 4) Industry. By a multidisciplinary approach all stakeholders are brought together to review the complete production chain and process, thereby using existing tools (eco-efficiency, ecodesign, prevention, waste sorting, reuse, recycling and best available techniques in waste treatment) and, if necessary, by developing new tools. For each discipline all available information and knowledge is gathered, on the basis of which future perspectives and solutions are then worked out.

- **Eco-clusters:** in the OVAM Eco-clusters Initiative, the aim is to achieve maximal materials valorisation, by reusing waste or by-products as secondary resources, before using them for energy recuperation. This philosophy is applied to existing and to-be-developed industry zones.
- **Input/output Model:** In order to minimize the environmental impact of our production and consumption patterns, it is a key for policy makers to have a clear overview of all Flemish economic activities that have an impact in Flanders and abroad. Therefore the OVAM Input/Output Model (I/O-model) has been developed, that registers and links monetary and environmental data, which are then coupled to environmental impacts of both consumption and production. This instrument should help to have a better assessment of a sustainable (economic) development. As so limited workable info is available, we want to list this instrument temporarily as a specific strategy in order to draw better overviews and impacts assessments. The I/O-model now focuses on products and consumption, although it might be interesting to explore the possibilities of extending the model also to material streams – though it is difficult to obtain and link data on this.

Walloon region

Some actions are carried out in Wallonia by specific actors and/or for specific products (see some examples below).

- **Wood energy plan** (public sector : municipalities and communities): This programme has the overall objective to foster the emergence of a wood-energy chain in Wallonia and implement “wood energy projects” in order to create capital gains and local jobs, to reduce energy costs and contribute to sustainable development.
- **Program ERable** (private and public sectors): This program, with a budget of 10 million Euros, aims to strengthen scientific and technical universities, colleges, research centres and enterprises and to promote the findings in the Walloon industrial sector by funding research projects. These should eventually lead to the exploitation of the results in existing companies, to create employment and added value. It also aims to support the appropriation of the research results by the Company through designers and consultants, prime contractors, building owners and consumers.
- **Better use of resources in the quarries sector** (new legislation): The plants treating the waste from extractive industries have the obligation to elaborate a management plan which has to encourage a better use of quarries’ waste through recycling, reusing or valorisation.
- **Walloon program of Rural Development 2007-2013:** The overall objective is to ensure better use of agricultural resources
http://agriculture.wallonie.be/apps/spip_wolwin/IMG/pdf/PDR2007-2013.pdf

5. Individual types of resources identified as priority for national or sector-specific resource efficiency policies

Belgium – Federal level

Three environmental priorities were defined by the National plan of Reform as growth and employment factors. They are gradually developed in the federal Products Plan (2009-2012):

- Stimulation of energy efficiency to fight against the climate changes;
- Effective use of materials and natural resources;
- Safeguarding of biodiversity.

Brussels Capital Region

- Energy
- Waste
- Mobility
- Biodiversity
- Water
- Food

Flanders region

With regard to regional or sector-specific resource efficiency policies, we elaborate earlier experience with preventing, sorting and recycling, and final treatment of household waste and industrial waste.

Up until now a number of waste streams have been given priority: end-of-life vehicles, WEEE, dredging and spoil, industrial waste, cover material, biomass, demolition waste, animal by-products, used cooking oils, hazardous waste, organic waste / vegetables, fruit & garden waste, household wastes, used diapers, medical waste, fertilizers, paper, industrial waste, ship's waste, sludge treatment, packaging waste.

In the long term a thorough approach is needed using system-level innovations. This presupposes major steps in the transition of the following priority systems: renewable energy, sustainable material management, sustainable living and building, sustainable food and sustainable mobility.

In 2010 the Public Waste Agency, OVAM, has made up a new decree thereby broadening the scope from waste and soil management, to also include a more specific focus on materials management.

Specific policies are worked out for household waste, industrial waste as well as for biowaste. Focus is on prevention, safe and sound waste treatment and the possibilities of a life cycle approach, for example by exploring the possibilities of chain management and eco-clusters.

