

creative policy packages for waste:

Flanders

overview

Flanders has achieved very high levels of recycling through a waste strategy based on a combination of instruments: disposal taxes, landfill bans, subsidies and financial incentives for separate collection of recyclables, and producer responsibility. In addition, an important part of Flanders' strategy is a range of voluntary agreements with the main stakeholders involved in the generation and/or management of waste (the Government, municipalities and industries.) Belgian federal law also provides the possibility of imposing taxes on products and product regulation.

who did we interview?

- Hugo Geerts (written responses) and Geert De Roover (written response and interview) from OVAM, the Flanders Public Waste Agency. OVAM was set up at arm's length from government to promote, amongst other objectives, recycling and waste prevention
- Bart Martens, Policy Director of Bond Beter Leefmilieu Vlaanderen, the umbrella organisation of Flemish-speaking environmental NGOs
- Geert Schoutteten, Director of Sobry, a company owned by Shanks Flanders, (written responses).

what kind of region is Flanders?

Flanders is one of the three regions of Belgium and has considerable political autonomy. It has a land area of 13,521 square kilometres (about a twentieth of the size of the UK) and a population of 5.9 million inhabitants, giving a high population density of 437 inhabitants per square kilometre. It has the same constraints on landfill, in terms of the high water table, as the other lowland countries close to the North Sea. In October 2001 there was permitted landfill capacity of 16.5 million cubic metres, giving a remaining landfill capacity of about five to seven years. The maximum capacity of incineration of municipal waste is 1,330,000 tonnes. Waste facilities and waste collection are in both private and public ownership.

what has been achieved?

Between 1991 and 1999, municipal waste¹ recycling increased from 21 per cent to 62 per cent, surpassing targets of 52 per cent for 2001 and 57 per cent for 2006. This gives Flanders the highest recycling rate in Europe in this waste category. The definition of municipal waste is sufficiently close to that of the UK to make it comparable.

Industrial waste² recycling averaged 50 per cent between 1995 and 1999. The figures for total waste generation fluctuate, giving an average yearly increase of 0.5 per cent between 1992 and 1999, but over the same period municipal waste showed an average yearly increase of more than four per cent.

what were the motivations behind the strategy?

Hugo Geerts sees the drivers as growing public and political awareness about environmental issues, international legislation, and better knowledge of waste in terms of the impact on the environment of different technologies and options.

The growth of the Flemish Green Party helped to motivate other parties and the Green Party has been part of the Flemish government since 1999. However, major initiatives on waste were taken by Socialist and Christian Democrat politicians as far back as 1991. Bart Martens comments: “there was not really a case of severe environmental pollution, rather an increase of environmental awareness among the population. De Batselier [the Socialist minister for environment from 1991-95] gave a policy answer to this general public consciousness”.

Geert De Roover comments: “the role of the ‘Intercommunale’ [inter-municipality groups] and the municipalities has also been very important because of their direct contacts with citizens”.

what are the principal instruments?

taxes on landfill and incineration

According to Hugo Geerts, the waste strategy made it clear that “environmental taxes on landfilling and incineration must favour recycling above landfilling and incineration”. The waste tax was introduced in 1987. The average tax rate currently stands at €58.61 (approx. £37³) per tonne for landfill and at €8.50 (approx. £53) per tonne for incineration. These tax rates have experienced an increase of 900 per cent for landfill and 100 per cent for incineration over the 1987-2000 period. The taxes depend on the kind of waste and the treatment. Since 1999 there has also been a ban on landfilling for selective collected glass, plastic packaging and unsorted industrial waste.

1 Municipal waste includes household waste, bulky waste from household and municipalities (including garden waste and waste from private construction and demolition), and other municipal waste (market waste, street sweeping, waste from offices).

2 Waste from manufacturing industries (excluding hazardous waste and waste from energy production).

3 Using the interbank rate at 25 September 2002.

Geert Schoutteten supports the importance of price as a motivational factor: “for industrial waste, the evolution in the prices (recycling down, incineration down and landfill up) due to environmental tax was the biggest driver”. He also notes the effect of these taxes: “for industrial waste, incineration has become more important; for municipal waste, the recycling of plastics, metal, paper has made incineration less important if expressed in percentage terms. Nevertheless, for at least five years, the government says that as well as landfill, incineration must go down. This has occurred for landfill but not for incineration where extra capacity (400,000 tonnes next year) is given to Indaver [a part publicly owned waste company] and refused to private companies”.

However, Hugo Geerts clearly indicates the aim of the taxes: “give priority to prevention and then recycling. The waste that cannot be recycled must be incinerated or landfilled. We then give priority to incineration”.

voluntary agreements with municipalities: the environmental covenants

Separation of recyclables has been achieved through environmental ‘covenants’ or ‘agreements’ with municipalities. In exchange for subsidies towards selective collection infrastructure (including doorstep and bring systems), municipalities agree to achieve a series of environmental goals, which go beyond the minimum legal requirements. They must develop an action plan for municipal waste, including targets and instruments to qualify for the subsidies. Out of 308 municipalities, 294 signed up to the original covenant of 1992-96, 300 signed up to the second generation environmental covenant of 1997-99, and municipalities are now considering the third generation environmental covenant of 2000.

