

Evaluation “SUSMETRO” (WP-102)

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Introduction

Sustainable agricultural development implies innovating through a broad range of innovative experiments. Such experiments can differ wildly. Some imply intensifying agricultural production, others build on combining multiple societal functions with traditional agricultural, and again others on transformation of value chains. These types of innovations are in line with very different, sometimes contradictory, value orientations.

Exploring the future is a typical example of an activity in which it is very hard to think outside one's own value framework. Based on our own values and interests, we are prone to choose a particular set of innovation options, in line with only one value orientation, instead of keeping a broad playing field. In contrast, Metropolitan Agriculture holds that it is actually necessary to include a broad mix of innovative agricultural options, one that deliberately crosses the boundaries of multiple value orientations. Specific areas may be best suited to specific options, but the metropolis itself is best served with that broad agricultural mix. So how can decision makers be facilitated in exploring a sustainable future for agriculture?

SUSMETRO aims to support stakeholders in Metropolitan Agriculture. SUSMETRO is a collaborative toolbox that can be used to visualise (make images of) a sustainable agricultural future, and explore the impacts of the resulting visions on the agricultural ecological footprint. SUSMETRO consists of a set of maps about a metropolitan region of choice. Each map contains information that is important from the perspective of metropolitan agriculture. These maps are linked with a computer model that can produce information about agricultural impacts on people, planet, and profit values. With SUSMETRO, stakeholders use a set of descriptions of agricultural innovations and their most important characteristics. With the SUSMETRO maps they decide which innovations are best fit in which region, and in doing so they produce their own, new map with a vision of sustainable agriculture. In sum, the SUSMETRO approach supports making images of Metropolitan Agriculture.

Aim

The aim of SUSMETRO is to provide a decision support for Metropolitan Agriculture. This means that it must be able to bridge different value orientations and that it facilitates designing a mix of agriculture innovations for the future. To do this, SUSMETRO acts as a boundary object that can facilitate discussions between different value orientations.

Set-up

Dirk Wascher and his colleagues are working in two tracks. First, they have organised various pilot tests and feedback rounds on the approach itself and its effectiveness. Second, they are integrating the computer models in the SUSMETRO approach, to improve the impact assessment of Metropolitan Agriculture.

Pilot tests and feedback rounds were held at TransForum, at the Dutch Ministry of Housing, Spatial Planning and the Environment, and at the international workshop "Farming at the edge of town," in collaboration with LEI.

The project is on-going, and the researchers are presently preparing a series of full-fledged SUSMETRO sessions with stakeholders in various areas in North-West Europe.

Main findings and conclusion

The findings and conclusions are based on the experiences with the above pilot tests. As a consequence, the main findings constitute promising directions for the use and application of SUSMETRO, but not empirically supported conclusive results.

The SUSMETRO approach, as a "serious game" in which stakeholders can explore their agriculture preferences, proved to invite the players to strike trade-offs between different kinds of agriculture in different areas. Furthermore, the use of a triple bottom-line within SUSMETRO invited the stakeholders to choose a mix of agriculture that has a positive triple bottom-line on the whole, a mix in which more intensive and more multifunctional agriculture both have a place. This suggests that SUSMETRO indeed can fulfil the role as envisioned by its developers.

The first experiences with SUSMETRO prototypes showed that the traditional ecological footprint can stifle thinking about sustainable agriculture. In most cases it will only confirm that regional agriculture has an ecological footprint that is bigger than the region itself, and that the ecological footprint cannot be sufficiently reduced to fit the region itself. The ecological footprint evokes the impression that we need one solution for ever after. In contrast, working from a triple bottom-line (operationalised, in the

case of SUSMETRO, as pertaining to recreation, to agriculture, and to nature) can empower stakeholders. A triple bottom-line can serve as a guiding point to work to in a step-by-step fashion.

One general finding is that stakeholders find it difficult to distinguish between urban agriculture and metropolitan agriculture.

In sum—SUSMETRO can act as a boundary object between multiple value orientations, and may help to bridge value differences between stakeholders, by inviting them to strike trade-offs between different types of agriculture in different areas.

Meaning for TransForum / Connecting values and practices

TransForum's vision of metropolitan agriculture is hard to operationalise and difficult to understand. Difficult to understand, because it presumes a mix of agricultural activities that cross value boundaries, whereas stakeholders are prone to think within the boundaries of one value orientation. Hard to operationalise, because it means taking into account a wealth of criteria that can inform decisions about a broad range of innovations. SUSMETRO can help to overcome these problems, by visualising the criteria and the impacts of sustainable agriculture with maps and computer models. Furthermore, SUSMETRO enables stakeholders to visualise Metropolitan agriculture, and may be able to help stakeholders to connect values from different value orientations.

Implications for the agro-innovation system

The agro-innovation system holds a plethora of innovation experiments. SUSMETRO allows stakeholders to put these experiments in a broader context, and invites them to think about a healthy mix of innovations, fit to the landscape.