With regard to sustainable materials management and the new materials decree, the switch will need to be made from product streams to material streams. This switch has not been made entirely yet, but for the moment and as mentioned above, priority is given to building materials, food waste and textile. Resource efficiency is also partly covered by the decree and implementation programme on near-surface mineral resources.

To achieve maximal results in the most efficient and effective way however, it will be necessary in the planned **Sustainable Materials Management Strategy** to design a coherent framework, in which all current and forthcoming strategies and action plans from all relevant actors (including waste & materials, soil, energy, water, agriculture, forestry, etc.) are integrated in such a way that their interdependency is recognized and that a clear focus is defined to reach measurable results. Policies on individual types of resources or resource groups will then be more efficiently managed.

A sustainable biomass policy is furthermore currently being worked out. Biomass is therein considered both as a resource or a soil fertilizer, as well as a resource for green energy. The goals with regard to climate, soil management and green energy production need to be balanced. Therefore this policy will focus on the cradle-to-cradle approach with regard to biomass and its usage as soil fertilizer, the possibility of using biomass as resource / substitute for production, the extension of the volumes and diversity to aid in cleaning up brownfields, and a high-performance energy conversion and recuperation of residue heating.

Walloon region

Water

The management of water resources becomes a major concern in Wallonia, the difficulty being finding a sustainable balance between the need for water and the resources available.

Through its river basin management plan and other existing measures (recovery of pit waters, abstraction quotas etc.), the Walloon Region foresees the possibility of applying further measures, including adapting environmental permits, consolidating control as well as carrying out further studies to make better estimation of the available resources.

http://environnement.wallonie.be/directive_eau/pg_menu/pgb.asp?Menu=2

Energy

The Marshall Plan 2.green offers a new inflexion focusing on alliances environment-employment (especially in the field of energy efficiency) and the creation of a 6th competitively pole dedicated to environmental new technologies.

The Walloon Region wants to:

- develop fiscal instruments directed towards energy savings;
- ameliorate the "energy-housing" subsidies system in order to rationalize the measures and to ensure their environmental efficiency.

Waste

A definition of some main guidelines for the prevention of household and household-like waste has been developed. These guidelines provide a dynamic and structuring frame for preventive actions for greater efficiency (whoever the stakeholders are). Only actions within this framework will now be financially supported by the Region.

Six priority waste streams have been identified because of their impact on the environment (organic waste, paper and paperboard, packaging and disposable items, bulky waste, special household waste, yard waste).

New Forest Code

The overall objective of the **Forest Walloon Code** is to ensure the regeneration and sustainability of the forest and an optimal balance between its economic, ecological and social functions. Forest owners (private and public) must also ensure that tree felling do not exceed tree growth over the long term.

Major Goals: (i) adaptation of forest species in the best local environment, (ii) diversification and (iii) limitation of clear cutting, drainage operation and nutrients application.

Conservation and restoration of Soil resources

New legislation is progressively being introduced to ensure the harmonised management of all potentially polluted soils, involving the inventory of the soils concerned. In parallel, supplementary financial resources have been allocated to the remediation of brownfields as part of a broad economic recovery plan for Wallonia.

6. Strategic objectives, targets and indicators on resource efficiency

Belgium – Federal level

At the moment, federal authorities are developing reporting systems on biomass material flows in general, starting with biofuels, other bioenergy sources and materials. Once those flows have been estimated, it will be possible to identify critical flows for which objectives and actions will be needed.

Two studies on the environmental impacts of European production and extra-European biomass for biofuel highlight the need to set new environmental standards and development of socio-economic criteria. These new criteria will be proposed by Belgium in the framework of the revision of Directive 2009/28 and 2009/30.

Brussels Capital Region

Waste reduction targets

The available data on wastes produced in the Brussels-Capital Region make it difficult to establish long-term trends. It is generally recognised that the quantities of municipal waste produced per inhabitant continue to increase in Europe. To reverse this tendency the regional authorities implement waste prevention and management plan.

