

Zurich-Basel Plant Science Center

Food security and sustainability in the city of Zurich

Xeniya Kofler (UZH) and Eleni Tevridou (UNIGE)

1.1 Abstract

In the past few decades, the issue of sustainable and responsible living has been on top of the list of topics discussed at world leaders' meetings such as the United Nations Summit. Since the development of sustainable development goals (SDGs), many European countries have embraced and implemented many steps on the way of achieving these goals. In this case study we decided to investigate the extent to which the city of Zurich, Switzerland succeeds in the policy development and implementation of SDG's 2 and 12 both dealing with food sustainability.

2.1 Definitions

- **Sustainable development** means environmentally safe, economically viable and social fair. In the environmental dimension refers to the use of resources at rates that don't surpass the capacity of Earth to replace them. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987).
- **Sustainable Development Goals (SDG's)** are a set of 17 goals defined for the purposes of sustainable development as the world population grows (Sachs, 2012).
- **SDG 2** stands for ending hunger, achieving food security and improving nutrition while promoting sustainable agriculture (United Nations General Assembly, 2015).
- **SDG 12** stands for ensuring sustainable food consumption and production patterns (United Nations General Assembly, 2015).
- **Food system** includes all processes and infrastructures involved in feeding population, including but not limited to: nutrition, food, health, community economic development, and agriculture (European Environment Agency, 2016).

3.1 From Millennium Development Goals to Sustainable Development Goals: Setting the stage

As a result of the United Nations Summit in September of 2000, a set of eight goals intended to guide countries in their fight against such issues as world hunger and poverty were signed (SDG Fund, 2014). This set of goals was called the Millennium Development Goals, or MDG's. These goals were defined and signed by 189 countries to be implemented by 2015. In 2015, MDG's were followed by a more explicit and well-defined set of 17 goals called Sustainable Development Goals, or SDG's (United Nations General Assembly, 2015). SDG's replaced MDG's and are expected to be reached by 2030. Unlike MDG's, SDG's were created in such a way that "developed" and "developing" countries can use and interpret the goals in their personalized manner. In this article, we review the progress of SDG's 2 and 12 dealing with food sustainability and its implementation through policies in the city of Zurich, Switzerland. We discuss the use of SDG's at the policy-making level and how different levels of government promote these goals through impact on education system and local initiatives based on our interview with Ruedi Winkler from Grün Stadt Zurich (2017), and a literature survey. We then proceed to discuss the success of developing sustainable food systems in Zurich. We finish our overview with some suggestions for changes that can be implemented.

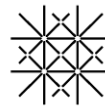
3.2 The Extend of Zurich's Involvement in Sustainable Development Goals

Following the establishment of SDGs, many countries began taking initiative in developing sustainable food systems. Zurich has several policies on sustainable food production and consumption in place.

In its 2000-Watt strategy developed in 2008 reduction in food consumption from 750 Watt to 250 Watt was one major objective (City of Zurich, 2008).

The Milan Urban Food Policy Pact was signed in October of 2015 by over 100 cities (Milan Urban Food Policy Pact, 2015). Joining the Milan Pact in 2015, were three Swiss cities – Zurich, Geneva, and Basel with the goal to implement policies directed toward sustainable food systems.

In its "Masterplan Umwelt 2017-2020" sustainable food is one of the main topics (City of Zurich, 2017). After the public voting in November 2017 public policy was enhanced with a



paragraph on Zurich taking action in “support of an environmental-friendly food consumption” and giving “information about the impact that food consumption patterns have for global climate” (City of Zurich, 2017).

Following these policies and as part of bottom-up governance many players became involved and receive support from the government to develop and to experiment with sustainable local food strategies.

4.1 Support of local initiatives through municipality

Overall, the municipality supports the development of a sustainable food system in a bottom up approach. It acts to incentivize the founding of start-ups and community-driven local initiatives through providing financial support and educational activities dealing with food selection and utilization for people of all ages and backgrounds interested in improving the city at the community level. This includes access to space or support in marketing and offering market places to sell their food products.

Grün Stadt Zurich is a sector of the local government, which supports and initiates many projects in the city directed toward making Zurich more environmentally aware, greener, and healthier. Grün Stadt Zurich takes care of 3773 hectares of land given to various community-driven projects. New parks are being created and old renovated in order to increase green areas for people to enjoy. Within these areas several community gardens are supported by Grün Stadt Zurich.

Grün Stadt Zurich has a vision for how different aspects of city’s green areas will change in the next 10 years including changes to support local and sustainable food initiatives. This information can be found online in the “Greenbook” and includes plans for quality of life improvement, biodiversity, land use and conservation, and more (Grün Stadt Zurich, 2011).

Some of the examples of their activities include seminars and talks on topics that range from biodiversity issues to training people on how to preserve locally grown foods. According to Ruedi Winkler, a big issue is that younger people have less experience with “old” techniques in cooking and food preservation. Thus, to improve and increase community’s

reliance on locally grown produce, it is important to teach the people how they benefit from this type of food and how their choices affects the world, and simply how to use the ingredients available in your area.

4.1 Ongoing local initiatives

One of the major sources of progress in the direction of sustainable food systems comes from start-ups that benefit from the urban setting. There is a variety of new and successful projects including Essent¹, Foodsharing², Zero Food Waste³, and Too Good to Go⁴ that focus on efficient food distribution but also reduction of food waste. Reduction of food waste is also in the center of the food sharing initiative, foodsharing.ch.

Examples for complex community-driven local food systems including all steps from production to processing to consumption are community-assisted agriculture initiatives as Ortoloco⁵ or Meh als Gmues⁶ or transition initiatives such as Neue Nachbarschaften.⁷

Local initiatives span over urban and peri-urban boundary.

