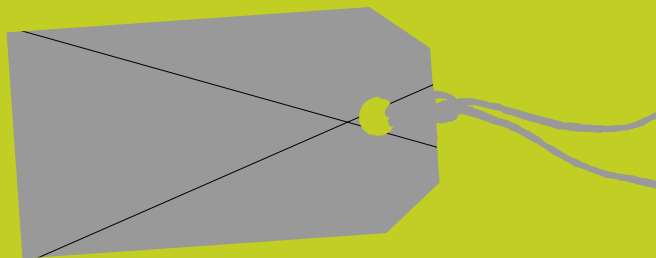
12 months on the move

2012 Activity Report



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The Board of Directors of OVAM (left to right) Danny Wille, Eddy Van Dyck, Ann
Cuyckens (new department head of Interventions, Disposals and Soil Remediation since 1 June 2012), Henny De Baets,
Luc Vanacker, Rudy Meeus and Herman Gobel

"Our goal is to encourage internal entrepreneurship"

How can OVAM work more intelligently, more efficiently and more effectively? In a pilot project OVAM examines how "the future of work" can improve services to citizens and the motivation of its employees. “We want our employees to become entrepreneurs”, says Administrator-General Henny De Baets.

The "Future of Work" is the new buzzword in HR. It is a collective term for various manners and methods for working more intelligently, more efficiently and more effectively. It involves experimenting with flexible offices and new technologies as well as with new types of collaboration and leadership: less hierarchy, more responsibility, delegating more and relying more on people's own creativity and promoting a problem-oriented approach among employees.

101 ideas for a flexible organisation: OVAM rises to the challenge and really applies them.

In the past year OVAM launched the IMPACT project, or the "Inspirerend Model voor Prestaties ontwikkelen en opvolgen, Anders werken en Competentie- en talentmanagement" (Inspiring Model for developing and monitoring performance, working differently and competence and talent management). What, in practice, does the model imply?

Henny De Baets: "At the heart of the IMPACT project is the concept of a better management of employees' skills, talents and performance. We want to achieve this by organising planning and follow-up at the team level, with a high degree of autonomy. Each team is given clear, measurable objectives and the team members together are responsible for achieving these objectives. We link the skills that need to be developed within the team with the objectives and the teamwork."

"We no longer organise individual performance appraisals and evaluations. Instead we work with group assessments. The team's development objectives are also openly discussed, in group. As of 2014 each team will also formulate its own objectives. The team members will no longer be individually evaluated, on an annual basis but monthly, as a team. The team managers are real coaches: they ensure that each team takes the responsibility to achieve its objectives."

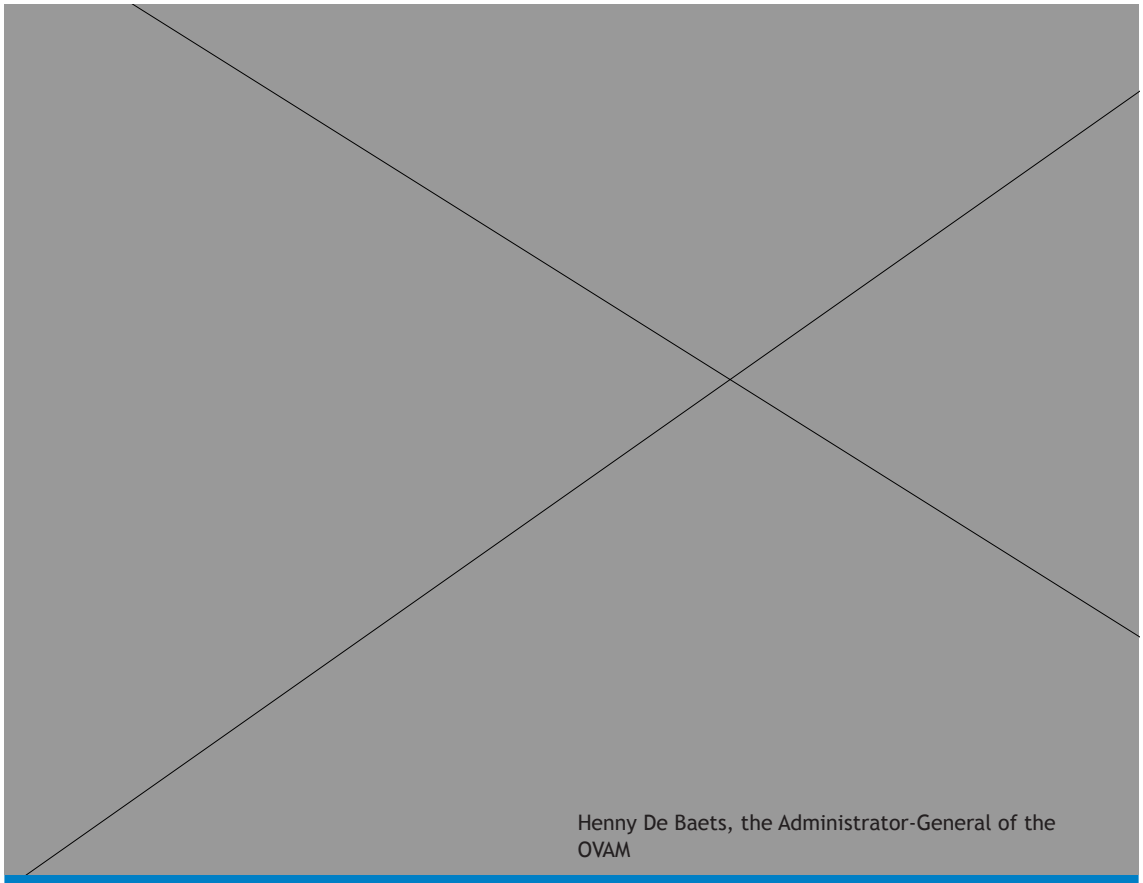
> **"The team managers are real coaches: they ensure that each team takes the responsibility to achieve its objectives."**

The Soil Management and Interventions, Disposals and Soil Remediation Departments are the first to implement this approach. Currently the brand-new HR model is only tested in these departments. Was this a conscious choice?

"After a preparatory period, which lasted about a year, we implemented the programme approach in early 2013 in the Soil Management and Interventions, Disposals and Soil Remediation Departments. On the one hand the appointment of Ann Cuyckens in 2012 as the new department head of these departments was a good time to kick off the project. On the other hand we also want to tackle our strategic objectives as regards soil management and soil remediation better and faster with this approach."

"We are now able to complete soil remediation projects faster and more cost-efficiently by tackling similar contaminations as a group. For example we developed an integrated approach for gas sites, schools and claims cases among others. Consequently contaminants are cleaned up faster and thanks to the large-scale approach the cost is even lower. Minister Schauvliege already announced the new approach in her *Environment and Nature Policy Paper for 2009-2014*. The programme approach was the perfect excuse to also try out a series of new HR methods."

"Both of these departments are our testing ground for the new approach to work with programme teams. In practice this means that the hierarchical organisation with two department heads has been replaced with five teams, which report to two department heads. We also want to ensure that our two soil departments work better together. We tear down the symbolic wall between the two



Henny De Baets, the Administrator-General of the OVAM

“Companies that engage in social innovation perform significantly better than companies that don't.”

departments by inserting a team in between them (see the organisational chart on p. 55).”

You have always stated that you wanted to better develop competence and talent management within OVAM. How does this tie in with the IMPACT project?

“Competence and talent management are a key aspect of career development and organisational development. It's all about mapping, developing and using employees' skills in function of the organisational objectives and their personal interests and ambitions. We start from our employees' skills and interests within the framework of the organisational objectives. This allows to search for the right position and the right place in a more targeted manner. Our employees' skills were the starting point for the selection of the programme managers and the team members.”

“A model like IMPACT also requires employees to have other skills, a different way of thinking and working. Our organisational culture will have to change to turn our employees into internal entrepreneurs. A result-oriented approach, cooperation, networking, innovative capacity, a sense of initiative and a

certain boldness will become extremely important. We are currently working on a culture project for our employees with the assistance of an external consultant."

What will change on the logistical level?

"The new approach to work also requires logistical support. People have to meet as much as possible with one another and exchange knowledge and experience, which is why the new programme teams work in a large landscape office. Every team member can also work from home two days a week. We are still reviewing other new forms of working, such as flexible offices."

"Competence and talent management are a key aspect of career development and organisational development."

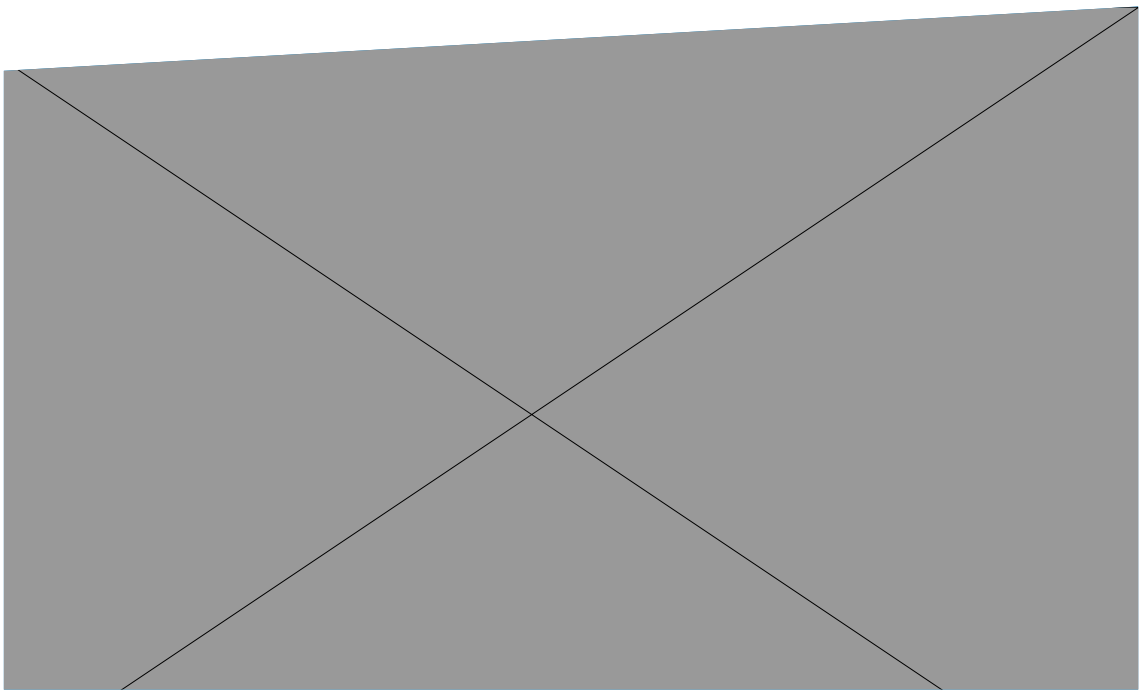
What have you learnt from the initial months?

"The IMPACT project has shown that people are interested in rising to new challenges and even want to be evaluated based on this. During the initial months we also realised that people are prepared to participate in the policy development process and are willing to contribute to building a new organisation on condition that we listen to them and that they can work independently."

Will you be rolling out the new approach in the other OVAM entities soon?

"Scientific studies have shown that companies that engage in social innovation perform significantly better than companies that don't. We believe this; this is definitely not an isolated experiment. Our departments have to work even better together. I'm not only referring to our two soil departments but also to a better cross-pollination with the Waste and Materials Management Department. Which is why we also need to implement a new HR and cooperation model in these departments as soon as possible".

"But first we will carefully evaluate the new approach. This is a pilot project for OVAM but also for the entire Flemish administration. I am convinced that OVAM as a whole and the Flemish administration will reap the benefits of the experiments that we are investing energy in today."



"People have to meet as much as possible with one another and exchange knowledge and experience."

Milestones of 2012

January

- Launch of online desk for soil remediation experts
- Launch of the OVAM Ecodesign. link
- Presentation of the OVAM Ecodesign Award PRO (p. 27)
- First digital soil certificates (p. 41)
- Work session on Landfill Mining and the future of landfills (p. 34)
- Kick-off of "Steunpunt Duurzaam Materialenbeheer (SuMMa, Sustainable Materials Management Support Centre)

February

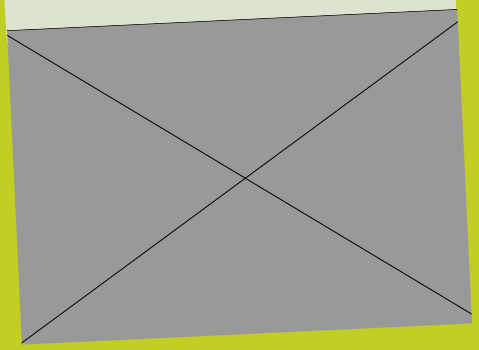
- The Government of Flanders adopts Vlarema (p. 18)
- Changes to the CMA sampling procedures
- European Commission "Biobased Economy"
- Kick-off of "De Wallen" soil remediation works in Zwijndrecht in conjunction with the municipality

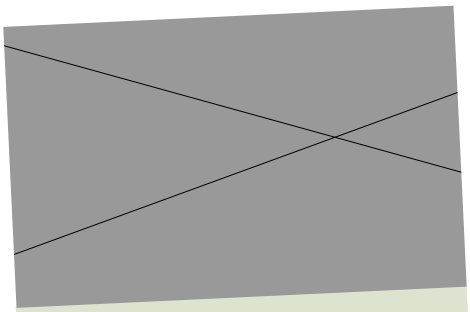
March

- OVAM becomes the owner of the Parmentier site, linked to the liquidators' protocol (p. 35)
- Start of the interdepartmental working group on bio-based economy
- The Plan C non-profit organisation becomes independent
- Kick-off of the soil remediation works in 'Statiestraat' in Hemiksem
- World Water Day
- Presentation of the Green Key by BBL and Tourism Flanders-Brussels with OVAM as a jury member.

