

Metropolitan Foodscape Planner

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Organisation: Wageningen University Research

Country: Netherlands

Level of government: Local government

Sector: Environmental protection

Type: Communication

Launched in: 2015

Overall development time: 1 year(s) 6 month(s)

Link to the innovation's website

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Description

The Metropolitan Footprint Tool (MFT) allows the spatial allocation of food groups on the basis of regional demand figures deriving from food consumption census data compiled by the EFSA (2011). The demand figures are been projected against the actual metropolitan land use, making use of land use data (HSMU). Making use of the digital Map-table technology, stakeholders can engage in 'serious gaming' exercises and develop scenarios for increasing the supply with regional food for the 8 food groups. For playing the game, the European Landscape Typology (LANMAP) allows stakeholders to use landscape ecological references when proposing land use changes. Building upon the classical market-centred von Thünen (1826) model, we also offer a concept of metropolitan zones. MFT allows the different parties to benefit from the project's knowledge brokerage capacities in order to commonly develop visions for a sustainable future. Taking the city's ambitions as a starting point.

Why the innovation was developed

- Rotterdam is facing major challenges: • Achieving sustainability in terms of social, economic and environment; • Facilitating the transfer to a knowledge-based processing industry; • Providing a high degree of rural-urban integration and livable landscapes; • Innovating the social, technical and governance aspects of food by introducing new (cluster) services.
 - Producing sufficient, high quality food while preserving soil organic biodiversity, using less fertilizer, water, and fossil fuel energy reducing the environmental and climate impact – while maintaining a high quality of life and a highly competitive economy, are key assets for metropolitan regions all over the world. A wealth of relevant knowledge regarding Rotterdam's agro-food sector is available but not always accessible in industry, farming, science and public services.
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Objectives

Enhance transparency, Improve access, Improve effectiveness, Improve efficiency, Improve social equity, Improve user satisfaction, Increase citizen engagement, Support economic growth

- Central to the innovation of food chains is to substantially improve resource use efficiency of energy, water, nutrients and space.
 - One of the proposed measures is the development of so-called Metropolitan Food Clusters (MFCs) that can provide this food system innovation at different levels, namely by horizontal integration of biomass recycling from non-farm origins, the better use of biomass streams off-farm (e.g. in bio-refineries as well as vertical integration of the food chain in terms of time and space.
 - For the case of Rotterdam we developed two examples: 1. Making dairy food chains more sustainable 2. Guide regional product marketing
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Main beneficiaries

Academia, Businesses, Civil Society, General population, Government staff, Students

Existing similar practices

Urban Footprint Tool

In my own organisation
Wageningen UR

The Urban Foodprint Tool is also producing global hectare figures based on urban food consumption, but does not have a spatial component: it only produces statistical figures (ha demands).

<http://www.stedelijkefoodprint.nl/51urbanfoodprint.html>

Results

Service quality

Accessibility:

- Data previously restricted to numerical databases at expert level is being made available to the wider public and user.

Responsiveness:

- The sustainability impact assessment in terms of the ecological footprint assessment is being made available immediately > maptable impact scores

Reliability:

- Data on landscape types used as reference increases the reliability of the output.

Development

Design

Dirk Wascher & Leonne JeurissenDesign time: 4 month(s)

Testing

- comparison of HSMU data with Dutch LGN7 land use data

Testing time: 8 month(s)

Implementation

Tools used:

- ARCGIS Mappable technology

Resources used:

- 3 person €350.000

Implementation time: 3 month(s)

Diffusion

- conferences
- paper publication
- city workshops
- new projects

Diffusion time: 3 month(s)

Challenges and solutions

- variations in national food demand data >> > >
 - rely on EFSA data high complexity of existing land use
 - rely on HSMU data nonexistence of national landscape data
 - rely on LANMAP data ARCGIS is static
 - transfer to MAPTABLE technology (new programming)
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Partnerships

City of Rotterdam City of Berlin City of London City of Milano City of Ljubljana City of Nairobi

Academics and Research Bodies, Civil Society, Other Public Sector, Private sector

Cooperation & Exchange

Lessons Learned

Lessons Learned

- EU FP7 project evaluation evaluation of various research papers
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Conditions for success

- city governments to be more proactive in the field of regional food supply
 - requires more spatial planning capacities
 - metropolitan food sector to consider new ways of designing chains
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Other information

We would like to offer the MFPtool 'life' on the internet for cities to use it directly 'on demand'.

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