

Keywords:

Food and agricultural policies, food security, urbanisation, rural-urban linkages, India

Policy pointers

In India, peri-urban areas are key frontiers for sustainable urbanisation and food security. Urban policy and planning must support these fragile peri-urban ecosystems and their marginalised residents.

Nutritional data should be collected more frequently. Disaggregation of data should capture peri-urban contexts and analysis relevant to other policy fields such as health, land use and environmental change. This could support policy initiatives to go beyond food distribution to focus on other aspects of food security such as access and food safety.

Forward-looking policy, planning and research will demand transdisciplinary approaches and sustained engagement with peri-urban communities to establish adaptive environmental governance mechanisms.

Promising policy entry points include the draft National Land Utilisation Policy and the newly revised Solid Waste Management Rules 2016, among others.

Tackling poverty and food security: lessons from India's peri-urban frontier

In India, peri-urban areas are too often neglected. They are fraught with institutional ambiguity, unplanned growth, poor infrastructure and environmental degradation. Many peri-urban inhabitants live in poverty and face increasing marginalisation and food insecurity. Efforts to address malnutrition are decoupled from urban development initiatives, policy and planning. There has been a major decline in public funding and support for agriculture. Yet peri-urban agriculture could be a major contributor to poverty alleviation and food security. This briefing identifies specific policies and programmes that could support peri-urban agriculture in India. It examines rural-urban transformations in relation to changes in food production, access, consumption, nutritional quality and safety. To improve health and nutrition, a more holistic, food security-based perspective is needed. Policy and planning must support those fragile communities engaged in peri-urban agriculture while protecting the environmental services on which they depend. But to facilitate pro-poor food security developments on the ground, we also need a better understanding of the knowledge gaps, governance challenges and mechanisms that might help.

Why explore links between peri-urbanisation and food security?

The limited interventions that support agriculture in the urban fringes often exclude health and poverty alleviation. There is a lack of alignment in terms of priorities for action. Support tends towards the economic viability of organic agriculture for urban markets, which has an elite focus. In parallel to this, peri-urban environmental 'greening' initiatives such as city forests neglect agriculture and often compete directly with the environmental resources needed to support agricultural livelihoods. How

can policy and planning integrate appropriate support for peri-urban agriculture that benefits poor and marginal groups while protecting the environmental services on which it depends?

This briefing draws on insights from research done in collaboration with academics, government departments, community groups and nongovernmental organisations (NGOs) in India and the UK over the past two decades.¹ It reveals some key interactions between peri-urban land-use transformations, urban food systems and poverty. Crucially, it identifies current destructive feedback loops between

urban development trajectories, and the health and livelihoods of urban and peri-urban residents — while recommending positive interactions to support food security and build better urban resilience.

The expansion of large cities has meant increasing and more complex interactions with surrounding rural areas, transforming them into peri-urban areas

Economic liberalisation and the decline of agriculture

Since the economic liberalisation of the 1990s, India has seen a major decline in public funding and support for agriculture. Cities were promoted as engines of economic growth.

Meanwhile, a process of

gradual re-classification from rural villages to towns has unfolded. This has created an expanding, and often neglected, 'peri-urban' zone — where rural and urban activities and institutions are juxtaposed, leading to institutional ambiguity, unplanned growth and poor infrastructure.

In India, 57 per cent of the urban population lives in the expanding city peripheries in 'statutory towns' and 'census towns'. Census towns grow in the peripheries of big cities and rural areas and have no effective urban governance structures or infrastructure such as sanitation and roads. And with urbanisation comes an inevitable transformation in the nature and extent of agricultural land use (see eg Box 1). The expansion of large cities has meant increasing and more complex interactions with surrounding rural areas, transforming them into peri-urban areas. They are characterised by dynamic flows of commodities, capital, natural resources, people and pollution and a range of processes leading to the intensification of urban-rural linkages.^{2,3,4}

Impacts of peri-urbanisation on food and nutrition

Over this same period, trends in food consumption and nutritional status also show that serious concerns over childhood malnutrition remain.⁵ In peri-urban areas in particular, there is a high concentration of people living in poverty. Peri-urbanisation tends to be associated with increasing marginalisation, access deficit and environmental degradation. Formal schemes aimed at improving aspects of the environment are often exclusionary, and impact adversely on people's ability to produce safe and nutritious food for urban and peri-urban markets.