April

- Regions for Recycling (p. 39)
- Start of the remediation works in the residential area on the site of the former gas works in Aalst
- CityChlor knowledge exchange day (p. 38)
- High-risk plant tool available online (p. 43)





May

- OVAM concludes first collaboration with Kortrijk (p. 29)
- OVAM partnership with Mechelen (p. 30)
- OVAM partnership with Aalst (p. 30)
- Roadmap Resource Efficiency (EU news)
- Launch of "Met Belgerinkel naar de winkel" (Shopping with bells and whistles going)
- Fair Trade Day

June

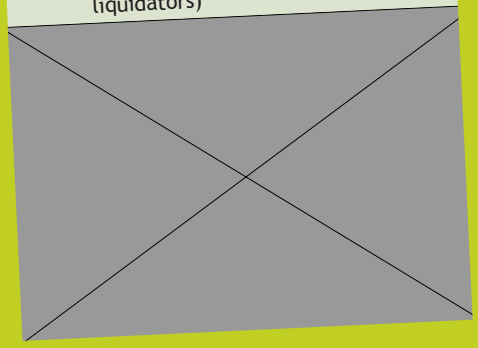
- New handover manual
- Launch of the Flemish materials programme: sustainable materials management action programme, Plan C and SuMMa (p. 12)
- Start of the soil remediation of a residential area at the landfill in Karel Van Wijnendaelelaan in Sint-Martens-Latem
- Litter round-table
- Vlarema enters into force (tariffs raw materials certificates)
- "Kringspel" wins a waste reduction award
- International ViA workshop
- Rio+20-top
- Belgian National Road Race Championship are a perfect example of an ecological event (p. 16)
- Ann Cuyckens succeeds Eddy Wille as department head of the Interventions, Disposals and Soil Remediation Department
- Compost month
- Organic week
- World environment day

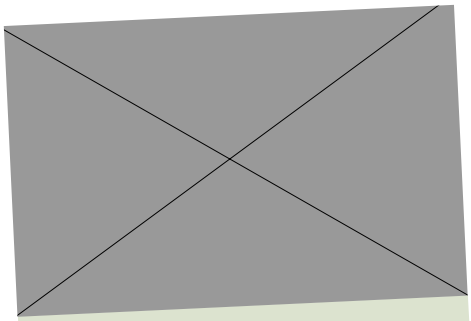
July

- Launch of the litter campaign (p. 36)
- Signing of the partnership for Waalse Krook (p. 10)
- iMade (the factory of the future) is up and running
- OVAM partnership with Eeklo (p. 31)
- SYMBIOSE platform pilot project kicks off (p. 23)
- OVAM presents the results of the consumer behaviour survey
- Adoption of the European End-of-waste criteria for glass
- Kick-off of remediation work in the wooded plot of Sint-Theresiacollege in Kapelle-op-den-Bos

August

- Start of the soil remediation in Hanswijk/ De Potterij (p. 33)
- Crammerock Festival is a perfect example of an ecological sample event
- New WEEE directive enters into force
- Acquisition of the 'Revos' site in Hemiksem (protocol liquidators)





September

- The 'My Sustainable Choices' campaign is launched
- Launch of a hotspot + litter campaign app (p. 36)
- Prototype of materials method for construction elements has been completed (p. 24)
- Approval of Vlarebo amendment on soil remediation organisations
- Kick-off of soil remediation at 'Van de Voorde' in Dendermonde
- Sing for the Climate + Clean Up the World
- Mobility Week

October

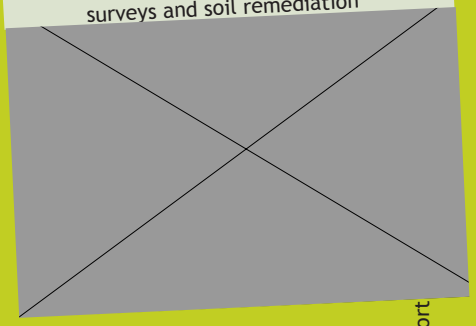
- Start of the soil remediation in the Bellevue residential area in Ledeberg.
- Minister kicks off silo tires project
- Workshop on catalytic eco-buying
- Seminar on food loss: OVAM presents food loss study (p. 21)
- World Food Day
- Meeting of the SNOWMAN network chaired by OVAM (p. 40)
- Presentation of the OVAM Ecodesign Award for students
- Launch of i-Cleantech Flanders
- Sustainable Development Week
- Multi-stakeholder governance workshop
- Transition festival in Ghent
- Energy savings month
- OVAM partnership with Duffel (p. 29)

November

- OVAM presents a CO_2 calculator
- Presentation of the new industrial waste regulation + campaign launch
- Launch of the European Innovation Partnership on Raw Materials
- Start of the remediation works in the residential areas in Merelbeke
- Waste reduction week (StuBru Recycle Day, Radio 2 in de Kringwinkel - partnership with public broadcaster VRT) (p. 44)
- Climate summit in Qatar
- "Boekenbeurs" book fair is a good example of an ecological event
- Establishment of the ENEC network
- Networking day at Plan C
- Household waste publication

December

- Presentation of the Groenevent Awards
- World Soil Day
- Closing event of the pilot project OVAM SIS Toolkit at leading companies
- Start of the soil remediation in the residential area in Mandelstraat and Leeuwerikenstraat-Merelsstraat in Ingelmunster
- Second agreement on principle about co-funding
- OVAM concludes an agreement with Tessenderlo Chemie for the execution of description soil surveys and soil remediation



2012 in pictures

Waalse Krook: the starting signal for a brand-new neighbourhood in Gent

A new part of the city will soon rise from the ashes of a former gas works in the centre of Ghent. Waalse Krook will become a vibrant beacon of knowledge, culture and economics. But first the badly contaminated site has to undergo remediation.

Today Waalse Krook is a 3,000 sq.^{m} parcel in the centre of the city. But its strategic location is precisely what makes it so promising for economic development. The City of Ghent, the University of Ghent, the province of East Flanders and IBBT, the Interdisciplinary Institute for Broadband Technology, joined forces, founding the cvba Waalse Krook to blow a breath of fresh air through the site.

By 2015 the neighbourhood should consist of pretty squares and quays, inspiring architecture, bicycle and pedestrian bridges across the Scheldt and connections with the rest of the city. But not before OVAM has completed the large-scale remediation of the site. A site which has been designed in function of its use as much as possible. **Inge De Vrieze** of OVAM: “We need to excavate about 22,400 m^3 of earth on the construction site. The contaminated soil will be mainly be removed by water. We will combine the soil remediation with the construction because the contamination is largely at the same level: this means we only need to dig once, limiting the nuisance, meaning the works take less time to complete and we can save costs .”

It is not the first time that OVAM has chosen to organise its soil remediation with a view to the redevelopment of the site. “We have been applying the integrated rehabilitation for several years”, says Inge De Vrieze. “It requires additional and intensive consultation before the works can start. But everything is much more efficient once you can start working.”

OVAM is working with two other principals for the Waalse Krook project: cvba Waalse Krook – which is responsible for the redevelopment of the area – and the TMVW water company, which will move the public sewage system. One contractor shall combine and coordinate the works of the three parties in order to limit nuisance as much as possible. The project thus combines remediation and redevelopment as well as paying attention to other problems such as mobility.

Materials programme provides the impetus for a circular economy

In 2012 the Flemish Materials programme kicked off. Partners from all levels of society have committed to developing a circular economy by 2020, in which materials are reused as much as possible, with this action plan. A milestone, according to Helen Versluys and Jorn Verbeeck, the programme directors of the Flemish Materials programme.

The launch of the Flemish Materials programme creates a momentum. Why is this programme so important?

Helen Versluys: "With the Flemish Materials programme, 33 stakeholders (government, industry, knowledge institutions and civil society) committed to creating an environment-friendly circular economy. The agreements they made are very practical: the objectives and time frames have been laid down, the leads appointed. It is literally about putting sustainable materials management into practice."

Jorn Verbeeck: "The Flemish Materials programme consists of three pillars: a long-term vision, research and action. In the years to come the learning network, Plan C, will develop the long-term vision in more detail, testing it with experiments. In the framework of the Sustainable Materials management support centre various universities and knowledge institutions are currently conducting policy-relevant research: they are examining how we can make the transition to a material-friendly circular economy. The action plan, the 2020 Agenda, transposes vision and research into 45 tangible actions. This phased plan is not fixed. Priorities can be changed where necessary and where new insights and needs arise. What is important is that we keep our options open and learn by doing."

Why should we take such a radically different approach to materials?

Helen Versluys: "Materials literally are the building blocks of our society: we need them for our economy to function, to grow food, to communicate, to travel and relax but also to provide for

our health care. But materials are finite and the growing demand for materials has led to a spike in the prices. If we want a solid economy in Flanders, which has strong potential for the future, then we have to become less dependent of raw materials from abroad, with prices that fluctuate significantly. That is we have to re-use materials over and over again. This circular notion requires a change in our way of living, producing and consuming"

Which steps has Flanders already taken in the direction of risk-based materials management?

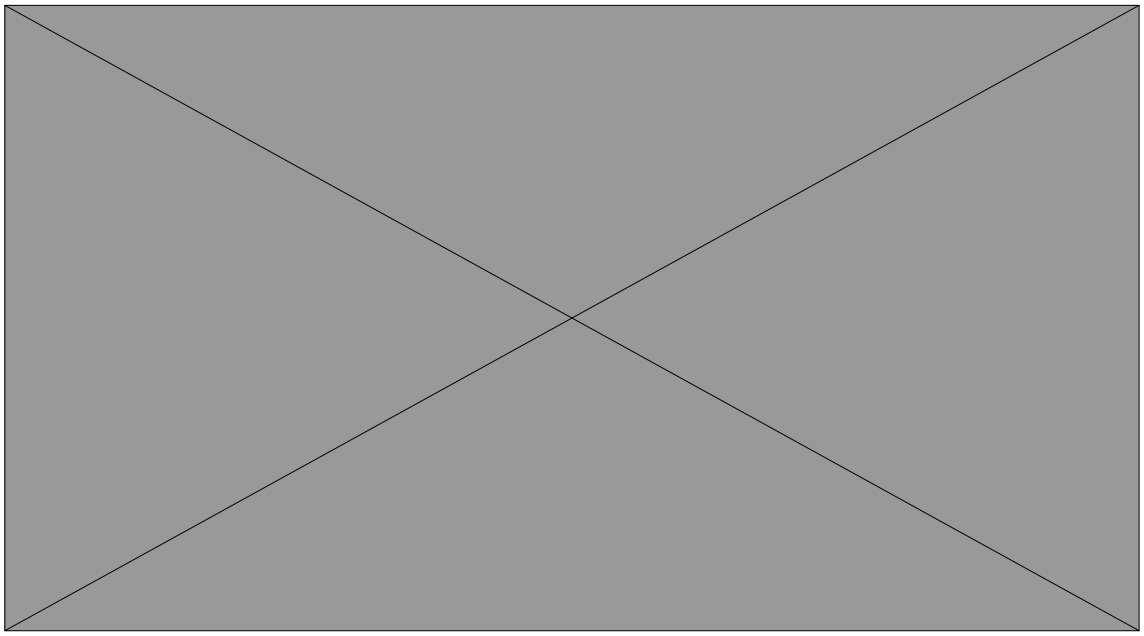
Helen Versluys: "A cross-section of the Flemish landscape in early 2012 taught us that a lot has changed and is changing in terms of sustainable materials management. This is good news. But the efforts to rise to this complex challenge are fragmented. Sometimes initiatives overlap or there are gaps, and partners do not always see eye to eye. With the Flemish Materials programme the government, the industry, the knowledge world and civil society are joining forces and pooling their knowledge. Together they are focussing on some carefully selected priorities. This is more beneficial than each party working in its own corner."

Which role does OVAM wish to play in sustainable materials management?

Jorn Verbeeck: "As the lead and coordinator of the Flanders in Action (ViA, "Vlaanderen in Actie") theme of sustainable materials management we have resolutely opted in favour of a circular economy. Material-friendly production and consumption are a priority. OVAM wants to help shape this transition and get the process right. We ensure wide support and a shared public-private agenda and ensure that all the stakeholders are on board."

Which stakeholders are contributing to this green circular economy?

Helen Versluys: "In 2012 we succeeded in enhancing the notoriety of the Flemish Materials programme in Flanders. Almost three hundred organisations attended the round-table in June. These are all potential ambassadors for the Flemish Materials programme. Twelve organisations – partner authorities, key sectoral federations, research institutions, an NGO – are permanent members of our steering committee. Many other partners have explicitly associated themselves with the Flemish Materials programme by actively contribut-



Henny De Baets, Administrator-General of OVAM (links), and Jan Turf, the then president of the steering committee of the Flemish Materials programme (right), look on as Karel Tobback, the principal private secretary of Minister-President Kris Peeters (centre), appends the logo of Flanders in Action on the interactive wall of the Flemish Materials programme.

Within Plan C the emphasis among others is on iMADE. This project examines the potential of 3D printing for a more sustainable materials management.

ing to the campaigns or participating within the SuMMa and Plan C. This shared responsibility is very important. Sustainable materials management is a complex theme. Even more than is the case for waste management OVAM does not have all the knowledge or tools to achieve the transition to a circular economy. That is why partnerships are crucial for achieving the objectives in terms of sustainable materials management."

How was the action plan, the Agenda 2020, developed?

Jorn Verbeeck: "The 45 actions are the outcome of a broad participatory process. This involved working with a steering committee of about twelve organisations from all levels of society. Ideas and actions were put to the test in this forum. The steering committee members then proposed them to their rank and file. The result has been tried and tested: we now have a first draft of a dynamic action programme, which is endorsed by a representative sample of society."

Which results has the Flemish Materials programme achieved to date?

Helen Versluys: "The first effective action in the margin of the Flemish Materials programme took place on 6 June 2012, when 33 partners presented the action plan. Within this action plan we developed the OVAM SIS Toolkit, a practical and clear brainstorming tool, which challenges employees in all of a company's departments to find ways of working more sustainably. A materials method, to measure the environmental impact of over 100 building elements, is also in the pipeline. Finally, the government and the industry are working on a SYMBIOSIS platform for the exchange of residual flows among companies. The residual flow of one company can thus become a raw material for another. In the frame of the bio-economy we have gathered almost all of the stakeholders to close nutrient cycles. Initially we mainly focused on the phosphor issue."

What is Europe's take on Flanders' newly developed materials model?

Jorn Verbeeck: "Resource Efficiency is one of the flagships of the EU 2020 strategy. And Flanders helped create the framework for the European Resource Efficiency Roadmap, which also includes the principles of sustainable materials management. We already are a pioneer in terms of the collection, the sorting, the recycling and processing of waste flows. The challenge is to also achieve this in the new field of materials management, on a Flemish and European level."

What does 2013 have in store?

Helen Versluys: "We are continuing to roll out the 45 actions of the action plan. Another important aspect is our targeted search for funding, with other governments and with private partners. We are also working with the New Industrial Policy, one of the other big societal challenges of the Flanders in Action Plan, to develop a roadmap with long-term objectives and a set of reliable indicators to measure whether we are making progress. In 2013 SuMMa will be fully implemented. This helps us develop knowledge faster about sustainable materials management in Flanders. Within Plan C the emphasis among others is on iMADE. This project examines the potential of 3D printing for a more sustainable materials management. In the autumn of 2013 we will organise an event which focusses on the theme of the Flemish Materials programme. The goal: to share the achievements and to introduce the programme to an international audience."

The three pillars of the Flemish Materials programme

Sustainable Materials Management, a Flanders in Action theme, is shaped by three pillars, which reinforce one another: Plan C, an action programme and the Sustainable Materials Management support centre.

1. Plan C: the Flemish Transition Network for Sustainable Materials Management.

Plan C wishes to accelerate breakthroughs in sustainable materials management. The three core activities for this are visioning, the activation of a learning network and supporting and consolidating transition experiments. After operating within OVAM for several years the independent non-profit organisation Plan C was founded in 2012.

Further information: www.plan-c.eu

2. Sustainable Materials Management Support Centre (SuMMa): research

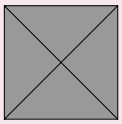
SuMMa examines which economic, policy-based and social preliminary conditions need to be fulfilled to achieve the transition to a material-efficient circular economy.

Further information: www.steunpuntsumma.be

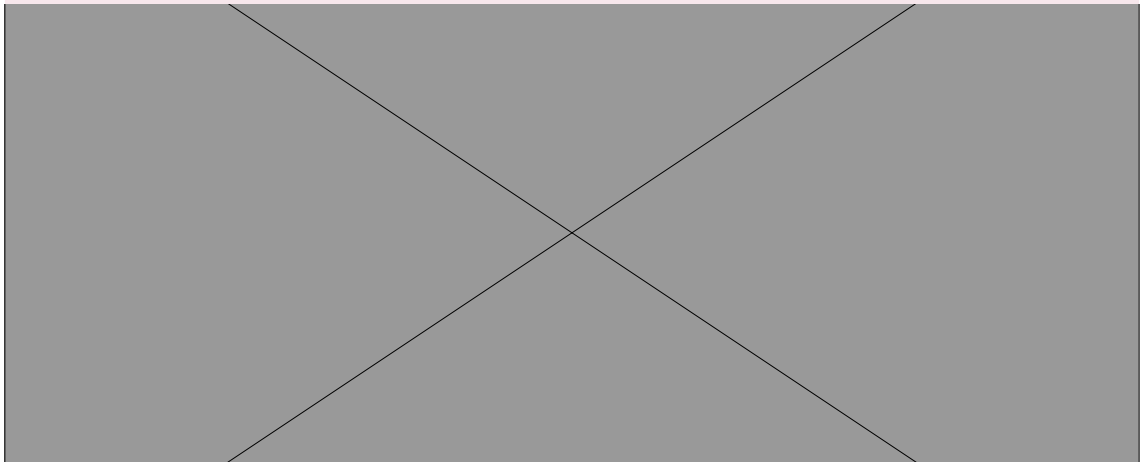
3. Agenda 2020 action plan: 9 levers, 45 actions

On a more operational level a steering committee of public and private stakeholders is implementing the action programme in a participatory process. The steering committee interprets and evaluates the materials issue on a panel. The aim is to accelerate the transition to sustainable materials management.

