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Nygren, Anja

2022-06-07

Nygren , A , Kröger , M & Gills , B 2022 , ' Global extractivisms and transformative alternatives ' , Journal of Peasant Studies , vol. 49 , no. 4 , pp. 734-759 . <https://doi.org/10.1080/03066150.2022.2069495>

<http://hdl.handle.net/10138/346589>

<https://doi.org/10.1080/03066150.2022.2069495>

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To cite this article: Anja Nygren, Markus Kröger & Barry Gills (2022) Global extractivisms and transformative alternatives, The Journal of Peasant Studies, 49:4, 734-759, DOI: [10.1080/03066150.2022.2069495](https://doi.org/10.1080/03066150.2022.2069495)

To link to this article: <https://doi.org/10.1080/03066150.2022.2069495>



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Published online: 23 May 2022.



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Global extractivisms and transformative alternatives

Anja Nygren, Markus Kröger and Barry Gills

Global Development Studies, University of Helsinki, Helsinki, Finland

ABSTRACT

This article examines global extractivisms and transformative alternatives; addressing: (1) access to and control over resources, (2) governance and recognition, (3) environmental-social harms, and (4) justice. The examination of these themes provides an understanding of the sociospatial links between extractivism and differentiated distribution of benefits and burdens. The study sheds light on the politics of recognition, including the discourses and policies that enable extractive industries to obtain licences to operate in resource-rich territories. The analysis illuminates the inseparability of environmental-social impacts of extractivism, including altered human-nonhuman relations, while opening perspectives to claims for justice and the search for transformative alternatives.

KEYWORDS

Environmental justice; harms; global extractivisms; political ecology; social movements; transformative alternatives

Introduction

The world has experienced a dramatic resurgence in the scale and pace of natural resource extraction since the mid-2000s (Dunlap and Jakobsen 2020; Kröger 2021). Commodity booms, associated with hydrocarbon and mineral extraction, and agricultural and biofuel plantations, have led to increased conflicts and human rights violations, including intrusions into indigenous territories, degradation of rural and urban dwellers' lived environments, loss of biodiversity, environmental pollution, and increased greenhouse gas emissions (Arboleda 2019; Arsel, Adaman, and Saad-Filho 2021; Gills 2020; Verweijen and Dunlap 2021). Extractive industries have long wielded the political-economic power to exploit 'cheap' material from resource frontiers, often with scant attention paid to the adverse effects on local ecosystems and people. From oil fields in the Gulf of Mexico (Breglia 2013; Quist and Nygren 2015) and Ecuadorian Amazonia (Cepek 2018) to mineral camps in Chile (de los Reyes 2022), tree plantations in Mozambique (Bruna 2022), and hydropower dams in Cambodia (Käkönen and Thuon 2019), people living in the midst of extractivism bear the burdens of resource exploitation for global commodity markets. Policies promoting climate adaptation and green economies have done relatively little to reduce the

CONTACT Anja Nygren  anja.nygren@helsinki.fi  Global Development Studies, University of Helsinki, Box 18 (Unioninkatu 35), Helsinki FI-00014, Finland

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pace of extractivism or to mitigate its environmental-social impacts in order to build more just futures (Obeng-Odoom 2021).

This Special Forum on Extractivisms and Global Extractivism explores a range of analytical devices in order to examine diverse facets of global extractivisms.¹ The articles analyse complex extraction patterns and practices at particular production sites and their links to global commodity flows and ‘value webs’ (Borras et al. 2016, 101), including financialisation (de los Reyes 2022); ‘green extractivism’ (Bruna 2022); the luring of governments in the global South onto (neo)extractivist developmental paths (Andrade 2022); and overviews of past and current conceptualisations of extractivism that link extractivism to further discussions on global crises and insecurities (Chagnon 2022).

The term extractivism is here defined as an *overextension* of natural resource exploitation, with attendant mindsets, politics, and practices (Dunlap and Jakobsen 2020; Gudynas 2015; 2020; Svampa 2019). It refers to an intensive mode of exploitation, a mentality of appropriation, and a logic of nature commodification, with low degrees of *in situ* processing (Jalbert et al. 2017; Willow 2018). Often the sites of extraction, such as oil camps and mining pits, are targets of rapid resource removal, with scant attention paid to the development of local productive structures, benefit sharing, or sources of employment, as the value-adding processes are carried out elsewhere (Bruna 2022; Ye et al. 2020). Extractivism often results in multifaceted environmental-social impacts in the frontline areas, entailing ecological degradation and socially differentiated vulnerabilisation. Contemporary extractivism is global in two dimensions: structurally in terms of networks of finance, corporations, and economic sectors; and spatially in the form of planetary scale, with links to intensified insecurities and crises (Arboleda 2019; Elhacham 2020; Gills 2020).

The concept of extractivism was first developed in the 2000s by Latin American academia and civil society to explore accelerated oil conflicts (Acosta 2013; Gudynas 2010). It has since been applied to diverse extractive sectors throughout the world and deployed by a range of social science disciplines. Critical agrarian studies and development studies have increasingly used extractivism as an overall concept to explain broad development dilemmas and politics in different parts of the world. The scope and usage of the concept has been expanding rapidly (Hamouchene 2021). Our focus here is on natural resource extraction in the global South, with close links to the global North.

We recognise sectoral differences and intersectoral dynamics between the key types of resource extraction, including oil, natural gas, and minerals, while emphasising that many agricultural and tree plantations can be considered forms of agro-extractivism (Alonso-Fradejas 2015; McKay, Alonso-Fradejas, and Ezquerro-Cañete 2021; Petras and Veltmeyer 2014). We highlight that many other resource-intensive modes of production may be extractivist in nature, including green grabbing, large-scale fisheries, hydropower projects, and the industrial production of wind energy, with their cognate infrastructures (Banoub et al. 2020; Büscher and Fletcher 2020; Dunlap 2020; Johnson 2020; Klein 2015). Yet, while supporting efforts to extend the analytical examination of extractivisms

¹The Special Forum builds on the EXALT-2020 Symposium, organised by the ‘Global Extractivisms and Alternatives’ Initiative (EXALT), University of Helsinki, Finland. EXALT is an interdisciplinary research programme and network of critical scholars focusing on political-ecological and political-economic aspects of global extractivisms and their alternatives. For more information on EXALT, see www.exalt.fi/ or contact exalt@helsinki.fi

beyond natural resource extraction, we recognise the problem of expanding the concept too much, potentially leading to a loss of explanatory power (Gudynas 2015).

