




Eco Innovation aisbl
Shaping and sharing innovation for sustainability

Activity Report 2011



Eco Innovation

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Activity Report 2011



Sustainable agriculture, eco-innovations and Eco Innovation (aisbl)

Eco-innovations are products, process or organisational innovations that contribute to the economic, environmental and social pillars of sustainability. Indeed, sustainable development depends on our capacity to reconcile the utilitarian «production-oriented» approach and the conservationist and social justice agenda. In that view, eco-innovations represent the building blocks of a genuinely sustainable type of development. They add market value and also increase environmental and social acceptance of changes. Much emphasis has been placed on the environmental and economic pillars of eco-innovations: lots of efforts are made to give an economic value to environmental goods and services and, to the opposite, to make goods and services that are more environmentally friendly. The social aspect of eco-innovations is less often considered. However, we believe that many potential eco-innovations, albeit technically feasible, are not yet implemented because of social, institutional, and cognitive barriers. In other words, the way in which eco-innovations are socially embedded is key to their success.

►► We founded Eco Innovation to better understand and alleviate social barriers to eco-innovations

Whereas eco-innovations increasingly mobilise industries and services, they should be further applied in agriculture too. Eco-innovations in agriculture represent a largely untapped potential with regard to the challenges brought by a rising population, migration, the loss of biodiversity, the shortage of arable lands and the concentration of people in urban areas, far from production sources.

We believe that a promising route for tackling the issues faced by today's agriculture is to promote its Eco-Functional Intensification (EFI) (see Frame 1) as suggested by the European Technology Platform «TP Organics».





Frame I. The Eco-Functional Intensification of agriculture (EFI). Definition.

Intensification in conventional agriculture is understood primarily as using a higher input of nutrient elements and of pesticides per land unit. It also means more energy (direct for machinery and indirect for inputs). Finally, it focuses on better exploiting the genetic variability of plants and animals; to do so, all available breeding techniques, including genetic engineering, are used.

The weakness of organic agriculture so far remains its insufficient productivity and the stability of yields. This could be solved by means of appropriate «eco-functional intensification» i.e. more efficient use of natural resources, improved nutrient recycling techniques and agro-ecological methods for enhancing diversity and the health of soils, crops and livestock...

Eco-functional intensification means, first and foremost, activating more knowledge and achieving a higher degree of organization per land unit. It intensifies the beneficial effects of ecosystem functions, including biodiversity, soil fertility and homeostasis¹. It uses the self-regulating mechanisms of organisms and of biological or organizational systems in a highly intensive way. It closes materials cycles in order to minimize losses (e.g. compost and manure). It searches for the best match between environmental variation and the genetic variability of plants and crops. It also means increased livestock welfare, with a positive impact on the health and productivity of animals. It uses and provides more farm labour per land unit, principally such of high quality and professional satisfaction. Knowledge is the key characteristic of eco-functional intensification.

Source :Technology Platform Organics 2008. Vision for an Organic Food and Farming Research Agenda to 2025. Page 34².

Technically, Eco Innovation aims at testing and demonstrating five main strands of EFI:

- ▶ **Hyper-productive associations**, in which specific plant and animal productions give better global results when associated together than when carried out in isolation from each other.
- ▶ **Biostimulation and stress reduction**: biostimulation can increase the capacity of plants and animals to withstand environmental stresses such as pests, temperature, drought, etc.
- ▶ Intense **recycling** of resources (water, biomass, minerals)
- ▶ Improvement of the **energy efficiency** of the food system: beyond the yields at harvest stage, we need to take into account inputs at all stages of the system.
- ▶ Innovative **information systems**: integrating formal and informal regulations across policy sectors and across governance levels requires enhanced learning and communication methods.
- ▶ ▶ **Our aim is to develop eco-innovations contributing to the Eco-Functional Intensification of agriculture.**

¹. Homeostasis is the property of a system, either open or closed, that regulates its internal environment and tends to maintain a stable, constant condition. For example, human homeostasis refers to the capacity of the human body to manage inner interactions in order to maintain balance or return to functioning within a normal range.

Eco Innovation aisbl

Eco Innovation is an NGO founded in 2005 by a group of scientists and agronomists concerned by sustainable development issues in agriculture: Dr. Frédéric Morand, Dr. Marco Barzman, Dr. Marjolein Visser and Dr Colin Sage. First registered as an Irish Charity, Eco Innovation relocated as a Belgian International Association (aisbl) in Brussels in May 2009.

The statutes objectives are:

- ▶ To facilitate the implementation of the Europe 2020 strategy³ with a particular focus on policy integration as well as on the direction and systemic impact of innovation.
- ▶ To help advance the understanding of eco-innovation processes.
- ▶ To support eco-innovators in their development.

Eco Innovation engages in the following activities:

1. Collects, consolidates and represents its members' opinions in the European policy-making process, especially with regard to the environment, innovation and education.
2. Contributes to eco-innovation research and development through research initiatives and participation in the research policy agenda (at the regional, national, European and international level).

Since 2009 we have focused our activities on the multiple functions of sustainable urban agriculture. One of our main tools for grounding our applied research activities are **urban potagers**. We chose to use this word rather than kitchen gardens as we wanted to keep the idea of aesthetically pleasing gardens. Those potagers provide safe and local food, employment while increasing biodiversity and improving the urban landscape.