Municipal environmental covenants are an established mechanism in Flanders, covering a range of environmental goals including waste, and dating back to 1992. Subsidies do not cover 100 per cent of initiatives but have made a crucial difference to the provision of infrastructure for the separate collection of domestic waste components, including household hazardous waste, organic waste, waste paper, glass, plastics and metal waste. A recent review document from OVAM concludes that, “as a result of [the] first generation of environmental covenants... the selective collection of domestic waste in Flanders was introduced in a very structured way and the volume of domestic waste that had to be eliminated had decreased from 330 kilos per inhabitant to 280 kilos per inhabitant... [As a result of the second generation] the domestic waste volume that finally has to be eliminated has decreased from 280 kilos per inhabitant in 1996 to 200 kilos per inhabitant in 1999”.

variable charging by municipalities

To enhance the incentive to separate, more and more municipalities are using variable charging. Bart Martens comments: “one reason for the recycling success is that the system of selection and recycling of municipal waste is financially worthwhile for the citizens. The more you sort your garbage, the less you will pay for it. For example: a grey bag [for the residual fraction] costs €1.25, whereas for a recycling bag for plastic bottles you pay only €0.20. Most of the municipalities are now using differentiated tariffs for different wastes, with the minimum amounts for the tariffs set as part of the covenants or agreements with OVAM”.

voluntary agreements to implement the federal Ecotax law

Bart Martens sees as important the various agreements with industry on environmental management, which arise from the federal Ecotax policy, “Industry has to reach recycling targets. If they don’t meet these targets it will have financial implications, mainly as a result of the Federal Ecotax legislation. So they have an interest in a good working selective system”. He explains the background: “In 1992 the Federal Parliament of Belgium needed the Greens’ vote to reform the state structure. Using this favourable position, the Greens were able to get a vote to introduce an Ecotax law, covering beverage packaging, other disposable containers, and one-way products such as batteries and disposable cameras – beverage packaging being the most important fraction. However the industry and trade unions lobbied heavily against it and the packaging industry was given the possibility for exemption from the tax if it agreed to reach certain recycling targets. As a result, the Ecotax law never came into force; but instead has been used as a ‘stick behind the door’”. These exemptions now cover a range of waste streams where manufacturers have set up recycling systems. Product-linked deposit-refund systems are encouraged as a means of meeting the targets.

voluntary agreements to implement the Duty of Acceptance

In a similar way, at the Flemish regional level rather than the Federal one, there is a legally enforceable ‘Duty of Acceptance’, ie producer responsibility for a number of waste streams, which is generally implemented through voluntary agreements. These voluntary agreements are in place for electrical and electronic waste, paper waste, accumulators and batteries⁴, end of life vehicles (prior to the EU directive), and waste tyres. The Duty of Acceptance comes from the Flemish 1997 regulation concerning waste prevention and management (VLAREA), and sets up take-back arrangements by importers, producers and retailers. If a sector federation does not agree to set up a voluntary agreement, each of its members is individually obliged to set up a waste management plan of its own, and has to meet the collection, recovery and/or recycling targets specified by the Duty of Acceptance, so there is a real incentive to join the voluntary scheme. Bart Martens comments: “These agreements have worked in that there are now treatment facilities for electrical and electronic waste, tyres, and batteries – for instance, 70 per cent of batteries in Flanders are recycled”.

⁴ Also subject to the Ecotax law.

waste reduction

OVAM's Hugo Geerts sees waste reduction as having equal emphasis with recycling in Flanders' future policy. Geert De Roover adds that "we are trying to set up some indicators of prevention, but it is not easy to give clear figures". Overall, the view is that prevention is more effort and a different kind of effort from recycling – and many companies are not happy with the idea of reducing the amount of materials in the economy. However, Flanders' policy includes a number of financial incentives for reduction at source: subsidies to Flemish recycling (reuse) centres, financial aid for municipalities setting up a prevention policy within the framework of the municipal covenants, and subsidies via the 'PRESTI' prevention stimulation programme, which encourages the drawing up of prevention manuals for different sectors, including construction.

what have been the key factors in success?

OVAM's Hugo Geerts sees five components of the strategy: communication, subsidies, financial instruments, producer responsibility and legislation as equally important. He comments: "the high recycling rates couldn't have been achieved without the efforts of everybody: the population, municipalities, collecting and recycling companies, producers of industrial waste. In order to get everybody to work in the same direction, stakeholder participation is essential".

communication

OVAM sees communication about separate collection as crucial – not only on what to separate, but also why it should be separated and what happens to it, as well as providing feedback on the success of the activities. OVAM's communication budget of around BEF 60 to 75 million per year for the last three years⁵ is additional to the money spent by municipalities and is helped by discounts from television stations and free space in the print media. Producer responsibility fees also pay for communication efforts. There are communication efforts at all levels: regional (through OVAM), and local, with different content. There have been moves to evaluate the success of communications, most recently by following up a campaign on waste prevention with a questionnaire. The study shows that 36 per cent of people remembered something about the campaign without prompting and 79 per cent remembered with prompting. The other way you can evaluate is by measuring the effect on waste prevention. This is not easy but as Geert de Roover says: "every year more people find their way to the reuse centre".

