



Achieving Food System Resilience Requires Challenging Dominant Land Property Regimes

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OPEN ACCESS

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Specialty section:

This article was submitted to
Social Movements, Institutions and
Governance,
a section of the journal
Frontiers in Sustainable Food Systems

Received: 21 March 2021

Accepted: 11 August 2021

Published: 14 September 2021

Citation:

Calo A, McKee A, Perrin C, Gasselin P, McGreevy S, Sippel SR, Desmarais AA, Shields K, Baysse-Lainé A, Magnan A, Beingsner N and Kobayashi M (2021) Achieving Food System Resilience Requires Challenging Dominant Land Property Regimes. *Front. Sustain. Food Syst.* 5:683544. doi: 10.3389/fsufs.2021.683544

Although evidence continues to indicate an urgent need to transition food systems away from industrialized monocultures and toward agroecological production, there is little sign of significant policy commitment toward food system transformation in global North geographies. The authors, a consortium of researchers studying the land-food nexus in global North geographies, argue that a key lock-in explaining the lack of reform arises from how most food system interventions work through dominant logics of property to achieve their goals of agroecological production. Doing so fails to recognize how land tenure systems, codified by law and performed by society, construct agricultural land use outcomes. In this perspective, the authors argue that achieving food system “resilience” requires urgent attention to the underlying property norms that drive land access regimes, especially where norms of property appear hegemonic. This paper first reviews research from political ecology, critical property law, and human geography to show how entrenched property relations in the global North frustrate the advancement of alternative models like food sovereignty and agroecology, and work to mediate acceptable forms of “sustainable agriculture.” Drawing on emerging cases of land tenure reform from the authors’ collective experience working in Scotland, France, Australia, Canada, and Japan, we next observe how contesting dominant logics of property creates space to forge deep and equitable food system transformation. Equally, these cases demonstrate how powerful actors in the food system attempt to leverage legal and cultural norms of property to legitimize their control over the resources that drive agricultural production. Our formulation suggests that visions for food system “resilience” must embrace the reform of property relations as much as it does diversified farming practices. This work calls for a joint cultural and legal reimagining of our relation to land in places where property functions as an epistemic and apex entitlement.

Keywords: food system transformation, food sovereignty, agroecology, resilience, property regimes, land tenure, land reform

INTRODUCTION

Although evidence continues to indicate an urgent need to transition food systems away from industrialized monocultures and toward agroecological¹ production (IPES Food, 2016; Clapp and Moseley, 2020), there are only few signs of significant policy commitment toward food system transformation in global North geographies (Lang et al., 2018; Pe'er et al., 2019). We, a consortium of scholars studying the land-food nexus, argue that reticence to directly confront the logics of global North² property regimes is a key lock-in that waters down food system reform ambitions. In a lock-in scenario, a dominant technology or socio-technological system creates a pattern of path dependence, excluding alternative technologies (like agroecology) even if the alternatives are superior, demanded by citizens or other actors, or indicated by scientific evidence (Vanloqueren and Baret, 2009). Private property norms in many global North contexts presents a structural challenge to the emergence of an equitable and resilient food system.

In such geographies, private property regimes take the form of a strong “ownership” or “castle-and-moat” style (Sax, 1993; Sax, 1451), distributing authority of decision making to rights holders, dispensing capacity to adapt to current owners of property and their heirs, and entrenching incentive structures aligned with forms of exploitative and exclusionary resource use (Shoemaker, 2021). These regimes present an intractable tension between individual liberties guaranteed by the state and the urgent structural changes required of a food systems transition. For the food systems of the global North, a landscape of competing private farmland businesses makes systematic behavior change counter intuitive (van der Ploeg et al., 2019) while simultaneously encouraging trends of farmland consolidation, market articulation (Thorsøe et al., 2020), asset financialization (Howard, 2016; Fairbairn, 2020), and narrowing rural succession patterns (Calo, 2020a).

