Connecting Town and Country: Lessons in urban sustainability

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Connecting Town and Country

"There's a city coming!!"

"We're waiting for the city to come to us..."
Connecting Town and Country

• Interface between the city and the countryside (peri-urban fringe) is under-going major changes as both natural/semi-natural and farming landscapes are converted to built-up environment as part of the process of urban expansion (often very rapid, esp. in developing countries)
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• Differences in the availability of land for development and demand for land to accommodate housing, industry and service provision have contributed to great variability of experience in different countries worldwide. Also reflects different planning systems.
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- Increased movement of people into areas at the edge of cities in which they live closely juxtaposed to natural and semi-natural environments.
- Residents living in these locations, the peri-urban fringe, face particular challenges posed by the environment because they live in closer proximity to nature than other urban residents.
- The physical environment can intrude more intimately.
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HOW DO WE MANAGE THE PERI-URBAN FRINGE?

• How can we resist demand for building new houses on greenfield sites? *Green Belts & Wedges, farmland preservation areas, urban growth boundaries, densification*

• What new relationships are developing between town and country in the peri-urban fringe?

Examples from UK, Australia and China
Green Belts

- **Green Belt** = part of a land-use planning system that has sought to distinguish between definitive sets of ‘urban’ and ‘rural’ land uses .... to sharpen the interface between urban and rural .... restricting the extent of the peri-urban fringe.

- More than one-fifth of **Greater London** (22 per cent) classified as Green Belt (since 1950s).

- 14/33 London Boroughs have more Green Belt than residential land.

- Similar policies in many countries worldwide, with variants... belts, wedges, sectors, corridors.
Green Belts

• Operates as a mechanism “to preserve the integrity of the built-up areas on one side of it and the countryside on the other” (Shoard, 2002, 137).
Green Belts

• Green Belts fulfil the function of a firebreak between more genuinely appreciated landscapes... but have protected agricultural land and areas of conservation value in several countries; and it has not been unchanging – more dynamic than is often appreciated.
• Despite the attempt to preserve rurality and create a ‘green lung’ for the city, the creation of Green Belts has neither created an entirely satisfactory edge to the city nor is it always correct to label this edge as ‘green’. It is also under growing pressure – moves to relax planning controls.
Green Belts

BUILD OR DON’T BUILD?

• “The only thing that will make homes more affordable is building on the Green Belt”

• GBs ... criticised for reducing the amount of land available for building and therefore pushing up housing prices

• The number of new homes being approved on GB land in England has increased five-fold in the last five years

• If general inflation had risen as fast as housing prices had since 1971, a supermarket chicken would cost £51 (US$66)
Green Belts

“Developers are carving up our countryside to build homes normal families can’t even afford”


- The number of applications to build homes on protected Green Belt land rose last year to a record 460,000. To make matters worse, research by Campaign to Protect Rural England (CPRE) found that less than one-third of homes built or approved on greenfield land since 2009 met the Government’s own definition for ‘affordable housing’.

- Councils in England have removed protections from land, opening the way for the development of hundreds of thousands of homes.

- Between 2011/12 and 2016/17 nearly 4,900 hectares of green belt have lost their protected status in local plans – the equivalent of a city the size of Middlesbrough, Housing Ministry figures show.
Green Belts

• in the past four years, 11,000 hectares of Green Belt land – a city the size of Bristol – have also been built on for industrial, commercial or residential purposes. Of this 7,200 were undeveloped ‘greenfield’ land.

• Last year alone the equivalent of nearly 400 football pitches of untouched greenfield were built on for flats or houses in England.

• Only 70 houses or flats were built in the green belt in 2009/10 compared with 8,143 in 2017/18. Of these, 3,300 were on greenfield sites.

• Today’s CPRE report, The State of the Green Belt, said: ‘Our key findings show that the Government has broken its promise to secure the green belt.’

• The CPRE also calculated that of the homes built on the green belt in the past nine years, 72 per cent were not ‘affordable’ under the Government’s definitions, so they do little to reduce the housing shortage.