The fourth Regional Waste Prevention and Management Plan was approved in March 2010 and reinforces the idea of dematerialisation initiated in the third one. It aims to achieve measurable prevention targets for numerous waste streams by 2020. Those reductions concern specific waste streams (food, paper, superfluous packaging, etc.) and specific segments of the society (households, workers, pupils etc):

- Reduction of 37 kg/inhabitant/year of household waste (targets per streams: food, paper, superfluous packaging, etc);
- Reduction of 37 kg/worker/year office waste (targets per stream: food, paper, superfluous packaging, etc);
- Reduction of 6,5 kg/pupil/year of school waste (targets per stream: food, paper, superfluous packaging, etc);
- Recycling of 50 % municipal waste;
- Reduction of 10 % of non-households waste production;
- Recycling of 50 % industrial waste;
- Recycling of 90 % of construction and demolition waste.

The data used for measuring the implementation of these objectives are based on the collection data from the ABP (Agence de Bruxelles-Propreté, the Agency responsible for waste collection) for municipal waste and similar waste. The evaluation of industrial waste is made on basis of different data sources.

The Brussels-Capital Region also participates in the campaign ‘-100 kg/inhab/an’, coordinated by the ACR+, whose objectives are translated in the above mentioned Waste plan.

These efforts are all the more necessary as a strong growth of the population of Brussels is expected for the next decades (+170 000 inhabitants from 2007 to 2020).

Flanders region

Short term objectives:

Raising the eco-efficiency in the different sectors (MINA 4):

- Further decoupling of industrial waste production versus gross added value of the industry within the period 2010-2015.
- 21% of new built residences with excellent energy performance by 2015.

- Significant improvement of the 'eco score' of Flemish vehicle fleet by 2015.

Reducing the use of primary raw materials and increasing the use of alternatives. Sustainable consumption will also be increased (MINA 4):

- The proportion of waste used as secondary resource is rising in the period 2010-2015.
- The proportion of substitutes for near-surface minerals is rising in the period 2010-2015.
- Consumption of tap water no longer increases in the period 2010-2015.
- Consumption of rain water increases in the period 2010-2015.

Reduced energy consumption and increase in the use of renewable energy sources (MINA 4):

- Energy savings: 9% of final energy consumption in 2016 compared to 2001-2005
- Reduction of energy consumption in residential sector by 2015
- Increase in proportion of renewable energies

Long term objectives:

In January 2009, the Flemish Government, the social partners and civil society concluded **Pact 2020**, reflecting their joint long-term vision and strategy and formulating targets and actions for 2020. One of the objectives of Pact 2020 is a further decoupling of the economic growth and the total emissions and waste production by 2020. This must be achieved by steadily increasing material and energy efficiency in the various sectors of the society.

The vision is to decrease the ecological footprint of Flanders to such extent that the impact on ecosystems here and elsewhere no longer exceed their capacity. Therefore attention will be given to local variations and ecological precious environments. Sustainable use of natural resources (e.g. water, wood, etc) and energy is part of this. By 2020 important steps must have been made towards a cyclical economy with a minimal usage of resources, energy, materials and land as well as a minimal impact on nature and environment. Therefore a transition is needed towards environmentally friendly energy consumption, sustainable materials management, and sustainable production and consumption patterns in housing, food and mobility.

By then, a breakthrough will have been realised in eco-innovation and energy-efficiency. Eco-efficiency of materials, products, services and technologies, as well as sustainable consumption will be the norm in Flanders by then. Materials and fuels for energy production will be used in the most efficient and sustainable way. The full lifecycle of resources will be taken into consideration in energetic valorisation, and weighed against other applications thereof. Furthermore, there will be mature markets for recycled materials, for sustainable consumption and production. Consumers, enterprises and public authorities will be well informed about the impact of processes and products. Special attention is given to sustainable living and building. Because of these standards a further decoupling and a significant minimisation of environmental pressure is foreseen. An integral and integrated environment policy offers opportunities for future oriented, new markets and employment, which will secure our economy for the future (cf. MINA 4).