The allocation and maintenance of property rights is a core function of Westernized liberal state-making (Sikor and Lund, 2009), which may explain the reticence for direct reform of property relations even if changes in land use is a consensus policy choice (Trauger, 2014). Fundamentally, agroecology operates through ecological and social interdependencies at the farm, field, landscape, and governance levels. The forms of collaborative land and resource access regimes like commons,

collectives, and solidarity markets that tend to be associated with emblematic models of agroecology (Miery Terán Giménez Cacho et al., 2018) contrast with the atomized and competitive logics of land divided into parcels with strongly guaranteed individual rights. Proposing new access regimes that encourage land use consistent with agroecology therefore challenges the legitimacy of the state, rendering such policy ideation unattractive.

While the connection between land governance and food systems has long been an important area of research (Wittman et al., 2017), research on agricultural land reform policies or land tenure innovations has largely been relegated to the global South, whereas states in the global North rarely challenge the socio-legal commitments to property (Borras and Franco, 2012). Instead, food system reform efforts often choose (implicitly or explicitly) to operate *through* dominant logics of property to achieve their objectives, like the use of easements to protect farmland from development (Morris, 2008), the use of certification schemes (Guthman, 2009) and the policy dominance of ecosystem service frameworks that aim to incentivize change amongst existing agricultural land owners (Büscher and Fletcher, 2019). It is within this property context that application of resilience thinking to food systems tend to unfold, in which the relative power of human actors to adapt to change is subsumed by technical analysis, the goal of community self-reliance abdicates state action (Cretney, 2014) and the singular scales suitable for analysis elides the cross-scale forces that may prefigure adaptability and present lock-ins (Olsson et al., 2014).

We argue that agroecology has failed to scale up when linked with dominant property models because of two key reasons. First, agroecology's alignment to collective use rights stands in direct contrast to the primacy of private property relations in late-stage capitalist economies. Second, concentration of ownership and/or access, and rising farmland prices restrict access for small scale farmers who seek land for diversified farming operations (van der Ploeg et al., 2015). These contradictions between agroecological transition and property relations endemic to developed economies have not been adequately highlighted.

Research on agrarian transition in the global South shows how formalization of land tenure to global investment capital changes the social, environmental and economic dynamics of local food systems (Akram-Lodhi and Kay, 2010). Research shows how land access is negotiated through informal power relations (Ribot and Peluso, 2009), how logics of “under-utilized” land enroll the state in large-scale contract farming (Li, 2011), and how movements of dispossessed peoples deploy counter logics to secure new land rights (Desmarais, 2002; Anthias, 2018). This work focuses on the penetration of capitalist farming relations into non-capitalist land tenure relations like common lands, Indigenous territories, and areas of shifting cultivation (Hall et al., 2011). In the global North, however, the centrality of agricultural land tenure has faced less scholarly scrutiny establishing a pattern where: “understandings of land were largely neglected in agrarian studies, unless land was ‘othered’” (Sippel and Visser, 2021, 272). The aim of remaking land tenure to foster food sovereignty and agroecology amidst a seemingly settled system of property rights (Bromley and Hodge, 1990) poses numerous unanswered questions.

¹Agroecology is a process to meeting food production needs through complex working landscapes that encourages the maintenance of biodiversity as a tool to reduce the need of off-farm inputs. While agroecology began as a study of the agronomic ways certain food systems could produce nutrient dense, culturally relevant diets with low external inputs, it has expanded to include the types of social relations and governance regimes that support and expand these forms of food production, indicating new emancipatory labor and market relations brought forth via social movements and policy change.

²We recognize the term global North may be unhelpfully homogenizing, but is an improvement on terms such as developing and developed. We take the term global North to generally indicate geographies with Western-liberal political ideologies, higher comparative per capita gross domestic product, and service-oriented economies. For the purposes of our paper, we aim for the term to conjure locales where the strong ownership model of property is expressed in the law in the social mind.

Instead of working through the logic of property, we argue that visions for food system resilience must embrace the reform of property relations as much as it does diversified farming practices. Direct engagement with property relations will help to advance resilience thinking to engage with the more transformational domains of power, agency, and politics (Olsson et al., 2014). At the same time, we recognize that there may be some “non-reformist reforms” that create spaces for alternatives to emerge (Gorz, 1964). Squarely addressing the socially constructed rules of property relations that distribute the assets forming the basis of the food system is central to understanding and then providing the “how” of food system transformation.

