POLICY BRIEF:
GOVERNING FOR ECO-CITY INNOVATION

Rising interest in eco-city initiatives prompts questions about what innovation processes are needed and how these can be facilitated by appropriate governance mechanisms. This briefing note identifies key opportunities and challenges based on a two-year research initiative[i].

OVERVIEW

- Eco-city innovation is concurrently driven by global concerns (eg climate change) and local needs and opportunities (eg sustainable food)
- Individual eco-city initiatives have to be considered in terms of their place specificity
- Integration across urban scales, systems and organisations is key to effective innovation
- Political leadership, through a mixture of national policy frameworks and city-regional initiatives, should focus on steering and incentivising innovation

- Community engagement should be tailored to various 'publics'; its functions in the planning and policy processes need to be made explicit
- Environmental-technological goals need to be balanced with social sustainability dimensions
- Accessibility and comparability of data are a prerequisite for international research, knowledge exchange and shared practice learning.

BACKGROUND

Recent years have seen a growing international interest in eco-city initiatives of various kinds. A 2011 census[ii] identified some 180 initiatives globally, which represents a significant increase compared with earlier decades (see Figure 1). The dual challenges of global climate change concerns and unprecedented urbanisation are key factors that have prompted a multitude of actors – cities, national governments, international organisations, private developers, technology firms etc – to become engaged in conceptual, policy and practical innovation. A recent UN report[iii] reflects current thinking by arguing that "the key to sustainability lies in the concept of 'green cities' or 'eco-cities'".
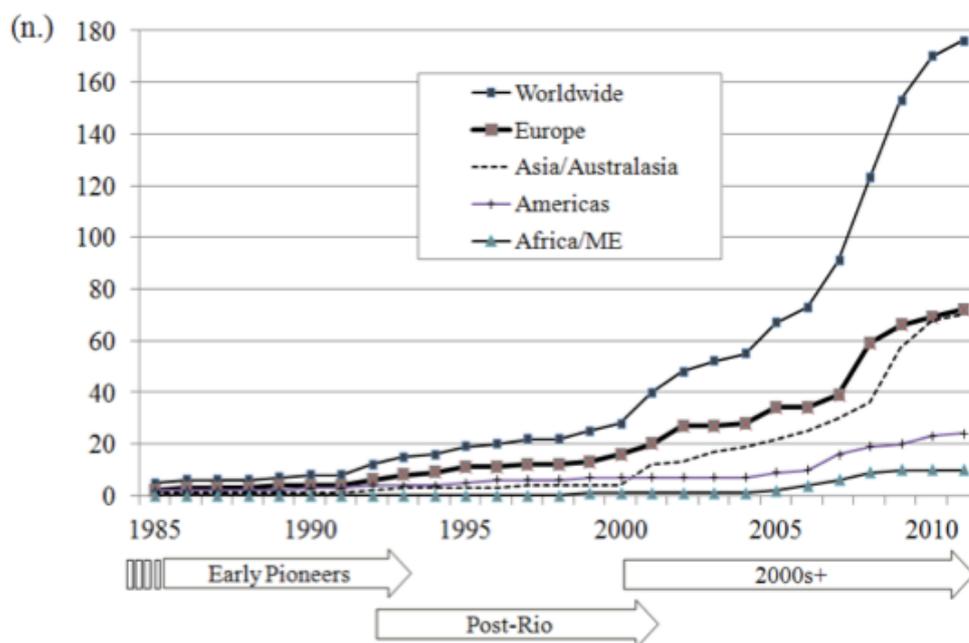

Figure 1: Eco-city Initiatives 1985 – 2011 (by launch date). Source: Joss *et al.* 2013; see footnote [2].

DEVELOPING ECO-CITY PARAMETERS

'Eco-city' is an umbrella term that covers various notions of, and approaches to, sustainable urbanism, rather than a uniform phenomenon. In practice, it typically covers the 'triple bottom line' of sustainability (environmental, economic, social); and it applies to new build, in-fill and retro-fit developments at different urban scales. Sister terms include 'climate-neutral city', 'low-carbon city', 'smart city', 'sustainable city', 'transition towns', among others.

In spite of the growing interest and practice, the quest for definitional agreement on what constitutes an eco-city is far from over. That there are currently no exact parameters to guide those seeking to define and implement eco-city initiatives partly reflects on the manifold complexity of urban sustainability: by its very nature, urban sustainability cuts across multiple policy areas (transport, energy, water, waste, green space, housing, public health etc); it transcends various scales (neighbourhood, district, city, city-region); and it involves diverse actors (policy-makers, planners, engineers, developers, investors, technology firms, interest groups, citizens). In addition, the lack of standardised concepts and models reflects on particular local contingencies: eco-city initiatives are products of their socio-political contexts, so have to be considered in relation to particular organisational, political and cultural dynamics.

