Second Nature Urban Agriculture: Designing the productive city.

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Katrin Bohn and Andre Viljoen are architects who also teach and research. Their design research into sustainable architecture led to the concepts of Continuous Productive Urban Landscapes (CPULs) and the CPUL City.

Main Text

In the future successful cities will be productive in many ways, socially, economically and ecologically. Networks of open space will be essential if cities are to remain desirable and environmentally sustainable. Landscape, like buildings, will become multifunctional, thereby enabling beneficial exchanges between the constructed and natural environments.

The phenomenal pressures on cities are well known; the UN department of Economic and Social Affairs 2011 projection for urbanisation estimates that by 2030 the average world percentage of residents living in urban areas will be 59.9% and 82% in “more developed regions”. Pressure from urbanisation makes access to open urban space an urgent concern.

Furthermore urban populations are experiencing an unprecedented increase in diet related ill health, such as diabetes and obesity. If cities are to thrive, then urban planners and designers need to radically rethink the way cities overcome these challenges, so that they become desirable and environmentally stable.

The concept of Continuous Productive Urban Landscapes (CPULs) was developed in 2004 by Bohn&Viljoen and aims to address these problems by proposing an ambitious but achievable strategy for integrating networks of connected open urban spaces that are designed to coherently include food producing urban agriculture. Urban agriculture, which refers to the production of fruit, vegetables, fish and sometimes small animals within cities, is not new, and each city and culture will have its own tradition to draw upon when establishing a CPUL. But what is new is the understanding of the multiple benefits, in addition to the production of sustainable food that CPULs can bring to cities. It is likely that in the future networks of open space will be as important as clusters of buildings.

There is much evidence emerging for these assertions, for example regarding urban biodiversity;

In 2010, the United Nations University Institute for Advanced Studies (UNUIIAS) issued a policy report on cities and biodiversity and noted that, ‘as the rule of interdependent adjacencies in urban ecology has it: the more diversity, and the more collaboration “between unlikely partners”, the better the chances for biodiversity, sustainability, and resilience (Hester, 2006). Linked to this idea is the concept of Continuous Productive Urban Landscapes (CPULs), which represents a powerful urban design instrument for achieving local sustainability while reducing cities’ ecological footprints (Viljoen, 2005)’ (UNUIAS 2010: 31-32).

We may conclude that biodiversity delivers or supports much needed ecosystems services and that
it can be achieved by creating 'more, bigger, better and joined' (Lawton et al. 2010: 3) resilient and coherent ecological networks... CPULs.

Implementing the CPUL City Concept.

There is already a lot of experience in how successful urban agriculture projects are established. Using this knowledge and relating it to the concept of multi-stakeholder planning a 4 point plan of CPUL City Actions has been developed, intended to provide a clearly stated overview of the various processes and activities required to implement CPULs over the long-term. These four actions are: Action U+D = Co-ordinated and mutually supportive Bottom Up + Top Down initiatives and activities, Action VIS = Visualising the Consequences of CPUL proposals, Action IUC = Completing Inventories of existing Urban Capacities for supporting new initiatives, Action R = Researching for Change. It would be rare to find successful long-term projects with not at least three, but usually all of the four actions evident, although often they have not been articulated as such. The UK’s Arts and Humanities Research Council (AHRC) is currently funding a research network to explore how policy pathways can be developed to support the large number of emerging productive landscapes, the networks website (http://arts.brighton.ac.uk/projects/utppp/) contains further information.

Setting out clear processes, such as multi-stakeholder planning and policy and the four CPUL City actions, should assist future stakeholders to realise better and more resilient projects in the future, while discouraging projects that are fundamentally flawed.

If successfully implemented CPULs have the potential to create more experience for less consumption.

For references and more information see the book:


http://www.routledge.com/books/details/9780415540582/

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Caption: The CPUL concept. Green corridors provide a continuous network of productive open space containing routes for pedestrians and cyclists. A variety of fields for urban agriculture and other outdoor work/leisure activities are located within the network and serve adjacent built-up areas.

Caption: The Urban Agriculture Curtain, designed as a prototype by Bohn&Viljoen in 2009, shows how the CPUL concept can be applied within buildings. It is a vertical growing system using hydroponics to grow salad crops for use in a restaurant serving the “London Yields Exhibition”, hosted by London’s Building Centre.

The CPUL concept is being applied internationally. Spiel/Feld Marzahn, Berlin, Germany was initiated in 2011 as a larger scale community food growing project commissioned by the local authority and was designed by Prof. Katrin Bohn with students from the Technical University of Berlin who worked with local residents. This project demonstrates how CPUL spaces can reanimate underused public space and result in “place making”. It has been recognized in Germany for its contribution to the UNESCO decade of education for sustainable development.

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