

## Urban health reading pack B

### Improving population health – strategies for inter-sectoral action

*Dr Helen Elsey, University of Leeds, UK and Dr Siddharth Agarwal, Urban Health Resource Centre, India, Journal of Urban Health, New York*

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#### Introduction to the topic

The multi-dimensional nature of the factors affecting urban health is highlighted in the [reading pack on data and evidence](#). Urban infrastructure such as housing, water and sanitation, green space, crime and security, transport and traffic planning, social welfare schemes, and health and education services have direct and indirect impacts on health. Attempts to improve urban health, particularly for the poorest, must be built on inter-sectoral action. This reading pack highlights some of the main issues and approaches that have been used in different low-income contexts.

#### Role of municipal governments

Municipal governments are ideally situated to act on these wider determinants of health as they often lead local policy and practice in key areas such as transport, land-use planning, and in some cases, delivery of health services. With increasing moves towards decentralisation in many countries, the role of municipal governments in integrated planning and implementation of urban health and welfare interventions is set to grow. Yet, they are often the least supported in terms of budgets and capacity building/human resources. Frequently, they have limited capacity to analyse and respond to local data and to facilitate the active involvement of the communities they serve.

#### About the authors

Dr Helen Elsey is a lecturer in public health at the University of Leeds. Helen's research interests lie in applied global public health research. In particular, in developing and evaluating public health interventions that reduce risks to health and well-being and improve health behaviour and access to health services among the most disadvantaged populations, particularly those in urban areas.

A physician, Dr Siddharth Agarwal works in medicine, public health, community empowerment, urban health, and policy, and has provided technical support for governments for 35 years. He is Director, Urban Health Resource Centre; Advisor, WHO, SEARO, WHO Kobe, UN Habitat, Nairobi; Expert, Global Committees. He has been a featured speaker at global, national and state consultations and conferences in several countries, and is in the editorial board of the Journal of Urban Health.

## Strengthening municipalities

Increasingly, donors are working more closely with municipal and state governments to ensure they have the capacity and are well-placed to respond to the challenges of urbanisation. Where this has been successful, particularly during humanitarian crises, working with local governments has enabled an area-based approach rather than one divided between sectors (see [IRC paper, 2015](#)).

Keys to success include understanding and working within the structures of local government, keeping responses geographically targeted and facilitating a participatory approach. DFID's Kolkata Urban Services for the Poor (KUSP) Programme in West Bengal, India, is one such example. KUSP followed an inter-sectoral approach in Kolkata and its neighbouring 41 municipal bodies, taking a three-pronged approach: inclusive urban planning and governance; provision of basic services in the worst-off slums and addressing critical infrastructure gaps; and supporting skill building and micro-credit development among the poor to enhance economic development. Intrinsic to all three approaches is capacity building targeted at state and local/municipal governments, non-government organisations (NGOs), and community groups (comprising of slum residents).

Evaluation of KUSP points to improved access of the urban poor to water, sanitation, low-cost housing, and community-based health workers, as well as the development of public-private partnerships (PPPs) to improve service delivery. The essentials of the approach, which include, inclusive urban planning and governance, provision of basic services and overcoming infrastructure gaps in most deprived slums, supporting skill building and micro-credit development among the poor to enhance economic development, and capacity building of municipal bodies, non-governmental organisations and slum community groups, are replicable in cities of all developing countries when efforts are sustained over a couple of decades with intermediate reviews and corrections.

Strategies used to provide technical assistance in this example include setting up a state level technical assistance (TA) unit in partnership with the state government, and contracting international or local TA agencies, including NGOs with opportunities for their capacity strengthening, to implement activities. The role of the TA has been to facilitate consultations between government departments at the state and municipal levels and other stakeholders to develop specific costed action plans. Capacity building of state and local governments has been effective through a) setting up of urban poverty alleviation cells (units for improving wellbeing and health of the urban vulnerable) and recruiting suitably trained and experienced personnel, helping state and local governments develop their scopes of work and monthly action plans; and b) study tours to cities within the country or a nearby country (if required) to observe, first-hand, how the local government and related departments (for instance, the State Health Department) operate and implement strategies that improve health, nutrition and the overall wellbeing of the urban vulnerable.

