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Abstract

Cities have become a focal point for efforts to transition towards a more sustainable, low-carbon society, with many municipal agencies championing ‘eco city’ initiatives of one kind or another. And yet, national policy initiatives frequently play an important – if sometimes overlooked – role, too. This chapters provides comparative perspectives on four recent national sustainable city programmes from France, India, Japan, and the United Kingdom. The analysis reveals two key insights: first, national policy is found to exercise a strong shaping role in what sustainable development for future cities is understood to be, which helps explain the considerable differences in priorities and approaches across countries. Second, beyond articulating strategic priorities, national policy may exercise a ‘soft’ governance function by incentivising and facilitating wider, voluntary governance networks in the effort to implement sustainable city projects locally. This innovative role, however, depends on the ability of national policy to produce resonance among societal actors and on its effective interaction with formal planning processes.

Keywords: national policy; policy implementation; governance; eco cities; future cities; retrofit; Indian Ecocity Programme; Japanese Eco-Model Cities; French EcoQuartiers; UK Future Cities

Introduction

That towns, cities and urban regions have moved centre stage in global efforts to transition towards a more sustainable, low-carbon society is by now widely recognised. So, too, it is increasingly expected that cities should exercise leadership in championing policies and implementing actions for sustainable development. In short, nationally and internationally, cities are treated more and more as actors in their own right, responsible for deciding and directing their own sustainable urban futures. And yet, national policy programmes frequently play an important role too. They may be less visible than high-profile sustainable city initiatives and iconic urban developments promoted on the local, national and international stages by cities themselves; instead, their influence may be more indirect in providing incentives and setting out policy frameworks as the basis for municipal and metropolitan actors to pursue their own agendas and projects. Certainly, our 2011 global survey of 'eco city' initiatives showed that national policy programmes have been responsible for a significant number of local urban sustainability schemes, especially ones classified as 'retrofit' initiatives (Joss *et al*. 2011; 2013).

Consequently, in this chapter we aim to take a closer look at the role of national policy programmes in guiding sustainable urban development and related innovation in 'future cities'. We focus on four notable examples instigated since the millennium: (i) India's Eco-Cities programme (2002-2010); (ii) Japan's Eco-Model City programme and related FutureCity initiative (2008-present); (iii) France's EcoQuartier programme (2008-present); and (iv) Britain's Future Cities initiatives (2012-present). Together, these four have engaged over one hundred towns and cities so far in various 'eco city' and 'future city' activities. These are all existing rather than newly planned towns and cities – even if, within this remit, the policy programmes do not necessarily differentiate 'retrofit', 'infill' and 'urban expansion' approaches explicitly.

Conceptually, we situate the analysis of these four programmes in the public policy literature (e.g. Hill 1997; 2013; Sørensen & Torfing 2009; Klijn & Koppenjan 2015). This prompts us to consider the following four interrelated policy dimensions (after Hill 1997):

1. The *purposive stance*, or orientation, espoused by policy; this helps reveal underlying values, goals and choices, and explain the prevalence of particular policy discourses;
2. The *dynamic process* of policy-making, from initial policy formulation to eventual implementation, through a series of incremental decisions and adjustments;
3. The enactment of *decision networks* involving a variety of actors, often beyond the initial policy-making process;
4. The deployment of particular *policy tools*, which vary according to the goal of policy and may consist of distributing (benefits), regulating (activities) and constituting (institutions) features.

Applying this conceptual perspective to the analysis of the four national policy programmes leads us to pose two key research questions: *(1) how is sustainable*

urban development normatively and discursively understood and propagated through policy? This relates to the first dimension above, and suggests that definitions of 'retrofitting cities' and 'innovating for future cities' are informed, and consequently shaped, by underlying norms and paradigms; in turn, this indicates that significant differences might be expected owing to the particular stances that these policies individually espouse. And, *(2) what governance approaches to sustainable urban development are promoted and enacted through these policy programmes?* This relates to dimensions 2-4 above, and raises the possibility that national policy may go well beyond articulating ambitious goals and providing broad directives. Indeed, our grounded assumption here is that the four national policies to varying degrees embody a new governance approach, based on a dynamic multi-level policy process which seeks to mobilise and engage multiple actor groups, not least municipal authorities and local communities. If correct, then these policy programmes may represent potentially quite significant governance innovations, deserving closer analysis. Among the implications to consider are whether these national policy programmes, and their underlying governance approach, might offer a way around the frequently noted policy implementation gap by achieving more integrated and concerted planning and development. (On the *problematique* of policy implementation failure, see for example the discussion of the Chinese national eco city programmes in: de Jong *et al*. 2016). Conversely, the implication may be that these programmes, acting as experimental models, risk coming into tension with established, formal planning and decision-making processes. This then also prompts a discussion of the factors that might be considered as a way gauging the relative 'success' or 'failure' of these national policies as a new governance approach.

The next section of this paper provides a summary description and outline analysis for each of the four policy programmes, informed by the aforementioned two key research questions and related conceptual perspectives. This is then followed by a transversal analysis, in which the above implications are considered in more detail. The concluding section discusses what future lessons might be learnt for governing urban transitions towards a low-carbon society.