Indicators:

- Concerning targets 'Raising the eco-efficiency in the different sectors':
 - Index of GDP compared to indices of several emissions and total primary waste production; reference year = 2000; the evolution of the indices over the considered time span is compared graphically, no ratio's are calculated. Sectors: households, industry, energy sector, agriculture, passenger and freight transport, trade and services; index of activity compared to indices of several environmental pressure parameters; reference year = 2000; the evolution of the indices over the considered time span is compared graphically, no ratio's are calculated (Pact 2020 – MINA4).
 - Proportion of new built residences < 40 'energy level' (MINA-4)
 - Mean 'eco score' of Flemish vehicle fleet (MINA-4)
- Concerning targets 'Reducing the use of primary raw materials and increasing the use of alternatives. Sustainable consumption will also be increased' (MINA-4):
 - Proportion of waste used as secondary resource
 - Proportion of substitutes for near-surface minerals
 - Consumption of water (tap water, rain water) both in millions of m³ and in litres/capita
- Concerning targets 'Reduced energy consumption and increase in the use of renewable energy sources' (MINA-4):
 - Energy savings as % of final domestic energy consumption (according to the EU directive 2006/32/EC)
 - Energy consumption by residential sector (= final energy consumption).
 - Renewable energy as % of the final energy consumption
- Other indicators:
 - Material intensity of the Flemish Economy (GDP/Direct Material Input) (Pact 2020/ MINA-4).
 - Turnover of industry/Direct Material Input (Pact 2020)
 - GDP/Domestic Material Consumption (Pact 2020)
 - Domestic Material Consumption/capita (Pact 2020)

Clarification: 'Direct Material Input', 'Domestic Material Consumption' and related indicators such as 'Total Material Requirement' and 'Domestic Processed Output' are monitored by MIRA since 2001 (Some data are available from 1995). Indicators are used in yearly Indicator Reports. 'Direct Material Input' and 'Domestic Processed Output' are for example taken up in the 2010 Indicator Reports (Under the Eco-efficiency indicators).

Walloon region

Some examples are given below:

1) Relevant strategic objectives or targets set out:

- to reach a level of 10 % of renewable energy in the global energy consumption - Walloon Plan for Sustainable Energy Management;
- to develop an agricultural network for promoting biomethanisation - Walloon Air-Climate Plan;
- to implement sustainable forest management criteria and assessment indicators - Program for the Endorsement of Forest Certification schemes (e.g. maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycle, maintenance of forest ecosystem health and vitality, maintenance and encouragement of productive functions of forests (wood and non-wood) etc) 11% of private forests are certified, 100% of public forests owned by the Walloon region are certified and 95 % of public forests owned by the local authorities are certified;
- to improve balance between forest and big game, better consideration of biodiversity in forest practices - Progress plan for forest management 2007-2011;
- to promote sustainable materials management by developing actions to prevent leakage from material cycles ; taking measures to reduce the use of raw materials and energy by, where possible, using waste and by-products; and setting up campaigns to encourage sustainable consumption and production patterns - Walloon Waste Plan 2010;
- to have 65 % of household waste collected separately by 2010 - Walloon Waste Plan 2010;
- to promote waste prevention, recycling and strict limitation of disposal in dumps - Walloon Waste Plan 2010;
- to achieve a far-reaching decoupling between economic growth on the one hand and impact on the environment resulting from the use of materials and energy on the other hand – Different plans.

2) Environmental planning in the context of sustainable development:

Each year, the Government provides a report on the "State of the Walloon environment" to the Walloon Parliament (Obligation coming from the Walloon Code of the Environment). The report contains:

- a critical, evaluative and prospective observance of the various components of the environment and the pressures exerted by human activities;
- a management analysis conducted by the environmental authorities, businesses and voluntary associations;
- a state of transposition of EU directives on the environment and compliance with international commitments on the environment;

- a review of efforts made in the Walloon Region for Sustainable Development to carry out the international conventions developed as part of the Rio Conference and the principles defined in Agenda 21.

The analysis of the environmental situation of Wallonia is made through the follow-up of different types of indicators (environmental indicators, Socio-economic indicators, Health indicators, etc) including resource efficiency indicators:

- Material Flow analysis (TMR)
- Energy intensity index
- Water abstraction index
- Eco-efficiency indicators, etc.

<http://etat.environnement.wallonie.be/>

7. The institutional setup for the development and implementation of resource efficiency policies

Belgium – Federal level

Promoting resource efficiency is a policy objective of the Federal Government of Belgium, but also of the regions, with many cross-cutting linkages to various policy fields. Therefore, resource efficiency policies are formulated and introduced by various Federal Departments, covering different issues and aspects of the resource efficiency agenda.

