Chapter 10
Upscaling in Progress: The Reinvention of Urban Planning as an Apparatus of Environmental Governance in China

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Abstract Through the lens of scalar politics, this paper examines how the Chinese national state has attempted to reassert its control over environmental governance through urban planning with successive rounds of scalar reconfiguration since the 1990s. Along with utilizing the traditional regulatory hierarchies, it has forced in a green urbanism agenda in local planning regimes through three forms of upscaling, namely, regionalizing urban development, intensifying intercity competition, and fostering global-local alliances. Not all of these attempts can claim immediate success, and the introduction of some has created new headaches to China's urban advancement and environmental protection.

10.1 Introduction

The contemporary era of China is an era of cities. At the dawn of Deng Xiaoping's reforms in 1978, urban dwellers only comprised 18 % of the nation's population. By 2030, this is estimated to break the 70 % mark. This quantum leap in the size of urbanites reflects the strong gravitational force of Chinese cities as locomotives of the industrialization, globalization and lately tertiarization of the nation's economy. Safeguarding urban environmental sustainability has never been such an imperative to the Chinese leadership, at least for three reasons: to maintain the physical wellbeing of its urban majority, to sustain the growth momentum of its urban-biased economy in the age of environment, and to mitigate socio-political crises linked to environmental problems which have emerged lately to challenge social stability.

Traditionally, environmental management is a policy responsibility of the Ministry of Environmental Protection, which employs a mix of command-and-control and market instruments to force in environmentally-responsible behaviour.

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These endeavours have met strong resistance in Chinese cities, where intercity contests for GDP growth have driven them to pursue development at all costs. Under stronger control of entrepreneurial urban governments than their corresponding upper-level agencies after 1978, many municipal urban planning departments not only have played loose on arresting environmentally-damaging land use patterns, but sometimes even actively engaged in legitimizing them. To reverse this trend, the national state of China have made various attempts since the 1990s to guarantee that urban planning in her cities is practised in the interest of the environment, thereby recentralizing environmental governance from the hands of urban governments.

Through the lens of scalar politics, this chapter argues that the initiatives put forward by the Chinese central state to force in a green urbanism agenda in local urban planning represents successive rounds of scalar reconfiguration. Along with utilizing the traditional regulatory hierarchies, the central government has attempted to redefine the interactional dynamics of urban players through at least three other scale-sensitive ways, namely, regionalizing urban development, intensifying intercity competition, and fostering global-local alliances. As this chapter will review, not all of these attempts can claim immediate success, and the introduction of some has created new headaches to China's urban advancement and environmental protection.

10.2 Scale and China's State Reconfiguration

A core idea in geography, scale has gained widespread popularity among contemporary human geographers and other social theorists as an instrument to narrate and analyze the organization and dynamics of social processes. While the spatial science tradition imagines scale as a rigid spatial limit inherent to the operational extent of a socio-environmental phenomenon, the new social or material perspective views it as fluid spatial framing an actor intentionally imposed on such phenomenon.

Given excellent discussion on the social perspective on scale can be found elsewhere (Brenner 2001; Marston et al. 2005), it will suffice here to highlight two of its fundamental caveats. First, the scale at which an issue is problematized is historically contingent (Brenner 2001). A national matter at one historical juncture may no longer be assigned to the national portfolio at the next one, but transferred to another scale, say, local. This redefinition of scale, or rescaling, is undertaken for a social actor to achieve at least one of the following three advantages (Lebel 2006): enlarging benefits or control to an issue, distancing from negative consequences, and creating room for negotiation and consensus-building. Scale is thus also dialectical, with the articulation of one scale both influencing and being influenced by practices at other geographical resolutions (Herod 2011). Socio-environmental and spatial metamorphosis is intertwined with a 'politics of scale', a process of struggle to establish a provisional system of differentiated yet related spatial units embodying the relative power of actors involved (Brenner 2001).

