Urban Studies
2023, Vol. 60(7) 1316–1325

DOI: 10.1177/00420980221146861
journals.sagepub.com/home/usj
SAGE

Scaling-up degrowth: Re-imagining institutional responses to climate change

William Otchere-Darko
Newcastle University, UK

Abstract
Focusing on the United Nations' Agenda 2030 and the New Urban Agenda, this commentary suggests that by engaging with degrowth, these mainstream policies can potentially provide alternative ecological values as climate responses. In turn, degrowth can also benefit from engaging with the multiple scales and sectors of these institutions for climate and planning practice. However, such multi-scalar engagements demand a repoliticisation of institutional and professional routines, processes and procedures.

Keywords
Buen Vivir, climate change, degrowth, planning, resilience

摘要
着眼于《联合国 2030 年议程》和《新城市议程》，本论文认为通过与去增长相结合，这些主流政策可能会提供另外的生态价值，作为其对气候变化的响应。反过来，与不同部门的制度程度不一的结合，也可以使去增长从中受益，有利于气候和规划实践。然而，这种程度不一的结合需要将制度和专业惯例、流程以及程序重新政治化。

关键词
美好生活 (Buen Vivir)、气候变化、去增长、规划、韧性

Received October 2022; accepted December 2022

Corresponding author:
William Otchere-Darko, School of Architecture, Planning and Landscape, Newcastle University, Henry Daysh Building, Claremont Tower, Newcastle upon Tyne, NE1 7RX, UK.
Email: william.otchere-darko@newcastle.ac.uk

Degrowth and multi-scalar practice

With the local scale being the main focus of degrowth debates and practices (D'Alisa et al., 2014; Xue, 2022), degrowth's potential to influence different scales of institutional practice is not adequately examined (Knuth et al., 2020). This special issue is a call to 'couple degrowth with urban studies and planning agendas' (Kaika et al., 2023). For Demaria et al. (2013: 205), 'it remains unclear how ecological transformation might actually take place at macro scales and which institutions should be involved'. Similarly, Xue (2022) expounds on the limited attention to spatial and planning transformations within degrowth, symptomatic of fetishising the local. While degrowth practices like bioregions (Latouche, 2009), eco-anarchism (Trainer, 2019), and transition towns (Hopkins, 2019), call for small-scale settlements, a methodology of how to scale them up remains elusive (Escobar, 2019). Notwithstanding the difficulties of rescaling innovative spatial practices (Druijff and Kaika, 2021), Xue (2014: 134) argues that 'a multi-scalar strategy of combining centralised planning power and local participation is arguably quite necessary, however at the cost of democracy'. Similarly, Paulson (2014: 55) offers 'political ecology's multi-scale analysis of power and politics' to the taxonomy of degrowth practices.

Nevertheless, degrowth is already gaining broader institutional and scalar traction, including a first mention in the 2022 Intergovernmental Panel on Climate Change Climate Report (IPCC, 2022). Kallis and March (2015: 366) for instance highlight networks of activist organisations in Barcelona who challenge 'spaces of dependence [and] rescale relations of care, production and social reproduction' while others create alternative food networks to challenge larger political scales like the EU. Similarly, international treaties like the Universal Declaration of the Rights of Mother Earth and hubs like The Global Tapestry of Alternatives also point to multi-scalar degrowth potentials.

Within this exploration of how degrowth practices and thinking can be scaled-up, it is useful to look at the United Nations' Agenda 2030 and the New Urban Agenda, as these global policies usually demand operationalisation at different scales (national, regional and urban). They absorb significant global and local financial, knowledge and technological capacities as climate responses (UNEP, 2013, 2018).

In what follows, I critically examine Agenda 2030 and the New Urban Agenda's (henceforth NUA) climate responses as potential degrowth pathways along three key lines: resource use and management, design and certification, and resilience responses. Subsequently, I expand on how these mainstream practices can learn from degrowth. I argue that the resource use and management approach could engage with degrowth practices focusing on other-than-growth-values, compact developments, ecologically unequal exchange and solidarity economies at multiple scales and sectors. Degrowth can also deconstruct the resilience and certification approaches in these mainstream policies through collective, convivial and materially contextual practices, particularly in urban housing. The paper thus contributes pathways for operationalising, spatialising and even institutionalising degrowth practices (Kaika et al., 2023), vis-à-vis Agenda 2030 and NUA.