The development of the Belgium's environmental policy is characterised by a separation of responsibilities between the national and the regional level.

The Environmental federal level is responsible for:

- the establishment of an integrated product policy
- the chemical policy
- the transit of wastes
- the protection against ionizing radiation and radioactive waste management

On the Federal level, a mainly horizontal approach is contributed to resource efficiency with cross-cutting linkages between various governmental bodies and policy fields, such as:

- Federal Public Service (FPS) for Economy, SMEs and Energy
- Federal Public Service for Foreign Affairs, Foreign Trade and Development
- Federal Department for Sustainable Development
- Federal Department for Sciences

These FPS are, for instance, in charge of the general building policy, the financial and fiscal policy, the energy policy etc.

In order to coordinate the federal and regional policies as good as possible, a body of dialog (between federal and regional levels) of the European and international policies (Coordination committee of the International policies of the Environment - CCIPE) was set up in 1995. This body works in sub-groups sets of themes. The question of the effectiveness of resource use is treated mainly within the working group "Sustainable Consumption and Consumption patterns- SCP" of which the mandate was widened, in 2003, to the strictly national policies. This group is thus the place of dialog and exchange of information (for certain policies) for any national policy in the field of the SCP.

The plenary CCIPE also regularly arranges consultations and meetings with the stakeholders.

Brussels Capital Region

The Brussels Capital Region is responsible for:

- Water policy
- Nature preservation and management green spaces
- Mobility
- Energy policy
- Protection of soil, subsoil, water and air against pollution
- Reduction of noise disturbance
- Protection and distribution of drinking water, the sewage and treatment of wastewater
- Waste policy
- Control of dangerous and nuisance-causing establishments

In the Brussels Capital Region the development and the implementation of resource efficiency policies are coordinated by the Brussels Environment administration (Bruxelles Environnement – IBGE).

Flanders region

On the Flemish level, the government has created the 'Flanders in Action'-plan in 2006, followed by the 2009 Pact 2020, in which sustainability and resource efficiency are key elements. Conform to the European targets, the Flemish Government has also set as its aim to realise a minimal usage of raw materials, land use, water use, and energy usage by 2020.

Flemish government agencies that contribute to these aims include among others:

- Flemish Ministry for Environment and Nature
- Flemish Waste Agency (OVAM)
- Flemish Energy Agency (VEA)

- Flemish Environment Agency (VMM)
- Flemish Agency for Nature and Forestry (ANB)
- Flemish Ministry for Economy, Foreign Trade, Agriculture
- Flemish Ministry for Innovation
- Flemish Ministry for Energy, Living, Cities and Social Economy

Walloon region

The Walloon Region is responsible for:

- forest, nature, hunting and fishing;
- protection of soil, subsoil, water and air against pollution;
- reduction of noise disturbance;
- protection and distribution of drinking water, the sewage and treatment of wastewater;
- waste policy;
- control of dangerous and nuisance-causing establishments.

In the Walloon Region the development and the implementation of resource efficiency policies are coordinated by the General Directorate for agriculture, natural resources and environment (DGO3). For some cases, the strategies are negotiated at the level of the Walloon Government in association with other General Directorates (land use, planning, and economy) and relevant stakeholders (sectoral federations) or at the federal level (for products policies).

According to the sector concerned (businesses, households, agriculture) discussions are often organised in order to balance the objectives defined by the public authority and the existing constraints for the sector.

8. Selected policy instruments or initiatives on resource efficiency presented in more detail

Belgium – Federal level

FRGE: The Fund for the Reduction of the Global Energy Cost (FRGE) is a public limited liability company, set up by the Belgian government in 2006 to reduce the energy invoices of low-income families and to make a large number of homes more energy efficient. The FRGE has a capital of 250 million at its disposal which was raised by means of private-market bonds and is offered to the public at large in the form of cheap loans to implement structural energy-saving measures in private homes.

Eco Management and Audit Scheme (EMAS):

The Belgian federal government decided in 2005 that all its public services (administrations) need to participate in EMAS, with the aim of improving its environmental performance. The Federal Public Planning service Sustainable Development has been tasked to provide guidance to other administrations during this process. To date, 14 of them have obtained EMAS registration and have succeeded in – often substantial ways – reduce their consumption of energy, water, paper, etc.