Applying the scalar lens, literature on the socioeconomic development of post-reform China (Ma 2005; Wu 2002; Zhu 2004) have underscored "a downward scalar shift of the state's functions" (Xu and Yeh 2009: 560) following the relegation of policy-making and fiscal power from the national state to urban governments in the 1980s. Cities are portrayed as quasi-autonomous entrepreneurial units where the relevance of the central government and the hierarchy of governance established during the pre-reform era have shrunk considerably. Yet, latest studies (Li and Wu 2012; Xu and Yeh 2009; Xu and Wang 2012) have identified that while power decentralization has indeed occurred, Beijing's leadership has not been all that passive to the territorialization of its urban citadels. Rather, it has been actively rearticulating and consolidating its presence in the Chinese regime of capital accumulation through various strategies to alter the current scales in its political-economic operations. During this process of state reconfiguration, significant attention has been given to reworking the scales of urban planning (Xu and Wang 2012), a municipal function which cities have extensively exploited to boast themselves as more capturing spaces to the free-flowing capital.

Parallel to this vivid picture of economic struggle is the widespread urban disregard of national environmental targets in blind pursuit for economic growth. There have been plentiful accounts (Chen 2009; Economy 2010; Shapiro 2012) on the emasculation of local environmental protection bureaus after the same downscaling of the state, and the consequential dire environmental trends in cities which persistently contradict the high-sounding goal of building a green China at the national level. Urban planning also constitutes part of the discussion as the central state strenuously heralds it as an alternative form of environmental intervention since the 1990s, a change widely seen as China's catching-up with the global vogue of sustainable urbanism. However, considering the aforementioned new context of urban governance (Li and Wu 2012; Xu and Yeh 2009; Xu and Wang 2012), this chapter believes that the recent outpouring of environment-linked urban planning initiatives from Beijing also constitutes part of a full-fledged attempt to reassert the national state in municipal decision-making, and is deeply entrenched in the same complex set of scalar politics.

It is in this context that this chapter argues for a scale-sensitive framework to interpret the changing contours in the environmental roles of China's urban planning system. New environmental discourses and practices introduced by the Chinese central state to urban planning can be understood as successive attempts to displace power and control from one scale to another which, in a nutshell, all aim at re-empowering the national and coercing the urban in the landscape of environmental governance. To illustrate this argument, subsequent sections in this chapter are dedicated to examine some of the most well-known environment-linked urban planning initiatives launched by the national state with an emphasis on how urban planning has been upscaled, how successful they have been, and what impacts, both intended and unintended ones, they have made.

10.3 Central Initiatives to Upscale Urban Planning

10.3.1 A Preamble: The Traditional Regulatory Hierarchies

Traditionally, the Chinese leadership relies on a hierarchical governing structure to enforce its agenda across the country. In the field of urban planning, legislations and policies introduced by the central state are passed down for implementation along a vertical chain of provincial, municipal and sub-municipal urban planning agencies technically supervised by the Ministry of Housing and Urban–rural Development (MOHURD; formerly the Ministry of Construction, MOC). In the post-reform era, formal attempts to force in an environmental awareness to the urban planning sector were first made with the promulgation of the *City Planning Act* (1989), which included the following terms (NPC n.d.):

> Article 14: In the compilation of the plan for a city, attention shall be paid to the protection and improvement of the city's ecological environment, the prevention of pollution and other public hazards, the development of greenery and afforestation, the improvement of the appearance and environmental sanitation of urban areas… and the natural landscape.

These principle terms were translated by the MOC into a set of operational prescriptions for plan-making known as Urban Plan Formulation Measures (1991). The Measures detail the basis of preparation and mandatory components of a city's master plan, the de jure planning instrument formulated by each city to articulate its spatial vision over a two decade horizon. The imperative of environmental protection is emphasized in the Measures, so does the necessity of planning in an environmentally-rational manner. A master plan is expected to contribute to environmental protection through including three mandatory components: a green space system layout for the built-up area, a zoning plan on pollution control, and a list of green spaces requiring conservation and planning regulation.

Nonetheless, promoted by post-reform entrepreneurialism, the customary use of plans in China as construction blueprints had effectively subsumed the environmental interests which the Measures seek to inculcate. The focus of master plans in some cities prepared during the 1990s was still confined to the built-up portion of the urban territory and other parts favourable for creating more production and consumption spaces in the future. Except for certain sites with outstanding natural beauty, urban planner rarely introduced development control on environmental hotspots, but at best avoided zoning them for development. Such non-interventionist approach left the environment highly vulnerable to urban perturbation especially in cities where plan enforcement remained less than effective.

