Spreading the Roots:

An assessment of the social and environmental impacts of the Rooftop Garden Project on the Montreal community

Based on research done during the 2006 season





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Text written by Rotem Ayalon for the Rooftop Garden Project.

Image on title page: Catherine, a 10 year-old garden volunteer and the carott harvest, 2006. Photo: Rotem Ayalon.

Background

G ardening on rooftops in the dense city, where access to soil is limited, surely benefits the urban environment. The act of adding green, living plants to space that was once pavement, tar or concrete, collecting heat and sitting idle in the centre of the city is a positive act; the whole urban environment benefits. When plants cover areas that were once paved, hot summer temperatures drop, storm drains are relieved of pressure during rainfalls and building occupants benefit from the natural cooling plants provide. But exactly how beneficial is rooftop gardening to the urban environment? That's an interesting question.

The Rooftop Garden Project (RGP) has been working to quantify the environmental benefits of growing food on rooftops in Montréal. Over two years of temperature testing, we have determined that the Santropol Roulant garden is effective in terms of reducing the heat flux entering the building. This in turn reduces the amount of energy the building uses on air-conditioning in the summer. (For more information, see the report "An Assessment of the Environmental Impacts of Rooftop Gardens"). The rooftop

garden reduces the amount of rainwater entering the Montréal sewer system and going unused through our rainwater capture system that has a capacity of 1,500 litres and over one hundred growers on the roof all capture rainwater on their surface. In addition, all the food grown on the rooftop garden is delivered to the Santropol Roulant kitchen by foot or bicycle to prepare meals for people with a loss of autonomy. This has a significant impact on the urban environment by reducing the amount of gasoline and greenhouse gases normally emitted by the delivery of food. When you think about the fact that most of our food travels over 1,500 miles to get to our plate, producing food right near our homes, and particularly in cities, makes a lot of environmental sense. The list of environmental benefits of the Santropol Roulant garden continues with the addition of composting. In the basement, thousands of worms work to break down the Roulant's kitchen scraps, which in turn are used in the garden as an excellent natural fertilizer.

This process ensures that 40% of the food waste produced by the Roulant does not enter the traditional waste stream, adding to landfill space and cluttering our city. This process is literally converting waste into food.

It's amazing. Think about it. One garden on one roof in the middle of the city is benefiting the environment in all of these ways. But that's just one garden. And the garden doesn't even cover the whole surface of the roof – rather, we use containers of different sizes that are spread out around the roof. In this way, there is room for large

> groups of people to get together on the roof to work, learn and celebrate the garden's harvest. In terms of the urban heat island effect, air quality and building heating and cooling requirements, green roofs are larger environmental superstars than rooftop gardens. A green roof is constructed with membranes and is integrated into a roof to cover the whole surface with grasses, shrubs or low-growing plants.

But the difference is that a rooftop garden is successful because of the **people** involved. All of the people

who plant the seeds, water the plants, pinch the basil, tutor the tomatoes, do the harvest, turn the compost, deliver the vegetables and manage the pests are part of the garden and are affected by the garden. It's hard to believe, but even though the gardeners are all volunteers, for some reason they keep coming back throughout the summer, year after year, and they tell us that they enjoy the garden, that the garden gives to them more than they feel that they give to it by watering and harvesting and everything else. These people even invite their friends, family and neighbours to come check out the garden! To us, that's pretty amazing.

This is a world-changing concept, everyone eating their fruits of labour and returning to the source of their daily meals. ... Patrick, 28

Ce projet crée un espace dans ma vie où je me permets de "jouer dehors, sous le soleil" tout en consacrant de mon temps à quelque chose de plus grand - l'entraide au sein d'une collectivité.





Watering the rooftop garden, summer 2006. Photo: Rotem Ayalon.