FEDESCO: Created in 2005 on the initiative of the Federal Government, FEDESCO is a public Energy Services Company that facilitates and finances energy-efficiency investments in property owned and/or used by the federal government (1800 buildings). By providing targeted advice, state-of-the-art services and technology solutions, it contributes to considerable cost- and energy savings.

Sustainable Public Procurement: A guide for sustainable public procurement has been developed, providing public authorities a practical tool for purchasing goods and services with a reduced environmental and social impact throughout their entire lifecycle. Currently, the guide covers label information for more than 200 products and services and procurer criteria documents for over 70 product and service groups, ranging from household appliances, computer and office machines, transport, electricity etc. As much as possible, the documents are discussed with sector and NGO-representatives.

www.guidedesachatsdurables.be

Corporate Social Responsibility (CSR): The Belgian federal government is a strong promoter of stronger corporate social responsibility. CSR, as a process whereby companies – on a voluntary basis – aim to integrate social and environmental concerns in their business operations and in their interaction with their stakeholders, is seen as a key tool in the re-orientation of our consumption and production patterns towards sustainable development, thus also contributing to resource efficiency.

To this extent, a CSR-framework (offering common definitions and vision to authorities and stakeholders) as well as a CSR-action plan (including a set of 13 actions) have been adopted.

Sectoral agreements for wood and detergents: At the beginning of 2011, the Federal Minister for the Environment together with the representatives of the sectors of the distribution and the production signed two sector agreements aiming at increasing the presence of products that are more environmental friendly. These agreements relate specifically to the products from wood and to detergents. The objective of these agreements is to gradually increase (by 2013, 2016 and 2019) the provision (on the level of the sector of the distribution) of products answering to precise environmental criteria (FSC and PEFC labels for the products regarding wood and exclusion of illegal timber, and products answering to the criteria of the European eco-label and criteria of concentration for the detergent products). These agreements are taken within the meaning of article 6 of the law “standards of products” (law of December 21st, 1998). This article allows the concluding of constraining sector agreements; in the event of unfulfilled target of precise figures, it is possible sue the business in non-compliance.

http://statbel.fgov.be/fr/binaries/431_projet_accord_sectoriel_bois_durable_FR_tcm326-106519.pdf

<http://staatsbladclip.zita.be/moniteur/lois/2011/04/18/loi-2011024078-print.html>

Contribution to the development of a general methodology allowing the calculation of the environmental impacts of the products

A vast consultation of the stakeholders was held during more than one year (2009-2010) in order to define the general principles of a method for calculation of the environmental impacts of the products. The results of this consultation were translated in a memorandum transmitted to the European Commission which works on this thematic issue. The experience feedback of pilot projects (in the sector of beer, mattresses and paper impression), finalized in March 2011, also made it possible to refine the positions included in the memorandum.

Bioenergy: biofuels, pellets, and wood energy (for households): In the context of the increase use of energy from biomass, Belgium is currently developing a framework for the reporting of the quantities of biomass used for energy domestic uses. In addition, the content of hazardous substances of those energy sources is strongly limited and sustainability criteria are progressively introduced.

Heating systems and boilers: For several years, Belgium has developed a legislative framework on the emissions (and then indirectly on the yield) of boilers. Belgium has developed this legislative framework in association with the sectors and is thus considered a co-legislation. It has permitted the elimination, from Belgian market, of 30% of obsolete models. The coal boilers are also covered by specific legislations.

Brussels Capital Region

None reported

Flanders region

Plan C: The OVAM, the Flemish Public Waste Agency, concluded in 2005 that a next generation of waste management – or ‘sustainable material management’ – requires room for changes in perspective and practice, for new structures and culture, for (failure-friendly) experiment and social learning, and cannot be controlled or planned. From this deeper understanding and concern to make future progression, the OVAM started Plan C in 2006, a transition network that brings together individuals and organisations (from the public sector, the business world, academia and NGOs) to co-create breakthroughs in sustainable material management. A specific approach was implemented to manage this complex process: transition governance.