With the enshrinement of sustainable development as China's leading governing discourse, the MOC was pressed to uplift both the capability and commitment of its urban planning sector to safeguard the environment. In response, it rolled out a series of new directives (Table 10.1) to make the environment a principle component of consideration in urban planning. Under their regulations, urban master planning are now mandated to begin with identifying such ecologically-sensitive areas as wetland, water conservation area and agricultural land uses in a city. On this basis,

Table 10.1 National legislations related to urban planning and its environmental requirements

Legislative tier	Approving and promulgating agency	Legislations (year of promulgation)
Law	National People's Congress Standing Committee	Urban and Rural Planning Law (2007)
		Environmental Impact Assessment Law (2003)
		City Planning Act (1989; now defunct)
Administrative ordinance	State Council	Plan Environmental Impact Assessment Ordinance (2009)
		Scenic Spot Ordinance (2006)
		Nature Reserve Ordinance (1994)
		Urban Greening Ordinance (1992)
Department regulation	MOHURD/MOC	Urban Plan Formulation Measures (1991; revised in 2005)
		Urban Blue Line Management Measures (2006)
		Urban Green Line Management Measures (2002)
		Provisional Measures on Urban Plan Compulsory Content (2002)
		Provisional Measures on Near-Term Construction Planning (2002)
		Regulation on Urban Greening Planning Standards (1993)

a city's territory should be trichotomized as 'no-go zone', 'restricted development zone' and 'developable zone'. Dissent spatial strategies should be adopted for each of these zones in urban master plans to minimize damage to the environment in the course of urban development.

Beyond the urban planning system, China's central government has also sought to re-regulate local urban planning practice through reinforcing inter-ministerial checks and balances. In 2003, the Environmental Impact Assessment (EIA) Law was promulgated to make compulsory EIA of major urban spatial plans by specialists supervised by the environmental protection system, which is led by the Ministry of Environmental Protection. The law specifies that EIA for plans should not be an ex-post exercise but performed during the plan-making process, and any plan who fails to include a chapter on its EIA results would not be vetted by its respective approving agency. Later, the Plan Environmental Impact Assessment Ordinance (2009) further empowers the environmental protection system to keep track of the implementation of comments made in EIA for plans. If a plan is found to impose significant adverse impacts on the environment at its implementation, environment protection agencies can recommend plan amendments to their plan approving counterparts.

With these two legal pieces in force, urban planning exercises for the first time have to be externally scrutinized for their commitment to the environment as a core constraining factor of development.

10.3.2 Regionalizing Urban Development

However sophisticated they are, legislations can only govern the general directions of local planning practices. In what ways these directions are translated into detail spatial prescriptions remains predominately influenced by urban officials. In a bid to ensure that no environmental hotspots would be left behind, the upper-level states have made its first upscaling attempt through reviving the pre-reform practice of regional spatial planning to enforce micro-control on local plans with regional plans.

While decision-making of urban governments is bounded by their administrative boundaries, elements and processes in the natural world do not. Apart from upsetting its own communities, environmental problems created by one city almost inevitably diffuse and adversely affect its neighbours, but the former often enough turns a blind eye to its externalities as well as local voices to constraint its damaging behaviour. This is unequivocally the case in post-reform China, whose developmentalist ethos has produced fierce competition among cities as economic citadels for investments and natural resources, thereby fragmenting both the economy and the environment of their respective geographical regions. To combat such localism, a new form of plan, regional strategic plans (RSPs, cf. Xu and Wang 2012), has emerged since the 1990s to rescale the concern of cities from municipal to regional wellbeing. They contrast regional plans in the 1950s, which were vehicles for a rational distribution of settlements and productivity to support the national economy (Wang and Hague 1993). They are also different from the statutory urban system plans required by the urban planning legislations, whose formulation usually subscribes to a normative paradigm focusing on articulating of a perfect spatial form (Wong et al. 2008).

One of the post-reform centres of 'regional renaissance' is the Pearl River Delta (PRD), the earliest test bed of China's market economy experiment. Devolution of economic power and responsibilities to municipalities since the 1980s has driven urban governments in the PRD to pursue city-centric accumulation strategies (Xu 2008). The lack of intercity coordination results in regional economic inefficiency, manifested as overlapping and excessive supply of infrastructure to the PRD as a whole. In an equally obvious manner, the regional environmental system suffers from rapid deterioration, in the form of significant loss of open space to the urban pressure of housing and industrialization. Transcending the municipal administrative boundaries, regional spatial plans are found wanting to rationalize intercity relations and herald synergy among member cities.

