

Analysing the environmental state in authoritarian and neoliberal governance settings

Andrew Flynn
School of Geography and Planning
Cardiff University

flynnac@cardiff.ac.uk

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Introduction

By the 1990s, a near-consensus on environmental governance emerged in Western policymaking circles for a sharp turn away from past patterns of regulation toward the theoretically greater efficiency and lower cost of environmental taxes, tradeable emission permits, and other market incentives. Another voluntary instrument is a standard (discussed further below). Moves towards neoliberalism have been given further impetus since the financial crisis of 2008. As several commentators have argued (e.g. Harvey 2011; Peck et al. 2012), governmental responses to the challenges of environmental governance have been profoundly neoliberal and an ongoing process of further withdrawing of state responsibilities and commitment to markets to deliver public policies (Peck and Tickell, 2002). Environmental organisations too have been caught up in promoting market-based environmentalism (Apostolopoulou et al., 2014, 491). However, as Heynen et al., (2007, 158) suggest: "Our understanding of how 'market rule' is implicated in contemporary patterns of socio-spatial and society/nature transformation remains seriously incomplete." To begin to cast some light on how governance and nature relations may be changing this paper how key actors - the local state, NGOs and the corporate sector - begin to construct an economic-environmental problem and the solutions that follow. Adopting a multi-actor and multi-space approach enables a more nuanced approach to emerge of the ways in which the environment is being thought about and of the challenges to environmental protection at a time when neoliberal thinking is so prevalent.

To provide both spatial and actor breadth to the analysis, the three case studies are:

- The local state in Dongguan China
- An American-based NGO, Global Footprint Network (GFN)
- Corporate actors in Europe and especially the UK.

The case studies are summarised in Table 1 below.

Table 1 Actors and policy problems

Actor	Policy problem	Solution	Conception of nature
Local state	Economic decline, severe pollution	Restructuring of local environmental state	Market opportunity
Environmental NGO	Legitimizing a tool for environmental measurement	Produce a standard	Valued and to be protected
Corporate sector	Move from linear waste economy to circular economy	Develop markets for materials and encourage the flow of materials	Resources have an economic value

For each case study, the paper presents an explanation of how actors shaped a policy problem, the solution that was implemented and then explores what this means for our understanding of the environment. Before that, though, there is a brief account of neoliberalism and why it underpins the three case studies.

Neoliberalism and environmental governance

Neoliberalism is problematical for environmental governance (cf. Pellizzoni, 2011, Loconto, 2017). In terms of the role of the state - within an analysis of neoliberal approaches to governance - environmental policy has traditionally been dominated by governmental activities. With the prior “command and control” laws and regulations, polluters were simply told to stop what they were doing and were typically fined, but enforcement was costly (Ackerman and Gallagher, 2000). The result was that, by the late 1990s, there was a much closer alliance of public and private interests in terms of environmental regulation which was closely linked to the extremely influential international development institutions who were promoting the ‘Washington Consensus’.

During the last two decades, Western states have mobilized a range of political strategies intended to stabilize, manage, and redirect conservation patterns to align them to capitalist interests. Especially since the financial crisis of 2008, governmental responses have been profoundly neoliberal (Harvey, 2011; Peck et al., 2012) repudiating pre- and post-crisis analyses with researchers arguing either that ‘hard’ neoliberalism belongs to the past (McCarthy and Prudham 2004; Hoffman et al. 2006) or that ‘postneoliberalism’ will soon emerge (Raco 2012). Post-crisis responses shed light on the decisive role of rescaling governance upwards, downwards, and outwards in promoting and facilitating not only market environmentalism but also the opening of protected natures to exploitation without any ‘green’ argumentation (Apostolopoulou and Adams, 2014).

The ongoing deepening of neoliberalism is accompanied by a broadening that draws in new economic, social and environmental actors, such as NGOs, and new forms of knowledge. This, in turn, enhances the legitimacy of neoliberalism since it draws together a variety of societal interests, as well as quasi state actors, and so encourages further rounds of deepening. In this context, there is a paradoxical effect whereby the deeper neoliberalism is adhered to, the greater the potential challenge from within. Challenges to the apparent hegemony of neoliberalism include a range of countervailing forces from populism to actors working outside of established political channels, e.g. the Occupy Movement.

Within neoliberal environmental governance, new policy spaces are being opened up whilst others are being closed down. This activity provides various opportunities for a range of socio-economic actors. For example, economic elites continue to enjoy access to state bodies, but for NGOs whilst consultative opportunities abound, they find it more difficult to shape policy. One reason is that key levers of government activity have been moved from environmental agencies to financial bodies, e.g. the UK’s landfill tax is controlled by the Treasury. In the context of NEG, power and legitimacy are continually in danger of ebbing away from NGOs as more powerful actors seek to control the public policy agenda, and thus to shape perceptions of nature.

These observations matter for the three case studies but in rather different ways. As an authoritarian state, neoliberalism in China plays out in distinct ways. The web of relationships between state and economic actors from national to local level mean that the state has a much more prominent role to play in market relations and must be the focus of scrutiny. For an environmental NGO, like GFN, there is a challenge to have their voice heard by governments and civil society. One way of trying to increase their influence with governments is to adopt a standard, one of the key tools of neoliberalism. Meanwhile, for corporate actors seeking to shape the notion of a Circular Economy (CE), standards become an important means by which to ensure the monetise the flow of materials and to upscale a CE.

