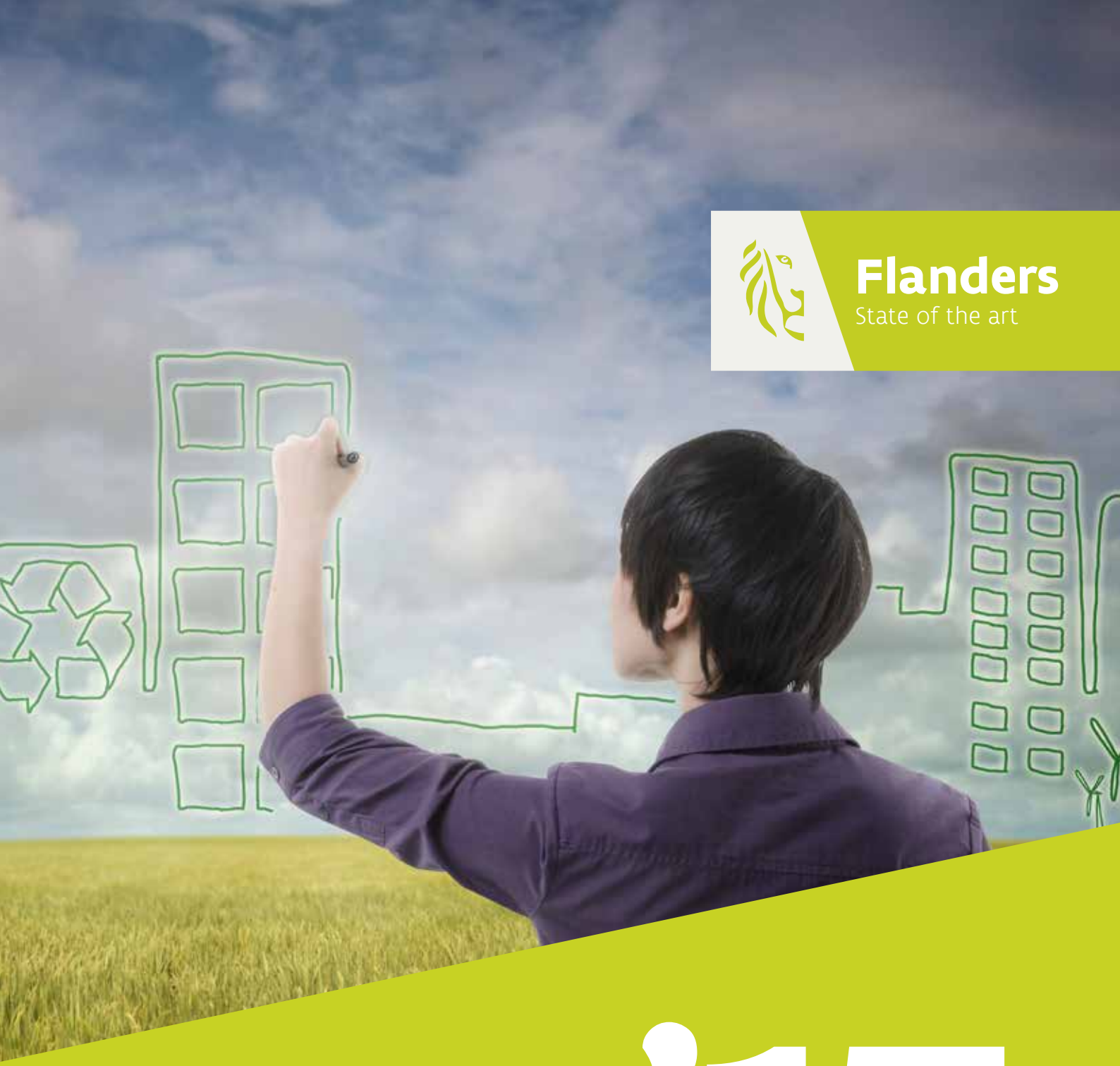


Flanders
State of the art

Activities Report '15

TOGETHER WE
MAKE TOMORROW
MORE BEAUTIFUL

OVAM

www.ovam.be

CONTENTS

Colophon

EDITOR-IN-CHIEF AND PUBLISHER: Jan Verheyen

EDITORIAL COMMITTEE: Sofie De Keyser, Patriek Casier, Lander Wantens, Caroline Van Gool, Ilse Pepermans, Willy Sarlee, Anne Vandeputte, Els Van Camp, and Sofie Feytons

CONCEPT, COPYWRITING AND DESIGN: Pantarein Publishing

PHOTOGRAPHY: OVAM, ISWA, Shutterstock, Pol Leurs, Kristel Peters, Harald Finster, ILD nv, Istock, Karlien Claeys, Bakkerij Tomassen, Jasper Leonard, Koen Keppens, and Ann Gewillig

PAPER: cover: maco silk 300 g
interior: maco silk 135 g

LEGAL DEPOSIT NUMBER: D/2016/5024/07

OVAM, Stationsstraat 110, 2800 Mechelen, Belgium

FOREWORD

f.l.t.r.: Luc Goeteyn, Herman Gobel, Eddy Van Dyck, Ann Cuyckens, Henny De Baets and Danny Wille

In September 2015, the ISWA World Waste Congress descended upon Antwerp. Together with the City of Antwerp and the Association of Flemish Cities and Municipalities (VVSG), OVAM welcomed participants from more than ninety countries. The most noteworthy "first" at the congress was the presentation of the first Global Waste Management Outlook from the United Nations. This report provides staggering figures and insights: 2 billion people have no access to waste collection; 70% of the waste world-wide is simply dumped, and more. The report praises the path that Flanders has followed in previous decades as being a model of how to get and keep waste issues under control. However,

A region like Flanders must dare to foster higher ambitions than just keeping the massive mountain of waste under control. OVAM accepts that challenge. In 2015, we finalised a new draft of the Household Waste Implementation Plan, which entered the public inquiry phase at the beginning of this year. That plan stipulates how we will handle our household waste from now on and how we aim to strengthen the transition to a re-use economy. It also provides a clear-cut policy and investment framework. In 2016, together with our partners in the Flanders' Materials Programme, we will also work out how we, as a progressive region, can respond to the ambitions and objectives that Europe has set in the Circular Economy Package, which was published at the end of 2015.

In 2015, we also demonstrated this progressiveness in the area of soil management. The United Nations proclaimed 2015 the International Year of Soils. So, for OVAM and its partners, this became the perfect moment to highlight the added value of soil for our health, living environment, economy, and innovation. 'Soil-conscious' grew into a robust awareness-raising campaign. Of course, the added benefits of sustainable soil management - efficient use of space, economic development, a healthy living environment, etc. - are also a priority in 2016.

In order to tackle these challenges, in 2015, we sought out the best possible organisational structure for providing an answer to the wishes of our targetgroups. A structure that allows us to capitalise, with flexibility, on new opportunities while guaranteeing the maximum quality of soil-related information. And, one with a flat organisational structure in which employees are encouraged to assume even greater responsibility. This exercise led to the creation of two new soil departments: 'soil information management' and 'targeted remediation'. The new Customer Relations team is responsible for the rapid and correct handling of questions from our customers.

This once again proves that OVAM is an innovative organisation. An organisation that dares to go beyond the obvious and that is prepared to adapt itself in function of new opportunities and challenges and the changing circumstances of our society. What, however, remains unchanged in 2016, dear reader, is that we want to realise these challenges together with you. Together we make tomorrow more beautiful.