Ortoloco is a self-managed joint initiative of more than 230 members (farmers and consumers) using 1.4 hectares of arable land at the organic farm Im Fondli, where they cultivate a variety of seasonal fruits and vegetables. Each participant holds a share. Ortoloco serves as a lab for economic and agronomic experiments. Participants can choose the working areas out of 14 and work on weekly basis to take care, harvest, distribute, and finally consume locally grown food. The initiative is ran democratically by a members’ assembly and all decisions are made together. Risks and costs are shared as well as the income. A living connection to food is created by involving people on a personal level and, generally, better ecological and agricultural outcomes are achieved.

Dunkelhölzli⁸ is a planting space initiative located on the outskirts of Zurich-Altstetten, provided by the city of Zurich. This location is easily reached by bike or public transport. The initiative is ongoing since 2010 with more spaces being added over the years. Similar to Ortoloco, here also participants grow vegetables with high regard for human and animal welfare. Pick up can be done directly on the planting space or

¹ <https://www.essento.ch/>

² <http://foodsharing.ch/>

³ <https://zerowasteswitzerland.ch/>

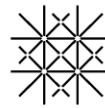
⁴ <http://toogoodtogo.ch/>

⁵ <http://www.ortoloco.ch/>

⁶ <https://www.mehalsgmues.ch/>

⁷ <https://www.neustartschweiz.ch/nach-hause-kommen/>

⁸ <http://www.dunkelhoelzli.ch/>



in selected depots where participants deliver the vegetables by bike on a regular basis. Through an online calendar, members can see when and where help is needed in the field so the participants can share the responsibility of taking care of the plants and animals.

The nature school, organized by Grün Stadt Zurich, has been around for over 30 years. The goal of this project is to familiarize children from young age with nature and allow for personal interaction with it, with the goal to facilitate understanding of biodiversity and importance of its preservation. There are approximately 900 classes that target different green spaces.

4.3 Education

Various educational programs are run by bottom-up initiatives in Zurich and are supported by public funding or by private funding (e.g., Grün Stadt Zurich subsidizes seminars for adults and children).

Both ETH and UZH are very active at their role in promotion of sustainable food systems. Following are some of the programs implemented:

1. World Food System Centre
2. Zurich-Basel Plant Science Center
3. Competence Centre Environment & Sustainability of ETH
4. Sustainable catering project of ETH
5. UZH Sustainability team
6. Swiss Food Panel project
7. Plant Science Center

These projects not only function at academic level, they allow educational opportunities for the public. Additionally, the intent of these projects is to improve the use locally grown foods and to reduce waste. An example is university cafeterias where locally grown produce is used preferentially.

5.1 Challenges for the implementations of SDG 2 and 12

Since signing the Milan Pact in 2015, Zurich has developed a lot of measures to coordinate already present sustainability initiatives through Grün Stadt Zurich and develop new programs. The vast majority of the programs have been active for years before 2015; however, there is still a lot of challenges in implementation of these initiatives.

The examples of food systems initiatives described earlier in this paper show that there are a lot of positive outcomes in implementation of SDG 2: the community-driven and community assisted agricultural initiatives within the urban and peri-urban space ensure a sustainable local food production and through their organic approaches progressively improve land and soil quality. Also, implementation of SDG 12 is done through local initiatives enabling a sustainable local food production and ensuring sustainable consumption with a focus on measures to reduce food waste.

However, we also observed some challenges that might slow down or hinder the implementation of SDGs through local initiatives.

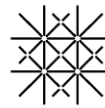
More community-assisted initiatives should be supported to move them out of their niche and make Zurich's citizens more aware about opportunities for local food systems.

Community-driven food production and processing initiatives on public land managed by Grün Stadt Zurich have a limitation in that the access to these resources is granted only temporarily. Some of these areas may be used for building houses in the following years. In general, there is a conflict of interest between spaces for building buildings versus green spaces.

There is insufficient data on progress of initiatives and data need to be collected on a regular basis and made publicly available. Lessons learnt from these local initiatives need to be shared between initiators, policymakers, and citizens in a timely fashion.

Thus, going forward, is paramount to offer opportunities and incentives to improve citizens' understanding and knowledge on sustainable food use. Education about the food is very important and goes beyond simple "where the food comes from?" or its nutritional value. Food storage and sharing are also important skills that are not commonly well-known in depth. These aspects are already being addressed in community initiatives such as Einmachbibliothek⁹, where people can learn about food preservation techniques and

⁹ einmach.ch



recipes that they may not have learned growing up or at school. However, the effects of these initiatives can be expanded to target a larger variety of people.

Citizen need to be educated about the role of Switzerland in the world-wide food system to change their consumption habits and to actively support and develop local initiatives that enable local food production and ensure sustainable consumption.

It would also be helpful to promote inclusion of all groups: actively involve weaker groups who for financial or other reasons may not have access to the information and the resources in general.

In addition, empowering young people could be a strong force that will last and spread. For example, use of education material of “Worldlargestlesson” generated by UN 2030 in collaboration with UNICEF with lesson materials on SDGs available in 10 languages at schools could create a deeper understanding of changes needed to be made in the future in children and young adults. Attempts should be made toward integration of SDG’s in schools. Introduction to SDG’s yearly on will raise public awareness.

Overall, both canton and municipality Zurich lack a coherent sustainable food policy definition and description (Moschitz, 2017). This problem is mainly attributed to the absence of detailed descriptions of what actions are considered sustainable that transcend different levels of cantonal organization. The urban and the rural areas do not receive the same treatment and thus create a gap in communication and large-scale implementation of SDG’s. However, local government is heavily investing in development of both local food production and food sustainability education of communities, which will bring change to make local food systems more sustainable.

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