When regional strategic planning was first practised in the 1990s, provincial states were the primary driver. In the PRD, RSPs had been independently prepared by the Guangdong Planning Commission and the Guangdong Construction

Commission to reassert the power of the Guangdong government in governing the region (Xu 2008). However, from the 2000s onwards, the central state has also actively intervened such process of regional re-formation. For instance, announced in 2004, the PRD Urban Cluster Coordinated Development Plan (UCCDP) was prepared collaboratively by the Guangdong committee of Chinese Communist Party, the Guangdong government and the MOC. The plan sought to build a 'green PRD' through setting aside 20 % of the PRD's territory to form a system of 'regional open space' for ecological protection. Central to this system are the northern mountain range and the southern coastline which jointly define the PRD's physical geography, plus three other regional mountainous 'green cores'. These components are connected by a network of ecological corridors, such as streams, hills, farm belts and municipal greenbelts. Such system rebuilds the cohesion of the region's ecological patches which has been underplayed by territorial interests of individual cities.

While similar environmental zoning could be found in the 1990s' plans, the UCCDP is distinguished by its proposal for selective recentralization of planning power. Each of its nine policy zones is tied to one of the four levels of a spatial regulation scheme (Xu 2008: 177). As a policy zone with the highest regional importance, the regional open space system is assigned to the level of 'supervisory governance' and is subject to the most stringent top-down control. Its territory and attributes could not be amended by any parties unless with approval from the provincial state. To facilitate its implementation, the UCCDP includes a collection of municipal scale sub-plans to indicate the principle coverage of the regional open space within each city. Urban planning departments of all PRD cities are expected to enforce their respective sub-plan through introducing development control to the designated open space and rerouting their development.

As regional strategic planning becomes more widely employed in China, its effectiveness of forcing in a regional environmental agenda in cities is under siege. Until now, RSPs are not institutionalized instruments of governance. The absence of legislations related to regional strategic planning means urban government can evade from the responsibility of following RSPs in their urban planning exercises at little cost, leaving RSPs as toothless tigers (Li and Wu 2013). The UCCDP was a rare exception to this trend with the enactment of the PRD Urban Cluster Coordinated Development Plan Ordinance. Under the Ordinance, municipal governments are obliged to formulate plans to detail the coverage of regional open space within their territories. Since regional open space is under supervisory governance, such plans have to be submitted to the Guangdong government for its approval. Having institutionalized its relationship with local urban plans, the UCCDP is equipped with greater capabilities to upscale urban planning decisions for the regional environment.

Another worry relates to the ministerial scramble of leadership in regional spatial planning. Unlike the preparation of urban master plans, there are no provisions on what agencies are competent RSP-makers and how RSPs should be prepared. Apart from the MOHURD, which is entitled to physical planning at all jurisdiction levels, other central ministries have also collaborated with the provincial states at variable

extents in regional spatial planning. In the PRD, they include the State Environmental Protection Administration (SEPA, now the Ministry of Environmental Protection, MEP), the Ministry of Land and Resource (MLR, responsible for land resource management) and, most recently, the National Development and Reform Commission (NDRC, China's central economic planning agency). With different political assignments, these ministries, while all rhetorically agreeing to prioritize the environment, offer rather different visions on how the new spatial balance in the PRD should be achieved (Table 10.2). As all these plans claim a say on urban planning, confusion over the regional future among the urban officials may result in none of these RSPs being fully adopted by cities in their space formation. The sheer intricacy between the central ministries in regional spatial planning ought to be clarified and formalized to assure policy consistency across plans and prevent any environmental loophole.

10.3.3 Intensifying Intercity Competition

In terms of the governance approach they represent, legislations and RSPs are similar. They are both 'sticks' to prevent urban planning from infringing the environment under the conventional postulate of effective top-down enforcement. Cities are posited as rebellious objects incapable of leading an environmentally friendly trajectory without coercive measures from the national state. However, adapting to the highly decentralized and economic-driven urban context, the Chinese central government has enriched its policy toolbox for sustainable urban planning with 'carrots' – policy instruments which carry benefits desired by urban governments upon their implementation. Cities are conceptualized in a more optimistic manner, as economic animals which can spontaneously recognize the priority of environmental protection in urban planning if they are given the right incentives.