Further information: www.vlaamsmaterialenprogramma.be



Join the discussion on Twitter using #VMP2020



2012 in pictures

Belgian National Road Racing Championships and OVAM low-waste right up to the finish line

An example of a low-waste use of materials. The Flemish Environment Minister Joke Schauvliege for example praised the Belgian National Road Racing Championships in Geel on June 24th. The City of Geel, IOK Waste Management and the Royal Belgian Cycling Federation (Koninklijke Belgische Wielrijdersbond (KBWB)) committed to avoiding waste as much as possible.

Summer festivals and events have been taking waste and environment-friendly measures for quite some time now. But this is still a relatively new matter for top-level sporting events. But the organisers of the Belgian road racing championships reasoned that if they could implement this at home they could also do this at a mass event.

The OVAM event scan calculates the ecological footprint of an event and provides tips for reducing it. The organisers used the OVAM event scan as their starting point. They prohibited the distribution of flyers and gadgets making waste prevention a priority. The VIP villages only used reusable plates and table linens. Moreover all the stallholders agreed to avoid waste as much as possible.

Any waste was selectively collected as much as possible. All the car parks, station neighbourhoods, access roads to the course, beverage and food stalls as well as the cyclists' village were equipped with waste islands.

The cyclists also contributed. Disposal areas were set up in three locations along the course where cyclists could dispose of their packaging waste. After the race volunteer ecoboys and ecogirls diligently collected the waste. Ultimately the efforts of visitors and cyclists alike ensured that the Belgian Road Racing Championships became a low-waste top-level sporting event.

www.ovam.be/groenevent

The Vlarema Decree has entered into force: 10 key changes

The new Vlarema regulation entered into force on June 1st, 2012. This implementing act replaces Vlarea and also transposes the new Materials decree into clear legislation. Ten key changes.

1. Companies will do an even better job of collecting their waste.

For over ten years companies have been required to selectively collect the majority of their waste. But as of July 1st, 2013, this also applies to plastic bottles and flasks, metal packaging and drink cartons.

Under Vlarema another obligation enters into force. As of 2013 every company has to conclude a contract with the company which collects its mixed industrial waste. The contract describes all the waste created in the company and how it has to be sorted.

At the end of 2012 OVAM launched a major communication campaign to inform companies about the new selective waste collection rules: companies were informed about the upcoming changes through a website, a TV ad and advertising.

2. Manufacturers have to accept waste solar panels

Since January 1st, 2013 Vlarema requires the manufacturers and importers of photovoltaic solar panels to take back and recycle discarded panels.

In 2012 OVAM consulted with the industry on the prevention, the selective collection and processing of discarded photovoltaic panels. These agreements will be enshrined in an environmental policy agreement. In practice these panels are collected under PV Cycle, a European collection and recycling programme for photovoltaic solar panels, which was established in 2007. Currently discarded solar panels can already be delivered at no charge to sixteen collection points in Flanders.

3. OVAM harmonises the waste collection charges of municipalities

In Flanders the municipalities enforce a wide range of systems and charges for the collection of household waste. In some municipalities inhabitants pay per kilo of waste, while other municipalities have chosen a tariff system which is based on the waste bags. Rudy Meeus of OVAM: “Consequently waste is more expensive in some municipalities. The inhabitants feel that they are treated unfairly, leading to "waste tourism". To discourage this we have harmonised the municipal charges by implementing minimum and maximum waste collection charges.”

The new tariff structures will be enforced as of July 1st, 2013. Waste such as waste electronic equipment which fall under the duty of care criteria will continue to be accepted for free.

4. The assessment framework for the turnaround of waste to full-fledged raw materials

In a circular economy we recycle waste and use as many residual flows as possible. This allows us to use fewer primary raw materials and is also more beneficial from an economic viewpoint. Materials which are ready to be (re)used in a company or for specific applications no longer have to be considered waste; they are 'end-of-waste'.

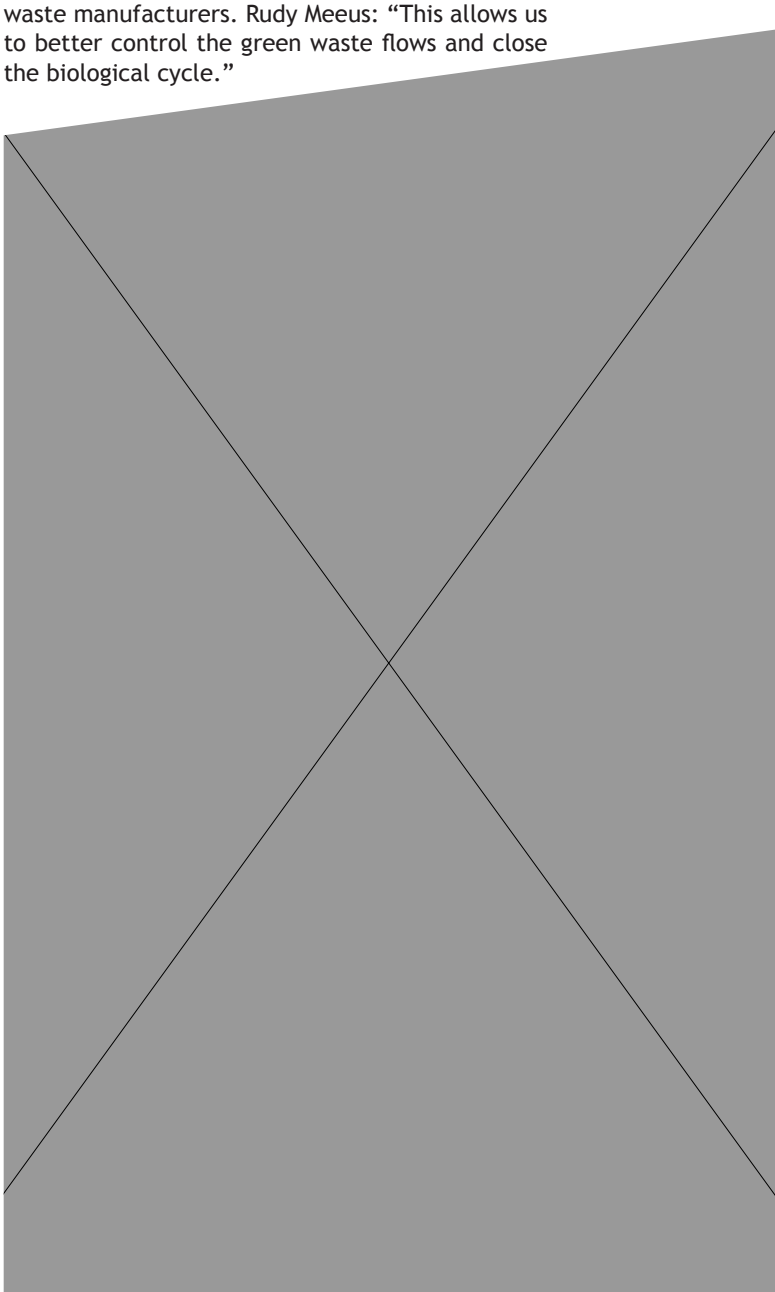
Vlarema determines the specific environmental conditions and terms of use for a large number of waste flows, determining when waste no longer can be called waste. Sometimes a 'raw material declaration' is required. Additional requirements may also apply as regards the independent certification of materials. Rudy Meeus: “We work with a sound and clear assessment framework, which simultaneously guarantees the purity and environmental safety of recycled materials.”

5. Processing household waste as much as possible in one's own country

Where possible household waste has to be processed as much as possible in the country where it originated. This principle is known as the self-sufficiency principle and is enshrined in the Vlarema regulation. Rudy Meeus: “The self-sufficiency principle prevents a household waste carousel between Member States because some countries have an over-capacity in terms of incinerators.”

6. Green waste has to enrich Flemish soil

A large part of the green waste which is created in Flanders is sent to other countries for incineration in biomass plants. Consequently Flanders does not have enough green waste for its own composting installations. Vlarema wants to control this deficit by enforcing a notification obligation for green waste manufacturers. Rudy Meeus: “This allows us to better control the green waste flows and close the biological cycle.”



7. Henceforth companies can collect small WEEE without an environmental permit

Until recently not much waste electric and electronic equipment smaller than 25 cm (small WEEE) was collected, such as discarded mobile phones for example. And yet many of these small appliances contain a lot of hazardous components or substances, which require a specific treatment. These appliances also contain precious metals and rare earth materials, which are in high demand as a raw material.

The Vlarema legislation was adapted on January 1st, 2013 to encourage the collection of small WEEE. In addition to WEEE manufacturers, companies, schools and associations now can also organise the collection of small WEEE without requiring an environmental permit. Some conditions do apply however. This small WEEE can only be collected twice a year, for seven days, and the use of these discarded appliances has to be clearly defined.

8. Flemish regulation for ship-generated waste a success

Every day five million items of waste are thrown overboard, according to figures of the United Nations Environmental Programme (UNEP). It is estimated that there are 13,000 pieces of plastic litter in every square kilometre of ocean. OVAM has long made a priority of collecting ship waste.

Now Vlarema has provided a solid legal framework for this. Each port has to draw up a waste management plan, for the collection and processing of ship waste. In it the port authorities describe their approach to ship waste. Each ship which calls at a Flemish port has to pay a waste fee to the port authority. If the ship delivers its waste to a so-called port reception facility then the port authority will reduce the waste fee, an incentive designed to reduce the ship's waste bill. Ships are encouraged to leave behind their ship waste on shore instead of discarding it in the sea. And so far this has been a success: since the regulation was enforced in 2004 the quantity of collected ship waste has tripled.

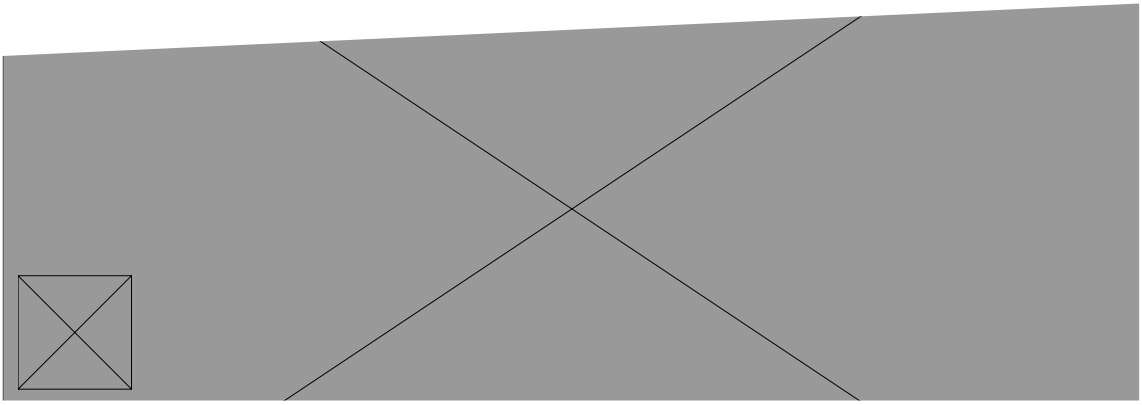
9. Old silo tires no longer an issue

Farmers who stop their activities can now have their old silo tires collected for a bargain price The farmer pays a third of the invoice, while OVAM and Recytyre pay the rest.

10. OVAM is focussing on administrative simplification

In 2012 OVAM examined a number of its procedures and rules in view of an administrative simplification. Professional waste collectors and transporters no longer need to be recognised by OVAM. They can now easily register through the electronic counter.

In the past companies had to fill out all kinds of separate annual environmental reports. Now these reports have been integrated in one declaration, the "Integraal Milieujaarverslag" (IMJV or Integrated Environmental Annual Report). Every two years a selection of companies have to declare which waste was generated by their activities with this declaration. Companies falling under the 'Pollutant Release Transfer Register' reporting duty have to file annual reports. A company which does not submit its report on time or does not fill it out correctly may receive an administrative fine. As of 2013 companies will also be able to use the electronic counter to file reports about discarded raw materials and the material flows they used.



“We need to tackle food loss throughout the entire chain”

Every year approximately 2 million tonnes of food and secondary flows are wasted in Flanders. Consumers are responsible for about ten percent of these 2 million tonnes of waste. How can we avoid food loss as much as possible? In 2012 OVAM mapped food loss, together with the food production and distribution chain.

How much food is lost in Flanders?

Willy Sarlee of OVAM: "Every year approximately 2 million tonnes of food and secondary flows are wasted in Flanders. By comparison: food companies in Belgium produce approximately 20 to 25 million tonnes of food annually. Approximately 75% of this is produced in Flanders. The losses occur in every link of the chain and in the secondary flows. Large quantities of unavoidable secondary flows are generated in agriculture and in the food industry, which are often reused, for example in animal feed. Every year consumers dispose of 85,000 tonnes of food. If you add the food waste in organic waste to this equation the total is about 155,000 to 235,000 tonnes. The high food waste figures cited in international reports and in the media cannot be simply extrapolated to Flanders.”

Kris Roels of the Flemish Government's Interdepartmental Working Group on Food Waste: "In every link of the chain food is lost: by not harvesting on time or in the right way, by not storing, transporting, processing, selling and consuming food properly or on time. The fact that food is lost in agriculture is mainly related to natural factors, such as the weather conditions or disease. The farmer cannot control this process. In the food industry food is mainly lost when production lines are stopped or restarted or by errors in packaging or in the cold chain."

How can the relatively limited food loss in Flanders be explained?

Willy Sarlee: “We have managed to control food loss in Flanders thanks to efforts throughout the

chain: in agriculture, in the food industry, by wholesalers and food services (such as the hospitality industry) and in households. For years the Government of Flanders has been focussing on waste prevention. And this is clearly paying off today: every year every inhabitant only produces 114 kilos of household waste, making Flanders the best student of the European class."

Kris Roels: "We also owe the limited food loss to our efficient agricultural system. For years farms have been investing in efficient operations, which is quite logical because farmers don't earn a cent from food they lose."

How was the food loss mapped?

Willy Sarlee: "Initially we analysed the food chain, from the production to consumption. The opportunities and issues were revealed in every link of the chain. The researchers zoomed in on four themes: shelf life information, packaging, social distribution and production waste for potatoes, fruit and vegetables."

How can better packaging help prevent food loss?

Willy Sarlee: "The expiry information has to be more visible on the product. Many people do not understand the difference between such concepts as "Use by" and "Best before", which is why they often throw away food that is edible, at home and in shops. Food packaging can also be improved. In the case of MAP packaging (*modified atmosphere packaging*) a protective atmosphere is injected in the packaging, extending the product's shelf life three or fourfold."

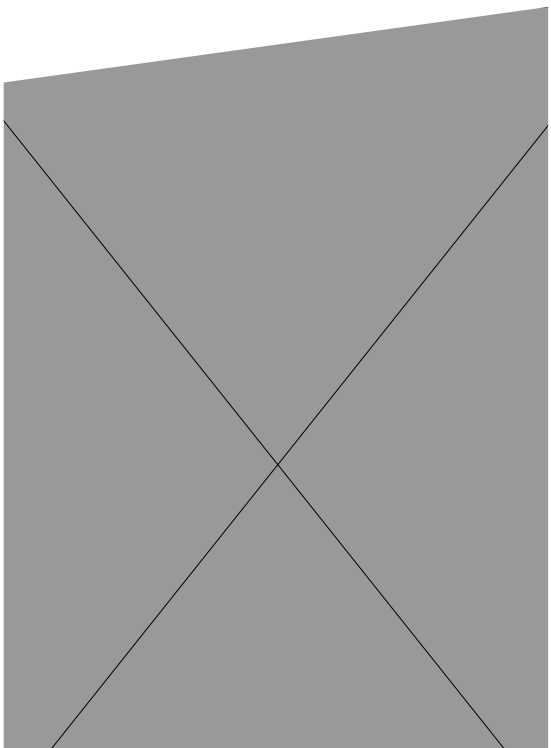
Which role can food banks play?

Willy Sarlee:"Food banks and social distribution play a crucial role in preventing food loss. Last year the food banks distributed about 13,000 tonnes of food; social distributors help thousands of people in fourteen cities. A lot can still be done on the logistical level. The transports and the logistical cold chain can be improved, for example, by using refrigerated trucks."

Kris Roels: "If we want to limit food loss even more then better tuned equipment or more efficient production methods are not sufficient. We can make huge improvements by using the secondary flows as efficiently as possible. We are already doing this. Just think of the vegetable and potato residues which are used as animal feed or soil improver."