Extraction has received considerable attention in recent discussions in critical agrarian studies, political ecology, political economy, and related research fields (Arsel, Hogenboom, and Pellegrini 2016; Banoub et al. 2020; Bebbington and Bury 2013; Bridge 2014; Himley 2013; Kirsch 2014; Lander et al. 2021; Peluso 2017). Scholars studying hydrocarbon, mineral, agricultural, and forest extraction have examined power relations surrounding extractive operations and various types of resistance towards resource exploitation (Anthias 2018; Frederiksen and Himley 2020; Kröger 2013; McNeish, Borchgrevink, and Logan 2015; Mingorría 2018; Quist and Nygren 2015; Schubert, Engel, and Elísio Macamo 2018). Recent political-economic analyses of developmental pathways have criticised the post-2000 neo-extractivist turn, uniting the debates on dependency and inequalities of rent-based development through the concept of extractivism (Burchardt, Dietz, and Warnecke-Berger 2021), and yielding analyses of the broader political-economic patterns and politics in different parts of the world (Hamouchene 2021). Yet, there remains a need for careful examination of continuities and changes within and among different types of extractivisms, through regionally situated, empirical analyses linked to broader patterns and systemic transformations, in order to better understand global extractivisms and associated environmental-social harms, including drastic changes in local environments and life-worlds.

This Introduction by the guest editors examines four interlinked issues crucial to political-ecological and critical agrarian studies of global extractivisms and transformative alternatives: (1) access to resources and resource spaces; (2) state, governance and politics of recognition; (3) environmental-social harms, and (4) environmental justice. Examining the interconnections between these key themes offers important insights into the socio-spatial links between extractivism and uneven access to and control over resources, competing land uses, stacked resource deals over the same territory, and socially differentiated distribution of benefits and burdens. It sheds light on the politics of recognition and responsibility – including the discourses and policies that enable extractive industries, often with legitimisation from the state, to obtain a licence to operate in peripheral resource-rich territories. Such an analysis provides a route to understanding the coupled environmental-social effects and altered human-other-than-human relations, while opening perspectives onto multifaceted claims for justice and the search for transformative alternatives to large-scale extractivism.

The following section discusses access to and control over resources, while the third explores the role of governance and politics of recognition related to extractivism. In the fourth, we examine the environmental-social harms associated with extractivism; followed, in the fifth, by discussion of justice claims and initiatives for transformative alternatives. In the sixth, we summarise the main themes addressed in this Special Forum and in the seventh, we suggest ideas for future research.

Access to and control over resources and resource spaces

Accelerated extractive operations have affected complex environmental-social transformations in many resource frontiers in Latin America, Africa, and Asia, including changes in access to and control over 'resources' and resource spaces.² Approaches in political ecology and critical agrarian studies help understand the role of power relations in

extractivist resource appropriations and the discourses justifying them. They demonstrate links between politics and ecology, given that the 'power to exclude' shapes access to resources and conflicts over altered environments, livelihoods, and lifeworlds, while altered ecologies produce differentiated degrees of exposure to vulnerability (Banoub et al. 2020; Borrás et al. 2016; Peluso and Lund 2011; Taylor 2015).

Resources do not exist as such; rather, they result from processes of 'resource-making', by which we refer to ways in which once 'unused reserves' are converted into 'natural resources' and brought into production and inserted into the circuits of global capital (Bridge 2010; Nygren 2021). Crude oil or raw natural rubber, for example, have no use value until further processed, and the means of assigning them an exchange value requires industrial processing (Peluso 2012, 79). The ways in which uncommodified reserves become appropriated and commodified through extraction have multifaceted consequences for local environments and local people, although the violence of dispossession involved in resource-making is often disguised under the rubric of 'discovery' of natural resources (Bridge 2010, 825; Polanyi 2001 [1944], 171) and pursued 'in the name of Development' (Escobar 2008). Extractivist commodification of nature is often linked to policies that encourage companies and states to appraise biophysical systems as 'natural assets', valorised in strictly monetary terms, and that promote a dramatic rise in prices for the raw materials in question, and, therefore, increased revenue and capital accumulation (de los Reyes 2022).

Many sites of extraction are areas of feverish resource-making and (violent) incorporation into global commodity markets, until the 'reserves' in question run out and extractive operations move to new terrains where a new round of exploitation seems profitable. When entering into global circuits of production and trade, extracted products are often subject to fetishism, to add to their exchange value (Peluso 2012; Watts 2011). Resource-making also involves a recurrent cartography of existing reserves, resources, fluxes, sinks, and dumps, which territorialise 'natural assets' in space, while linking the sites of extraction to complex modes of enclosure and connectivity (Bridge 2014, 821). Such extractivist expansions often violate indigenous knowledges and place-specific valuations of lived environments by residents, whose home regions are sacrificed to resource extraction (Escobar 2008; Kröger 2021; Quist and Nygren 2019).

Struggles over resource-making indicate that natural resources are brought into social life through particular sociopolitical processes in interaction with cognate material processes (Bridge 2014). As Peluso (2012, 99) contends, such processes need to be examined through empirical analyses, to understand their contextual variations and situated politics, with multifaceted appropriations, territorialisations, and contestations. How the way how history of extraction is told is part of the politics of extractivism, as are the tactics of mystification used to obscure concomitant environmental degradation and social exploitation (Perreault 2018). Control over resources, the distribution of benefits and burdens, and the unequal incorporation of sites of extraction into wider circuits of capital accumulation are often key issues in conflicts between extractive industries,

²We recognise the problem of using the term 'resources' when referring to indigenous land-use practices and environmental perceptions (de la Cadena and Blaser 2018; Ehrnström-Fuentes 2020; Escobar 2008; Götz and Middleton 2020; Kröger 2020). This recognition is important for understanding alternative worldviews that challenge extractivist practices and mindsets premised on converting lived environments into extractable resources for profit-making. Here, we use the term resources as an analytical concept, recognising its limits with respect to indigenous worldviews.

state institutions, and heterogeneous groups of local people (Arboleda 2019; Bruna 2021; Broad and Cavanagh 2021; de los Reyes 2022; McNeish, Borchgrevink, and Logan 2015; Vergara-Camus and Kay 2017). Extractivism creates value via enclosures and exclusions, by the assertion of property rights, and appropriation of resources through ‘accumulation by dispossession’ (Harvey 2003, 145–147). It transforms relations of territorial control and politicises landscapes by enclosing access to livelihood options crucial for local residents (Leifsen et al. 2017). This kind of politicisation is often linked to conflicts over access to *resource space* rather than over resources as such. The oil industry and small-scale fisher-farmers, for example, rarely compete over the same resources; rather conflicts related to marine oil extraction and fisheries, or to onshore hydrocarbon extraction and small-scale farming, usually emerge because different actors lay claim to the same resource space, where the by-products of one resource use undermine the viability of others, and dominant policies allocate strategic resource spaces exclusively to extractivism (Bebbington, Bury, and Gallagher 2013; Käkönen and Thuon 2019; Quist and Nygren 2015; Watts 2011).

A crucial issue in this respect is the spatial requirements of different types of extractivism and how different modes of extraction alter the socioecological production of space and human-nonhuman interactions. As Huber and McCarthy (2017) note, energy extraction based on subterranean fossil fuels, such as hydrocarbons, is generally not highly land intensive. In contrast, recent proposals for green energy, in which vast territories are dedicated for monocultural plantations of agrofuels and wood-based biofuels, indicate a turn towards land-intensive energy production, in addition to agrofuels’ high water consumption and low energy return related to energy input (Borras et al. 2016; Kama 2020; Kröger 2013; Martinez-Alier 2011). The same concerns wind power, which is a spatially extensive, land-based mode of energy generation (Dunlap 2020; Huber and McCarthy 2017). Nonetheless, the indirect effects of fossil-fuel energy production – the networks of oil pipelines and the contamination of water sources critical for local livelihoods – render control over land and water resources a key point of tension also in hydrocarbon extraction (Breglia 2013; Cepek 2018; Pellegrini et al. 2020; Sawyer 2017).