Henny De Baets,
Administrator-General

OVAM rolls out new structure

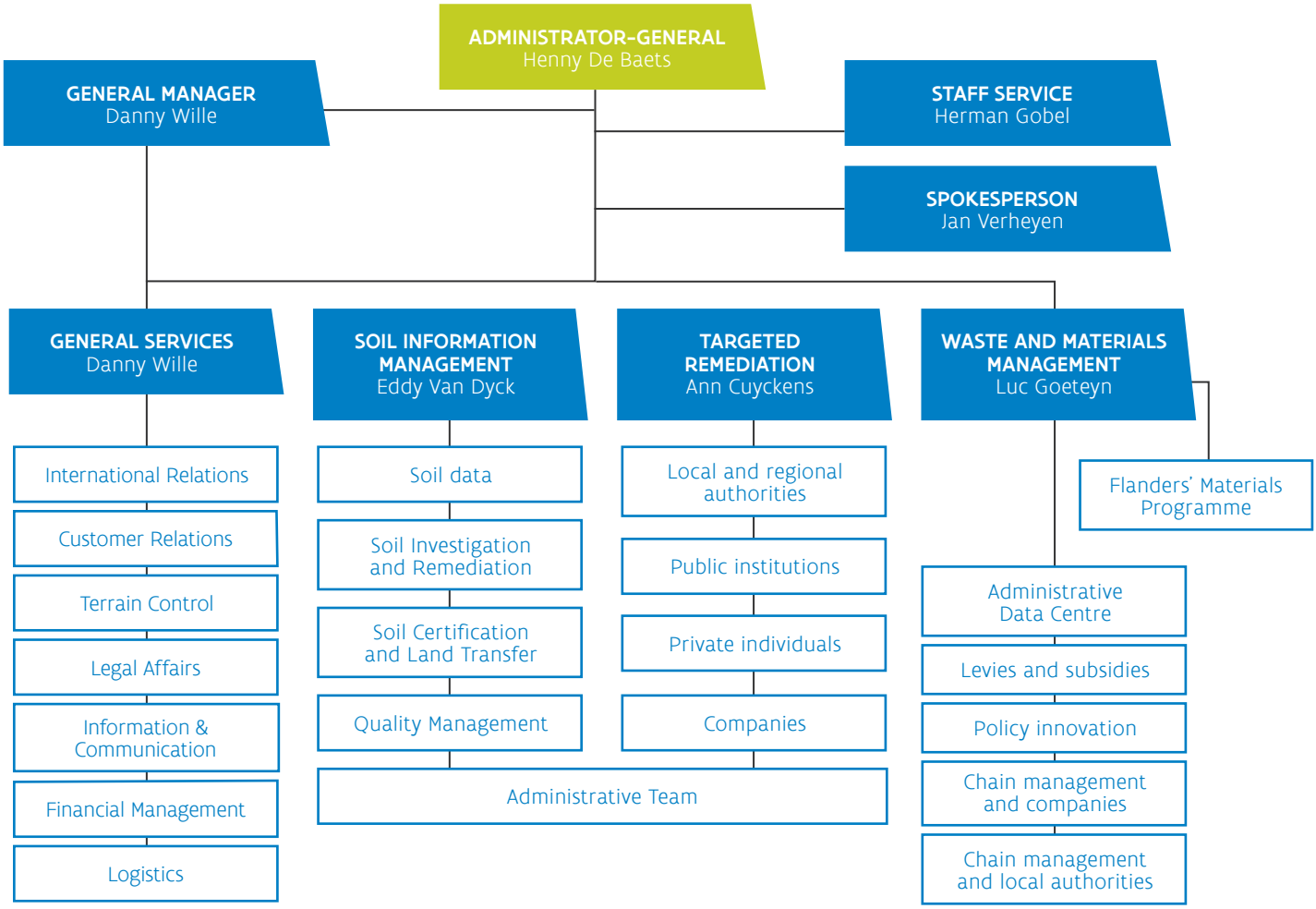
OVAM has been working for years towards 2036. It is by then, at the very latest, that the remediation of all historical soil contamination in Flanders must be started up. In order to achieve this objective, OVAM fine-tuned its internal structure and rolled out Flexible Working.

Two new departments replace the existing Soil Management and IVS (Interventions, Removals and Remediations) Departments:

The Soil Information Management Department manages soil information and is responsible for the implementation and handling of the soil procedures and for the coordination of the (soil) policy preparations.

The Targeted Remediation Department handles the remediation files, designs customised solutions, and performs ex officio remediations. In addition, it also acts upon policy or elaborates instruments. Four target groups are at the fore: companies, private individuals, local and regional authorities, and public institutions.

At the same time, OVAM has chosen for **Flexible Working,** a new form of cooperation and supervision that stimulates the creativity and focuses attention on intensive talent and competency management. That must keep the organisation flexible and make it more efficient.



In focus

Winner OVAM Ecodesign Award PRO

Buggybooker: Hire a pram

The Buggybooker, a rental service for baby buggies, won the 2015 OVAM Ecodesign Award PRO for 'product on the market'. With the Ecodesign Award PRO prizes, OVAM laurels the environmental efforts of designers and companies.

The concept is simple. With just a few clicks of the mouse, you can reserve a pram at www.buggybooker.com, and just a little later on, the pram is ready for you at the agreed-upon location. This service also makes it possible for families with young children to get around on the bicycle or on public transport. Frank Verheijden from Buggybooker: "Children usually find it much more fun to travel on the train or in the bicycle trailer. I got the idea to start a rental service because I was getting tired of my two daughters whining in the back seat."

Today, you can find Buggybooker at some 15 locations in Flanders and in the Netherlands in cities like Leuven, Hasselt, Mechelen, Ostend, Lommel, Eindhoven, Maastricht ... Any city or business can start their own pram point.

For more info, check out www.buggybooker.com

OVAM in 2015

ISWA WORLD WASTE CONGRESS IN ANTWERP (P.26)

422
number of abstracts submitted

93
nationalities

1.223
participants

AREA OF LAND REMEDIATED EX OFFICIO

OVAM remediates
715.38 hectares of land
(281 files) in 2015

INTERNATIONAL YEAR OF SOILS 2015 (P.6)

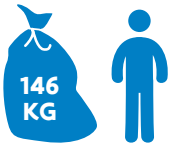
OVAM bundles
25 inspiring soil stories

STATE OF AFFAIRS MUNICIPAL INVENTORY 2015

153.399
lots inventoried

RESIDUAL WASTE IN FLANDERS
2004 - 2014

8% reduction
(relative to 2004)



146 kg
residual waste per capita in Flanders (2014)

Only 3 municipalities
produce more than
180 kg
of residual waste per inhabitant

LITTER: GET RID OF IT

150
clean-up campaigns throughout Flanders

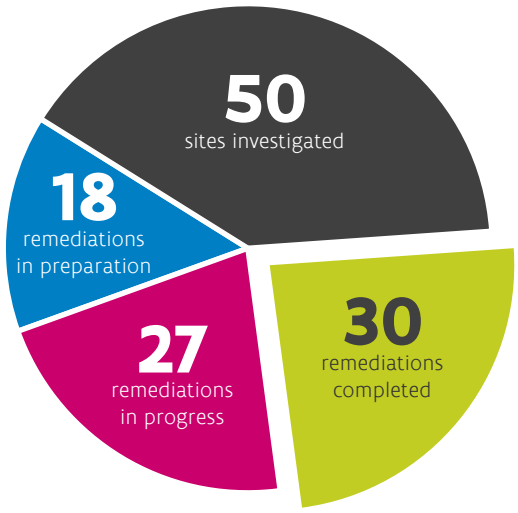
OVAM STRATEGIC PLAN
2015 - 2020

220 stakeholders surveyed

More than **2.100** reactions

MANUFACTURED GAS PLANTS (P.12)

125 gas sites in Flanders



AND THE GREENEST EVENT IS ... (P.27)

100 organisers of festivals, sporting events, etc. complete OVAM **'green event'** scan.

TIMELINE 2015

MID-FEBRUARY
Start of manufactured gas plant remediations in Sint-Truiden and Oudenaarde

5 MARCH
The City of Ghent and OVAM sign collaboration agreement

20 APRIL
Federation of Manufacturers of Recycling Granulates (FPRG) and OVAM celebrate 25 years of construction and demolition waste recycling

22 APRIL
International Year of Soils debate causes fireworks

1 JUNE
Luc Goeteyn succeeds Rudy Meeus as Head of Waste and Materials Management Department

8 JUNE
OVAM participates in Flemish Environment Week at Milan's World Expo

1 AUGUST
New litter campaign goes live

7-9 SEPTEMBER
ISWA World Waste Congress welcomes international waste experts to Antwerp

29-30 SEPTEMBER
Flemish Young Entrepreneurs (VLAJO) Innovation Camp tackles food waste

1 DECEMBER
Flanders' Materials Programme nominated for 'The Circulars' Award at the World Economic Forum in Davos

2 DECEMBER
European Commission publishes Circular Economy Package

4 DECEMBER
In cooperation with the European Commission, the International Year of Soils is festively concluded with a congress

THE INTERNATIONAL YEAR OF SOILS 2015 in five highlights

The United Nations proclaimed 2015 as the International Year of Soils, and the Flemish Soil Decree celebrated its 20th anniversary. The importance of a healthy soil has been placed in the spotlight for an entire year. Take a look back with us at five outstanding highlights.

