



City Research Online

City St George's, University of London

Citation: Chen, G. C. & Lees, C. (2018). The New, Green, Urbanization in China: Between Authoritarian Environmentalism and Decentralization. *Chinese Political Science Review*, 3(2), pp. 212-231. doi: 10.1007/s41111-018-0095-1

This is the accepted version of the paper.

This version of the publication may differ from the final published version. To cite this item please consult the publisher's version.

Permanent repository link: <https://openaccess.city.ac.uk/id/eprint/35997/>

Link to published version: <https://doi.org/10.1007/s41111-018-0095-1>

Copyright and Reuse: Copyright and Moral Rights remain with the author(s) and/or copyright holders. Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge, unless otherwise indicated, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way. For full details of reuse please refer to [City Research Online policy](#).

The New, Green, Urbanization in China: Between Authoritarian Environmentalism and Decentralization

Geoffrey C. Chen¹ and Charles Lees²

Keywords: China, Environmentalism, Urbanization, Sustainable Infrastructure

Abstract

Orthodox environmental political discourse and practice posits a positive causal link between participation and effective environmental governance and regards participatory practices as a normatively desirable element in the building of a more just and sustainable society. However, recent discussions around theories of authoritarian environmentalism have challenged the basic assumptions of Western environmentalism. These discussions still lack sufficient discussion of actual real-world policy making and implementation and this article addresses that gap by exploring the policy of green urbanization, deemed a top priority by Chinese policy elites, in order to understand environmental authoritarianism as a perceived alternative path to addressing China's growing environmental emergency. We argue that the shifting strategies of governance associated with green urbanization are indicative of a distinct paradigm of authoritarian environmentalism characterizing a re-centralization of state power and a reduction of local autonomy in environmental policy making in China.

¹Address of correspondence: chun-fung.chen@xjtlu.edu.cn; Affiliation: Department of China Studies, Xi'an Jiaotong-Liverpool University, China.

²Address of correspondence: charles.lees@flinders.edu.au; Affiliation: College of Business, Government, and Law, Flinders University, Australia.

1. Introduction

The rise of Western environmentalism has been accompanied by the growth of the anti-nuclear movement, the growth of the anti-war movement, and other emancipatory actions closely related to the binary oppositional practice of state-social conflict in the post-industrial context. Orthodox environmental political discourse and practice posits a positive causal link between participation and effective environmental governance as well as regarding participatory practices as a normatively desirable element in the building of a more just and sustainable society. However, recent discussions around theories of authoritarian environmentalism (Moore 2014; Beeson 2010; 2016) have challenged these assumptions at the same time as commentators have begun to focus on concerns about potential chaos and security threats that may arise from acute environmental emergencies.

Given the increasing doubts of the dominant model of environmental governance (Blühdorn 2016; Howes et al. 2017), researchers have increasingly used China as a case study to explore the possibility of a non-participatory model of environmental policy-making (Gilley 2012; Mol 2015). However, these discussions still lack sufficient discussion of actual real-world policy making and implementation. This article addresses that gap by exploring the policy of 'green urbanization', which has been deemed a top priority by Chinese policy elites, to understand changing patterns of environmental authoritarianism as a perceived alternative path to addressing China's growing environmental emergency.

The emergence of China as a major player in the politics of climate change has reawakened academic interest in non-democratic approaches to environmentalism, or so-called authoritarian environmentalism, as an alternative environmental policy model. By-and-large these debates have approached the issue more with prudent apprehension than with optimism but it is undeniable that the return of authoritarian environmentalism has

revived the old, unresolved academic debate, begun in the late 1970s, which pitted market liberalism against authoritarian command economies.³ These debates have re-emerged because of the limited progress made by orthodox Western approaches as well as China's growing influence in global climate politics. Authoritarian environmentalism *does not* emphasize emancipatory, decentralized environmentalism (Blühdorn 2011b, 4-5), but demands the opposite solution: tackling the environmental emergency by using a non-participatory and top-down mode of governance. This approach is documented in Wainwright and Mann's 'Climate Mao' (2013, 9-10), which conceives the Chinese state as an alternative to a neoliberal capitalist bloc led by the USA, and with the potential to 'achieve political feats unimaginable in liberal democracy'. Similarly, Bigger (2012) argues that centralized state responses may be needed to address the fragmented state of global carbon governance. However, most of the new discussions around authoritarian environmentalism tend to portray China as a fixed, single entity and fail to understand the changing nature of environmental policy model(s) within China's authoritarian system (Shen and Xie 2017). These debates have not taken into account the shift and evolution of the institutions and practices of policy making in China. By contrast, through our case study of green urbanization and the related policy initiatives of transportation equity, this article aims to understand the changing institutional configurations that have emerged over the last decade and, in doing so, enhance the empirical basis of what still remains primarily an intertextual and theoretically-driven debate.

³ For further discussion and debate of authoritarian environmentalism, see, for instance, Heilbroner (1991), Doherty and De Geus (1996), Lafferty and Meadowcroft (1996), Midlarskey (1998), Barry and Wissenburg (2001), Shearman and Smith (2007), Humphrey (2009), Ophuls (1977; 2011), Blühdorn (2013, 23-29) and Chen (2016, 223-245).

Our research questions are as follows:

1. What are the institutions and policy instruments used by policy elites in China to implement their policy of green urbanization?
2. To what extent are the relevance and utility of the theory of Authoritarian Environmentalism capable of analyzing the mode of governance in this policy area?

We use the concept of environmental authoritarianism as a theoretical lens to focus on these questions. Using the policy area of 'green urbanisation' as a case study, we seek to grasp a more comprehensive understanding of the trajectory of China's recent environmental policy development. The reason for selecting this policy area for analysis is that empirically, 'green urbanization' has become a high salience political agenda for policy elites (Zhang 2015, 163-164; Xinhua News Agency 2017). The policy document *Opinions on Accelerating the Construction of Ecological Civilization* (*Guanyu jiaokuai tuijin shengtai wenming jianshe de yijian*, 关于加快推进生态文明建设的意见) co-introduced by the Party and the State Council, emphasises the relationship between China's environmental carrying capacity and the need for co-ordinated development. This indicates a shift into a kind of political economy that eschews high consumption, high emissions, high expansion and inefficient output, and which reflects Chinese policy elites' awareness of the urgency of the climate issue. In other words, we are seeing a new emphasis on environmental authoritarianism.⁴

⁴ That being said, in view of the limitations of space, we in this article mainly concerned about English academic literature and China's policy responses.

The rest of the article is structured as follows. Next, we assess the debate around non-democratic approaches to environmental policy that have emerged in the recent literature. In section three, we further discuss green urbanization in China, examining how China's top-down approach has worked in practice. In particular, we look at the trade-off between notions of sustainability and equality in the policy design of green urbanization. We seek to identify the practical challenges and the policy shifts, as well as the thinking behind them, that drove the implementation of green urbanization initiatives. In section four, we discuss our findings, and argue that the shifting strategies of governance associated with green urbanization are indicative of a distinct paradigm of authoritarian environmentalism. We argue that this paradigm is characterized by the use of a top-level design of environmentalism deployed by both central and local governments, depending on the level of policy making. This mode of authoritarian environmentalism not only diverges from the global consensus mode of environmental governance, but is in effect a new mode of policy making that emphasizes an explicitly result-oriented policy style that seeks to integrate environmental imperatives into economic policy planning.

