

Promotion of decentralised composting in Brussels



1. Summary

Country/Geographical Area	Belgium, Brussels Capital Region
Level of implementation	Regional
Scale	Roll-out
Waste fraction / Specific Waste Type	Organic waste from kitchen and garden
Target Audience	Inhabitants of the Brussels Capital Region (approx 1 million)
Objective	Promotion of decentralised composting in Brussels Capital Region, including individual garden composting of garden and kitchen waste, individual vermicomposting (indoor composting of kitchen waste with worms), community composting
Initiator/coordinator	IBGE hires a external subcontractors (presently "Worms") to coordinate the action (relay office) through calls for tender
Other key actors involved	municipalities (19) + subcontractors (call for tenders) e.g. Comité Jean Pain, Inter Environnement Bruxelles, Worms...
Duration	ongoing since 1999
Number in Mapping report	21
Drafted by	Brussels Environment (IBGE) 09/02/2011; 19/01/2012
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2. Context

Brussels Capitale Region is an urban centre made up of 19 municipalities with approximately 1 million inhabitants, of which about 37% have a garden. It is estimated that these gardens generate no less than 30,000 tonnes of green waste (30 kg/inh/year). To this must be added over 50,000 tonnes of food waste (30 kg/inh/year).

Kitchen waste is not collected selectively and disposed of with the general refuse, all of which is incinerated. Weekly separate collection of garden waste is a service offered in 13 out of 19 municipalities (in 2011) from spring to autumn. In municipalities and neighbourhoods not covered by this service, the possibility is given to drop off garden waste at collection points at certain times once a week. The collected garden waste (more than 10 000 tonnes/year) is composted in a centralised composting unit.

Brussels Environment (the public administration that manages almost all environmental and energy matters within the boundaries of the Brussels-Capital Region) supports **decentralised composting**, which allows inhabitants who wish to do so to manage a fraction of their organic waste themselves. This is considered waste prevention at the source.

Only inhabitants with an outdoor space can engage in individual (garden) composting. The remainder of the population can compost kitchen waste, either by joining a community composting initiative or by composting in a closed container in their home (individual vermicomposting).

Some **municipalities offer financial incentives** for the purchasing of composting equipment (fut). Compost that is sold as a product needs to meet certain **quality standards established by the Belgian federal state**. This in effect inhibits the sale of compost from decentralised units.

3. Strategy

Objectives

Promotion of decentralised composting in Brussels Capital Region, including

- Individual garden composting of garden and kitchen waste
- Individual vermicomposting (indoor composting of kitchen waste with worms)
- Community composting

Target of the 2010 Waste plan is to reduce garden waste by 5 kg/inhab/year by 2013 and by 12kg/inhab/year (12,000 T) by 2020 compared to 2005.

Preconditions

Quantify the garden & kitchen waste fractions

Carry out pilot actions to measure effectiveness and quantify reduction potential

Identify priority action areas to maximise impact (e.g. Brussels Environment first gave priority to individual garden composting, then to individual vermicomposting of kitchen waste, and now also to community composting initiatives)

Identify indicators to measure progress.

Procedure

1) Compost Master Network

Promotion of decentralised composting in Brussels Capital Region through a network of Compost Masters, trained voluntary citizens who inform the population on composting and how to solve the main difficulties encountered.

The actions of the Compost Masters is varied and includes manning demonstration sites and information stands during markets, local fairs and other events, promoting composting in schools, supporting collective composting projects as coordinator or adviser, presenting evening information sessions, participating in regional actions, such as environmental festivals and open garden events, being reachable at a local level to provide one-to-one advice to fellow citizens etc.

Since 2000, some 350 Compost Masters were trained and the network remains active thanks to regular actions of the IBGE to motivate the volunteers:

- continuous training (one or two offered per year);
- annual event for Compost Masters and half-yearly information newspaper (with articles from and for Compost Masters) to foster feeling of belonging to a group;
- autonomy in the choice of the activities they carry out.

With the financial support of Brussels Environment and the land provided by the municipalities, the compost masters have set up local demonstrations sites.

2) Information tools

The Compost Master network was complemented by a range of **information tools**

Brochures and information folders written by Brussels Environment (paper and electronic form) that are regularly updated: practical guides (e.g. “Composter pour réduire ses déchets - guide pratique”), list of contact details of Compost Masters for the general public; information on where to buy equipment and on support provided by the different municipalities. These are accessible through the Brussels Environment website.