TOWARD A LAND LOGICS FRAMEWORK

Our perspective complements recent work that similarly centers the role of land in differing dimensions of food system reform. Kepkiewicz and Dale (2018) demonstrate how goals of food sovereignty are incongruent with the legal underpinning of settler colonies like Canada, and that land must be decolonized and repatriated before food justice objectives can be realized. Borras and Franco (2012) put forth the concept of “land sovereignty” as an underdeveloped aspect of food justice literature, although their focus is more the global South. Sippel and Visser’s (2021) concept of “land imaginaries” demonstrates how narratives and imaginaries of what land is, can, and should be, are central to reworking land use arrangements, whether into new, financialized or more equitable, non-capitalist/non-property-based forms. Shoemaker (2021) analyzes the relationship between the way property is legally constructed and how this leads to racial injustice in the US rural sector. Importantly, Horst et al. (2021) attempt to advance a “land justice” research agenda through the mechanisms of international comparison and dialogue.

We aim to add to this percolating attention toward the logics of land and property as an upstream element of meaningful systems transition through a brief exploration of emerging international cases where the “ownership” model of property is usually entrenched. We show how a focus on the logics through which land is used, accessed, valued, and controlled provides insights into how food system transformation visions hinge on the ways property regimes are expressed or contested. This method of examining the “land logics” that may prefigure pathways of agrarian transitions emerged from series of international collaborations between the authors who found that their central concern of advancing food system transformation in a global North context was repeatedly confounded by entrenched land property regimes—and the associated need to put this much more prominently on the research agenda. We thus set out to develop an initial comparative case analysis—based on our respective geographical foci—from the standpoint of identifying how property regimes condition food systems change potential.

In the first two cases, contestations over large-scale and/or foreign agricultural land acquisitions have led to a reinvigoration of the national significance of land with states altering their legal frameworks for the acquisition of land by foreigners or by

corporate actors (e.g., Fairbairn, 2015; Desmarais et al., 2017; Sippel and Weldon, 2020). Cases from Australia and Japan demonstrate how the state, facing pressure from civil society groups to address increased land acquisitions and concerns over food security, may leverage legal, and cultural norms of property to legitimize their control over the resources that drive agricultural production. The effect is the deployment of property norms to shut down alternative land governance and food system reform pathways.

Land struggles have also triggered political mobilizations and resistance. Cases from Canada, France, and Scotland are indicative of “counter movements” against increasing farmland financialization, restricted access, and consolidation through a diversity of land reimaginings and provide a unique opportunity for novel thinking on the relationship between property and agroecology. These cases demonstrate the power of a joint cultural and legal reimagining of our relation to land in places where property functions as an apex entitlement.

INTERNATIONAL VIGNETTES—CENTERING PROPERTY REGIMES IN LAND FOOD NEXUS ANALYSIS

Australia—A Reinforced Neo-Nationalization and Financialization of Farmland

Between 2010 and 2015, the Australian government revised its legal regime with regards to foreign investment in Australian farmland (Sippel and Weldon, 2020). This revision was both part and result of a broader public debate surrounding what some considered to be the “selling out” of Australian farmland to foreigners. This highly politicized debate emerged against the backdrop of the financial, food price, and energy crises in 2007/08, and the subsequent increase of foreign interests in acquiring Australian farmland. While the geographical origins of investors played an important role—investors from the Middle East and China were especially scrutinized—the debate also addressed the (assumed) motives behind investments, their market orientation, the loss of control over resources to foreign sovereign powers, as well as nationalistic sentiments. In essence, the revision has allowed the state to expand its control over the process of foreign land acquisitions, together with an increased support for Australian ownership of land. This specific combination of national control over the land-buying process, coupled with an emphasis on Australian national interests and land ownership within a neoliberal governance structure, can be interpreted as a “neo-nationalization” of Australian resources. The prominent and contested sale of S Kidman—Australia’s largest agricultural business in terms of the size of its property—in 2016 to Australia’s richest person (as majority owner) was emblematic of this neo-national land governance and its distributive mechanisms, which give preference over ownership to wealthy nationals’ and national interests. What is more, given the problematic character of (some) foreign investments, new substantial sources of capital are needed, which