## Introducing and enforcing legislation

Municipal governments have a key role to play in enforcing legislation. Evidence from high income countries points to the effectiveness of legislation to keep cities smoke-free (see [WHO guide \*Making Cities Smoke-free\*](#)), while placing restrictions on alcohol availability and increasing taxes can help reduce alcohol related violence and crime. Enforcing road safety and air pollution control is also necessary, and innovative approaches have been seen across low- and middle-income countries (see the Indian Express article: <http://indianexpress.com/article/india/india-news-india/the-steps-aimed-at-curbing-rising-air-pollution-levels-in-delhi/>).

## Public health departments

The importance of local governments leading the process of urban development is clear across all areas requiring inter-sectoral action. The public health function within local government is an important component of this and to function effectively they need to be able to draw on reliable surveillance data. This requires community awareness of infections and a strong public health infrastructure that includes cooperation between states and neighbouring countries to identify and respond to outbreaks and epidemics. Examples include surveillance of TB treatment programmes and contact tracing using GIS mapping smart phones in South Africa ([Marra et al., 2011](#)), and training slum level TB DOTS volunteers to detect cases and facilitate completion of DOTS in India ([Central TB Division, Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India, 2015](#)). In India, surveillance of dengue is undertaken through identifying and testing cases that report to health facilities, reporting deaths

and surveillance of mosquito breeding locations through community outreach efforts of the City Health Department functionaries (see for example: the [Public Health Foundation of India](#)).

### **Water, sanitation and hygiene: action at community and government level is key**

The minimal access to improved water and sanitation in urban slums, as highlighted in [reading pack A on data and evidence](#), emphasises the importance of infrastructural improvements. However, without community education and ownership encouraging urban disadvantaged families to construct and use toilets, and without a wider systematic government-led approach to sanitation, the mere building of sanitation systems is likely to be ineffective. For example, there is good evidence that without pit emptying, replacement of pits and safe disposal of pit contents, urban sanitation systems will not be effective.

One important lesson is that, whether or not the three interventions of the WASH sector i.e. water supply, sanitation and hygiene promotion are integrated, they are dependent on one another for optimal realisation of their benefits. For example, many sanitation systems cannot function without water; school WASH programmes have an impact on education outcomes, especially for girls who are dissuaded from attending schools which do not have adequate toilet facilities that are hygienic and keep them safe from harassment. Handwashing with soap and water and other personal hygiene practices have the potential to substantially reduce household transmission of diarrhoea and other common infections ([Dfid WASH Evidence Review, 2013](#)).

Personal hygiene is not easy to investigate in randomised controlled trials, and therefore the evidence is currently only suggestive. However, handwashing with soap and water and safe disposal of child faeces, for example, are beneficial and can be incorporated into a wide range of public health strategies at low cost. There have been challenges to the idea that community based sanitation models, such as Community Led Total Sanitation (CLTS), can work in urban areas due to the heterogeneous nature of urban slums and the transient nature of 'communities'. However, while there has been no rigorous evaluation, there are interesting examples of how to adapt the approach to the urban area, for example, presenting CLTS as 'citizen' led, rather than community-led, and focusing on supporting citizens to come together to advocate and lobby for institutions to meet their obligations to provide a clean environment (for more debate see: <http://www.communityledtotalsanitation.org/blog/can-urban-clts-work>).

### **Slum upgrading**

Transport, housing, water, sanitation, solid and liquid waste management, and food systems are key to health and wellbeing in cities. Slum upgrading programmes offer opportunities for improving these aspects and there is evidence that such programmes reduce diarrhoea and household expenses on water; for example, in Salvador, Brazil, sewerage coverage was extended from 26 per cent to 80 per cent of households leading to an estimated reduction of 22 per cent of diarrhoeal disease (Barreto et al., 2007). However, the evidence of health, social and economic benefits is limited due to poor evaluations of such programmes ([Turley et al., 2012](#)).

There are strong recommendations for participatory planning processes with integrated strategies and systemic changes (for example, [UN-Habitat's Participatory Slum Upgrading Programme](#)). There are also several cautionary tales where the lack of inter-sectoral thinking and engagement with communities has led to unsuccessful slum upgrading programmes. South Africa's Reconstruction and Development Program is one such example where improved housing has been situated too far from employment opportunities with no affordable and efficient transport links ([Lall et al., 2012](#)).