2.1. The paradigm of participatory environmental governance

Much has been written about the importance of widening civil society participation in environmental politics and policy. In the West, we can see a now established orthodoxy that stretches from radical environmentalists, through mainstream politicians to business practitioners, in which actors at all levels of governance assume a positive link between popular participation and environmental protection (Smith 2003; Hobson 2012). This orthodoxy was forged in an ongoing debate amongst academics, activists, and practitioners

that dates back to the emergence of eco-politics in the 1960s and culminated in the presentation of the Brundtland Report in 1987 (Blühdorn 2011a). Although the environmentalist orthodoxy emerged within the New Social Movements from the late 1960s onwards, from the mid-1980s onwards it became increasingly mainstream and unconstrained by social location (Bäckstrand and Lövbrand 2006). In its purest form, Green political actors have sought a radical, decentralized, and civil-society focused mode of organization that fundamentally challenged the capitalist materialism of the established economic system, advocating and seeking a new way of life (Scott 1990). This particular strand of environmentalism was closely associated with the anti-nuclear movements that were particularly active at the time (Kitschelt 1986) and the non-traditional techniques of mass mobilization associated with them achieved public and political attention and established the key issues in the wider public discourse in Western democracies (Price et al. 2014). Such movements, rooted in the tradition of emancipation, are explicitly opposed to hierarchical bureaucracy (Dobson 2007). In short, the Green politics that emerged through the new Social Movements saw defense of the environment and the extension of citizens' autonomy as linked concepts with a close, positive relationship between them.

However, from the 1980s onwards the radical edge of Green politics was subsumed into the more mainstream discourse of 'sustainable development', which has become the dominant framework for the discussion of international environmental politics (Hajer 1995). Such an apparently depoliticized policy model was in fact highly political in that its more formalized and structured model of stakeholder participation excluded the informal and often deliberately unstructured participation practices associated with New Social Movements (Blühdorn 2000a; 2000b; 2013; Bäckstrand 2004, 696). This shift away from more radical notions of participation saw a shift from notions of open and deliberative practice to

a more constrained contractual model of cooperation between the public and private sectors (Joss 2010; Baker 2015). Although this more constrained notion of participation downplayed the radicalism of the new Social Movements it nevertheless still presented a challenge to existing practices in liberal democratic states. Not only does this conventional model of environmental governance contain nebulous notions of neo-liberal thinking but, in its emphasis on *stakeholder participation* policy paradigms, its narrative outsources the responsibilities of elected policy makers (who are supposed to be responsible for dealing with this vexing issue) to mass consumers (Blühdorn 2016) and eschews the state's capacity to solve climate problems with large-scale global solutions. This paradigm embedded in the sustainable development agenda has, for some, been considered an exhausted or even 'failed paradigm' (Bulkeley et al. 2013, 962-963; Blühdorn 2013, 260-264). As Blühdorn put it:

This discourse presents consumer-citizens—rather than economic or political elites—
—as real center of power, demands that every individual *contribute their bit*, and
suggests that the sum of individualized consumer choices and small scale behavior
changes (for example, recycling household waste, not printing every email, using
public transport more regularly, changing light bulbs) will deliver what neither the
globalized economy nor the decapitated state are able to achieve (2016, 269).

In such paradigmatic decadence, in which the established model of environmental governance seems to have lost its effectiveness in dealing with climate urgency, Beeson echoed his view by indicating that 'many democracies have great difficulty either overcoming powerful, entrenched domestic interests and generally following through on policy commitments, no matter how well intentioned they may be' (Beeson 2017, 3). In this context, environmental authoritarianism – an empirical mode of governance stressing decisively the solution to non-neo-liberal solutions – encourages us to explore its ability to

solve large-scale problems, such as green urbanization, on a large scale. Such a theory, accompanied by the emergence of a possible new empirical realm, should have its use explored as a potential paradigm for comparison. In the next section, we focus on the empirical discussion of emerging non-democratic approaches to environmental policy making.

2.2 'Authoritarian Environmentalism' and the case of China

Authoritarian environmentalism dates back to the 19th Century and the romantic movement's critique of industrial revolution and the subsequent criticism in the 20th Century of the anthropocentric nature of liberal democracy. In their own ways, Heilbroner (1974), Ophuls (1977), and Ophuls and Boyan (1992) all pointed to the inherent dilemma faced by contemporary market democratic states when confronted with the potential measures required to tackle the global environmental emergency. The core of this dilemma was what they saw as the inevitable trade-off with individual rights; in this case the right to unlimitedly exploit the earth's resources. These writers' skepticism about the ability of democratic states to address the environmental emergency led to them being labelled proponents of authoritarian environmentalism (Blühdorn 2013). In particular, authoritarian environmentalism questioned the default principle of market liberalism that placed economic and political individualism as a priority value. For instance, Ophuls (1977, 223) pessimistically points out that 'current political value and institutions are the products of the age of abnormal abundance now drawing to a close, so that solutions predicated on scarcity would necessarily conflict with them'. He believes that, in order to move toward a more stable environmentally benign society, 'we must determine its basic principles and then put

them into effect in a planned or a designed fashion' (1977, 227). Authoritarian environmentalism generated a lively academic debate in the 1970s but, as Dryzek and Dunleavy (2009, 262-263) later observed, this academic discussion of authoritarian environmentalism ran into the sand simply because there had not yet been a substantial example of such a regime in the real world.

That being said, the criticism of political systems legitimized on the basis of *a priori* individualistic freedom and the pursuit of selfish consumerism has continued and many commentators have attempted to apply the principles of authoritarian environmentalism to the empirical world, building model nondemocratic approaches to climate policy. One of the more controversial works in this direction of enquiry is Shearman and Smith's (2008) contribution that argues that liberal democracy itself may be an insurmountable obstacle to tackling the environmental emergency. For Shearman and Smith, the East Asian model of economic development, with its emphasis on technocratic management and a more collective focus, may provide a more promising way forward than the Anglo-Saxon model in particular. Drawing on the earlier work of Ophuls (1977), Anthony Giddens (2011) also argues for a more active 'interventionist' role for the state and for the reversal of the neo-liberal deregulation of the past 30 years that has failed to mitigate or compensate for the externalities of economic activity (Giddens 2011, 96).⁵ This recent scholarship has reawakened interest in the potentialities of authoritarian environmentalism but as Blühdorn (2013, 24) points out, none of the models proposed succeed in illustrating exactly how and to what extent the institutional mechanisms of government ought to be arranged. Moreover, although academic debates accept the premise of the embedded tendency towards

⁵ And also to break the locked-in situation to resolve the obstacle resulted from the lobby groups' long effort in denying the proposed climate policies in industrial states (Giddens 2011; Klein 2015).

environmental and resource exploitation under market liberalism (Eckersley 2004, 87), authoritarian environmentalism is still tainted empirically by the experience of the totalitarian dead end and environmental catastrophe associated with the Soviet and East European model of planned economy in the 20th Century (Baker and Jehlička 1998; Foster 2015). At the same time, however, commentators continue to criticize the current environmental laggards in high-carbon-reliance countries like the US, Canada, and Australia. As a result, some scholars have turned to an unlikely empirical case for consideration in this conversation—that of China.

The emergence of the Chinese case is in many ways unexpected, given that China is generally considered an environmental laggard and has been criticized by many researchers as a major cause of global warming (Bulkeley and Newell 2015, 50). However, for some scholars, this criticism is not always justified. For instance, Beeson (2010) used the lively academic discussion around the rise of China as a means of raising the possibility of effective environmental governance under authoritarian rule. For Beeson, the rise of China is not only an unprecedented economic phenomenon in empirical terms, but he believes that it can even be conceived as an alternative environmental policy-making model due to urgent need to tackle the global environmental emergency. If one accepts that the environmental emergency has potential existential consequences, then it is possible to conceive of China's interventionist state model as a template for rethinking and perhaps trying to reasonably replicate the same degree of state capacity in order to protect human civilization under the eschatological threat of global warming (Beeson 2010, 289). Beeson invited readers to take a different perspective to the normal critical position on China, and consider the fact that if the strong political control and one child policy had not existed in China, the sustainable carrying capacity of our planet could already have been exceeded.