⁵ Equivalent to £950,000 - £1.1 million per year.

what were the major problems for the strategy?

difficulty of negotiating some of the agreements

The agreements are not without their critics, including OVAM itself, whose 1999 review identifies a number of drawbacks. In Bart Martens' view, the recycling targets in some of the agreements are too low, and the agreements give too many opportunities to opt for incineration (energy recovery). However, the OVAM document insists: "The slow pace to reach this agreement on environment management [on household and electronic appliances] illustrates that the Flemish Region has learned a lot from former agreements with the paper sectors. Eventually an agreement is not just concluded because there has to be one. The Flemish Region keeps pressuring the sectors to close an agreement that fits entirely in the framework of the environment management and that puts all responsibility on the side of the sectors concerned. Meanwhile the Flemish region still opts for a lenient approach by driving negotiations that lead to a well founded agreement on environment management, rather than compelling the sectors to apply the duty of acceptance without fail".

what are some of the issues for the future?

fluctuation of markets a limiting factor on further recycling

A general problem is moving beyond current recycling rates, which are, for some waste streams, probably at a maximum. A key limiting factor is the fluctuations of markets and for some recyclates the lack of well established markets. Geert De Roover comments: "Not all markets are stable. Even established markets like paper and cardboard are subject to high fluctuations. If the demand for these materials decreases, the municipalities have to pay to get rid of the collected paper". If a municipality is in deficit because of this, it has the option to raise local taxes, but more and more municipalities are using variable charges for waste as a way of making up the difference.

export of secondary fuels

Bart Martens sees as a future risk the fact that secondary fuels, sometimes known as RDF (Refuse Derived Fuel) are no longer classified as waste and can be exported to cement kilns in Wallonia and Germany, with the possibility of unacceptable emissions of certain heavy metals such as mercury. His organisation hopes to convince local authorities using Mechanical Biological Treatment to send the residue to facilities with emissions standards comparable to those of Flanders' incinerators. He comments: "We can't prevent the export of high-caloric streams for energy recovery because there is no clear distinction between disposal and recovery – if it is seen as recovery, it is subject to free movement, and will go to the cheapest installation which also tends to be the dirtiest"⁶. However, Geert Schoutteten suggests the cement industry may see the issue in a different light.

⁶ See European Environmental Bureau study - Eco-dumping by energy recovery, available from www.eeb.org

insufficient emphasis on prevention

Bart Martens thinks that there is not enough emphasis on prevention as opposed to recycling: “The separate collection system is not complementary to waste prevention – the packaging materials that could be prevented are the ones presently being collected (ie plastic) so they are the wrong ones! In order to ensure the right balance between selective collection and waste prevention, there should also be a tax on the product. Material taxation should be differentiating on the basis of the environmental damage caused by the material, ie plastic and glass would get different tax levels”. Geert Schoutteten suggests that: “prevention is in fact not done because it is politically difficult because you impact on the liberty of the people”.

what are the lessons for the UK?

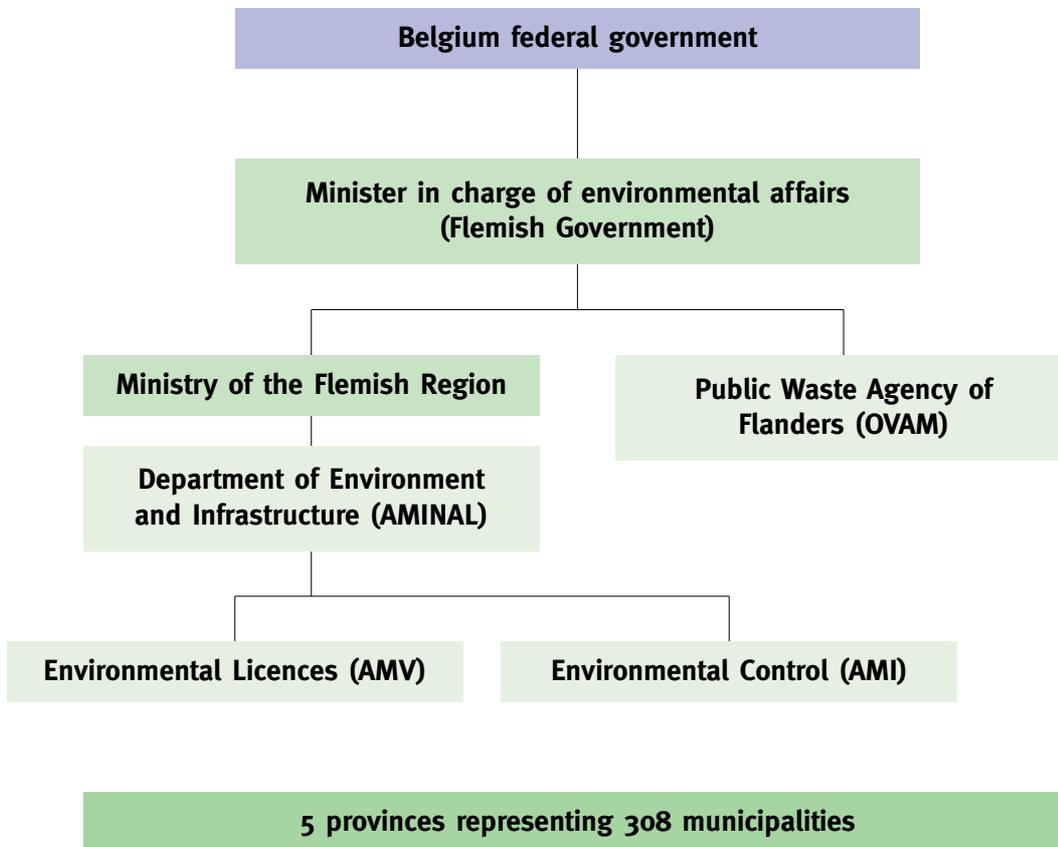
Hugo Geerts: “Rome is not built in one day! High recycling rates and reduction of waste at source cannot be achieved in a few months. The waste problem must be tackled step by step. A waste management plan with ambitious but realistic targets is a tool that can help you. Stakeholder participation both in the planning phase and operational phase is necessary”.