3. Innovates in e-education by designing and producing educational interactive services.

2. http://www.tporganics.eu/upload/TPOrganics_VisionResearchAgenda.pdf

3. http://ec.europa.eu/europe2020/index_en.htm





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Accompanying the growth: the challenge of 2011

2011 was a year of rapid growth for Eco Innovation. While maintaining and developing its ongoing educational activities and the managing of La Rosée and Betteraves enz. potagers, **Eco Innovation** had to manage the start of the Canal Midi and of the Masui Sustainable Neighbourhood Contracts. We also attempted to increase our self-funding activities through the diversification of its commercial activities, and the multiplication of collaborative efforts (ex: creation of roof gardens in Anderlecht, depollution project on the Albert Square etc...). This required Eco Innovation to undertake a change of scale and, in order to achieve this, to restructure its activities and hire new staff.

This report sums up the main activities performed in 2011, centered on our urban potagers. It then recounts the changes required by those activities. We have built throughout 2011, an internal structure that reflects the main functional relations within our organisation (see Table 4 p. 28). Those relations require a range of specific management and coordination tools, most of which were not available to us before 2011 (see Tables 5 and 6). Building those tools took up a significant amount of human resources. Their facilitation and appropriation among the teams benefited from the participatory approach we always favour. Still, urban potagers give rise to a lot of passion and pretending it is easy to regulate it – not matter how sustainably and participatory - would not be a completely fair statement!

Eco Innovation advocates the citizen's right of inventory for technological and trade innovation in food and agriculture. We have identified at least one important condition to this right: passion should never accommodate ideological dictatorship, ill-informed prejudices or denigration. We should rather channel it toward respectful and informed dialogue, education, and intellectual sovereignty. Without those, social critique – the cement of innovation – would not bear very tasty fruit.

Those tools appear constructive, standard-bearing and long-lasting. They open the door to the creation of our cooperative endeavour: **Vert d'Iris.**

*Frédéric Morand
Secretary general*





2. Potagers: the heart of our activities

Our potagers provide the grounds for all Eco Innovation activities: participation in policy making, research and education.

Eco Innovation manages two types of potagers: professionally ran ones and **mixed potagers**. The model of mixed potagers tested by Eco Innovation can be seen as an attempt to address the difficulties that we have observed in collective vegetable gardens in Brussels since 2009. A cascade of technical challenges, together with lack of continuity, motivation and references often undermine the sustainability of vegetable garden projects. In order to support these projects in the long term, Eco Innovation has introduced mixed potagers, which articulate amateur gardening (for self-consumption) and professional gardening (for trade). Practically, for a small amount of money, amateur gardeners can rent a ready-to-use spot in a vegetable garden that they cultivate, organically, for their own consumption and pleasure. Professional gardeners are employed by Eco Innovation on another part of the garden where they grow food that will be sold on local markets hence providing financial resources. They also give advice to the lay gardeners and provide them with tools and plants.

Mixed potagers are a flexible way of engaging local residents and associations in urban agriculture. Mixed potagers foster local engagement, spatial and social proximity, short food chains, on the spot learning, appropriation of local landscape⁴.

2.1 Our potagers

Eco Innovation constantly explore new opportunities, new available land and refer to this activity as «prospective projects» (see Table 1). When local partners are ready to move forward, we make quotes and prospective projects become referred to as «quoted projects». Finally, when the work begins we speak about «potagers under management».



4. For more on the benefits of mixed potagers, see La Pépinière 2010 film clip – voice over: <http://www.eco-innovation.net/blog/la-pepiniere-clip>



Scheme of an agroforestry project that combines fruit trees and plants.

Table I. Some prospective projects

Neerpede

Through original prospective work⁵, Eco Innovation identified up to 50 ha of land with potential for ecological agriculture in Neerpede and beyond. Negotiations started with the Anderlecht administration and with other owners. We also initiated our «Fruit project» relying on an agroforestry approach: <http://www.eco-innovation.net/neerpede-resume/>.

One of these plots of land could help us developing another service to gardeners: compost making and distribution. Eco Innovation is already in close contact with Nos Pilijs and WORMS⁶ both being local NGO specialised in compost and recycling that could be partners in a project (1ha is needed). We also have contacts with local business (restaurants, other farmer) which already agreed to provide us with their waste.

Liedekerke

We were contacted by the NGO Potamoes to help them making a prospective budget for a kitchen garden in Liedekerke. The budget was approved in April.

Dilbeek

This is an agro forestry project on a 2 ha plot in which rows of fruit trees will alternate with rows of fruit bushes (raspberries, strawberries etc..)

2.1.1 Potagers under management

In 2011, Eco Innovation has managed two potagers: Betteraves enz. and La Pépinière de la Rosée. We initiated preparation work for three more: Les Goujons, Square Albert and Masui.

Betteraves enz. (Neerpede)

We prepared this 37 ares potager for cultivation during the second half of 2010 and we harvested its first crops in 2011. Following an intensive and ecological agro forestry approach, we planted rows of fruit trees alternating with stripes of land where we grew garden market vegetables. The garden also has a non-heated glass greenhouse and an herb garden.

We cultivate this potager with three aims: testing eco-functional horticulture, commercial production and education.

