Farming the City

A People's Convention on Urban Agriculture

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Context

We find ourselves in a state of deep crisis, in every possible manner. While the glaciers melt, forests burn, rivers run dry, oceans get acidified, rains become increasingly uneven, cities turn into heat archipelagos, communities are dispossessed in the name of 'greater common good', wildlife and biodiversity is killed by uprooting the species from their territories, the corporate rulers of the world continue with their campaign to sabotage the life-supporting ecologies on earth and the institutions of liberal democracy have become toys in the hands of the "democratically" elected tyrants. Many are rightfully anxious that humans are fast approaching the termination of their very existence as neoliberalism – essentially a political-economic order organized directly in conflict with Nature and community – has pulled us into a convergence of crises of food, energy, shelter, environment, and economy.

Cities have become central to this harmful development as the world is urbanizing rapidly and in increasingly unsustainable ways. With the globalization regime pushing cities to expand outwards, upwards and downwards with the sole purpose of accumulation and profiteering, and the flow of materials, energy, and information at planetary scale becoming more voluminous than ever, the manner in which public and private life is manipulated, controlled and put at risk is taking on new meanings. As the society develops a general lack of attachment to forms of life and social-ecological processes, individuals, more isolated than ever, become enchanted with the artificial replacements of organic substances and relationships. Each aspect of everyday life has moved so much away from personal control that it has become detached from reality. Because of the detached, linear thinking that goes into planning of our cities, people have been distanced from the processes that affect them and the systems they are part of. This transformation is both caused by and appropriated for the wealth accumulation processes, the most significant of which is financialization.

The global food economy is now highly corporatized and financialized (read 'unreal'), and speculations of a few can decide whether and how everyone else gets to feed themselves. An increasingly higher proportion of urban food supplies are being sourced from faraway lands, while the vast tracts of urban and peri-urban land are being turned into financialized commodities for rent-seeking. As a result, the ecological footprint of urban systems, especially the food system has become huge. Tens of thousand tonnes of waste are getting piled up in urban landfills (which have now become 'garbage mountains') every day and urban environment is being harmed to the extent of irreversibility, but merely a look around can tell how much bearing all this has on routine.

What we think and how we act is structured by the system that we all are burdened to adapt to, and sometimes people may even go beyond adaptation to rather benefitting from the system. For example, through land-use changes in urban and periurban areas, governments act as the agents of liberalization and turn huge tracts of cultivable lands into commodities for global trade. This policy change has quickly eroded respect for the land among the 'traditionally' landowning and farming communities and has replaced it by rent-seeking. What this shows is how deeply entrenched the crisis has become. But what is worse is that the "green fixes" such as large-scale renewable energy plants, bioenergy plantations, etc. are actually turning out to be 'land grab' and financialization projects meant to further the moneymaking interests of the big corporations while also being recipes for ecological disaster. Thus, what we are witnessing is a higher stage of alienation and the worldwide implications of which are only beginning to show.

Why Urban Agriculture (UA)

In the context of the deep crisis that we find ourselves in, it is impending on us to build what David Harvey calls "spaces of hope" [1]. To address the roots of the crisis, the relationship of cities with Nature needs to be fundamentally reorganized. Practise of urban agriculture in an urban neighbourhood and the vicinity of the city is one such activity which, as many scholars and practitioners argue, promises a radical alternative to the increasingly globalized, financialized and distanced urban food system. By shortening the food chains and by creating feedback linkages between food, waste and energy systems, it promises to not only bring down the overall ecological footprint of the city regions, but also let people take back control of their life by bringing them closer to the conditions in which their food grows, balancing the nutritional composition of their diet[2], and reducing the number of toxic chemicals in food and local environment. This has strong implications for public health as the toxicity of crop production becomes nil and the number of air pollutants released during the circulation of food within the city comes down. Urban agricultural production supplements the household food supplies and thus brings down the expenditure on food and increases income[3]. Thus, municipal-level coordination of such efforts can increase the city region's sovereignty over their food, land, water, energy, livelihood, and knowledge. It can also bring a lot of many collateral impacts on urban neighborhoods. This has the potential to strengthen the interpersonal and communal bonds in urban neighbourhoods by creating local markets for exchange of home-grown food and food grown in community gardens. UA can enable the practitioners and urban residents to cope with stressful urban life and improve mental health, and thus contribute to the overall well-being[4].