blend flawlessly with the “moral economy” of the neoliberal regime while responding to the urge for “nationalization” (Sippel, 2018). Australian superannuation capital, similar to a corporate pension plan in a US context, was identified as such a “perfect match.” In an interesting twist, the neo-national land governance is thus going hand in hand with a reinforced financialization of farmland, where the investment of domestic superannuation capital has emerged as a moral imperative to keep farmland in “national hands.”

Japan—Fading Farmers and the Entry of Corporate Agriculture

As a super-aging society experiencing massive depopulation, Japan faces multiple challenges to maintain rural infrastructure and agricultural lands. About 40% of farmland occurs in mountainous areas, characterized by poor soils, and small, fragmented tenant farms. The result is that 33% of Japanese hamlets are extremely aged (average age 65 or older) and agricultural land is abandoned or left fallow. To ease this trend, the Japanese government has developed mechanisms and strategies to attract and support new farmers and reform the sector (McGreevy et al., 2019). However, regulatory measures that govern land ownership and distribution embrace a logic that seeks to erode long-held protections for local governance, and promote corporatization and large-scale, industrial agriculture (Jentsch, 2017).

The national government encourages corporate investment in the agricultural sector via the 2009 Agricultural Land Law amendment. With the amendment, agricultural land leasing was no longer limited to agricultural cooperatives and individual farmers, but open to corporate leasing, provided that the farmland is used for production. This jump-started corporate entry into the agricultural sector. Notably EON, Seven and I Holdings, and Sumitomo Chemical Co. Ltd. have opened their own agricultural farms, all claiming, in their own way, commitment to environmentally friendly and safe food production (Hisano et al., 2018). The amendment increased the role of direct investment and management of agricultural land by these corporations, expanding vertical integration in the sector. In addition, prefectures are encouraged to centralize the leasing of agricultural land through the use of “land banks,” a measure enabled by the Agricultural Land Bank Act in 2014. This initiative was designed to make it easier for landowners to lease their farmland, and for newcomers to find farmland. Most of all, it was intended to support further consolidation of farmland into larger, contiguous parcels. While such consolidation trends are contributing to the improved use of underused farmland, there are growing concerns and lack of research on enclosures of the most productive land, exploitation of rural farm labor, and other predatory practices deepening the corporatization of Japanese agriculture.

Canada—Attempts to Maintain Collectivity and Multifunctionality of Grazing Land

Canada’s agri-food system is highly industrialized and export-oriented. While key links in the agri-food chain are controlled by large corporations, the vast majority of agricultural land is privately owned and 97% of farms are family owned (Statistics

Canada, 2016). In recent decades, average farm sizes have increased significantly, and land ownership is now markedly more concentrated (Qualman et al., 2020). Facing tight profit margins, many farmers maximize production by tilling native grasslands, filling in wetlands, and deforesting their land. Economic pressures coupled with the private property model impede a more multi-functional and ecological approach to agricultural land use.

An important exception exists in the legacy of the federal community pasture system. Established in 1935, it managed over 2.3 million acres of sensitive public land in the prairie provinces with the aim of providing livelihoods to ranchers, preserving the soil, protecting threatened species, and providing access for recreation. In 2012, the federal Conservative government ended the program, creating a risk the land would be privatized. However, ranchers, hunters, conservationists, and others united to resist privatization and, ultimately, provincial governments kept the land publicly owned, leasing it to private and non-profit grazing collectives. These collectives have partnered with conservation organizations that provide funding to help ensure stability of tenure, public access, and wildlife habitat. In short, the collectives seek to preserve a multifunctional understanding of prairie grasslands as a public good. This civil society driven model, while encouraging, faces challenges including unstable funding and changing priorities of partners. We suggest that the community pastures model provides an avenue for reimagining agricultural land in the public interest and for facilitating land access and ownership changes that foster agroecology.