The huge transformations provoked by different types of extractivism in access to and control over resources raise fundamental questions concerning to whom the ‘natural resources’ belong. These questions are particularly relevant in the global South where official and customary laws and tenured and usufruct rights are tightly interwoven, and extractive concessions and local residents’ territorial claims frequently overlap and clash (Kamphuis 2020). In situations of legal pluralism, complex procedures govern the acquisition of resource rights, while power asymmetries between corporates and small-holders differentiate their capacities and opportunities to rely on extra-economic forces to secure access to particular resource spaces (Dunlap 2020; Perreault 2013).

These dynamics have close connections to the biophysical properties of different natural resources, to the material conditions under which they are extracted, and how such conditions shape what is economically profitable and politically viable to extract (Bebbington and Bury 2013; Bridge 2014). To a certain degree, natural resources are rooted in sites: hydropower requires particular types of cascades, and soybeans and oil palms need certain kinds of climatic and soil conditions. Likewise, the geographic fixity of oil deposits and the huge investments needed to actualise their extraction mean that oil extraction is not easy to transfer to another location. Furthermore, oil’s material

characteristics pose special challenges for how to capture it, as drilling has to be executed without pause, twenty-four hours a day (Appel 2012, 696).

Struggles over access to resources encompass diverse forms of governance, cycles of accumulation and dispossession, and the recurrent appropriation of new spaces and new forms of life (Arboleda 2019; Wolford 2021). In Mexico, for example, historical struggles over resource access related to oil extraction include the nationalisation of oil reserves and state-led oil capitalism; neoliberal promotion of public-private partnerships and private subcontracting (Breglia 2013); recent neo-populist agendas, with a re-strengthened role for the state; and challenges posed by climate change and proposals for post-carbon economies. Diminishing conventional oil reserves have led to the exploration of deposits of shale oil, while plans for green energy have provoked shifts from discourses on 'peak oil' to 'carbon bubbles', suggesting that global petro-states might have more oil deposits than will be used (Harstaad and Wanvik 2017, 438). Analysis of shifting forms of governance and politics of recognition is important to understanding extractivism as a process with particular continuities and changes in the forms of gaining access to resources and in negotiating issues of responsibility related to the impacts effected.

State, governance and politics of recognition

Given the centrality of access to and control over natural resources, the state has a critical role in regulating resource extraction. Despite their differential power and capacity compared to global forces of capitalism, states play a significant role in steering property rights to lands, waters, and subsoil resources, enabling certain forms of resource access, granting licences for extractive operations, and establishing schemes for environmental governance (Ehrnström-Fuentes and Kröger 2018; Lund 2016; Tilzey 2019). Governments often envision sites of extraction as zones of expansion, hinterlands to be developed, and arenas for territorialisation, whereby the state seeks to consolidate its authority (Campbell 2015; Harris 2017; Nygren 2021). Furthermore, the state is often actively engaged in framing the public discourse to justify extraction in the name of development (Pedersen and Jacob 2017; Schilling-Vacaflor, Flemmer, and Hujber 2018). This concerns especially energy extraction, where strong state-business coalitions frequently exist. In many petro-states, where oil is a basis of the economy and a seedbed of popular imagination, ideas of sovereignty and oil resources as a national patrimony that benefits all citizens are tightly coupled (Breglia 2013; Johnson 2020; Perreault 2018; Watts 2011).

In contrast to mainstream, policy-oriented analyses, which often paint essentialist views of weak states in the global South, understanding the role of states in extractivism means questioning ideas of state institutions as given entities, while paying attention to competition and contestation as key parts of authority, and to how the governance of vital resources creates 'state-ness' (Lund 2016). As Emel, Huber, and Makene (2011) note, sovereignty is not always an exercise in self-determination standing in opposition to capital; rather, it is often the presupposition of capital. For extractive capital to be invested in a particular place, the state has a key role in producing legal, fiscal and proprietary conditions for capital accumulation (Scott 1998). Thus, the interests of extractive industries and states often align, especially when the time between the initial investment and eventual returns is lengthy and the capital must be assured a fixed temporality of

investment. The state is frequently expected to finance the infrastructure necessary for extractive operations, including the provision of roads, power transmissions, communications, and water networks.

As extractivism links certain modes of production to certain mindsets about human-nonhuman relations (Willow 2018; Wolford 2021), it is important to consider how the rationalities promoting extractivism shape practices of environmental governance. Diverse forms of governance are often strategically mixed, as hybridisation of state-led and market-based forms of regulation, and clientelist networking and neoliberal outsourcing serve to insulate extractive activities from public scrutiny and obscure issues of responsibility (Coates and Nygren 2020; Kojola 2019).

According to Lund (2020), political authority, constituted through (re)modified resource rights and views of responsibility, plays an important role in corporate-state-making, as extractive industries and the state often endorse each other's authority in the legitimisation of extraction. Simultaneously, multifaceted conflicts frequently appear between extractive companies, state agencies, non-governmental organisations, environmental-social movements, and heterogeneous groups of local people concerning the authority to make decisions over how environments are to be used, how the benefits and burdens of extraction are to be distributed, and who bears responsibility for the harms effected. The ways in which extractive-industry representatives tend to frame issues of responsibility have close links to the industry's highly expansionary and competitive nature and to the forms of governance that promote extraction and regulate possibilities for contestation.

Recently, many right-wing populist regimes have promoted accelerated extractivism, based on neoliberal development models and increased profit-making, for the benefit of 'the people' (Borras 2020, 5). These right-wing populist agendas have evoked particular responses among the poor, with few job prospects and scant opportunities to make a living off the land. Correspondingly, several left-wing populist regimes have pursued 'new' development models by means of neo-extractivism. For example, the populist regimes in Bolivia and Ecuador articulated policies of national developmentalism in the mid-2010s by forging alliances with counter-hegemonic groups comprised of peasants, semi-proletarians, landless labourers, indigenous groups, and domestically oriented class fractions of the bourgeoisie, through deploying a rhetoric of anti-imperialism, resistance against transnational capital, and revival of indigenous principles of the good life (Arsel, Hogenboom, and Pellegrini 2016). Rather than a fundamental alteration of capitalist social-property relations, the aim was to increase state interventions in the economy, and to tame counter-hegemonic groups through social welfare programmes to be funded by rents accrued from hydrocarbon and mineral extraction, operated increasingly by transnational capital. Simultaneously, the landed oligarchy was soothed through increased agro-food extractivism and state abstention from the pursuit of land reform (McKay 2017; Tilzey 2019).