Gilley (2012) attempts to extend this argument and build an environmental policy-making model that does not *a priori* emphasize the democratic principle, in order to provide a clear-cut analytical distinction between the two different theoretical approaches to climate policy making. He defines authoritarian environmentalism as 'a policy process that is dominated by a relatively autonomous central state, affording little or no role for social actors or their representatives' (Gilley 2012, 288). Gilley points out that China's active state intervention in environmental policy making can be explained by this theoretical framework, and domination of scientific technocrats in managing and controlling the process conforms to the prototype of authoritarian environmentalism. However, Gilley remains doubtful that the model is potentially superior to the orthodox Western model of participatory environmental policy making. In particular, Gilley points to the pathologies of administrative decentralization in China: the fact that managing and coordinating policy across such a large and geographically diverse territory often leads to a lack of coordination between central and local government that hinders the central state's ability to implement effective environmental policies. He concludes that while the policy elites have been able to generate high levels of environmental policy output, they have struggled to solve their long-term problems of implementation deficit (Gilley 2012, 298; also Economy 2010 and Shapiro 2012). Eaton and Kostka (2014) also echo these accounts of implementation deficit and argue that one of the defining problems of environmental policy in Western democratic states, that of short-termism, also exists in China's authoritarian system (see also Westra 1998, 86). These scholars argue that the Chinese Communist Party's cadre turnover system means that key officials are often only *in situ* in a particular locality for four years. As a result, there are limits to the extent to which officials can cultivate local networks and this tends to scale up into an emphasis on quick but limited environmental gains. In the following sections, we interrogate

these claims through the case study of the Green Urbanization initiative. Furthermore, Eaton and Kostka (2017) posed an empirical challenge regarding optimistic conviction on the use of environmental authoritarianism. In a recent article on the state-led protection of central enterprises, they indicated a long-standing environmental problem embedded in fragmented authoritarianism: central state-owned enterprises (SOEs) have long defied environmental laws, and the 'National Champions' rely on their superiority, which constrains the local governments' capability to enforce environmental regulations. Under the protection of the central government (that is, the State-owned Assets Supervision and Administration Commission, the chief governing body of the central SOEs) and inspired by industrial policies introduced by both the central and local governments, they became chronic polluters, and non-compliance with local environmental regulations became the norm (Eaton and Kostka 2017, 694). After all, SOE managers seem to be motivated by appraisal systems that gauge their commercial performance rather than environmental compliance. In short, their thesis presents an interactive, loophole-like system of mutual incentive protections that facilitate the central economic actors' behaviours of environmental noncompliance. In fact, the absence of institutional mechanisms for environmental governance in China has led many to believe that the state has been the core driver of the dislocation of environmental governance in China for a long time (Economy 2010, 110-117; Lo and Tang 2014), as Toke indicated

[T]he modes of environmental governance that are now dominant in China are slow to respond to these changes... At a local level there is a basic contradiction between officials that are incentivized for their ability to pursue economic development and the need to protect the environment (2017, 97).

This also means that there have been variegated responses within the localities in terms of

implementing green development policy, depending on the degree of local autonomy (Lo and Fryxell 2014, 113). Such institutional contradictions inherently restrict policy elites' endeavours to foster the outcomes of environmental governance and fuel the failure of the governance practices (Balula and Bina 2015, 119). From this perspective, it seems that the concept of authoritarian environmentalism encountered a problematic in discussing empirical aspects in China, in which, given the still-insufficient discussion of actual real-world policy making, it remains ambiguous whether a potential new mode of governance can emerge. This article addresses that gap by exploring green urbanization policy, deemed a top priority by Chinese policy elites, and the direction of which seems to entail an emphasis on the overall planning dilemma and the need for coordinated governance in China. This is also reflected in the research report published by the Development Research Center of the State Council, which voiced concerns about China's fragmented approach to green development policy (Lv 2015, 11-39).

Therefore, it is worth exploring the possibility of a different paradigm that could be the frontier issue of contemporary environmental politics. It is especially important for China to explore an alternative governance model that has been deemed exhausted in the Western context. Because this potential paradigm in environmental governance not only is aimed at solving China's own problems but also provides the potential to experimentally seek more meaningful strategies to curb the global crisis of global warming. Thus, we distinguish between the two paradigms in the empirical reality in seeking to understand how these two paradigms can be understood and have been implemented in China's policy areas in the sources and empirical analysis of 'new and green urbanization'. The topics discussed in the next section will be the exploration of the institutional reconfiguration of the Chinese government's move towards a new strategy of centrally-formulated and steered mode of

urban policy making known as the 'New Urbanization'.

3. A Top-Down Mode of 'New Urbanization'

For four years New Urbanization (*Xinxing chengzhenhua*, 新型城镇化) has been an influential phrase noticeable in official media, reflecting its championing by the current Xi-Li administration. Urbanization in China has long been a policy issue for the current policy elites. However, this has become a more complex challenge in the years that preceded them taking power. Rapid environmental degradation, as well as the uneven distribution of resources accompanied by the change of land conversion (Gaubatz 1999; Ma 2002), has compelled the new leaders to advocate the introduction of new explicitly 'green' policies in the now well-established urbanization program.⁶ This new Green Urbanization marks a break from the past in that the design of the policy emphasizes the possibility of a cohesive, controlling but integrative institutionalization processes rather than encouraging the autonomy of third parties in the sector. In this sense, it is very different from the Western orthodoxy of sustainable development and reflects Chinese elites recognition of the need for top-level policy making to tackle China's environmental crisis.

⁶The bureaucratic system of the PRC has long been defined as a model of "Fragmented Authoritarianism": the policy-making process in China, as argued by Lieberthal and Lampton (1988, 3) is "disjointed, protracted, and incremental," which leads to competition for interests among provinces and key bureaucracies where policy coordination is difficult to reach. The extensive bargaining politics has therefore deeply involved in the process of policy implementation among territorial and hierarchical elites (Lampton 1992).

3.1 Crises and Unreconciled Remediation

Official recognition of the environmental problems associated with China's rapid development can be seen in the Chinese government's five-year year guidelines. The "Twelfth Five-Year Guideline for Urbanization" (*Shi er wu guihua*, five-year guidelines, 十二五规划), introduced in 2010 by the previous Hu-Wen administration, explicitly linked the issues of large-scale population mobility and environmental challenges and acknowledged the tension between the imperatives of economic growth and environmental protection. The document focused on the changes and challenges resulting from the early process of urbanization, particularly in eastern coastal areas. The "'Twelfth Five-Year Guideline' of National Population Development" (*Guojia renkou fazhan "shi er wu" guihua*, 国家人口发展 "十二五"规划) referred to the associated problem of uneven population distribution and a large-scale floating population drawn from the countryside to the cities. This problem, despite being acknowledged by Hu-Wen administration, has not been resolved due to the insufficient degree of social security and provision of public services for China's increasingly expanding urban migrants. As Director of the National Development and Reform Commission (NDRC) Xu Shaoshi observed:

Over 200 million migrant workers and their families have been unable to enjoy equal access to basic public services of education, employment, health care, retirement, and affordable housing as urban residents. New structural dual contradictions within urban areas have emerged, which constrains the positive effect of urbanization that could have pushed forward domestic demand and structural upgrading of the economy. There are also potential risks to the security of the society (Xu 2013).