Goal

hroughout the process of evaluating the environmen-L tal benefits of rooftop gardening, we kept realising the impossibility of separating the social benefits from the environmental benefits. A city is made up of the people who live in it. So if any changes are made to the city, ideally we should first ask, how does it benefit or harm the people? Of course, cleaner air and cooler temperatures in the summer help people, but in order to create a noticeable change in the environment, we would need to cover most of the roofs, roads, parking lots, sidewalks and other paved surfaces in Montreal, which make up 85% of the area of Montreal(!), with vegetation. Hopefully, someday that will be the case. But for now, we have half a dozen gardens sitting atop the city's skyline. Rooftop gardens bring positive benefits to the people in the city, but how much and what kind? This is what we want to find out if rooftop gardening is to become a widespread reality in the city.

All of these thoughts led us to this social and environmental impact study, with the goal of discovering **How much of an impact the Rooftop Garden Project** (**RGP**) has on the Montreal community and What is the nature of the impact of the **RGP**?

More specifically, we want to assess the impact of the RGP on the Montreal community, the organisations and individuals involved. The following are some questions we would like to answer for these three levels of investigation.

1. Community:

- o What type of impact has the RGP had on the community?
- o How has our dream of greening Montréal's roofs penetrated the community's collective conscience?
- 2. Organisations:
- o How is the RGP changing the day-to-day functioning of the organisations involved?
- o How is the RGP forming or influencing the future development of these organisations?
- 3. Individuals:
- o What are people learning from participating in and visiting the gardens?
- o What are participants taking from the project to nourish themselves (mentally, physically, spiritually, philosophically, etc.)?

Reasoning

We have internal and external reasons for doing this analysis. We would like to better understand ourselves and at the same time help others better understand our project. This process and analysis will help us to gain a deeper understanding of the role of the RGP in the community. It may help us to assess the current scope of the project's impact, however intangible that may be to assess. In addition, we hope that this study will uncover some ideas of where and how the Project should evolve in the future. Also, through this study, we hope to emphasize the importance of social benefits of projects. In current environmental discussions, social benefits are not often included in the discussion. We often forget to ask, "How will this initiative directly benefit people?" The results of this study will be used to clearly explain the social and environmental benefits of rooftop gardens to decision makers.



End-of-season volunteer session, 2006. Photo: Amelie Germain.

Process of evaluation

To achieve this unconventional study, various methods (most of them based on basic qualitative methodology) were used, most notably:

- Informal interviews
- Informal focus groups
- One-on-one interviews with key participants
- Community action research volunteers inter viewing each other and the community invited to participate in the research
- Simple surveys at strategic events (i.e. one or two questions posed to all attendees at rooftop events)
- In-depth surveys with participants
- Artistic interpretation An art therapy work shop in the garden.
- Conversation groups
- Focus groups with participating organisations
- Creative expressions

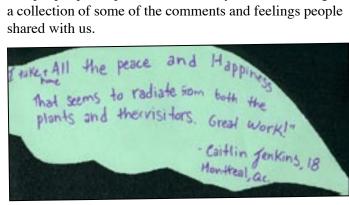
Results

The results of this study are divided between the three levels of evaluation: **community, organisations and in-dividuals**. We hope to express how the RGP has had an influence on each of those levels.

Community

The Rooftop Garden Family Beanstalk

uring one of our largest public events of the summer, the August BBQ, we decided to invite everyone to share what connects them to the garden and their reasons for coming to the garden. This year, we estimate that over 300 people came to the event - families, friends, neighbours, volunteers, and even people off the street who had never even heard about the Rooftop Garden before! Everyone was given a paper bean to write his or her comments on and add to the Rooftop Garden family beanstalk. We thought this was a great opportunity for us to survey participants in a fun, interactive way. By the end of the evening, one of the garden pergolas was completely covered in colourful beans and some artistic creations. It was a fun, creative and decorative research method. About 100 people participated in the activity! The following is a collection of some of the comments and feelings people



Sample bean from the Family Beanstalk.

Common themes kept popping up in people's responses. Many mentioned that they are connected to the garden through **Santropol Roulant**, either as

volunteers, ex-volunteers, friends or staff:

Je suis bénévole et je voulais voir le jardin. Sebastian, 10 years old.