Overall, striking relationships exist between accelerated extractivism and grinding inequality in the midst of abundance and accumulation (Bridge and Le Billon 2013). Simultaneously, long-term forms of social dispossession have made many residents in localities of intensive extraction highly suspicious of state authority (Harris 2017). However, as Lund (2016, 1205) notes, for many people there is only one thing worse than being controlled by political authority, and that is being forgotten, as it signifies

ignorance of the right to have rights and to be politically represented. On this basis, many people living close to sites of extraction not only seek tangible benefits from extractive companies, but acknowledgment as 'stakeholders' (Rajak 2011, 216). The extractive industries themselves cultivate strategies that keep such people enchained to networks of dependency, deploying tactics of economic persuasion that emphasise benefit-sharing, and mechanisms of political pressure that seek to tame dissent (Schilling-Vacaflor, Flemmer, and Hujber 2018). Asymmetric power relations provide significant opportunities for companies to trade off amongst local leaders. Simultaneously, many companies prefer governance that frames delicate negotiations with local communities as the responsibility of the state, building upon the state authorities' 'will to govern' and poor people's 'desire to belong' (de Vries 2016, 1–2).

In such interplays, local residents pursue their own agendas, with tactics ranging from everyday negotiations to legal struggles, social mobilisations, and political resistance (Kröger 2020), albeit often within highly uneven power relations. Through an established presence and diverse forms of allegiance, they seek to legitimise their right to possess the land (Lund 2016) and claim compensation for the harms caused by extraction. Nevertheless, consolidating rights is hard work, as people may have rights but no means to get them institutionally recognised (Ribot and Peluso 2003). Furthermore, recognised rights can quickly erode, especially when people hold usufruct rights based on land 'improvements' (Kröger and Nygren 2020). Although frontline communities seek to improve their positions in relation to extractivism, the conditions are rarely of their own choosing, given the power of the companies to manipulate the terms of territorial access and political recognition (Lund and Rachman 2018).

In addition to institutional rules and regulations, everyday power has an important role in shaping negotiations over authority. In his study of oil extraction in Nigeria, Watts (2004) shows how decisions over rights and responsibilities are formulated through ambiguous trade-offs between oil-company representatives, governmental officials, and local leaders. Competition over the authority to determine who can claim rights and what claims are to be recognised is a crucial part of exercising political authority. This means that rights do not simply flow from authority, but also constitute it, indicating that the control exercised by institutions produces authority, while the processes of claim-making 'breathe life' into the institutional will to exercise it (Lund 2016, 1201–1202). In politically charged, authoritarian circumstances, extractive companies and state officials often reinforce their joint authority through coercion and constraint, intimidation and abuse, and condescension and contempt (Borras 2020; McCarthy 2019; Tilzey 2019).

In the politics of recognition, formal and informal modes of governance and legal and shadow procedures of control are often strategically interlinked. Extractive industries build liaisons that straddle formal, informal, and shadow channels, seeking to licence their operations through informal networks with the 'right' officials and via clientelist relations with local people (Quist and Nygren 2015; Verweijen and Dunlap 2021). Porous relations of cooperation and collusion between extractive companies and the state enable an efflorescence of deals and the consolidation of authority through ties that act as channels of shared profit-making (Sud 2017).

Differentiated opportunities also characterise the extractive companies' and local residents' possibilities to frame the value of extraction and the symbolic meanings apportioned to land, property, and water rights. These opportunities are often shaped

by policies that impose a particular sociospatial order and suppress dissenting mobilisation through strict control of critical social movements, while rewarding those civil society groups who consent to collaborate within the schemes set by the companies and the state (Petras and Veltmeyer 2014). Strategies to repress counter-hegemonic claims help to break up social movements, while sophisticated political and psychological tactics are used to create strong internal surveillance mechanisms within relevant state institutions (Velázquez García 2016).

A distinctive feature of contemporary extractivism is its entanglement with various combinations of populism and authoritarianism, with heterogeneous right-wing and left-wing variants (Adaman, Arsel, and Akbulut 2019; Arsel, Adaman, and Saad-Filho 2021; Scoones et al. 2018). The recent rise of populist regimes can partly be explained through their ability to conjure a feeling of community among ‘working people’ (Shivji 2017, 1), using the language of taking care of those ‘pushed aside’ and ‘forgotten’ (Borras 2020, 26) and justifying neo-extractivism through discourses of anti-imperialism and national sovereignty (Andrade 2020; McCarthy 2019; Monjane and Bruna 2020).

We emphasise that the volatility of forms of governance in many sites of extraction, hierarchical negotiations over the distribution of benefits and burdens, and instabilities of global financial circuits and commodity markets for extracted products, are often the key tensions in extractivisms and associated environmental-social harms. Many people claiming compensation for harms affected have to cope with diverse kinds of insecurities and threats, especially in the COVID-19 circumstances when the possibilities for public consultation, political debate, and contestations over extractive operations have been suppressed. Meanwhile, the actors’ differentiated opportunities to engage in such politics produce interlayered scales, wherein politics *of* scale are also politics *among*, *across* and *within* scales (Nygren 2021). This invites analytical devices that are sensitive to multi-scalar connections and circuits, as many drivers of extraction, including investment capital and permit granting, are not physically proximate to the sites of extraction, yet profoundly shape their environmental-social dynamics (Arboleda 2019; Budds and Hinojosa 2012).

Environmental-social harms

In addition to struggles over access to territories and institutional recognition, extractivism provokes serious conflicts over environmental-social harms. A rich body of literature in political ecology, critical agrarian studies, and other related fields, addresses socially differentiated exposure to hazards affected by extractivism and the contextually different ways of claiming compensation (Conde and Le Billon 2017; Kröger 2020; Perreault 2013; Quist and Nygren 2015; Sveinsdóttir, Aguilar-Støen, and Bull 2021). Here, we emphasise that understanding how living amidst the hazards and harms associated with extractivism requires sophisticated analyses of how people acquiesce to, configure, and contest resource exploitation in their lived environments, and how they challenge the dominant views of who bears responsibility for environmental-social harms. Careful attention should be given to local people’s ways of recrafting their lives and livelihoods in drastically altered landscapes, against the backdrop of economic insecurities and environmental unknowns associated with conditions of post-extractivism.

In addition to sudden disasters, such as oil spills and gas explosions, it is important to consider less spectacular yet long-lasting effects of extractivism (Salas Landa 2016). The arguments made by extractive companies that their operations function in sound and sustainable ways frequently conflict with local residents' efforts to confront the hazards affecting their lives, as the contamination caused by oil drilling, mining, or large-scale oil-palm plantations accumulates little by little through a process of 'slow violence' (Nixon 2011, 2). Auyero and Swistun (2009) have demonstrated that the confusion of residents in informal neighbourhoods in Buenos Aires regarding toxicity related to a nearby petrochemical plant is the result of unequal power relations, wherein company representatives, state officials, and lawyers undermine residents' environmental suffering. Understanding people's experiences of injustice requires processual analysis, as the selective remembrance and forgetting of sufferings is often collectively produced (Perreault 2018).