Bart Martens’ prescription for success:

- Introduce producer responsibility for the packaging industry (high recycling targets, obligatory financing of selective collection schemes).
- Apply the polluter pays principle (product taxes on one-way packaging, process taxes on incineration and landfill).
- Use differentiated tariffs at point of collection of municipal waste – high tariff for residual fraction, lower tariffs for packaging and organic waste. This is done through charging different rates for bags for different wastes, or in some places weight-based charging using containers with electronic chips in them.
- Subsidise municipalities to set up selective collection schemes.
- Invest in best available technology for waste treatment (anaerobic digestion of organic waste, biological-mechanical pre-treatment of domestic waste combined with a gasification of the high caloric remaining RDF).

Flanders - competent authorities

4-8



- The federal government is the only competent waste authority for nuclear wastes, waste transit through Belgium, product regulation and taxes, control and tracing by federal civil-servants, and penalties for environmental crimes by criminal courts
- All other aspects are regional competences.
- The regions can propose changes to, or take competencies from, the federal level as long as proposals are implemented identically in the three regions in order to maintain the Belgian monetary and economic entity
 - Eg the proposal of an agreement on packaging
- The main competent waste management authority in Flanders is the Public Waste Agency of Flanders, or OVAM
 - OVAM is in charge of the development and implementation of waste policy and of waste management and prevention plans
- AMINAL, within the Ministry of the Flemish Region, is in charge of the environmental policy for Flanders. It has related competences through its licensing department, AMV and its control department, AMI

Flanders - waste management plans

	first waste plan 1986-1990	second waste plan 1991-1995	environmental management plan 1997-2001
type of waste	<ul style="list-style-type: none"> All types of waste 	<ul style="list-style-type: none"> All types of waste with a focus on C&D waste and organic waste from municipalities 	<ul style="list-style-type: none"> All types of waste with focus on organic waste (both municipalities and industries), municipal waste and industrial waste
general objectives	<ul style="list-style-type: none"> Creation of a waste treatment structure 	<ul style="list-style-type: none"> Prevention, reduction and recovery 	
sectoral implementation plans and targets		<ul style="list-style-type: none"> C&D waste (1995-today): <ul style="list-style-type: none"> Reduce by 25% the amount of building waste produced Achieve 75% recovery (recycling) of C&D waste by 2000 Organic waste (1994-97): <ul style="list-style-type: none"> Creation of 270 000 tonnes per annum composting capacity spread over 18 facilities 40% of the Flemish population to be covered by a selective collection system For garden waste 300 000 tonnes per annum composting capacity to be developed 	<ul style="list-style-type: none"> Household refuse (1997-2001): <ul style="list-style-type: none"> Prevention of 6% by 2001 and of 10% by 2006 based on 1995 figures Increase recycling from 34% in 1995 to 52% by 2001 and to 55% by 2006 Each municipality must generate less than 150 kg/person/year of residual waste by 2006 Selective collection of industrial waste in small & medium size enterprises (2000) Organic waste (1998-2001), which also includes wastes of industrial origin
results		<ul style="list-style-type: none"> Organic waste targets achieved 10-15% of population practising home composting C&D recycling increase from 43% in 1990 to 65% in 1995 	<ul style="list-style-type: none"> Municipal waste recycling rate reaches 62% in 1999 thus achieving the 2001 and 2006 targets