The imbalanced distribution of the population and resources was accompanied by an overload on environmental resources. China's rapid economic development was grounded on the unrestricted use of carbon energy, particularly coal, and resulted in an increasingly obvious negative environmental impact all over the country (Liu and Diamond 2005). The unprecedented levels of environmental degradation were to a large extent linked to the business-as-usual energy structure. By 2010, China had become the world's largest energy consumer and its energy consumption accounted for one-fifth of the world's consumption (Leggett 2011).

China's poor environmental record also challenged the central state's ability to secure its high economic performance. Water scarcity, soil contamination, and air pollution not only created environmental overload (Liu and Diamond 2005; Kahn and Yardley 2007) but also began to exact a monetary cost, estimated to be around 13.5% of GDP in 2005 (Deutsche Welle 2015). In addition, a number of writers have indicated that "environmental mass incidents" have increased dramatically year by year after the economic reform (Shapiro 2012, 131). As Wang stated:

The number of legal petitioners has grown astronomically as pollution has worsened throughout the country and more than 40 new specialized courts or tribunals dedicated to hearing environmental lawsuits are now hearing cases, many of them brought by public interest plaintiffs including NGOs, private citizens, and environmental protection bureaus (2011; as cited in Shapiro 2012, 128).

The overloading of environmental capacity is now firmly on the political agenda, attracting the criticism from a number of commentators and policy makers. Significant warnings raised

by both domestic and international media seem to have pushed China's political elites into a recognition that a crisis is emerging and that the current political-economic regime is unsustainable.

3.2 The partial Return of Centralized Planning

Official recognition of the extent of the crisis was made clear during the National People's Congress and Chinese People's Political Consultative Congress in 2015, in which Li Keqiang spoke bluntly at a press conference on the newly released government report, placing environmental protection and green urbanization at the very front of the tasks facing the State Council (BBC 2015; Xinhua News Agency 2015). Key policy documents put forward in recent years have developed the notion of the 'New Urbanization'. In 2014, the State Council released a lengthy policy document called "The National Guidelines of New Urbanization, 2014–2020" (*Guojia xinxing chengzhenghua guihua, 2014–2020, 国家新型城镇化规划, 2014–2020*), with a list of implementing strategies. In the document, policy makers highlighted urbanization as an important symbol of national modernization and set a new guiding ideology for urbanization. It stated, '[Chinese] Urbanization has been promoted against the backdrop of overpopulation, relative shortage of resources, fragile ecological environment, and uneven regional, urban, and rural development.' In order to achieve modernization, the authors of the "National Guidelines of New Urbanization, 2014–2020" listed several areas for development: from justice, urban and rural coordination, efficiency planning, environmental and ecological conservation, cultural development, and government guiding market mechanisms to the reconfirmation of the overall organization and the principle of control by the central government. Most notably, the document eschewed any references to Western orthodox principles of diversity and inclusivity in its proposed urbanization strategy. On the

contrary, it proposed a strategy of ‘top level design’ (*Dingceng sheji*, 顶层设计), particularly in terms of the development of ecologically-sustainable new towns (Xu 2013; Twelfth Five-Year Guideline 2010; Noesselt 2017).⁷ This new policy thinking, which incorporates the precautionary principle in tackling environmental problems at their source, emphasizes that in formulating policies, each department must accept higher-level institutions, such as the State Council, to coordinate various departments in the governance system. For example, in energy governance, the State Council leads the Ministry of Environment, the National Development and Reform Commission, and provincial governments to tackle the long-running challenges (Liu et al. 2013, 145; Chen 2016, 200).

The focus on top-down planning and steering was intended to “coordinate and promote stable economic growth and structural optimization” (International Daily 2015). With its clear emphasis on the key role of the scientific and technocratic bureaucracy, the document rejects the orthodox template put forward by the World Bank and other international organizations, which prioritized an open and participatory process. By contrast, the Chinese document indicated a concerted move in the opposite direction, albeit for domestic reasons: in order to address the negative consequences of administrative decentralization (Shin 2013; Sorace and Hurst 2016).

Policy documents from recent years indicate that the Xi-Li administration’s approach to dealing with sensitive environmental issues is to look to enhance the technocratic bureaucracy’s steering capacity. One of the most significant of these documents was the

⁷ These initiatives seem contrary to the joint research report “Urban China: Toward Efficient, Inclusive and Sustainable Urbanization,” coauthored by the State Department and the World Bank in 2014, which advocated an open and inclusive urbanization approach.

revised Environmental Protection Act 2014, which came into force in 2015. The Act proposes a number of new institutional arrangements and policy instruments that are designed allow the central state to further strengthen its ability to steer policy formulation and implementation.⁸ For instance, a new environmental pollution warning mechanism deploys the 'precautionary principle'⁹ to allow closer monitoring of local government (Article 47) and also incentivize local officials to conform to and act in the interests of central government's environmental objectives. The document also proposed a tougher approach to enforcing accountability by aligning performance to officials' promotion prospects, a potential sanction that had previously been absent (Shapiro 2012). Other potential sanctions and rewards were now to be exercised by the Ministry of Environmental Protection, such as the right/power to detain the property of enterprises that have breached the environmental regulations and the right/power to sanction illegal enterprises (including sanctions in conjunction with other administrative departments such as financial and/or land use approval). The revised law also added a centralized regulatory intervention mechanism to address and sanction non-compliant behavior of both local government and enterprises, as well as to reduce rent-seeking behavior by business and government officials.

One new measure introduced by central government since Xi Jinping came to power is the establishment of the 'environmental inspection teams' (*huanjing jiancha xiaozu*, 环境监察小组). As with all similar inspection teams (*xunshizu*, 巡视组) dispatched by the Party-State, environmental inspection teams contain retired ministry officials and officials from

⁸ For many years, environmental legislation in China has often been considered positive, but due to the weak law enforcement, environmental governance has been severely criticized.

⁹ See, for instance, O'Riordan and Cameron (1995) and O'Riordan and Jordan (1994) for discussions of the concept in practice.

the Organization Department of the Chinese Communist Party who carry out tours of provincial administrative units' environmental monitoring facilities. The top-down mode of inspection was suggested and then institutionalized in 2015 directly by the Deepening Reform Leadership Small Group (Naughton 2017, 5-6). Xi Jinping's 2017 report to the nineteenth party congress proposed a more institutionalized mechanism of centralized monitoring to strengthen the *overall design* and *organizational leadership* by establishing state-owned natural resources asset management and natural ecological regulatory agencies. This objective was also articulated by Yang Weimin, the Deputy Director of the Central Finance Leading Group Office, who pointed out:

In the past, almost all the departments involved in natural resource management; all have set up their own protected areas. There are a large number of these areas, involving a large amount of territory, but the regulation is not in place or is not working. In addition, a piece of land may be allocated by different departments for different purposes. We must have a unified, complete spatial planning process at the heart of the national governance system (Xinhua News Agency 2017).

Such policy initiatives provide a seemingly new plan that is different from the established de-centered paradigm of environmentalism advocated in the West. On the contrary, it contains a more decisive, holistic approach that relies on governance mechanisms carried out by the party and state machines in order to improve political efficacy.