Edgelands

Move from **Fordism** to **Post-Fordism** creating new planning measures and governance arrangements

- **State control versus markets**
- Concerns for meeting housing needs/social justice
- But also demands of food security & conservation
- **Edgelands**

Peri-Urban Fringes are being ‘invaded’ by some surprising land uses:
- commercial activities;
- noisy and unsociable uses pushed away from people;
- transient uses such as casual markets;
- bulk-retail;
- light manufacturing; warehousing and distribution;
- some public institutions;
- degraded farmland;
- planned recreational areas such as country parks, golf courses;
- fragmented residential development (often centred on road junctions) interspersed between
- areas of unkempt rough or derelict land awaiting re-use.

Constraints on building are often being relaxed.
“Edgelands are those unnoticed, forgotten and abandoned geographic spaces that are neither part of the city nor part of the countryside. Places where things happen outside the norm. Places of a different kind of freedom.”

The Desakota Landscape

• Term used to describe areas in the extended surroundings of large SE Asian cities, in which urban and agricultural forms of land use and settlement coexist and are intensively intermingled – coined by Terry McGee, a Canadian geographer, 1990.

• Comes from Indonesian, desa “village” and kota “city” – initially applied to the peri-urban fringe of the Jakarta agglomeration (Jabodetabek), but also the extended metropolitan regions of Bangkok and Manila.

• Located beyond the immediate commuter belt

• Sprawl alongside arterial and communication roads
The Desakota Landscape

• high population density
• intensive agricultural use (especially wet-rice cultivation)
• differ from densely populated rural areas by more urban-like characteristics:
  □ developed transport networks,
  □ high population mobility,
  □ increasing activity outside the agricultural sector,
  □ the coexistence of many different forms of land use,
  □ more female participation in paid labour,
  □ unregulated land use.
The Desakota Landscape

• Spatial extent and indistinct boundaries → brings difficulties for the administration, as uniform plans, regulations or designs are hardly viable.

• Characterised by high mobility of goods and services

• Rapid change in patterns of settlement.

• Usually elude the division in functually specialised zones that is conventionally applied in urban geography.

• Completely different forms of land use: traditional agriculture, large scale and cottage industry, amusement parks and golf courses, shopping centres and retail parks, and forms of settlement from shanties to gated community coexist close to each other.

• EDGELANDS?
Contentious planning laws, which will create an urban growth boundary around Adelaide, have been passed in South Australia's Parliament.

The Environment and Food Protection Area will limit the spread of Adelaide's suburbs, as well as several smaller cities and towns in the region.

Planning Minister John Rau said major developments within the protected zone would require parliamentary approval.

"Once these lands have been lost to urban development they are irrecoverable. There is no way of converting housing or the like back into lands to produce the quality food that forms part of this state's growing food and wine industry."
Conservation Easements

- Peri-urban fringe areas have become the focus for various environmental and farmland protection measures as well as being subject to planning regulations to control urban sprawl.
Conservation Easements

What is a Conservation Easement?

A conservation easement is a legal document whose purpose is to protect specific conservation values of land (including agriculture), by restricting certain uses of the land that are not consistent with those values.

That legal document represents a relationship between you, as the landowner, and the “holder” of the conservation easement – a land trust or government agency.
Conservation Easements

• Maintain and improve water quality;
• Perpetuate and foster the growth of healthy forest;
• Maintain and improve wildlife habitat and migration corridors;
• Protect scenic vistas visible from roads and other public areas; or
• Ensure that lands are managed so that they are always available for sustainable agriculture and forestry.
Densification

• Even in countries that can be regarded as land-rich, such as Australia, concerns are being voiced about loss of valuable farmland to housing.
• Growing lobbies seeking to prioritize environmental conservation
• Presentation of arguments that economic growth is best supported through **urban densification** schemes as opposed to allowing unchecked urban sprawl.
• **Brownfield sites**
Densification

• The process whereby residential densities are increased in a planned and meaningful way within the boundaries of a specified area.