5. Cobérac Elsa, defended in 2012; Les potentiels spatial et humain disponibles pour le projet agro-écologique de Neerpede porté par Eco Innovation; Mémoire pour le diplôme d'ingénieur en agriculture, Eco Innovation (Bruxelles) et Ecole d'Ingénieurs de Purpan, Toulouse, 60 p.
6. Waste Organic Recycling and Management Solutions

► An eco-functional pilot

Betteraves enz. is our first medium scale project for testing plant association. We designed the site with a view to develop positive synergies between a variety of crops: rows of fruit trees separating vegetable beds, plants associations with mutual benefits in terms of health, water and nutrient cycles. The greenhouse (6 ares, unheated) also hosts plants associations throughout the year, and a plot next to it is devoted more particularly to herbs.

Biodiversity is a key component of all our potager projects; yet managing a diversity of crops generates daunting challenges. Key management tools developed in 2011 on Betteraves enz. include a comprehensive crop database recording cultivation history of each individual bed.

Multiplying plant associations doesn't guarantee against pests and diseases, and this is especially true during the first year of cultivation, as the surrounding ecosystem is not yet developed and does not yet provide a diversity of beneficial organisms, such as soil symbiotic micro-organisms (mycorrhizal associations) or auxiliary insects preying on crop pests (lady beetles). In Betteraves the first pest outburst occurred as early as March and in May we had to face fungus and bacterial diseases. We took advice from internal and external sources on organic pest control, including from HORPI s.a.⁷. who recommended a list of beneficiary organisms. We implemented a logbook of the plant health situation in order to optimise our crop rotation plan and our plant associations.

► Commercial production

The potager began to produce and we sold about 1 ton of vegetables. We tested four types of retail circuits:

- On-site sales counters
- Customer boxes
- Purchase groups
- Sales to our partners such as a slow food restaurant, the Heymans farm shop

This represented an income of around 3.000 €.

7. <http://www.horpi.be/HomeFR.htm>





► Education

Training the adults involved in the ecological gardening program implemented for the Canal Midi Sustainable Neighbourhood contract (see frame 2). The potager also hosts educational activities with schools. In this respect, we have developed a cooperation with La Maison Verte et Bleue (MVB)⁸ a new educational centre sponsored by the Municipality of Anderlecht. Greenloop, involved in the MVB project, asked us to organise five educational activities for young children about biodiversity, healthy food and potagers. In September, a discovery walk on «wild and edible plants» led by Dr François Couplan also took place in and around Betteraves enz⁹.

Frame 2. EDUCATION : Adult training program in ecological horticulture. 14 March-27 September 2011

This training is targeting unemployed adults from Anderlecht and the Brussels Capital Region wishing to reorientate their professional activity towards ecological gardening. Organised in cooperation with the CRABE¹⁰ (Roll Grenier and Peter Van Mol), it provides theoretical courses (144 hours) and practical training (720 hours) over a six months period. Eight people followed this training and two of them were hired at the end of the training: a gardener (Jawad Ziani) and an educator for the conception and animation of schools activities (Aude Jacomet).

Eco Innovation management produced an assessment report

based on interviews of both the group members and the group leaders. The report suggested paths for improving the program that will be implemented in 2012. For example, it recommended:

- To start the program earlier so as to allow a better following of the season in the gardens while keeping time for theoretical work.
- To foster more autonomy and responsibility among the trainees.
- To develop the visits of professionals from other horticulture projects.

In the autumn 2011, other opportunities of potager creation appeared at Neerpede (see Table 1); hence the need to identify which plot of land we were talking about and to identify the cultivated garden for our customers. We named our first Neerpede garden «Betteraves enz.»¹¹ as it allowed to play with the two Belgian languages while indicating our activities («beetroots etc») and location (Beetroots street).

