

Urban agriculture and local food production: feeding our cities future

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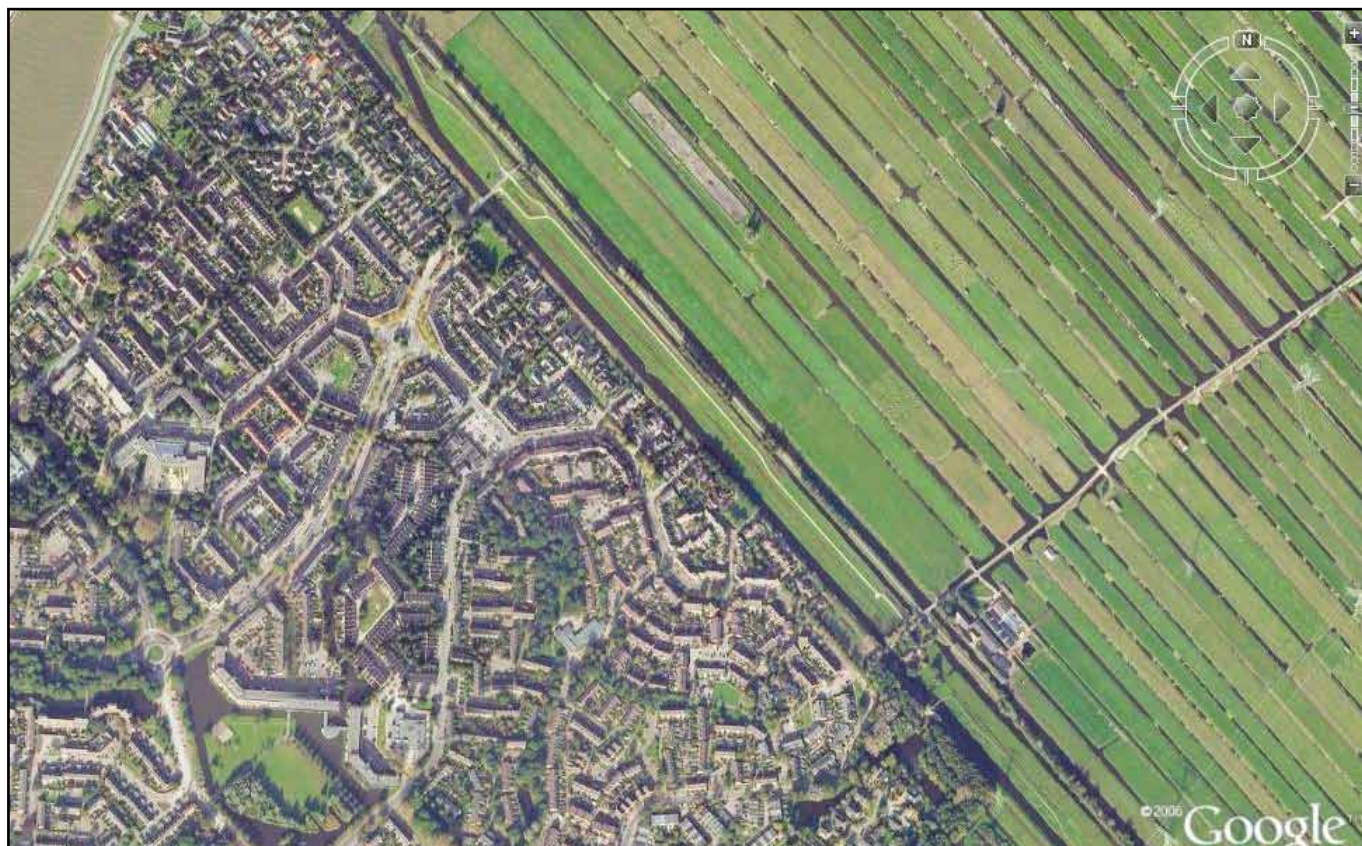


Figure 1: Illustration of sharply delineated city-fringes in the Netherlands (source: Google Earth).

Nowadays more than 50% of the world population (3.3 milliard people) is living in cities. In the Netherlands, the urban population is already more than 75%. After WWII the main Dutch spatial planning policy was to concentrate or cluster urbanization. The goal of this policy was to keep the landscape open and undeveloped, to limit travel distance and to support amenities. This led to extremely sharp fringes between city and countryside in the Netherlands (see figure 1), resulting in an increasing distance (mental en physical) between city (and citizen) and the countryside. Consequence is that people become estranged of food production, nature and the basic values of rural live, like quietness, darkness and the rhythm of seasons.