There have been numerous policies and schemes aiming to ensure 'food security' in India. These include the Public Distribution System (PDS), Integrated Child Development Services (ICDS) and Midday Meal (MDM) for school children schemes, National Rural Employment Guarantee Act (NREGA) 2005, National Food Security Mission and National Food Security Act 2013. These have included some emphasis on distribution to poor consumers and efforts to improve the nutritional status of children and women. But how successful are they in addressing food access and nutritional needs? Many appear to be failing poor and marginalised groups (see eg Box 2). In peri-urban situations, which tend to concentrate poverty, many people are unable to access existing formal schemes due to their informal or migrant status.

Key policy entry points for addressing food security

There are several promising policy entry points for facilitating the role of urban and peri-urban agriculture in addressing food security. The peri-urban interface, and its marginalised inhabitants, must be recognised as a key frontier in addressing the challenges of sustainable urbanisation, with food security being central to this.¹⁰

Box 1. Environmental degradation and peri-urban agriculture

Studies documenting the impact of urbanisation in peri-urban Gurgaon and Hyderabad show how water security is threatened by land-use changes, land grabbing and an environmentally negligent development focused on unsustainable growth.⁶ Many peri-urban communities still involved in smallholder farming often rely on recycled wastewater, which is becoming increasingly contaminated. Traditional village ponds recharged by rainwater have disappeared in the development process, and other water sources have become less accessible.^{7,8} At the same time, other agriculture-related ecosystem services — the 'benefits people obtain from ecosystems'⁹ such as water provision — are degraded and access by the poor and marginalised is increasingly restricted.¹⁰ Future policy should examine, and support learning between, apparently successful wastewater reuse initiatives such as the Kolkata example, where municipal household and industrial wastewater is reused in vegetable cultivation and pig rearing.¹¹

National Land Utilisation Policy

The draft National Land Utilisation Policy aims to protect land suitable for agriculture, ensure food security and meet the needs of future consumption and livelihoods, while preserving the natural environment and related ecosystem services.¹² Peri-urban agriculture depends on the preservation of peri-urban ecosystems.¹⁰ This can also have multiple other benefits for supporting urban resilience.¹³ Government-supported ecosystem management approaches could incorporate food production in peri-urban areas. New alliances of actors should be built that link (peri-urban) environmental activism with concerns of the poor, and recognise the significance of agriculture.¹⁴

Vegetable Initiative for Urban Clusters (VIUC)

Increasing demand from urban consumers has demonstrated the importance of peri-urban vegetable production. The government-led Vegetable Initiative for Urban Clusters (VIUC) scheme¹⁵ was launched in 2011–2012 to supply vegetables to urban clusters from nearby villages and peri-urban areas, while looking at constraints such as access to markets and food safety concerns. This promising scheme is no longer operational. But if reinstated and developed, a thorough evaluation of its impacts and potential would be helpful — such as the potential to encourage the wider involvement of small-scale producers and other food-system actors in the informal sector. This could provide the basis for much-needed support and incentives for smallholders to remain involved in agriculture — while pursuing more sustainable farming practices.

Prime Minister's Irrigation Development Plan (PMKSY)

This new initiative has the potential to improve synergies in rural-urban resource use, while supporting multiple dimensions of food security. For example, one key objective is to explore the feasibility of reusing treated municipal wastewater for peri-urban agriculture. There is potential to support the safe and appropriate use of urban wastewater for agricultural production, while addressing several constraints on food security. However, it will require recognition and support for farmers who currently rely on the widespread informal use of contaminated wastewater and an improved understanding of how benefits of such schemes will accrue to poorer consumers and producers.