Restructuring the environmental state in Dongguan

The persistence of state authoritarianism, party-state governance and pro-growth pragmatism are central to interpreting current developments in China, and especially how it is linked to economic growth agendas (Cartier, 2015; Lee et al., 2012; Knight 2014). Equally important is to understand how local states may seek to resolve or displace the tension between their economic development strategies and environmental protection. Dongguan is part of a nationally important economic area, the Pearl River Delta. It is in Guangdong Province and has two other major cities nearby, Shenzhen and Guangzhou. Dongguan used to be mainly reliant on agricultural production. It was noted for its rice, fruits and fishes. It was one of the earliest cities to take advantage of China's Open Door policy and quickly grew into an industrial centre. Dongguan benefited from its proximity to Hong Kong and local political elites who were willing to attract FDI to further boost the local economy (Shan and Tsai 2016: 116-7). Like many manufacturing cities, the processes of industrialisation and urbanisation in Dongguan have followed a bottom up path in which rural areas become urban areas, and a rural population migrates to the city. The Municipal Government, town governments, villages, and even local residential (village) groups in Dongguan gave priority to attracting inward investment. Supporting business and enterprise development was treated as local governments' dominant economic policy (Wang and Zhu, 2013).

Many inward investment projects, typically those from Hong Kong and Taiwan drew upon shared cultural connections. Investors entered directly into cooperation with villages. The local villages used or established new township enterprises as a partner to work with investors (Yin and Jiang, 2003; Rolf 2019). It is difficult to exaggerate the scale and rapidity of change. Out of a total of 581 villages in Dongguan 512 established their own factories and/or joint venture enterprises (Yin and Jiang, 2003). Township and village governments participated directly in economic development, for example, attracting and supporting investment with the appointment of staff to support companies (Shan and Tsai 2016). For example, Wusha Village in Dongguan, with a local Hukou population of 3483, attracted and set up 265 enterprises which employed more than 70,000 migrant workers (Yin and Jiang, 2003). The township enterprise development model of Dongguan has enriched towns and increased their economic influence and, perhaps more crucially still, their political capability. Jiang (2009) argues that due to their economic capability the town government in Dongguan have much larger powers and authority than is to be found in other Chinese cities and towns.

Much of the economic activity in Dongguan was processing and assembly that relied upon vast numbers of migrant workers who could swell the settled population of over 8m threefold (Airriess 2008). Products were then exported, generating enormous revenues and confirming the city's reputation as a 'workshop of the world'. Since much production was low tech and relied upon cheap labour it was possible for activities to be decentralised which suited its governance arrangements that were similarly decentralised.

By the late 1990s and into the early 2000s, senior local officials began to recognise that the city was facing greater national and international competition. Efforts were made to improve infrastructure, attract higher technology firms and to consolidate economic activity on better serviced specialist industrial estates (Shan and Tsai 2016). Further impetus was given to the local programme of economic reform with the appointment of Wang Yang as Party Secretary for the Province of Guangdong in late 2007 (Lim 2016; see also Harvey 1989 who points to role of entrepreneurial figures in development). In his analysis of economic restructuring in Guangdong, Lim (2016) shows how Yang was able to connect national economic policy with local reform to legitimise change. It is also important to note that recourse could be made to shifting national level environmental policy commitments, like Ecological Progress, since these too could be utilised to justify promoting more

resource efficient firms and discouraging polluting companies. In this way, economic and environmental agendas could be mutually supportive of a programme of economic modernisation. As Lim (2016) notes, Wang Yang's appointment took place at an inauspicious moment with the global financial crisis of 2008 soon to have a major impact on firms in Dongguan and Guangdong more generally. For the Provincial Government led by Wang Yang, the financial crisis highlighted the weaknesses of the economy: it was overly dependent on cheap labour, dominated by low value economic activities, polluting and low in efficiency. The strategy to rectify these problems, and to maintain economic growth in the future, involved restructuring the economy by closing existing low skilled and inefficient firms (Lim 2016, p415 and endnote 3 p431-2; Shen et al 2017).

Promoting a township model of development has been at great cost to the environment. Working to the policy of "development is the absolutely priority" town governments and village leaders in Dongguan and elsewhere failed to recognise the devastating consequences of pollution for human health or the environment, and when they did begin to recognise problems failed to act sufficiently quickly or robustly. The long shadow cast by prioritising development stifled efforts at environmental reform or even the implementation of regulations. Typically, environmental standards were regarded as a potential economic cost and curb on growth. For Dongguan, which is characterised by its waterside area, made up of multiple rivers, it makes for a very sensitive environment. Data produced by the Dongguan Environmental Protection Bureau (2014) shows that more than 13 different sectors with more than 650 factories generated severe pollution to rivers in 2013.