Four national sustainable city programmes in profile

Eco Cities (India)

The earliest of the national initiatives considered here was announced in 2001 as part of the Indian Ministry of Environment and Forest's (MoEF) 10th 5-year plan (2002/3 – 2006/7). The Ecocity Programme was designed and coordinated by the Central Pollution Control Board (CPCB), a statutory body reporting to MoEF, with technical support provided by the German Agency for Technical Cooperation (GTZ - *Gesellschaft für Technische Zusammenarbeit*) under the Indo-German programme on Advisory Services for Environmental Management (ASEM). ASEM intended that the programme would catalyse further activity by raising "awareness" and establishing "local dynamics for decreasing environmental burden/stress and improving living conditions" (Surjan & Shaw 2008: 252), thus building the "capacities of the

stakeholders to prepare and implement projects" (Kulshrestha 2007: 1). Rather than attempting large-scale, integrated retrofitting, it focused on creating "environmental landmarks that show visible environmental improvement" (Surjan & Shaw 2008: 253). A complementary objective, according to Kulshrestra (2007: 1) was to "improve urban management and for this purpose, promote networking of participating cities with similar cities in Europe". Essentially, then, the initiative aimed to inspire and enable wider processes of change and knowledge sharing through visible demonstrator projects.

The six cities chosen (see Table X.1) were medium-sized – with populations under 500,000 (CPCB, 2009) - but all had prominent profiles as sites of historical, cultural and spiritual significance (Surjan & Shaw 2008: 253; Datta 2011: 5). A total budget of 50m rupees (approximately £500,000) was envisaged for each city, with 50% offered by the CPCB, and 50% to be raised by the local municipality. Six further cities were selected for participation in a second phase, which never took place, but which would have incorporated learnings from the first six (CAG 2010).

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[insert Table X.1 here. (N.B. Table is mentioned in-text above.)]

Thematically, the programme had a socio-environmental emphasis, focusing on 'quality of life' issues: improving public spaces, green areas, and visitor facilities; relieving congestion; upgrading drainage and sewerage; and creating employment for the urban poor (Kulshrestha 2007: 1). Local authorities were invited to prioritise specific projects through design processes in which local stakeholders would participate (Medindia 2007; CPCB 2009: 275); decisions on the technologies to be adopted, and the precise approaches taken, were to be shaped by the problems thus identified in each location.

Locally prepared detailed project reports for each city were reviewed by an expert committee at CPCB against the broad programme objectives. The first set were rejected on the grounds of insufficient public input (Kulshrestha 2007: 2). Following resubmission, the final approved reports all proposed minor interventions to existing land uses. Although some new infrastructure was also planned (eg a water pipeline in Tirupati, and a visitors' 'eco' parking and car repair facility in Puri), the general focus was on improving/upgrading existing amenities (eg covering stormwater drains in Tirupati, renovating water tanks in Thanjavur, improving public toilets in Puri, renovating a boat jetty canal in Kottayam, cleaning up the lake in Ujjain, and environmental improvements to key pilgrimage routes and sites in Vrindravan).

Collaborative governance methods were encouraged at local level. Local project coordination committees were to operate as partnerships between municipal authorities and other interested local bodies and organisations, and the municipalities were invited to raise funds jointly with other local stakeholder groups. For example, in Vrindavan, contributors included the Banke Behari Temple Trust, three local NGOs, and the India Heritage Foundation (an international non-profit making spiritual

organisation) (Kulshrestha 2007). However, there is no evidence of significant private sector engagement with or investment in the programme, suggesting that the public authorities may have been unwilling, or lacked suitable mechanisms, to secure or manage such involvement. Local authorities were in fact permitted to raise funds with the help of financial institutions, and public-private investment projects had been envisioned (CPCB 2009: 275). In Vrindavan, according to Kulshrestha (2007: 6), private sector actors (including those operating in the tourism industry) had been identified as potential partners in development. The "scope for public-private partnerships and private investment" was one of the criteria for the selection of these six cities (Surjan & Shaw 2008: 253).

In the most optimistic evaluation, the programme did engender small-scale activities in some cases. Three of the six envisaged projects in Tirupati had been completed by 2008; at least one project in Kottayam, the boat jetty canal renovation, was initiated – though CAG (2010) dismissed MoEF's (2010) claim that this had been completed. Kulshrestha (2007), additionally, reports enthusiastic citizen involvement in Vrindavan. Overall, however, the programme was strongly criticised for not delivering on its goals (Datta 2011). The Comptroller and Auditor General of India (CAG) – the national authority responsible for auditing governmental bodies – observed in its environment audit report for the period ending March 2009 that "[w]orks undertaken under the programme remained incomplete in all selected six cities" (CAG 2010: 65). The processes of plan-making and fundraising had suffered long delays, with work often not beginning even after funds were released. The report suggests that finances were mismanaged by the State Pollution Control Boards (who were managing the funds); and notes that the local authorities in Puri and Vrindavan entirely failed to raise the required funding. CAG concluded that two main factors had led to project failure: (a) the difficulties faced by municipalities in raising funds; and (b) CPCB/MoEF's weak implementation and monitoring/control mechanisms. While, then, international 'best practice' approaches shaped the programme from its inception, through GTZ's active involvement, this may have taken insufficient account of both the lack of capacity at local level, and the absence, as Datta (2011: 10) notes, of clear and well enforced national environmental policies.

Although CAG recommended addressing these two problems in the programme's second phase, there is no evidence of further activity taking place. More recent national urban sustainability initiatives (the Ministry of Commerce and Industry's Delhi-Mumbai Corridor eco-city programme, and the Ministry of Urban Development's Near-Zero Energy Satellite Towns, both announced in 2010) are not explicitly linked to this earlier programme. Meanwhile, various other new-build 'eco city' schemes are being developed by the private sector, and targeted at the Indian middle classes (Datta 2011: 5). The failed eco cities programme has closer similarities with the more recent *Solar Cities* scheme (announced in 2008 by the Ministry of New and Renewable Energy): it too is a retrofitting scheme with a socio-environmental focus; and it incorporates international expertise (from the US Department of Energy and Japanese government, among others). However, there is no clear evidence that *Solar Cities* has attempted to take on board the lessons from the earlier programme.