### **Right to land**

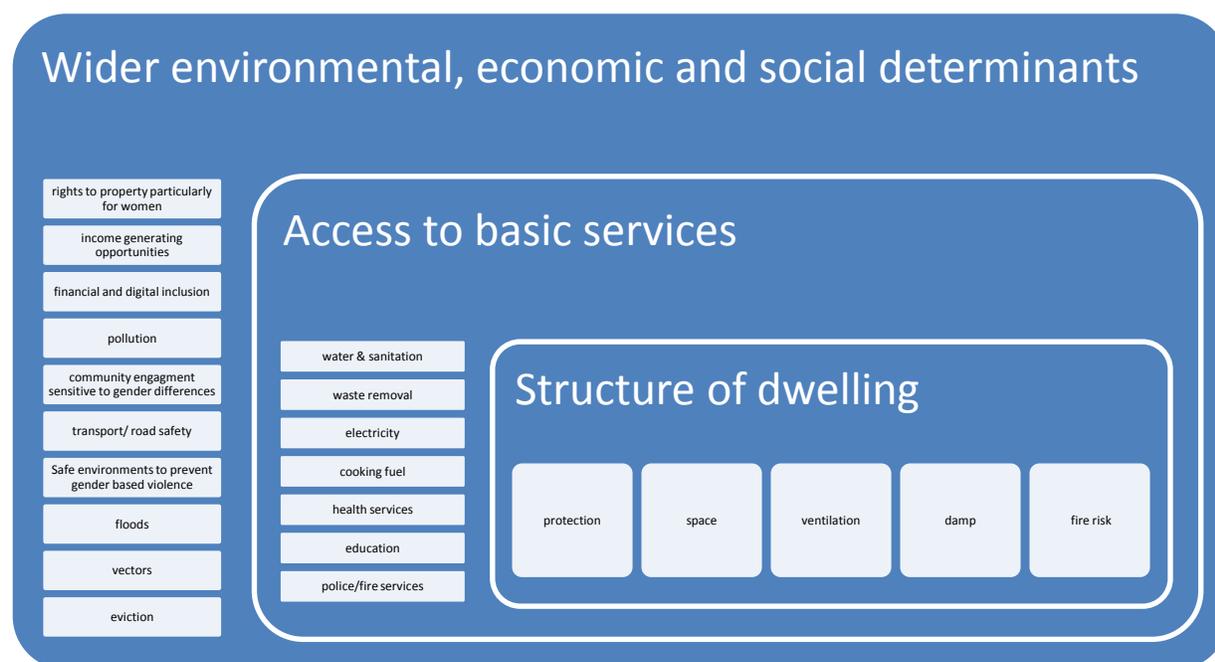
Clear and equitable policies on land tenure are vital if slum upgrading and urbanisation are to benefit the poorest. This is particularly important for women who frequently do not have recognised rights over their homes. In practice, any rights they do have are vested with their husbands. This makes women particularly vulnerable to evictions. Most forced evictions are in breach of international law, which states

that forced evictions are prima facie violations of human rights. However, they are a common threat for urban slum communities. During evictions, due to large-scale projects such as the Olympic Games and gentrification, even those with title deeds on freehold land can be evicted by the state.

Where policies on land tenure have been implemented fairly and with particular attention to the rights of women, one visible result is improvements in housing renovations. In Phnom Penh, Habitat For Humanity (HFH), Cambodia, worked with relocated families to build, repair or rehabilitate houses and toilet facilities. Housing loans and smaller loans from microfinance institutions such as CBIRD, Theneaka Phum, and Hattha Kakseakar Limited enabled families to make home improvements and gain access to toilets, clean water and electricity. The Battambang project is unique in making centrally located, urban land available for housing the poor. To address land insecurity, the Municipal Government of Battambang approved the conversion of urban land from public state land to private state land, allowing for the delivery of secure tenure for informal settlers under the Social Land Concession (SLC) process. Informal settlers are supported to organise documentation and advocate with the government to transition themselves, through the SLC process, from insecure land to secure land in an incremental fashion (Luke Millar, 2014; Habitat for Humanity, Cambodia). In Payatas, Philippines, under the Land Administration and Management Program, residents and land administration personnel jointly developed a prototype records management system ([Global Land Tool Network, 2010](#)).