One of the most well-known forms of 'carrot' from the national state is model city campaign, a reinvention from the pre-reform campaign strategy of 'model-making'. Under the reign of Mao Zedong, territorial units and individuals could be designated by the central government as models to articulate the direction of nationwide socio-political changes (Shapiro 2001). For instance, settlements built during the Cultural Revolution were expected to emulate spatial layouts of Dazhai commune and Daqing oil city after the central state identified them as embodiments of communist revolutionary ideals. Given any deviation from the models could be smeared as anti-revolutionary, dogmatic copying of the models without regards of their suitability to local physical setting occurred. It was reported that, in imitating the Daqing model, an oil field town had attempted (and in fact succeeded) in opening up new farmlands along the frontier of Gobi Desert (Koshizawa 1978). 'Model-making' was thus a costly exchange of environmental wellbeing with political authority (Shapiro 2001).

Nonetheless, when the MOC pursued model-making again in 1992, it was aimed at the very contrary. Their creation, the National Garden City (NGC) campaign, was to honour cities whose conscious effort in planning for high environmental

Table 10.2 Major central-provincial collaborations in regional strategic planning of the PRD

Plan	Collaborating ministry	Spatial zoning for the PRD	Core ecological components of the PRD
PRD Urban Cluster Coordinated Development Plan (UCCDP) (2004–2020)	MOC	Nine policy zones under four levels of spatial regulation: *Supervisory governance:* Guangdong government (GG) claims complete control; regional open space is under this level *Regulative governance:* GG sets out specific requirements *Coordinative governance:* GG and municipal governments collaborate in plan-making *Conductive governance:* GG plays an advisory role	A ring of mountains A coastal belt 3 regional green cores A three-tier ecological corridor network
PRD Environmental Protection Plan (2004)	SEPA	Three zones of different development intensities: *Strictly-protected zone:* areas of high ecological importance and sensitivity which require strict conservation *Regulative development zone:* areas requiring ecological protection but can accommodate non-polluting development *Directive development zone:* areas for agriculture and urban development	18 nodes 16 corridors 6 cores from 6 regions Supported by a three-tier ecological function zoning scheme
National Planning at Guangdong (2006)	MLR	Two functional regions: *Development-upgrading region:* areas around the estuary where high-end development should concentrate; requires ecological restoration *Development-optimizing region:* outer ring of the PRD accommodating development opportunities overflown from the estuary; should strengthen agricultural development and ecological protection	Not detailed; the plan however includes a layout of 'ecological leisure space' which resembles the ecological structure articulated in *PRD UCCDP*
PRD Urban–rural Integration Plan (2009–2020)	NDRC[a]	Only proposed an outline of regional spatial structure; reference made to the zoning in PRD Environmental Protection Plan (2004)	A circumferential ecological barrier A ecological ring for bay area 3 metropolitan green cores 6 greenways Rivers and streams in the region

Note: [a]The *PRD Urban-rural Integration Plan* was prepared by the Guangdong Development and Reform Commission for the spatial implementation of the NDRC's *Outline of the PRD Development and Reform Plan* (2008–2020)

Table 10.3 Initial point-based assessment scheme of National Garden City, 2000 (MOC 2000)

Aspect	Examples of assessment areas	Points
Organizational effort	Set up specialized agency for urban greening	12
	Expenditure on urban greenery	
	Lessons can be learnt by other cities	
Regulatory effort	Careful formulation and implementation of urban green space plan	10
	Promote plating of native species and diversity of flora	
Landscape protection	Natural landscape protection	10
	Heritage protection	
	Rationality of urban spatial structure	
	Protection of old and valuable trees	
Greening effort	Municipal green coverage and green space provision	30
	Greening of roads, residential areas and work units	
	Promotion of vertical and rooftop greening	
Garden-building effort	Provision and distribution of public green space	10
	Protection of traditional gardens	
	Planting in parks and squares	
Ecological environment	Air and water quality compliance	14
	Wetland protection	
	Popularization of green architecture	
Municipal facilities	Coverage of gas and water provision	14
	Public transport vehicles per 10,000 inhabitants	
	Proportion of commuting served by public transport	
	Total	100

quality should be followed by others in China. At the beginning, the MOC followed the old way, granting the title to a city as they saw it fit. However, since 2000, NGC became a title which cities can compete for based on a point-based assessment scheme (Table 10.3). Cities wishing to become a NGC should apply to the MOC, which would assess their fulfilment of various criteria set out in the scheme. Apart from re-examining their performance on a five-yearly basis, the MOC seeks to keep the NGC winners on their toes by creating a higher-level award, National Ecological Garden City (NEGC), in 2004. Currently with an elaborative set of 91 criteria, NEGC extends its requirements from the NGC's purview of pollution control and green space expansion to sustainable resource use, ecological security and climate change responses.