Concrete demonstration tools are lent to the Compost Masters when manning a stand etc. Besides equipment for the stand itself (posters, table etc) different models of home composting containers, samples of materials that can be composted, compost at different ages from fresh to maturity, etc. are provided.

Short training sessions for the general public are organised by the subcontractors of Brussels Environment since 2003: theoretical evening class followed by a visit of a demonstration site. The emphasis was first placed on garden composting of garden and kitchen waste (37% of the population has a garden). In response to the growing interest of the population, additional sessions have been provided to address vermicomposting (indoor composting of kitchen waste with worms) and community composting.

Helpdesk which the general public can contact by email and telephone by the subcontractors of Brussels Environment since 2011

3) Support to Community composting projects

For community composting projects, since 2009, in addition to the support provided by the Compost Masters as coordinators or advisers, Brussels offers **financial support through a call for projects**. In 2010, assistance by a subcontracted facilitator was tested successfully at a pilot scale; in 2011 this assistance is continued. This approach was initially defined after having contracted a consultant (Vlaco) to carry out a study analysing strengths and weakness of community composting initiatives elsewhere.

Instruments

Voluntary: compost master network

Information tools (Training, Communication campaigns, Practical guide, Brochures, Concrete demonstration tools)

Economic incentives: Support for community composting initiatives

Timeframe

On-going since 1999.

Since 2000 set up of compost master network (gradually broadened in size and scope)

Since 2003, training sessions for the general public on garden composting

Since 2005, training sessions for the general public in vermin-composting (indoor composting of kitchen waste.)

Since 2009-2010 training sessions on & support to community composting initiatives

4 .Resources

Financial Resources

Financial resources in 2011

Staff costs: 40% of one full time equivalent in IBGE (approx EUR)

External service costs: Between 70 000€ and 130 000€ per year for external services (equipment, trainings, coaching for community composts, communication campaigns, gifts - e.g. compost silo given to new compost masters...)

Examples of approximate external costs in 2011:

Communication

Help desk/Web Communication	24 000€
Support for Master Compost network	33 000 €
Support for Community Compost network	32 000 €

Training sessions

Master compost training cost	8 000€ (5 sessions)
Public training cost	4 000€ (9 sessions)

External resources:

Support provided by certain municipalities (about 50 EUR for the purchase of equipment (fut))
Land provided for free for the demonstration sites and some community composting sites.

Human Resources

Internal paid: 40% of one full time equivalent in Brussels environment to supervise the external contractors and to draft information materials and to cover equipment needs of compost master network.

External paid: 2,1 full time equivalents (0,5 for helpdesk, 0,8 for compost master network, 0,8 for community composts)

External unpaid: Some 350 Compost Masters have been trained since 2000 of which 80 are known active in 2010.

Equipment

Composting units given to new compost masters, occasionally shredders given to compost masters, exhibition equipment for stands.

Communication Tools

Demonstration sites and information stands; Brochures and information folders; Demonstration tolos; Short training sessions (see detail in procedure)

Allocation of resources over time

The resources have been maintained and increased over time from 70 000 to 130 000. They are currently stable.

5. Evaluation

Results

- Participation

Brussels Environment launched awareness raising operations for decentralised composting as of the second waste plan. Since 1999, approximately 350 master composters have been trained, 80 of which are still known to be active in promoting composting beyond the local level.

In the framework of the third Waste Plan, Brussels Environment initiated the organisation of training evenings that have involved one thousand Brussels residents since 2003.

By 2010, some 30 on-going community composting initiatives were operational or in start-up phase, many of which had benefited from start grants from IBGE; number of participating households about 650, i.e. about 1300 inhabitants.

Participation is thus measured by counting the number of trained/active compost masters, number of inhabitants having participated in a training session, number of community composts (based on annual reports by subcontractors).

Population reached by the action (estimate): 6% by 2003 and 10% by 2008 and 12% in 2010. Among the population, awareness about composting and the share actively composting is estimated through surveys: According to survey results from March 2009: Among inhabitants who have garden waste, more than 30% are composting it at home or at a community compost. This is a good result that is comparable to the figures reached in more rural regions. Overall, about 15% of the region's population now participates in decentralised composting. (More detailed figure available on request).