Concerning negotiations over extractive companies' social licenses to operate, local residents often lack knowledge about companies' legal obligations and their own rights (Schilling-Vacaflor 2017). The techno-juridical terms used in agreements increase residents' dependency on companies and authorities, while socially differentiated governance creates rivalries within the targeted communities. The multi-dimensional aspects of benefit sharing are converted into bureaucratic consultations and financial transactions that monetise harm, while ignoring the broader issues of territorial control, political representation, and social wellbeing (Kamphuis 2020; Leifsen et al. 2017). Sometimes the social licenses to operate have been used to hide investment grievances and to render them legitimate (Ehrnström-Fuentes and Kröger 2017). Careful analyses are needed to understand how environmental-social harms are interpreted by those living through them, and whose views of suffering and vulnerability are disregarded in favour of companies' rhetorical arguments of extraction as a pathway to sustainable development. There is a need to address interlinked struggles over materiality and meanings in conditions where extractivism drastically alters agroecologies and hydrologies, and associated resource grabs and enclosures lead to social marginalisation, symbolic violence, and disregard of alternative knowledges Quist and Nygren (2019).

Using the analytical device of modularity, Appel (2012) delineates the tactics employed by oil companies in Equatorial Guinea to disentangle their activities from local life and operate 'just like' nothing had happened despite signs of significant harm. Appel's study illustrates how strategies to structure responsibility on the attenuated liability of contractual obligation allow oil industries to bemoan environmental degradation and social dispossession at the sites of extraction as if they are not complicit. As these tactics vary according to contextual regulations and shifting relationships between companies and local powerholders, oil industries need sophisticated plans to navigate prevailing legal, fiscal, and regulatory conditions and make their operations at the edge of legitimacy appear legal and justified. Recent research on the Ecuadorian indigenous groups' lawsuit against the Chevron Corporation shows the twisted ways in which the company's layered contracts and tiered subsidiary structure enable protracted legal appeals and judicial arbitrations as a way to eschew corporate liability (Pellegrini et al. 2020; Sawyer 2017).

Although many conflicts over extractivism hinge on highly contested environmental-social harms, these have seldom been analysed in political ecology from the perspective of the *socionature* of extractivism, by which we refer to the intimate entanglement of the

natural and social, and the biophysical and political, in environmental alterations (Linton and Budds 2014; Nygren 2021; Nygren and Rikoon 2008; Swyngedouw 2004, 2015). World-ecological perspectives are paying attention to global hazards and crises associated with extractivism, and to the transformation of nature as constitutive of capital accumulation (Moore 2015). Simultaneously, political-ecological and critical agrarian studies have called for nuanced analyses of shifting human-nonhuman relationships that examine extractive activities not merely as technical operations that occasionally inflict harm, but as processes that promote complex changes in socio-environments, with multi-dimensional effects (Li and Semedi 2021). More attention should be devoted to interlocking socio-environmental processes and feedback loops, the consequences of which can be difficult to predict, and highly disruptive for humans and other beings, especially because environmental-social effects often occur along timescales that cross generations (Budds and Hinojosa 2012; Taylor 2015). To examine mining-related water contamination, for example, it is necessary to analyse both biochemical processes and forms of governance that give rise to them, with recognition that rivers often transport contaminants to far-away places, and many contaminants accumulate in sediments.

Earlier political-ecological and critical agrarian studies tended to present 'nature' as a mere context for extraction, while discussions of harmful effects concentrated on how they impact human beings. Environmental injustices, however, also affect the nonhuman realm (Schlosberg 2013). Current political-ecological approaches emphasise examination of extractivism within a broad, more-than-human perspective, involving a critique of anthropocentric views of justice (Castellanos-Navarrete 2021; Srinivasan and Kasturirangan 2016). In contrast to flat-ontology perspectives, where human-environment relations are analysed as if people, animals, and inorganic nature were interacting on a single playing field and nonhuman forces had agency – defined simply as the capacity to leave a track (Latour 2005, 71–72) – we emphasise that political-ecological approaches which recognise differences in actions between human beings and natural forces are needed to understand the drastic effects of extractivism (Castellanos-Navarrete 2021). Natural forces often circumvent human-imposed boundaries, whether oil contaminants transported by water or soils salinated by the opening of canals for hydrocarbon transportation, with complex environmental-social effects (Nygren 2021). Such approaches enable understanding of how the natural and the social are embedded in extractivism, although further analyses of the human and other-than-human interactions are needed (Escobar 2008; Fraser 2021; Kröger 2020). Simultaneously, issues of social responsibility for harms effected by extractivism require careful attention.

Large-scale extractivism has links with many kinds of hazards and crises, including pandemics, demonstrating that nature sets certain limits on human control over biophysical processes, while human activities, especially global production-consumption systems, profoundly transform nature (Montenegro de Wit 2021). The COVID-19 pandemic has highlighted the intrinsic links between human, animal, and ecological health, and how the 'metabolic rift' – the sociospatial and material separation of nature and society characteristic of current agro-extractivism – can seriously affect planetary health (Wallace et al. 2020). Meanwhile, increasing inequalities between the global North and South have strengthened uneven patterns of extractivisms and invisibilised diverse struggles for justice and transformative alternatives. As Hamouchene (2021) notes, dialectical relationships between extractivisms and alternatives need more attention, based on the fact that

extractivism shapes the political dynamics and entrenched developmental pathways, while possibilities to enhance conditions related to equality and justice depend on carving out new post-extractivist futures.

Environmental justice and claims for transformative alternatives

In addition to past and present forms of global extractivism, initiatives should be explored that diverge from environmentally and socially harmful paths of extractivist development and make claim to justice and social transformation (Borras 2020; Feola 2020; Massarella et al. 2021). These often unnoticed initiatives include new forms of contestation (Kröger 2020), agendas for resource redistribution, new forms of institutional recognition and political representation (Nygren 2014), and alternative production-consumption networks (Ehrnström-Fuentes 2020; Obeng-Odoom 2021). In many parts of the global South, heterogeneous social groups are engaged in multi-scale struggles for official recognition of their territorial rights, and fair compensation for and social recovery from the harms effected by extractivism (Peschard and Randeria 2020; Scoones et al. 2018).

In recent years, environmental justice has become an important analytical device for understanding how local people address access to resources, control over territories, and distribution of benefits and burdens related to extractivism (Kamphuis 2020; Schlosberg 2013; Wayessa and Nygren 2016). Through initiatives to challenge dominant forms of sociospatial ordering and create space for counter-territorialisations, they endeavour to create meaningful ways to engage in decision-making, show evidence of harmful effects of extraction through alternative knowledges, and halt its most expropriating forms, together with translocal allies. While extractive companies and state authorities seek to make incommensurable harms commensurable by building equivalence between loss of livelihood and monetary compensation, frontline communities emphasise that it is impossible to compensate financially for loss of livelihoods and social well-being (Leifsen et al. 2017; Quist and Nygren 2019). Understanding these struggles requires consideration of multiple aspects of justice, including resource redistribution, institutional recognition, political representation, and social recovery (Nygren 2018). Justice as redistribution refers to the fair distribution of benefits and burdens, while justice as recognition indicates the right to be institutionally recognised (Fraser 2009; Lund 2016). Justice as representation indicates incorporation of different stakeholders in diverse spheres of decision-making in socially inclusive and non-racialised ways (Pulido 2017; Walker 2009), while justice as recovery refers to people's ability to reproduce their livelihoods and their relationships to 'nature' in a manner different from the logic of 'taking without giving' prevalent in contemporary extractivisms (Willow 2018).