Faced with economic and environmental challenges, and an analysis led by key officials that pointed to the need to radically restructure the economy to ensure its future viability, the local environmental state was reformed. Previously ignored rules were implemented and new, higher environmental standards adopted. More stringent enforcement proved to be controversial because it provided the most direct challenge to the previously dominant *regulatory* style and was directly linked to local factory closures, causing unease amongst local officials and opposition from migrant workers. Objections to factory closures were overridden and in a key statement of ambition, it was reported that: "Dongguan government will deliver the most stringent supervision, enforcement, severe punishment ... to prevent pollution. The policies are [to be] combined with reasonable financial incentives ... to close down and exit ... polluting enterprises" (Dongguan Government 2014). The investment in factory closure or relocations was considerable. In interviews with local senior officials in Dongguan we were informed that local government had invested more than 10 billion Yuan as compensation to close polluted enterprises, including paper mills, dying, electronics and textile companies. In one year along, 2015, "101 enterprises with high pollution, high energy consumption ... but low productivity" were closed at a cost of 1.71 billion Yuan (Dongguan Government 2016).

A second feature of an emerging environmental state was the efforts to promote a *recovery* of previously lost or undervalued ecological assets. The Waterside Area was where most of the polluting activities were concentrated (see Figures 1 and 2 above) and where recovery activities were concentrated. As a key government circular pointed out it is necessary

"to optimize the industrial structure, to help promote the Water Site Economy Area, to hasten the closure and exit of enterprises with high pollution, high energy consumption ... but low productive efficiency [the so-called "Two Highs and One Low"] in the area for Ecological Progress development, and to build a Water Ecological Progress demonstration area [that will be recognised] at national and provincial levels." (Dongguan Government 2014)

Making river water cleaner was accompanied by extensive planting. The vibrant colours of water plants vividly represented the cleansing of rivers. Riverside plants and enhanced access to riversides were largely for the enjoyment of local social and political elites and not migrants or local workers. Indeed, in some rivers, although water quality may have improved it remained polluted and continued to be used for traditional activities such as washing. Despite the investments in sewage treatment for homes in Dongguan, as well as those upstream, there continues to be a discharge of sewage into waterways.

A third feature of the local environmental state was efforts to *enhance* resource efficiency of local firms and to attract low carbon companies, including tourism ventures. It is clearly aligned to the economic restructuring agenda of Wang Yang. In 2011, Dongguan Municipal Government launched its 12th Five-Year Economic and Social Development Plan (2011-2015) (Dongguan Municipal Government, 2011). According to the Plan, the core task, in line with national thinking, is to build a "Happy Dongguan", and this would be facilitated by maintaining economic development. More specifically, this meant ongoing urbanisation processes should be reformed, and industrial restructuring continued so that economic and urban development are united under the umbrella of Ecological Progress (Dongguan Municipal Government, 2011). While the aspiration is to promote green economic development that would have low energy consumption, low GHG emissions, and low pollution attracting companies to Dongguan has not proved easy.

The environmental regulatory state is focussed on business and not citizens. In both the recovery and enhancement environmental states, however, citizens have a presence. Dongguan's Government was committed to the 'Four Improvements': in urban quality, the environment, social governance and people's living quality (Dongguan Government 2016). While citizens would gain from improved air quality and some traditional communities would also benefit from better water quality and sewerage infrastructure but beyond that for many local people and migrants' debates on environmental quality would have little interest. The environmental enhancement state can facilitate additional opportunities to access the environment, but this will be limited, for example, to those who live in a new waterside community, anglers, and those who participate in tourism activities such as river boat rides.

Seeking legitimization: Global Footprint Network and the Ecological Footprint Standard

In this case study and the one below, standards play an important part. There are several interpretations of what constitutes a standard. Helpfully, Brunsson et al (2012, 616) point out that standards "define normative rules. They prescribe what those who adopt these rules should do and hence "enable and restrict behavior". Creating a standard provides an important window through which to examine states or private actors' authority to influence the quality and credibility of production and/or services (Cashore, 2002). This is because standards are rules that apply across space and at a range of overlapping scales which extend from extremely localised practice to the global activities of transnational corporations who are moving significant flows of materials. Standards are an important instrument in neoliberalism because they facilitate governing at a distance, what Gibbon and Hendriksen (2012, 275) term "governing through standards" in their identification of the key role they play in the "specific ways in which neoliberalism unfolded" (282). Standards are selective in their operation, for example, and their coverage of key constituencies and geographical reach is not uniform. With an ever-increasing use of private standards organisations (PSOs), less powerful stakeholders can find their access to standard setting deliberations constrained. If PSOs completely supplant the activities of regulatory bodies, there are further concerns including: business dominance, NGO-dependence, the potential failure to involve heterogeneous societal groups, implementation gaps, a credibility gap, increased costs to gain certification by multiple voluntary standards systems as well as the potential for a race to the

bottom of such systems (Dauvergne and LeBaron, 2014; Marx and Wouters, 2014; Bitzer and Glasbergen, 2015; Fransen, 2018). For environmental groups, the process of engaging with standards is always a fraught business. On the one hand, NGOs must bestow their own legitimacy upon a neoliberal instrument. But on the other hand, NGOs are continually questioning how neoliberalism is undermining environmental protection. So why did GFN embark on trying to establish a standard for the Ecological Footprint (EF)?