Which initiatives and collaborations are already visible in the field today?

Willy Sarlee: "In the framework of the "Food loss in a chain perspective" project we already launched a chain consultation with food industry stakeholders. OVAM is now pursuing this consultation in the framework of the Interdepartmental Working Group on Food Loss. The chain consultation regularly meets to examine how we can better coordinate the food supply links with each other. Together with social economy stakeholders we examine how we can improve the transport from shops to food banks and social distributors. This intensive consultation between all the stakeholders is crucial to transpose recommendations into practice."



Launch of bio-economy?

How can we make the transition to a bio-economy? A working group of the Government of Flanders involved representatives from all the links of the chain, across policy areas. The goal: to define a Flemish vision on bio-economy. OVAM also participated.

In a bio-economy the building blocks for materials, chemicals and energy are sourced from renewable raw materials from biomass instead of fossil fuels such as oil or coal. Bio-energy is obtained by incinerating, gassing or fermenting biomass: these processes generate electricity. The most common bio-materials in Flanders are fibreboard and paper from forestry. This is the conclusion of a report, entitled *Hoe biobased is de Vlaamse economie?* dating from 2010, in which the University of Ghent mapped the bio-economy in Flanders at the request of the Government of Flanders.

The production based on agricultural products is still developing. Flanders is however working towards producing bio-rubber and fibre to use it in various industries such as the automotive, textile and packaging industries. Another high-quality application of biomass is the production of chemicals. Eight percent of the chemical industry in the European Union is bio-based. In Flanders a lot of research is also conducted into the development of organic products and their applications. The chemical industry especially is searching for alternatives for fossil fuels, which are uncertain and exhaustible.

OVAM has developed a range of tools to accelerate the transition to a bio-economy. The bio-inventory was extended and updated in 2012. This inventory maps the available biomass in Flanders and charts which biomass flows are eligible for composting, fermentation or incineration. The inventory also predicts how much biomass we can valorise by 2020.

The SYMBIOSIS platform also provides a solid base for the bio-economy. This residual flow platform can be used to exchange the demand and supply of organic (and anorganic) flows. There is still a lot of potential for the recovery of organic waste. Rudy Meeus of OVAM: “Currently a lot of raw organic waste is strewn in fields, although it does not improve the soil in any way. What's more, it's prohibited. Biomass should be fermented first: this produces biogas and the digestate can be used to improve the soil. This allows us to close the loop.”

New materials method for buildings

How sustainable is your house?

The houses in which we live, the offices where we work, the gyms and sports halls where we work out... they all have an impact on our environment. They consume energy but the materials used to build them also have an ecological footprint. But how do we know how sustainable building materials really are? We will be able to measure the environmental impact of over one hundred building elements in the future thanks to the new building materials method.

Wood or PVC windows, parquet or laminate, brick or concrete walls... Building materials can easily determine 10 to 30 percent of a house's environmental impact. Smart building and living starts in the design phase. Manufacturers in the building industry and architects have to limit the environmental impact of building materials as much as possible from the design phase onwards. But they have to be able to compare the overall impact of materials in a specific building application in order to do this.

High time for a good measuring tool in other words, in order to make a sustainable decision, based on more insight. OVAM asked the Flemish Institute for Technological Research (Vlaamse Instelling voor Technologisch Onderzoek (VITO)), the University of Leuven and the Scientific and Technical Centre for the Building Industry (Wetenschappelijk en Technisch Centrum voor het Bouwbedrijf (WTCB)) to calculate the environmental impact of the materials used in the building industry. They used a quantified method based on a life-cycle analysis (LCA) for this.

Acidification, particulate matter and water scarcity

The environmental impact of a building is felt on various levels: climate change, acidification of the soil, water contamination, ozone depletion, the depletion of natural resources, photo-chemical oxidant formation, eutrophication, smog formation, toxicity, the formation of particulate matter, land use, water scarcity. All these "environmental impact categories" were incorporated in the materials method.

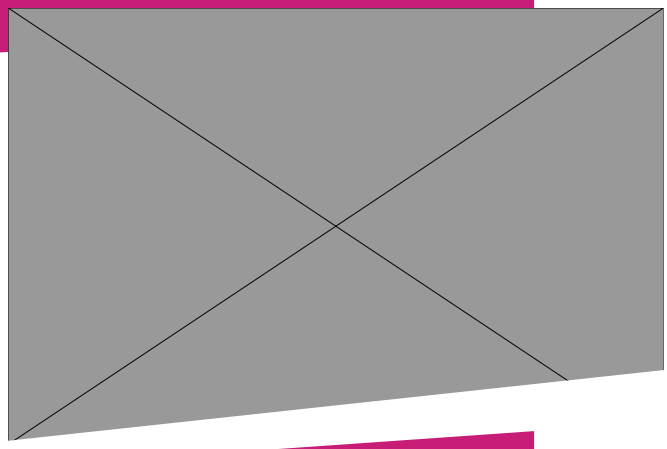
More Flemish, more Belgian

Roos Servaes of OVAM: “The building industry wishes to gain a better insight into the environmental impact of materials. Currently the industry is using foreign evaluation methods (NIBE, Green Guide to Specification), but these are insufficient for Flemish or Belgian building scenarios. Transport distances, production methods, the energy mix and raw materials supplies are often quite different in other countries. That is why we gathered the Flemish and federal policy-makers and all the stakeholders. Together we mapped a framework for defining the environmental impact, from the mining and production of raw materials to the maintenance and demolition of building elements.”

A user-friendly tool for architects

As soon as the environmental impact of building materials was calculated VITO made further calculation down to the building element level. The result is a database with environmental profiles of 115 frequently used building elements: various types of outside walls, roof structures, windows, etc. **Philippe Van de Velde** of OVAM: “The building materials method has generated a lot of insights for the building industry and is tailored to the Belgian situation. We are currently working hard on developing a user-friendly tool, so the architects can set to work for their own design. The main merit of this research undoubtedly is the fact that the method was developed in close consultation with the building industry. Because we involved all the stakeholders in the process we can now rely on almost everyone's support.”

OVAM transposes sustainable materials management into practice



Building activities account for approximately forty percent of greenhouse gas emissions and raw materials use worldwide. Sustainable materials management in the building industry can generate significant environmental gains.

The Government of Flanders opted in favour of a closed loop with the implementation plan 'Environmentally sound material use and waste management in the building sector' as early as 2007. The materials method is one of the projects to be developed in this frame.

Selective demolition for better recycling

Besides this OVAM has focused on selective demolition for several years now. Anyone demolishing or dismantling a commercial building with a volume of over 1,000 m^3 is required to draw up a demolition inventory of all the materials which will be released during the demolition of dismantling process beforehand since 1 May 2009. The demolisher will first remove all hazardous material such as asbestos during a selective demolition. Windows, doors, joinery and roofing, pipes, lighting and utility installations as well as non-bearing structures including interior walls of cardboard or gypsum will be removed before the carcass is demolished. This has several advantages. The waste which is released is sorted at the source, which in turn facilitates the environmentally responsible recycling of materials.

In 2012 OVAM developed a guideline for drawing up a demolition inventory. It shows architects and experts how they can draw up a demolition analysis of a building step by step. The guideline also demonstrates how to establish a correct inventory of the waste generated during demolition. This allows for the better monitoring of waste flows and the separate processing of hazardous waste.

The debris loop is closing

Huge amounts of debris are generated when demolishing a building. Recycled granules are created by breaking this debris. They are an excellent alternative to primary raw materials and can be used in the foundation of roads. The materials loop for debris can be closed more easily if the recycled granules are used to create new concrete products or for producing poured concrete. The quality and the traceability of the recycled granules has to be guaranteed and improved to facilitate such applications.

That is why OVAM drew up guidelines for the debris of public transfer stations and a quality assurance system for the debris of sorting facilities. It did this together with the Association of Flemish Cities and Municipalities (VVSG, Vlaamse Vereniging van Steden en Gemeenten) and the Federation of Enterprises in Environmental Management (FEBEM). Public transfer stations have to inform citizens about the quality requirements for the collected debris. Impure rubble fractions should be collected in a separate container. The debris sorted by sorting facilities will also be carefully checked in the future.

2012 in pictures

2012 Ecodesign Awards

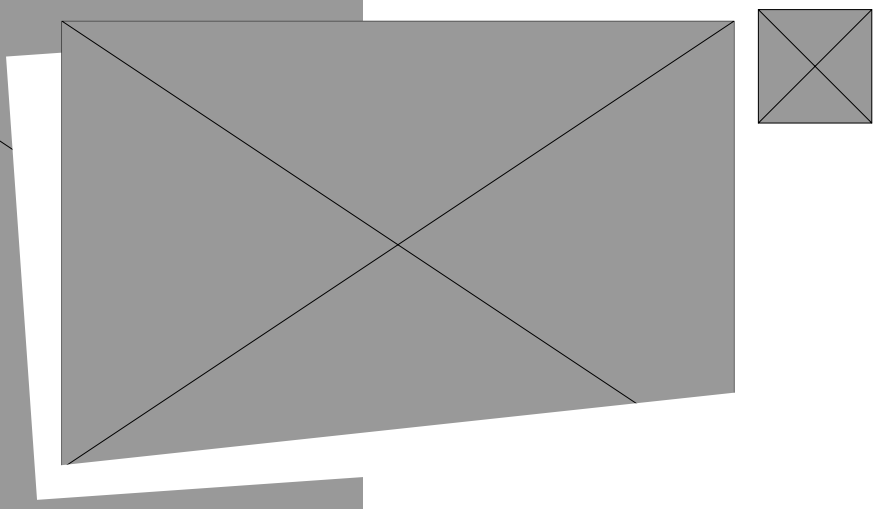
A *longboard* with a child seat: the design by Studio Peter Van Riet & Quinny Team was quite a hit during the presentation of the 2012 OVAM Ecodesign Awards PRO.

The Quinny Jett garnered a lot of praise in the "product development" category. Thanks to the *longboard* young parents can easily move through the city in an environmentally-friendly way, overtaking traffic queues with their child in the buggy seat.

By bearing in mind the product's entire life-cycle or service and mapping its environmental impact designers can reduce the environmental impact of their design to a minimum. OVAM is a firm believer in ecological design, which has already led to several noteworthy initiatives. The development of the Ecolizer, Ecolizer 2.0 and the OVAM SIS Toolkit, the organisation of the Ecodesign Awards, ecodesign studies and workshops: every year the expertise and the experience grow.

This information has been made available online
as of 17 January 2012 at www.ecodesign-link.be. Here designers, educational institutions, entrepreneurs and companies can find all the information and the tools they need on sustainable product innovation.

Go to www.ovam.be/ecodesignlink



In the framework of the partnership Kortrijk and OVAM together are tackling the redevelopment of the derelict Blekerij-Weide industrial site.

Partnerships with cities and municipalities are operating at full speed

Litter, large quantities of residual waste, plans for a green procurement policy, a polluted residential area... Every municipality has different problems and needs when it comes to waste, materials and soil policy. In 2012 OVAM established the first partnerships with cities and municipalities, an umbrella initiative to tackle the specific issues and questions of local governments. Five cities and municipalities share their experience:

The fact that the Flemish waste policy is such a success is largely due to the close collaboration between OVAM and the Flemish cities, municipalities and intermunicipal collaborations. We have also been working together for several years in the field of soil contamination. And yet local governments often have questions and problems which cannot be solved within the framework of the existing collaboration: litter, urban blight, plans for new neighbourhoods in the city... For these specific questions, issues and projects OVAM is currently testing a new type of support, tailored to a city or municipality. In 2012 five cities and municipalities established a partnership with OVAM. What do they wish to achieve and what is their first impression of this partnership?

Kortrijk: "Saving time and costs by looking at the bigger picture of projects"

Yves Baptiste, the coordinator of Kortrijk's Environmental Directorate: "We are currently implementing various projects in our city in terms of soil, waste and materials. Thanks to the partnership with OVAM we now have one single point of contact for all our questions. We meet every three months to discuss the progress of all the projects and ongoing dossiers.

"A good example of this is the pilot project for waste collection. Currently household waste is collected every week in Kortrijk, while PMD and paper/cardboard are collected fortnightly. We think that this process can become more efficient. We are currently examining in a pilot project in a neighbourhood of our submunicipality Bissegem whether it is feasible to collect all the waste fortnightly on the same day. OVAM is helping us develop this test case. The optimisation of selective waste collection is just one aspect of the partnership which we concluded with OVAM in 2012."

"In addition to ongoing dossiers the partnership also focuses on new projects and ideas for future plans. We are currently working together on the redevelopment of the derelict industrial site, Blekerij-Weide. The site has to become a lively neighbourhood with space for recreation, offices and green space. By reviewing the remediation and redevelopment of the site together all the parties involved can save a lot of time and costs."

Duffel: "Combating litter"

Ann Hamers, Environment and Mobility Coordinator for Duffel: "We are focussing on three big dossiers in the framework of the partnership between the municipality of Duffel and OVAM. Firstly we are searching for a solution for the PMD bags which often contain the wrong items. The waste collector leaves these bags behind, which in turn creates a nuisance in the neighbourhood. Together with the intermunicipal company IVAREM we have tested various awareness campaigns: door-to-door information, distributing flyers, etc. Now we are examining which action we need to take in the future to eliminate the problem of the refused PMD bags once and for all."

"Our collaboration also involves new projects. We developed a litter campaign among others: the residents of Duffel can receive a façade sign from the municipality which they can put up in their windows. The message is: "Thanks for keeping our street clean." Besides this we also organise free workshops and provide support to secondary schools. During a large-scale educational game the pupils are introduced to the various aspects of the litter issue."

Mechelen: "We want to also inspire others"

Noël De Winter, Head of the Environment and Nature Development Department, Mechelen: "Mechelen is OVAM's home base. For several years we have been working together to improve the living environment of the people of Mechelen. We felt that further strengthening this partnership with a collaboration was a perfect opportunity to reopen some files in which no progress had been made to date as well as starting up new initiatives. Moreover it is an opportunity for Mechelen to be one of the first cities to conclude such a partnership. It also allows us to inspire other organisations and municipalities."

"We want to do this among others by making the city's procurement policy more environmentally-friendly. Together with OVAM we are examining how we can structurally embed sustainability criteria in our specifications and calls for tenders. In the past, when purchasing a vehicle, we tended to focus on the technical specifications and the cost. Now we are checking whether environmental criteria, such as ecoscores, can also play a role in a purchase. Currently this is still done on an ad-hoc basis. That is why we are currently studying with OVAM how to embed this sustainability reflex in our activities."

"Another dossier which we hope to tackle in the frame of this partnership are the PMD bags, which often contain the wrong items and which are left in the street. They constitute a nuisance for the locals, for passers-by and for the town council. When a PMD bag is left in front of a single-family dwelling it is immediately clear who left if there. But the anonymity can be a problem in case of apartment buildings or collective living. We are now trying to gain a better understanding of the issue with a pilot project while searching for potential solutions, together with our inter-municipal waste association IVAREM and other partners."

Aalst: "How to turn a derelict neighbourhood into an attractive living environment?"

Inge Singelyn, Sustainability official for Aalst "The partnership with OVAM is a win-win situation for Aalst. It gathers all the ongoing dossiers, which in turn guarantees the follow-up and progress of our projects. We now have one single point of contact for all our questions. We can contact him with all our informal questions."

"In Aalst the neighbourhoods of Sint-Elisabeth and Molendries-Hovenierstraat, like other neighbourhoods, have had to contend with waste-related problems for several years. These neighbourhoods generate quite a lot of household waste, which is often put out in the street for collection too early. The inhabitants do not take back their refused waste and often it is impossible to find out who left the waste there in the first place. Consequently the community is paying to clean up the waste and part of the sorted waste can no longer be recovered for recycling purposes. We also have a litter problem: a neighbourhood which does not look clean only attracts even more litter. Together with OVAM Aalst wants to work towards a cleaner neighbourhood thanks to a better collection of household waste and highly targeted communication. In the long term waste prevention is also an issue that needs to be tackled. Aalst hopes to contribute to sustainable materials management in this way."