Plan C shows that this approach towards system innovation really can make a difference. Plan C offers a visionary framework and initiates and assists in a coordinated effort for experimenting along selected pathways. Experiments are ‘innovation projects with a societal challenge as a starting point for learning’, looking into the proper technological, juridical, economical and social bottlenecks on our journey towards breakthroughs in the way we manage material resources. Some examples of experiments are situated in the field of product-service systems, chemical leasing, closed loops of materials, product design, local production and consumption, etc.

As a follow-up to the European presidency in 2010, we continue to explore the possibilities of a multi-actor transition platform, preferably on EU-level, to realise the shift to a more sustainable and resource-efficient/effective society.

Recycling certificates: the idea of exploring the possibilities of recycling certificates was launched on the informal council during the Belgian presidency and is therefore still quite immature. Several objectives are brought forward, such as stimulating producing better recyclable products and integrating more secondary raw materials into product designs. Recycling could be an instrument to enlarge the consuming market, but also as an instrument to complement the existing and by now well established green electricity certificates.

Enhanced Landfill Mining (ELFM): In 2008 a consortium of people with varying expertise was established in Flanders (Belgium) in order to explore potential pathways to develop an Enhanced Landfill Mining (ELFM) approach and to integrate landfilling in a more sustainable waste management practice (Enhanced Waste Management: EWM). The ELFM Consortium has been initiated together with an EU-EFRO Demonstration Project in this domain. In this new Waste/Materials Management concept, prevention and re-use/recycling become even more important, while the idea of landfills as 'a final solution' is discarded. In the ELFM Consortium's view, landfills can become part of EWM, provided they are considered as 'temporary storage places awaiting further treatment'. In this approach, landfills become future mines for materials, which cannot yet be recycled with existing technologies but which show potential to be recycled in a more effective way in the near future. Extended producer responsibility for the materials stored in such temporary storage places becomes part of this EWM view. This idea is related to the fact that today's practice of incineration eliminates the possibility for reuse of materials resulting in increased material costs and decreased welfare. An approach based on improved recycling and storage in view of recycling is a possible answer in order to increase re-use rates. This is the first pillar of EWM. The second pillar of EWM is the concept of Enhanced Landfill Mining (ELFM). As indicated above, the waste brought to new storage facilities needs to be mined after a limited time. The storage operation will be performed in such a way to make mining and valorisation as efficient as possible.

Chemical Leasing Project: in this project the opportunities are explored of a business model wherein chemicals are leased for a specific service and result, in accordance with the demands of the client. The service is being paid for, not the amount of chemicals used. The efficiency / effectiveness determines the economic value, and the incentive for both provider and client is to have the same results, but by using less materials. The project is currently investigating possibilities of translating this philosophy into workable business models.

Walloon region

Sectoral agreement: Since 2003, several industrial sectors have concluded sectoral agreements with the regional authorities in order to reduce their energy consumptions and greenhouse gas emissions by 2012. The objectives for the different sectors are to reach a certain value of IEE (Index of Energy Efficiency) and IGES (Index of Greenhouse gas Emissions) (and not on a list of measures). Both indices take into account the amounts of goods produced, the global energy consumption and CO₂ emissions, as well as the specific values of consumption and emission for each ton produced. By the end of 2007, 162 companies from 15 industrial sectors and sub-sectors

had signed up such agreements.

<http://energie.wallonie.be/fr/les-accords-de-branche.html?IDC=6244>

Water seepage management: In 2003, water seepage volume in quarries reached 34 millions m³ which represents 8,4% of the total amount of underground water abstracted a year in the Walloon Region. The fact that quarries sites are bigger and worked for a longer period implies the increase of water seepage amounts. That is why the Walloon Region (through the SWDE – Walloon Water Society) is going into partnerships with several quarries companies to collect seepage water and transform it in drinking water. The water is thus pumped and after sanitation, mixed with water coming from waterworks and distributed. It facilitates a reduction in the quantitative pressures exerted on groundwater resources. These operations are mainly implemented in the Hainaut province (Tournai, Ecaussinnes) where groundwater abstractions are the most important.