1. Innovative campaign reminds us of the importance of a healthy soil

How can a healthy soil foster the sense of belonging to a neighbourhood? How can a healthy soil prevent cancer? With these types of questions from the 'Soil-conscious ' campaign, OVAM, together with its partners, launched the International Year of Soils.

A healthy soil is found underground and is not visible; therefore, it is considered rather unimportant. The goal of the 'Soil-conscious' campaign was to help turn the tide by having the general public recognise the importance of a healthy soil. With surpising stories, short films from documentary-maker Kobe Ilsen, and advertisements starring a cast of adorable soil-dwelling creatures, OVAM rolled out its cross-media campaign. It emphasised the impact of soil on our economy, living environment, health, and innovation.

Soil may not be seen as separate from its surroundings nor from the services it provides. Clean soil ensures healthy food and clean drinking water. It stores carbon and provides the space we need to live, to work, and to do business.

At a well-attended Soil Debate on 22 April, soil experts engaged in a dialogue with experts from all corners of society, including Leo Bormans, author of 'The World Book of Happiness', and Jan Tytgat, Director of Toxicology and Pharmacology at KU Leuven. This discussion placed the societal relevance of soil in a refreshing new light.

All stories, short films, and info about the 2015 International Year of Soils can be found at www.bodembewust.be

2. Soil pioneer Flanders at Milan's World Fair

From 1 May to 31 October 2015, the 34th World's Fair took place in Milan. The Fair's theme was 'Feeding the Planet, Energy for Life'. During the Flemish Environment Week, OVAM featured the theme 'soil' in the Belgian pavilion. Taking centre stage was the 'Soil-conscious' campaign, which had been specially tailored to the international audience. Testimonials from all over the world emphasised the importance of soil.

3. Gathering inspiring soil stories in Berlin

Six hundred scientists and policy-makers from 80 countries examined the soil challenges we face, now and in the future, on a global scale at the Global Soil Week in Berlin in April 2015. OVAM spoke at a meeting about how remediation can go hand-in-hand with innovative methods for redevelopment and new types of financing, such as crowdfunding.

After this, dozens of soil specialists from around the world shared their experiences, which resulted in a great many interesting stories. These stories once again stressed the societal importance of a healthy soil.

In Kenya, for example, certain ethnic groups attach religious significance to the soil. They use the soil for their rituals. They need unadulterated soil for these rituals, soil that has not been used for grazing or for agriculture. The Kenyan government is currently working on legislation that would anchor the right to land for religious purposes into the constitution.

Discover all of these soil stories at www.bodembewust.be/soil-and-sediment-stories

4. Healthy home turf

A healthy vegetable garden requires fertile, unpolluted soil. With the 'Healthy home turf' campaign, coordinated by the Department of Environment, Nature and Energy (LNE), the Flemish Government urges the public to do more of their own gardening, and to do so in a healthy manner. You will find the most important rules of thumb for growing healthy vegetables and eggs in your own garden in a brochure and at www.gezonduiteigengrond.be.

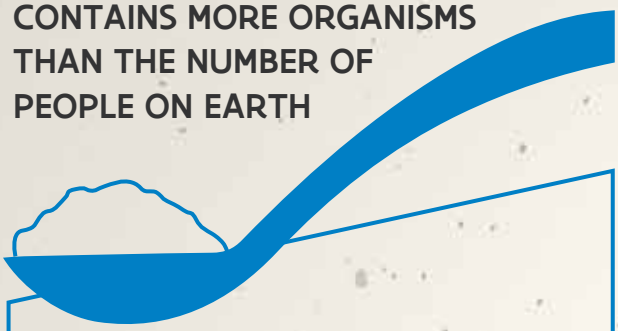
5. Soil contamination in 1,800 cartoons

During the International Year of Soils, soil contamination and remediation were also the theme of the 20th Euro-Kartoenale cartoon competition in Kruishoutem. No less than 532 cartoonists from 71 countries gave free rein to their imaginations. Their cartoons playfully portray the importance of a healthy soil for each and every one of us. The exhibition ran from 29 March to 14 June in the European Cartoon Center.

4 REMARKABLE SOIL STATISTICS

1 TEASPOON OF SOIL

CONTAINS MORE ORGANISMS THAN THE NUMBER OF PEOPLE ON EARTH

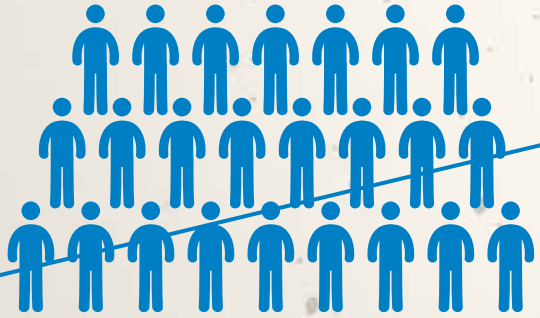


These soil-dwelling organisms are crucial to our health. They provide clean drinking water and a balanced diet. Furthermore, they are the source of life-saving medicines. Almost all known antibiotics come from soil bacteria or soil moulds. Some soil organisms even produce substances that increase our feeling of happiness and are used in antidepressants. That is why it is so important that we keep our soil healthy.

808.700 HECTARES

That is how much land is needed in Flanders to provide every resident of Flanders with locally produced food. But we don't have that much land. The area cultivated is approximately 665,000 hectares. We import food from all over the world to feed all these mouths. But how sure are we that that food will always be available? The loss of fertile soil throughout the world, climate change, the limited availability of fossil fuels, and geopolitical tensions... There is a very real chance that the door to food importation will close entirely at some point. That is why we had better take care of each and every clump of fertile soil.

474 INHABITANTS



That's how many people live on one square kilometre in Flanders. And increasing urbanisation is one of the greatest causes of soil degradation. By sealing the soil, less rainwater seeps through to the groundwater table. If the water is barely able to infiltrate, heavy rains quickly lead to soil erosion, and valuable fragments of agricultural land are washed away. That causes increased sludge deposits in our waterways. And clean-up and dredging works mean additional costs.

33 PERCENT OF THE SOIL WORLDWIDE HAS BEEN IMPACTED AS A RESULT OF DEMOGRAPHIC PRESSURE AND POLLUTION

Europe redraws the path to a re-use economy

Most of the objectives of the current European Commission are lower than those of the previous European Commission:

By 2025, 60% of municipal waste must be recycled; by 2030, that figure must have risen to 65%. The original goal for household waste recycling was set at 70% by 2030.

The recycling goals for packaging waste were set at 65% by 2025 and at 75% by 2030. In the package from the previous Commission, the recycling goals were set at 70% and 80%.

The landfill ban from the previous package became a compulsory objective to landfill only a maximum of 10% of the separately collected household waste by 2030.

The goal of achieving 30% less food waste by 2025 has disappeared from the new package.

Member states that are behind in their recycling objectives receive a 5-year postponement.

At the end of 2015, the European Commission published the updated Circular Economy Package. That package replaces the plan from the previous European Commissioner of the Environment.
Is the current Commission more ambitious, or have its objectives been weakened?

Why this new package of measures?

The Circular Economy Package was very ambitious and visionary. Our country was happy with it because it was full of incentives to set the bar for sustainable materials management even higher. Many other Member States, however, found the objectives too ambitious. At the beginning of 2015, the current Commissioner withdrew the Circular Economy Package with the promise of making an even more ambitious plan..

>

Has he lived up to his promise?

The package is more ambitious on some points, but generally speaking, the objectives have been weakened relative to previous plans. The new package consists of 'Closing the Loop - An EU action plan for the Circular Economy' and a proposal for the revision of the six waste directives: the Waste Framework Directive and the Directives for the landfilling of waste, packaging waste, end-of-life vehicles, batteries, and electrical and electronic waste. On the positive side, the new package takes into account all of the links in the chain. This way more attention will be paid to product policy, eco-design, etc. The plan also zooms in on a few specific sectors, such as food, construction and demolition waste, and biomass. It also allows for customisation by the Member States that are running behind.

Which of the plan's points look promising?