First, the *resource use and management* response of Agenda 2030 and NUA includes strategies to reduce resource taps and sinks. Goal 1 of Agenda 2030 champions ending global poverty through effective resource mobilisation. The NUA spatialises this Agenda 2030 goal by recommending food

security strategies in territorial plans, and prioritising efficient use of energy, raw materials and building materials. The policies also aim to promote sustainable production and consumption, as well as reduce waste by enhancing production networks, waste-to-energy initiatives and institutional waste management (UN, 2015, 2017).

However, despite the benchmarks set by Agenda 2030 and NUA, substantial reductions in resource consumption remain elusive. Between 1990 and 2015, high income countries, alongside China and India, have been net importers of embodied materials, energy and land (Dorninger et al., 2021). Cities remain the most significant consumers of global energy and material flows (UNEP, 2013, 2018) and urban agglomerations remain the largest end-users of lands for crops, grazing, fishing areas and for CO^2 absorption (Ewing et al., 2010). Multi-scalar decarbonisation initiatives, including UN's Race to Zero Initiative, EU's Green Deal, etc. also do not question the growth paradigm underlying resource consumption (cf. EU, 2019; UNFCC, 2019), for instance, the EU increased its Critical Raw Materials requirements to include lithium for electric vehicle batteries to be imported from the Global South (European Commission, 2020). Similarly, many cities described as archetypes of resource efficiency like Masdar, Vauban, Bogotá, Johannesburg, etc, (cf. UNEP, 2013, 2018; UN-Habitat, 2014) provide piecemeal outcomes without questioning global resource use and climate implications (see Kaika, 2017). These exemplars uncritically hinge on decoupling markets from their central tenets of inequality and ecological exploitation. In effect, Agenda 2030 and NUA neglect debates and practices that centre on other-than-growth-values, compact developments, solidarity economies and questions of ecologically unequal exchange in their resource use approach (Dorninger et al., 2021; Gudynas, 2011, 2013). As the commentary will highlight, these practices can be integrated in resource mobilisation policies, funding streams and in measuring footprints across multiple scales of territorial, ecological and economic planning.

The second key climate response of Agenda 2030 and the NUA that I examine here vis-á-vis degrowth is the *design and certification* response, focusing particularly on rating sustainable buildings and infrastructures. Goals 9 and 11 of Agenda 2030 promote retrofitting infrastructure with environmentally sustainable local technologies and materials. The NUA similarly advocates performance-standards for energy efficiency and growth (UN, 2017). UNEP and UN-Habitat particularly posit a ten-fold reduction in energy use through sustainable building technologies, lifestyles and urban forms (UNEP, 2018; UN-Habitat, 2014). Interestingly, UNEP suggests 'a fundamental change in the macroeconomic structure of the economy' to enhance such technological penetration (UNEP, 2018: 132).

Yet, existing and new technologies still thrive on growth paradigms, while rating technologies like LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method) have seen limited implementation globally. There are several impediments that can explain the slow up take on these suggestions. First, these technologies add significantly to building costs (Reichardt, 2016; SWA, 2004). For the Global South, they are further dependent on exchange rates and the import costs of such new technologies. Unsurprisingly, therefore, the Global North makes up about 95% of LEED projects (Wu et al., 2016, 2017). Additionally, these technologies side-line or even make redundant local building knowledges (Birkeland, 2008). Moreover, rating technologies often respond to global industry trends rather

than local ecological needs (Birkeland, 2008; Dale et al., 2019; Hes and du Plessis, 2014). In effect, they often perpetuate an ecological modernisation pathway to sustainability (Cugurullo, 2016). The inertia of the construction industry and urban development institutions militate against the upscaling of degrowth practices (De Castro et al., this issue).

By contrast, as the commentary will show, degrowth housing practices can contravene the costly, privatised and industrialised design and certification responses by offering context-specific, regenerative and a social basis of housing. Such housing practices, based on democratic politics, can also enhance collective and convivial responses particularly in disaster contexts. These practices can be integrated in planning compliance and approval procedures at multiple scales (Cole and Fedoruk, 2015).