### Transport and housing

The physical infrastructure of the city can both improve and undermine health. Transport is key to urban health, impacting on road safety, air pollution and activity levels, as well as the wider determinants such as social and economic opportunities. With increasing road improvements and greater car ownership, the amount and speed of traffic is increasing leading to more road accidents. The urban poorest are disproportionately affected by key negative externalities generated by transport, including road accidents, air pollution and project displacement (Vasconcellos, 1997; Robinson, 2003; Drabo, 2013). Adequate housing provision is a key aspect of urban development. The diagram below illustrates the key housing factors that drive health inequities and is adapted from WHO (1989):



## Smart cities

Over 20 definitions of smart cities exist, and while there may be some confusion over the term, the idea of using new technologies to enable integrated responses to urban problems has taken hold with over 140 self-designated smart cities, including 50 in Asia, 10 in South America, and 10 in the Middle East and Africa ([Albino et al., 2015](#)). Many emphasise that the concept goes beyond digital technologies, for example, the UK Department for Business, Innovation and Skills (BIS) considers smart cities a process rather than a static outcome, in which increased citizen engagement, hard infrastructure, social capital and digital technologies make cities more live-able, resilient and better able to respond to challenges.

The British Standards Institute (BSI) defines smart cities as “the effective integration of physical, digital and human systems in the built environment to deliver a sustainable, prosperous and inclusive future for its citizens” ([BSI, 2014](#)).

Examples of the use of technology to support multi-sectoral interventions include mapping population through crowd-sourcing apps such as the ‘SmartCitizenKit’ and ‘OpenStreetMap’ to inform urban survey sampling, identify urban flooding and pollution. In Nairobi, the Spatial Collective has an app for the public to mark specific problems of governance, such as water and waste, so that the aggregated data can be presented to the municipal government for action. While these methods offer great opportunities and the number of smartphone users continues to increase, with over 220 million in India alone, the reach of new technologies is still unequally distributed, with the poorest being the least likely to be able to participate directly. However, when the focus of smart cities remains on reducing public health risks and improving the wellbeing of the urban poor and the vulnerable, then they can offer the opportunity to improve city living for all urbanites. A good example of this comes from New Delhi where the ‘SAFTIPIN’ app allows women to identify safe zones in the city (for more information see: <http://safetipin.com/>)

In addition to the benefits of new technologies, careful attention to local infrastructure is still the foundation of urban improvement. A transport policy is an important example which can bring triple wins in terms of environmental improvement, carbon reduction and public health benefits. More compact cities have lower carbon. A study of 30 Chinese cities found those with more public transport in compact cities had lower CO2 emissions and sprawling cities were associated with lower physical activity (Rode et. al., 2014).

Increasing emphasis on private vehicle ownership and improved roads have led to an increasing number of road traffic accidents, with lower-income households disproportionately affected by key negative externalities generated by transport, including road accidents, air pollution and project displacement (Vasconcellos, 1997; Robinson, 2003; Drabo, 2013). One example of an effective legislative intervention to reduce road traffic accidents comes from Nairobi, where in 2006, ‘Legal notice no.161’ was implemented, enforcing matatus (minibuses) to follow speed restrictions and use seat belts, employing drivers on a permanent basis, and ensuring they are regularly re-tested. Benefits were seen in the first six months with accidents being reduced by 73 per cent compared to 2005 ([UN-Habitat, 2007](#)).

## Green spaces and urban agriculture

The importance of access to green spaces in urban areas has been identified in high income countries and found to be associated with reductions in non-communicable diseases and health inequities ([Mitchell and Popham, 2008](#)). While similar studies have not been conducted in low-income countries, access to green spaces and areas for urban agricultural production have been associated with reductions in pollution and improvements in nutrition, both of which are highly rated by urban residents ([Shackleton and Blair, 2013](#)). FAO points out that much urban and peri-urban agriculture goes unrecognised although it has the potential to contribute to household food security. Food grown within urban areas can easily reach markets, providing cheaper and fresh produce vital for nutritional improvement among the urban poor. The lack of recognition of this activity means that production may take place in hazardous conditions exposing growers, and their produce to pathogens and pollutants. Recognition and collaborations between the agricultural authorities and local governments are needed (see <http://www.fao.org/urban-agriculture/en/> for more examples).