I work at Santropol Roulant but I also feel connected through the space and sense of community created. People, learning new ways and knowledge, sharing an urban space – all these bring me to the garden. I feel part of something bigger and more important than just myself. Emma, 30. I like the idea of using each possible space in town to grow plants and have vegetables for meals on wheels, so I come to help grow the plants. Vihra, 32.

Most responded to the question "What do you take from the garden to your home?" For many people, the garden gives **inspiration**, **happiness and hope for the future:**



Rooftop Garden Family Beanstalk activity. 2006. Photo: Rotem Ayalon.

Well, physically I take Basil and Vitamin D but psychologically I take HAPPINESS. Melissa, 26.

It's the right place to be inspired. Dream of an alternative way of greening our cities-strengthening our community connections. Gerardo, 33.

I am a Saturday morning volunteer. Coming here is the best part of my week. Tye.

Des idées, et le rêve que l'on peut toujours améliorer notre environnement! Jonathan, 31.

The notion of the garden as an **oasis and place of relax**ation kept popping up:

Un mot glissé, comme ça, quelle belle découverte cette oasis urbaine. Valerie, 20.

A green wonderland in the middle of the 'concrete jungle' of a city. Rotem, 26

God knows why I'm here. Was in the area. It's quite relaxing. Joey, 19. Common responses were that the rooftop garden helps create a **sense of community**:

It's just around the corner from my house, so it feels like a part of my immediate community. I love the experimental nature of the project. I also like the fact that I can come and go as it suits me since it wouldn't be something that I would commit to on a regular basis. Thanks for being so flexible! I love the large gatherings, as well as the fact that I can come and sit by myself when no one is here. Sometimes I even have meetings for my work in the garden. Tana, 32.

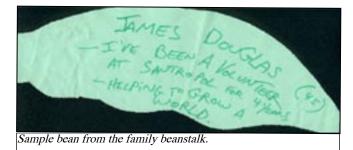
To meet people interested in creating more spaces like this one. Also to see one for myself! David, 31.

My family enjoys fresh air, organic food and being familiar with social activities. Van's family.

Several people also reminded us that they enjoy the rooftop garden for the simple **act of gardening** and the fact that we're doing it in the middle of the city:

My love for organic gardening, and wanting to make it happen in the city! Carlye, 29.

Je sentais vos basilic de ma maison...(I smelled your basil from my home...). Karine, 26.



Discussion

Over thirty people assembled at Santropol Roulant on a rainy Thursday evening near the end of the gardening season to participate in a community discussion about the impact of the rooftop garden on the Montréal community and to sample some of the garden's harvest. We started with a brief overview of the three organisations hosting the discussion (University of the Streets Café, Santropol Roulant and the Rooftop Garden Project) and an introduction to the social and environmental impact assessment. Then we broke up into three smaller groups to have a more fruitful discussion. Each group addressed the three questions below and shared their reflections. 1. How is our understanding of the city changing, with respect to food, food production and the environment?

2. What has changed in our ideas of the City and its relationship to food?

3. Where is there space in our city for food production and greening?

Some participants made comments about the disconnection between cities and food production:

Because of grocery stores, people are disconnected from food production.

No food is produced in the city.

The urban lifestyle makes it difficult to find time to garden.

Many community members commeted about how the city is changing with respect to people **growing food and becoming more aware about the source of their food in general**:

When you grow food you have to be more conscious of what you do with your life, more engagement with the environment. We are landless (in a city) but there are different ways of owning land.

Primarily, it is personal relationships that are affected by gardening in the city. You learn to grow food, keep food. I haven't seen an impact on the city as whole. I can see that gardening is spreading, it does have a visual impact on the city, but the social impacts are hard to define.

A personal benefit is that people discover the taste of food.