The third climate response of Agenda 2030 and NUA I want to examine here are policies linked to *resilience*. Resilience remains a fuzzy and loaded concept. For the UN, it entails resisting, absorbing, accommodating and recovering from disaster effects 'including through the preservation and restoration of essential basic structures and functions through risk management' (UNDRR, n.d.). However, such a 'restoration' does not consider the pre-existing unequal and exploitative status-quo (C40 Cities, 2019), as acknowledged in 'Build Back Better' initiatives (UNDRR, 2015). As Kaika (2017) highlights, resilience approaches like the City Resilience Index implicitly immunise communities to absorb further deprivation and ecological harm. Agenda 2030 also outlines resilience objectives to combat climate-related natural disasters focusing on integrated, inclusive, resource-efficient mitigation and adaptation plans in housing, among others (UN, 2015, 2017). These resilience responses can resemble degrowth in practice, by leaving urban populations to their own resources. However, resilience is also implemented through a raft of indicators as ends in themselves (Kaika, 2017). The UNDRR indicators for instance require the Global South to revamp financial capacities to meet benchmarks (UNDRR, 2019). Agenda 2030 pledges an annual climate fund towards these benchmarks (UN, 2015). However, as Bhattacharya et al. (2020) show, the funding scheme already has inconsistencies and transparency issues. Such limitations potentially reproduce the familiar challenges typical of foreign aid in the Global South (see Obeng-Odoom, 2012). Hence, operationalising resilience through such funding can potentially create other forms of deprivation. They at best mediate rather than alleviate the fallouts of growth-based socio-ecological inequality (Kaika, 2017). As reiterated, the next section suggests how degrowth practices can politically emphasise and instantiate social, alternative and context-specific building practices and disaster responses as 'living indicators' (Kaika, 2017: 99). This would deconstruct the resilience responses to climate change in Agenda 2030 and the NUA.

In sum, current mainstream climate responses focusing on resource use and management, design and certification and resilience are underlain by ecological rebound and pro-growth expectations. They perpetuate eco-modernisation objectives which similarly thrive on current growth paradigms. They reignite and regurgitate the already familiar challenges of predatory and austerity finance. They immunise vulnerable groups with facades of growth and development, without alternatives to either. I further expand on how the multiple degrowth languages, frames and practices can be operationalised as up-scaled climate planning responses vis-à-vis Agenda 2030 and NUA.

Re-imagining institutional degrowth responses

Low impact planning as a response to resource use and resilience

Here, I argue that low impact planning offers degrowth alternatives to the resource use and resilience approaches, as practices that augment compact building, potentiate ecological values and collectivise responses to resilience. Low impact planning is loosely employed here in reference to practices that maintain or improve environmental quality (Dale et al., 2019; Fairlie, 1996). In urban–rural housing planning, *tiny housing* provides one such possible degrowth practice. It offers a degrowth alternative to mainstream housing construction throughput and post-occupancy footprints (Stefansdottir and Xue, 2019). Tiny housing charts pathways for other low impact housing models using light materials and vernacular architecture. In effect, it can be used as in-filling strategies to enhance compact city developments (cf. Xue, 2014), by enhancing effective land and resource use, and with complementary access to services to enable energy efficiencies. This will contribute towards the NUA goals of prioritising efficient energy, raw material and building material use as well as augmenting urban forms (UNEP, 2018; UN-Habitat, 2014).

Additionally, tiny housing could help deconstruct the 'Build Back Better' and other disaster-response initiatives by highlighting questions of ecological justice, commodification and access as muted 'indicators' in resilience responses. For instance, the Secwepemc peoples' protest using tiny houses against the Kinder Morgan gas pipeline, as a potential socio-ecological disaster in British Columbia, shows the ecological justice potentials of such degrowth practices (Anson, 2019). Such 'living indicators' (Kaika, 2017: 99) highlight broader notions of disaster, its responses and politicisation; practices which are useful to deconstruct mainstream resilience responses. However, if commodified, tiny housing can also mask housing inequality and scarcity or offer another avenue for boutique ruralism, elite environmentalism and privatisation (Alexander et al., 2018; Anson, 2019). Tiny housing practitioners therefore attempt to enact 'refusal and illegibility' (Weetman, 2018: 238), by repoliticising housing rights, resource use and exploitation in dominant institutional practices.