Christel De Meersman of the City of Aalst: "In the past certain plots in Aalst used to be occupied by companies which carried out soil-polluting activities. When this land is sold the current owners have to submit to a soil survey although they usually are not responsible for any contamination that is found. By tackling this contamination in a generalised manner the administrative and financial burden for owners is reduced. Moreover OVAM sooner has a better idea of the contamination and the possible risks. In 2012 we started a grouped residential area project on the site of a former gas works. The inhabitants were invited to an information meeting. Thanks to our partnership with OVAM we are more closely involved in the upcoming soil remediation projects in Aalst. This allows us to do everything possible to ensure the works are as efficient as possible. Vice versa OVAM helped us tackle dossiers again on which no progress has been made for several years."

Eeklo: "OVAM's expertise is more than welcome"

Ben Caussyn, environmental official in Eeklo: "Our high residual waste figures were the reason why we started to work more closely with OVAM. For several years the inhabitants of Eeklo have been producing more residual waste than the Flemish average of 150 kilos per capita per year. In 2011 this figure still stood at 164 kg per capita. The city has made several efforts to reverse this trend but to no avail. OVAM was the perfect partner to tackle this. Thanks to their experience in terms of waste policy they can provide support to help us reduce the quantity of residual waste. Together with the intermunicipal association IVM we developed a phased plan. The tariffs for waste collection have been adapted and we are currently reviewing the price of the residual waste bag. We are also studying whether organic waste can be collected in the wider area around Eeklo. And finally we are planning to redesign our public transfer station. We enshrined these structural measures in the partnership with OVAM."

"But our collaborations extends beyond this. We map plots where there is a risk of soil contamination. Another key dossier is the remediation and redevelopment of the former Ebes gas works. From 1908 until 1939 there was a gas works in Cocquytstraat. The soil and the groundwater are polluted as a result of gas production. OVAM's expertise is more than welcome to tackle this serious and complex contamination."

"There are several benefits to such a close cooperation. Whereas it was not always clear whom we had to contact for which issue, we now have a single point of contact at OVAM. This individual advises us on a range of matters."

2012 heralds "Remediation 2.0"

Remediating problem sites faster with better results. OVAM uses an array of innovative tools to tackle the soil issue in an efficient and results-oriented manner.

1. 122 gas works, 1 approach

Soil remediation is facilitated by tackling various similar contaminations together. The gas works in Nestor De Tièrestraat in the centre of Aalst is a good example of a remediation project which can be tackled in the frame of a programme approach. The factory closed down its furnaces over a century ago. But today the soil is still heavily polluted. This is not an isolated case. Flanders has 122 gas works sites. OVAM has mapped each of these sites and has developed a planning schedule for the remediation of these high-risk sites. **Patriek Casier** of OVAM: “Thanks to the programme approach for gas works sites we can carefully prepared every remediation down to the smallest detail and select the most cost-efficient remediation techniques."

By 2016 all the soil surveys of the gas works sites have to be completed. OVAM has drawn up a list of priorities for this. **Caroline Van Gool** of OVAM: “A combination of factors determine which sites have to be studied first. To which extent is the parcel suitable for redevelopment? What are the public health risks? Is the site in a residential area? We determine our priorities based on these criteria."

Effective communication

OVAM is also studying ways of making the communication related to gas works more efficient and effective. **Caroline Van Gool**: "Depending on the location and the type of gas works we require another type of communication. If there are a lot of parcels and owners involved within the framework of a gas works then we tend to organise a meeting for the inhabitants. As soon as the programme action plan has been defined we need to communicate it in a targeted and unambiguous manner. At the same time we need to anticipate as much as possible on the questions of residents and anyone else who is involved. We are currently working on an overarching communication strategy.”

This integrated approach, which defines a timing and the cost, is a good example of efficient remediation: the gas works sites are remediated sooner and thanks to the large-scale approach this can be done at a lower cost. OVAM is also working on such a programmatic approach for schools.

2. Looking for the egg of Columbus: innovative remediation

There is to ready-made solution for several complex contamination issues. That is why each polluted site requires a new approach which tackles the remediation project with some measure of inventiveness. Stimulating this innovation is a key theme in OVAM's policy. In 2012 this proved to be the case for several highly complicated remediation projects all over Flanders.

Innovative remediation

Innovation extends beyond purely technological innovation. OVAM focuses on the integrated approach of a remediation job. Innovation has to become more visible in every step of the process - from the tendering of the remediation to the redevelopment of the site. Innovative remediation requires attention to the remediation method that is used, to the remediation and research technology, to the administrative tendering procedure and economic-ecological considerations. OVAM wants to play a ground-breaking role in these fields.

Exporting expertise

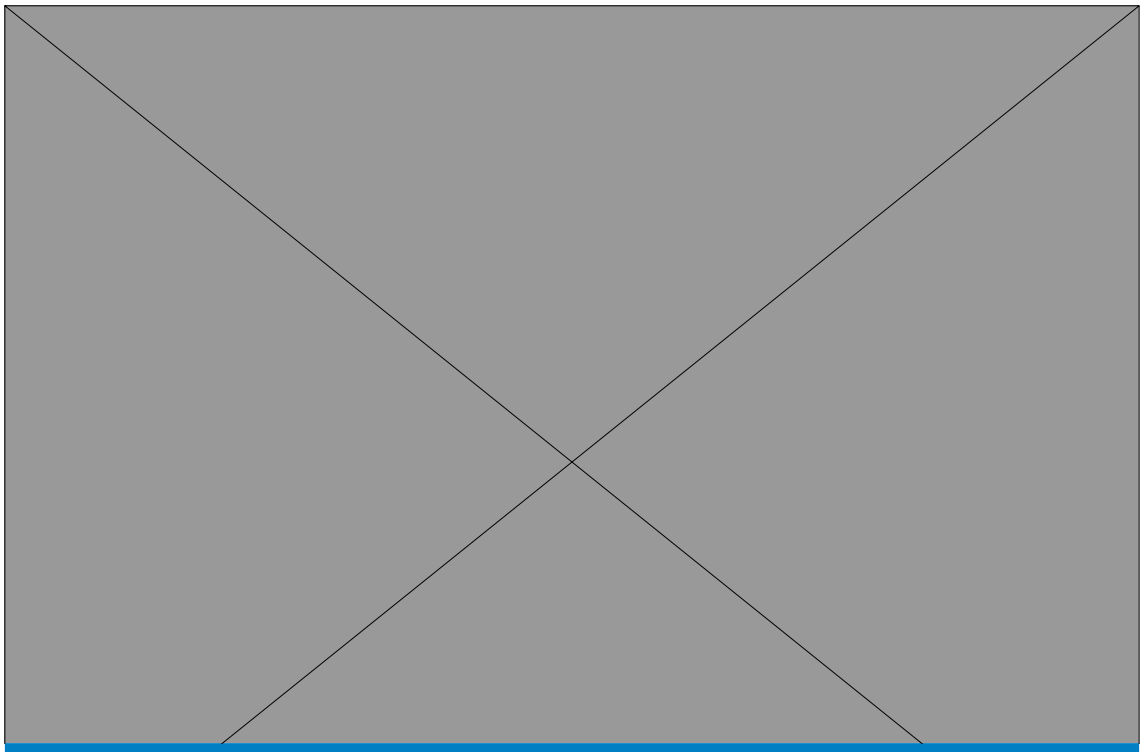
The remediation of De Potterij, a site in the old centre of Mechelen, perfectly illustrates how innovation can provide a way out in case of complex remediation processes. De Potterij can only be reached by means of a narrow alley and is surrounded by houses. The contamination has continued to a depth of more than nine metres and has sunk to the clay layer, twenty metres under the soil. Veerle Labeeuw of OVAM: “It involves a soil and groundwater remediation with VOCs which are located in the centre of the city. A potential remediation operation at this location would entail risks for the stability of the adjacent properties.”

The challenges in terms of access, odour nuisance, safety and other restrictions resulting from city contamination, require ground-breaking solutions. OVAM was inspired among others by the European CityChlor collaboration (see p. 38). Nine partners from Flanders, Germany, the Netherlands and France exchange knowledge about remediation techniques and put their heads together to move forward on pilot projects. OVAM also acquired the required expertise to ensure that the remediation of De Potterij was a success, by reading these case studies. This knowledge is already being used in other complex remediation dossiers

A future-oriented soil sector

The soil sector has to be prepared to remediate all the historically contaminated soil in Flanders by 2036: not an easy feat. Ten sectoral stakeholders brainstormed with OVAM in the think thank "De toekomst wenkt" (The future beckons).

Soil remediation experts, remediation companies and companies contending with a major soil contamination attended two workshops on the future of the soil industry. They contributed valuable angles and solutions based on their experience and expertise. OVAM evaluated these and incorporated them in a vision on the future of the soil policy.



3. Old landfills as a storage

Old landfills often have a lot of potential. There are about 1,700 landfills in Flanders, dating from 1945-1981. In the majority of the cases there is also a risk of soil and water contamination, even today. OVAM is checking whether these sites require remediating. On average half of these landfills contain materials which can be used. Today these materials can easily be recycled or incinerated with energy recovery. This application is called 'Enhanced Landfill Mining' (ELFM).

ELFM lab

In 2012 OVAM rolled out pilot projects in the former landfills in Kermt-Hasselt and Zuienkerke. Eddy Wille, Project coordinator ELFM: "ELFM is a relatively new concept which has barely been implemented in practice. By using these two sites as an ELFM laboratory we want to gather knowledge on the subject of ELFM. We need to understand how we can recover as many usable materials as possible in old landfills in Flanders.

In Kermt, which is only seven kilometres from Hasselt, there is an illegal landfill which has remained untouched for several years. From 1965 until 1976 2.5 hectares of household waste and the debris of a builder were deposited here. In 2012 the former landfill was used for ELFM tests. How can we study the potential of a landfill? What is the most efficient way of detecting its contents? OVAM tested various research methods. Eddy Wille: "We wanted to find out which technique is most suited for mapping the volume and the nature of the materials."

Long-term vision

As soon as these materials have been mapped they need to be efficiently processed. OVAM tested this in a pilot project in the former landfill of Zuienkerke, between Bruges and Blankenberge.

But OVAM also approaches ELFM from another angle: what we can't do now, we may be capable of tomorrow. Eddy Wille: "Landfills are an important link in our stock management. They supply materials as well as energy, space, and healthy drinking water reservoirs. That is why we want to develop a long-term approach with all the stakeholders. We need to avoid choosing interventions now which may make ELFM impossible in the long term. The extraction must tie in with sustainable materials management and should not lead to inferior use in the short term."

4. Saninvest has to whitewash its blackfields

Liquidators' protocol provides a new lease on life for bankrupt commercial sites

All too often a polluted commercial site falls into disrepair after bankruptcy. The liquidator always has a difficult time selling off the land. In order to break this deadlock OVAM concluded a liquidators' protocol with the Flemish Bar. The first remediation projects started in 2012.

The idea is simple but it works. If a curator does not find any interested investors for contaminated land in the private market then he can sell the site to OVAM for the symbolic amount of one euro. OVAM then becomes the owner of the land and is in charge of the remediation and subsequent selling of the land.

OVAM has already purchased a handful of parcels thanks to this liquidators' protocol. In 2012 OVAM started to remediate the site of bvba D'Hoe in Liedekerke and the Parmentier site in Izegem as well as kicking off the demolition work of Scheldefuel in Dendermonde. There are five other files in the pipeline. **Ann Cuyckens** of OVAM: "The strength of this instrument is that that we are the owners of the land ourselves, allowing us to impose our own accents for the site's redevelopment."

Efficiency gains are an important aspect when tackling blackfields. Generally the cost of the remediation of these extremely polluted sites exponentially exceeds the value of the land and the redevelopment. **Ann Cuyckens** of OVAM: "It is impossible to attract investors for this. The cost of remediating one blackfield can easily be millions of euros. The remediation of the Carcoke site in Zeebrugge, a former cokes factory, for example has already cost 47 million euros."

The Saninvest tool has to provide a solution for this. In 2011 OVAM and the Flanders investment company (PMV) signed a protocol agreement for establishing Saninvest. Ann Cuyckens: "In principle the site's soil remediation and its redevelopment are coordinated. We tackle the contamination while taking into account the site's new use: space for entrepreneurship, living, schools and much more. Consequently soil remediation can serve as a real lever for the redevelopment."

Alvat

In practice Saninvest can help spread the costs associated with soil remediation over the next few years and among several investors. As a result a larger number of blackfields can be remediated sooner and the redevelopment can start, within the available budgets.

In 2012 OVAM and PMV developed a project and business plan. The model is first tested in a number of test cases The Alvat site in Buggenhout is one such test case. Ann Cuyckens: "The soil and groundwater of this vat-cleaning company have been polluted with a series of hazardous substances. The site has been vacant since the company filed for bankruptcy fifteen years ago, which in turn contributes to the blight. In spite of an investment to the tune of four million euros for two remediation operations carried out by OVAM in the last two years there still remains a lot of work to be done. We hope to make some progress thanks to the integrated Saninvest approach. We cannot justify letting such sites go derelict in a densely populated region like Flanders."

2012 in pictures

Litter bin briefly becomes a WiFi hotspot

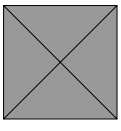
In 32 municipalities and cities passers-by could surf the Internet for free thanks to WiFi litter bins. These hotspots were situated along 'candy routes': popular routes from and to schools where there is also a lot of litter. OVAM and Fost Plus are trying to raise awareness among young people with posters that litter belongs in a litter bin.

But that is not all! Youngsters from all over Flanders competed against each other in the "Indevuilbak" game, which they could download as an app. The aim of the game: to deposit as much litter as possible in a litter bin. The players with the highest scores won a tablet or a smartphone.
The app was downloaded about 10,000 times.

Cigarette butts, chewing gum, food scraps, cans, plastic bottles... litter is small waste with big consequences. It is often discarded in the street casually and carelessly, often in small quantities. But many small quantities make for dirty streets which attract even more litter. What's more, you tend to feel unsafe in such streets. Litter is a persistent social problem. OVAM research has shown that 77 percent of the Flemish population – three in four Flemings – is annoyed about litter.

Since 2006 OVAM has been working with companies and local governments to eliminate litter from the streets. In 2012 OVAM and Fost Plus again organised a fun litter campaign: we considered cans, banana peels, chewing gum and other litter to be found objects, which were returned to their rightful owner.

www.indevuilbak.be



Cross-border collaborations

Flanders is an international leader when it comes to collecting, sorting, recycling and processing the waste flows and in terms of soil management. But this does not mean that we cannot learn anything from other countries. OVAM looks at the rest of the world with an open mind and takes part in European projects. This is a conscious choice. "The methods or techniques that work well elsewhere can also be applied in the Flemish context and vice versa."

CityChlor

"Two know more than one"

In 2012 the European CityChlor project entered its last year, closing with a conference in mid-2013. "The knowledge exchange with partners from our neighbouring countries helps tackle the contamination in our own cities more efficiently", said Veerle Labeeuw of OVAM.

CityChlor is a group of nine partners, from Flanders, Germany, the Netherlands and France. Together they search for solutions for specific soil contamination in cities, a problem throughout Europe. How to technically solve such a complex problem? But also: how to communicate this, how to tackle this in organisational terms? **Veerle Labeeuw**: "The strength of a partnership like CityChlor is that you can learn from each other's experiences, also by looking at other policy areas, which saves you a lot of time and money. Let me give you an example: a pilot project concerning a new remediation technique in the Netherlands or Germany also provides a wealth of information for our soil remediators. At the same time Flemish companies also reap the fruit of the partnership. Their expertise is much coveted in other countries."

CityChlor in a nutshell

Financial framework: INTERREG IV B-programme for Northwest Europe

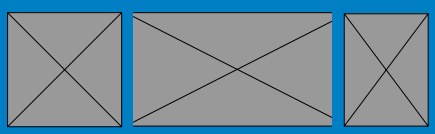
Participants: OVAM, City of Mortsel and City of Ghent (Flanders); Bodem+ and the City of Utrecht (the Netherlands); INERIS and ADEME (France), ITVA and Landeshauptstadt Stuttgart (Germany)

Other partners: professional federations, experts and remediation funds

Duration: 3.5 years, closing conference on 16 and 17 May 2013

Budget: 5.2 million euro, half of which is financed by Europe

www.citychlor.eu



Regions for Recycling

“We can be even better at waste recycling”

On 18 April 2012 Regions for Recycling was launched. Twelve European cities and regions work together to boost the recycling of household waste in the framework of this European Interreg IV C project.