Currently, there is a growing interest in re-establishing the connection between city life and values associated with the countryside, like green infrastructure and healthy food. For example, in London the food strategy was launched as a response to the fact that obesity and diet-related illnesses accounted for a huge number of premature deaths, with many on low incomes suffering disproportionately. In 2007, Amsterdam, inspired by London, also launched its food strategy. Moreover, in the Netherlands there is in general the urge to decrease the ecological footprint of food production and –consumption, to recycle waste and to develop new ways of energy production.

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Urban farming is practiced in both developing and developed cities worldwide, including the Netherlands. In most cases urban farming is about local food production. However, by producing local food, urban agriculture can simultaneously provide green space, energy, care, education or recreation for city dwellers. Farming can also contribute to the shape and management of the green fringe of the city. It can function as energy supplier, water buffer and processor of city waste. The city's needs for healthcare, elderly services, childcare and education are already part of some agricultural enterprises in the Netherlands.

Is it possible to (re-) integrate agriculture in city development in The Netherlands and in that way contribute to a more sustainable and liveable city? In this paper we introduce the case of Agromere, an innovative design of city development in the Dutch city of Almere. Almere (180,000 inhabitants) is a new and fast growing town, 30 km east of Amsterdam. By the year 2030, Almere will have to be expanded to accommodate 350,000 inhabitants, in order to fulfil the growing need for new houses in the Western part of the Netherlands. Northeast of the city 15,000 new houses are planned on approximately 4,000 ha of fertile farming