What is encouraging is that the manufacturer must take attention to the efficient use of materials as early as the design phase of a product. The consumer must receive better information at the time of purchase of the product: Is the product made from recycled materials? Were less scarce materials chosen? As is now the case for electronic devices, they will have an energy label that shows how economical they are.

Another positive aspect is the attention paid to green government contracts. Public procurements make up some 20% of the market and, in that sense, act as important leverage for setting innovations into motion. The new plan also looks at the expanded responsibility of manufacturers - manufacturers are responsible for the waste created by their products. The action plan also aims to encourage them to design their products in such a way that they can be easily repaired and have a long service life.

Which of plan's points are not ambitious enough?

The objectives of the current European Commission are lower than those of the previous European Commission (see info graph). In addition, the landfill ban has been weakened; by 2030, 10% of the selectively collected waste may still be landfilled. In the new package, there is no trace left of the objective of having 30% less food waste by 2025. And finally, the plan's focus is still strongly on waste legislation, while the circular economy must chiefly focus on a new economic model where raw materials and resources are handled more wisely.

What steps must the Circular Economy Package now go through?

The action plan was discussed in the European Council, which represents the 28 Member States, in February 2016. It is OVAM's job to come to one Belgian position in consultation with all parties involved in Flanders, Brussels, and Wallonia. Our stakeholders were also consulted. The European Council submitted its remarks to the European Commission in June.

Flanders' Materials Programme wins prestigious Circulars Award

'The Circulars' were awarded at the World Economic Forum in the Swiss city of Davos in early 2016. These prizes are awarded to the best and most inspiring projects related to the circular economy. OVAM won an award for its Flanders' Materials Programme (FMP).

In the public-private FMP, partners from all sectors of society joined together in 2012 for the transition to sustainable handling of raw and other materials in a future-oriented re-use economy.

The FMP beat out formidable opponents like The City of Sydney (Australia) and The National Zero Waste Council (Canada) for the 'governments, cities and regions' category award in Davos.

The jury consisted of William McDonough, co-author of '*Cradle to Cradle - Remaking The Way We Make Things*', Ellen MacArthur, founder of the eponymous Foundation that works on circular economies, and former EU Commissioner for the Environment Janez Potočnik. In its report, the jury praised "the dedication of OVAM in its efforts towards sustainable materials management, the impressive volume of initiatives and projects that are executed within the region under the auspices of the FMP, and the cooperation between a vast number of stakeholders and economic sectors, and this all-encompassing programme".

IN FOCUS

Alice wins Additive Design Challenge

3D printing to combat waste

In 2015, 60 thinkers, doers, and designers got down to work with 3D printing. Through the Additive Design Challenge, Plan C and OVAM challenged them to make an economically viable and circular product.

At the beginning of 2015, designers, companies, and students signed up for the Additive Design Challenge. After a 6-month coaching process, the jury selected four winning designs:

- Turbulent, a new way of converting small-scale hydropower into electricity;
- Bookbox, audio stories with 3D-printed tactile illustrations for blind and visually-impaired children;
- Absorblight, a table lamp that absorbs ambient sounds and enhances speech;
- Alice, a modular shoe.

Alice designer Kristel Peeters: "Alice is a modular shoe and a sustainable solution for the problem of disposables. The sole and the inside of the shoe are 3D-printed and are therefore custom-made. This means that the shoe fits like a glove, so to speak, and so you wear it longer. Only the shoe's 'jacket', which is attached to the sole, is changed depending on the season or on your outfit for the day."

Manufactured gas plants and asbestos in schools: Cleaned up, ready to go

Contamination from manufactured gas plants: a thing of the past

After the Second World War, the last of the 125 manufactured gas plants in Flanders shut its doors. OVAM tackled the lands that were contaminated by the gas production at an accelerated pace and assisted, in word and deed, cities and municipalities with the old gas sites on their territories.

From the 19th century through the first half of the 20th century, coal gas was produced from coal and used for street lighting, among other things. During the production of this gas, toxic substances, such as tar and cyanide, were released. These substances ended up in the soil and in the groundwater, leaving these sites severely contaminated even today. This pollution can be a serious risk for public health because the former manufactured gas plants are usually situated in urban areas, in the heart of or on the edges of residential areas.

Local remediator for fellow authorities

Flanders has 125 old gas sites. OVAM picks up the pace: All soil investigations at manufactured gas plant terrains must be completed by the end of 2016, and the remediation of these sites must be started by 2022 at the very latest. In order to achieve this ambition in good time, OVAM is mobilising its many years of experience and expertise to assist fellow authorities in the remediation of manufactured gas plants. In the coming years, OVAM will act as a remediator partner, knowledge centre, and partner for the local authorities who administer thirteen such gas sites. Those cities or municipalities were the owners or the managers of these manufactured gas plants at the time of their operation. Therefore, they are legally required to bear the costs of the remediation themselves.

OVAM now utilises its know-how to assist the local authorities and to adequately and cost-effectively tackle the soil contamination at these thirteen sites. In concrete terms, OVAM assumes responsibility for the descriptive soil investigations, soil remediation projects, and soil remediation works, as well as pre-financing these.

OVAM's policy on gas sites can be found at www.ovam.be/gassites

From manufactured gas plant to homes with a view of the Scheldt

In Oudenaarde, along a dead-end arm of the Scheldt, you will soon be able to enjoy idyllic living and a pleasant work environment with a view of the river. In the spring of 2015, OVAM took on the heavily contaminated manufactured gas plant site there. They seamlessly coordinated this remediation with the building plans.

When gas was produced from coal at the beginning of the last century, large amounts of harmful substances, such as tar and cyanide, ended up in the soil. These substances have severely contaminated the land and the groundwater. A radical remediation of the degenerated terrain along the head of the Scheldt became imperative.

At the beginning of 2015, OVAM started the remediation of the soil land and the groundwater and continued until there were no more risks to public health or the environment. The contaminated soil was excavated and carried off for processing.

From the start, the remediation also took into account the building plans for the site. After excavation, we usually refill the site with clean soil. But this didn't make much sense at the location where the homes and other facilities would soon be constructed. After all, the builder would have to do his own excavation work in order to build the underground parking garage. We excavated the contaminated soil somewhat deeper at the site where the green zone around the future buildings would be, since we already had the plans for its landscaping in mind. By ensuring thorough deliberation and consultation in advance, all parties saved valuable time and money.

150 specialists at International Manufactured Gas Plant Site Symposium in Ghent

Other major cities must also contend with contamination from old manufactured gas plant sites. That was evident from the great interest in the International Symposium and Exhibition on the Redevelopment of Manufactured Gas Plant Sites. OVAM was co-organiser of this international congress, which took place from 8 to 10 November 2015 in Ghent. One hundred and fifty specialists from all over the world exchanged knowledge and best practices related to the remediation and redevelopment of manufactured gas plants.

More info about the International Manufactured Gas Plant Site Symposium can be found at http://mgpsymposium.com/

Where is the asbestos in schools?

It is estimated that a total of some 15,000 tonnes of asbestos is present in all of the schools in Flanders. And because children are especially vulnerable when exposed to asbestos, Flanders has made the tackling of asbestos in schools a priority. In 2015, OVAM started making an inventory of exactly where the asbestos is and precisely which asbestos products are present?

Breathing in asbestos fibres is harmful to the health. It causes lung cancer or asbestosis (a disease that damages the lung tissues). When exposed, children are extra vulnerable. That is why the Government of Flanders decided to accelerate the handling of the asbestos problem in 2014. OVAM coordinates this asbestos removal and contributes to the financing of this work. Schools, residential buildings, and agricultural and horticultural holdings are given priority.

Asbestos removal plan

All of Flanders must be asbestos-safe by 2040. OVAM will reveal how it will achieve this final goal by 2018 in an asbestos removal plan. To do this, it must map out exactly where the asbestos is located and which asbestos products are present.

OVAM took the first step in 2015, when it requested that educational institutions from all over Flanders carry out an in-depth asbestos inventory. This inventory goes further than the statutory asbestos inventory that every employer is obligated to draft in order to protect all employees and users of their buildings against exposure to asbestos. However, the existing asbestos inventory only records those sections of the buildings where asbestos exposure is possible. Spots that are difficult to reach or areas that are very seldom used are not included. With its detailed inventory-making, OVAM aims to track down these locations, too.