3.3 Green Urbanization and Sustainable Infrastructure

One of the most significant keys for the delivery of the Chinese central government's objectives is the restructuring of China's energy sector, in particular its reliance on carbon-based energy. It is striking that the current Xi-Li administration seems to now be willing to confront carbon interests and to exercise top-down decision power to enforce policy implementation (Green and Stern 2016). Specifically, the Xi-Li administration talks about seeking a new path in which 'energy waste could genuinely be reduced and at the same time (we) keep the growth of economic development' (Xu 2014a). It is proposed that this new path should include a series of new, strict, enforcement measures over the industry with the aim to mitigate large industrial greenhouse gas emissions, as well as a variety of policy instruments such as energy-saving assessment reviews, finance and land use pre-assessments, and other 'gateway' controls for steel, nonferrous metals, building materials, petrochemical, and chemical industry products, requiring these business actors to implement environmental impact assessments before being given appropriate administrative approval for projects¹⁰. In addition, the new Act proposed tackling air quality issues, for instance over the prevalence of particulate matter in the atmosphere. In 2013, the 'Action Plan for Atmospheric Pollution Prevention' (*Daqi wuran fangzhi xingdong jihua*, 大气污染防治行动计划) jointly issued by the NDRC and the Ministry of Environmental

¹⁰ Although it seems too early to conclude ultimately whether China will really decouple the use of fossil fuels and economy growth, some optimistic signs have shown that, during the past two years, the amount of China's coal use has been reduced: Economic growth in 2014 remained at the same level as the previous year, but the use of coal in 2014, however, fell by 1.6 percent (Macauley 2015). Perhaps what is more surprising is that in 2014 China's carbon emissions also fell for the first time after increasing sharply during the reform and opening up process. According to an estimation by the International Energy Agency, China's annual carbon emissions fell by 2 percent in 2014 alone (Lean 2015).

Protection, introduced new measures to enforce implementation and subject local governments to accept central government assessment of their performance. These measures were to be coordinated by a core of central government institutions (Johnson et al. 2017, 116).¹¹

On the evidence so far from the early years of the Xi-Li administration we can observe a re-centralization of state power and a reduction of autonomy further down the administrative chain (Naughton 2017; Van Rooij et al. 2017). As mentioned earlier, central government implemented a cap on coal electricity (*Meidian zongliang guanzhi*, 煤电总量管制)¹² and this was augmented by a new requirement, introduced in 2014, for key enterprises¹³ to submit extensive details of their estimated greenhouse gas emissions (State Council 2014b). As part of this initiative, central government introduced standardized guidelines for the accounting and reporting of greenhouse gas emissions in order to preempt problems of asymmetric information in the central-local relationship.

Attempts to standardize the reporting of environmental data where a necessary precursor to central government issuing targets for reducing greenhouse emissions. The Action Plan set out the intention to eliminate at least 150 gigawatts generated by coal-fired

¹¹ This includes the National Development and Reform Commission, Ministry of Environmental Protection, Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Housing and Urban Affairs, National Bureau of Energy, and so on.

¹² The plan of implementing the cap on coal electricity was written in the “Strategies for Energy Industry to Strengthen Air Pollution Control” (*Nengyuan hangye jiaqiang daqiwanfang zhigongzuo fangan*, 能源行业加强大气污染防治工作方案. 2014. No. 506) and the “Energy-Saving and Emission Reduction: The Action Plan for Upgrading and Transforming the Coal-Fired Power Industry for 2014–2020” (*Meidian jieneng jianpai shengji yu gaizao xingdong jihua*, 2014–2020, 煤电节能减排与改造行动计划. 2014. No. 2093).

¹³ This refers to enterprises that reached 13,000 tons of carbon dioxide in 2010 or those corporations whose total energy consumption reached 5,000 tons of standard coal in 2010.

electric plants by 2015, followed by the phase out of another 350 GW by 2020 (Xinhua 2014, as cited in China Daily 2014). These targets represent a decisive break with the past, given that since the Mao era the coal industry has been privileged in China's plans for endogenous technological development, self-sufficiency, and energy security (Chen and Lees 2016, 579-581; Qi et al. 2016). China's domestic environmental crisis has compelled the current leadership to restructure its energy sector. At the same time, China has made the link between its domestic crisis and the global environmental emergency and has taken on a more active global leadership role (Mathews and Tan 2014), often in co-operation with the United States (Bäckstrand and Elgström 2013, 1373). Despite the interregnum of the Trump Presidency, which has put it on hold for the time being, this nascent Sino-American co-operation reduced the number of institutional veto players and focused directly on the urgency of tackling global climate change.

3.4 Social justice and the need for the efficient execution of policy

Beyond discussion of technical measures to reduce greenhouse emissions, any assessment of the Action Plan must also engage with issues of social justice and fairness. As already discussed, China's rapid economic growth and unplanned urbanization highlighted issues of geographical justice, including the unequal treatment of rural Chinese compared with their urban counterparts. The urbanization policy prescriptions provided by the Xi-Li administration seem to indicate a shift towards reforms focused on alleviating the issue of unequal rights at the local level. This shift was reflected in the 2014 policy document 'State Council's Opinion on Further Reform of the Household Registration System' (*Guowuyuan*

guanyu jingyibu tuijin huji zhidu gaige de yijian, 国务院关于经济部推进户籍制度改革的意见), which proposed a 'a unified urban and rural household registration system' designed to normalize and standardize urban immigrants' status.¹⁴ The measures included an attempt to implement an effective residence permit (*Juzhuzheng*, 居住证) system and accelerate the construction and sharing of a national population information database. Once again, we see explicitly top-down measures introduced to overcome the implementation gap caused by decentralization and, in doing so, mitigate the persistent gap in welfare between rural settlers in cities and established urban citizens, particularly in terms of the inequality in access to education, employment, and health benefits.¹⁵

In addition to the reform of urban and rural household registration restrictions, the Xi-Li Administration has also moved to centralize the coordination of social security policies themselves. For instance, central government has sought to introduce a 'unified pension scheme for the rural and urban residents' (Xu 2014b) as well as a 'Comprehensive National Pilot Program of New Urbanization' (*Guojia xinxing chengzhenhua zonghe shidian fangan*, 国家新兴城镇化综合试点方案), which designated 64 new administrative units to implement the pilot policy, which was to commence in the coastal provinces and to be adapted to local conditions. The preliminary outcomes of the pilot projects are due in 2017. From 2018 until 2020, central government intends to synthesize the experience of these local pilots and to

¹⁴This policy is an attempt to eliminate the household distinction of agricultural and *non-hukou* aliens and to promote a unified system for the registration of residents, thereby placing all public services into a single information system to obtain control. Here, the town identity number is a unique identifier, enabling the central government to garner political control by more or less dispelling information asymmetry.

¹⁵Yu Jia and Ding Jiahong (2008) have conducted an empirical analysis of the unfair treatment of migrant workers, which has long been experienced because of the lack of household status in cities, pointing out the structural discrimination of the existing regime.

'implant' similar institutional arrangements throughout the entire territory of China (People's Daily 2015). The regional experiment that is deemed most successful will eventually be rolled-out at the national level as an environmental policy template, so that the project of new urbanization can then be implanted according to local conditions. This cycle of policy development further enhances central government's steering capacity.

Over the last decade or more China's developmental path has moved away from a previously single-minded emphasis on economic growth and begun to address the environmental consequences of that growth process. Where these policies address issues of urbanization in China, this shift has also begun to encompass issues of social justice and fairness in terms of the disparity between the rights and welfare enjoyed by rural and urban citizens. What has also become evident from the early years of the Xi-Li administration, however, is that the central state has begun to concentrate more steering capacity to itself, in order to overcome an increasingly irresistible sense of crisis, including a growing environmental consciousness among Chinese citizens. The discussion around urbanization or environmental protection is not a new one, but the Xi-Li administration's reforms demonstrate the level of urgency that is now acknowledged by Chinese elites. In short, the cognitive problem identified by the policy elites is not that there has been too much concentration of power, but rather that power is too scattered and fragmented in this policy area. All in all, the Xi-Li leadership seems to be focused more intently on the efficient execution of urban policy.