There is an educational impact. Organic food is hard to sell, but when people start to grow their own food they get used to freshness as well as to seeing different forms and shapes of fruits and vegetables and so then they are more willing to buy organic (accept veggies that aren't in perfect condition). Several community members commented on the impact of gardens on **life in the city**:

Cities have to find a way to retain people, so as to decrease urban sprawl and the taking of agricultural land. So urban gardens are a good way to keep people in the city, by making it greener, by bringing the green into the city.

People feel isolated in the city, living amongst 3 million others, so they look for people who have similar interests and vision.

Food is expensive, so it's a good motivation for urban agriculture.

Participants commented about the **benefits of small-scale**, community-based initiatives such as the Rooftop Garden Project:

It is very hard to have access to roofs and maybe the [Rooftop Garden] project can have power in opening access to roofs, changing laws, etc.

People are opening to the idea that roof is a place to use and maybe the Rooftop Garden Project has something to do with this new awareness/change.

The garden is definitely a community. The number of volunteers in each session has increased. People who met through the garden now meet outside of the garden as well. People come from a lot of places but everyone has common values; the garden is a way to share with people who share common ideas (they eat like us, think like us, etc.)

Community members offered some interesting suggestions to where food production should take place in our cities:

The city must reserve a space for urban agriculture. New laws requiring green roofs can be appropriated and used to support development of productive RTG.

Institutions, including hospitals, community centers, schools. Any places with lots of people, money and big roofs!

When you grow your own food you become conscious of environmental contamination: if a tomato can't live here, how can I?

(Comment by a community member during a discussion).

After each group had one hour to address the above questions, we all came back together to air out any burning questions.

Questions that emerged at the end :

- To find space in the city, we need to build awareness, so how can we do that in an effective way?
 After educating people, how can we help them to do it themselves?
- How can we help individuals to transform the whole city?
- How can schools be involved?
- Institutions such as hospitals are good places to build awareness and encourage action.
- How are we going to pay for all of this?
- Does urban agriculture have a role to play in social economy initiatives? Is the government willing to pay communities to build
 - a strategy?

• What new economic or social structure do we need to exploit our roof space in a useful manner?

• What about developing rooftop markets?

• Are we interested in moving from gardening as a hobby to gardening for food production? How can we do that?

• How do we keep strong relations between the city and the countryside (i.e. with farmers for seeds, etc. and with locally-produced foods to help us lessen our dependence on food that has travelled long distances)?

This was such an interesting conversation, and an exciting way to share this research with the community.



Child at the rooftop garden. 2006. Photo: Rotem Ayalon

Organisations

The Rooftop Garden Project surely has had an impact • on the partner organisations that have been involved in its development. Originally, the RGP started as an initiative of Alternatives, a Montreal-based NGO that is an action and communication network for international development. Later, the RGP became a project in partnership with Santropol Roulant, a youth-led and youth-run mealson-wheels organisation that serves meals to Montrealers with a loss of autonomy. Today (at the end of 2006), the RGP has about nine partner organisations of different levels of involvement. Three organisations are creative partners; they collaborate in the creation of gardens and the expansion of the Project. The creative partners are: Alternatives, Santropol Roulant and the Maison de quartier Villeray. Six organisations are beneficiary partners,

meaning the creative partners help them set up gardens to integrate into their organisations: the Patro le Prevost community center in Villeray, the Institut de tourisme et d'hôtellerie du Québec, the Université de Québec, Cooperative d'habitation les Pénates in Québec City, HLM Maison Lizette Gervais in Outremont, and Habitations les boulevards in Montreal-Nord. As part of this study, we wanted to assess how the RGP has influenced the day-to-day functioning of the partner organisations and how the RGP is forming the future development of the organisations.

Roulant kitchen. 2006. Photo: Rotem Ayalon.

For example, the organisation's focus areas for 2007 include sustainable development, environmental issues, food sovereignty and urban and rural agriculture. Perspectives for the coming year include internationalising the RGP by continuing to develop international partners for urban agriculture in addition to improving the serviceproviding capacities locally.