425 schools request an inventory

425 schools requested an inventory in 2015. Professional, external inspection agencies will verify the presence of asbestos in 300 of those throughout 2016. If the situation proves to be high-risk, then the participating school can make an appeal to OVAM.

Scholengroep 11 of the Flemish Community's GO! educational network also requested an inventory. Scholengroep 11 has 38 buildings in the Leuven, Landen, and Tienen regions. Asbestos was found in

one of those schools, in the centre of Leuven.

Health and safety officer Wim Goris from Scholengroep 11: "The building in questions was built in the 1950s. The heating pipes in the basement are insulated with asbestos. This insulation is now in poor condition. Now that we want to build three new classrooms next year, it is high time to remove this asbestos. After all, the electricity cables and the heating pipes for the new building will also end up in the basement.

By way of an OVAM framework contract, a specialised company will remove the asbestos in April 2016. OVAM pays 60% of the costs, and our school network will cover the remaining 40%. Without this financial support, we would have to postpone the remediation for years."

Health and safety officer Wim Goris from Scholengroep 11

"We are gaining at least 50 years."

Scholengroep 11 has made an asbestos inventory of its 38 buildings. Health and safety officer Wim Goris: "We know exactly where the asbestos is located in each of our school buildings. We monitor the condition of the asbestos in-detail on an annual basis. We even perform air quality measurements in one school to check whether any asbestos particles are circulating. We also inform maintenance technicians and other external parties so that they can put on the necessary protective clothing."

"Of course, that does not take away from the fact that remediation is urgently needed in some schools. Without the intervention of the Flemish Government, the schools would never succeed in removing the dangerous fibres quickly enough. After all, the removal of high-risk, non-friable asbestos applications, such as asbestos-containing pipe insulation, is expensive. Last year, at our own expense, we were able to tackle one school. The cost? 65,000 euros. Thanks to the asbestos elimination policy, we can now clean up all of the asbestos much sooner. That means we gain at least 50 years."

Up to the light: The impact of a deposit system

What would be the effect of the introduction of a deposit system on single-use beverage packaging in Flanders? In 2015, at the request of the Flemish Minister of Environment, Nature, and Agriculture, Joke Schauvliege, OVAM mapped out the impact of this measure on litter, selective waste collection and cost.

The study consisted of four phases: the elaboration of five different scenarios for the introduction ofdeposit systems, an analysis of their impacts, a legal analysis, and a study that scrutinised one concrete scenario.

All concerned parties showed a great deal of interest in the study right from the start. Federations from the food industry, the distribution industry, companies, environmental organisations, the Interregional Packaging Commission (IVC), the federal government, cities and municipalities, the Walloon Region, and the Brussels-Capital Region, among others, were represented in a focus group that met five times throughout the course of the study (December 2014 - October 2015).

In addition, informal consultation meetings were held, which included company visits, etc. The preferred scenario that was studied in detail assumed a 25-cent deposit on plastic beverage packaging and cans. Consumers can return the empty packaging to the supermarket and to large distribution centres. Smaller sales outlets, such as sandwich bars, chip shops, and news agents, may participate in the deposit system on a voluntary basis.

The study brought to light the following advantages and disadvantages associated with the introduction of a deposit system in Flanders:

ADVANTAGES

1. **20% to 40% less litter** (in volume) and cleaner public spaces.

2. **Municipalities pay less** to keep the streets and squares clean:
   - municipalities that work with permanent litter clean-up rounds save between **1.8 and 3.6 million euros;**
   - municipalities that clean-up litter as needed save between **7.6 and 15.2 million euros.**

3. **Increased recycling** of the single-use beverage packaging that now ends up in the household waste, as litter, or in public waste bins.

DISADVANTAGES

1. The introduction of the deposit system costs (with a large margin of uncertainty) 77 million euros annually. That is **three times more** than the cost of waste **collection via the PMD bags** (Plastic bottles and flasks, Metal packaging and Drink cartons) (24 million euros annually).

2. If the deposit system is successful and at least 90% of the packaging is returned, then this will lead to a deficit in the financing of the system. Manufacturers and importers will have to bear that deficit. Possible sources of revenue are the unredeemed deposits and the revenue from materials.

3. **Possible shifts in the purchasing behaviour of citizens** (e.g. reduced consumption, increased purchases in foreign countries, decreased purchases in retail outlets). **The expected effect on Flanders** is not clear. An analysis of the impact of the introduction of a deposit system in neighbouring countries produced varying results.

4. **Introduction a deposit system in Flanders only** is very difficult, both operationally and legally.

CONCLUSION

The advantages and disadvantages outlined above do not make the introduction of a deposit system an obvious choice. Furthermore, the study showed that it is legally difficult to introduce the system solely in Flanders. And if we want to introduce a deposit system throughout all of Belgium, then that will require consultation and coordination between the regions and the federal government.

This finding does not take away from the fact that OVAM is concerned about the litter issue. There is no doubt that litter is a great hindrance to citizens and that an adequate approach is absolutely essential. In order to effectively tackle the litter problem, Minister Schauvliege signed an agreement with the packaging industry at the beginning of 2016. The sector laid 9.6 million euros on the table to combat litter.

This renewed litter policy will be evaluated in cooperation with the industry at the beginning of 2018. The point of departure is the baseline measurement that OVAM made in 2013 and 2014. If no changes are visible in the amount of litter on the ground, at bus stops, along motorway car parks, and around the bottle banks by 2018, then the Minister will consider whether a deposit system can still be introduced.

You can view the final reports at www.ovam.be/statiegeld

This is how the building of the future looks

After several decades, most houses and buildings have seen better days. The demolition crane levels everything and what remains is a heap of building debris. OVAM wants to change all this with its 'Design for change' policy concept. The goal: to drastically reduce our footprint and close the materials cycle in the construction sector.

Currently, Flanders still builds in a very traditional manner. As a result, adapting buildings to the new needs of users leads to high costs, nuisance in the immediate surroundings, a great deal of waste, and a high consumption of raw materials. The increasing scarcity of materials and the rapidly changing building standards that stimulate contractors and owners to build more sustainably are forcing us to change the way we build. We must take into account the changing needs and requirements of the individual users as well as the society starting early on, in the design phase. Therefore, we must build houses and buildings today in such a way that future renovation work is less polluting and less material-intensive. By working with building elements that can be disassembled, recycled, or reused, we can keep materials in the cycle indefinitely.

In addition, design-for-change construction also contributes to the efficient use of space. Continually broaching open space is detrimental to the climate and to mobility. Therefore, we must do more with the space we already use. By constructing a building that combines various functions or that can be adapted to fulfil temporary needs, the need for public spaces decreases.

23 design guidelines

OVAM commissioned a study of this dynamic building concept in 2014 and 2015. The result is the 'Design for change: Development of an assessment and transitional framework' study from VITO, the VUB, and the KU Leuven. OVAM came up with 23 detailed design guidelines for the purpose of integrating dynamic building as early as the design phase at the level of the neighbourhood, the building, and the elements. Each guideline has its own design sheet. This sheet indicates to designers and principals how they can incorporate dynamic building into their designs and which solutions already exist.

Check out the study at **www.ovam.be/veranderingsgerichtbouwen**

NEIGHBOURHOOD

DECONSTRUCTABILITY

If we are able to deconstruct roads, squares, and utilities without damaging them, then buildings and infrastructure are easier to maintain, demolition is easier, and we are able to re-use more materials.

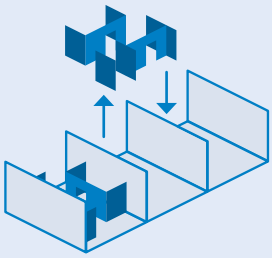
MULTIPURPOSE AREAS

In public facilities, such as public parks and sport centres, a wider variety of activities must be possible without having to adapt the space. This benefits community life.

DIVERSITY

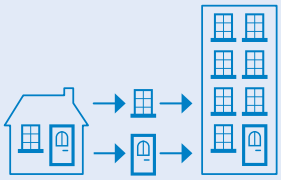
A mix of functions, facilities, and types of home in one neighbourhood increases the liveability and social cohesion of that neighbourhood. Furthermore, this diversity makes it easier to integrate new functions at a later stage.

BUILDING



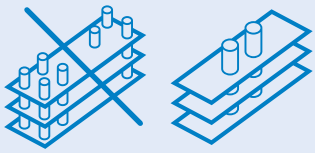
RE-USABILITY

Walls, floors, and windows are designed in such a way that they can be combined in all manner of ways. By also making them deconstructable, they can be reused in other building projects.