Global Footprint Network (GFN) was established in 2003 with a specific mission to “support the transition to a sustainable economy by advancing the Ecological Footprint” as a resource accounting tool (GFN, 2004, 1). For the Ecological Footprint community, particularly its leading organisation, GFN, which operate around the world, market-oriented initiatives such as standards look attractive as a way of promoting the EF and demonstrating that it is a robust tool for identifying environmental impacts. From the outset the EF has had several applications, including products, organizations, services, and at different levels of government (Chambers and Lewis, 2001; Best Foot Forward, 2002; Barrett and Scott, 2003; Barrett et al., 2005; Collins and Flynn 2005). More than that, though, the EF has had policy entrepreneurs who have championed its case, most notably Mathis Wackernagel one of the co-developers along with his colleague Bill Rees. These entrepreneurs have been able to promote the EF to a wide range of policy audiences and to promote it as way of helping to improve the quality of decision making by ensuring that more attention is given to the environmental consequences of policies. Wackernagel has also been the guiding force behind Global Footprint Network.

The rapid growth in interest in the EF (Collins and Flynn 2015) raised concerns amongst senior figures within the EF community that some studies were labelling themselves as Footprint analyses, and gaining a cachet from doing so, but fell outside of what might be expected of an EF study. This might be because analysts used proxy data, made a methodological innovation, or interpreted results in a non-standard manner. These issues, and others, raised worries about how EF studies might be compared to show what differences might be happening to resource use over time or in different places, and of worries that users of the EF, typically government officials, might lose faith in a model that seemed to be able to produce so many numbers. Matters came to a head with the influential report by the European Common Indicators Project that reported in its review of the Footprint that “the main point highlighted was the importance of setting out a common and shared simplified EF calculation methodology to give a concrete tool to the cities interested in the EF implementation” (Tarzia 2003 17; see also Standard 3 in GFN 2006b).

The search for a shared or standard methodology for the EF was a key argument used to justify GFN’s advocacy of Footprint standards. By developing rules that apply across space with the standards for calculating the EF, it was hoped to bring together those in a producer community (e.g. consultants and researchers) and those in a user community (e.g. local and national governments). The two sides would be able to speak to one another with greater confidence in the robustness of the methodology and interpretation of the results. Standards, like other neoliberal practices, such as auditing and certification, are becoming more important policy instruments and a means to provide reassurance on quality when trading takes place (Bloomfield, 2012, Cashore, 2002, Bennett 2017). For many key actors involved in formulating or using standards, there is implicitly and/or explicitly a subscription to a neoliberal environmental governance approach. As one interviewee argued:

“[I]n a political situation where we want to only have public policy intervention if this is an added value and where we want to focus as much as possible on allowing for dynamic standard setting by collaborative action, I think there is a clear coming together between public policy and economic stakeholders, to try to see how much we, how can we achieve

things through standards. I think that's an obvious area of common interest.” (Standards Interviewee)

GFN encourages governments to try and use the Footprint as a tool to aid decision-making, however, where the state is in retreat, this NGO, like many others, has inevitably become much more reliant on its network to assert its authority. From the autumn of 2003, GFN began discussions with key partners on the need for EF standards. GFN is the only body within the wider EF community with the authority to manage both the content and process of standards development. Here we examine the case that was made for the content of the standards and below the process by which they were produced. One of the most notable features of the standards debate in the EF community that was brought together by GFN is that members in North America, Europe and Australasia made little or no challenge to the view that standards were the best way to increase the legitimacy and reach of the Footprint. Although not deliberately promoting neoliberal policy outcomes, GFN was drawing on “local neoliberalisms” within its wider network (cf. Peck and Tickell, 2002, 382). This feature reveals much about the pervasive nature of neoliberalism (cf. Ferguson, 2009). In developing EF standards, GFN was keen to enrol as many as possible of its partner organisations by making the case for mutual benefits (GFN, 2004, 1).

According to one Footprint practitioner, GFN’s role in promoting a standardised Ecological Footprint is highly important because: “Trust [in the Footprint] ... [has] taken years to build up. What we’ve done is created a market for [it] ... within the UK and Europe. But ... if it's badly done, [that] can undermine it” (GFN Interviewee). Amongst early advocates and practitioners of the Ecological Footprint, standardisation was believed to be essential if the method was to have credibility in policy and academic debates:

“[E]veryone has to really push behind the standardisation issue ... [S]tandardisation I think is absolutely vital. [But t]he biggest criticism that policy-makers [make is the lack of it].” (Footprint Practitioner Interviewee)

When the representative of one EF organisation was asked how they distinguish themselves from others, they pointed to their expertise and the importance of being part of a network that could promote a standard EF methodology:

“We're interested in not just ... our own commercial well-being, but in the future of the Ecological Footprint and the standardisation which is key [to] that. That's what people want. They want to know that when they get results, it's not just any old results. Their [EF] is [not] going to change ... they're stable results.” (Footprint Practitioner Interviewee)

The authority that is gained from standardisation in turn bolsters the expert knowledge of those who produce EFs. In reflecting upon how the EF had been adopted as an environmental indicator by city and national governments, one interviewee commented:

“It's a very powerful tool ... [W]e have been incredibly careful about maintaining its robustness, reputability, standardisation, the whole range of things that make a good indicator ... [I]t's absolutely essential if it's ever to be embedded as a real proper indicator, that [the EF] is robust and credible.” (Footprint Practitioner Interviewee)

Ultimately, within the EF community, there was a consensus on the need for EF standards (cf. Gueneau, 2018). No alternative policy instruments or approaches were gaining attention that might bring additional credibility to the EF. As suggested above, this is an example of the pervasive nature of neoliberalism and yet it is also paradoxical because of the tension between the EF, which restricts

resource use, and neoliberalism which encourages it. This dualism forces weaker actors into an arena in which they must attempt to tackle neoliberalism through engaging with it.