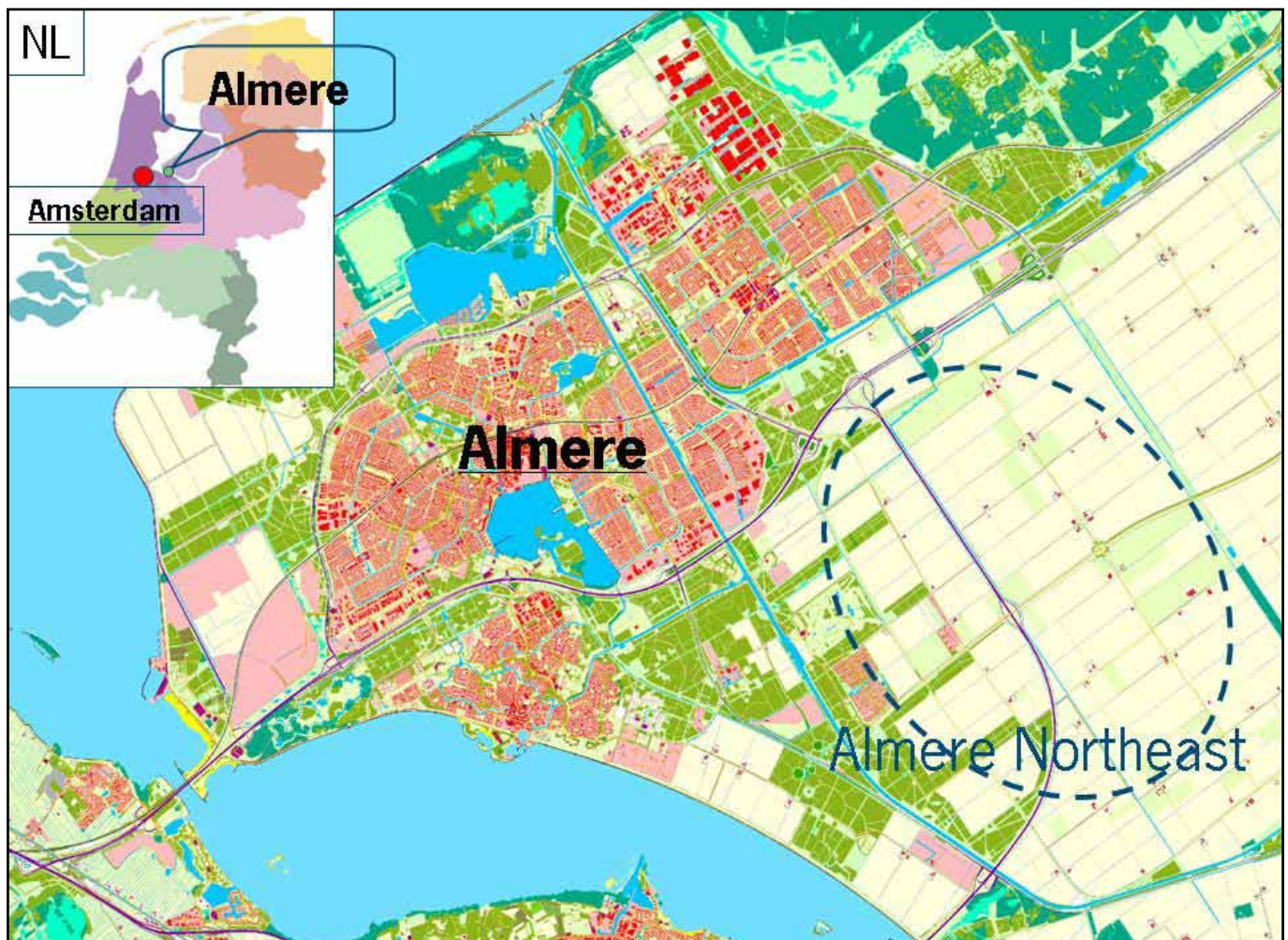


Figure 2: The Dutch new town of Almere, 30 km Northeast of Amsterdam, situated in the Southern part of the Flevopolder. 15,000 ha are planned Northeast of the city on app. 4,000 ha of land. In this area mostly arable and dairy farmers are producing for the world market.

land (see figure 2). Besides housing needs, also nature conservationists, waterboards, farmers and enterprises lay claims on this area.

The objective of the case 'Agromere' was to create a process which was to eventually lead to a new residential quarter where agriculture is fully integrated in the city life of Almere. At the same time the goal was to inspire the city council and other stakeholders to include urban agriculture in the city development plan (the so called 'draft Structure vision 2030').

With a group of stakeholders we designed a virtual suburb where urban agriculture meets city life in Almere Northeast: 'Agromere'. We used the DEED framework to structure this process, which combines stakeholder management and design. Involving all relevant stakeholders, we explored the possibilities of developing this new suburb for Almere. In cooperation with the stakeholders, a township was designed which integrates living (5,000 inhabitants) and urban agriculture on 250 ha. For houses and (social) infrastructure 70 ha was used. On the remaining 180 ha, four urban organic farms were projected: a community supported (CSA) vegetable farm, a dairy farm with nature-education, a greenhouse farm with restaurant

and school and an arable farm with health care and village-shop. Each of those four farms is related to the others by (re)-using products, services, raw materials and waste. The most innovative part of the design is that public areas in the new district are not used for the traditional public parks and shopping malls but that agriculture is given a central place in the district. In that way, new economic activities are brought into the district, in a sustainable way. Food and energy are produced locally, decreasing food miles and resulting in a smaller ecological footprint. Moreover, besides local food production, agricultural activities and attached services create a dynamic district in which social cohesion is high.

The Agromere process and designs inspired the city designers and developers to adapt urban agriculture as part of their plans. By June 2009 the municipality of Almere launched its draft Strategic Vision on the so called 'Scale Jump'² 2030, Almere 2.0 (see figure 3). In this plan, urban agriculture is introduced as one of the potential green and sustainable foundations of the