The introduction of competitive model city titles reflects the central state's attempt to better put forward their environmental agenda in the context of corporatist local states. NGC, NEGC and many other national model city titles have been

associated with plentiful economic benefits (Bai 2007; Hoffman 2009, 2011) which spur cities to take a proactive approach to environmental issues. To begin with, urban governments view these titles as effective place marketing tools. The high-profile announcement of new members to the club of NGC by the central government represents a vote of confidence to winners' environmental achievements. To cities notorious for pollution, acquiring such title epitomizes a golden opportunity to rebuild their environmental image. These reputational gains are translated into more tangible benefits when cities succeed with their title in attracting more investors, professionals and tourists. Meanwhile, the environment can secure a higher priority in the making of urban plans as environmental benchmarks in the assessment scheme become yardsticks of urban planning exercises undertaken by candidate cities. In a nutshell, this coupling of environmental actions and economic competitiveness make it more convincing for urban governments as entrepreneurs to take the environment more serious.

Enthusiasm for cities to acquire such title must also be understood from the political interests it entails. In China, local governors are well-known for their keen interest in GDP-ism because their promotion to higher positions is de facto dictated by the economic performance of their respective territorial units (Ran 2013). Conversely, they downplay the importance of meeting environmental targets, not only because such targets are impediments to the development imperative, but also because any environmental noncompliance constitutes only a minor demerit to their cadre report card. However, by binding environmental targets with economic interests, NGC offers the necessary political initiatives to stimulate local governors' effort in developing their cities with a good dose of environmental awareness. As environmental sustainability is rising to a par with economic objectives in the national agenda, earning one's city a model title becomes a strategy for local governors to score higher in their competition for career advancement.

Yet, there have been doubts on how far these models can actually steer a paradigm shift in China's approach of urbanization. While it is rather plain sailing to carve out new green refuges on the drawing board, it has been daunting to translate them into realities and realize their ecological utility. In the NGC reassessment in 2010, the MOHURD found that some cities transplanted mature trees in larger quantities from distant forests to vegetate their barren land. Others made the same attempt to replace original plantations with flora of higher biological value or exoticness. Apart from creating heavy financial burden to local governments, such attempt is equally costly in ecological terms, for it damages the ecosystem of where the transplanted floras were uprooted. Chou Baoxing (2009), the former deputy minister of the MOHURD, also noted that cities have been too obsessive with meeting the target such that they may demolish buildings to make room for tree-planting. In other cities, the model scheme failed to address the chronic deprivation of greenery in inner city areas because new green spaces have been created in the outer city where more room is available.

10.3.4 Fostering Global-Local Alliances

Taking its endeavour to reregulate environmental discourses in urban planning to the extreme, the national state has spurred the construction of 'model alternatives' ab initio to palpably exhibit the ecological paradigm underlying the nation's new trajectory of urbanization. Urban development is expected to be undertaken in them in compliance with ecological principles so that their inhabitants will live in harmony with the environment. Depending on their geographical features and development objectives, such initiatives have been variedly named as 'eco-city', 'eco-island', 'low-carbon city' and the like in their respective development schemes, but for simplicity this chapter would collectively refer them as eco-cities. As of 2013, such urban planning laboratories have proliferated to beyond 200 across the country (Pow and Neo 2013a).

One underpinning feature among the forerunning eco-cities, and thus the tone setter of the current wave of change, is their embeddedness in the global arena. Under the auspice of the central government, transnational cooperation has emerged as an increasingly popular and privileged way of their development (Fig. 10.1), and planning of these eco-cities have been globalized in terms of both their participating parties and discourses. The role of the central government in steering such rescaling varies from case to case, which can be generalized three forms: endorsing local state engagement of overseas parties, engaging in bilateral agreements with another national state on transactional collaboration, and setting up inter-governmental joint ventures (de Jong et al. 2013). But regardless of its level of commitment, the central government regain a greater say over urban planning affairs in its capacity as the gatekeeper of local-global interactions.