<http://environnement.wallonie.be/enviroentreprises/pages/etatenviindustrie.asp?doc=syn-ext-cea>

Household appliances: Creation (in 2006) of a website, containing a CO₂-calculator. It measures the energy performance of existing appliances/products available on the Belgian market. It calculates not only the CO₂ emissions and financial costs, but also the yearly energy savings and the payback time, according to personal selection criteria, personal behaviour, specific parameters and fiscal incentives and subsidies. An “energy-guzzlers campaign” has been launched to promote the website and attracted more than 500.000 visitors in 2.5 years.

Waste Prevention website: A website was put online in 2008 and is dedicated to the prevention of waste generation and awareness.

9. Topics of interest and information needs for follow up work

Belgium – Federal level

- Clear definition of resource efficiency
- Targets and measurable strategic objectives
- Indicators on environmental impacts from resource
- Rebound effect
- Embodied impacts
- Incentives for transition management
- Costs of inaction

Brussels Capital Region

- How to implement resource efficiency policies
- Practical definition of resource efficiency
- Economic arguments for implementing resource efficiency policies

Flanders region

- Developing resource efficiency programmes.
- Developing a clear scope (sustainable materials management versus resource efficiency, sustainable consumption and production, etc).
- Exchange of best practices on transition management and a multi-stakeholder approach.
- Guidelines on implementing, integrating and evaluating resource efficiency programmes.
- Create an overview of recent and running related programmes and projects which might contribute important information to avoid redundancy (e.g. Interreg, EFRD, EU Green Capitals Project, UNEP, etc.).
- Developing uniform objectives, targets and indicators on resource efficiency by using already existing indicators from comparable areas, e.g. sustainable development.
- How to raise awareness to bring a change in production and consumption patterns. For example it should be examined to what extent new or existing instruments such as the environmental, voluntary agreements, fiscal instruments, and subsidies channels; perhaps reoriented so that they encourage a change in norms and behaviour.
- Workshop on strategies for policy integration and reorientation

Walloon region

- methods for measuring resource efficiency and developing adequate indicators
- sharing knowledge and good practices: comparison of resource efficiency policies and the way they are implemented in different European countries
- need for a structured way to collect information on European resource efficiency policies
- discussion on the policy effectiveness of different resource efficiency policies
- define a common structure for monitoring and reporting on resource efficiency policies

10. References

10.1 Facts and figures about the country

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[http://www.bruxellesenvironnement.be/uploadedFiles/Contenu_du_site/Professionnels/Formations_et_séminaires/Conférence_Pre-waste_2011_\(actes\)/w-bruxellesenvironnement-wasteplanEN.pdf?langtype=2060](http://www.bruxellesenvironnement.be/uploadedFiles/Contenu_du_site/Professionnels/Formations_et_séminaires/Conférence_Pre-waste_2011_(actes)/w-bruxellesenvironnement-wasteplanEN.pdf?langtype=2060)

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<http://www.bruxellesenvironnement.be/planeau/>

Sectoral agreement on GHG emissions and energy consumption

<http://energie.wallonie.be/fr/les-accords-de-branche.html?IDC=6244>

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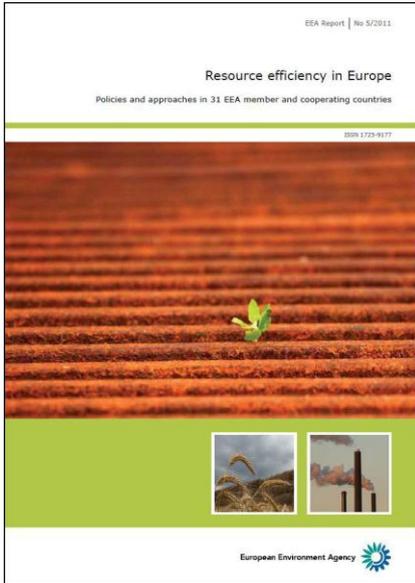
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Resource efficiency in Europe

Policies and approaches in 31 EEA member and cooperating countries

Further information about resource efficiency policies, including the analytical report and thirty-one detailed country profiles, are available on the EEA website:

<http://www.eea.europa.eu/resource-efficiency>

Selected examples of resource efficiency policies, instruments or targets presented in the thirty one detailed country profiles