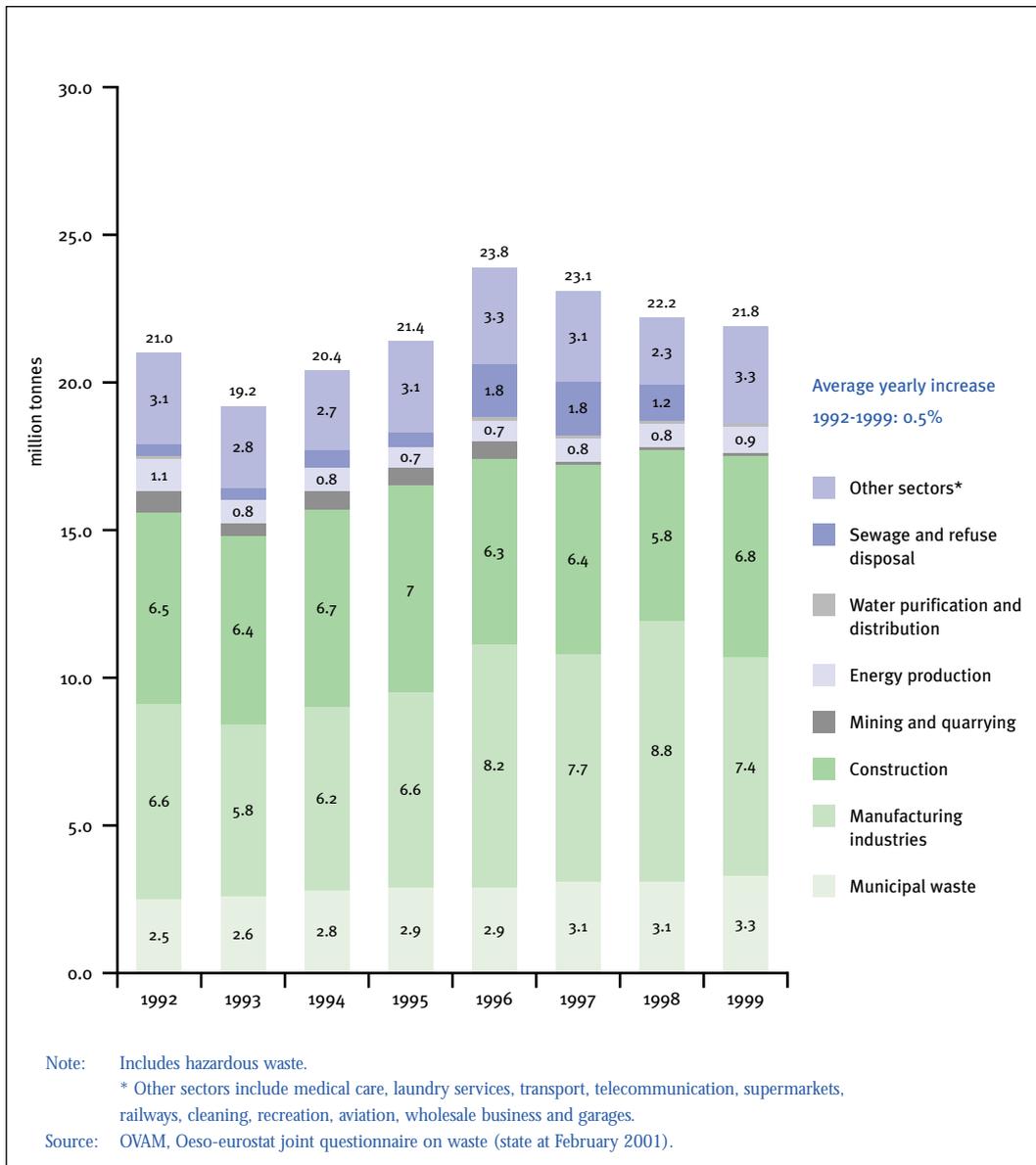
Flanders - definitions

waste categories	waste treatment	measurement
<p>total waste</p> <p><i>Includes both hazardous and non-hazardous waste</i></p> <p>Municipal waste: household waste; bulky waste from household and municipalities (includes garden waste and waste from private C&D); other municipal waste (market waste, street sweeping, waste from offices)</p> <p>Construction & demolition waste</p> <p>Manufacturing industries</p> <p>Energy production</p> <p>Sewage and refuse disposal</p> <p>Water purification & distribution</p> <p>Waste from agriculture and forestry</p> <p>Mining and quarrying</p> <p>Other sectors: medical care, laundry services, transport, telecommunication, supermarkets, railways, cleaning, recreation, aviation, wholesale business, garages</p>	<p>waste prevention</p> <ul style="list-style-type: none"> • The prevention or diminution of waste generation or its toxicity through source reduction and reuse • Includes home composting and reuse activities of recycling centres 	<p>waste prevention</p> <ul style="list-style-type: none"> • Waste prevention is not measured in absolute figures but expressed by the ratio of waste production to gross regional domestic product, based on the fact that wastes are produced by human activities
<p>Construction & demolition waste</p> <p>Manufacturing industries</p> <p>Energy production</p> <p>Sewage and refuse disposal</p>	<p>recovery</p> <p>Reuse</p> <p>Recycling</p> <p>Composting</p>	<p>recovery</p> <p>Reuse</p> <p>Recycling, and composting</p> <ul style="list-style-type: none"> • Measured by the related facilities
<p>Water purification & distribution</p> <p>Waste from agriculture and forestry</p> <p>Mining and quarrying</p> <p>Other sectors: medical care, laundry services, transport, telecommunication, supermarkets, railways, cleaning, recreation, aviation, wholesale business, garages</p>	<p>disposal</p> <p>Incineration</p> <p>With and without energy recovery</p> <p>Landfill</p>	<p>disposal</p> <p>Incineration and landfill</p> <ul style="list-style-type: none"> • Measured by the related facilities
<p>other waste streams</p> <p>Agriculture and forestry waste</p> <p>Contaminated soils</p>		