Still, there is a need among researchers, policy-makers and practitioners for shared international discourse, in order to facilitate the exchange of ideas, advance comparative research and encourage practice learning. As such, the current eco-city phenomenon may be best understood as an ongoing process of innovation. Ideally, this process should concurrently drive forward practice and generate knowledge about key dimensions of eco-cities and related governance. The need for this becomes clear when considering the fast pace of urbanisation in tandem with mounting pressure to effect the transition to low-carbon urban economies. Shared research activity and practice learning are particularly called for, given resource capacity issues, which are often cited as a barrier to eco-city innovation in many locations in both the Global South and Global North.

Much of current debate about eco-cities is centred upon environmental aspects of sustainability and related technological innovation. This comes as no surprise, given the need to respond to climate change concerns and to address cities' role as a major source of energy consumption and greenhouse gas emissions. However, the focus on environmental aspects should not come at the expense of social (and economic) sustainability considerations. More knowledge is needed about the social lives of eco-cities, both in terms of how social intervention can steer environmental goals, and in terms of what social change is produced by technological interventions in the built environment.

INNOVATION THROUGH INTEGRATION

Integration across systems and scales, however challenging to achieve in practice, has to be at the heart of eco-city governance efforts. Arguably, the goal of integration is one of the key dimensions that distinguishes eco-cities from 'normal' ones. Current thinking about integration is partly informed by systems and environmental sciences which conceive of cities in terms of 'circular metabolism' and material flows. This approach emphasises the need to identify inefficiencies in current urban systems, and to overcome these by improving existing infrastructure and innovating in new socio-technical systems. Equally important, integration has to be considered in terms of governance – that is, how coordination between multiple actors is achieved through organisational and political steering, facilitating and networking. Within a transition context, such governance necessarily has to be adaptive and dynamic to be effective.

The type of integration can be expected to differ depending on whether intervention is sought through retro-fit, in-fill, or new build, developments. Similarly, integration will differ depending on whether intervention is to be applied to one particular socio-technical system – say, energy generation – or more ambitiously across interlinked socio-technical systems (eg energy – waste – transport). Even within one single socio-technical system, integration – both technical and institutional – may be difficult to achieve due to incompatibilities, or frictions, between existing and new systems (eg centralised and spatially concentrated energy generation vs. decentralised micro-generation).

Inevitably, integration needs to address the issue of scale. This requires integrating inward at sub-city level ('from city to street'), as well as outward ('from city to region'). While a focus on the city level is relevant, it is increasingly recognised that integration must take place between urban and rural systems, given their interdependence and in order to provide an effective scale for addressing climate change mitigation and adaptation.

Traditional institutional capacity may not suffice to achieve effective integration, thus requiring new types of governance arrangements and partnerships. The need to coordinate and cooperate between and across professions, organisations, political authorities and socio-technical systems calls for new ways of social learning and strategic development and management. As such, current eco-city innovation is as much a social and organisational process, as it is a technical one. Different governance modes may be suitable at different scales: at national level, this may take the form of light-touch regulation to incentivise eco-city innovation at sub-national levels; at regional level, land use zoning may be an effective tool to steer development; and at local level, community involvement may be advisable to create social acceptance and engender public engagement in sustainable urbanism. Furthermore, particular attention needs to be paid to identify suitable financing modes and public-private partnerships.

HARNESSING POLITICAL LEADERSHIP

The innovative nature of eco-city governance is dependent on leadership capacity at multiple levels, including national, regional and municipal. The benefit of national leadership is demonstrated in the case of, for example, France, Japan and Sweden, where national initiatives have provided a guiding framework and incentives for cities to embark on urban sustainability initiatives. In France, the national *ÉcoCités* and *ÉcoQuartiers* initiatives have been used since 2008 to support over 30 municipal urban sustainability programmes. Governmental guidelines provide an overarching framework, within which individual cities can formulate their own specific implementation plans. Likewise, in Japan 13 cities were selected on the basis of a competitive eco-city development initiative launched by the government in 2009; this builds on an earlier 'eco-town' national programme launched in 1997, thus enabling long-term planning and investment. Sweden's national urban sustainability policy similarly dates back to the 1990s, when the Local Agenda 21 was adopted as a national programme, with municipalities required to implement local action plans.

These and other examples point to the importance of national frameworks as coherent mechanisms for steering and facilitating innovation in urban sustainability, especially where this is done on a long-term basis. One of the challenges involved is to retain sufficient flexibility in lasting strategic plans, to allow for adaptive change in response to evolving social and material conditions. Another is to consider national 'steering' not purely in terms of regulatory requirements, but also through 'soft' incentives and support mechanisms, to encourage engagement by municipal authorities and private developers.