Within urban-rural neighbourhood planning, *co-housing* and *eco-collaborative housing* also offer degrowth potentials for rethinking resilience by emphasising collective and convivial housing, together with resource-conscious consumption practices. Co/eco housing planning practices like collectivising brownfield lands, pro-poor housing policies, rental housing incentives and minimum occupancy requirements can enhance 'Build Back Better' initiatives by strengthening the social basis of housing practices in climate mitigation and adaptation plans (cf. De Vidovich and Otchere-Darko, 2020; Schneider, 2019). However, a financialised and exclusionary basis of co/eco housing creates a gated community, reiterating the importance of access and distribution questions (Chiodelli, 2015; Muradian and Martinez-Alier, 2001). Low impact planning nonetheless enables a reduction in the absolute impact of housing and resource use, aided by social and ecological values which, I argue, could be precursors to regeneration.

Ecologically regenerative planning as a response to better design and certification

Ecologically regenerative planning offers a degrowth alternative to the second key issue

(the design and certification approach), touting the importance of materially contextual housing practices to regenerate ecosystems. Ecological regeneration goes beyond net-zero to emphasise net-positive socio-ecological practices. This constitutes improving building designs and its social systems to enhance the surrounding ecological base (Hes and du Plessis, 2014). Particularly, *net-positive design* lays bare complex socio-ecological relationships between buildings, landscapes, infrastructures and services, going beyond individual buildings (Cole and Fedoruk, 2015). This can impact rural, urban and national planning scales. The design and certification response promoted in Agenda 2030 and NUA emphasises retrofitting, performance standards and building technologies. As discussed, these technologies are geared towards costly industrialised building approaches to reduce environmental impacts. These could benefit from net-positive design and housing practices using available materials and context specific building practices (Birkeland, 2008). Here, housing planners can require potential builders to not only comply with standards and technologies but also highlight potential net positive contributions, particularly, constructions that use available wood, mudbrick and other organic or renewable materials while disincentivising permanent materials like cement, metals, etc. (Birkeland, 2008). Proposed buildings could also aim to provide ecosystem functions and regenerate nearby wildlife corridors, greenbelts, etc. However, despite its potential, net positive design still 'hover(s) uncomfortably' within the building certification approach and commodified construction methods (Mang and Reed, 2015: 8). It thus requires 'a fundamental rethinking of planning, compliance and approvals processes' (Cole and Fedoruk, 2015: 118).

Cosmovisions in planning as response to resource use and resilience

I use cosmovisions in planning to refer to other-than-growth-values, questions of ecologically unequal exchange and solidarities in resource use. These are degrowth alternatives that can engage the resource use and resilience approaches at multiple scales. A starting point of such cosmovisions is to *forge cultural imaginaries* of living in a region built on degrowth. Here, Buen Vivir cosmovisions provide an apt cultural entry point for re-imagining alternatives to growth, emphasising quality of life, well-being and intrinsic nature embedded in community (Gudynas, 2011). Originating from transboundary Andean communities in Ecuador and Bolivia and subsequently incorporated into national constitutions, Buen Vivir cannot be equivocated to degrowth. However, both reject growth as means to development, providing syncretic advantages (Gudynas, 2011). The cultural contribution of a Buen-Vivir-inspired-degrowth is to enable institutions to pursue other values beyond economic growth (Gudynas, 2011). Here, multi-sectoral planning practices can integrate reciprocity, cooperation and redistribution, rather than merely competition, into regional planning policies. Agenda 2030's goal of poverty reduction through effective resource mobilisation could benefit from such cosmovisions. Buen Vivir also suggests qualitatively different objectives which could be useful, for example, in NUA's food security objectives as part of territorial planning. Buen Vivir can also provide an ethical scaffolding for non/more-than human rights in environmental planning practices (Demaria et al., 2013). This goes beyond the instrumental and relational references to nature – as merely heritage, resource and habitat – in Agenda 2030 and NUA (UN, 2015, 2017).

Additionally, there is potential to *re-ecologise economy* through such cosmovisions, offering alternatives to the resource use approach. Here, planning practices could centre social metabolism assessments to highlight ecologically unequal exchange between different scales: rural–urban, regional, national, or international (Dorninger et al., 2021). This enables planners to re-ecologise and repoliticise questions of access and distribution of resources and waste (cf. Muradian and Martinez-Alier, 2001). Such assessments allow environmental planning practices to excavate the ecological underbelly of economy. They also potentiate the upscaling of regenerative planning practices beyond urban housing (Birkeland, 2008). Such practices therefore contribute towards the NUA goals of prioritising efficient use of energy, raw and building materials (UN, 2015, 2017; UNEP, 2018).