EcoQuartier (France)

The EcoQuartier programme was launched in 2009 by the Ministry of Ecology, Sustainable Development of Transport and Housing, as part of the national Urban Sustainability Plan. The initiative emerged against the background of two overlapping policy developments at the time: the *Grenelle Environnement* initiated by the government in 2007 as a national convention aimed at bringing together state and non-governmental actors to facilitate sustainable development action; and the national economic stimulus programme *Le Grand Emprunt*, launched in response to the global economic crisis of 2008. Consequently, the EcoQuartier programme is guided by the twin overall objectives of encouraging economic investment and facilitating sustainable development, with towns and cities targeted as centres of innovation.

Within this wider policy context, the EcoQuartier programme pursues an avowedly comprehensive approach to urban retrofitting and regeneration. First, with the impetus clearly on investing in existing urban centres as opposed to building new towns, the programme treats urban retrofitting equally alongside urban renewal (especially the re-purposing of brownfield sites) and urban expansion. Hence, the programme concurrently promotes the retrofitting of existing buildings and infrastructure as well as the construction of a significant number of additional residential units and related infrastructure to meet the demands for urban growth. One evaluation report, of the projects supported up to 2011, categorises 42 % as 'urban expansion' and 58 % as 'retrofit' (*Ministère de l'Écologie, du Développement durable des Transports et du Logement* 2011: 14).

Second, the programme is thematically broad, encompassing 20 key areas of engagement organised along four intersecting strands (see Table X.2). Hence, rather than singling out a particular infrastructure domain or even a particular set of (retrofit) technologies, issues of environmental resource efficiency are closely interrelated with issues of land use planning and concerns about socio-economic health and well-being ('quality of life'). The programme thus advocates fundamental, integrative and long-term planning and investment efforts. Relatedly, third, the first five key indicators are subsumed under an explicit process heading; this not only foregrounds a comprehensive governance approach to urban retrofitting and regeneration, but also highlights the importance attached to locally co-determined and embedded planning and development processes.

[insert Table X.2 here. (N.B. Table is mentioned in-text above.)]

Close co-operation and coordination between national, regional and local actors, from the public and private sectors and wider civil society, are central to the EcoQuartier programme – both in terms of its substantive definition of urban renewal/retrofit (see the thematic strand 'approach and process') and of its procedural implementation. Table X.3 lists the four main implementation phases since 2009. This indicates that the programme has grown quite considerably, with a strong response from local actors

(see also Zetlaoui-Léger *et al*. 2013); and also that it has evolved procedurally, especially through the launch of a national certification (*Label EcoQuartier*) process. (By 2014, the programme appears to have been transferred from the Ministry of Ecology, Sustainable Development of Transport and Housing to the Ministry of Housing, Territorial Equality and Rural Development.)

[insert Table X.3 here. (N.B. Table is mentioned in-text above.)]

EcoQuartier displays a multi-level and multi-lateral governance approach functioning chiefly as a voluntary process aimed at encouraging innovation and engendering collective engagement. It has the following five stated characteristics:

1. *Knowledge transfer and policy learning*. Both the *Club National EcoQuartier* and the *Label EcoQuartier* certification process are seen as serving shared learning across organisational and municipal boundaries. This relates both to the contents and forms of urban sustainability, and the various processes, such as planning methods, engineering approaches and investment and financing strategies.

2. *Co-operation.* While the impetus for the initiative comes from the national ministry, the programme is built upon co-operation with local and regional stakeholders as well as various (independent) experts. For example, only around a quarter of the reviewers guiding the national awards, and more recently certification, represent national agencies: approximately one quarter are independent experts, and the remaining half are local experts. Likewise, complementary mechanisms to support preparation and implementation processes are offered at local, regional and national levels.

3. *Local contexts*. While the national guidelines and validation process provide an overarching, unified approach, the emphasis is equally on recognising local specificities. The development of the *Label EcoQuartier* in particular highlights the intention not to impose a uniform state-centric norm, but to promote local context-specific adaptability.

4. *Policy complementarity*. EcoQuartier is predicated on its coherence with existing statutory planning frameworks and tools. As such, the programme is intended as a collaborative, facilitating mechanism for planning and implementing sustainable urban development.

5. *Accountability*. Given the complementary nature of the programme and its focus on multi-level and multi-actor governance, considerable emphasis is placed on open and transparent guidelines and related evaluation processes. The joint involvement of local and regional actors alongside national representatives, the shared deliberations through the national and regional EcoQuartier clubs, and a commitment to reviewing the progress of the overall programme, together are designed to ensure accountability.

In the second half of 2016, the government is due to publish national evaluation guidelines, which should then complete the set of tools including the EcoQuartier Charter and the certification manual, as well as its evaluation report of the first round of projects. It appears confident enough of the positive impact of the initiative to have scheduled a presentation of the report at the 2016 UN-Habitat III conference in Quito, Ecuador. Meanwhile, a measure of relative success lies in the fact that 38 towns and cities were selected in the first two programme rounds, and 39 EcoQuartier certifications were issued in the subsequent project phase, during which the ministry claims that over 55,000 buildings directly benefitted from certification (*Ministère de Logements, de l'Égalité des Territoires, et de la Ruralité* 2015). Furthermore, the *Club National EcoQuartier* has reportedly attracted over 600 participating organisations engaged in shared practice learning.