## Key readings

*The six 'must-reads' are in bold below:*

### **Slum upgrading and WASH improvements**

Lall, S.V., Van den Brink, R., Dasgupta, B., and Leresche, K.M. (2012) Shelter from the Storm-but Disconnected from Jobs: Lessons from Urban South Africa on the Importance of Coordinating Housing and Transport Policies. Policy Research Working Papers. <http://dx.doi.org/10.1596/1813-9450-6173>

**Turley R, Saith, R.R., Bhan N, Rehfuess E, and Carter B (2012) Slum upgrading strategies involving physical environment and infrastructure interventions and their effects on health and socio-economic outcomes. *Cochrane Database of Systematic Reviews* 2013, Issue 1 [http://www.heart-resources.org/doc\\_lib/slum-upgrading-strategies-involving-physical-environment-infrastructure-interventions-effects-health-socio-economic-outcomes/](http://www.heart-resources.org/doc_lib/slum-upgrading-strategies-involving-physical-environment-infrastructure-interventions-effects-health-socio-economic-outcomes/)**

Barreto ML, Genser B, Strina A, Teixeira MG, Assis AM, Rego RF, et al. (2007) Effect of city-wide sanitation programme on reduction in rate of childhood diarrhoea in northeast Brazil: assessment by two cohort studies. *Lancet*, 370: 1622-8

**DfID (2013) *Water, Sanitation and Hygiene. Evidence Paper***

[http://www.heart-resources.org/doc\\_lib/dfid-evidence-paper-water-sanitation-hygiene/](http://www.heart-resources.org/doc_lib/dfid-evidence-paper-water-sanitation-hygiene/)

### **Transport**

**Rode, P., Floater, G., Thomopoulos, N., Docherty, J., Schwinger, P., Mahendra, A., and Fang, W. (2014) Accessibility in Cities: Transport and Urban Form. *NCE Cities Paper 03*. LSE Cities. London School of Economics and Political Science. [http://www.heart-resources.org/doc\\_lib/accessibility-cities-transport-urban-form/](http://www.heart-resources.org/doc_lib/accessibility-cities-transport-urban-form/)**

Drabo, A. (2013). Intra-Country Health Inequalities and Air Pollution in Developing Countries. *Oxford Development Studies* 41(4): 455-475.

Vasconcellos, E. A. (1997). The making of the middle-class city: transportation policy in Sao Paulo. *Environment and Planning A* 29(2): 293-310.

Robinson, C. W. (2003). *Risks and rights: The causes, consequences, and challenges of development-induced displacement*. Washington, DC, Brookings Institution

### **The role of governance and local municipalities**

Owusu G., and Afutu-Kotey, R.L. (2010) Poor Urban Communities and Municipal Interface in Ghana: A Case Study of Accra and Sekondi-Takoradi Metropolis *African Studies Quarterly*, Volume 12, Issue 1 <http://asq.africa.ufl.edu/files/Owusu-Kotey-V12Is1.pdf>

**Kobe: WHO Centre for Health Development (2011) Making cities smoke-free [http://www.heart-resources.org/doc\\_lib/making-cities-smoke-free/](http://www.heart-resources.org/doc_lib/making-cities-smoke-free/)**

### **'Area-based' approaches through local governments during humanitarian crises**

**IRC (2015) Humanitarian Crises in Urban Areas: Are Area-Based Approaches to Programming and Coordination the Way Forward? DfID/IIED [http://www.heart-resources.org/doc\\_lib/humanitarian-crisis-urban-areas-area-based-approaches-programming-coordination-way-forward/](http://www.heart-resources.org/doc_lib/humanitarian-crisis-urban-areas-area-based-approaches-programming-coordination-way-forward/)**

## **Smart cities**

BSI (2014) Smart Cities Framework – Guide to establishing strategies for smart cities and communities, PAS 181:2014 <http://www.bsigroup.com/en-GB/smart-cities/Smart-Cities-Standards-and-Publication/PAS-181-smart-cities-framework/>

BIS (2013) Smart Cities Background Paper, London: Department for Business Innovation and Skills [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/246019/bis-13-1209-smart-cities-background-paper-digital.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/246019/bis-13-1209-smart-cities-background-paper-digital.pdf)

Albino, V. Berardi U., and Dangelico R. M. (2015) Smart Cities: Definitions, Dimensions, Performance, and Initiatives Vol. 22, No. 1, 3–21, <http://dx.doi.org/10.1080/10630732.2014.942092>, [http://www.nesta.org.uk/sites/default/files/rethinking\\_smart\\_cities\\_from\\_the\\_ground\\_up\\_2015.pdf](http://www.nesta.org.uk/sites/default/files/rethinking_smart_cities_from_the_ground_up_2015.pdf)