- *Avoided waste quantities (or toxicity)*

Current situation

Decentralised composting of garden & kitchen waste is currently estimated at 6 000 tonnes/year (i.e. about 6 kg/inhabitant). Quantities of kitchen and garden waste gathered by community composts in 2010 are estimated at 85 tonnes (about 65 kg/participating inhabitant, based on data collected at one pilot community composting site)

Encouraging decentralised composting diverts waste from preventable waste streams

- incineration of kitchen and garden waste with general refuse, estimated in 2005 at about 60 000 tonnes/year (i.e. 60 kg/inh). This represents 23% of general refuse (based on rubbish bag analysis)
- centralised composting of garden waste, currently more than 10 000 tonnes /year (i.e. 10 kg/inh)

Further reduction target

Target of the 2010 Waste plan is to reduce garden waste by 5 kg/inhab/year by 2013 and by 12kg/inhab/year (12,000 T) by 2020 compared to 2005.

Impacts

- *Avoided Costs*

Decentralised composting decreases the need for separate collection, both of garden waste and general refuse.

Participating individuals avoid costs of garbage bags and fertilisers.

- *Avoided CO₂ equivalent*

Could be calculated by applying ratios to the avoided waste quantities. Depending on the waste treatment option replaced by decentralised composting (incineration, composting or others such as biomethanisation) and underlying assumptions the estimates of net impacts vary greatly from positive to negative (a series of calculations could be provided upon request).

Other environmental benefit: greater resource efficiency compared to incineration.

- *Social Benefits*

Besides the environmental benefits, community composting has financial, social (because it encourages neighbourly relations) and educational (notably on the issue of waste) advantages.

Continuation over time

This action is a long term action, gradually increasing scope. Resources were increased over the years from 70 000 to 130 000 and presently remain constant.

Difficulties encountered

More difficult to get inhabitants without a garden to compost. Because the majority of the population does not have a garden, IBGE increasingly promotes alternatives to individual garden composting: vermicomposting (inhouse compost of kitchen bio-waste) and community composting. Both alternatives require specific training, support of compost masters and specific information, i.e. on where to buy vermicomposting equipment, how manage a community compost etc.

Difficulty to get access to shredded materials/shredder. For legal security reasons the shredder could not be rented out. Some Municipalities offer this service (Saint Gilles).

To be allowed to sell compost produced by community composts, it has to comply with national standards and undergo a physical and chemical analysis to verify heavy metal content, maturity, impurities.... Indeed, while “waste” falls under the responsibility of the region, “products” such as compost fall under the responsibility of the federal state.

This action requires substantial and sustained financial support over time.

Promoting decentralised composting can conflict with other potential environmental priorities such as support to centralised biomethanisation, because waste flows would be diverted from one to another.

Monitoring System

The indicators make it possible to justify the continuation of the project and to adapt the message and technical material to the evolutions of the target public. They are used in communication materials and to answer political requests.

The majority of these data are based on surveys or incomplete data due to the lack of exhaustive inventory (e.g. local activities of composting experts, number of community composting,...) Since anybody may compost without informing IBGE, changes in behaviour are difficult to quantify. Not all trained Compost Masters are active, and many of their activities are not formally reported.

General issues with data (uncertainties, lack...): uncertainties on survey, uncertainties on the organic waste amount per inhabitants.

6. Lesson learnt & recommendations

Opportunities & Challenges

Awareness of the population on composting techniques and benefits has improved

Key factors of success

Key role of volunteers

Important to accompany/maintain/motivate the network of volunteers (compost masters and community compost managers).

Recommended improvements/adaptations

A single contact point for all composting activities would be an advantage and reduce confusion.

Recommended indicators & monitoring

Reducing uncertainties about the waste flows would enable a more precise evaluation of the potential.

7. Comparison with similar actions

In different location/context

Flanders: also a compost master network

Sweden: electromechanically treatment (apartment buildings)

The 2300 or so community compost projects underway in Basel or the 1000 projects in Zurich demonstrate that neighbourhood composting can play a significant role in waste prevention policies in major cities. Between 50 and 175 kg of organic waste per household and per year can thus be avoided.

Can be compared to other Pre waste Factsheets about composting.

- Home composting in Karlskrona - Steering with fees (Pre-waste Factsheet 28)
- Home Composting in Macerata Province, Italy (Pre-waste Factsheet 37)
- Education on back-yard composting in Tampere, Finland (Pre-waste Factsheet 73)