Eco-Model City (Japan)

"The government of Japan will select Eco-Model Cities that will tackle pioneering initiatives and provide substantial support to them, in order to transform Japan into a low-carbon society" (Prime Minister's Cabinet Office, quoted in Murakami 2008: 14). This statement reflects the high-level support accorded to the Eco-Model City (EMC) programme and the centrality of the low-carbon agenda. Following the programme's launch in 2008, 13 towns and cities emerged from the first competitive selection round in 2009, out of a total of 82 applicants (see Table X.4). The selection was from across the country's eight provinces and included five major cities, four regional core cities, and four smaller cities and towns. An additional ten cities were selected in 2012-13, in the wake of the Fukushima Daiichi nuclear disaster triggered by the Tohoku earthquake and related tsunami of 2011, which further heightened the debate about how Japan was to realise its low-carbon energy future. In parallel, in 2010 the government launched the FutureCity programme, whose relationship is described as conceptually building on the EMC programme, albeit with a more pronounced socio-economic development focus informed by the national growth strategy (Regional Revitalization Bureau, 2014: 4; Promotion Council for the 'FutureCity' Initiative 2014: 3). This latter programme has to date recruited 11 model cities, of which four also feature in the EMC programme (Regional Revitalization Bureau 2014: 5). In total, 30 towns, cities and city-regions have been selected as part of this national effort to transition the country to a low-carbon, green growth future.

[insert Table X.4 here. (N.B. Table is mentioned in-text above.)]

To be selected as EMC, applicant cities have had to successfully demonstrate engagement with the following five criteria: (1) plans for drastic reduction of GHG emissions, to comply with national targets – namely, at least 50% emission reduction by 2050 in comparison to the early 2000s (Murakami 2008: 4); (2) excellence in acting as model city, particularly in relation to pioneering integrated approaches to sustainable urban development; (3) regional adaptability, to incorporate local characteristics and assets; (4) the feasibility of proposed plans, with emphasis on

engaging with local communities; and (5) long-term commitment to revitalising the city. Together, these selection criteria emphasise both substantive issues centred upon the transition to a low-carbon society, and process-related issues with focus on consolidating urban governance.

The reduction of GHG emissions is central to the selected cities' proposals, with mid-term targets for 2030 ranging from 15% reduction in one case (Sakai) to 30-50% in most others (based on emissions in the 1990-2000s), and rising to at least 50% and up to 70% by 2050. The national programme stipulates five areas of intervention in urban planning to achieve drastic reductions in carbon emissions: (1) prioritising 'compact city' development, including 'walkable neighbourhoods'; (2) upgrading public transport infrastructure; (3) improving the energy performance of residential buildings; (4) investing in renewable energy technologies; and (5) increasing carbon sequestration, with a focus on (re)forestation. The particular articulation of these intervention areas, and the related project definitions and socio-technical choices, are not prescribed by the national programme, but a matter for applicant cities to configure in their proposed action plans; they are thus expected to reflect the individual city profiles, including size of city, environmental conditions, industrial base, and residential make-up (Murakami, 2008: 10). This is described in the official guidelines as a special feature of the EMC programme: promoting a low-carbon society policy by setting unified targets, while leveraging local characteristics (*ibid*: 11). Consequently, the EMCs display considerable variety (for case profiles, see e.g. Regional Revitalization Bureau 2011).

The national—local relationship defines the governance approach used to implement the EMC programme. On one hand, there is strong national co-ordination, with the Cabinet Office (and its Regional Revitalization Bureau) taking overall charge of the initiative. As Shuzo Murakami, the chair of the EMC sub-committee appointed by Prime Minister, explains: "…the Cabinet Secretariat is supporting the project rather than specific ministries, such as the Ministry of the Environment or the Ministry of Economy, Trade and Industry, in order to promote cooperation among the national government ministries, between the national government and municipalities, and between businesses and universities" (quoted in Edahiro 2009). On the other, local engagement is emphasised as being key to implementation: "The [EMC] sub-committee chooses model cities in order to promote drastic reductions of greenhouse gas emissions by encouraging local communities to promote integrated efforts that incorporate existing knowledge and information into social and economic systems and make good use of local characteristics" (Edahiro 2009). This is echoed by Murakami: "…we need to provide information on what a low-carbon society might be like, share the idea with all citizens in a way that will increase their awareness. One effective way to do this is to present an existing case study of an environmental model city" (quoted in Edahiro 2009).

To facilitate the multi-level governance process, the Cabinet Office set up the Promotion Council for Low-Carbon Cities. By 2011, it had attracted 204 members: 89 cities (including the selected EMCs), 46 prefectures, 12 ministries, 29 public organisations, and 28 private sector organisations. It chiefly acts as a platform for

information sharing and policy discussion, organised through thematic working groups (e.g. sharing and disseminating best practice; developing standards for calculating GHG emissions of cities; promoting low-carbon measures and policies in cities). Several of the EMCs, notably Kitakyushu and Yokohama, act as working group convenors. The inclusion of both recognised EMCs and a larger number of non-EMC municipalities is seen as particularly important for replicating the innovation spearheaded by the pioneer cities.