To make it clear, what we are referring to here as urban agriculture is a diverse set of practices[5] and ecologies wide-ranging in terms of objectives, inputs, outcomes, agents, processes, and feedback

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[1] Harvey, David. Spaces of hope. University of California Press, 2000

[2] For example, all the developing regions of the world fall short of the 400 g daily intake of fruits and vegetables as recommended by FAO-WHO in WHO (2003) Diet, nutrition and the prevention of chronic diseases: report of a joint WHO/FAO expert consultation. WHO Technical Report Series no. 916. WHO, Geneva.

[3] Tambwe, N., Rudolph, M., & Greenstein, R. (2011). "Instead of begging, I farm to feed my children": Urban agriculture—An alternative to copper and cobalt in Lubumbashi. *Africa,81*(3), 391-412.

[4] Taylor, L., Hahs, A. K., & Hochuli, D. F. (2018). Wellbeing and urban living: nurtured by nature. *Urban Ecosystems*, *21*(1), 197–208.

[5] Bryld, E. (2003). Potentials, problems, and policy implications for urban agriculture in developing countries. *Agriculture and Human Values*, *20*, 79–86.

loops. These include the agriculture in urban and periurban fields, rooftops and backyard gardens, and allied livelihoods including poultry, dairy, cattle and other forms of livestock farming, sericulture, aquaculture (in a river, pond, or other water bodies). The ecosystem of urban agriculture includes not only these different forms of farming but also the waste recycling and composting process, using its outcome as organic inputs to take care of the soil, sustainable management of water resources, grazing fields and other urban commons, freight transport system, use of renewable energy sources at the farm, and so on. The historical structures of power in land relations and resource allocation are equally central concerns.

In the absence of a well-researched estimate of the 'size' of urban agriculture and measures of total yields, we argue that it is more than significant and yet remains invisible, intimidated and overshadowed in India by the governing processes of urbanization. The inimical relationship between the global current of urbanization and local practices of urban agriculture – exhibited in the form of lack of land tenure, illegal status of urban farming, absence of housing and other basic rights, and the risk of loss of livelihood in the face of financialization - are common across the rapidly urbanizing global South, as some recent studies have shown[6]. Even rooftop garden farming in India can show higher biodiversity than other types of urban land uses[7]. According to a worldwide estimate, around 20-30 percent of urban residents are already involved in the agri-food sector[8]. Equally interesting is the fact that women constitute around two-thirds of the global urban agriculture community, and that the majority of the urban farmers are women across the geographical regions. It is the cheapest source of food security and one of the few dignified and meaningful livelihood options for the urban poor everywhere, whether it is in Africa, Asia, Europe, or anywhere else. Urban agriculture has demonstrated an ability to bring down the urban greenhouse emissions by reducing food mileage[9] and energy usage in cold storage, and also by reducing the need for air conditioning in case of buildings with rooftop farms[10] and thus significantly bringing down the 'heat island effects'[11]. Because of such demonstrably clear benefits, it is not surprising that cities all over the world are embracing UA in their policy frameworks. For example, the city government of Tokyo in Japan makes it compulsory to afforest more than 20% of a building rooftop and more than 30% of a large-scale building[12]. It is equally important to note that the successes of urban agricultural policies developed in Havana in response

[6] For example, see: Diehl, J. A. (2019). Mapping social networks of urban farmers: A comparison of four case cities in developing versus developed countries in Asia. In ISPM PPGIS Conference. Espoo, Finland.
[7] Jaganmohan, M., Vailshery, L. S., Gopal, D., & Nagendra, H. (2012). Plant diversity and distribution in urban domestic gardens and apartments in Bangalore, India. *Urban Ecosystems*, *15*(4), 911–925.
[8] Orsini, F., Kahane, R., Nono-Womdim, R., & Gianquinto, G. (2013). Urban agriculture in the developing world: A review. *Agronomy for Sustainable Development*, *33*(4), 695–720.
[9] Michael, M. B., & Bernhard, B. (2005). Food miles for thought. Environmental Science and Pollution Research, 12(3), 125–127.
[10] Rajesh, B. T., & Yuji, M. (2008). Land evaluation for peri-urban agriculture using analytical hierarchical process and geographic information system techniques: A case study of Hanoi. Land Use Policy, 25(2), 225–239.
[11] Dubbeling, M., Campbell, M.C., Hoekstra, F., and van Veenhuizen, R., 2009. Building Resilient Cities. Urban Agriculture Magazine, 22. June 2009.
[12] Lee, G. G., Lee, H. W., & Lee, J. H. (2015). Greenhouse gas emission reduction effect in the transportation sector by urban agriculture in Seoul, Korea. *Landscape and Urban Planning*, *140*, 1–7.