Santropol Roulant

At Santropol Roulant, the RGP is being integrated into the daily functioning of the organisation. One of the highlights of this integration is that this year, the RGP demonstration garden has truly become the Santropol Roulant garden. This dynamic organisation has fully appropriated

> the garden and made it its own, while also staying connected to the RGP. In addition, the workshops entitled From the garden to the plate, were very successful and were an excellent way to connect the garden to the kitchen while sharing information with volunteers and community members. At an end-of-the season evaluation in November 2006, the Roulant staff expressed that they see their garden as a way to allow the mealson-wheels to become something larger: a food cycle that involves the production and distribution of food. The garden, therefore, plays

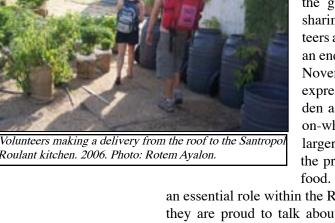
Alternatives

At Alternatives, the RGP is becoming more integrated into the organisation's initiatives and future project development. Not only is the organisation putting more and more emphasis on developing the local urban agriculture experience, but also international partnerships are being pursued.

At the Annual General Assembly in 2006, where the organisation shares a summary of the past year and proposals for the coming year with its members and Board of Directors, the RGP played an integral role in the presentations.

an essential role within the Roulant and is something that they are proud to talk about. The staff sees the garden as a way to make the Roulant more sustainable and they would like to share their experience with other organisations by having a model garden for inspiration.

The Roulant expressed that since urban agriculture is the future path for life in the city, the garden is an integral part of the kitchen and should serve as a way to share knowledge with others. Also, since the garden is a space that attracts many people to it, we can advertise it more as a public space, a space of life. For the future, the Roulant discussed some of their dreams for the garden. They wish the garden could be on the roof of the Roulant's building and they would like to have cooking workshops in the garden with a barbeque. Also, they wish that this cycle could take place throughout the year, not only during the summer growing season.



Maison de quartier Villeray

The Maison de quartier Villeray (MQV) is a community organisation in the Villeray neighbourhood of Montreal that works on breaking social isolation through food, by managing collective gardens and collective kitchens. The MQV is a creative partner with the RGP because it has helped set up a rooftop garden at the Patro le Prevost community center in Villeray. The organisation is also incorporating the RGP into other aspects of its functioning. For example, the MQV has set up its own garden on the balcony of the building to grow vegetables for the collective kitchen. The agronomist has been working with local schools to set up gardens on paved schoolyards using the rooftop garden techniques of container gardening. In addition, the MQV is working on developing a social economy project to grow Stevia in the RGP container gardens to generate income locally.

HLM Maison Lizette-Gervais

The Maison Lizette-Gervais is a senior residence in Outremont. This past year, 2006, was the first season that a

garden and a gardening group was organised with over 10 residents. This project, according to the residents, was a success and will be continued in the coming years. Residents were able to have garden kits on their own balconies, in addition to caring for the communal garden at the entrance to the building. Residents expressed their enjoyment of this initiative by conveying that caring for fruits and vegetables added so much life to



Residents of HLM Lizette-Gervais gardening in 2006. Photo: Emmanuelle Brunet.

their homes and created a community around the gardens. For many people, this residence is the last place they will live, so by having plants in their environment to enjoy and to care for, makes the living environment more enjoyable and unites residents who otherwise may not interact or get exercise on a weekly basis during the summer. The president of the resident's association has been very excited by this project and is already thinking about how the building can begin a composting program to extend the gardening initiative to make the residence more ecological. Garden members also dream about constructing a rooftop garden in the near future.

Individuals

Creative interpretations

ne beautiful, sunny day after a garden volunteer shift, a unique workshop was held in the garden. Leading the workshop was Virginie, a volunteer gardener and ceramist who wanted to volunteer her time and creative skills to bring artwork to the garden. Twelve participants were invited to let their creativity and emotions flow through clay and respond to the questions "What does the garden mean to you?" and "What do you mean to the garden?" (Qu'est-ce que le jardin signifie pour toi? Et Qu'est-ce que toi tu signifies pour le jardin?) The garden proved to be quite a place to be inspired. As soon as each person received a ball of clay, silence took over and concentration set in. After one hour of working with the clay, each person presented their artwork to the group. It's amazing what some clay, a beautiful garden and the inspiration of 12 people can produce.