Just as important as national policy is local leadership: cities themselves can have significant agency to drive forward urban sustainability. (However, this is not always recognised by national governments and can be hampered by constraining factors, such as a lack of political autonomy.) The history of urban sustainability provides ample evidence of cities spearheading innovative initiatives and, in turn, shaping national and even international policy. Freiburg (Germany) and Växjö (Sweden) are much cited examples of cities that have pursued significant urban sustainability initiatives over the last three decades. Apart from substantively informing local policy and planning, municipal initiatives are also often used for branding purposes: urban sustainability can confer distinctiveness and competitiveness. Finally, the increasingly important leadership role of cities as part of wider inter-city networks has to be recognised; such networking can facilitate knowledge exchange and raise cities profiles within national and international politics.

BENEFITS OF COMMUNITY ENGAGEMENT

A focus on institutional governance processes at various scales alone, however, risks downplaying the agency of individuals and grass-roots organisations. Both from a substantive perspective – defining and prioritising urban sustainability – as well as from a procedural perspective – realising community engagement – the social dimension of sustainability is critical to the potential effectiveness of eco-city initiatives. And yet, this dimension often remains elusive, be it because urban sustainability efforts are predominantly cast in environmental-technological terms, or because community engagement may not easily fit into what are typically technocratic planning and development processes.

One of the challenges of opening up eco-city governance to public participation is to define and present urban sustainability in a socially relevant and accessible way. For example, the issues of sustainable food, urban green spaces and affordable public transport are likely to engage the public directly and can be shown to have significant environmental benefits. More technical and far ranging issues – such as how to invest in infrastructure improvements and tackle global climate change – have a better change of engaging the public if they can be shown to be relevant to particular communities and locations. Such an approach then also provides an opportunity to situate place-specific concerns within a wider 'bioregional' context, to highlight the interdependence of urban sustainability with regional and even global developments.

Another challenge is to overcome an overly monolithic view of 'the public' and 'the community'. Rather, it is more productive to consider various 'publics' and 'communities', containing a plurality of interests and composed of a range of stakeholder groups. In turn, this calls for tailor-made engagement processes to take into account the types of participants to be involved. This may not in itself resolve the difficulty of public participation in planning, but it at least suggests more differentiated and responsive engagement modes.

Finally, when public participation is used in eco-city governance, its function has to be made explicit. There is a place for formal consultative processes, such as 'collaborative place-making', as there is a place for open public discourse; but these should not be conflated. The former can be useful in structured processes for uncovering public issues and insights of which designers, planners and developers might otherwise be unaware. The latter is important to ensure that decision-makers are held to account and that urban sustainability is subject to informed and robust public debate.

TOWARDS 'GOOD GOVERNANCE'

Governing for eco-city innovation is a complex phenomenon: in terms of the multiple urban sustainability dimensions involved; the difficulty of effective integration and coordination; and the importance of social resonance. Understandably, therefore, guidance on 'good governance' would be welcome, especially so given the growing international collaboration and knowledge exchange involving a multitude of actors.

However, there are several conceptual and practical limitations to developing a 'good governance' model for eco-city innovation. 'Good governance' is in itself a contested concept, with critics claiming that it risks depoliticising decision-making by suggesting universal principles ('transparency', 'participation' etc) devoid of political substance. Empirical observations have shown that in practice the concept can produce 'thin' forms of governance that fail to engage properly with the complex reality of decision-making and public discourse.

'Good governance' as a universal language or set of principles may be particularly difficult to implement in eco-city practice, as individual initiatives are inevitably situated within, and thus intimately defined by, specific places and related socio-technical networks. Furthermore, as eco-city practice has yet to move beyond the early innovation stages, more analysis and learning have to take place before standards can be expected to emerge.

As such, 'good governance' efforts may at this stage be most productively understood as an international process of comparative learning, practice sharing and open, critical reflection. This, though, is predicated on both the comparability and accessibility of information. Hence, there is a need produce consistent, comparable data based on a sufficiently diverse range of initiatives, facilitated by international knowledge exchange and practice learning networks. Over time, this may be expected to lead to shared 'good governance' practice and even international indicators and standards for eco-city innovation[iv]. Importantly, however, this will always have to be locally contextualised to take account of the inherently place-specific nature of eco-cities and related innovation and governance processes.

ACKNOWLEDGEMENTS

[i]ESRC Research Seminar *The Governance of Eco-City Innovation* (2011—2012); coordinated by Simon Joss, University of Westminster. For further information, including five synthesis reports, see **westminster.ac.uk/ecocities-esrc**

[ii]Joss, S., Cowley, R. & Tomozeiu, D. 2013. "Towards the 'ubiquitous eco-city': an analysis of the internationalisation of eco-city policy and practice." *Journal of Urban Research & Practice*, 6 (1): 54-74.

[iii]UNEP. 2012. *21 Issues for the 21st Century. Results of the UNEP Foresight Process on Emerging Environmental Issues.* Nairobi: United [iv]Nations Environment Programme; page iv.

Joss, S. (Ed.). 2012. *Tomorrow's City Today: Eco-City Indicators, Standards & Framework. Bellagio Conference Report.* University of Westminster. **westminster.ac.uk/ecocities**