8. In English: The Green and Blue House.

9. About François Couplan: http://www.youtube.com/watch?v=E3NyporUc_4

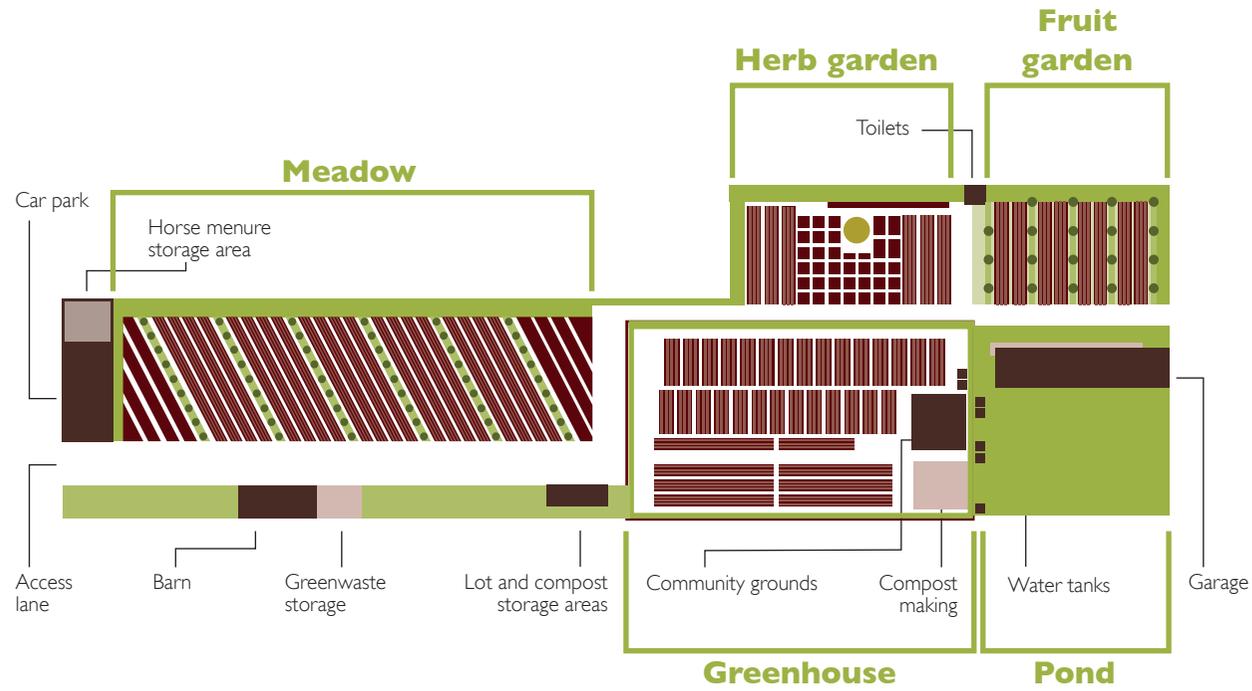
10. <http://www.crabe.be/>

11. (enz. Is the abbreviation of «en zo voort» which means «etc.» in Dutch)

► François Couplan leads a discovery walk

Betteraves enz. Map.

An edge made with local plants and fruit bushes encircles the potager
Fruit tree lines are planted in the meadow





La Pépinière de la Rosée¹²

We reopened this garden, a mixed potager of 700 sqm, in April and soon neighbours and schools rented about 30 containers. This was a little less than last year because we couldn't open it for more than two afternoons a week (Wednesdays and Saturdays). The neighbourhood is not always safe (very unfortunately, problems did occur this year in the nearby Parc de la Rosée) and the garden requires constant watch. Also, contrary to 2010, there was no funding for the running of the garden and we couldn't pay more hours for the staff. This is an issue that must be considered for next year. Economically, 0,5 tons of vegetables were produced which has provided an income of about 1.000€.

The garden was also used for testing collective compost making, using kitchen wastes from the neighbourhood. In May a first informational meeting gathered local inhabitants interested in the idea of compost making. Any significant shift in waste recycling in the neighbourhood clearly requires more similar initiatives.

Last, the Pépinière de la Rosée was used to implement an aquaponics research project (see Frame 3). It also hosted numerous activities with schools (see Table 4).

Frame 3. RESEARCH PROJECT : Aquaponics in la Pépinière

Aquaponics is a food production system that combines aquaculture with hydroponics (cultivating plants without soil). While in conventional aquaculture, effluents accumulate in the water, hence increasing toxicity for the fish and the environment, in aquaponics, they are used by plants as nutrients hence cleansing the water that can be used again for the fish tanks. Therefore Aquaponics is a tool that tackles two major issues: the necessity of a constant water renewal in aquaculture and the dependence of agriculture on chemical fertilisers. The development of aquaponics would allow efficient water use (90 % of water savings vs. aquaculture) and provide an efficient source of animal protein while coping with the shortage of wild fish stock.

Goal of our aquaponics project

In order to get hands on experience with aquaponics, we developed trials of aquaponics modules in La Pépinière potager, led by one of our academic interns Simon Delvaux. In order to network and trade experience, we hosted Charlie Price in Anderlecht in May and visited him at Aquaponics UK in July, together with a delegation from GroupeOne¹³. Simon's final dissertation¹⁴ shows promising results and stresses the difficulties linked to the lack of commercial providers for fish, food and material. Valentin Wallers an intern from HEPHC¹⁵ will carry on work on an aquaponics prototype in 2012.

For more information: <http://www.youtube.com/watch?v=7nIL9hWW3-Q> and the aquaponics UK webpage: <http://www.aquaponics.org.uk/>

12. About the creation of the potager in 2011: <http://www.eco-innovation.net/blog/la-pepiniere-clip1>

13. <http://www.groupeone.be/>

14. Delvaux Simon, 2011; L'aquaponie et le lombricompostage, couplage de deux techniques novatrices appliqué en contexte urbain; Mémoire de fin d'étude pour l'obtention du Master en Science de l'ingénieur industriel en agronomie, Haute Ecole Charlemagne, Institut Supérieur Industriel (Huy-Gembloux), and Eco Innovation (Brussels), Huy, 70 p.

15. HEPHC stands for Haute Ecole Provinciale du Hainaut Condorcet

Les Goujons

This garden is part of the Canal Midi Sustainable Neighbourhood Contract. Mid-2011, Eco Innovation, the municipality of Anderlecht and the Brussels Capital Region signed a four years contract in order to develop mixed potagers and training activities in areas of this deprived neighbourhood. One of the sites considered for the first potager is a patch of land at the bottom of a 900 inhabitants building called «Les Goujons» Our objective is to create a 500 sqm mixed potager from a privately owned brownfield. The challenge is to mobilise local inhabitants and raise enough awareness so as to encourage them to participate in the creation of the potager right from the beginning. For doing so, Eco Innovation has chosen a long-term approach of awareness-raising with the idea of creating links with local associations and residents. In a second step an information meeting was set up, leaflets were distributed locally. A party was organised in July staging a local junior music group (the Tiss Team¹⁶).

Activities for all age groups, including vegetable tasting and sales (from our other potagers) have been successful in creating local expectations and desire for a potager at the Goujons. Last, topographic difficulties and, above all, uncertainties associated with the projected sale of the land, forced us to postpone the project as we couldn't go further on with the signature of the land use convention with the owner.