Box 2. Public Distribution System in India

The Public Distribution System (PDS) aims to improve food security at the household level. It makes essential commodities — such as rice, wheat and kerosene — available to consumers at below-market prices. With more than 462,000 outlets (or 'fair price shops') distributing commodities worth over 300 billion rupees annually to about 160 million families, the PDS network in India is perhaps the largest of its kind in the world. However, it has been criticised for a number of failings, such as leakages/loss of food grains before reaching the intended beneficiaries due to corruption and high levels of exclusion. Many of those living below the poverty line in transitional peri-urban and urban areas are bypassed by government schemes such as the PDS as most live in informal settlements (unauthorised colonies and slums).

Composting in Solid Waste Management (SWM) Rules 2016

The reuse of urban solid waste for peri-urban farming provides opportunities to have positive impacts on food security by helping to preserve soil quality and structure, and reducing the costs and environmental impacts of synthetic fertiliser inputs, while contributing to the challenge of addressing solid-waste management. For the first time, there is a major emphasis on composting in the newly revised Solid Waste Management Rules 2016.¹⁶ Previously, there had been no serious policy steer or incentive for composting, and no market for compost as opposed to chemical fertilisers, which were subsidised. Now, alongside centralised composting plants, there is a proposal for decentralised processing of biodegradable waste. With food security as a priority, the challenge will be to establish ways of scaling these activities out or up, linking compost creation with support mechanisms for peri-urban farmers, and ensuring that benefits flow to poorer consumers as well as producers.

Peri-urban agriculture can and does contribute significantly to food security in and around Indian cities. But competing development priorities, uneven power relations and complex governance arrangements are currently undermining the ability to realise its potential. The challenge is to expand on this and support rural-urban synergies in environmental management through low external input peri-urban food systems.

To distil lessons for future agrifood system design, forward-looking transdisciplinary research agendas need to explore the complex interactions that occur across scales, linking household food and livelihood systems to consumption patterns and processes of land-use and environmental change. Such activities should involve sustained engagement

with peri-urban communities to develop experiential embedded knowledge of how and in what ways existing rural-urban transformations unfold and with what impacts on the environment and on the nutritional status, health and livelihoods of diverse residents across the rural-urban divide. This in turn requires attention to how wider political economy drivers meet local policies, politics and governance arrangements — and to shifting power relations, norms, values and cultures.

Insights from such action research activities need to be developed, shared and deliberated using formats that are engaging, forming new

alliances to utilise insights in ways that support effective cross-sectoral interaction, and which also support multi-level policy advocacy¹⁷ that has been largely missing in nutrition interventions to date.

Fiona Marshall and Pritpal Randhawa

Fiona Marshall is a professor of environment and development at the Science Policy Research Unit, University of Sussex. She undertakes research and postgraduate teaching on environmental change and food systems, science and technology policy in relation to the needs of the poor, the water-energy-food-environment nexus, and sustainable urban development in the global South. Pritpal Randhawa is a senior researcher at Jawaharlal Nehru University (JNU), New Delhi. Trained in science policy studies, his work is focused on diverse aspects of sustainability including policy processes, governance, informality, local knowledge and everyday environmentalism in urban and peri-urban contexts.

Urbanisation, rural-urban transformations and food systems

This policy brief is part of the IFAD-funded project Rural-Urban Transformations and Food Systems: Re-Framing Food Security Narratives and Identifying Policy Options That Foster Sustainable Transitions. Global food security and rural development are often framed in terms of inadequate agricultural production. But urbanisation is driving profound transformations in food systems in rural, peri-urban and urban areas — from food consumption to food processing, transport, markets and all related activities. Local, national, regional and global policies are critical to shaping rural-urban linkages and the political economy of food systems. Policies must support food security and livelihoods of low-income groups in all locations — while fostering sustainable rural-urban transitions.

IIED is convening and supporting a global network of researchers and practitioners in sub-Saharan Africa, Asia and China. These include local government officials, civil society organisations and regional research institutions, both urban and rural. Network members are also engaging with international agencies such as the International Fund for Agricultural Development (IFAD), UN Habitat, the Food and Agriculture Organization of the United Nations (FAO) and the Organisation for Economic Co-operation and Development (OECD). For a full list of project policy briefs and working papers, see: www.iied.org/urbanisation-rural-urban-transformations-food-systems.



