In other words, a more pronounced sustainable development of periurban agriculture requires a strong biotic natural resource component. It further means creating closer ties between ecological habitat functions on one hand and urban or industrial habitat functions of larger metropolitan agglomeration on the other. However, linking and integrating functions must be grounded in profound land-use planning, which, in our opinion, can only be indicative planning or the provision of orientation. This includes land zoning and taxation or subsidisation of negative or positive externalities, respectively, as policy instruments.

Creating viable urban-rural interfaces should not only be market driven. In the current deliberate and somewhat unplanned and unsustainable development of mega-cities in South-East Asia, periurban land-use planning in conjunction with building rural-urban interfaces is an important new policy tool. To achieve a critical threshold of ecological sustainability, local administrators of cities need guidance on how to balance the resource cycle and cope with organic wastes on a larger regional scale. In situations where different cycles should be closed, government interventions are needed to correct market failures. An ecologically more balanced growth of cities can only be reached if the potential interactions between market-driven growth and spatially driven planning initiatives are explored.

However, agroecological land-use orientation in city planning does not intend to give state planning the upper hand, thereby hampering industrial expansion. In fact, catering for the ecological basis of city growth means to create platforms from which to initiate market development. For instance, the potential of private waste management and sewage recycling on the basis of government directives could be explored. Directives may enforce consumers to seek private companies for their sewage treatment, enforce sewage treatment companies to look for farmers that offer acceptance of organic material and sludge at lowest prices, and farmers to buy clean technologies. However, especially the urban farmers need planning and land security to start such an operation.

To achieve these objectives for sustainable development of cities, a broader investigation of the specific functions and system components of periurban agriculture is needed. Special design and treatment of functions of land-use types is urgently needed to provide local decision-makers with options for adequate land-use planning. However, the analysis cannot solely focus on periurban regions as the only, or main, support system of cities. Alternatives for purchases of functions of metropolitan areas have to be included. It is always the purchase of these functions from a global market that serves as a reference point. In particular, with respect to food imports, trade-offs appear. But local waste treatment also must be challenged on economic grounds. For instance, we all know that waste can very easily be dumped into the sea. In economic terms, the waste treatment service in this case is purchased from the sea for a zero-price. However, the property of a global community that shares the world seas is violated; not to mention, the tourism or fishing industry.

This aspect brings about a double-sided discourse into the debate on policy options for land use. On the one hand, we have to look at opportunity costs for local provision of live support of mega-cities by periurban land use. This means that we have to consider economic, ecological and social prices for dumping or offering payment to the countries willing to provide the envisaged services. On the other hand, we have to look at the earth from the perspective of a spaceship. This implies that policy-makers in these mega-cities may have a duty not to dump waste outside their borders, for instance, but should rather look at periurban land use as the dumping ground. If you look at a city like a world on its own, it becomes a micro-cosmos that has to look for its own solutions for recycling organic matter using agriculture. To seek for waste dumping as possible local alternatives might become an obligation in global debates. Hence, we have to specify limits for transactions within live support systems of mega-cities, or look for real costs.

For practical reasons, periurban land-use planning should focus on periurban agriculture providing a core local service function instead of relying on resources elsewhere. However, this requires clean technologies including in agriculture.

The challenges today are to extend this thinking to much larger regional scales, to consider modern clean technologies, and to develop or streamline modern policy instruments in such a way that we can reach a threshold of sustainability.

This article has been published as the editorial of the electronic newsletter “Peri Urban Development in South East Asia”, and has been re-published with the consent of the author. More information on this newsletter can be found under http://www.uni-giessen.de/fbr09/pudsea/