A corollary is to *rescale and regionalise production–consumption networks*, with implications for resource use and resilience. Granted, upscaling practices like urban gardening as part of degrowth could perpetuate low density urbanisation, nature destruction and increase travel demands (Xue, 2022). Similarly, globalising degrowth models like bioregions disregards the disproportionate ecological capacities and territorial restrictions involved (Xue, 2014). Here, the commentary suggests the regional scale of production-consumption as requiring attention. The regional scale offers avenues to rescale production and consumption of food and materials beyond the local while cushioning risks of global dependence (cf. Schneider et al., 2010). Reducing the length of extraction and food–fuel chains offers useful openings. For instance, Gudynas (2013) uses Buen Vivir to envision post-extractivist Latin American futures entailing regionalised exports, decentralised renewable energy and encultured food–fuel policies between neighbouring countries. Similarly, Wächter (2013) suggests regionalised renewable energy planning practices as part of degrowth. Such regionalisation will also enable the integration of solidarity economies and social enterprises into production networks (Latouche, 2009; Schulz and Bailey, 2014). Rescaling and regionalising such networks would aim to reduce the footprints of industrial production, intermediate and final consumption, thereby challenging the scales of unequal exchange. It would also highlight the redistributive mechanisms and planetary boundaries of resource use under degrowth (Kaika et al., 2023).

Industrial ecologists and economic planners are central to such practices. Such rescaled cosmovisions could potentially contribute towards the Agenda 2030 goals of reshaping global exports, reducing waste and enhancing production networks (cf. UN, 2015, 2017). Additionally, extractive policies like the EU's Critical Raw Materials demands and other resource networks (including from emerging economies) could be potentially situated within similar contextually derived cosmovisions. Such cultural, ecological and economic cosmovisions could offer alternatives to the resource use and resilience approaches.

Conclusion

The commentary has highlighted potentials for mainstream policies to engage with specific degrowth practices and concepts across scales and vice-versa. It sketches a pathway for localised degrowth practices to inform larger scale planning practices and mainstream international agendas (Kaika et al., 2023). I outline three potential areas where mainstream practices can learn from degrowth. First, Agenda 2030 and NUA could pay attention to other-than-growth-values in resource management. Here, reciprocity, cooperation, redistribution and the ethics of non/more-than human rights could

be potential planning objectives to pursue, including in compact city policies. Secondly, these mainstream policies could recognise the importance of collective, convivial and materially contextual housing practices in deconstructing resilience and certification responses. Third, these mainstream policies could concentrate on social metabolism assessments, ecologically unequal exchange, regionalised cosmovisions and solidarities in resource use (Gudynas, 2013; Schulz and Bailey, 2014). These degrowth practices could be integrated into mainstream funding requirements, compliance and approval procedures as well as project implementation practices.

Finally, I suggest that degrowth practices and related cosmovisions can also benefit from engaging with existing scales of specific policy focus and practices by capitalising on available funding and technological capacities.

The expectation of constant growth carries an absurdity (Demaria et al., 2013) akin to an expectation of growing taller every year. Hence, focusing on mainstream climate responses, this commentary pinpoints degrowth opportunities for low-impact compact building, regenerative design practices and other-than-growth values at various planning scales. Notwithstanding, these practices are not panaceas either. Hence, they go together with critical questions surrounding commodification, access, distribution and ecological justice to constantly repoliticise taken-for-granted processes.

Acknowledgements

A huge debt of gratitude to Maria Kaika for her encouragement, guidance and valuable contributions to the commentary. I would also like to thank Sarah Knuth, Bosman Batubara, Michelle Kooy, Federico Demaria, Angelos Varvarousis, Hug March, David A Smith as well as the anonymous reviewers for their comments and critical prompts. The statements made and views expressed are solely the responsibility of the author.

Declaration of conflicting interests

The author declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The author received no financial support for the research, authorship and/or publication of this article.