to the post-Soviet restructuring of global trade[13], and in other postcolonial cities of Asia (for example, Hanoi[14]) and Africa (for example, Nairobi, Kampala and others[15]) have largely gone unnoticed.

It is tragic that in the absence of institutional support and due to general reluctance of urban policy makers, many sites of urban agriculture today are "illegal"[16], a tendency which prevails across the city regions in the global South[17]. Amid the adverse environment of change, these agricultural spots, whether in the periurban fields or in the rooftop/backyard gardens, are 'oases' where human life is organised at a more local level in connection with Nature. The time has certainly arrived for creating a critical mass of the urban farming community and to seek various ways to expand these oases in and across our desertifying cities.

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[13] Koont, S. (2011). *Sustainable urban agriculture in Cuba*. University Press of Florida.
[14] Lee, B., Binns, T., & Dixon, A. (2010). The Dynamics of Urban Agriculture in Hanoi, Vietnam. *Field Actions Science Reports*, (Special Issue 1), 1–8.
[15] (i) Karg, H., & Drechsel, P. (Eds.). (2018). *Atlas of West African urban food systems: examples from Ghana and Burkina Faso*.
(ii) Prain, G., Karanja, N., & Lee-Smith, D. (Eds.). (2010). *African Urban Harvest*. Lima, Peru: Springer in collaboration with International Potato Center (CIP) and International Development Research Centre (IDRC).
[16] Cook, J., Oviatt, K., Main, D. S., Kaur, H., & Brett, J. (2015). Re-conceptualizing urban agriculture: an exploration of farming along the banks of the Yamuna River in Delhi, India. *Agriculture and Human Values*, *32*(2), 265–279.
[17] Maxwell, D. G. (1995). Alternative food security strategy: A household analysis of urban agriculture in Kampala. *World Development*, *23*(10), 1669–1681.

Organizers

People's Resource Centre aims to build new infrastructures of solidarity with the valuable fragments of learning derived from collective actions everywhere and the possible alternatives imagined by all people. The initiative seeks to explore the possibilities of bringing the resources back into the people's powerful control, and to understand whether and how that can eradicate the most persistent problems such as hunger, homelessness, ambient pollution, and social injustices based on caste, gender, and religion. PRC engages with movement groups and communities in the places with the ongoing or potential struggle over resources, and regularly undertakes policy monitoring, research and documentation, and grassroots networking to generate resources for collective resistance and creative action.

Institute for Democracy and Sustainability has carved out a niche for itself among the people-centric organizations while working actively on the issues of social transformation including sustainable urban transport, equal road rights, right to livelihood and urban agriculture for the last three decades. IDS believes that providing opportunities for employment, housing and education based on the quality and egalitarian ethos is the prerequisite of developing an environment-friendly, socially inclusive and eventually, a throbbing city. IDS believes that it is pertinent to accord priority to local and decentralized production and distribution systems. IDS is a constituent member of National Alliance of People's Movements (NAPM), Sustainable Urban Mobility Network of India (SUMNet), Car-free Network and is associated with several national and international forums.

Technical Support

Transportation Research and Injury Prevention Programme (TRIPP), IIT Delhi is an interdisciplinary programme focusing on the reduction of adverse health effects of road transport. TRIPP attempts to integrate all issues concerned with transportation in order to promote safety, cleaner air, and energy conservation. Faculty members are involved in planning safer urban and inter-city transportation systems, and developing designs for vehicles, safety equipment and infrastructure for the future. Activities include applied research projects, special courses and workshops, and supervision of student projects at post graduate and undergraduate levels. Projects are done in collaboration with associated departments and centres at IIT Delhi, government departments, industry and international agencies.