Reconciling local, bottom-up innovation with national targets and top-down steering is recognised as a particular challenge for implementation of the programme. As a consequence, a national Committee for Creating Eco-Model Cities & Low Carbon Society was established to support EMCs with regular, independent evaluation. In turn, this has driven demands for common indicators, and even a national standard, for sustainable cities. In response, in 2010 the Japan Green Building Council launched its CASBEE for Cities assessment framework to provide a practical tool for evaluating and benchmarking city performance (Joss *et al*. 2015).

Overall, the EMC programme may be considered relatively successful so far, considering the participation of 23 towns and cities, plus a further seven cities through the related FutureCity initiative. Several factors seem relevant to this outcome: the initiative's high national profile, due to ongoing direct support from the Prime Minister's Cabinet Office; the level of resourcing provided through funding support and comprehensive governance processes; local buy-in from towns and cities nationwide, with significant participation in the competitive selection process and the Promotion Council for Low-Carbon Cities; and conceptual and programmatic continuity across governments (there have been five governments since 2008) and between the EMC programme and the more recent FutureCity initiative. Finally, there is arguably a further, historic factor at work: current eco-city innovation is steeped in historical values and traditions, including earlier engagements in garden cities, eco-towns and ecological industrialisation (van Berkel *et al*. 2009; Low 2013; Joss 2015: 139-141); this may partly explain the readiness of various stakeholders concerned to embrace the contemporary eco-model city challenge.

Future Cities (UK)

In 2012, the UK's Technology Strategy Board (TSB) – a national innovation agency sponsored by the Department for Business, Innovation and Skills – announced a 'Future Cities Demonstrator' competition (TSB 2012). At a time of ongoing cuts to local authority budgets across the UK, the competition aimed to stimulate new thinking in local service provision, as well as open up markets abroad for new 'smart' urban management technologies, building on the UK's recognised strengths in urban consultancy (Taylor Buck & While, 2015). 30 of the 50 cities expressing initial interest were each awarded £50,000 to develop feasibility studies. Among the 29 doing so (see Table X.5), 26 also submitted proposals for a 'large-scale demonstrator project'. Glasgow was chosen from these as overall winner in January 2013, receiving £24m to deliver a series of now completed demonstrator projects (Macdonell 2015), while

plans developed in the feasibility studies are being implemented unevenly elsewhere (Taylor Buck & While 2015: 13).

[insert Table X.5 here. (N.B. Table is mentioned in-text above.)]

The competition conceptualised potential benefits for cities around the three pillars of sustainability, inviting proposals demonstrating "potential for a large impact on the economy, quality of life and environmental impact of the city" (TSB 2013: 3). However, its overarching aim was to stimulate private sector innovation, and thus encourage economic growth and exports. This strong economic framing was complemented by a focus on hi-tech and digital innovation: the proposals judged most successful all promoted open-access data platforms. As one commentator observes with regard to *Glasgow Future City*: "[the] money was not earmarked for regeneration, or housing projects or even renewable energy schemes. It was all to be spent on technology" (Macdonell 2015). Retrofitting possibilities were thus understood through the enabling possibilities of (data-driven) technology, rather than around predefined categories of concrete challenges.

This conceptual centrality of technological innovation was accompanied by the encouragement of active collaboration between different stakeholder groups: the most successful proposals, according to an analysis conducted for TSB, promoted "extensive engagement with a range of partners including industry, academia and citizen groups" (Arup 2013: 50). The task of defining local problems, precise modes of addressing these, and potentially in leading ongoing activities and collaborations, was devolved to city-level authorities. Despite this emphasis on enabling, devolved and collaborative governance, however, national government retained a dominant gatekeeping role by setting broad competition criteria and making final funding decisions.

An official assessment of the *Future City Glasgow* project should be completed in early 2016 (Macdonell 2015). Beyond the specific achievements which this highlights, the project – and therefore the competition which led to it – will succeed on its own terms if its initiatives are replicated in other UK cities. It seems reasonable to suppose that the competition did forge a space for collaborative strategizing and innovative thinking, even if, as Taylor Buck & While (2015: 11) conclude, "the most developed submissions were based on ideas previously proposed or already under submission". However, replicating technical solutions may be problematic if the successful 'demonstrator cities' turn out to be untypical. This risk is implicitly highlighted in Arup's (2013) analysis of the competition proposals as a whole, in which cities identified barriers not only in terms of limited resources but also: low levels of citizen engagement and skills; difficulties for councils in reaching shared visions (and related viable long-term financial models); reticence to share data (see also Macdonell 2015); problems with the consistency and formatting of open-access datasets; and the precondition of strong local leadership. Taylor Buck & While (2015: 15) highlight the possible tensions between the goals of "improving the functioning of UK cities" and "external export opportunities", contending that the competition focused more on the latter. Although knowledge-sharing of different types was strongly encouraged (between different

stakeholders locally, through the mandatory publication of submitted proposals, and through the intended export process), the expectation of encouraging innovation through intra-urban competition, reflecting the "competitive localism of UK national innovation policy" (Taylor Buck & While 2015: 15), differentiates this scheme from a fundamentally collaborative national cities framework (*ibid*).

The demonstrator competition displays some continuity with the ensuing *Future Cities Catapult* initiative, whose flagship projects include the £24m *Glasgow Future City*. This is one of ten 'Catapult' initiatives jointly funded by Innovate UK (as TSB was renamed in August 2014) and the private sector; each will provide facilities and support for private companies in sectors identified as having significant international growth potential. *Future Cities Catapult* claims the 'global future cities market' will be worth £200bn annually by 2030 (Future Cities Catapult, undated a). Within these ambitions, the role of urban sustainability is conceptualised at best as co-constitutive with economic growth. Had these policy initiatives been primarily concerned with developing urban sustainability knowledge, they might have displayed more obvious linkages with the 'garden city' development proposals announced by the Department for Communities and Local Government in April 2014 (see *BBC News* 2014; DCLG 2014), ongoing debates about the shortage of affordable housing in the UK, and indeed with the now-abandoned 'eco-towns' (see Tomozeiu & Joss 2014) and 'zero carbon homes' policy initiatives instigated by the previous Labour government.