• More space for accommodating more functions in one building

• Increases economic opportunities in the city to attract more capital investment and increase job opportunities
Densification

- Facilitating more affordable housing choices
- Curbing the negative impacts of sprawl
- Mitigating climate change
- Dramatically decreasing energy costs
- Increasing energy independence
- Making walking, biking and transit more inviting
- Improving public health, diversity, creativity, safety and vibrancy
Density and Trees

Mutual Co-existence – The Urban Forest as it could be.
annual petroleum use per capita (a.u.)

population density (persons per hectare)
Urban Area Average Population Densities
DHAKA & SELECTED (ENGLISH MEASURE)

- Dhaka
- Mumbai
- Karachi
- Hong Kong
- Manila
- Seoul
- Jakarta
- Paris
- Vancouver
- Portland
- Atlanta

Population per Square Mile

Legend:
- Less Developed World
- More Developed World

Figure 1
Where the City meets the Country

Greening v ‘Un’greening

Greening
Community agriculture
Smallholdings
Farmers’ markets
Pick-Your-Own
Farm-gate sales
Farmland protection
‘Eat local’

RECONNECTION
Where the City meets the Country: Greening

• A renewal of links between producers and consumers that some contend was lost during the last half century’s emphasis on mass food production

• On the opposite pole to the expanding global food sector dominated by trans-national, supermarket-based retailing and fast foods

• Small-scale production, processing, distribution and consumption of food within a particular region →→→ sustainability
Where the City meets the Country: Greening

Around many cities in the West, **reconnection** is typified by small-scale horticultural and dairying enterprises that feature direct sales to the public, including:

- pick-your-own schemes,
- farm-gate sales,
- farmers’ markets &
- ‘slow food’

**Alternative Food Networks**
Where the City meets the Country:
Farmhouse Joy

• In China, establishments known as ‘Farmhouse Joy restaurants’ (*nongjiale*) have emerged around the suburbs of big cities and are associated with the foodstuffs of ethnic majority Han Chinese farmers

• Now taken up by ethnic minority groups

• Rural tourism experience
Floriade – 14 September to 13 October 2013

Urban Agriculture Australia
*inspiring... innovative... interactive... backyard and beyond*

Pop in and visit our permaculture exhibition

BUY FRESH
BUY LOCAL

...with Community Supported Agriculture
How about labeling foods on this basis?

Note: The slow food movement promotes conservation of food culture.
Where the City meets the Country

Two key questions to consider

• How can we best protect high-quality agricultural land and areas of high conservation value in the PUF whilst still meeting growing housing demands?

• What measures do we need to enhance relationships between the urban populace and the agricultural producers in the PUF?
Where the City meets the Country: THE CHINESE CONTEXT

TQDEBF

• 1994 State Council of the People’s Republic promulgated Basic Farmland Protection Regulations, stipulating that county-level governments should guarantee ‘total quantity dynamic equilibrium of basic farmland’ (TQDEBF).

• TQDEBF requires implementation of plans for land utilisation to ensure there is no reduction in the total amount of cultivated land within given jurisdictions.

• In the succeeding two decades this policy has had to contend with huge pressures from urban development across the country, seen most sharply for the mega-cities of Beijing and Shanghai.

• To realise the TQDEBF, new arable land has been created, sometimes in ecologically fragile areas (including wetlands and uplands).
Elsewhere, to protect the environment and to promote ‘harmonious growth’ between the economy and ecosystems, central government has provided subsidies for converting farmland to pasture, grassland and forest in ecologically vulnerable regions to help protect ecologically fragile areas from further agricultural exploitation,

- e.g. under the ‘Grain for Green’ measures introduced in 1998.

- This conversion accounted for around half of total farmland loss from 1998-2003, compared with 20 per cent due to urban construction.

- In contrast, vast land reclamation and consolidation schemes have contributed to substantial improvements in crop yield, enhancing overall food production and modernising the agricultural sector.

conflicts between growth of the built-up area, arable land protection, and demand for increase of conservation land are getting increasingly acute
Where the City meets the Country

Area of farmland has been continuously declining due to rapid urbanisation and industrialisation in recent decades. The total area of cultivated land was 1.951 billion mu in 1996, falling to 1.911 billion mu in 2001 and to 1.824 billion mu in 2011.
Financial incentives to local government that underpin land development are a major driver in urban spatial expansion that has been taking place at an unprecedented pace in recent decades.