ORCID iD

William Otchere-Darko https://orcid.org/0000-0001-7522-0364

References

Alexander S, Gleeson B, Coupe T, et al. (2018) Bumps along the road of the tiny house movement: Practitioner notes with critical reflections. *Australian Planner* 55(3–4): 198–208.

Anson A (2019) Framing degrowth: The radical potential of tiny house mobility. In: Nelson A and Schneider F (eds) *Housing for De-Growth*. London: Routledge, pp.68–79.

Bhattacharya A, Calland R, Averchenkova A, et al. (2020) *Delivering on the $100 Billion Climate Finance Commitment and Transforming Climate Finance*. Geneva: UNFCCC.

Birkeland J (2008) *Positive Development*. London: Earthscan.

C40 Cities (2019) *Realising the Multiple Benefits of Climate Resilience and Inclusive Development in Informal Settlements*. New York: CCCLG.

Chiodelli F (2015) What is really different between cohousing and gated communities? *European Planning Studies* 23(12): 2566–2581.

Cole RJ and Fedoruk L (2015) Shifting from net-zero to net-positive energy buildings. *Building Research & Information* 43(1): 111–120.

Cugurullo F (2016) Urban eco-modernisation and the policy context of new eco-city

projects: Where Masdar City fails and why. *Urban Studies* 53(11): 2417–2433.

Dale J, Marwege R and Humburg A (2019) Low impact living. In: Nelson A and Schneider F (eds) *Housing for Degrowth*. London: Routledge, pp.145–155.

De Castro A, Kaliaden R, Wende W and Egermann M (2023, this issue) Beyond urban ecomodernism: How can degrowthaligned spatial practices enhance urban sustainability transformations? *Urban Studies*.

Demaria F, Schneider F, Sekulova F, et al. (2013) What is degrowth? From an activist slogan to a Social Movement. *Environmental Values* 22: 191–215.

De Vidovich L and Otchere-Darko W (2020) Residential Segregation and housing policies in Vienna. *Territorio* 92(92): 86–96.

Dorninger C, Hornborg A and David J (2021) Global patterns of ecologically unequal exchange. *Ecological Economics* 179: 1–14.

Druijff A and Kaika M (2021) Upscaling without innovation: taking the edge off grassroot initiatives with scaling-up in Amsterdam's Anthropocene forest. *European Planning Studies* 29(12): 2184–2208.

D'Alisa G, Demaria F and Kallis G (2014) *Degrowth*. New York, NY: Routledge.

Escobar LG (2019) Food sovereignty. In: Kothari A, Salleh A, Escobar A, et al (eds) *Pluriverse: A Post-Development Dictionary*. New Delhi: Tulika Books, pp.185–187.

EU (2019) A European green deal. Available at: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en (accessed 5 July 2022).

European Commission (2020) *Critical Raw Materials*. Brussels: EC.

Ewing B, Reed A, Galli A, et al. (2010) *Calculation Methodology for the National Footprint Accounts*. Oakland, CA: Global Footprint Network.

Fairlie S (1996) *Low Impact Development*. Charlbury: Jon Carpenter.

Gudynas E (2011) Buen Vivir: Today's tomorrow. *Development* 54(4): 441–447.

Gudynas E (2013) Transitions to post-extractivism. In: Lang M and Mokrani D (eds) *Beyond Development*. Quito: Fundación Rosa Luxemburg and TNI-Amsterdam, pp.165–188.

Hes D and du Plessis C (2014) *Designing for Hope*. London: Routledge.

Hopkins R (2019) Transition movement. In: Kothari A, Salleh A, Escobar A, et al. (eds) *Pluriverse: A Post-Development Dictionary*. New Delhi: Tulika Books, pp.317–319.

IPCC (2022) *Climate Change 2022: Full Report*. Available at: https://www.ipcc.ch/report/ar6/wg2/ (accessed 10 May 2022).

Kaika M (2017) Don't call me resilient again!. *Environment and Urbanization* 29(1): 89–102.

Kaika M, Varvarousis A, Demaria F, et al. (2023) Urbanizing degrowth: Five steps towards a Radical Spatial Degrowth Agenda for planning in the face of climate emergency. *Urban Studies* 60(7): 1191–1211.

Kallis G and March H (2015) Imaginaries of hope: The Utopianism of degrowth. *Annals of the Association of American Geographers* 105(2): 360–368.