The presence of a 'triple coincidence of wants' explains why the transnationalization of Chinese eco-cities has been so well-received at all fronts. To the central state in Beijing, transnational collaboration secures China's access to overseas successful lessons in making their cities more sustainable and saves the tremendous cost in developing solutions from scratch. New ideas and technologies on eco-urbanism are rapidly imported through the direct involvement of overseas institutions in eco-city planning (de Jong 2013). To foreign interests, having a stake in Chinese eco-cities paves way for them to secure a firm footing in the booming market in China. For urban planning firms in particular, the Chinese state offers them with immense spatial and institutional flexibility to translate their ambitious conceptualizations into brick and mortar. And to urban governments, needless to say, eco-cities as prestigious global projects are carrots well meeting their appetite of internationalization. To cite one case, Chinese cities had contested for the right to cooperate with Singapore after the city-state decided to build an eco-city with China (Pow and Neo 2013b).

While all signs are propitious for China to set sail on a greener pathway from the eco-cities, opinions are critical about the effectiveness of the whole campaign to 'gre-enlighten' Chinese urbanism. Suspicions have mounted over the ultimate objective of building eco-cities. The prominence of real estate components in their plans (Cheng and Sheppard 2013; Pow and Neo 2013b) has been cited as evidence

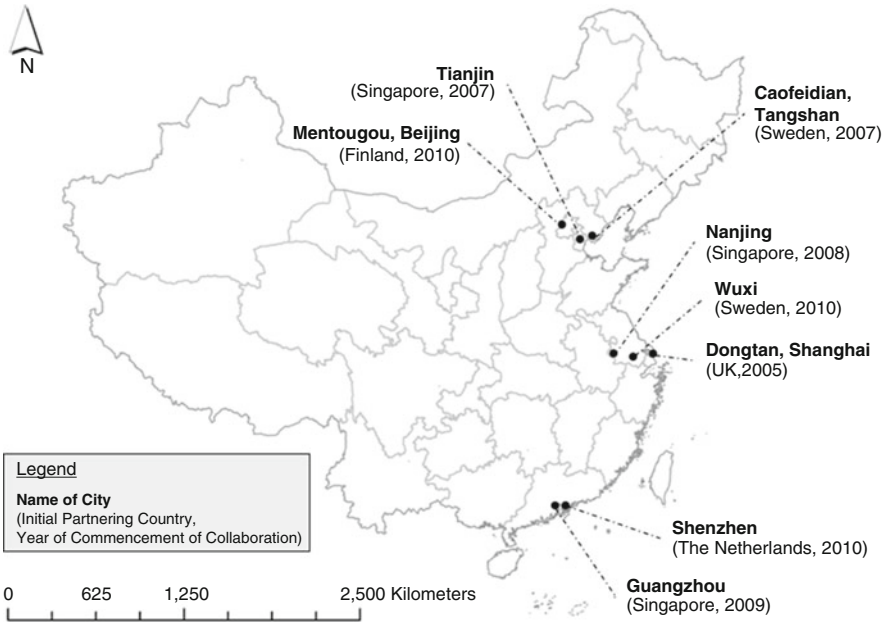

Fig. 10.1 Major Sino-foreign eco-city initiatives in China

that Chinese eco-cities are crafted as new vehicles of land-based urban economics appealing to the discourse of sustainability. Expensive tags of residential units fuel further criticism that these project are producing "premium ecological enclaves" (Hodson and Marvin 2010: 298) affordable only to the wealthy minority. The impossibility of the temporary workers who built the flagship eco-city in Tianjin to afford a flat in it is but an obvious example (Caprotti 2014). However, before concluding that eco-city projects are purely speculative, one needs to consider the unique way they come into being. Resembling how Ebenezer Howard's garden city utopia was realized in Letchworth, Chinese eco-cities are built from scratch within a few years rather than being allowed to develop organically over time. The widespread application of ecological technologies means that their buildings cost 30–50 % more than ordinary ones (Shen and Wu 2012). If eco-cities have to be developed without purely relying on state subsidies, it is rather likely for them to transfer some of the financial burden to their inhabitants.