4. Conclusion

Our analysis in this article indicates that, at the level of institutional strategies, the policy of the 'new' green urbanization and the strategy for its effective implementation indicates a transitional paradigm of authoritarian environmentalism, in which we can observe a break by the Xi-Li administration in its approach to centralization as a tool of policy. In other words, the Xi-Li's more explicitly top-down mode of governance has been deployed in order to manage and reconcile the often competing imperatives of development and environmental protection. We find that, in terms of operating practices, there is no evidence of the orthodox participatory model that originated from the emancipatory tradition of environmentalism in the Western context. In the face of the growing environmental crisis in China, the Chinese Communist Party did not seek to emulate the orthodox environmental governance paradigm associated with notions of sustainable development. This means that it did not delegate decision-making power to the lower tiers of government or encourage and cultivate dialogue with civil society. On the contrary, in implementing its policy of the New Urbanization, Chinese central government has sought to implement its own policy instruments by re-centralizing policy making and enforcement. In particular, central government has attempted to overcome the loss of steering capacity associated with decentralization and standardize the content and implementation of urban policies. Recent policy documents indicate that Xi-Li administration intends to strengthen and extend the hierarchical command and control mechanisms and consolidate the powers of environmental and urban planning at the top of the chain of command.

As noted the central state's new emphasis on centralized steering capacity represents a break from the orthodoxy of sustainable development and assumed the role of the

'interventionist state' (Giddens 2011, 96; as cited in Blühdorn 2013, 24). We identify this as evidence of an emerging *authoritarian environmentalism* that aims to limit the number of potential veto players in the policy process. The new green urbanization process promoted by the Xi-Li administration aims to consolidate the Chinese Communist Party's ability to steer and control the process of modernization, albeit with a partial return to a centralized planning mode that reverses the trend towards what many China scholars have called fragmented authoritarianism (Lieberthal and Oksenberg 1988; Lampton 1992).

References

- Bäckstrand, Karin, and Eva Lövbrand. 2006. Planting trees to mitigate climate change: contested discourses of ecological modernization, green governmentality and civic environmentalism. *Global Environmental Politics* 6(1): 50–75.
- Bäckstrand Karin. 2004. Scientisation vs. civic expertise in environmental governance: eco-feminist, eco-modern and post-modern responses. *Environmental Politics* 13(4): 695–714.
- Bäckstrand, Karin, and Ole Elgström. 2013. The EU's role in climate change negotiations: From leader to "lead-actor". *Journal of European Public Policy* 20(10): 1369–1386.
- Baker, Susan. 2015. *Sustainable development*, 2nd ed. London: Routledge.
- Baker, Susan, and Petr Jehlička. 1998. Dilemmas of Transition: The Environment, Democracy and Economic Reform in East Central Europe - an Introduction. *Environmental Politics* 7(1): 1–26.
- Balula, Luis and Bina, Olivia. 2015. The 'eco' and 'low-carbon' promise: a critical review of China's experience. In *China's urban century: governance, environment and socio-economic imperatives*, ed. François Gipouloux. Cheltenham: Edward Elgar, pp. 103–120.
- Barry, John, and Wissenburg, Marcel, ed. 2001. *Sustaining liberal democracy: ecological challenges and opportunities*. Basingstoke: Palgrave.
- BBC. 2015. *Likeqiang gongzuo baogao jiu huanbao he fanfu ti mingque cuoshi* (Li Keqiang proposed explicit measures on environmental protection and anti-corruption campaigns). Online at: http://www.bbc.co.uk/zhongwen/simp/china/2015/03/150305_china_li_keqiang_on_corruption.
- Beeson, Mark. 2010. The coming of environmental authoritarianism. *Environmental Politics*

19(2): 276–294.

Beeson, Mark. 2016. Environmental authoritarianism and China. In *The Oxford handbook of environmental political theory*, eds. Teena Gabrielson, Cheryl Hall, John M. Meyer, and David Schlosberg. Oxford: Oxford University Press, pp. 520–532.

Beeson, Mark. 2017. Coming to terms with the Authoritarian alternative: the implications and motivations of China's environmental policies. *Asia & The Pacific Policy Studies*. Online at: (<https://doi.org/10.1002/app5.217>).

Bigger, Patrick. 2012. 'Red Terror on the Atmosphere: Responses to Wainwright and Mann's 'Climate Leviathan'', July. Online at: (https://radicalantipode.files.wordpress.com/2012/07/bigger_climate-leviathan.pdf).

Blühdorn, Ingolfur. 2000a. Ecological modernization and post-ecologist politics. In *Environment and global modernity*, eds. Gert Spaargaren, Arthur P.J. Mol, and Frederick H. Buttel, 209–228. London: Sage.

Blühdorn, Ingolfur. 2000b. *Post-ecologist politics: social theory and the abdication of the ecologist paradigm*. London: Routledge.

Blühdorn, Ingolfur. 2009. The participatory revolution: new social movements and civil society. In *A companion to Europe since 1945*, ed. Klaus Larres, 407–431. London: Blackwell.

Blühdorn, Ingolfur. 2011a. The politics of unsustainability: COP15, post-ecologism, and the ecological paradox. *Organization & environment* 24(1): 34–53.

Blühdorn, Ingolfur. 2011b. The Sustainability of democracy: on limits to growth, the post-democratic turn and reactionary democrats. *Eurozine* (July), pp. 1–16. Online at: (<http://www.eurozine.com/the-sustainability-of-democracy/>).

Blühdorn, Ingolfur. 2013. The governance of unsustainability: ecology and democracy after

- the post-democratic turn. *Environmental Politics* 22(1): 16–36.
- Blühdorn, Ingolfur. 2016. Sustainability, post-sustainability, unsustainability. In *The Oxford handbook of environmental political theory*, eds. Teena Gabrielson, Cheryl Hall, John M. Meyer, and David Schlosberg. Oxford: Oxford University Press, pp. 259–273
- Bulkeley, Harriet, Andrew Jordan, Richard Perkins, and Henrik Selin. 2013. Governing sustainability: Rio+20 and the road beyond. *Environment and Planning C: Government and Policy* 31 (6): 958–970.
- Bulkeley, Harriet and Newell, Peter 2015. *Governing climate change*, 2nd ed. London: Routledge.
- Chen, Geoffrey C. and Charles Lees. 2016. 'Growing China's renewables sector: a developmental state approach'. *New Political Economy* 21 (6): 574–86.
- Chen, Geoffrey C. 2016. *Governing sustainable energies in China*. New York: Palgrave Macmillan.
- China Daily. 2014. China aims to lower share of coal energy to below 62% by 2020. Online at: (http://europe.chinadaily.com.cn/business/2014-09/20/content_18633513.htm).
- China Development Research Foundation (CDRF). 2013. *China's new urbanisation strategy*. London: Routledge.
- Darido, Georges, Torresmontoya, Mariana, and Mehndiratta, Shomik Raj. 2014. Urban transport and CO₂ emissions: some evidence from Chinese cities. *Wiley interdisciplinary reviews: Energy and environment* 3(2): 122–155.
- Deutsch Welle. 2015. How much is pollution costing China's economy? Online at: (<http://www.dw.com/en/how-much-is-pollution-costing-chinas-economy/a-18323476>).
- Dobson, Andrew. 2007. *Green political thought*, 4th ed. London: Routledge.
- Doherty, Brian, and De Geus, Marius, eds. 1996. *Democracy and green political thought: sustainability, rights, and citizenship*. London: Routledge.