Seven European regions, five cities and one international organisation joined forces for three years in the frame of the European Interreg IV C project "Regions for Recycling" (R4R). The goal: to increase the recycling of household waste in Europe and work towards more effective waste management.

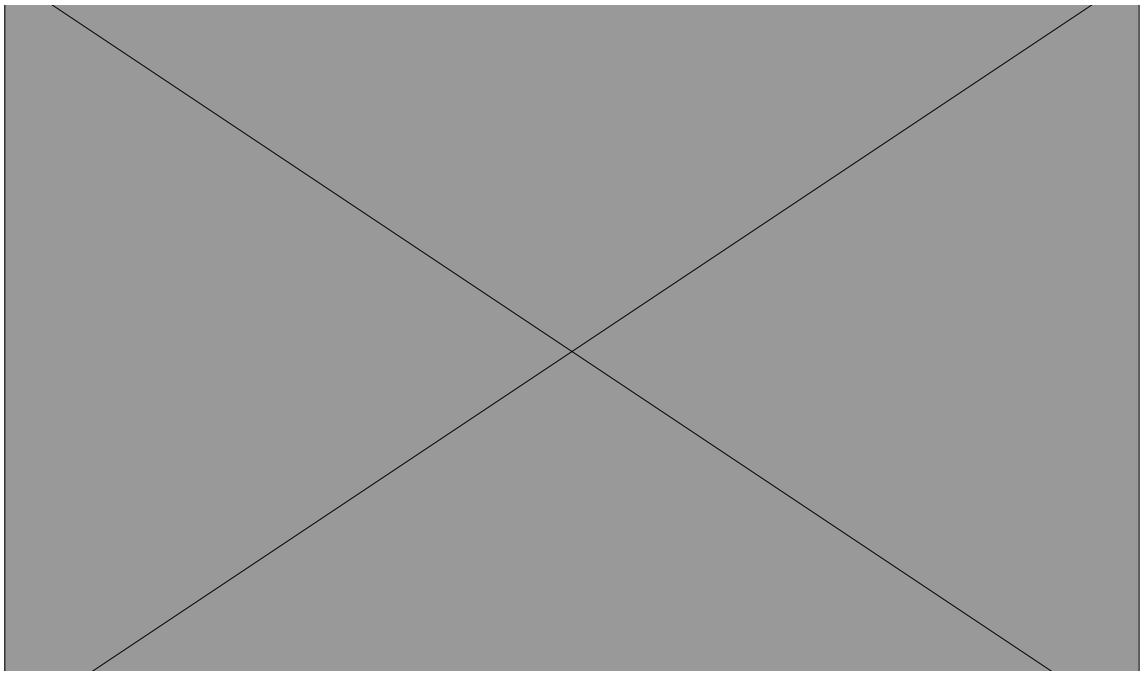
The first project was already launched. The project partners are streamlining the statistics for household and comparable industrial waste of cities and regions throughout Europe to compare them with each other. They are using a new joint reporting instrument and an online tool for gathering and analysing figures. Thanks to the best practices database the project partners can exchange practical experiences and data about their waste policy.

Regions for Recycling in a nutshell

Project partners: Flanders, Ile de France (France), Odense (Denmark), Limerick (Ireland), Stiermarken (Austria), Catalonia (Spain), Ilfov (Romania), Exfini Poli (an association of 30 communities spread throughout Greece), Lisbon (Portugal), Tallinn (Estonia), Sofia (Bulgaria), Zagreb (Croatia) and the Association of Cities and Regions for Recycling and Sustainable Resource Management (ACR+).

Duration: 2012-2014

Budget: 313,840 euros, 75 percent of which is funded by the European Regional Development Fund (ERDF)



SNOWMAN

“Making soil surveys more relevant”

As the chair of SNOWMAN, OVAM worked towards expanding and deepening this cross-border network. “SNOWMAN will become the source of knowledge for sustainable soils”, said Sofie Van den Bulck of OVAM.

Throughout Europe various organisations are conducting research in the soil and the subsoil. For quite some time this research was not coordinated, nor were the results exchanged. The SNOWMAN network, which was established four years ago, is now trying to fill that knowledge gap. French, Swiss, Dutch and Belgian organisations exchange soil knowledge and fund research into sustainable soil management.

OVAM set a high standard as the chair of the network in 2012. **Sofie Van den Bulck** of OVAM: “By welcoming new partner organisations and opening SNOWMAN to other types of collaboration we wish to further expand and deepen the network. The emphasis is on exchanging knowledge and expertise.”

In 2012 the fourth SNOWMAN call for research was launched. Sofie Van den Bulck: “Instead of merely focussing on the soil-technical aspect we are increasingly looking at what our research results can do for society. Consequently we are reinforcing the ties between soil research and society.”

SNOWMAN in a nutshell

Partners: OVAM (chair), Department of Environment, Nature and Energy of the Government of Flanders, Stichting Kennisontwikkeling en Kennisoverdracht Bodem (SKB) (the Netherlands), Agence de l’Environnement et de la Maîtrise de l’Energie (ADEME), Ministère de l’Ecologie, du Développement durable et de l’Energie (France), Swedish Environmental Protection Agency (SEPA) and FORMAS (Sweden)

Find out more about the SNOWMAN network at www.ovam.be/jahia/jahia/pid/1411.

OVAM arouses great interest abroad

China, Egypt, Iran, Slovakia, Bangladesh, Croatia, South Korea … in 2012 ten delegations from all over the world visited OVAM. They were curious to find out more about the recipes for Flemish success and studied Flemish waste, materials and soil policy during field visits and in the framework of knowledge exchanges. **Anne Vandeputte** of OVAM: “This intensive exchange allows us to strengthen existing ties and collaborations as well as creating new networks. The cross-pollination underscores OVAM's international position and visibility.”

“Online soil information is the standard”

Applying for and receiving a soil certificate, sending reports to OVAM electronically: since January 1st, 2012 you can do easily do this. 2012: the year in which OVAM fully digitised soil information.

Why is OVAM focussing on the digitisation of soil information?

Eddy Van Dyck of OVAM: “OVAM has monitored the soil quality in Flanders for over fifteen years. In order to prevent soil contamination of where necessary intervene in a timely and adequate manner knowledge about the state of the soil and high-risk activities is crucial. OVAM keeps a minute registry of all information related to soil quality in the "grondeninformatieregister" or land information registry. The soil certificate provides the buyer with information about one plot of land. By digitising this information we hope to promote a rapid and correct information exchange with notaries, real estate agents, soil remediation experts, municipalities and private individuals. We want to inform people better and more efficiently about the soil quality in their region.”

Who will benefit from this digitisation?

Eddy Van Dyck: “Anyone selling a property or land will have to provide a soil certificate to buyer before signing the compromise. In practice notaries and real estate agents will request this certificate from OVAM. They have an account with OVAM for paying these soil certificates. Private individuals usually rely on their notary or

real estate agent for obtaining this certificate."

Since early 2012 applying for such a certificate is much easier. How do you apply for this certificate?

Els Gommeren of OVAM: "Until the end of 2011 OVAM would send these soil certificates by post. Since January 1st, 2012 we make these certificates available electronically, as a PDF file. This is much more efficient: if you apply for a soil certificate you can download it the next day. Moreover the notary can incorporate whole parts of the digitised document in his documents. In the past notaries would waste a lot of time copying information for the compromise. Now all they need to do is copy and paste, which also increases accuracy. And what's more, this digitisation also means you save large quantities of paper, which, in turn, benefits the environment."

Do notaries and real estate agents effectively use this customer-friendly service?

Els Gommeren: "Most certainly! 95 percent of the applications are already filed online or 218,543 of the 229,070 applications in 2012."

The online counter for soil remediation experts also opened online on January 1st, 2012. What are the advantages of this counter?

Els Gommeren: "Soil experts can now review soil surveys online thanks to this online counter and electronically send reports to OVAM. Consequently they save a lot of time. They no longer have to make a personal appointment with OVAM to review a dossier. Moreover soil remediation experts can use existing reports about a parcel of land for a new soil survey, even if these surveys were conducted by other firms. Whereas in the past they had to start from a blank page they can now request the existing report via the online counter and start working with this information."

Recently a dedicated online counter was also opened for the municipalities.

Eddy Van Dyck: "That's right. In the new online counter municipalities manage parcels with a higher risk of soil contamination, the so-called "high-risk parcels". Mapping these high-risk parcels is crucial for monitoring soil quality in Flanders. The municipalities are closest to the source, because they issue environmental permits for all land within their boundaries and are also aware of high-risk activities. The data exchange occurs in two directions. On the one hand we provide the municipality with an overview of the available soil surveys and certificates in its territory. The soil certificates are made available in PDF format. On the other hand OVAM is given access to information about high-risk parcels in the Municipal Inventory."

How were the online counters created?

Eddy Van Dyck: "We involved the soil remedia-

tion experts, municipalities and notaries in the development of these online counters. We further developed the system based on their feedback. The online counters are a clear example of e-government as well as a good example of a government which works with its citizens. We will continue to further digitise our services in the future."

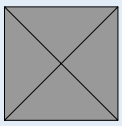
Further information: www.ovam.be/webloket

Should you require more information about a property or land then request the soil survey reports at **www.ovam.be/inzage.**

Users can find a lot of useful tools through the OVAM online counters

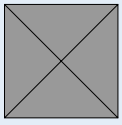
High risk installation tools Users can use the online tool to assess whether a high-risk activity is involved and whether a soil survey is necessary. If you type the word "fuel" for example then the tool will tell you that a soil survey is required of the fuel tank can contain more than 20,000 litres.

www.ovam.be/rit



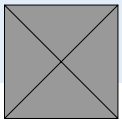
Transfer tool. This tool guides notaries, municipalities and private individuals through the procedure for land transfers based on a number of targeted questions. Users can thus assess whether a soil survey is required for the land that is sold.

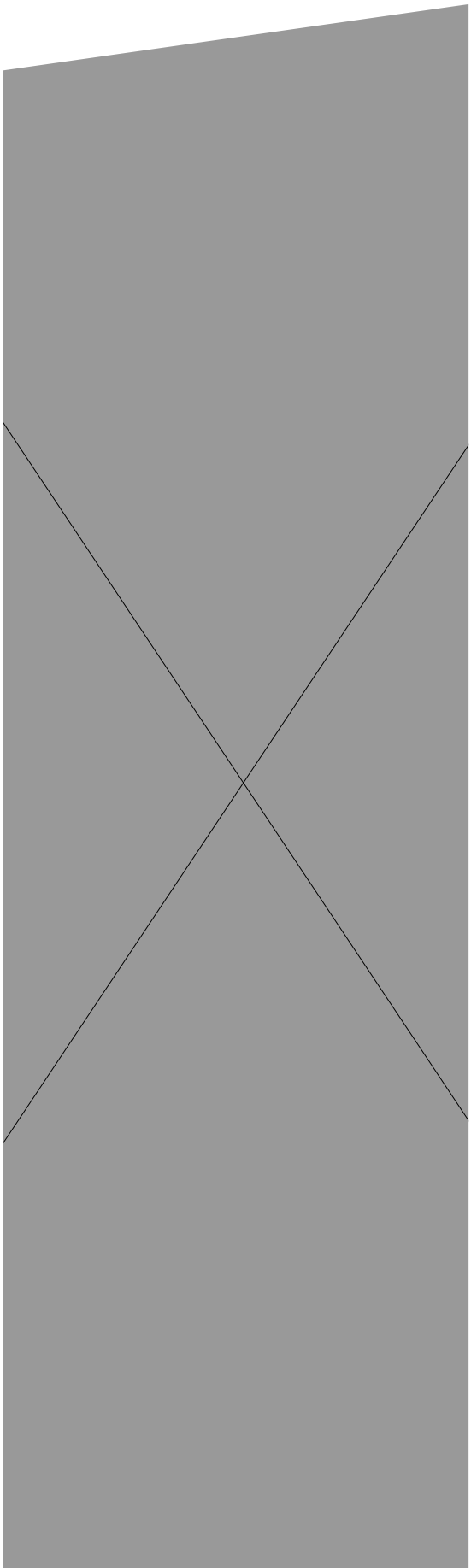
www.ovam.be/overdracht



Geoloket or Geo counter. Private individuals can find out online what is the state of the land in their neighbourhood using the Geo counter. Simply type an address and you will see an overview of all the soil surveys that were conducted in your neighbourhood.

services.ovam.be/geoloket





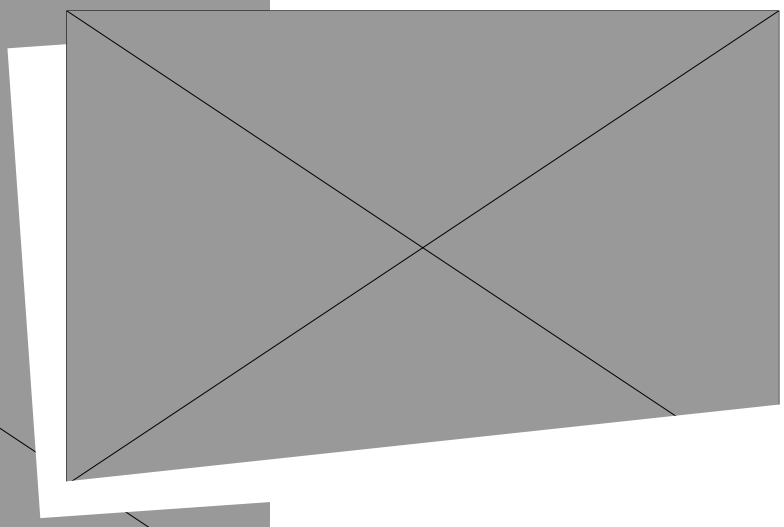
2012 in pictures

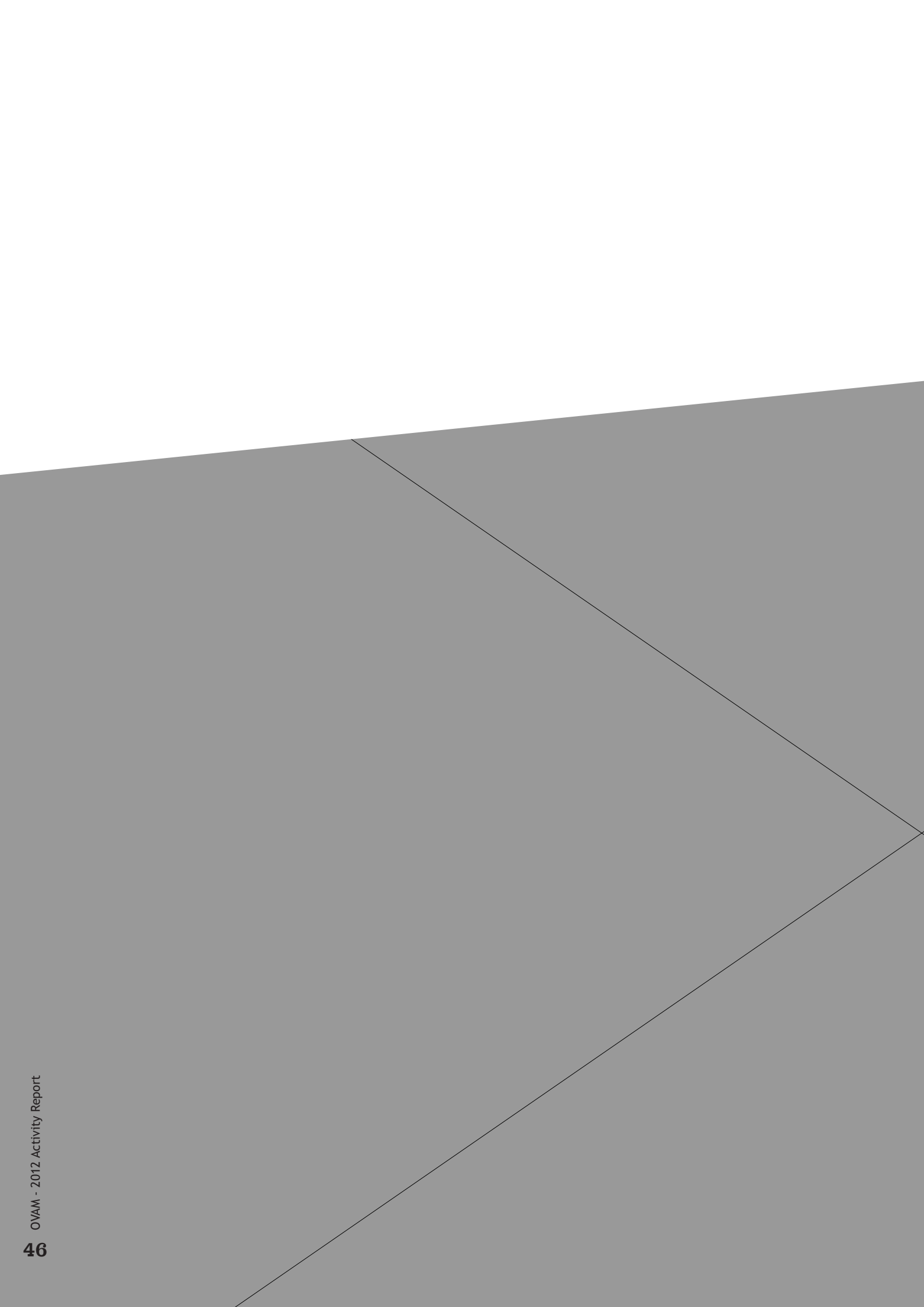
Studio Brussel Recycle!