The concern of financial viability here leads us to an interrelated question – whether current eco-cities can deliver their trigger down effect to the urban sphere. Obvious enough, prohibitive cost of building eco-cities would prevent their rapid replication in China, but this is not an ineradicable barrier in a nation with track record for the central government to heavily fund local infrastructure projects for a dual boast in social progress and economic growth. To think a step backward, one can also explore whether we have less costly options to fix urban sustainability. What is though more pertinent is the determination of the existing eco-cities to break their functional isolation. So far, no concrete action plans are observed to har-

ness them as points of departure for spatial transformation on a greater scale. This lack of a radiating agenda needs to be promptly addressed if these eco-cities were not to remain "pearls in the sea of degrading urban environments" (Wong 2011:131) in the long run.

Last but not least, the current globalization of eco-city planning is at risk of decontextualization. Despite their technical superiority, foreign planning practitioners often face a steep learning curve in China (Wu 2012). In the Sino-British Dongtan project, the British-led planning brigade claimed that they would give due respect to indigenous historical peculiarities in their development plan. However, when it boiled down to reality, socio-cultural baseline studies for the project were performed by foreigners who received no formal training about Chinese contexts (Held 2009). In other cases, even the local governments involved are also responsible for socially unrealistic plans, for they superimpose their views on the social realities over what is really ongoing among the affected (May 2011). Unlike concept plans for Chinese cities, which are also commonly formulated by foreign design firms, eco-city plans serve more than visionary statements. As blueprints for implementation, they should be drafted in conscious of the people and space being planned.

10.4 Concluding Remarks

As the above reflective account shows, the Chinese national state is clearly on an uphill battle to reinvent urban planning as an apparatus of environmental governance through various upscaling attempts to redefine the environment, and related urban planning exercise, as a regional, national or global matter. One can affirm that the status of the environment, rhetorically at least, has been raised in local urban planning regimes as they are introduced to a wide variety of hard and soft constraints. One can also affirm that China's central government has created for itself more channels, both institutionalized and ad hoc ones, to inject its escalating environmental commitment to the municipal urban planning departments, which hold the key to realize visions from above in the urban space. However, the introduction of these initiatives has entailed side-effects to the broader social, economic, political and, to our greatest concern, environmental terrains across which urban planning operate. Dealing with these consequences necessitates revision of the operational details of these initiatives, as well as the institutional setup with which they are crisscrossed.

From the range of initiatives employed, one can also notice the transformation of central-local relationship from conflictive to collaborative on the fields of urban planning and environmental governance. While the central state does not give up on governing the cities through hierarchical coercion, taking the form of legislations and RSPs, it has also explored the use of implicit economic incentives, including the NGC/NEGC campaign and Sino-foreign eco-city projects, to stimulate bottom-up rerouting to the favour of the national environmental agenda. An overall conclusion

on their impacts would be a cautiously optimistic one. On regionalizing urban development, regional spatial planning is a productive attempt to safeguard the environment against localism, but the law of diminishing returns may set in when multiple regional visions co-exist for a city to follow. On intensifying intercity competition, model city campaigns helps translate the competitive mindset of cities into a catalyst of planning the environmentally-sensitive way, but sometimes it may also push local leaders too far to damage the environment instead. On fostering global-local alliances, Sino-foreign eco-city projects may seem all but cashing in the environment, but the transfer of policies and technologies involved in this coupling of entrepreneurialism and environmentalism may stimulate some serious, yet not necessarily perfect attempts to remodel China's urbanization.

China is not alone in reworking the scales for the environment. Similar attempts have also been widely observed in European and North American nations, examined through the lens of multilevel environmental governance (Weibust and Meadowcroft 2014). Despite obvious differences in their political-economic contexts, these nations have all engaged in continuous negotiation between the central and the local, in which decentralization and hierarchicalization have coexisted. This reflects a very fundamental principle of good environmental governance: that is, the universality of environmental problems requires engagement of all parties to work in a coordinated manner for the environment so that no space would be left out for intervention.

Meanwhile, as reregulation continues on various scales by the central state, and as the urban continues to be the favoured scale of development, further inquiries on the scalar politics in China remains much needed for a more nuanced understanding of the nation's momentum towards flourishing in a sincerely green manner. Urban planning in China needs to be viewed as a terrain not only contested for economic benefits, but also increasingly for environmental sustainability.

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