VARIABLE FUNCTIONALITY

A building that can have several functions or that allows a future change of function, lasts longer. And that reduces renovations and demolitions.



EXPANDABILITY

If a building must be expanded or if the function of the building changes, then the technical requirements for the load-bearing construction, installations, pipes, and (thermal/acoustic) insulation must also be adapted.

As opposed to scattered, technical distribution (above), a linked technical distribution (below) allows for easy expansion.

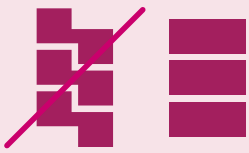
ELEMENT

REVERSIBILITY

It must be possible to deconstruct building components without damaging them; for example, by using reversible connections, such as screws and bolts, instead of using adhesives or welding. In this way, the disassembled parts can be reused, and the sorting and recycling processes are more efficient.

SUSTAINABILITY

The multiple re-use of components is only possible if sustainable materials are used. Examples of these are bricks, ceramic (roofing) tiles, steel joists and profiles, and oak beams. Their resistance to wear and gradual degradation make re-use possible.



INDEPENDENCE

The components of a building element must be able to be used independently of one another. This makes the replacement, removal, or repair of one or more of the components significantly easier.

In focus

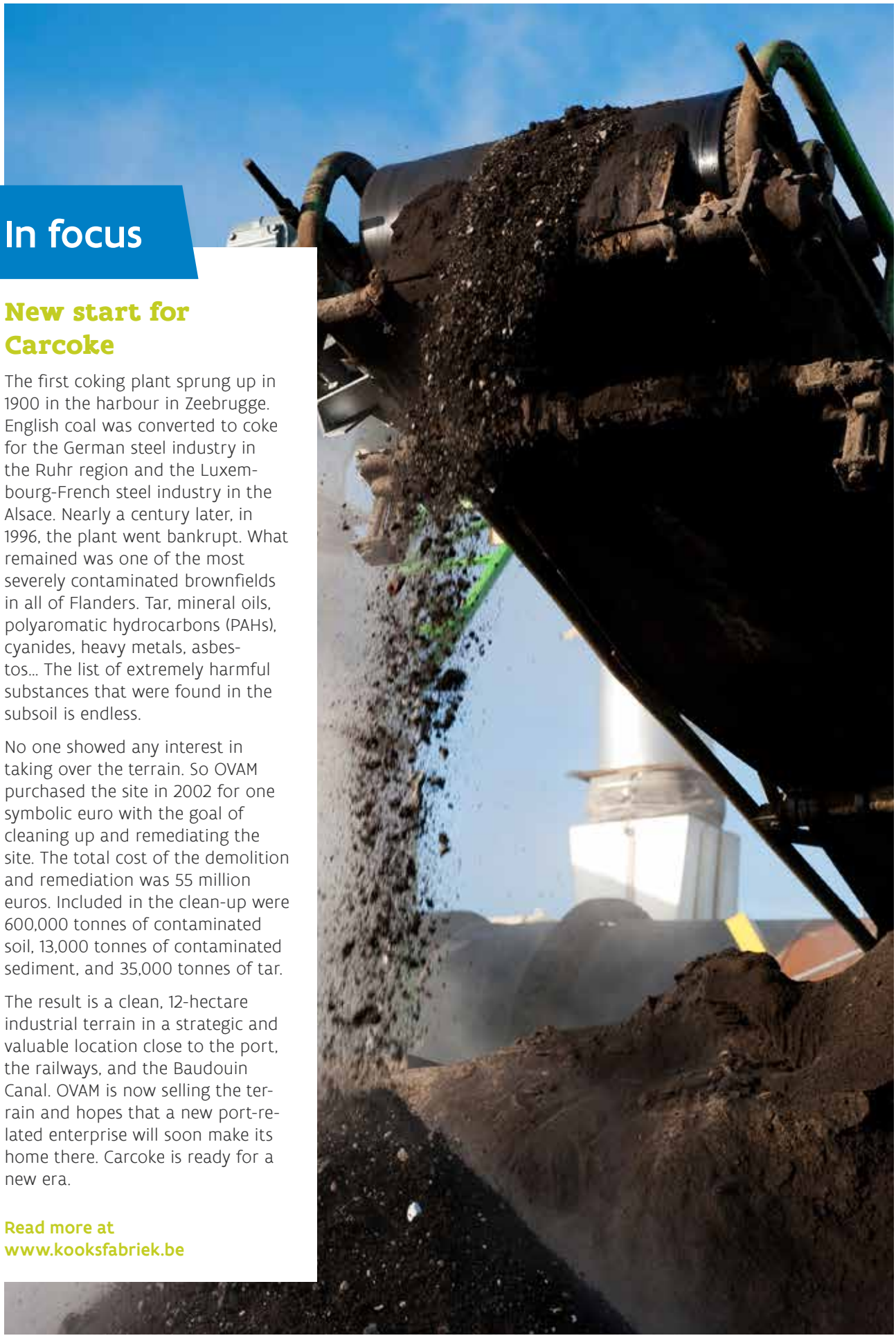
New start for Carcoke

The first coking plant sprung up in 1900 in the harbour in Zeebrugge. English coal was converted to coke for the German steel industry in the Ruhr region and the Luxembourg-French steel industry in the Alsace. Nearly a century later, in 1996, the plant went bankrupt. What remained was one of the most severely contaminated brownfields in all of Flanders. Tar, mineral oils, polyaromatic hydrocarbons (PAHs), cyanides, heavy metals, asbestos... The list of extremely harmful substances that were found in the subsoil is endless.

No one showed any interest in taking over the terrain. So OVAM purchased the site in 2002 for one symbolic euro with the goal of cleaning up and remediating the site. The total cost of the demolition and remediation was 55 million euros. Included in the clean-up were 600,000 tonnes of contaminated soil, 13,000 tonnes of contaminated sediment, and 35,000 tonnes of tar.

The result is a clean, 12-hectare industrial terrain in a strategic and valuable location close to the port, the railways, and the Baudouin Canal. OVAM is now selling the terrain and hopes that a new port-related enterprise will soon make its home there. Carcoke is ready for a new era.

Read more at www.kooksfabriek.be



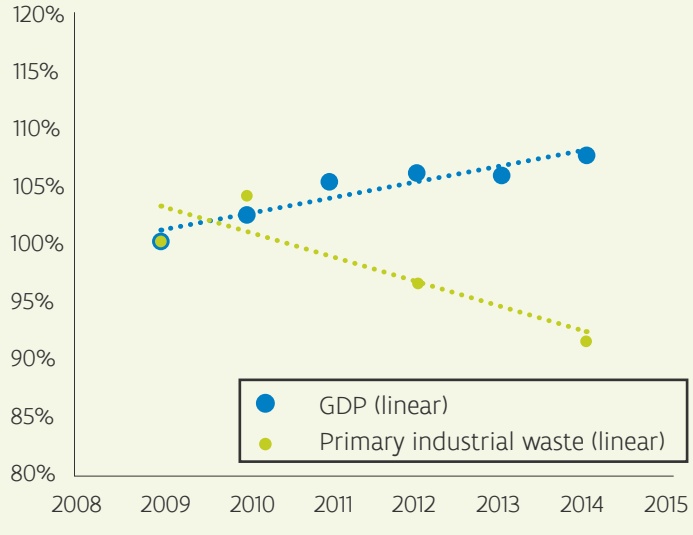
Selective collection pays off

In 2015, managers of hotel, restaurant and catering businesses and bakers had the opportunity to read testimonials and tips in their respective trade journals about how to selectively collect waste. Bart and Peter Tomassen from Brood & Banket Tomassen in Genk are now convinced: "Selective collection requires a bit more work than just throwing all the waste in one bin, but generally speaking, it ends up being less expensive. And it's better for the environment."

TOTAL PRIMARY INDUSTRIAL WASTE
13.911.000 tonnes

PRIMARY INDUSTRIAL WASTE
THAT IS GIVEN A SECOND LIFE:
77%

Dissociation of the production of primary industrial waste and GDP



By 2022, all Flemish companies together must produce 15 percent less mixed industrial waste. OVAM investigated which sectors could improve their selective collection of waste. There seems to be room for improvement in the hotel, restaurant and catering industry and at the fresh bakery shops.