For example, Beijing’s urbanized area increased by nearly 30 per cent in the 1990s whilst Guangzhou expanded its built-up area by 7-8 km² per year in the second half of the 1990s.

Smaller cities have also experienced substantial growth:

Yantai City in Shandong province nearly trebled its built-up area from 2001 to 2004 (from 120km² to 340km²),

Chongqing’s urban built-up area increased from 158 km² in 1994 to 175 km² in 2000.
Where the City meets the Country

• **Beijing’s Urban Master Plan for 2004-2020** (extending ideas first promulgated in the city’s 1958 plan) designated a discontinuous circle of green space at approximately 25 km from the central business district, alongside seven new towns with a further four new towns designated beyond 60 km.

• Although on a much larger scale (some of the new towns already have a population well in excess of 1.5 million), this combination of Green Belt and new towns has distinct echoes of planning for urban growth in the UK post-1945.
Where the City meets the Country

• In the case of Beijing the Green Belt covers nearly 1000 km$^2$ in the form of “nine pieces of wedge-shaped green space which are used to prevent new towns from merging into each other or into Beijing”.

• There is also an extension along the Sixth Ring Road to produce a ‘green strip’ along the roadside, and another along the Wenyu river to protect the riparian environment.

• The pressures of urban growth from the new towns and Beijing itself threaten the integrity of the green wedges, especially as the boundaries of these designated wedges have not been firmly established on the ground.
Conflicting aims of different levels of govt.

Local administrations have frequently used land auctions as a means of attracting investment and creating employment opportunities in the local economy.

Have a vested interest in promoting development, as opposed to protecting ‘green space’ in the peri-urban fringe.

This runs counter to goals expressed, for example, by Beijing’s government whose Master Plan espouses the need for protection of green space at the city’s edge and where a desire for a clear limit to urban sprawl is expressed.

To date the gains to local government revenue from land sales for development have largely outweighed the need to maintain Green Belts.

Any proposals to provide stronger controls on protecting ‘green space’ in the fringe need careful consideration of the particular context that applies to land transactions and planning in China.
Where the City meets the Country

Differentiation between urban and rural in China

• Land in cities and towns belongs to the state, so that city governments act as the representative of the state in land management, and this extends to land requisition and public land leasing.

• In contrast, land in rural areas is collectively owned by all members of village communes.

• Moreover, land use rights transactions have been strictly limited to urban land.

• Only in the last few years has central government suggested land reforms enabling creation of land markets for ‘construction land’ in rural areas and integration with urban land markets.
Where the City meets the Country

• This integration may make it easier to introduce more holistic planning in urban hinterlands.

• But local administrations still have monopolistic controls in land requisition and land leasing, enabling them to make significant proceeds from land development.

• One of the key issues regarding effective management of the peri-urban fringe for Chinese cities will be the need to resolve conflicts between different levels and arms of government.
Where the City meets the Country

• For Beijing important planning documents affecting the fringe have been produced by at least three different government departments. So there are conflicts and contradictions between the plans, partly reflecting the different data resources utilised in their preparation, but also their basic aims.

• More co-ordination between departments and different tiers of government would help remove some of the contradictions and provide impetus towards greater efficiencies in planning.

• Simplified overarching planning legislation would also help to resolve many of the existing governance and jurisdictional problems.
Where the City meets the Country

• There also needs to be consideration of the function of local government in the planning process. At present, it plays two roles: one as administrator and the other as a salesman whereby it expropriates land cheaply from farmers and sells at a much higher price to real-estate developers.
Where the City meets the Country

• It is this ability to gain revenue from sales that encourages local government to convert agricultural land to construction land and to amend existing plans. In part it is this that underpins the assertion by Yang and Jinxing (2007, p.287), with respect to the Green Belts designated for Beijing that “urban sprawl is hard to contain with an arbitrary boundary such as a greenbelt”.