Albert Square: a mixed potager within the Canal Midi project

Eco Innovation's aim for this 2000 sqm plot is to implement and manage mixed potagers and an aquaponics project all of which are funded by the four years subsidy received in 2011 by Eco Innovation within the Canal Midi project. However, the plot has polluted soil. This is why the Anderlecht municipality and Eco Innovation submitted a clean up proposal to the EU funded «Greenfield» program. The Greenfield program supports companies that relocate next to the canal Midi by financing up to 75 % of the clean-up costs and by providing administrative help <http://www.bruplus.eu/fr/content/brussels-greenfields-d%C3%A9pollution-de-sols>. A positive answer was received on November 29, 2011 (budget granted: 600 000€).

16. http://www.corsaires.tv/spip.php?article102&lang=fr&no_js=oui&lang=fr





Masui: the Northern Potager

This is a 2500 sqm project for mixed garden project that is being designed within the framework of the Sustainable Neighbourhood Contract Masui (2011-2014) in the Northern part of the city of Brussels. A substantial number of popular gardens close to this neighbourhood are bound to disappear because of land sales and railway development. There is a need to replace them and to create places where the different communities inhabiting the area could mix and meet. Hence the project of BRAVVO¹⁷, an association coupled with the city of Brussels, to develop a green corridor on the old bed of the Senne; part of which will be dedicated to mixed potager created, then managed, by Eco Innovation. BRAVVO and Eco Innovation signed a 4 years renewable convention mid-2011 and feasibility work started in the fall.

2.1.2 Quoted potagers.

Hanging potagers on roofs in Cureghem (Anderlecht)

Developing hanging potagers is one of Eco Innovation aims. Since 2009, Eco Innovation instigated and participated in several feasibility studies related to rooftop potagers in Brussels: l'Alchimiste, La Rosée, Liverpool, Scheut, the Urban Farm (Anderlecht), Peter Pan school (St Gilles). We presented the resulting perspectives at the seminar «Green roofs: between eco-construction and urban agriculture, a market opportunity» organised by Groupe One and held in Brussels on May the 19th¹⁸.

These studies have enriched our vision of rooftop potagers. It articulates now several functions in order to make the most of the aerial space – and to payback for the massive investments required by these types of projects:

- The production of fresh fruit and vegetables, that could be completed by an aquaponics project
- The creation of an on site café and shop with the aim of selling and using the garden's products
- The use of these roofs for gardeners training in ecological and urban agriculture
- The creation of a training course in fruit drying so as to use the left fruit
- The creation of a space dedicated to event and seminars
- The creation of spaces for private housing or offices

¹⁷. <http://www.bravvo.be>

¹⁸. <http://www.groupeone.be/docs/programme.pdf>

This project was presented to Evelyne Huytebroek Regional Minister for Environment, Energy and Urban Renovation. Discussion for its funding is ongoing with various partners.

- ▶ The development of so many projects activities and the need for funding that results from it makes the creation of the cooperative **Vert d'Iris** all the more relevant for us.
- ▶ **Vert d'Iris** will be a cooperative with social purpose that we have been planning to create for two years and for which we have received the ENTERPRIZE 2010 award. We are still working on the cooperative statutes and on financial planning.



Lay out scheme for a roof potager . Scheut.



3 The restructuring of Eco Innovation

Along with potagers creation and management, Eco Innovation develops educational and policy making activities. This has led to an increase in size and capacity.

3.1 Eco Innovation takes an active role in the local life

Our vision of sustainable development also means being integrated in local networks. It is a way of promoting sustainable food production, distribution (short circuit) and consumption together with an opportunity to support policy making initiatives as required by our status. The various events in which Eco Innovation participated are summarised in Table 2. Our collaboration with local NGOs (see Table 3) has increased since last year. We have also participated in some Regional or National policy events such as the meeting on conciliating economics and green urban development organised by the Regional Ministry of Environment, Energy and Urban Renovation in July. However, our level of involvement is globally the same than in 2010 because of the high involvement required by the potagers projects.

Table 2. Participation in local events in 2011

Name of the event	Organising body	Date	Objectives
Atelier de travail urbain. Lemmens Neighbourhood contract	Municipality of Anderlecht	February the 7th	Coordination of local stakeholders
Lemmens neighbourhood Fair	Municipality of Anderlecht	April the 30th	Social cohesion
Journée de la Mobilité douce	Municipality of Anderlecht	May the 22nd	Promotion of alternative transports
Parc Astrid Fair	Municipality of Anderlecht	May the 28th	Awareness raising (Nature and ecology)
Atelier de travail urbain. Canal Midi Sustainable neighbourhood contract	Periferia ¹⁹	June the 8th	Collective debate about new urban projects including the Goujons and Square Albert potagers
Mobility day	Brussels Capital Region	September the 18th	Promotion of sustainable mobility
Autumn week-end	Nos Pilijs farm ²⁰	October the 15th and 16th	Promotion of sustainable food and sustainable living