Communication campaign

Together with sector federations Horeca Vlaanderen and Bakkers Vlaanderen, OVAM created a communication campaign tailor-made for both target groups. A message sent out via the sector itself is more credible and immediately reaches the right people. The federations themselves also know what works and what doesn't when it comes to their members and the most appropriate channels of communication.

Less expensive

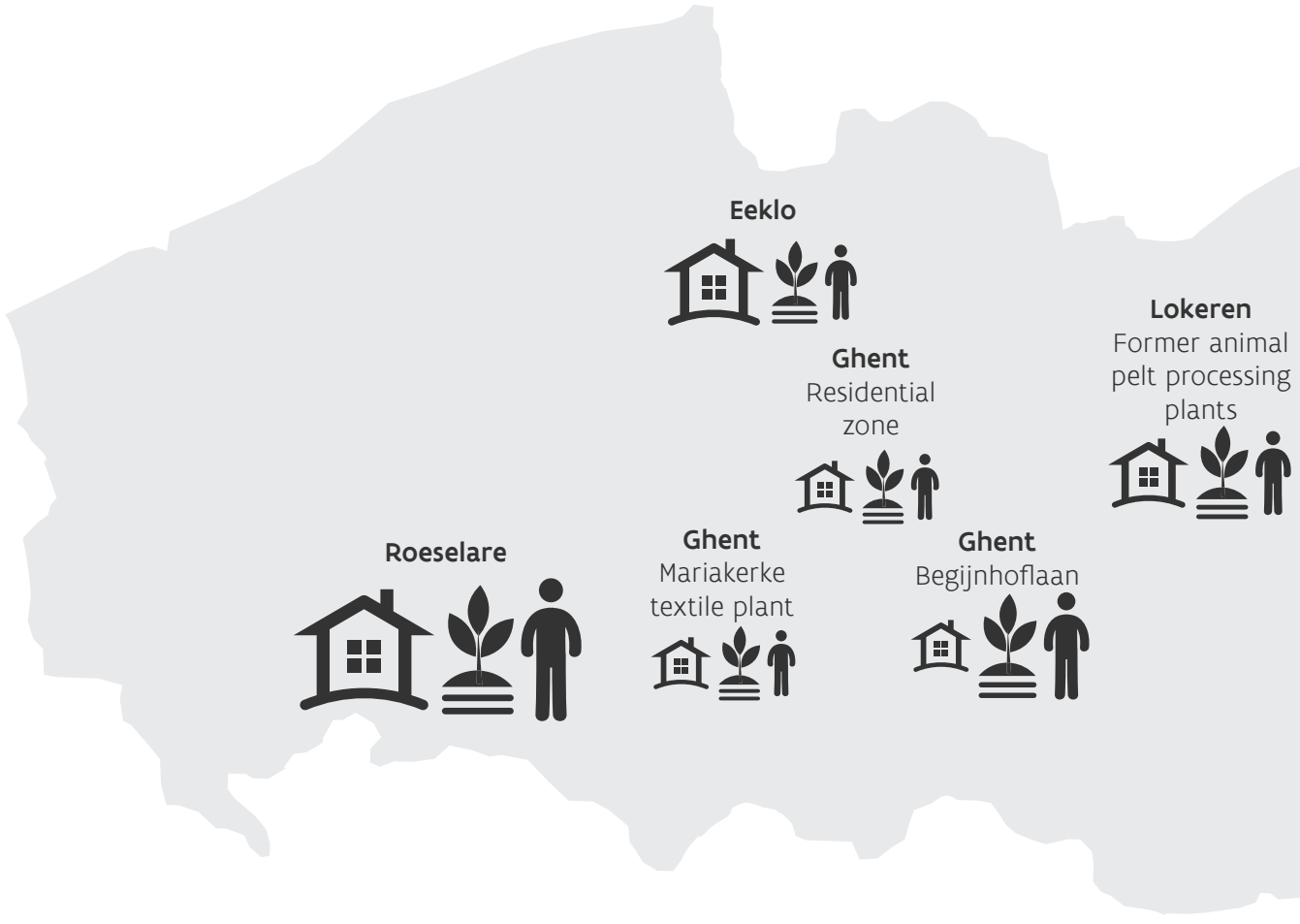
Bart and Peter Tomassen from Brood & Banket Tomassen in Genk decided to get involved: "Since we have started separately collecting PMD, plastic films, and organic waste, such as left-over dough and old baked goods, the quantity of our residual waste has shrunk considerably. Before, that container had to be collected once a week; now it is only once every three weeks. That ends up being less expensive. It's true that selective collection does require more work than just throwing all the waste in one bin, but with this new method, we are doing our share to help the environment and we're saving money."

762 families helped by residential zone projects

In many places in Flanders, people live on land that may be contaminated by activities from the past, like a residential neighbourhood that was built decades ago on an old dump or a neighbourhood that is situated close to a polluting company. OVAM is taking a grouped approach to these residential zones.

OVAM groups the individual residential lots on which high-risk activities previously took place together under a site decision, meaning that a single, coordinating soil investigation can be carried out for all of the lots. This global approach guarantees residents and owners rapid information about the quality of the soil, while reducing costs and administrative red tape.
In 2015, 54 new locations in Flanders were grouped into 11 residential zones. This meant that 762 families were no longer obligated to fulfil their investigation and remediation duties. They also received clear-cut information about the soil quality of their own lots.

More info: www.ovam.be/woonzones



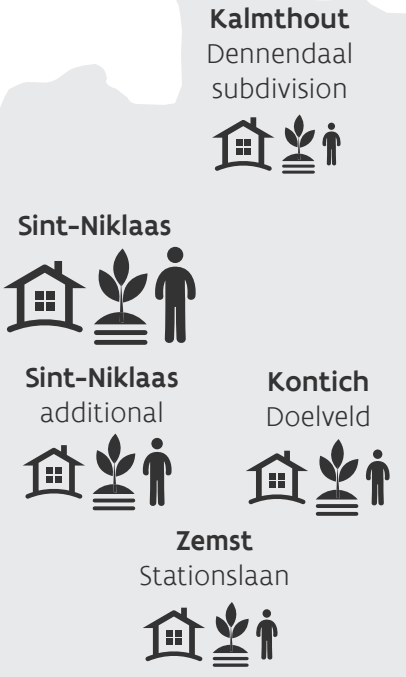
Residential zones 2002-2015

Number of **residential zones in Flanders**
74

Number of **locations**
373

Number of **sites**
4.300

Number of **families helped**
7.599



Municipality and name of site	Number of locations	Number of lots	Number of families
Roeselare	26	128	280
Sint-Niklaas	4	65	77
Sint-Niklaas - additional	1	33	41
Lokeren – Former animal pelt processing plants - additional 3	5	60	64
Ghent - Residential zone Sint-Baafskouter	1	37	44
Ghent - Begijnhoflaan	1	72	118
Eeklo	12	47	53
Zemst - Stationslaan	1	7	10
Kalmthout - Dennendaal subdivision	1	4	4
Ghent - Mariakerke textile plant	1	30	43
Kontich - Doelveld	1	31	28

UN uses Flemish waste policy as a model

The International Solid Waste Association's (ISWA) World Waste Congress descended upon Antwerp in September 2015. There, for the first time, the United Nations (UN) presented an international overview of the waste issues, which putsFlanders forward as an example. An exceptional recognition, according to Danny Wille, General Manager of OVAM.

Having Antwerp host the ISWA was a real honour for Flanders. Why?

Danny Wille: "The ISWA Congress is easily considered the high mass of the international waste sector. For Flanders, it was a unique chance to bring that top event to Antwerp and to showcase our successful waste and materials policy to the rest of the world. More than 1,300 experts and leading managers from 93 countries descended upon Antwerp."

What role did OVAM play in the organisation of the Congress?

"OVAM was a co-organiser and provided financial support for the Congress. And it is from this role that we made the argument for taking a broader view of the waste theme and for opening it up to include the entire cycle: How can we re-use or recycle our waste so that it once again ends up as usable material in the cycle? All of the partners rallied around our plea and renamed the theme 'Let's make the most of our resources and waste'."

Waste professionals are calling the Congress a milestone in the international approach to waste. Is that true?

The Global Waste Management Outlook (GWMO) shows the worldwide impact of waste on the climate: improved waste management could reduce emissions of greenhouse gasses by 15% to 20%.