Catherine, one of our youngest volunteers at 10 years old, recognizes the fact that the garden needs people. Through

her ceramic creation of a flower that is wilting in the heat and needs water, she represented her idea that the garden does not only give to us, but we also give back and support the garden:

This shows what I bring to the garden. When the flowers are wilting from the heat, I come to give them water.

The clay representations of the garden exposed various interpretations of the meaning of the garden to the individuals. Several participants created artwork representing their feeling that the garden creates **community**:

This represents the community created by the garden and the success of the garden. (Two people with their arms raised in victory).



Clay workshop 2006. Photo: Rotem Ayalon.

Many agreed that by participating in the rooftop garden, people are able to be **active, creative and productive**:

I like to come to the garden to get my hands dirty. This piece represents my good feeling from being active and creating things in the city. (Nina's hand).

Because going on the roof is funny, I made a funny frog.

This represents what the garden gives to me. Delicious fresh fruit. (Watermelon and ground cherry).

In addition, repetitive themes included **feeling closer to nature** through garden involvement, and the idea that the garden represents **diversity in people and nature**. Many felt that this type of interaction and contact with nature is rare in the city:

A ladybug crawled on me earlier. This is my representation of how rare it is to see bugs in the middle of the city. (Ladybug).

Coming to the garden makes me feel close to nature. It's a peaceful place, where everyone feels good. Like the sun, the garden radiates goodness. (Peaceful sun).

People interact with other people in the city, and they think that there is a lot of diversity. But, they forget that there are other types of diversity in the city – plants. In reality, a diversity of plants and animals can live in cities and should be protected by people. (Person with arms full of plants).

Several participants represented the garden with the symbol of **life and fertility**. A garden, on a roof, is quite **powerful**:

Survey with volunteers

In order to find out some information directly from volunteers, we conducted a survey during an end-ofseason event and also sent the survey by email to volunteers. The responses we got were really great. During the season, we often do not have the time to find out what brought people to the garden, why they were interested, or what they are incorporating from the garden into their own lives. This activity helped us get this information down on paper to learn from for future years.

Below are the questions we asked and the responses, grouped into themes, from 14 dedicated volunteers, whose ages ranged from 25 to 52.

1. When you first heard about the Rooftop Garden Project, why did you want to get involved? What excited you? Lorsque vous avez entendu parler du Projet des jardins sur les toits pour la première fois, pourquoi avez-vous voulu vous impliquer? Qu'est-ce qui vous a stimulé?

Several people mentioned their excitement about having **contact with nature**:

Green, outdoors, sunshine, people, flowers, vegetables. The whole concept excited me. It is a way to escape the indoors, the computer and get fresh air!

The idea of working outside and learning about plants.

Various people mentioned wanting to be **part of something sustainable and creative, working together** with other people in the community:

The possibility of joining a project that, I believe, can lead us to a better quality of life; To give some of my time to a sustainable initiative

> and help to make this idea become widespread excited me at the time I decided to get involved.

> Je m'implique au jardin pour rencontrer des personnes qui ont des belles valeurs sociales.Je trouve aussi que c est une activitées très zen ou il ne faut pas etre performent comme dans la plupart des emplois.

The egg is a symbol of fecundity. A shell is arid like the roof. Instead of a seed, here the plant comes out of an egg. The shell is broken, so the plant pushes through the cracks, just like on the roof. This shows that by seeing it in a different way, a roof can be fruitful and fertile, like an egg. (Plant coming out of an egg).



Clay workshop participants. 2006. Photo: Rotem Avalon.