Neoliberal environmental relations are inherently fragile (Pellizzoni, 2011). The construction of EF standards is a way to provide structure and continuity in a disordered world. Part of the way that order is achieved by standards, is through the highly procedural and consensus-based format for their production. Consensus building around a range of mutually agreed boundary objects that unite practitioners from potentially diverse disciplines has distinct appeal to a range of actors who wish to avoid radical interventions that might potentially subvert neoliberal relations (cf. Pellizzoni and Ylonen, 2011).

In 2004, GFN “initiated a consensus, committee-based process” (GFN, 2006a) to ensure the quality and consistency of EF work. Three committees were formed: a National Accounts Committee to ensure the quality of the key data set that underlay much Footprint work; an Applications Standards Committee to develop a consistent approach to EF analysis; and a Communications Committee to develop guidance on the accurate presentation of EF results. Membership of the committees covered GFNs producer and user communities. For example, initial Standards Committee members from the producer community included UK Partners SEI-York and Best Foot Forward, and from the user community EPA Victoria from Australia (GFN, 2006b). Committee membership was also to be representative of the countries where Footprint activity occurred (GFN, 2006a).

The first set of EF Standards produced in 2006 (GFN 2006b) covered 14 topics (there were an additional three topics, one for product standards that was not released and two that remained as guidelines one relating to data analysis and the other to communication style). The Standards covered Applications and Communications. For GFN, the priority in promoting Standards was to ensure both the credibility and the adoption of its National Footprint Accounts. This is the data that underlies the calculation of national Footprints. As Standard 1 made clear: “To make Footprint studies comparable, the Standards require that each assessment is consistent with the National Footprint Accounts” (GFN 2006b, p4). By privileging its National Footprint Account data over all other data, GFN was also enhancing its own legitimacy. It was seeking to bind in Footprint practitioners and researchers to its National Footprint Accounts if they were to produce studies that were to be certified to the EF Standards. GFN was actively seeking to manage diversity (Loconto, 2017) in EF practices since it promoted the EF Standards, acted as the Standards’ setting body and provided the National Footprint Accounts. There was later recognition that GFN playing multiple roles might undermine the perceived independence of the EF Standards.

By utilising a neoliberal policy instrument, a standard, the Footprint community would be able to more effectively engage with neoliberal actors such as businesses and government agencies. However, GFN found itself in difficulties. Acting in a neoliberal way, GFN operated like a classic private sector organisation seeking to enrol fellow actors based on its privileged knowledge. It then encountered problems in pursuing voluntary rule making because it lacked the authority of that private actor with all its economic and political capital (Ponte and Cheyns, 2013, Marks and Wouters, 2014, Gueneau, 2018). In practice managing the EF Standards and using them to exercise reach over the wider (i.e. non GFN) Footprint community proved to be an insurmountable challenge.

From early on in GFN’s thinking on standards there was a recognition that reports that met the EF Standards would need to be certified and receive a quality seal, results would be reported in a manner that does not misrepresent or mislead, and the value of the Footprint would be built for all users (GFN 2006b). The commitment to certification – assigning a public quality mark to studies – was an essential underpinning of the Standards. EF practitioners entering into a commitment to use

the Standards expected that their work would be certified. As one interviewee recalled, in early work on standardisation with GFN:

“[W]e were all really pushing for the idea of legal standardisation ... pushing it down and trying to work out which route it should go ... They [GFN] should set the standard and then you [another organisation] would then be able to apply for certification ... And that’s how that works, but it never happened.” (Interviewee)

It became clear that poorly coordinated certification damages the Standard and legitimacy of GFN as the key standard setter. More broadly, such failed or failing moves began to undermine the voluntary efforts being made under the umbrella of neoliberal environmental governance measures (cf. Cashore, 2002). Once legitimacy for a standard is lost, it is difficult to re-establish. This is due to the variable market relations of those in the EF community which permits the membership of those actors who may ultimately choose not to pursue a particular type of certification and to do so with relatively little financial or reputational penalty.

To be meaningful, standards must be useful to GFN’s practitioner and user communities (Brunnson and Jacobsson, 2000). For GFN, interest in the Standard was confined to its partners and other organisations sympathetic to the EF. From a GFN perspective, it seems that the EF Standards did not lead to the hoped-for improvement in credibility with governments. Rather quickly, therefore, GFN began to move away from efforts to further institutionalize the EF Standards that it had done so much to develop. Following the publication of the revised Standards in 2009, one practitioner noted that “since then, unfortunately the Standards Committee has not been active” (Practitioner Interviewee).