- Dryzek, John, and Dunleavy, Patrick. 2009. *Theories of the democratic state*. Basingstoke: Palgrave Macmillan.
- Eaton, Sarah, and Kostka, Genia. 2014. Authoritarian environmentalism undermined? local leaders' time horizons and environmental policy implementation in China. *The China Quarterly* 218: 359–380.
- Eaton, Sarah, and Genia Kostka. 2017. Central protectionism in China: the "Central SOE Problem" in environmental governance. *China Quarterly* 231: 685–704.
- Eckersley, Robyn. 2004. *The green state: rethinking democracy and sovereignty*. Cambridge: The MIT Press.
- Economy, Elizabeth C. 2010. *The river runs black: the environmental challenge to China's future*, 2nd ed. Ithaca: Cornell University Press.
- Foster, John Bellamy. 2015. Late Soviet ecology and the planetary crisis. *Monthly Review* 67(2): 1–20.
- Gaubatz, Piper. 1999. China's urban transformation: patterns and processes of morphological change in Beijing, Shanghai and Guangzhou. *Urban Studies* 36(9): 1495–1421.
- Giddens, Anthony. 2011. *The politics of climate change*. 2nd ed. Cambridge: Polity Press.
- Gilley, Bruce. 2012. Authoritarian environmentalism and China's response to climate change. *Environmental Politics* 21(2): 287–307.
- Green, Fergus, and Nicholas Stern. 2016. China's changing economy: Implications for its carbon dioxide emissions. *Climate Policy* 17 (4): 423–442.
- Hajer, Maarten. 1995. *The politics of environmental discourse: ecological modernization and the policy process*. Oxford: Clarendon.
- Heilbroner, Robert. 1991. *An inquiry into the human prospect*. New York: Norton.

- Hobson, Christopher. 2012. Addressing climate change and promoting democracy abroad: Compatible agendas? *Democratization* 19(5): 974–992.
- Howes, Michael, Liana Wortley, Ruth Potts, Aysin Dedekorkut-Howes, Silvia Serrao-Neumann, Julie Davidson, Timothy Smith, and Patrick Nunn. 2017. 'Environmental sustainability: a case of policy implementation failure?' *Sustainability* 9 (2): 165.
- Hu, Angang, and Liang Jiaochen. 2011. China's green era begins. Online at: China Dialogue; (<http://www.chinadialogue.net/article/show/single/en/4149-China-s-green-era-begins->).
- Huber, Joseph. 2000. Towards industrial ecology: sustainable development as a concept of ecological modernization. *Journal of Environmental Policy & Planning* 2(4): 269–285.
- Humphrey, Mathew. 2009. *Ecological politics and democratic theory: the challenge to the deliberative ideal*. London: Routledge.
- Joss, Simon. 2010. Accountable governance, accountable sustainability? A case study of accountability in the governance for sustainability. *Environmental Policy & Governance* 20(6): 408–421.
- Johnson, Thomas, Arthur P. J. Mol, Lei Zhang, and Shuai Yang. 2017. Living under the Dome: individual strategies against air pollution in Beijing. *Habitat International* 59 (Supplement C): 110–117.
- Kahn, Joseph, Yardley, Jim. 2007. As China roars, pollution reaches deadly extremes. *New York Times* 26: A1.
- Klein, Naomi. 2015. *This changes everything: capitalism vs. the climate*. London: Penguin Books.
- Lafferty, William M., and Meadowcroft, James. 1996. *Democracy and the environment: problems and prospects*. Cheltenham: Edward Elgar.

- Lampton, David M. 1987. A plum for a peach: bargaining, interest, and bureaucratic politics in China. In *Policy Implementation in Post-Mao China*, eds. David M. Lampton, 33–58. Berkeley: University of California Press.
- Lean, Geoffrey. 2015. The lights are going out for coal - and humans may be starting to fight back against global warming. Online at: (<http://www.telegraph.co.uk/news/earth/environment/globalwarming/11486432/The-lights-are-going-out-for-coal-and-humans-may-be-starting-to-fight-back-against-global-warming.html>).
- Leggett, Jane A. China's greenhouse gas emissions and mitigation policies. 2011. Online at CRS report for congress. Online at: (<http://www.fas.org/sgp/crs/row/R41919.pdf>).
- Lieberthal, Kenneth and Oksenberg, Michel. 1988. *Policy making in China: leaders, structures, and processes*. Princeton: Princeton University Press.
- Liu, Jianguo, and Diamond, Jared. 2005. China's environment in a globalizing world. *Nature* 435 (7046): 1179–1186.
- Liu, Zhu, Dabo Guan, Douglas Crawford-Brown, Qiang Zhang, Kebin He, and Jianguo Liu. 2013. Energy policy: a low-carbon road map for China. *Nature* 500 (7461): 143–145.
- Lo, Garlos Wing-Hung and Gerald Eric Fryxell. 2014. Enforcement style: regional variations. In *Institutions, regulatory styles, society and environmental governance in China*, eds. Carlos Wing-Hung Lo and Shui-Yan Tang. New York: Routledge, pp. 91–118.
- Lv, Wei. 2015. *Green development: Institutional mechanism and policies (Lvse fazhan: tizhi jizhi yu jianshe, 绿色发展: 体制机制与政策)*. Beijing: China Development Press.
- Ma, Laurence J. C. 2002. Urban transformation in China, 1949 - 2000: A review and research agenda. *Environment and Planning A* 34(9): 1545–1569.

- Macauley, Richard. 2015. China grew its economy last year without any extra coal. Online at: (<http://qz.com/364886/china-grew-its-economy-last-year-without-any-extra-coal/>).
- Manaugh, Kevin, Badami Madhav. G., and El-Geneidy Ahmed M. 2015. Integrating social equity into urban transportation planning: a critical evaluation of equity objectives and measures in transportation plans in North America. *Transport Policy*. 37: 167–176.
- Mathews, John A., and Hao Tan. 2014. Energy: China leads the way on renewables. *Nature* 2508 (7496): 319–319.
- Mol. Arthur P.J. 2015. China's transition to sustainability: which direction to take? In *Routledge international handbook of sustainable development*, eds. Michael Redclift and Delyse Springett, 351–363. Abingdon: Routledge.
- Moore, Scott M. 2014. Modernisation, authoritarianism, and the environment: The politics of China's South–North water transfer project. *Environmental Politics* 23 (6): 947–964.
- Naughton, Barry. 2017. The General Secretary's extended reach: Xi Jinping combines economics and politics. *China Leadership Monitor* 54: 1–10.
- National Development and Reform Commission, National Energy Bureau, Ministry of Environmental Protection. 2014a. *Nengyuan hangye jiaqiang daqiwan fangzhigongzuo fangan* (Strategies for Energy Industry to Strengthen Air Pollution Control) No. 506.
- National Development and Reform Commission, National Energy Bureau, Ministry of Environmental Protection. 2014b. *Meidian jieneng jianpai shengji yu gaizao xingdong jihua, 2014–2020* (Emission Reduction: The action plan for upgrading and transforming the coal-fired power industry for 2014–2020) No. 2093.
- National Energy Administration (NEA), Development Research Center of the State Council (DRCSC), and Ministry of Land and Resources of the PRC. 2016. China Natural Gas