19. <http://www.periferia.be/>

20. <http://www.fermenospilifs.be/>





1

Participation in international projects



3

Participation in public policy events

about sustainable food and agriculture



8

Participation in public events



9

Collaboration with local NGOs



15

Table 3. Eco Innovation: collaboration with local NGOs in 2011

Organisation	Collaboration
Atrium	Neighbourhood development through urban landscape enhancement
CRABE	Collaboration with Eco Innovation's adult training program on ecological horticulture
BRAVVO	Cooperation on a potager project in the Masui Sustainable Neighbourhood Contract (2011-2014).
KIK (Ket in Kuregem)	Educational activities in La Pépinière and design work on prospective garden
Groupeone	Collaboration for the submission of a European project on eco innovations
Les Corsaires asbl	Production of a video trailer introducing the 2010 activity report ²¹ and regular reporting of Eco Innovation's activities in Corsaires TV ²² . Filming of Potagers activities for future video projects.
Nos Pilifs (Neder over Heembeek)	Knowledge exchange on sustainable agriculture, Supplier of garden inputs (compost). Participation in Nos Pilifs events
UFLED (Union des Femmes Libres pour l'Égalité des Droits) Womens rights NGO	We provided containers to be cultivated by a women group
Walalou-Walala	Provision and maintenance of containers. Greening of the Otlet street
Periferia, Ulaç (Anderlecht Tenants association), SLRB (Society for Housing in Brussels), Foyer Anderlechtois (Council housing), Régie des quartiers, CRU	Cooperation for the Goujons project
Mission locale de Cureghem	Helps spreading information on our ecological agriculture program
GREENLOOP/La Maison Verte et Bleue	Animations for kids
Bruxelles Laïque	Art and garden project

3.2 Eco Innovation education activities are blossoming

Eco Innovation offers various education programs for young children with the general aim of reintegrating ecological gardening in the city. The education programs are organised on six or eight mornings and are often conceived on demand using the schools' material opportunities. For example, our team offers sessions about worms and compost, biodiversity, the food chain etc. In 2011, we have developed a new «art and potager» lecture program with Alix de Briey from the NGO «Bruxelles Laïque»²³ and with the Maison Verte et Bleue (MVB) (see Table 4). Our team has worked on three different types of projects:

1. Collaborative projects over six months or more with kinder gardens and elementary classes in both the Ecole des Trèfles and the Ecole des Etangs in Anderlecht.
2. Three to six months projects with neighbourhood's community centres (La Rosée and Les Goujons)
3. One shot activity days with:
 - a. The Kameleon school in Anderlecht,
 - b. Studio Globo an association that organises guided neighbourhood tours²⁴
 - c. Grenloop an NGO that organises animation in La Maison Verte et Bleue in the Neerpede neighbourhood²⁵

▶▶ **We have created 10 courses tools to support the lectures activities.**

21. <http://www.eco-innovation.net/blog/activity-report-is-online>

22. http://www.corsaires.tv/spip.php?article2&lang=fr&no_js=oui&lang=fr

23. <http://www.bxlaique.be/index.php>

24. <http://www.studioglobob.be/fr/>

25. <http://www.greenloop.eu/>

Table 4. Education activities for young children. 2011

School or organisation	Themes	
Ecole communale des Trèfles (36 lectures)	The plant's needs. Friendly animals and pests in the garden. Worm and compost.	From the vegetable to the soup. Art and potager. Birds, bees, ladybirds and butterflies.
Centre Pédagogique Jules Anspach (32 classes)	Art and potager: The plant's needs + creation of plant containers.	Visit of the potager of La Pépinière. Birds, bees, ladybirds and butterflies.
Ecole communale des Etangs CPI8 (8 classes)	Creation of vegetable gardens in containers Sawing and planting. 2 sessions. Weeding, harvesting cabbages and chervil. Sawing, planting, watering semis, plantations. 2	sessions. Feeding trays, insect covers. Cleaning plant containers, weeding, containers pricking out and mulching.
Kameleon (4 lectures)	Discovering a potager: planting, weeding	and harvesting
Neighbourhood community centres		
Les Goujons (2 lectures)	1 session: a game on vegetables,+ sawing+ painting red cabbages + self portraits with plants.	Creating plant containers
La Rosée (16 lectures)	One hour sessions every Wednesdays (mid-May until mid-August) and 4 sessions in autumn. Seeds and plants	Game on vegetables and herbs + herbarium+ decoration Seeds and plants. Arts and potager.

Eco Innovation has also hosted seven interns most of them for coming to complete their academic degree. One trainee has been recruited as staff members by BRAVVO the local NGO with which we collaborated on the Masui potager project. The interns have produced the following reports:

Bellin Justine, 2011; *Création, implantation, gestion et suivi des cultures de production de potagers urbains mixtes avec choix d'anciennes variétés*; TFE pour le Bachelier en Agronomie, option Techniques et Gestion Horticoles, Institut Supérieur Industriel Huy-Gembloux, Gembloux et Eco Innovation (Bruxelles), 93 p.

Bellin Justine, 2011; *Contribution à l'étude des anciennes variétés horticoles à potentiel économique*; Rapport de stage: Graduat en Horticulture (option Production), Institut Supérieur Industriel Huy Gembloux, Gembloux et Eco Innovation (Bruxelles), 42 p.

Cobérac Elsa, forthcoming 2012; *Les potentiels spatial et humain disponibles pour le projet agro-écologique de Neerpede porté par Eco Innovation*; Mémoire pour le diplôme d'ingénieur en agriculture, Eco Innovation (Bruxelles) et Ecole d'Ingénieurs de Purpan, Toulouse, 60 p.

Delvaux Simon, 2011; *L'aquaponie et le lombricompostage, couplage de deux techniques novatrices appliqué en contexte urbain*; Mémoire de fin d'étude pour l'obtention du Master en Science de l'ingénieur industriel en agronomie, Haute Ecole Charlemagne, Institut Supérieur Industriel (Huy-Gembloux), and Eco Innovation (Brussels), Huy, 70 p.