The relative demise of the EF Standards has not led to a diminution of interest in the EF by the research community (see above) or by efforts of GFN to legitimate the EF in a government setting. Rather than using EF studies to influence government policy – in which the credibility provided by standards would matter – attention has now switched to having governments adopt the EF as part of their developing environmental accounts. As one interviewee argued:

“A country cannot make policy decisions based on the accounts of an NGO [i.e. GFN]. So the big challenge was how do you institutionalize it [the EF] in a country, how does a national institute of statistics produce the [national Footprint] accounts by itself? The government would want to do the accounts by itself because it has to do policies on the basis of these numbers.” (Interviewee)

This interviewee went on to argue that, with the shift in focus: “The question is therefore not whether you have a standard but whether it’s compatible with other systems of [environmental] accounting...” (Interviewee). The search for legitimation of the EF is an ongoing political and social process and are continually hampered because within a neoliberal context messages of resource constraint will be difficult to pursue consistently.

GFN was seeking to utilise standards as a means of trying to stabilise pre-existing asymmetries of power in the development of public policies. It wished to ensure that greater attention was given to the environment. Although it was trying to create a standard to create a market for the EF, GFN was not seeking to create a market for the environment. Rather the EF challenges growth-fixated development approaches. The EF poses the question of how much land is needed to meet the consumption demands of individuals, a defined population, or activity. The advocates of the EF reframe environmental policy debates away from those predicated upon growth, such as weak forms of sustainable development, to one where environmental limits are to the fore.

Keeping materials flowing: standards and the Circular Economy

From the 1960s and 1970s, there has been greater interest in wastes and resources management with a concomitant rise in efforts at supranational governance. As trade in wastes has grown, it has been accompanied by a set of shifting narratives, including waste dumping in Africa and Asia (Clapp, 2002, Schmidt, 2006) as well as the search for material value to help drive economies (Velis, 2014, Velis, 2017). More recently, the key narrative linked to trade in wastes has been that of the CE, a normative vision based on a multi-level sustainability transition (Loiseau et al., 2016). CE activity requires flows of materials between those countries/regions which produce waste (now conceptualised as a resource input) and those countries along a supply chain who can add further value to that material by making use of it within their processes. Within the CE, these material flows will take place at multiple levels as market operation weaves between the local and the global. To facilitate the trade in waste and resources, there have been both public policy initiatives - such as that on the CE - and private, voluntary efforts particularly around standards (European Parliament, 2017). Standards have been identified by several researchers as a key tool in the governance of a sustainability transition in waste and resources (Gregson and Crang, 2019).

The transition to a circular economy has so far involved high-level ambitions from national and supranational governmental bodies. This action has come at a time of increased promotion of knowledge about the CE from think tanks, NGOs, charities, academics and private companies (see Appendix A for data on the rising numbers of academic publications). Together these actors have been setting out the content and meaning of the CE at a policy level. Key meanings of what the CE is have been presented by several leading actors. These include, the Ellen MacArthur Foundation which states that:

“A circular economy is an industrial system that is restorative or regenerative by intention and design” (EMF, 2012, 7).

The EC picked up on this work of the EMF and went on to define a CE as:

“[one] where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised” (EC, 2015)

Both the EMF and EC's activities have in turn informed the CE definition proposed by the British Standards Institute in 2017 with the world's first CE standard (BS8001):

“A more circular approach seeks to decouple economic growth from resource consumption” (BSI, 2018a).

What these evolving definitions have in common is a systems approach to the flows of materials, the suggestion of positive economic benefits for organisations engaging in CE activities and the coordination and design of new markets. However, it would be a mistake to assume that convergent understandings of CE are playing out in a straightforward fashion within the waste and resources sector. Instead, an exploration of how the CE is understood by different standard users gives an indication of the broader shifts in environmental governance in recent decades and the difficulties that may arise with an evolving CE in the future.

Other actors have indicated their scepticism of the CE and the activities it requires. From the UK, industry actors point to a lack of understanding as to what the CE might mean, highlighting a gulf between the thinking of larger companies and policy makers and much of the industry. One

interviewee noted that: "the circular economy, is ... essentially all things to all people" (Interviewee B1). Whilst for another:

"[R]elatively few people in the waste management industry can honestly say they could even articulate what the circular economy [is]. I think people in the waste sector tend to use it as a euphemism for the waste hierarchy." (Interviewee A3)

Another industry actor suggested that key bodies were more interested in traditional waste management practices than promoting something novel:

"[The Department for Environment, Food and Rural Affairs (DEFRA)] and the Environment Agency, for example, those kinds of organisations, are, really waste-y, so you know, unless and until they can look across the economy, they will tend to regulate the end of pipe and not think [of] ... the circular economy." (Interviewee A3)

These more sceptical comments indicate that the normative direction of change towards a CE is being led by EC policy. While the EC works with the larger industry actors, NGOs and the standard setting bodies, there are significant queries about the costs of moving to a CE via standards amongst a broader range of waste and resources stakeholders. As with any transition, there is a fight for legitimacy over the likely costs and benefits. This normative shift requires broad realignment not just in terms of actor practice but also in terms of knowledge resources and thinking. Actors want tangible evidence of the financial benefits of the CE, and using standards to get there, before committing to change. This suggests that the future evolution of CE secondary markets will depend in large part on enrolling some very sceptical actors hesitant to realign their business practices.