With examples of good practices - a great number of which come from Flanders - the action plan also provides the instruments needed for effective waste management. The cost to society of doing nothing is higher than the financial costs of rolling out an effective waste management plan."

"The fact that the UN commends the waste and materials policy of the densely populated Flanders is an important recognition. Demographers predict that the population of the world will continue to increase in coming decades and that this population will be concentrated in cities. Flanders's chain and re-use approaches already offer an answer to these future challenges."

Which actions, insights, or contacts resulted from the ISWA Congress?

"The UN asked us to translate the Flemish model into a short- and a long-term strategy for the waste policy in Lebanon. That country has been in a major waste crisis for months now. As a result of the closing of the most important landfill, the waste has been piling up in the streets of Beirut. We went to Beirut for the first time in October 2015. In February 2016, we once again discussed the situation with the Lebanese government. In this pilot project, under the auspices of the UN, we are exploring how we can share our knowledge with the rest of the world. In the long term, the objective is to be able to have the Flemish companies, which have been carrying out our waste policies in practice for years now, also transfer their know-how on an international scale."

You can find the Global Waste Management Outlook at www.unep.org/ietc/OurWork/WasteManagement/GWMO

Seven to ten billion tonnes of waste are produced each year in cities around the world

70% of the that waste is dumped

3 miljard people have no access to controlled waste processing

Improved waste management can reduce the emissions of greenhouses gasses by **15 tot 20%**

Source: Global Waste Management Outlook, UNEP - ISWA, September 2015

In focus

Winner GroeneVent Award

Green Guerrilla at Sfinks

In 2015, the Sfinks Mixed festival claimed the GroeneVent Award in the Large Event category. OVAM uses this annual prize to honour sustainable events.

Organiser Patrick de Groote: "We have been working on producing a sustainable event for years, and now that work is being recognised. We focused on a sophisticated waste policy in 2015. 'Green Guerrillas' kept the festival fields clean. Cups, plastic bottles, plates, food waste, and residual waste were collected separately on waste islands. By using PLA cups (polylactic acid, plastic made from natural raw materials) and food containers made of sugar cane, the waste produced was also biodegradable. That is quite an accomplishment, but next year we are going to go even greener."

Other winners of the GroeneVent Award 2015 were the Release Festival in Borgloon and Ieperfest.

Would you also like to compete for the 2016 GroeneVent Award? Check out www.groenevent.be for all the info!

OVAM remediates heavily polluted canal sludge

Eeklo enjoys uncovered Dullaert in city centre

In 2004, a construction company in Eeklo purchased an old textile dye works in order to construct apartments on the site. The demolition of the plant exposed a severely polluted canal under the plant premises. Would this throw a wrench in the redevelopment works? The City of Eeklo and OVAM had other ideas.

From this polluted urban site, they have created an attractive residential area along the Dullaert. Situated right on top of the old canal was the former textile weaving plant Covina, which had been dumping its waste through a large pipe in the floor straight into the Dullaert below for years. These many years of discharge polluted the sediment with a poisonous brew of heavy metals, mineral oils, PAHs, and nonylphenols. The dye works went bankrupt in the 1980s. Since then, the old plant building, just a stone's throw from the centre of Eeklo, has been abandoned to the ravages of time. That is, until 2004, when a construction company bought the plant and the surrounding grounds.

8,000 tonnes of sludge

Seven residential buildings, good for 146 apartments with a view of the open and clean water of the Dullaert - these are the splendid plans they had for the canal zone in Eeklo. But first, the Dullaert had to be remediated. In the beginning, it was unclear who would have to cover the costs of the remediation. Since the construction company was the 'innocent owner' and since Covina had gone bankrupt in the meantime, OVAM took responsibility for the investigation and for the remediation.

In 2015, a two-metre-thick layer of sediment was removed over the entire length of the canal, approximately 180 metres. This came to 8,000 tonnes of sludge. The canal bed was refilled with clean soil from a sand dredging. Reed zones have appeared along the banks where fish can shelter and reproduce. The first apartment building with a view on the babbling canal has already been built.

But that wasn't the only reason to give the hidden Dullaert a new day in the sun, Dirk Waelput, from the City of Eeklo's Urban Planning Office, tells us. "At the moment, we are completely absorbed with the reorganisation of the city centre. The laid-open Dullaert is the perfect solution for accommodating excess water. Moreover, the water brings a touch of nature to the city, one that our inhabitants can enjoy right here."

Water in the city

The sediment in water channels in the vicinity of old industrial buildings is often polluted. This can result in unpleasant odours. The water quality will improve noticeably once the polluted sludge is removed.

In the future, OVAM wants to support even more public authorities in the creation of 'green-blue networks' in cities. These networks provide pleasant areas, increased water buffering, biodiversity, and cooler areas within the urban environment. OVAM therefore advises public authorities to verify whether water channels can be upgraded at the same time that sites in the vicinity of water are being redeveloped.

Cities inspiring cities

The remediation of the Dullaert Canal is a good example of how local authorities transform waste, materials, and soil policies into practice. OVAM has collected forty similar stories at portfolio.ovam.be. Would you like your city to be inspired?

Local authorities from all over Flanders recount how they handle their waste, materials and soil policies in the online portfolio and how OVAM helps them with this via financing, cooperation, or legislation. These stories must inspire other cities, municipalities, and provinces to create 'repair cafés', tackle asbestos, or detect soil contamination.

The launch of the portfolio is not the end of this work-in-progress. OVAM continues to search for new examples. Do you know of a project that deserves a place on our website? Let us know at voorbeeldprojecten@ovam.be.

Browse through the online portfolio and be inspired by forty examples at portfolio.ovam.be.

STATISTICS

Staff

MEN	WOMEN	DIVERSITY
135	223	6,24%

Waste

LITTER	TOTAL HOUSEHOLD WASTE
17.500 tonnes	3.167.010 tonnes

Budget

Budget 2015

Revenue	
Surplus	5.664.937,14
Own income (e.g. soil certificates)	13.492.726,76
Income transfers from companies (e.g. UMICORE)	4.374.015,79
Income transfers from EU institutions	106.608,33
Income transfers within the public sector (operational subsidy and MINA subsidies)	26.837.648,20
Capital transfers within the public sector (investment subsidies and MINA subsidies)	27.536.408,57
Withdrawal from the Soil Protection Fund	24.170.607,32
Total	**102.182.952,11**

Management of MINA funds

VLABOTEX	967.875,18
Subsidies for animal waste	11.093.270,49
Subsidies to authorised recycling centres	808.000,00
Income transfer to local administrations (prevention and separate collection)	269.350,00
Subsidies to local authorities (preventionve, separate collection, and installations)	5.115.654,00
Income transfers to NPOs (Plan C)	198.000,00
Total	**18.452.149,67**

TOTAL INDUSTRIAL WASTE
13.911.000 tonnes

HOUSEHOLD WASTE PER INHABITANT
492 kg

RESIDUAL WASTE PER INHABITANT
146 kg

SEPERATLY COLLECTED WASTE PER INHABITANT
346 kg

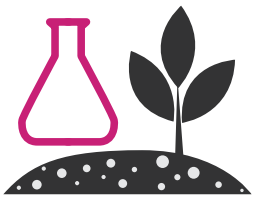
Expenditures

Surplus	**4.198.914,89**
Staff	**24.107.327,06**
Operating resources	**6.298.952,88**
Research	**2.665.634,91**
Communication	**654.940,70**
Remediations	**28.154.191,28**
Operational contribution VLACO, IVC, and Summa	**1.307.342,29**
Damage payments	**844.942,92**
Contributions to the Soil Protection Fund	**33.950.705,18**
Total	**102.182.952,11**

PROCESSES

Number of soil certificates delivered	**239.642**
Number of raw materials declarations delivered	**140**
Number of opinions issued for environmental permits	**577**
Number of notifications of cross-border transport of waste processed	**1.290**
Number of notifications of cross-border transport of waste processed	**201.739**

Soil



HIGH-RISK PLOTS:
85.000 (estimated)

INVESTIGATED:
44%
(37.270 files with assessed exploratory soil investigation)

REMEDIATION NEEDED:
16%
(5.933 files which need a soil remediation project)

OVAM
Stationsstraat 110
2800 Mechelen
www.ovam.be