Knuth S, Stehlin J and Millington N (2020) Rethinking climate futures through urban fabrics: (De)growth, densification, and the politics of scale. *Urban Geography* 41(10): 1335–1343.

Latouche S (2009) *Farewell to Growth*. Cambridge and Malden, MA: Polity Press.

Mang P and Reed B (2015) The nature of positive. *Building Research & Information* 43(1): 7–10.

Muradian R and Martinez-Alier J (2001) Trade and the environment: From a 'Southern' perspective. *Ecological Economics* 36: 281–297.

Obeng-Odoom F (2012) Neoliberalism and the urban economy in Ghana: Urban Employment, inequality, and Poverty. *Growth and Change* 43(1): 85–109.

Paulson S (2014) Political ecology. In: D'Alisa G, Demaria F and Kallis G (eds) *Degrowth*. New York, NY: Routledge, pp.53–54.

Reichardt A (2016) *Sustainability in Commercial Real Estate Markets*. Wiesbaden: Springer Gabler.

Schneider F (2019) Housing for degrowth narratives. In: Nelson A and Schneider F (eds) *Housing for Degrowth*. Abingdon and New York, NY: Routledge, pp.14–19.

Schneider F, Kallis G and Martinez-Alier J (2010) Crisis or opportunity? Economic degrowth for social equity and ecological sustainability. Introduction to this special issue. *Cleaner Production* 18(6): 511–518.

Schulz C and Bailey I (2014) The green economy and post-growth regimes: Opportunities and challenges for economic geography. *Geografiska Annaler Series B Human Geography* 96(3): 277–291.

Stefansdottir H and Xue J (2019) The quality of small dwellings in a neighbourhood context. In: Nelson A and Schneider F (eds) *Housing for Degrowth*. Abingdon and New York, NY: Routledge, pp.171–182.

SWA (2004) GSA LEED cost study. Final Report for US General Services Administration. Available at: https://www.wbdg.org/FFC/GSA/gsaleed.pdf (accessed 11 June 2020).

Trainer T (2019) Eco-Anarchism. In: Kothari A, Salleh A, Escobar A, et al. (eds) *Pluriverse: A Post-Development Dictionary*. New Delhi: Tulika Books, pp.160–162.

UN (2015) Transforming our world: the 2030 Agenda for sustainable development. Available at: https://sdgs.un.org/2030agenda (accessed 11 June 2020).

UN (2017) The New Urban Agenda – Habitat III. Available at: https://www.habitat3.org/the-new-urban-agenda (accessed 11 June 2020).

UNDRR (2015) *Sendai Framework for Disaster Risk Reduction*. Sendai: UNDRR.

UNDRR (2019) *Making Cities Resilient*. Geneva: UNDRR and EU.

UNDRR (n.d.) Resilience. Available at: https://www.undrr.org/terminology/resilience (accessed 11 June 2021).

UNEP (2013) *City-Level Decoupling*. New Delhi: UNEP and IRP.

UNEP (2018) *The Weight of Cities*. Nairobi: UNEP and IRP.

UNFCC (2019) Race to zero campaign. Available at: https://unfccc.int/climate-action/race-to-zero-campaign (accessed 5 July 2022).

UN-Habitat (2014) A new strategy of sustainable neighbourhood planning: Five principles – Urban planning discussion note 3. Available at: https://unhabitat.org/a-new-strategy-of-sustainable-neighbourhood-planning-five-principles (accessed 11 June 2020).

Wächter P (2013) The impacts of spatial planning on degrowth. *Sustainability* 5(3): 1067–1079.

Weetman VM (2018) Resistance is fertile: Exploring tiny house practices in Australia. *Australian Planner* 55(3-4): 232–240.

Wu P, Mao C, Wang J, et al. (2016) A decade review of the credits obtained by LEED v2.2 certified green building projects. *Building and Environment* 102: 167–178.

Wu P, Song Y, Shou W, et al. (2017) A comprehensive analysis of the credits obtained by LEED 2009 certified green buildings. *Renewable and Sustainable Energy Reviews* 68: 370–379.

Xue J (2014) Is eco-village/urban village the future of a degrowth society? An urban planner's perspective. *Ecological Economics* 105: 130–138.

Xue J (2022) Urban planning and degrowth: A missing dialogue. *Local Environment* 27(4): 404–422.