Source: OVAM, Oeso-eurostat joint questionnaire on waste.

Flanders - total waste arisings

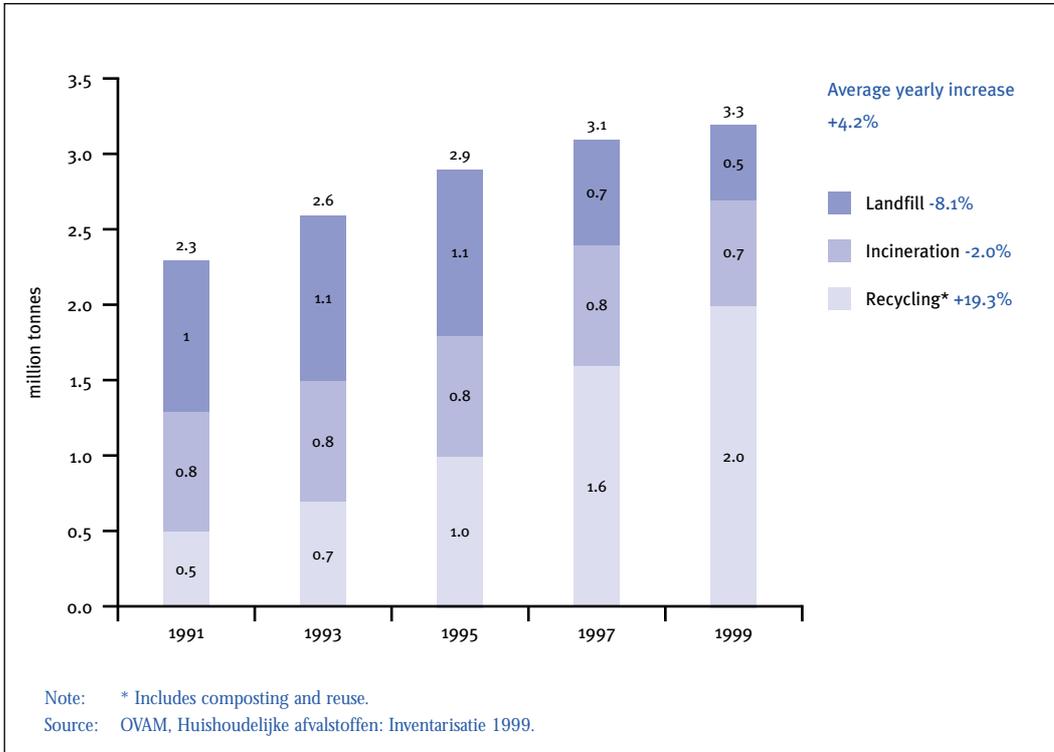
total waste arisings, 1992 - 1999



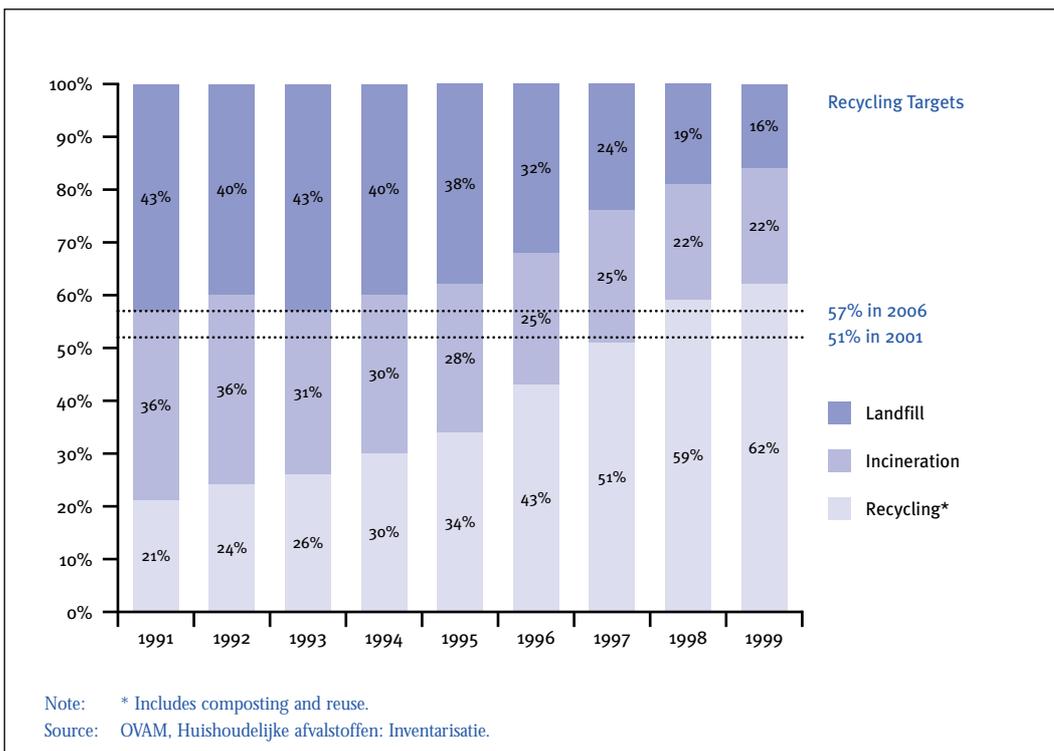
Flanders - municipal waste arisings and treatment