Advanced notions of justice require careful consideration of temporal horizons to understand how collective memories shape current struggles and future aspirations for responsibility. Many struggles for justice wax and wane, as organised struggles pass through phases of latency and quiescence and visible confrontations alternate with invisible contestations and everyday contentions (Schilling-Vacaflor, Flemmer, and Hujber 2018). Unacknowledged claims are stored for more propitious moments, and obsolete struggles are retrieved from the past when a better opportunity emerges (Lund 2016). This requires contextually grounded analyses, with attention paid to how people make claims for justice through formal, informal, mainstream, and subaltern channels.

Extractivism has special resonance for contemporary political-ecological and critical agrarian studies on social movements (Conde and Le Billon 2017; Edelman and Borras 2016; Huber and Joshi 2015; Kröger 2020; Petras and Veltmeyer 2014). Accelerated extractivism has often encountered vocal forms of resistance, especially when local people feel that companies are taking away the minerals ‘beneath their feet’ and contaminating their water sources (Bebbington and Bury 2013, 6). Justice advocates try to repoliticise extractive operations to mitigate the power asymmetries involved in negotiations over what constitute plausible claims for justice, who is entitled to make such claims, and whose claims deserve consideration (Fraser 2009; Wolford 2010). Broken promises of transformations in extractivist production systems have given rise to relatively vibrant movements seeking environmental justice in many parts of the global South (Edelman and Borras 2016; Tramel 2016). Simultaneously, one should avoid celebrating mobilisations for their own sake, as contestations do not necessarily ensure removal of social inequalities or recognition of marginalised people’s rights through binding decisions (Fraser 2009; Teivainen and Trommer 2017).

Many of these initiatives searching for transformative alternatives acknowledge that it is difficult to achieve significant changes in global extractivism through minor transitions that do not alter wider sociopolitical structures (Borras 2020; Scoones et al. 2018). Many of them challenge the neoliberal development model, which pursues economic growth, capital accumulation, and increased consumption of goods and services through commodification of human and other-than-human lives, violent appropriation of natural resources, and exploitation of bodies and minds (Büscher et al. 2021). According to these advocates, rents accrued from extractivism by the host-states may temporarily mitigate poverty, but often at the cost of deepening environmental-social harms. Most of these movements emphasise the need to address the structural bases of resource insecurity and social inequality through land redistribution, recognition of indigenous resource rights, and creation of decent working conditions for those in precarious, low-paid jobs (Levien, Watts, and Hairong 2018; Tilzey 2019; van der Ploeg 2020).

To understand the plurality of these initiatives, it is important to recognise their diverse agendas and multiple strategies, including struggles to halt extraction, to cope with it, or to manoeuvre among and make sense of the shifting contours of politics to demand new forms of governance and novel forms of compensation (Bebbington and Bury 2013; Edelman and Borras 2016; Quist and Nygren 2015). There are cases where resistance groups have succeeded in blocking destructive projects, using strategies that promote contentious agency (Kröger 2013). Simultaneously, it is important to note struggles that are not part of well-organised movements and thus do not easily gain the attention of global media, yet have a particular role in contesting extractivism, defending rights to clean water, diverse agroecologies, and possibilities for local people to control their environments and lifeworlds. Using innovative tactics to make extractive industries responsible for adverse impacts, they announce silenced grievances and invisibilised sufferings though means crafted according to intersectional concerns related to class, gender, age, ethnicity, and race (Das 2011; Nygren and Wayessa 2018; Pulido 2017; Scoones et al. 2018).

Many of these initiatives form multi-scale alliances and act flexibly through open confrontations, hidden negotiations, and everyday acts of resistance (Scoones et al. 2018). To understand the risks embodied in such struggles, it is important to consider how

hegemonic discourses and regressive politics seek to undermine these alternative voices, co-opt their leaders, and suppress their contestations with arguments that the claimants are involved in partisan politics and their agendas are 'anti-State' or 'anti-development' (Vergara-Camus and Kay 2017; Verweijen and Dunlap 2021). Simultaneously, populist politicians seek to institutionalise their demands and appropriate their discourses and bases of organisational support (Borras 2020; Tilzey 2019).

Despite many kinds of challenges, these initiatives have changed the dynamics of contemporary extractivism. It is nowadays rare that a hydrocarbon or hydropower project can proceed without significant public debate on its impacts. The fair distribution of benefits and burdens and the proper ways to consult affected populations are also subjects of lively discussion (Bebbington, Bury, and Gallagher 2013; Kamphuis 2020). In contrast to companies' often rhetorical statements of corporate responsibility and community participation, there are wide calls for multi-dimensional respect for local territorial rights and just compensations for altered livelihoods and lifeworlds. Many justice movements demand a more rule-driven state, with a stronger regulatory presence, better protection of human rights, and responsible safeguards against environmental degradation, social dispossession, and labour exploitation (Hall et al. 2015; Hosseini et al. 2020; Kröger 2020; Scoones et al. 2018).

Such initiatives highlight fundamental questions concerning the rights to own, use, control, benefit from, and dispose of resources that seriously affect local people (Kamphuis 2020). They call for significant changes in structural bases of inequality, and demand novel forms of production based on land security and fair redistribution of access to resources, instead of neoliberal models premised on accelerated extractivism and large-scale agribusiness. Other crucial questions raised include how to repair landscapes that have been drastically altered and how to build post-extractive environments and livelihoods in places shaped by decades of extractivism. In contrast to mainstream policies, which promote technocratic fixes, technological transitions, and civic self-responsibilisation (Massarella et al. 2021; Nygren 2016; Scoones et al. 2018), many of these initiatives struggle to develop alternative livelihoods and more just forms of living with 'nature'.

Still, a major challenge involved in such efforts is how to join together diverse groups of peasants, indigenous communities, fishers, pastoralists, the lower middle class, landless labourers, and those working in informal and fragmentary sectors – all of those who need to minimise their consumption and maximise their labour in order to survive – with other social forces in the search for transformative alternatives (Bernstein 2010; Borras 2020; Shivji 2017). Questions arise of how to link small-farmer and peasant organisations, indigenous and women's movements, environmental and human-rights advocacy groups, pastoralist associations, fisher organisations, and climate justice and food sovereignty groups to broader 'people-in movements' (Dunlap 2020); and how to build multi-sectoral networks around transformations that connect people across class, race, gender, and generational divides and geographical boundaries, without institutionalising them and making them dependent on conventional international organisations (Scoones et al. 2018). The future of these initiatives might depend on their ability and willingness to co-construct a pluralist platform for a broad-based project for transformation (Borras 2020; Hosseini and Gills 2020).

Any exploration of these initiatives must also consider the scenarios for post-pandemic recovery. The COVID-crisis has demonstrated the key vulnerabilities of the global food system: industrial livestock production puts tremendous stress on animals' immune systems while narrowed genetic diversity leaves them susceptible to viral infections, with the threat of animal diseases spreading to humans. The risk of zoonotic diseases is increased by habitat fragmentation, climate change, removal of the protective barriers of biodiversity, heavy use of antibiotics, and shifting human-nonhuman interactions (Montenegro de Wit 2021; Wallace et al. 2020).