Comparative observations

Taken together, the four initiatives prompt several comparative observations relating to the two research questions at the centre of this chapter: that is, concerning, on one hand, the role of national policy in shaping the substantive and discursive engagement in (local) sustainable urban development; and, on the other, its role in promoting and enacting potentially new governance approaches and practices.

Shaping the content of local agendas

It may be unremarkable that national policy, as represented by the initiatives analysed here, should have aimed to prioritise and support sustainable urban development at local level; after all, public policy embodies a purposive stance and seeks to steer decision-making across the wider policy network. However, what is revealing is quite how instrumental policy can be in actively shaping the substantive agenda for urban retrofitting and future city planning. In other words, policy here is not merely about prioritising and lending recognition to an already known quantity – retrofitting cities – but it more fundamentally engages in definitional groundwork and, thus, provides substantive direction. In doing so, it reveals some important differences owing to particular underlying assumptions and approaches. In the case of Japan's EMCs, for example, policy is almost exclusively defined in terms of the national priority of transitioning to a low-carbon society (greenhouse gas emission cuts of 50% or more by 2050). As a consequence, the five thematic areas of intervention, from transportation to building infrastructure, are defined primarily in terms of low-carbon

energy strategies; and this is reflected in the specific innovations and activities that the selected towns and cities have prioritised in response. In contrast, the underlying approach of the French EcoQuartier initiative is deliberately comprehensive, informed by the concurrent goals of improving environmental performance, stimulating urban economic regeneration and growth, and incentivising technological innovation. Tellingly, a key measure for success quoted in the official literature is the number of renovated and new housing units (over 55,000) that have so far benefited from EcoQuartier certification, alongside an emphasis on quality of urban life and environmental protection. Interestingly, Japanese policy has more recently sought to broaden its thematic approach, as reflected in the subsequent FutureCity initiative; while this is positioned as closely building on the EMCs, it nevertheless introduces a more explicit focus on economic and technological innovation, with an unmistakeable nod to the emergent 'smart city' discourse.

The UK's Future Cities initiatives are similarly instructive, both for what their underlying policy approach does and does not articulate. While the triple-bottom line of sustainability is generally referenced, with economic development, quality of life and environmental protection all mentioned in principle, the actual policy formulation heavily privileges economic growth and related technological innovation, especially prioritising 'smart' digital technology. And by highlighting business export opportunities as a major benefit of Future City engagement, there is arguably a notable disconnect with the need for particular local regeneration, significant additional housing, and low-carbon energy generation – areas that have elsewhere been identified as policy priority for the UK. As a consequence, the city as specific place for innovation seems almost incidental, other than serving the purpose of technological innovation for the global market. This can in no small part be explained by the fact that the Future City policy falls under the remit of the national innovation agency within the government's business department; other departments with responsibility for communities and local government, the environment, and climate change, are notable by their absence. (A similar observation about disjointed policy was made in relation to the earlier English eco-town initiative; see Tomozeiu & Joss 2014.) In contrast, the EcoQuartier initiative is run under the auspices of France's ministry responsible for housing and urban-rural development, and is predicated on its complementarity and compliance with other, related policies and planning regimes. For its part, the EMC initiative is run from the Cabinet Office under the Prime Minister's direction; together with the substantive, long-term policy goal of transitioning Japan to a low-carbon society by 2050, this places the retrofitting and regeneration of towns and cities centre stage.

India's Eco-Cities programme represents something of a contrast to the other three initiatives in that the underlying policy stance appears less pronounced and directive: while the policy was broadly framed in terms of decreasing environmental pollution and improving urban living conditions, this was not explicitly linked to any wider national goals and targets. Instead, it appears to have focused almost exclusively on locally defined environmental and urban challenges, and the approach was characterised less by sustained, systematic urban retro-fitting than by punctual intervention aimed at raising local awareness and increasing visibility. This may well have to do with the fact that the initiative resulted from a bilateral collaboration (with

Germany) and was, therefore, defined more in terms of international development aid aimed at local capacity building than as part of a wider national policy strategy.

In summary, the significance of the four initiatives may be seen as much in their exercising influence over how urban retrofitting (in the wider sense) is defined in the first place as in their elevation of the subject matter to national importance; and insofar as they are motivated by differing underlying normative goals and strategic priorities, their takes on retrofitting cities for the future vary considerably. As such, national policy may be a rather important, though often unacknowledged, avenue through which urban retrofit approaches and practices are forged.

Governance innovation

Beyond the ability to fashion the thematic discourse, however, the initiatives arguably demonstrate further significance in terms of their potential as instruments to influence and shape the wider policy implementation processes. In doing so, they are noteworthy for their engagement in governance innovation for sustainable urban development. This is particularly the case of the EMC and EcoQuartier initiatives, whose substantive articulation and process designs place special weight on their intended contribution to facilitating and co-ordinating governance across the wider policy network. It is telling, for example, that the model character of the EMCs is defined as much in terms of displaying excellence in pioneering new, integrated approaches to urban planning and development, as of demonstrating low-carbon urban performance. In similar vein, it is significant that the first five key areas of engagement (see Table X.2) of the EcoQuartier scheme have an explicit governance focus under the heading ‘approach and process’; together, these areas explicitly emphasise integrative and long-term planning. The addition of the *Label EcoQuartier* certification process further reinforces this approach, since it is designed to create the necessary certainty and commitment to enrol private sector organisations and leverage in financial investment for the realisation of sustainable urban development projects. Consequently, in seeking recognition as EMC/EcoQuartier initiatives, applicants are prompted to demonstrate – and are accordingly evaluated against – their proposals for putting in place effective integrative governance processes.