Barrionuevo, J.M., Berrone, P. and Ricart, J.E. (2012) Smart Cities, Sustainable Progress, *IESE Insight* 14 (2012) 50–57

Evolving Smart City Approaches: Journey and Path <http://cityminded.org/evolving-smart-city-approaches-path-and-journey-14087>

## **Reducing risks from natural and man-made hazards, including RTA**

**UN-Habitat (2007) *Enhancing Urban Safety and Security: Global Report on Human Settlements, 2007*** [http://www.heart-resources.org/doc\\_lib/enhancing-urban-safety-security-global-report-human-settlements-2007/](http://www.heart-resources.org/doc_lib/enhancing-urban-safety-security-global-report-human-settlements-2007/)

Cook, V. J.1; Shah, L.2; Gardy, J.3; Bourgeois, A-C (2012) Recommendations on modern contact investigation methods for enhancing tuberculosis control [Review article] *The International Journal of Tuberculosis and Lung Disease*, Volume 16, Number 3, 1 March 2012, pp. 297-305(9) <http://www.ingentaconnect.com/search/article?option1=tka&value1=TB+contact+tracing+GIS&sortDescending=true&sortField=default&pageSize=10&index=1#expand/collapse>

Costello, A. et al (2009) Managing the health effects of climate change: *Lancet and University College London Institute for Global Health Commission* Volume 373, No. 9676, p1693–1733 DOI: [http://dx.doi.org/10.1016/S0140-6736\(09\)60935-1](http://dx.doi.org/10.1016/S0140-6736(09)60935-1)

## **Urban agriculture**

FAO (2012) *Profitability and Sustainability of Urban and Peri-Urban Agriculture* <ftp://ftp.fao.org/docrep/fao/010/a1471e/a1471e00.pdf> and 'Food in Cities' <ftp://ftp.fao.org/docrep/fao/012/ak824e/ak824e00.pdf>

Mitchell, R. and Popham, F. (2008) Effect of exposure to natural environment on health inequalities: an observational population study. *The Lancet*, Volume 372, Issue 9650, 1655 – 1660 [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(08\)61689-X/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(08)61689-X/abstract)

Shackleton, C and Blair, A. (2013) Perceptions and use of public green space is influenced by its relative abundance in two small towns in South Africa. *Landscape and Urban Planning* 113 (2013) 104– 112 <http://dx.doi.org/10.1016/j.landurbplan.2013.01.011>

## **TB surveillance**

Marra, C., Mndaweni, S., Nywagi Louis, F., Matji R., Radebe, Z.V., Mndebele J. - KZN Department of Health, Umzinyathi District Household contact tracing of Multi- Extensively Drug Resistant Tuberculosis (MDR XDR TB) patients in Msingasubdistrict, KwaZulu Natal South Africa 2005- 2010

[http://tbsouthafrica.org/sites/default/files/Household%20contact%20tracing\\_0.pdf](http://tbsouthafrica.org/sites/default/files/Household%20contact%20tracing_0.pdf)

Central TB Division, Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India, 2015. TB India 2015. Revised National Tuberculosis Control Program: Annual Status Report. <http://tbcindia.gov.in/WriteReadData/l892s/254998242TB%20India%202015.pdf>

## **Housing**

WHO (1989) Health Principles of Housing. WHO Geneva,

[http://apps.who.int/iris/bitstream/10665/39847/1/9241561270\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/39847/1/9241561270_eng.pdf)

Global land Tools Network. 2010. Tackling tenure security in slums through participatory enumerations.

[http://www.glttn.net/downloads/GLTN%20Documents/2992\\_alt.pdf](http://www.glttn.net/downloads/GLTN%20Documents/2992_alt.pdf)

## **Questions for discussion**

- Is it time for a global moratorium on forced evictions? How could such a moratorium be achieved and implemented with the urban poor in an active role in land tenure certificate processes to enable inclusion of voiceless families?
- What approaches should be adopted to develop smart cities as socially inclusive and pro-poor establishments?
- How best can municipal governments be strengthened and supported to take a lead role in inter-sectoral action?
- How can slum community groups best be supported and encouraged to work with civic authorities across all sectors/departments that affect their lives, health and wellbeing?
- How can we encourage sharing of best practice for inter-sectoral action and ensure it is utilised to catalyse and persuasively encourage socially inclusive, pro-poor cross-sectoral efforts at city, sub-city, ward and community levels?