4.12

municipal waste arisings and treatment - absolute terms



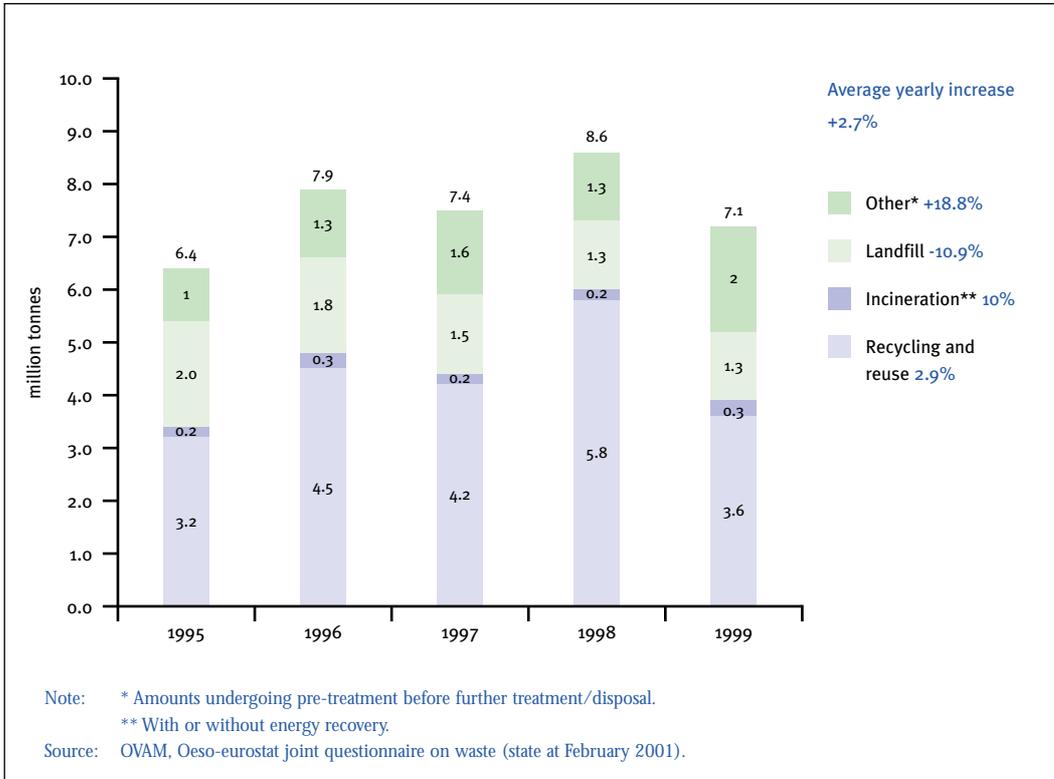
municipal waste arisings and treatment - relative terms