The COVID-19 crisis has exposed the fragility of the global food system also in the sense that many countries are highly dependent on food imports, and yet are large agro-food exporters. This translates, in times of crisis, into serious shortages and surpluses, enlarging the vulnerability of hundreds of millions of people (van der Ploeg 2020). Recently, many transnational agribusinesses have expanded their operations in the global South, taking advantage of cheap land, cheap labour, and loose regulation, while millions of Southern migrant labourers work in precarious conditions in Northern agricultural enterprises. The COVID lockdowns have upended their lives, together with those of many domestic labourers, small-scale farmers and fishers, informal food vendors, and rural-urban migrants, whose insecure jobs have been lost or put on hold (Montenegro de Wit 2021).

In this context, transnational agrarian and food justice movements – such as La Vía Campesina and the International Planning Committee for Food Sovereignty – have increasingly questioned arguments that food security can be guaranteed through 'free markets' (Akram-Lodhi 2021). Many of these movements call for fundamental changes in the ways food is produced, traded, and consumed. They claim that biodiversity-based, regenerative agriculture helps mitigate the effects of climate change, overcome the pesticide treadmill, maintain landscape complexity and buffer viral spill-overs (Altieri and Nicholls 2020). These initiatives envision forms of farming that are not based on increased circularity, but promote dignified livelihoods, fair working conditions, and just production-consumption networks that enhance resilience and contribute to sustainability within existing ecological boundaries (Büscher et al. 2021). Although these initiatives do not present a uniform agenda, many of their ideas are noteworthy for a post-COVID recovery.

Scope of this Special Forum collection

The articles of this Special Forum provide several contributions to current debates on extractivism. Although they vary in geographical and sectoral focus, the articles share an interest in how agrarian landscapes, lives, and livelihoods have been and are transformed by global extractivisms and cognate forms of governance, struggles over environmental-social harms, and claims for social transformation. The contributions are rooted in critical agrarian studies, political ecology, and political economy, offering empirical cases from both the global South and global North, and demonstrating their complex interlinkages. The articles highlight different forms of extractivism in various geographical and political-economic contexts, their direct and indirect multi-scalar implications, and the global patterns and systemic changes in the pace, intensity, and value webs of multifaceted extractive operations.

The article by Julie de los Reyes provides a highly inspiring examination of the financialised practices that shaped the Pascua Lama project in Chile and Argentina, one of the most ambitious gold mining projects to be developed in mining history. It follows attempts by Barrick Gold, the project developer, to turn the project into a source of (maximum) shareholder value for institutional investors. These attempts mobilised particular forms of interventions that differ from conventional modes of extraction. De los Reyes argues that this new approach calls for the 'production of an extractive space' that is 'conducive to the extraction of financial value'. The article contextualises some of the changes experienced in the Atacama region of Northern Chile, in the ways that land, resources, labour, and capital have been assembled and reassembled during Pascua Lama's development, in light of this goal. It shows how these socio-spatial arrangements feed into expectations of financial value – and their potential to enable – or in the case of Pascua Lama, disrupt accumulation processes. The study contributes to better understanding of the 'conditions of possibility' of mineral extraction, as a place-based/nature-based activity under a financialised regime, in ways that could help ongoing resistance against its expansion into new territories.

The article by Natacha Bruna offers an interesting analysis of how contemporary accumulation is based on 'extractivism'; where unindustrialised global South countries work as extractive hubs by supplying primary commodities and energy to industrialised countries. The emergence of climate change narratives and its implications for the capitalist system, call for going beyond efficiency-driven extractivism to further analyse the implications of green policies. The study shows that new strategies of capital accumulation arise through the creation of new commodities, vehicles of accumulation and legitimisation strategies. By using the extractivism framework, it is possible to grasp how emission rights are expropriated, transformed into carbon permits, and transferred in favour of external accumulation. By exploring Mozambique's climate change policy, Bruna is able to show that green policies imply, beyond resource grabbing, the extraction and expropriation of the rural poor's emissions rights, which refer to the ability of the rural households to rightfully use and benefit from ecological assets. The article puts forward 'green extractivism' as a new variation of extractivism, which constitutes extracting and expropriating emission rights, by reducing the necessary consumption of the poor, while feeding and legitimising external capital accumulation with adverse implications to extractive regions.

The article by Daniela Andrade offers a critical analysis of extractivism in Brazil during the early-2000s. In contrast to what has previously been highlighted in the literature on neo-extractivism in Latin America, she argues that the expansion of extractive activities in Brazil, especially related to agriculture, is associated with the depletion of the state and society at large. Andrade's article shows in an interesting way that in the context of neoliberalism in Brazil, the primacy of financial accumulation has reinforced a regressive productive structure, dependence on foreign capital, and a systematic spoliation of the state and society. This is what Andrade calls 'neoliberal extractivism'.

The article by Christopher Chagnon et al. provides a detailed analysis of different definitions of extractivism prevalent in critical agrarian studies, political ecology, and political economy literature. It proposes global extractivism as an organising concept to examine different sectors of extractivism in a variety of realms, their historical trajectories, global connections, and multifaceted implications. The article explores how extractivism

has morphed, travelled, and expanded, theoretically and spatially, over time, and how more and more scholars are deploying the concept to understand how extractivism works as an ensemble of self-reinforcing practices, ideologies, and power differentials underwriting and rationalising socio-ecologically destructive modes of organising life. The article emphasises the need for analysing relationships between extractivisms and multiple global crises, including climate change, ecological degradation, pandemics, and human displacement. It encourages the further refinement of the concept to enhance its utility across a variety of critical social sciences.

Agenda for future research

By drawing on political ecology and critical agrarian studies this introduction has explored the interconnections between (1) access and control over resources; (2) the politics of recognition and responsibility; (3) environmental-social harms; and (4) claims for justice and transformative alternatives related to global extractivisms. To advance future research on extractivisms and alternatives, we propose six thematic clusters – temporality, space, socationature, state, scale, and social contestation – in which theoretically sophisticated and empirically rigorous work is needed. These topics are highly relevant for a wide range of scholars, policymakers, and activists working on resource politics, justice, and sustainability in the global South.

First, more profound analyses of **temporality** are needed to evaluate the long-term effects of extractivisms, and the historical trajectories of their contentions. Postcolonial scholars have warned against linear views of ‘development’ (Levien, Watts, and Hairong 2018, 854), while Edelman and Worford (2017, 971) emphasise that it matters if history is treated as a canvas on which things unfold, or as a process of struggles across time. Hybridity should also be historicised so that accelerated forms of extractivism and altered human–other-than-human relations are seen in the light of their temporal context. Better understanding is needed of how the values of different resources have changed through shifting forms of extractivism and shifting notions of ‘development’, an issue particularly relevant in the current age of the Capitalocene (Moore 2015), or Plantationocene (Worford 2021), with rapid changes in patterns of resource use.