Such a new, collaborative governance approach is, however, not only incorporated within the policy tools themselves, enacted locally through the implementation of policy in relation to specific urban contexts (for example, the application an EcoQuartier in a specific town); it is more widely promoted across national policy networks and processes. Both the EMC and EcoQuartier initiatives have been instantiated through multi-level governance arrangements, whereby central government agencies act as overall convenors while at the same time collaboratively enrolling lower-tier (regional, local) government actors as well as non-governmental organisations for policy implementation. In the case of the EcoQuartier initiative, proposals are evaluated by a mixed group of experts, including local, national and private sector representatives; and a wider actor network has been created through the *Club National EcoQuartier* and several similar regional associations, aimed at knowledge and policy transfer and shared practice learning, both among the selected EcoQuartier projects and among a wider circle of interested actors. Likewise, Japan’s Promotion Council for Low-Carbon Cities brings together several dozen towns and cities (including the selected EMCs),

numerous prefectures, over 40 ministries and public organisations, and well over 20 private sector organisations, in an extended policy actor network. Significantly, while these governance structures are intended to act as catalysts for policy implementation and knowledge dissemination, they simultaneously contribute to the continuous formation of policy. For example, the Promotion Council for Low-Carbon Cities includes several working groups – some of which are led by selected EMCs – that generate thematic contents as input into the ongoing definition of what EMCs are understood to be.

Taken together, this places a dynamic, circular policy process at the heart of these initiatives, driven by the recognition that policy implementation requires the effective mobilisation of wider actor networks. This dynamic circularity relates to several dimensions, including: vertically, the national—local interrelationship (the EMC initiative makes this explicit with reference to "setting unified targets, while leveraging local characteristics"; Murakami, 2008:10); horizontally, public—public (city-to-city) and public—private sector interactions; and temporally, the policy formation—implementation process.

Factors co-determining policy implementation success/failure

If as 'model' (EMC) and 'exemplary' (EcoQuartier) initiatives, these policies aspire to a new, integrative governance mode for sustainable urban development – and, as noted, their innovativeness may, therefore, arise as much from the governance approach as from the substantive urban sustainability goals – then it can, of course, not be assumed that such governance is achievable as a matter of course. Indeed, one can expect a far from ideal practice reality, given the multiple complexities involved in enacting policy for urban sustainability, although this should not in itself devalue the role of these initiatives. Gaining a critical, in-depth understanding of how these initiatives operate in particular practice contexts – though beyond the scope of this chapter – should therefore be the subject of further empirical analysis. Meanwhile, the following are some of the governance factors that might be expected to impact on the performance – and, hence, the perceived 'success' or 'failure' – of national policy initiatives for sustainable urban development. These factors are in play to varying degrees in the examples discussed here; however, they are arguably more pronounced in the case of the Indian Eco-Cities and the UK's Future Cities initiatives, accounting for their relatively weaker governance profiles compared with the EMC and EcoQuartier initiatives.

1. *Policy continuity*: if the purpose of a policy is more about agenda-setting, aimed at initiating and promoting policy discourse, then a short-term initiative may well be appropriate. However, if the purpose is to effect more long-term transformative change based on collaborative governance then a more sustained policy implementation process is called for. And since retrofitting cities for long-term sustainable futures typically involve planning and development over several years if not decades, any policy that is short-term may end up being disruptive rather than enabling. From this perspective, both the Indian Eco-Cities and UK's Future Cities initiatives appear to be at a relative disadvantage, given their short intervention period, although the jury is still out on the other two initiatives, too. This then also suggests the need for more long-

term policy analysis, in order to be able to evaluate policy implementation success/failure.

2. *Availability of structural and financial support*: even if the expectation is for a considerable degree of self-organising among policy actor networks, this still requires an element of central direction and co-ordination. Otherwise, the various actors expected to participate in policy implementation on the ground may not have sufficient confidence in government commitment, resulting in only cursory engagement. A clear framework, based on explicit parameters and transparent procedures, may well be necessary to elicit actor participation. And putting an initiative under the auspices of the Prime Minister's office, for example, or issuing a national certification process, could send out an important signal of governmental dedication and support.

3. *Compatibility with formal planning*: a policy initiative which may be launched with good intention, but which ends up being too removed from, or out of sync with, existing planning and decision-making processes, could be disruptive to sustainable urban development, especially if it creates uncoordinated parallel decision processes and related accountability conflicts. Hence, a key question is the extent to which national policy initiatives for sustainable urban development, as discussed here, manage to complement existing local planning and decision processes and, furthermore, consolidate these by facilitating improved, co-ordinated engagement across the wider policy actor network.