- Development Report 2016 (*Zhongguo tianranqi fazhan baogao 2016*, 中国天然气发展报告 2016). Beijing: Petroleum Industry Press.
- Noesselt, Nele. 2017. Governance change and patterns of continuity: assessing China's "New Normal". *Journal of Chinese Political Science* 22 (3) :341–55.
- OECD. 2013. *Urbanisation and green growth in China, OECD Regional Development*. Working Papers, Paris: OECD Publishing. Online at: (<http://dx.doi.org/10.1787/5k49dv68n7jf-en>).
- Ophuls, William. 1977. *Ecology and the politics of scarcity: prologue to a political theory of the steady state*. San Francisco: W.H. Freeman.
- Ophuls, William. 2011. *Plato's revenge: Politics in the age of ecology*. Cambridge: MIT Press.
- Ophuls William, Boyan, Stephen A. 1992. *Ecology and the politics of scarcity revisited: the unraveling of the American dream*. New York: W.H. Freeman.
- O'Riordan, Timothy and Cameron, James. 1994. *Interpreting the precautionary principle*. London: Routledge.
- O'Riordan, Timothy and Jordan, Andrew. 1995. The precautionary principle in contemporary environmental politics. *Environmental Values* 4(3): 191–212.
- Paterson, Matthew. 2007. *Automobile politic: Ecology and cultural political economy*. Cambridge: Cambridge University Press.
- People's Daily. 2015. *Liushisi ge xinxing chengzhenhua shidian chengshi pilu* (Disclosure of 64 new urbanization pilot cities). Online at: (<http://history.people.com.cn/peoplevision/n/2015/0109/c371452-26355709.html>).
- Price, Stephan, Saunders, Clare and, Cristiana, Olcese. Movements. 2014. In *Critical environmental politics*, ed. Carl Death, 165–174. Abingdon: Routledge.
- Qi, Ye, Stern, Nicholas, Wu, Tong, Lu, Jiaqi, and Green, Fergus. 2016. China's post-

- coal growth. *Nature Geoscience* 9 (8): 564–66.
- Rooij, Benjamin, Li, Na, Zhu, Qiaoqiao, and Wang, Qiliang 2017. Centralizing trends and pollution law enforcement in China. *The China Quarterly*, August, 1–24.
- Schreurs, Miranda. 2011. Authoritarian state: the ambivalent case of China. In *The Oxford handbook of climate change and society*, eds. John S. Dryzek, Richard B. Norgaard, and David Schlosberg, 449–463. Oxford: Oxford University Press.
- Scott, Alan. 1990. *Ideology and the new social movements*. London: Unwin Hyman.
- Shapiro, Judith. 2012. *China's environmental challenges*. Cambridge: Polity Press.
- Shearman, David and Smith, Joseph Wayne. 2008. *The climate change challenge and the failure of democracy*. Westport: Praeger Publishers.
- Shin, Hyun Bang. 2013. The right to the city and critical reflections on china's property rights activism. *Antipode* 45 (5): 1167–1189.
- Smith, Graham. 2003. *Deliberative democracy and the environment*. London: Routledge.
- Sorace, Christian and Hurst, William. 2016. China's phantom urbanisation and the pathology of ghost cities. *Journal of Contemporary Asia* 46 (2): 304–322.
- State Council. 2011. *The Twelfth Five-Year Guidelines (Shi er wu gui hua, 十二五规划)*.
- State Council. 2012. The "Twelve Five-Year" Guidelines of National Population Development (*Guojia renkou fazhan "shi er wu" gui hua, 国家人口发展"十二五"规划*).
- State Council. 2014a. State Council's Opinions on Further Promoting the Reform of the Household Registration System (*Guowuyuan guanyu jinyibu tuijin huji zhidu gaige de yijian, 国务院关于进一步推进户籍制度改革的意见*) No. 25.
- State Council. 2014b. *Notice of the National Development and Reform Commission on the Organization to Carry out Key Enterprises Units' Reporting of Greenhouse Gas Emissions (Guojia fazhan gaigewei guanyu zuzhi kaizhan zhongdian qi (shi) ye danwei wenshi qiti*

- paifang baogao gongzuo de tongzhi*, 国家发展改革委关于组织开展重点企(事)业单位气体排放报告工作的通知) No. 63.
- Shen, Wei and Xie Lei. 2017. The political economy for low-carbon energy transition in China: Towards a new policy paradigm? *New Political Economy*. Online at: (<https://doi.org/10.1080/13563467.2017.1371122>).
- Shu, Han, Zhang, Hua, and Chen, Xiaohong. 2014. Intervention policies for private car ownership in megacities of developing countries. *Transportation Research Record: Journal of the Transportation Research Board* 2451: 68–76.
- The Development Research Center of China's State Council and the World Bank. 2014. *Urban China: Toward Efficient, Inclusive and Sustainable Urbanization*.
- Toke, David. 2017. *China's role in reducing carbon emissions: the stabilisation of energy consumption and the deployment of renewable energy*. New York: Routledge.
- Wainwright, Joel and Mann, Geoff. 2013. Climate Leviathan. *Antipode* 45 (1):1–22.
- Weiner, Edward. 2016. *Urban transportation planning in the United States: History, policy, and practice*, 5th ed. Switzerland: Springer.
- Westra, Laura. 1998. *Living in integrity: A global ethic to restore a fragmented earth*. Lanham: Rowman & Littlefield.
- Xinhua Net. 2015. Li Keqiang Indicates that China Has Made A Breakthrough in Urbanization (*Li Keqiang zhichu, tuijin chengzhenhua qude xintupo*, 李克强指出，推进城镇化取得新突破) Online at: (http://news.xinhuanet.com/politics/2015-03/05/c_1114529574.htm).
- Xinhua News Agency, 2015. In the third session of the twelfth National People's Congress press conference, Prime Minister Li Keqiang answered domestic and foreign reporters (*Zaishierjie quanguo renda sanci huiyi jizhehuishang likeqiang zongli da zhongwai jizhe wen*, 在十二届全国人大三次会议记者会上李克强总理答中外记者问) Online at:

(http://news.xinhuanet.com/politics/2015-03/15/c_1114645482.htm).

Xinhua News Agency, 2017. "Practicing the concept of green development and constructing beautiful China" press conference full text record ("*Jianxing lvse fazhan linian, jianshe meili zhongguo*" *jizhe zhaodaihui quanwen shilu*, "践行绿色发展理念，建设美丽中国"记者招待会全文实录) Online at: (http://www.zhb.gov.cn/xxgk/hjyw/201710/t20171023_423919_wap.shtml).

Xu, Shaoshi. 2013. State Council's report on the construction of urbanization—the third meeting of the Standing Committee of the Twelfth National People's Congress (*Guowuyuan guanyu chenzhenhua jianshe gongzuo qingkuang de baogao*, 国务院关于城镇化建设工作情况的报告), 26 June.

Xu, Shaoshi. 2014a. State Council's report on the work of energy conservation—the eighth meeting of the Standing Committee of the Twelfth National People's Congress (*Guowuyuan guanyu jienengjianpai gongzuo qingkuang de baogao*, 国务院关于节能减排工作情况的报告), 21 April.

Xu, Shaoshi. 2014b. State Council's report on the implementation of national economic and social development plan of the year—the tenth meeting of the Standing Committee of the Twelfth National People's Congress (*Guowuyuan guanyu jinnianyilai guominjingji he shehuifazhan jihua zhixing qingkuang de baogao*, 国务院关于今年以来国民经济和社会发展计划执行情况的报告), 27 August.

Yu, Jia and Ding, Jinhong. 2008. 'China's household registration system: fundamental values, function dissimilation and reform orientations' (*Zhongguo huji zhidu: jiben jiazhi, yihua gongneng yu gaige quxiang*, 中国户籍制度: 基本价值, 异化功能与改革取向), *Population and Development (Renkou yu fazhan, 人口与发展)* 5: 23–32.

Zhang, Yan. The Strategies of *Green Urbanization: Theory and Practice* (*Lvse chengzhenhua zhanlue: lilun yu shijian*, 绿色城镇化战略: 理论与实践). Beijing: Social Sciences Academic Press.