Knowledge Products

The International Institute for Environment and Development (IIED) promotes sustainable development, linking local priorities to global challenges. We support some of the world's most vulnerable people to strengthen their voice in decision making.

Contact

Cecilia Tacoli
Cecilia.Tacoli@iied.org

80–86 Gray's Inn Road
London, WC1X 8NH
United Kingdom

Tel: +44 (0)20 3463 7399
Fax: +44 (0)20 3514 9055
www.iied.org

IIED welcomes feedback via: @IIED and www.facebook.com/theiied

This research was funded by the International Fund for Agricultural Development (IFAD). The views expressed do not necessarily reflect those of the donors.



Investing in rural people

Notes

- ¹ Marshall, F and Randhawa, P (2017) India's peri-urban frontier: rural-urban transformations and food security. IIED, London. <http://pubs.iied.org/10794IIED> / ² Marshall, F *et al.* (2009) On the edge of sustainability: perspective on peri-urban dynamics. STEPS Working Paper 35. STEPS Centre. www.ids.ac.uk/publication/on-the-edge-of-sustainability-perspectives-on-peri-urban-dynamics / ³ Randhawa, P and Marshall, F (2014) Policy transformation and translation in peri-urban Delhi, India. *Environment and Planning C: Government and Policy* 32: 93–107. / ⁴ Tacoli, C (2006) The Earthscan reader in rural-urban linkages. Earthscan, London. / ⁵ GOI and Unicef (undated) Rapid survey on children (RSOC) 2013–14 national report. Ministry of Women and Child Development, Government of India and Unicef. <http://wcd.nic.in/acts/rapid-survey-children-rsoc-2013-14> / ⁶ Prakash, A *et al.* (2011) Changing waterscape in the periphery: understanding peri-urban water security in urbanizing India. Oxford University Press. www.idfc.com/pdf/report/2011/Chp-11-Changing-Waterscapes-in-the-Periphery.pdf / ⁷ Amerasinghe, P *et al.* (2013) Urban wastewater and agricultural reuse challenges in India. International Water Management Institute (IWMI). <https://cgspace.cgiar.org/handle/10568/39932> / ⁸ Marshall, F *et al.* (2010) Contesting sustainabilities in the peri-urban interface. STEPS Centre and Sarai. <http://steps-centre.org/publication/contesting-sustainabilities-in-the-peri-urban-interface> / ⁹ MEA (2005) Ecosystems and human well-being: biodiversity synthesis. Millennium Ecosystem Assessment, Washington DC. www.millenniumassessment.org/documents/document.354.aspx.pdf / ¹⁰ Marshall, F *et al.* (2016) Risk and responses to urban futures: integrating peri-urban/urban synergies into urban development planning for enhanced ecosystem service benefits, ESPA Project Progress Report. / ¹¹ Cofie, O and Jackson, L (2013) Thematic paper 1: Innovative experiences with use of organic wastes and wastewater in (peri-) urban agriculture in the global South. SUPURBFOOD, RUAF/IWMI. www.ruaf.org/sites/default/files/SUPURBFOOD%20Waste%20reuse%20FINAL.pdf / ¹² GOI (2013a) Draft National Land Utilisation Policy. Department of Land Resources, Ministry of Rural Development, Government of India. <http://tinyurl.com/NLUP-India-2013> / ¹³ de Zeeuw, H *et al.* (2011). The role of urban agriculture in building resilient cities in developing countries. *The Journal of Agricultural Science* 149(S1), 153–163. / ¹⁴ Priya, R *et al.* (2017) Local environmentalism in peri-urban spaces: the politics of emerging alliances in an Indian context. STEPS Working Paper (in press). / ¹⁵ GOI (2011b) Guidelines for the Vegetable Initiative for Urban Clusters. Department of Agriculture, Cooperation and Farmers Welfare, Government of India. / ¹⁶ GOI (2016) Solid Waste Management Rules 2016. Ministry of Environment, Forest and Climate Change, Government of India. / ¹⁷ te Lintelo, D *et al.* (2017) What are the challenges and opportunities for multi-level advocacy for nutrition? IDS Policy Brief. <http://tinyurl.com/telintelo-et-al-2017-ids>