Standards are central to the activity of markets in terms of trust-building and quality control. From a policy perspective, the role of standards in the CE is very clear at the moment for those working on circular practices in Europe:

"[Standards] facilitate trade ... When you adopt European standards ... it means that these standards are going across the trade routes ... and that helps to remove the trade barriers in Europe. If these standards are adopted abroad ... then they will have more of a relevance, which helps the European industry." (Interviewee F2)

Facilitating the growth of markets in Europe requires borderless movements and the development of new secondary markets in recycled materials. A European policymaker suggests that standards are central to growing secondary raw materials markets in a CE:

"[Y]ou cannot have a secondary market for raw materials if you do not have a set of interlinking standards. You need a quality standard for recycled material, which is linked to very clear quality standards for the products that incorporate those materials, which is linked to quality standards for virgin materials." (Interviewee A2)

Companies therefore are prepared to regard standards as part of the currency of trade:

"[I]f you like ... standards are sort of [the] ... formalisation of the market supply chain message." (Interviewee B1)

However, striking an agreed balance between regulatory and voluntary activity within an evolving CE is key to hoped-for growth and development. Where that line should be drawn is currently disputed depending upon the specific industrial activity. For example, "[T]he paper industry continues to

believe that it should be the arbiter of the quality of the material it receives, and not other elements of the supply chain” (Interviewee C2). Another interviewee suggested that while standards have a place, it is the markets that decide what is traded and what is not:

“Ultimately the market will dictate ... As long as you're supplying material that is legally compliant, then the [company] has a choice of whether to buy it or not. You know if they don't like the material, they don't buy it, if they do like it, they do buy it. If it's not the greatest material then they might pay less for it, if it's great material they might pay a premium for it. But the market sort of tends to regulate itself.” (Interviewee C3)

In the context of increasingly neoliberal environmental governance, the BSI have tried to use a new CE standard in order to facilitate a realignment of waste management practices which includes the creation of new markets for materials. The initiative was supported in part by the Department for Business Energy and Industrial Strategy and a BSI-led group of stakeholders including, for example, the Ellen MacArthur Foundation and the Chartered Institute of Wastes Management. Unlike previous product and process standards, this new framework was intended to encourage broad industrial participation in a principles-based standard. After an 18-month stakeholder consultation, BS8001 appeared in July 2017. It claimed to be:

“[the] first practical framework and guidance of its kind for organizations to implement the principles of the circular economy ... It is intended to apply to any organization ... It provides practical ways to secure smaller ‘quick-wins’, right through to helping organizations re-think holistically how their resources are managed to enhance financial, environmental and social benefits.” (BSI, 2018a)

Amongst our interviewees there was an overwhelming, and largely uncritical, acceptance of a neoliberal approach to environmental governance of waste and resources. There was common agreement amongst our interviewees that, whilst a wide range of stakeholders (businesses, NGOs and academics, for example) might be involved in deliberations on standards, business interests were to the fore in the setting of standards (Interviewees A2, F1, F2). And, not surprisingly, therefore, standards tend to support the market strategies of those bigger corporate actors with the resources to participate in standard setting exercises. This degree of self-interest in standard setting has important implications well beyond a product, a process or a principle. As one interviewee noted, “I think that there is a growing population of economic stakeholders that sees standards ... as a policy tool” (Interviewee A2). This interviewee went on to point out that even when efforts are made to make standard setting inclusive industry voices dominate:

“[O]n the civil society's side, there are serious resource constraints for getting involved in standardisation discussions ... [T]he level of technical knowledge and know-how is very ... high, and very often civil society doesn't have the resources to really engage ... [T]here is ... quite an imbalance in the standardisation work between the amount of resources that industry ... can and will put into it, and what other stakeholders can put into it” (Interviewee A2)

Three leading European CE actors cited here – the BSI, the EC, and the EMF – all promote a win-win partnership between the state and industry (BSI, 2018a, EC, 2015, EMF, 2012). Delivery of the desired outcomes for a sustainability transition towards a CE increasingly has to rely on voluntary standards. This is demonstrated by the BSI's promotion of the CE principle-led standard. For these and other key CE actors, there is implicitly and/or explicitly a subscription to a neoliberal environmental governance approach:

“[I]n a political situation where we want to only have public policy intervention if this is an added value and where we want to focus as much as possible on allowing for dynamic standard setting by collaborative action, I think there is a clear coming together between public policy and economic stakeholders, to try to see how much we, how can we achieve things through standards. I think that's an obvious area of common interest.” (Interviewee A2)

The BSI with its practical guidance aimed specifically at the private sector suggests that:

“[The CE] enables [companies] to capitalize on cost savings; unlock new revenue streams; and make themselves more resilient to external shocks and disruption” (BSI, 2018a, italics added)

This sort of language and these sorts of messages have appeal to most corporate actors when interviewed about the prospects for the transition to a future CE, for example:

“[O]ne of the things that we recommended ... was that Government back off even further and leave even more of this policing to formal standards ... there is very much ... an opportunity in that space for the state to have to do less.” (Interviewee B1)

However, there were some dissenting voices that argue for more government intervention to help get novel CE practices out of their niches and into the mainstream:

“[I]f we're talking about implementing a circular economy, you know proper circular closed loop sort of resource base, then I think the Government needs to take a strong hand” (Interviewee C2)

These exchanges suggest a mutuality of benefits from neoliberal environmental governance for business and the state. The state appreciates the lighter administrative costs while industry appreciates lighter touch regulation. However, an effective transition to a CE, at whatever scale, does require governmental intervention in order to support, protect and align – at least to some degree - the new CE activities as they emerge from niches and ideally move towards supplanting the current linear waste and resources regime. This suggests that the role of standards in this hoped-for transition may yet be more problematic than anticipated because of the way that markets – and not the state - are broadly perceived by stakeholders to dominate the way the CE may develop. In this sense, quality assurance of material flows will be central to CE market development given the way several interviewees suggest that it currently matters less than cost.

Part of the claims for the effectiveness of standards is that they work with the grain of the market as they help to foster trading relations. Within a CE framework trade and standards should therefore also be improving the quality of materials. For some of our interviewees, though, standards were perceived to be marginal in improving quality and securing markets. In part, our interviewees' perceptions depended on the markets that they operate in and their positions within supply chains. For example, there was a general view that the closer businesses were to the consumer, then the more standards were likely to matter. So, for one business leader, market conditions are more than standards when it comes to the quality of materials that they trade in. The interviewee pointed out that: “[I]t's no coincidence that you get more [quality] rejections in an over-supplied market than you do in an under-supplied market.” This interviewee continued to say that quality: “is generally more of a commercial decision rather than a standard decision.” (Interviewee C3)

Conclusions

The pace of change in environmental governance is rapid and spatially variable. In Dongguan, for example, the local state has shown it has the capacity to adapt to a new policy context that takes its particular form as a result of the need for policy innovation being framed as one of economic necessity rather than ecological crisis. The local state showed that it was able to absorb new challenges, adapt to new circumstances and present itself as a reformed and multifaceted environmental state that can undertake regulatory, recovery, and enhancement activities. Even though the environmental state in Dongguan is more fully fledged than anything before, it is by no means a fully formed one. It, therefore, remains somewhat fragile. It was formed from a diverse set of factors, including an entrepreneurial leader, a desire to rethink development, and external and internal pressures to improve the quality of the environment. These factors are continually subject to contestation and reinterpretation, which may question (or reinforce) the legitimacy of a local environmental agenda. Given the nature of governance in Dongguan, an ecological rhetoric can be utilised, but perceptions and practices are contingent on local circumstances and the perceptions of party leaders.

Meanwhile standards have been used to promote the legitimacy of the Ecological Footprint and to promote flows of traded materials when moving from a predominantly linear model to a more circular one. Both cases provide insights into the challenges of public policy delivery in the neoliberal model. For the CE, analysis suggests that there is a lack of legitimacy for the activities of many private waste and resources actors. One contributor suggested that: "[T]here can only be a level playing field if there is some degree of public support for the input provided by civil society into that process." (Interviewee A2). In this way, as public policy becomes increasingly private, so questions of trust and legitimacy come more to the fore for civil society activists. This matters for the CE because, as a system-level change, it cannot be realised by private actors working in isolation.

Ultimately, there is a strong challenge to neoliberalism as it seeks to promote a transition to a CE. The role of the state in seeking to coordinate but not necessarily manage transitional change from novel niche practices to mainstream regimes is problematic. There is evident tension between those actors professing high ambitions for normative change and the reality of those involved in the actual work of aligning and realigning corporate interests and activities. This analysis suggests that if the CE is to happen with the pace and ambition that its advocates hope for, then it needs to challenge the orthodoxy of neoliberal environmental governance in the early shift from niches to new regime. This challenge involves a rethinking of how policy instruments, such as standards, operate so that they can be used to challenge existing market relations rather than simply follow them.

Meanwhile, a challenge for groups such as GFN is, how within an increasingly neoliberal environmental policy context can an agenda based on resource limits be promoted? For GFN the answer was to work with NEG policy tools (in this case standards) to promote change. Footprint analysts and advocates often had a technocratic approach to the policy world in which they believed well-evidenced arguments would be persuasive to decision makers. As a consequence, within the Ecological Footprint community there was a widely held belief that economic and political systems had the capacity to reform. By using standards, an increasingly popular environmental governance tool, GFN and its supporters hoped that they would be able to talk to governments with a new-found legitimacy. Although little noticed or remarked upon with the wider environmental community, GFNs efforts to promote a standard provided further support for NEG.

A self-reinforcing politics of legitimation, in which the Ecological Footprint was bolstered by the adoption of a standard and standards were enhanced within the environmental movement, did not,

though, come to pass. In the case of the development of Ecological Footprint Standards, 'stability and order' were short lived and temporary (cf. Timmermans and Epstein, 2010, 84). The consensus-based approach to standards making enabled bodies within GFN to protect their interests, whilst at the same time by agreeing to them they contributed to the "legitimacy and authority ... of a standard" (Brunsson et al., 2012, 619). The authority and legitimacy of the EF continually needed to be constructed amongst those who produce and use it, since it faced challenges by other environmental tools and by economic interests that are less sympathetic to its resource constrained view of development.