De Meester Wim, 2011; *Contribution à l'identification du contexte politique de la future coopérative potagère Vert d'Iris*; Rapport de stage: Master avec dispense, Gestion de l'Environnement, ULB/IGEAT, Eco Innovation, Bruxelles, 25 p.

Kopera Timothée, 2011; *La création d'une dynamique participative autour d'un nouveau projet. Analyse du protocole expérimental mis en place pour un projet de potager dans un quartier sensible*; Mémoire de fin d'études pour le diplôme d'ingénieur du paysage (option maîtrise d'œuvre et ingénierie), Agro Campus Ouest, Institut National d'Horticulture et du Paysage, Angers (France) et Eco Innovation (Bruxelles), 60 p.



2010 2011

Lectures achieved

in schools or education organisations

4

98

Months of full time work

provided by academic interns

36,5

39

Course tools

created

2

10

Public events

taken part in

8

8

6 months long professional training

in ecological horticulture

0

1

►► **Eco Innovation wants to increase self-funding opportunities by developing the sale of products and services.**

Eco Innovation provides tools that contribute to urban renovation: apart from its design activities, it has acquired a valuable experience in the conception and realisation of plant containers that can be used in soil polluted areas, it can also provide seeds and plants, especially old varieties that can be difficult to find on mainstream markets. In another way, educational activities represent also a source of funding. Finally, Eco Innovation sells the vegetables produced in the potagers. Self funding represented 20.754 € in 2011. Our aim is to use the knowledge acquired on marketing opportunities for our products to develop self funding in 2012.

3.3 Managing the change of size: a new organisation chart and extended material capacity

The management of all these potagers and projects requires capacity building and the hiring of new staff. First of all, Eco Innovation has developed new tools with the aim of supporting the development of its different activities. Three types of weekly meetings are organised: coordination meetings, of management meetings and general staff meetings. They are completed and sustained by coordination and reporting tools but also with communication tools about our different activities which are summarised in table 5 and 6.

Table 5. Coordination tools

Objective	Tool	Use
	Sowing and cultivation plan	Planning Recording of the plot past
Technical follow-up of the potagers activities in situ	Cultures log	Follow up and recording
	Crop log	Follow up and recording
	Sales book	Follow up of the sales
General assessment and planification	Potagers development plan ²⁶	Analysis of social and economical dynamics Strategic planning Identification of new needs Assessment of forthcoming budgets
	Strategic guide for sales	Assessment of the various market segments, of the various products and sale procedures
Coordination	Weekly activity program and weekly staff meeting	Coordination and identifications of needs and issues Planning

26. Barbosa Pereira Jorge, 2011; Guide stratégique: Plan et perspectives de développement des potagers, Eco Innovation; Bruxelles, 10 p

Table 6. Communication tools

Corporate identification	Graphic chart Business card Letterhead paper Identification of containers Lay outs for book-keeping documents (facture, devis) Lay out .ppt e-signature Lay-out for A3, A2 and A5 documents
Marketing and advertising elements	Corporate Leaflet 4 pages in FR, EN, NL Flyer: Presentation of education services Flyer: Presentation of Products and services FR NL Promotion tools Banner; stall decoration Leaflets and posters about activities in the Goujons and Betteraves enz. FR, NL Communication in gardens Poster on sustainable food Two posters on the history of the Pepiniere potager Plant tags
Educational material	Poster on compost Poster on animals inhabiting the gardens Poster initiation à la culture en bacs
Activity report	2010, EN and NL Trailer (FR with NL subtitles)
Ecological agriculture classes.	Recruitment leaflet Various management tools (registration forms etc..)

The rapid growth of our organisation didn't come without internal change.

The most visible consequence of our growth was the integration of new staff. Eco Innovation created 7,2 full time equivalent jobs in 2011 which includes a financial and administrative manager (FAM), a communication officer, a garden coordinator, a logistician (see Frame 4).

We have also expanded the surface of our office in Anderlecht from 40 to 100 sqm and rented a depot for our containers stock and assembly line. We also bought essential second hand machines and tools.