Flanders - non-hazardous industrial waste arisings and treatment

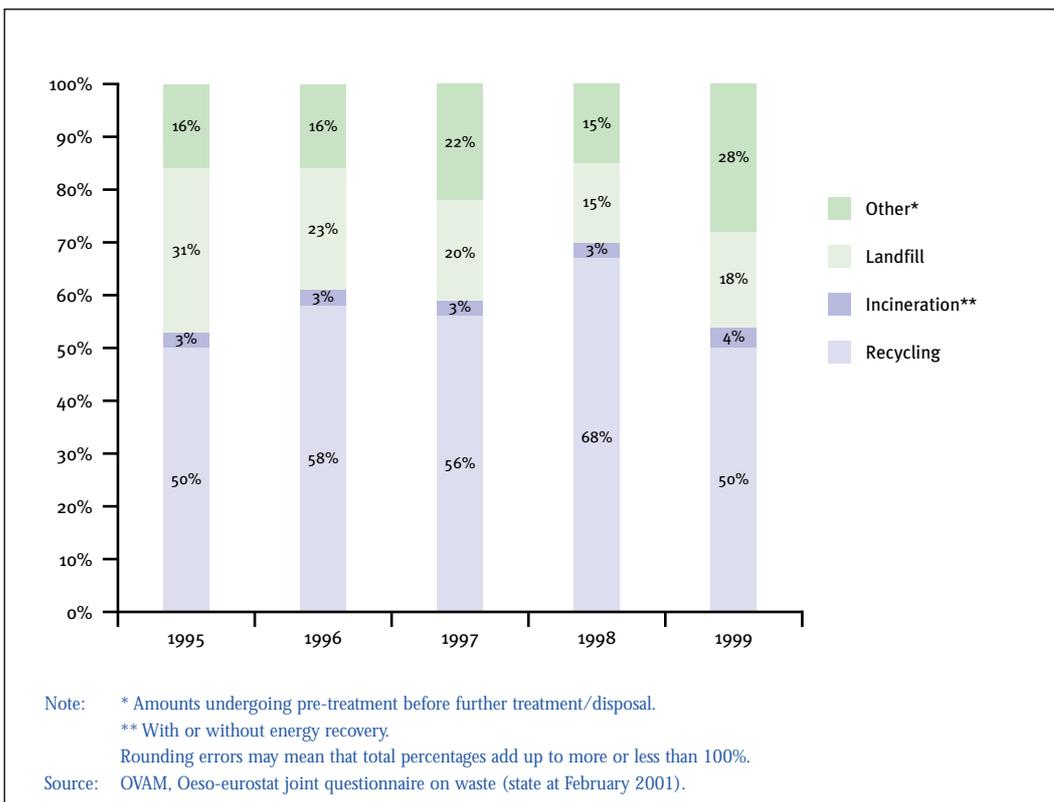
4.13

non-hazardous industrial waste arisings and treatment - absolute terms



creative policy packages for waste: lessons for the UK

non-hazardous industrial waste arisings and treatment - relative terms



Flanders - overview of policy packages: regional level

4.14

tool ▼	target ►	municipalities	businesses
legislative		<ul style="list-style-type: none"> • Mandatory separate collection for hazardous household waste, glass waste, waste paper/cardboard, bulky waste • Prohibition of landfilling of untreated domestic wastes from 1995 onwards • Prohibition of landfilling of domestic waste that are recoverable or that can be incinerated (1997) 	<ul style="list-style-type: none"> • Mandatory separate collection for glass, and paper/cardboard waste • Duty of Acceptance (incl. “voluntary” agreement) (1997): paper waste (1998), accumulators and batteries (1998), ELVs (1999), waste tyres (1999), brown goods and white goods (1999) • Prohibition of landfilling of C&D waste that can be recycled for road building (1998) • Prohibition of landfilling of hospital wastes from 1995 onwards • Except for bulky wastes no company landfills will be allowed (1995) • Duty of Notification (1981-85) for waste statistics • Stricter incineration standards (1997): all incineration facilities have flue gas treatment with dust removal and acid quenching
economic		<ul style="list-style-type: none"> • Landfill and incineration taxes (1987) for non-hazardous solid residual waste and solid hazardous waste: different level of tax depending on the type of waste and degree of sophistication of treatment facility 	
		<ul style="list-style-type: none"> • Subsidies: household hazardous waste collection, waste container parks, collection receptacles, transformation installations (compost) 	<ul style="list-style-type: none"> • PRESTI programme (1994): subsidy to acknowledged federations to promote preventive management among their members • Financial assistance to companies investing in projects aimed at increasing savings of raw materials and energy
agreements		<ul style="list-style-type: none"> • Agreements with municipalities, also called “environmental covenants” (first generation in 1992): subvention based on performance 	<ul style="list-style-type: none"> • Inter-regional co-operation agreement on packaging waste (1995) • Agreement with the pharmaceutical branch (1998): collection and management of outdated pharmaceuticals brought back to the chemist by customers • Agreement with the Flemish Federation of Contractors and the Organisation of Sorting Companies: contractors who sort waste on site should be guaranteed a better price for their waste (1997) • Subsidy agreements with recycling (reuse) centres (1995): about BEF16 million per year
information		<ul style="list-style-type: none"> • Awareness campaign promoting composting at home • Action with schools 	<ul style="list-style-type: none"> • Construction and demolition: brochure for architects on prevention and recycling
R&D			<ul style="list-style-type: none"> • Subsidies for clean technologies programmes

Flanders - overview of policy packages: federal level

4.15

tools ▼	target ▶	municipalities	businesses
legislative			Product regulation: eco-labelling
economic			<ul style="list-style-type: none"> • Ecotaxes or product taxes on the following products (1993): <ul style="list-style-type: none"> - Batteries - Disposable beverage packaging - Disposable cameras - Packaging: packaging for inks, glues, oils, solvents and pesticides for professional applications - Parameters used for tax avoidance: the availability of a returnable system; the proof of assisting the financing of recycling or treatment; the proof that set forward quota for reuse were obtained; the proof that set forward quota for recycling were obtained; the use within the product of less harmful compounds (batteries using mercury oxide are not exempted) • Waste charge: charges on import, export and transit of waste
agreements			
information			
R&D			