21 November 2012. Public broadcaster Studio Brussel and OVAM focused on waste recycling all day, broadcasting from the public transfer station in Harelbeke.

And even the listeners broke out into a sweat as they cycled to generate the electricity needed to keep the programme on air. What's more, all the music broadcast by Studio Brussel that day had been been recycled: they only played covers and music based on samples. The programming also discussed recycling: how can I reduce my own waste mountain, was one of the issues discussed. What about the waste that I sort? How can I compost my own fruit and vegetable waste? These and many other questions were discussed that day on Studio Brussel.

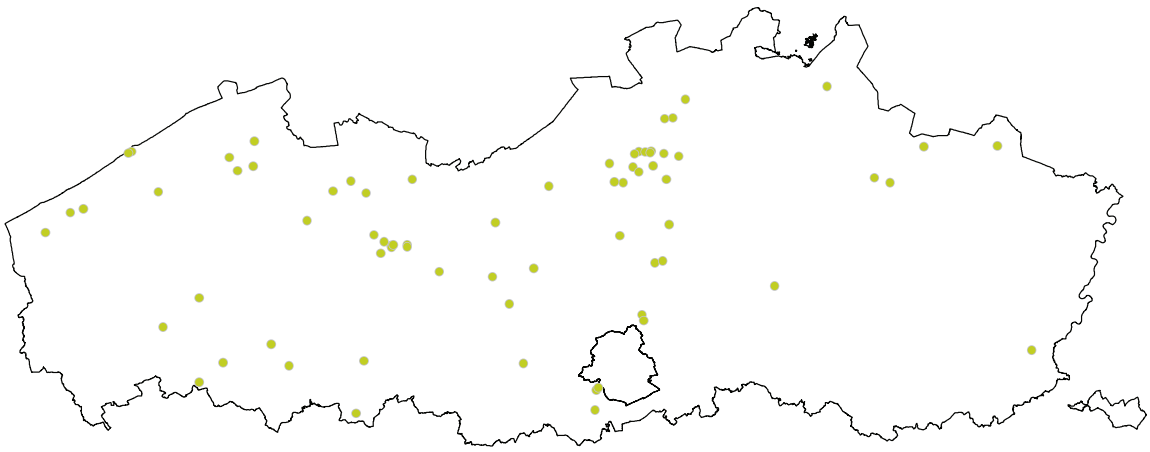
Studio Brussel Recycle! was the outcome of a collaboration with OVAM, Leefmilieu Brussel and the federal public service for the Environment.





OVAM in figures

Interventions, Disposals and Soil Remediation Department



● Ex officio remediation started in 2012

Some important interventions in 2012

Project	Municipality	Previous activity and contamination	Planned use after remediation	Cost €
Carcoke	Bruges	Coking plants	industrial area	2.35 million
Janssens Pharmaceutica	Beerse	furniture plant - chlorinated solvents	industrial area	1.57 million
Waalse Krook	Ghent	gas works	public institution - library	1.53 million
Zinc plant	Boom.	zinc plant	industrial area	1.35 million
Vilvordit	Vilvoorde	benzole and naphtha storage - benzene	residential area	1.28 million
Hoedhaar	Lokeren	hair cutting plant - mercury contamination	residential area	0.95 million
Building Services	Wevelgem	storage of soil contaminated with asbestos	industrial area	0.76 million
Europe	Machelen	fuel storage	large shopping centre	0.59 million
Asbestos cement leftovers	Kapelle-op-den-Bos	functional filling with waste containing asbestos cement	mainly residential area	0.57 million
Zinc ash	Hamont-Achel	functional filling with zinc ash heavy metals at private individuals	mainly residential area	0.49 million
Schools.	Aalst	former tannery - heavy metals	recreational and leisure area	0.47 million

Waste and Materials Management Department

The increased levies on the landfilling of incinerable waste, in effect since 2007, have led to the volume being offered for disposal decreasing consistently. 2012 was a pivotal year for the direct landfilling of shredder waste. Compared to 2011, 85,940 tonnes less of combustible waste were dumped in 2012. The amount of waste that was incinerated rose by 25,666 tonnes, the amount of waste that was co-incinerated by 81,609 tonnes and the amount of waste that was transferred by 17,721 tonnes. The total income from levies for 2012 was approximately 31.6 million euros, compared with 32.8 million euros in 2011.

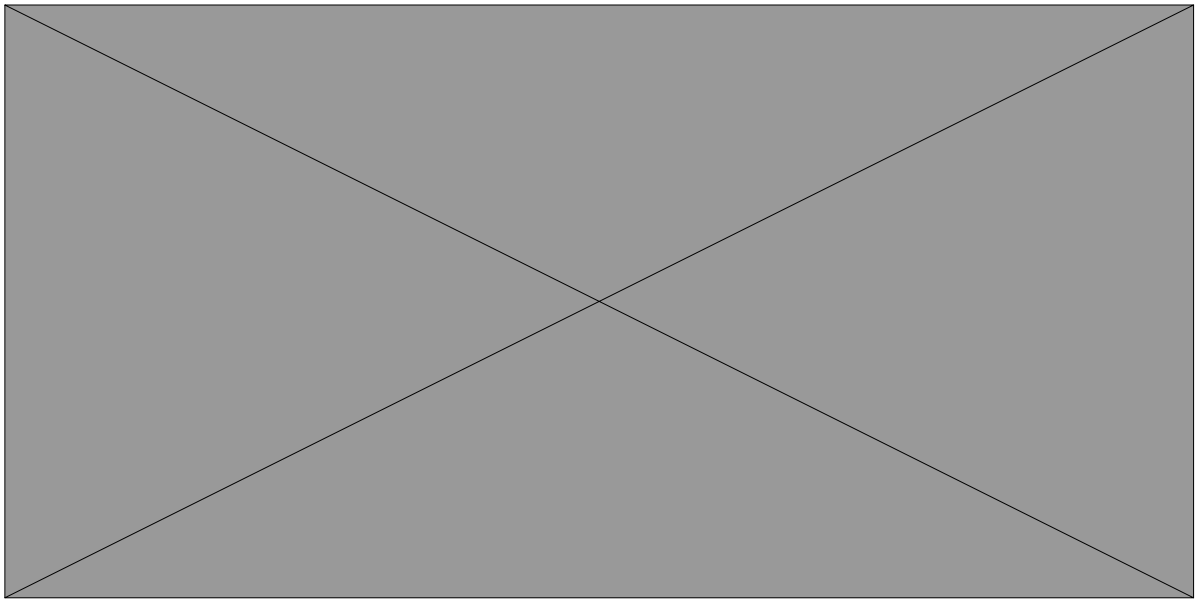
Processed waste and levies collected in 2012:

	2012	
	in tonnes	in euros
Landfilling of incinerable waste	244.040	5.430.338
Landfilling of non-incinerable waste	761.740	6.998.713
Incineration	2.022.611	13.816.213
Co-incineration	392.296	1.323.611
Transfer	642.540	2.669.134
Total	**4.063.227**	**30.238.009**

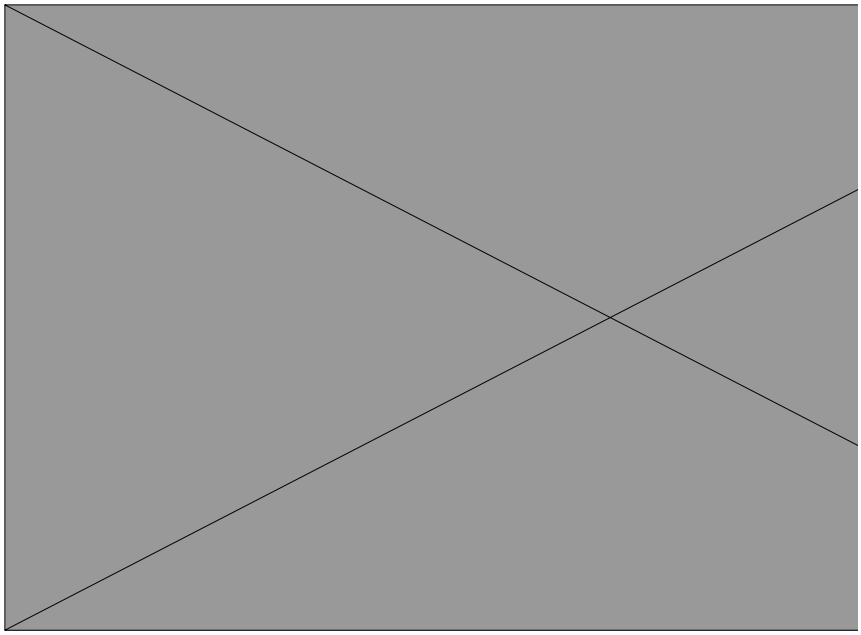
Shredder waste

2012 was a pivotal year for the processing of shredder waste. Shredder waste is a mixture of materials such as metals and plastics and is a by-product of the dismantling, recycling and crushing of car wrecks or electronic equipment for example. In 2012 shredder waste was hardly landfilled directly: only 3,836 tonnes compared with 76,472 tonnes in 2011, 137,031 tonnes in 2010 and 223,048 tonnes in 2009.

Almost 97 percent of the shredder waste that was generated was processed using Post Shredder Techniques (PST) before it was landfilled. In 2011 this was still 40%. About 41 percent of the waste that was previously landfilled is now reused as material or for energy recovery. In 2012 36,033 tonnes of waste were incinerated with energy recovery and 19,595 tonnes of waste were recycled instead of being landfilled.

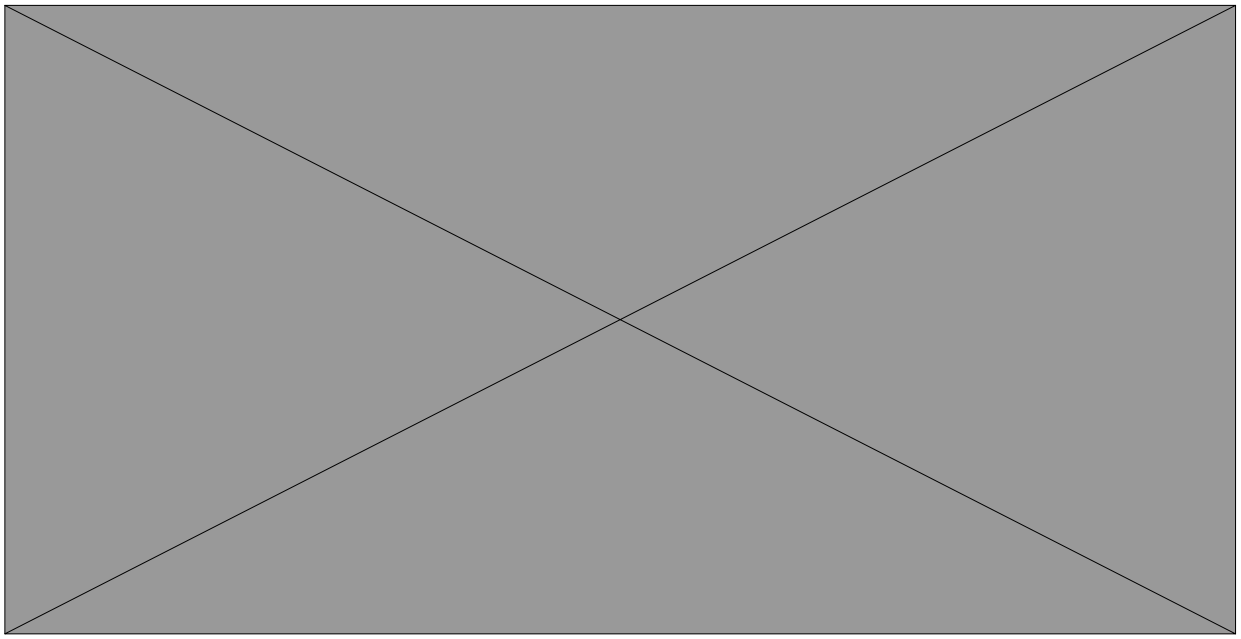


Residual household waste (per inhabitant)



Data available until 2011 on May 1st, 2013

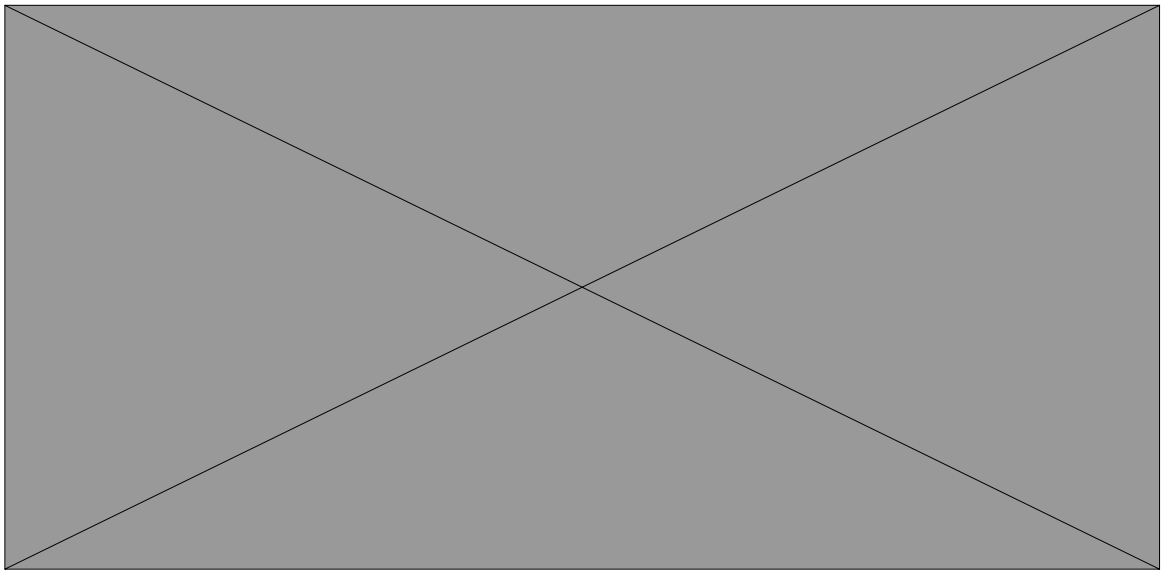
Industrial waste



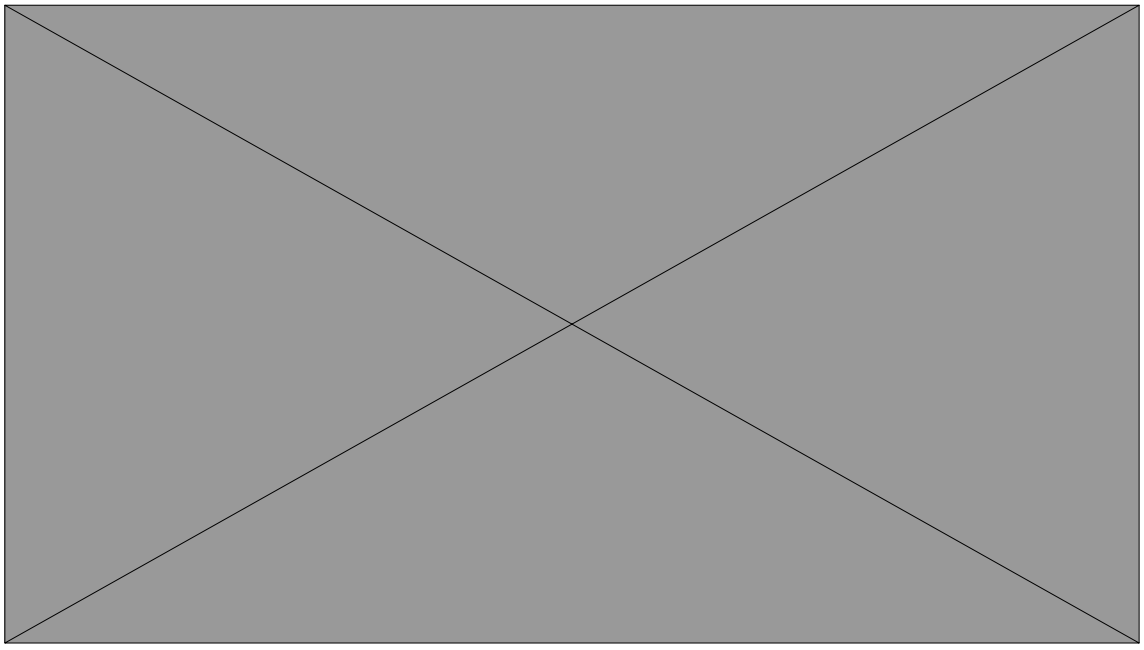
Data available until 2010 on May 1st, 2013