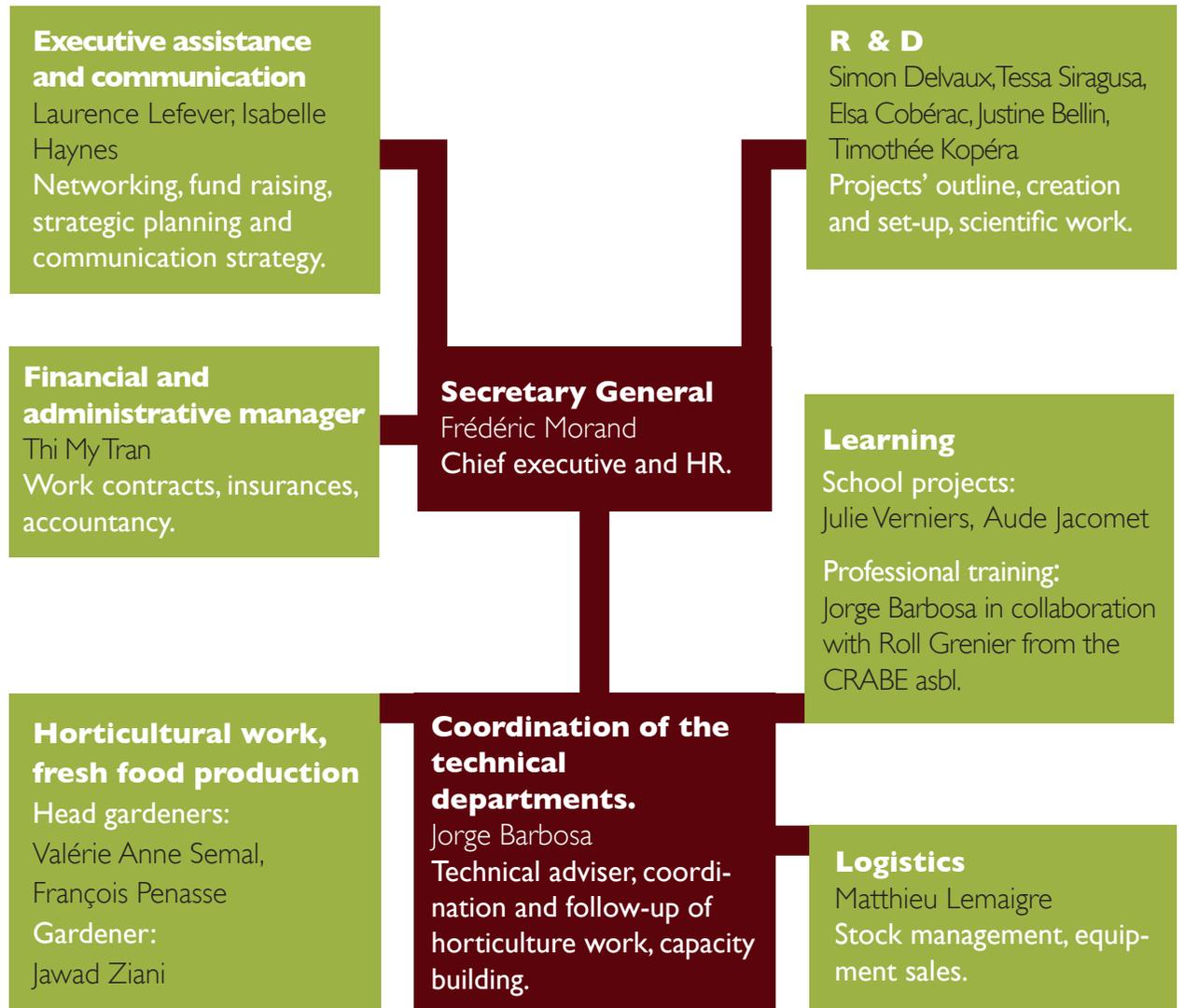
A second consequence of growth was the challenge it laid to our book-keeping: outsourcing book-keeping became rapidly inadequate due to the amount of information implied, the difficulty of controlling recruitment documentation, and the complexity of properly forecasting. We decided to hire a financial and administrative manager (FAM) and to consult external specialists. Consolidating the books remains a major objective for 2012.

2010 2011





Frame 4. Eco Innovation Organisation chart 2011







4. Financial Report

In 2011 the accounting which was previously outsourced has now been integrated into the association.

Balance sheet:

Assets

Capital assets are valued at 18.995,51€ principally represented by tangibles (investments in office automation, vehicle and tools etc.)

Currents assets are valued at 195.892,76 €, a noticeable increase from last year. The break down is as follows:

- 28,2 % in stock,
- 60,3 % amount falling due after more than one year (2/3 of which is the subsidy still to be paid from the Canal midi contract)
- 11,5 % cash.

Liabilities

Our debts of 156.507,23 € are principally short term (138.424,23 €) of which the break down is the following:

- 42 % owed to the associates' current accounts,
- 9,5 % owed to providers,
- 48,5 %, to the Social Security.

Most of these short term debts are under control as we have negotiated a payment plan with the Social security administration.

The amount carried forward is composed of two 2010 subsidies still to be paid in 2011. We don't have any mid to long term debts.

Balance sheet

Assets	214.888,27	Liabilities	214.888,27
Capital assets	18.995,51	Equity capital	58.381,04
Tangible assets	18.158,66	Deferred 2010 income	20.506,31
Financial assets	836,85	2011 income	37.874,73
Current assets	195.892,76	Debts	156.507,23
Amount falling due after more than one year	118.195,08	Debts falling due within one year	138.424,23
Stock (plant containers)	55.197,00	Amount carried forward	18.083,00
Cash assets	22.500,68		

Income statement:

Subsidies represent 96 % of our income, vegetable sales 4%.

The subsidies break down is as follows:

- 76 % from the Canal Midi neighbourhood contract and the following organisations: Cocof, the Huytebroeck administration, the Courard administration, the City of Anderlecht and the Maribel employment plan.
- 16 % subsidies still to be received (2nd phase of the 2011 Canal midi subsidy)
- 7,5 % from the Activa employment fund.

Wages account for 70 % of our expenses. The rapid growth of wages will stabilise in 2012. Eco Innovation's final result for 2011 will therefore be a net profit of 37.030,79.

Expenses	450.229,69	Revenues	490.915,75
Purchases	57.662,98	Sales	20.754,55
Stock variation	-55.197,00		
Overheads	107.861,89	Subsidies	470.161,20
Payroll	321.248,62		
Depreciation	1.484,28		
Decrease of Stock Value	3.324,47		
Other expenses	13.844,45		
		Operating profit	40.686,06
Financial expenses	4.024,18	Other income	1.213,41
		Year Profit	37.875,29