The idea of gaining experience with **gardening** and having direct contact with **growing food** interested many people:

I just think that gardening is really cool and that every small (or large) action that you can take to make food more personal is a good and healthy action.

.. Je trouvais le projet de jardinage en ville sur des structures autrement laissées vides vraiment intéressants. L'idée de mettre les mains à la terre, de découvrir le cycle agricole dans un contexte urbain, de le faire pour une popote roulante et de rencontrer plein de nouvelles personnes était vraiment stimulante.

... When I discovered the nature of the project I became interested in taking

part to learn about growing vegetables and to be part of a social group of like-minded people. I was excited about working outdoors which is something I've never really done before.

Finally, various people mentioned that the project excited them because of their **desire to be involved in a socially and environmentally engaged activity**:

> J'avais déjà travaillé pour le Santropol Roulant et je

cherchais un projet différent dans lequel faire du bénévolat.

...Premièrement je me suis dis que ça pouvait être une activité à faire avec ma fille de 10 ans. Je ne cherchais rien de particulier mais le Jardin est une activité ludique qui pourrait lui plaire et qui est aussi reliée à une conscientisation sociale et écologique. Les Jardins joignait donc une activité de plaisir et socialement engagé.

The idea of working on a project that was both environmental and social. I also wanted to practice French and do something that I wouldn't be able to do in my normal working life.



Dawson College students in their rooftop garden, 2006. Photo: Mark McGuire.

2. What keeps you inspired to stay involved? Qu'est ce qui vous inspire à poursuivre votre implication ?

Various volunteers explained that reasons they stay involved are the **people and the fun**:

The people I've met. The project just makes so much sense; it brings me joy. It's gratifying to do manual labour; it's a change of pace from everyday life.

Les gens sont dynamiques, farfelues, sortent de l'ordinaire et ça sert à quelque chose.

Many people explained that the reasons they stay involved include **being involved in a gratifying project that is socially and environmentally engaged and constantly developing**:

> The fact that the project is developing each year makes me believe that our work can really lead us to a better consciousness about our cities and environment.

> I want to be involved in concrete actions, which contribute to real sustainable development, and to network with those who share similar values.

En apprendre plus sur le jardinage et sur l'agriculture urbaine, comprendre davantage les enjeux socio-

environnementaux de cette pratique, continuer d'échanger avec les autres jardiniers et faire découvrir ce projet à d'autres personnes.

Volunteers also explained that they stay involved because they are **continually learning new things**:

...Seeing my students discover the project and have it capture their imagination. The work. The challenge of learning.

La créativité que demande le jardin et sa présentation, ses rencontres, la sagesse que me procure le jardinage dans un environnement amical

J'ai demandé à Catherine (ma fille) et elle dit qu'elle aime tout simplement être là sur le toit à jardiner et à apprendre de nouvelles choses sur le jardinage.

Rooftop Garden Project Social and Environmental Assessment

3. What are you taking from the project to nourish yourself personally (mentally, physically, spriritually, etc.)? Qu'est-ce que vous prenez du projet pour vous nourrir en tant qu'individu (aux plans mentaux, physiques, spirituels, etc.)?

A common response given by volunteers is that they enjoy **learning and gaining skills** through their involvement:

I love learning about how to care for plants and produce things in the garden. The rooftop garden is a great opportunity to learn about these things.

I learnt a lot about plants, it gave me time to reflect and gave me confidence to interact in a new society and in a new language.

People mentioned that the project makes them physically nourished because they are **doing exercise and being outside:**

... being outside and working in the garden, touching plants and watching them grow, is very good for me spiritually. Every time it's sunny out and I spend a few hours in the garden I come home feeling great!

Faisant du yoga, c'est un endroit ou je peux me relaxer, me détendre et oublier la vie citadine quelquefois trop rapide et occupée. Je prends le temps de me poser.

Ce projet crée un espace dans ma vie où je me permets de "jouer dehors, sous le soleil" tout en consacrant de mon temps à quelque chose de plus grand - l'entraide au sein d'une collectivité.