Spatial control involved in extractivism, and its implications in marginalised areas of the global South, also deserves greater attention. This would enable theoretical understanding of how people inhabiting areas of extensive extraction have been excluded from making their own history, developing alternative ways of being in the present, and aspiring to novel futures. It would illuminate how different forms of discrimination, based on class, gender, and race intersect in politics of vulnerabilisation. There is also a need for better understanding of the spatial requirements of different sectors of extraction, and how extractivism territorialises landscapes and restructures environmental-social relations. Attention to peripheries and margins can demonstrate how centres and ‘hubs’ are defined, and which forms of resource production are considered ‘valuable’ (Edelman and Worford 2017; Watts 2018). Space is intimately connected to control over environments and inhabitants, as marginalised people inhabiting territories with resource endowments are circumscribed in ways that appropriate their resources and restrict their political agency (Levien, Watts, and Hairong 2018; Lund 2020). Extractivism in oil-rich wetlands, mineral-rich mountains, and agricultural areas targeted for agrofuel/biofuel

plantations often generate violent forms of control and coercion, especially when local land use is based on institutionally unrecognised, usufruct rights. Analyses that take seriously the contextual variations involved in such dynamics are urgently needed.

Third, more sophisticated research is needed on shifting **socionatures**, which recognises that the political, ecological, social, and hydrological aspects of extractivism are intimately interlinked, and that analyses of concurrent impacts need to be extended into altered environmental-social interactions in more-than-human realms (Castellanos-Navarrete 2021; Collard et al. 2018; Nygren 2021; Swyngedouw 2015). We call for multi-scale analyses of environmental-social impacts of extraction, and of strategies deployed to countervail the prevalent trends of ecological degradation and environmental vulnerability. There is a need for empirically rich and theoretically rigorous studies of people's shifting relationships with landscapes drastically altered by extractivism, essential for understanding multiple hazards and harms. Giving rise to further vital avenues for theoretical development, the issue of intensified re-crafting and subjugation of everything to market logic is crucial: soil structure and plant genetics, human bodies and labour practices, access to modes of production and circuits of distribution and consumption (Edelman and Worford 2017). Such developments depend on the recurrent 'making' of new resources and new resource frontiers (Kröger and Nygren 2020; Lund 2020), giving rise to commodity supercycles and accelerated accumulation through social dispossession and labour exploitation (Arboleda 2019). The COVID crisis provides another window onto volatilities of global extractivisms, crucial for novel theorising of the environmental-social harms involved.

Fourth, better understanding of the role of the **state** is needed in relation to extractivism and transformative initiatives. Thousands of hectares of land in different parts of the world, previously used for small-scale agriculture, have been transformed into landscapes of extraction, with huge environmental-social impacts. This calls for detailed analyses of the role of the state in regulating land use and access to resources and shaping forms of institutional recognition. We suggest rigorous analyses of state politics in light of neoliberal extractivism, as well as the dynamics of populism that promote the legitimacy of the state-capital nexus by means of compensatory welfare programmes – and how such policies are premised on the proceeds of extractivism. There is a need for analyses of the role of the state in the search for social transformations, rather than overemphasis upon the self-managed grassroots 'counter-powers'. The way in which post-extractivist states might be co-produced by novel alliances of state and other actors should be examined in close detail.

Fifth, it is essential that the multi-**scale** dimensions of extractivisms – with interlinked sectors and scales – are systematically analysed and new theorisations on complex patterns and conjunctures of global extractivism developed. As the planetary scale of extractivism risks deepening environmental-social contradictions, further studies are needed to integrate diverse sectors into a global analysis of extractivisms and initiatives for transformations. Recent theorisations of the circulation of capital could be augmented to globalised circuits of extractivism, with their multifaceted sociospatial, financial, infrastructural, and logistic landscapes, and 'complex interdependencies, crisis-tendencies, and points of intersection' (Arboleda 2019, 2). This could advance examinations of turbulent alterations in multi-scale processes of operation, distribution and consumption, and enable better understanding of the hazards and crises entailed (Rempel and

Gupta 2021). Recent organisational restructuring in global extractivisms has triggered new forms of inequality, as the workforce is increasingly polarised in terms of gender, race, and nationality, with a proliferation of subcontracted, temporary, and piecemeal labour (Levien, Watts, and Hairong 2018). There is a need to advance theorisation on the interrelations between land, labour, class, race, and gender-based forms of discrimination, and their implications for social mobilisations.

The sixth topic that needs rigorous theoretical and empirical analysis is **social contestations** and initiatives for transformative alternatives. Novel angles of examination are needed to understand how such initiatives are constrained by neoliberal development models, authoritarian populism, and suppression of movements seeking critical transformations. Also worthy of investigation is how recent innovations in logistics and enlarged commodity circuits have stimulated creative forms of transnational contestation that take place beyond extractive sites, although directly connected (Arboleda 2019). Research is needed on how diverse initiatives and movements are linking horizontally across classes, and vertically through transnational coalitions, calling for economic restitution and redistribution of access to and control over the key means of production, while simultaneously struggling for institutional recognition, ecological regeneration, and social recovery (Borras 2020). As many of these initiatives seek to remake economies and politics in ways that respect ecological limits, claim for justice, and call for diverse development models (Büscher et al. 2021), considerable research is needed to understand how these strategies may be accomplished within a world beyond COVID-19.

Acknowledgements

The authors want to thank the editor of the *Journal of Peasant Studies*, Saturnino (Jun) Borras for highly valuable comments on the first draft of our manuscript.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by Academy of Finland [grant numbers 1295044, 1317319, 253680]; Koneen Säätiö [grant number 4705967].

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Anja Nygren is Professor of Global Development Studies at the University of Helsinki, Finland. Her research interests include oil extractivism, political ecology, resource frontiers, water and vulnerability, urban displacements, and environmental justice. She has carried out long-term research in Mexico, Honduras, Nicaragua, and Costa Rica. She has published articles in many scientific journals, including *Annals of the American Association of Geographers*, *Critique of Anthropology*, *Development and Change*, *Geoforum*, *International Journal of Urban and Regional Research*, *Journal of Hydrology*, *Journal of Peasant Studies*, *Society & Natural Resources*, and *World Development*.

Markus Kröger is Associate Professor of Global Development Studies and Academy of Finland Research Fellow in the Faculty of Social Sciences at the University of Helsinki, Finland. He is the author of *Contentious Agency and Natural Resource Politics* (2014), *Iron Will: Global Extractivism and Mining Resistance in Brazil and India* (2021), *Studying Complex Interactions and Outcomes Through Qualitative Comparative Analysis: A Practical Guide to Comparative Case Studies and Ethnographic Data Analysis* (2021), and *Extractivisms, Existences and Extinctions: Monoculture Plantations and Amazon Deforestation* (2022).

Barry Gills is Professor of Global Development Studies at the University of Helsinki, Faculty of Social sciences. He is the Editor in Chief of the journal *Globalizations*, and co editor of the Rethinking Globalisations book series (Routledge). He is a founding member of the Extractivism and Alternatives Initiative (Exalt), the Peoples Sovereignty Network, and the Societal Transformations working group of the World Academy of Art and Science.