Conclusions

In analysing here the contribution of national policy, based on the four exemplars from France, India, Japan and the UK, we do not wish to make any claim about whether such initiatives necessarily represent an effective means of generating substantive sustainability transitions at the urban level. Tracing and evaluating concrete outcomes and indirect effects is a long-term undertaking, requiring further empirical research – and this undertaking is potentially complicated by the possibility that frameworks encourage local actors to 'repackage' already planned activities, rather than incentivise innovation. Instead, this chapter has drawn attention to the conceptually innovative multi-level governance arrangements which such policy frameworks entail. We, therefore, argue, that their potential force is to engender dispersed networks of decision-making (while also noting several factors mitigating against this). At the same time, their underlying purposive stances can have strong shaping roles in the types and qualities of decisions made, with implications for the practices of sustainable development within towns and cities.

Taking the longer view, the key to national policies for urban sustainability gaining traction and catalysing broader change may lie in their ability to resonate with wider networks of societal actors. The 'horizontality' of this desired outcome, however, does not imply that similar initiatives in future should seek to obviate more hierarchical

regulatory and institutional structures. Rather, the preconditions for the wider resonance of 'soft' governance approaches, which seek to incentivise and enable sustainability innovation rather than impose solutions from the national centre, may relate in a fundamental sense to the qualities of their interactions with existing formal decision-making processes over time.

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TABLES

Phase	Selected Cities
1 (2002—2007)	Kottayam (Kerala), Puri (Orissa), Thanjavu (Tamil Nadu), Tirupati (Andhra Pradesh), Ujjain (Madhya Pradesh), Vrindavan (Uttar Pradesh)
2 (not implemented)	Bharatpur (Rajasthan), Deogarh (Jharkand), Mathura (Uttar Pradesh), Rishikesh (Uttaranchal), Shillong (Meghalaya), Vapi (Gujurat)

Table X.1: Participant cities in the Indian Eco-Cities programme.

'Approach & process'	'Quality of life'	'Land use planning'	'Climate change adaptation & resource efficiency'
1. integrative pilot and consultation processes 2. clear project definition 3. financial, technical and legal feasibility 4. ability to manage and evaluate project and its effects on district 5. longer-term continuity of process	6. promoting social cohesion 7. promoting social solidarity and responsible lifestyles 8. offering a healthy and pleasant quality of life 9. enhancing local heritage, history and identity 10. intense, compact and dense district design, in harmony with context	11. ensuring mixed land use 12. optimising local transport and reducing car dependence 13. promoting alternative and sustainable modes of travel 14. integration into local development processes 15. enhancing relationship with agricultural and woodland areas	16. greenhouse gas reduction and climate change strategy 17. reducing energy needs and diversifying energy sources 18. ensuring high quality, efficient management of water resources 19. avoiding irresponsible use of non-renewable energy and production of waste 20. enhancing biodiversity and urban nature

Table X.2: Four thematic categories, each with five elements, in the *Grille EcoQuartier*.
Source (authors' translation): *Ministère de l'Écologie, du Développement durable des Transports et du Logement* (2011: 12).

Year	Phase	Response
2009	First call for proposals	• 160 submissions, of which 14 selected for national award (*Palmières national EcoQuartier*)
2010	*Club National EcoQuartier* launch	• Bidders from first call brought together with aim of shared practice learning • Grows to over 500 members within first year • Membership exceeds 600 by 2014

2011	Second call for proposals	• 393 submissions, of which 24 selected for national award • Launch of *Clubs Regionaux EcoQuartier*
2013	*Label EcoQuartier* launch	• 2013: 13 *EcoQuartier* certifications, with 32 further projects receiving 'engagement' diploma • 2014: 19 certifications (out of 108 projects), and 53 receiving 'engagement' diploma • 2015: 7 certifications, and 24 diplomas
2015	National evaluation guidelines	• Evaluation report on first round of EcoQuartier projects due December 2015, presented at Paris UN Climate Change Conference (COP21)

Table X.3: Main implementation phases of EcoQuartier programme.

Source (authors' translation): *Ministère de l'Écologie, du Développement durable des Transports et du Logement* (2011); *Ministère de Logements, de l'Égalité des Territoires, et de la Ruralité* (2014).

Programme	Phase	Cities
Eco-Model City	Phase 1 (2009)	Chiyoda, Iida, Kitakyushu, Kyoto, Minamata, Miyakojima, Obihiro, Sakai, Shimokawa, Toyama, Toyota, Yokohama, Yusuhara
	Phase 2 (2012-13)	Amagasaki, Ikoma, Kobe, Matsuyama, Mitake, Niigata, Niseko, Nishiawakura, Oguni, Tsukuba
FutureCity	Phase 1 (2010)	Higashimatsushima, Iwanuma, Kamaishi, Kashiwa, Kesen city-region (Ofunato, Rikuzentakata, Sumita), Kitakyushu*, Minamisoma, Shimokawa*, Shinchi, Toyama*, Yokohama* *Cities selected under both programmes.

Table X.4: Japan's national Eco-Model City programme, and related FutureCity initiative.

Feasibility study plus proposal for large-scale demonstrator project				Feasibility study only
Birmingham	Glasgow †	Milton Keynes	Southampton	Camden
Brighton & Hove	Greater London *	Newcastle	Southend-on-Sea	Belfast
Bristol *	Enfield	Nottingham	Stoke-on-Trent	Derby
Cambridge	Ipswich	Peterborough *	Swindon	
Cardiff	Leeds and Bradford	Plymouth	Warrington	
Coventry	Leicester	Salford		
Dundee	Manchester	Sheffield		
† overall winner of large-scale demonstrator funding * shortlisted for large-scale demonstrator funding				

Table X.5: 29 municipal authorities submitting funded *Future Cities* feasibility studies.

Source: adapted from Arup (2013: 11)