Several volunteers are satisfied by being **involved in** something positive and gaining hope for a sustainable future:

Feeling helpful, feeling that I have value as a citizen. Meeting people/ social integration to a group with concerns that are similar to mine.

Je suis contente d'appartenir à une communauté qui devient un mouvement pour faire changer des pratiques sociales.

Hope! That we can build a lot of groups like this and through them, slowly spread out the idea of sustainability (environmental, economic, social...)



Weighing the harvest, 2006. Photo: Rotem Ayalon

4. Are you incorporating anything from the project into your life? If so, what? Est-ce que vous intégrez des facettes du projet dans votre vie? Si oui, lesquelles?

Many volunteers are now integrating the knowledge from the rooftop garden by **gardening at their homes**:

J'essaie d'intégrer tout ce que j'ai appris sur l'agriculture urbaine dans mon petit jardin de balcon. J'apprécie aussi énormément tout ce que je récolte de ce jardin et j'aime beaucoup en partager le fruit, que ce soit avec mes voisines, avec mes ami-e-s qui viennent chez moi ou avec ma famille.

Not yet a rooftop garden, but I'm planning to grow some vegetables next year.

This coming season, I will certainly be growing tomatoes in my back yard. I have already begun a compost bin.

Many volunteers mentioned that they are **becoming more aware** about other issues and that their involvement is **influencing their work, studies and free time activities**:

It has made me more aware of food and agriculture, skills that need to be taught and learned – it's so important for our health and well-being. I've become more careful about how I eat.

Je suis plus sensible à toutes les questions qui touchent l'environnement.

Je commence a intégrer des facettes du projet dans ma vie comme par exemple j'ai appris avec un autre bénévole a me faire un bac de vermicompostage.

> Various volunteers also mentioned that they are **sharing their experiences in the project with friends and family members**:

J'aime beaucoup parler avec mon entourage aussi de ce projet et de ce que j'y apprends puisque cette source d'inspiration et d'idées de projets qu'on peut reproduire à plus petite échelle chez soi.

Conclusions

This study of the Rooftop Garden Project (RGP) highlights the important role that this innovative project has played in the health and well being of the individuals involved, in the inspiration of community members, and in the daily functioning and future orientations of partner organisations. The conversations, artistic interpretations and interviews revealed many inspired and excited people, more than were able to be represented in the pages of this report.

An overarching finding of this study is that the RGP is touching the lives of Montrealers and inspiring people to participate and learn more than just gardening. Participants and community members are becoming more aware of food and environmental issues in their community. The creative and open nature of the project has sparked many people's interests and given them tangible ideas to learn from and apply at their own homes.

Community health is improved by this project. Participants repeatedly mentioned that the gardens gave them happiness, hope, relaxation and made them feel healthy because of the outdoor physical activity. In addition, community is devel-

oped by this project. The gardens are seen by many as places where community members can meet other people, build a sense of community and be involved in a socially and environmentally engaged initiative.

This report is a way for the RGP to learn more about itself, but also as a way to begin understanding the impact that this project has had on the Montréal community. These results have helped us to see that environmental impacts of rooftop gardens reach far beyond tons of greenhouse gas emissions reduced – they reach the people who are involved in caring for the gardens and all the people related to or touched by those people. The impact is, when you look at it that way, endless. It cannot be calculated or captured in words. It is our hope that this research will inspire more rooftop gardening and will have an impact on discussions about environmental impacts, to encourage them to include social and community effects as an integral part of the assessments. J'ai appris énormément sur l'agriculture, apprentissage que je reproduis sur mon propre balcon en faisant pousser des tomates et autres aliments et auquel j'accorde beaucoup d'importance. De plus, comme le jardin se transforme graduellement en espace collectif, les rencontres se multiplient, que ce soit au cours de yoga, aux événements spéciaux ou encore aux activités que les bénévoles sont invités à organiser.



Photo: Jonathan Douaire

Thank you to all of our wonderful volunteers and community members for your support. This project would not be possible without you.