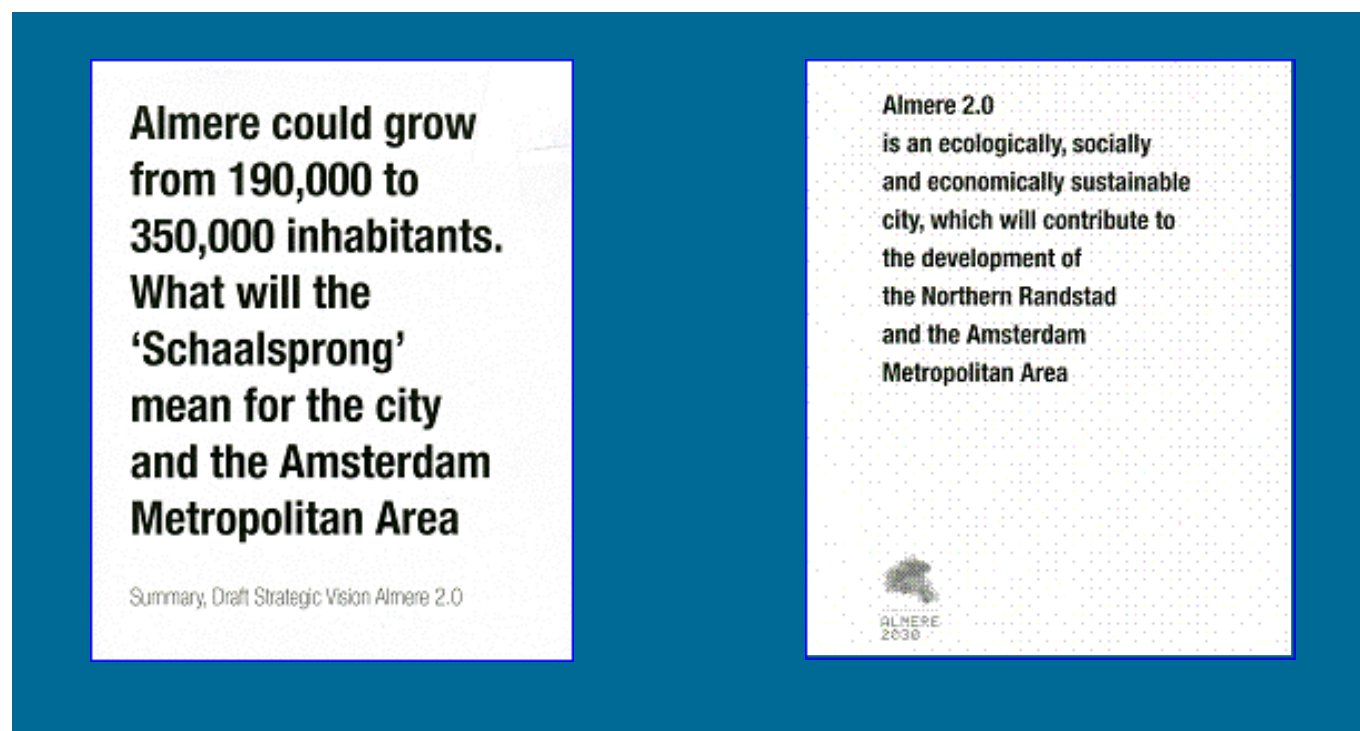


Figure 3: The draft Strategic Vision Almere 2.0, launched in June 2009, in which the city describes among others its plans on urban agriculture.

² In Dutch, *schaalsprong*; the task of growing to 350.000 inhabitants.

future Almere Northeast area. The design team of the Scale Jump 2030 fully adapted urban agriculture in its design and developing plans for the whole Almere Northeast area - or the so called Almere Oosterwold. The draft Strategic Vision was later ratified by the Dutch government, as the Scale Jump is part of the national (housing) ambition.

For the municipality of Almere the important question remained which amount of food could potentially be produced by the future city farmers of Almere Northeast. We calculated that 6,900 ha of conventional farming (or 9,300 ha of organic farming) is needed to produce 20% of the daily food basket (mainly fresh produce like vegetables, bread, milk and some meat) of the future citizens of Almere. This reduces carbon emissions with an estimated 33,000 tonnes per year or an equivalent of a yearly carbon uptake of 1,600 ha of forest. Based on these data, the city of Almere launched the ambition to produce 10% of food locally - within or around the city - by 2030.

Without our Agromere process urban agriculture would not have been part of these developing plans. Hence, this is a unique and important system innovation in the Dutch land use and urban development practice.

Our next goal in Almere is to create, in cooperation with the stakeholders, a place to experiment with urban agriculture concepts in Almere Northeast. Important questions that need answering focus on issues like how to transform an open polder landscape into a more metropolitan garden, how to connect citizens, health care organizations, commercial developers and others to this new concept, and what this transformation will mean in terms of footprint and foodmiles for the future city. And finally, what this will all mean for the urban agriculture entrepreneurs and what is necessary for them to succeed.

Besides these goals in Almere, we are currently developing a network of Dutch cities which are the harbingers in re-establishing the connection between agriculture and city live. The aim of this network is to develop means to overcome present (and future) thresholds in establishing this connection. This network, Feeding our cities Future, has the aim to bring urban agriculture to the national agenda as well.

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