Soil Management Department

Soil certificates issued per year

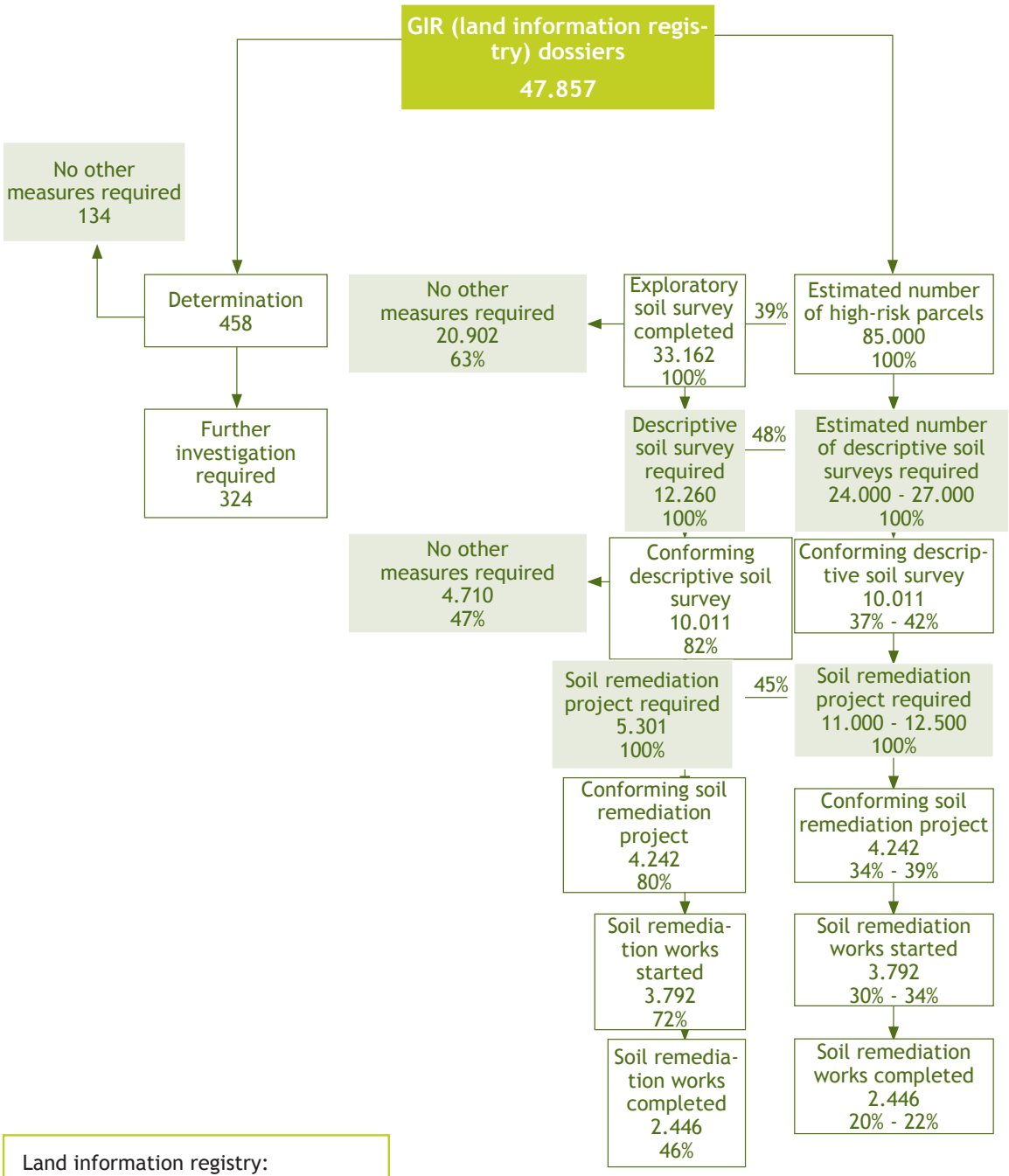


Overview of DSA-SRP cumulative*



*See insert at the bottom of p. 53

Overview of dossiers of the Soil Management Department



Land information registry:

ESS:	Land Information Registry
DSS:	exploratory soil survey
SRP:	descriptive soil survey
SRW:	soil remediation project
	soil remediation works

Dossiers of the Soil Management Department on January 1st, 2013

General Services Department

Complaints management

In 2012 the complaints manager received 31 complaints. Eighteen of these complaints related to OVAM's activities. OVAM processed these complaints and formulated an answer to every complaint. Four of the complaints were deemed justified. For these OVAM developed a solution. The other thirteen complaints did not relate to OVAM's activities. OVAM also formulated an answer to these complaints and referred the claimants to the appropriate authorities.

Citizens usually contact the complaints manager for general information or with questions about the status quo of a dossier. On average they have to wait fifteen days before receiving an answer. You can read the complaints report for 2012 on the OVAM website (www.ovam.be):

Workforce and labour cost

Personnel on 31.12.12 (number of people)	378

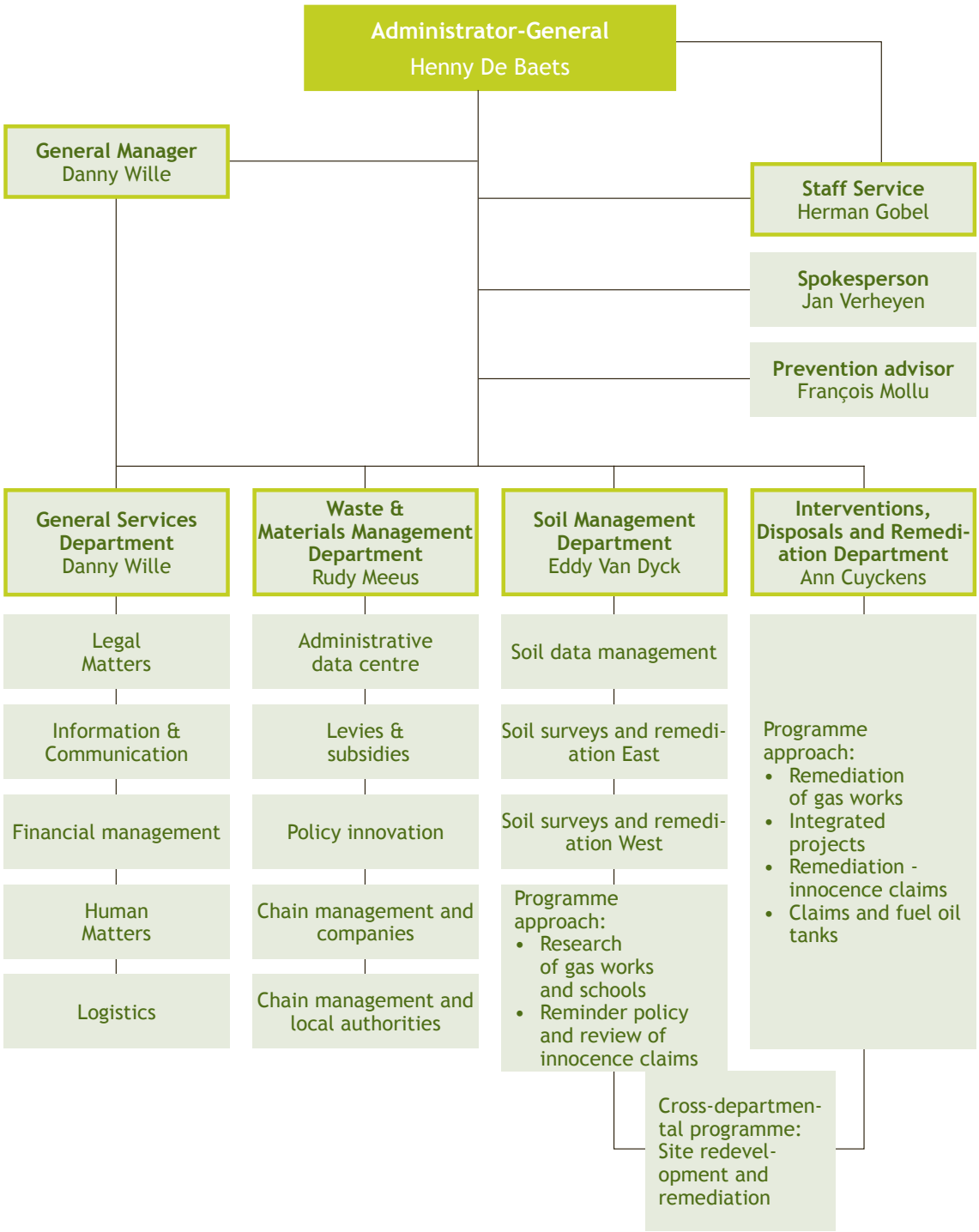
Sex	
Male	Female
143	235

Age categories			
<=34 yrs	35-44 yrs	45-54 yrs	>= 55 yrs
92	155	92	39

Qualification (level)			
A	B	C	D
203	69	84	22

Status	
Statutory (including trainees)	Contractual
240	138

Organisational structure of OVAM as of February 1st, 2013



OVAM 2012 budget implementation account (authorisations in euros)

Revenue	
Balance carried over from previous budget years	5.784.136,34
Own income (mainly soil certificates and notification dossiers)	8.693.533,54
Income transfers from companies (e.g., UMICORE and official reclamations)	2.707.126,58
Income transfers from E.U. Institutions and Member States (CityChlor/C2CN/R4R)	373.628,03
Income transfers within the public sector (mainly operational subsidy and MINA subsidies)	29.213.278,45
Capital transfers within the public sector (investment subsidies and MINA subsidies)	16.030.647,28
Sales of material fixed assets	5.350,00
Withdrawal from the Soil Protection Fund	14.591.020,80
Total	**77.398.721,02**

Expenditure	
Balance to be carried forward	6.546.309,03
Wages and social security contributions	24.320.451,03
General operating expenses (housing expenses, office expenses, travel expenses ...)	3.399.431,87
Rent of buildings	2.126.201,80
Indirect taxes	429.292,08
Specific purchases (primarily costs of litigation and expert expenses)	931.007,65
Studies and surveys (waste and soil)	1.545.595,69
Communication	1.136.872,16
Operating costs remediation and certification	2.938.640,58
Disposals and soil surveys in the frame of the cooperation agreement	15.708,33
Operational subsidies collection and sales (VLACO subsidy, IV C and Plan C)	1.300.058,27
Damage payments	845.722,46
Contributions to the social secretariat	23.485,36
Income transfers within the public sector (Sustainable Materials Management support centre)	134.182,23
Disposals and remediations	13.435.649,31
Sites	23.126,20
Installations, machinery and equipment	14.616,80
Hardware	205.338,53
Software	785.092,47
Contribution to the Soil Protection Fund	17.241.939,17
Total	**77.398.721,02**

Implementation account MINA fund - OVAM share (in euros)

	Commitments	Liquidations
Transfer of financial soil remediation funds - VLABOTEX	606.799,95	606.799,95
Subsidies for animal waste	8.150.000,00	8.167.277,96
Subsidies to accredited recycling centres	898.000,00	898.000,00
Income transfers to provinces, provincial companies, municipalities, municipal enterprises and inter-municipal partnerships in support of prevention (compost bins, information booths, demonstration areas for compost masters, etc.) and separated collection	48.670,00	260.570,00
Investment subsidies to provinces, provincial companies, municipalities, municipal enterprises and intermunicipal partnerships to support prevention, separated collection (public transfer stations, underground containers, tariff differentiation systems, ...) and the development of systems (green and organic waste composting, sorting of bulk waste...)	4.561.240,00	6.570.442,00

OVAM 2011 budget implementation account (authorisations in euros)

Revenue	
Balance carried over from previous budget years	7.957.757,58
Own income (mainly soil certificates and notification dossiers)	8.710.665,96
Income transfers from companies (e.g., UMICORE and official reclamations)	1.671.684,63
Income transfers from E.U. Institutions and Member States (CityChlor/C2CN)	272.095,41
Income transfers within the public sector (mainly operational subsidy and MINA subsidies)	26.302.770,49
Capital transfers within the public sector (investment subsidies and MINA subsidies)	21.118.410,38
Sales of material fixed assets	7.175,00
Liquidation of participations in privately-held companies (Ecopla)	24.000,00
Withdrawal from the Soil Protection Fund	24.112.463,93
Total	**90.177.023,38**

Expenditure	
Balance to be carried forward	5.784.136,34
Wages and social security contributions	22.083.646,47
General operating expenses (housing expenses, office expenses, travel expenses ...)	2.734.517,69
Rent of buildings	2.064.668,62
Indirect taxes	218.952,49
Specific purchases (primarily costs of litigation and expert expenses)	1.185.730,13
Studies and surveys (waste and soil)	1.623.270,26
Communication	822.616,88
Operating costs remediation and certification	3.300.192,21
Disposals and soil surveys in the frame of the cooperation agreement	13.274,14
Operational subsidies collection and sales (VLACO and IV C subsidy)	1.086.175,13
Damage payments	286.968,53
Annulments of recovery of ex officio expenses	41.176,30
Contributions to the social secretariat	23.493,84
Income transfers within the public sector	994.288,65
Disposals and remediations	23.864.939,48
Sites	14.196,28
Installations, machinery and equipment	46.237,99
Office equipment and furniture	37.874,10
Hardware	185.619,57
Software	1.212.826,82
Contribution to the Soil Protection Fund	22.552.221,46
Total	**90.177.023,38**

Implementation account MINA fund - OVAM share (in euros)

	Commitments	Authorisations
Transfer of financial soil remediation funds - VLABOTEX	522.967,33	522.967,33
Subsidies for animal waste	8.422.843,00	8.280.095,63
Subsidies to accredited recycling centres	887.766,00	898.000,00
Income transfers to provinces, provincial companies, municipalities, municipal enterprises and inter-municipal partnerships in support of prevention (compost bins, information booths, demonstration areas for compost masters, etc.) and separated collection	48.770,00	320.190,00
Investment subsidies to provinces, provincial companies, municipalities, municipal enterprises and intermunicipal partnerships to support prevention, separated collection (public transfer stations, underground containers, tariff differentiation systems, ...) and the development of systems (green and organic waste composting, sorting of bulk waste...)	4.955.550,00	7.418.274,00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