France—A Renewed National Debate About Farmland Management and Property Relations

In France, a parliamentary taskforce was established in 2018 to prepare legal reforms on farmland management. It has discussed the capacity of farmers and current agricultural land management tools to deal with the issues of land concentration and financialization, farmers’ generational renewal, and land conversion to development (Petel and Potier, 2018). It has proposed legal innovations and invited local stakeholders to experiment with them before the potential law reform, recently postponed until after the 2022 general elections. Another parliamentary taskforce reported in 2020 on possible updates of the *fermage* lease, which guarantees strong protection to the tenant (i.e., including long term lease, automatically renewed and transferred to children, and a right of pre-emptive purchase), but which is increasingly questioned.

Indeed, France has an established history of the state mediating property relations concerning agricultural land use, dating from the 1960s. As a result, existing farmers benefit from secure land tenure without the need to buy expensive farmland (Baysse-Lain and Perrin, 2018). The sub-national committees which control land transactions (i.e., sales and rents), such as the *Société d’aménagement foncier et d’établissement rural* (SAFER), involve mainly local authorities and farmers representatives. Even though SAFER committees engaged more diverse stakeholders in 2005, their decisions and representativeness are often debated by farmers and their

representative bodies, NGOs, or community groups seeking to maintain or gain land property-rights and ownership. Recent criticisms concern the inability of such sub-national committees to avoid land asset financialization and to support more agroecological farming practices. Protagonists of the agroecological transition create, manage, and call for a range of alternative land tenure arrangements. For instance, since 2009, the civil society organization *Terre de Liens* has deployed unique financial instruments (e.g., civic investments, donations, etc.) to hold over 6,400 ha of land (225 farms) in a quasi-common trust for ecologically sustainable agricultural use. Urban local authorities also rent public land to new-entrant farmers willing to develop agroecology and short food supply chains in peri-urban areas, where access to land is otherwise very difficult for those with non-farming backgrounds (Perrin and Baysse-Lainé, 2020). Such alternative land-tenure systems contribute to debates surrounding the pending land law reformulation and the possible impacts of property relations and land governance mechanisms on food system transition (Baysse-Lain and Perrin, 2018).

Scotland—New Rights for Community-Driven Compulsory Purchase

The Scottish First Minister, Nicola Sturgeon, has stated that: “Scotland’s land must be an asset that benefits the many, not the few” (see also Scottish Government, 2014; Black, 2016). A suite of far-reaching land reform Acts is now law in Scotland following a wave of legislation between 2003 and 2016. These Acts and policies aim to promote fairness, social justice and economic revitalization of rural areas *via* the creation of new entitlements to land (Scottish Government, 2020). The key power of the Acts revolves around a “community right-to-buy,” affording a community body the first right of refusal over rural and urban property (Lovett, 2010). In the case of crofting³ communities and sustainable development, these rights become absolute (Ross, 2020). These powers support a goal of the current devolved administration to transfer land from public and private ownership to ownership by local community bodies, due in part to the highly concentrated pattern of private landownership in Scotland⁴.

The latest phase of the Land Reform Act (Scotland) 2016 (“Part 5”) facilitates compulsory land sales to community bodies where it is considered that the transfer of ownership will further the achievement of “sustainable development” in relation to land, and where maintaining the status quo is considered “harmful” to the local community and the public interest. Land reform legislation, the resulting community activism (Combe, 2020), and the Scottish Government’s official discourse toward the “right” use of land has provoked fresh debate about the virtues of

property entitlements, and how to decide who benefits from the land (McKee, 2015; McCarthy, 2020).

The limitation of the new legislative landscape arguably remains the lack of integration with other national policy goals, with regard to climate change, rural renewal (e.g., focusing on depopulation, rural housing, and employment), and crucially, food policy. The opportunity arises, albeit untested, for the “Part 5” legal powers to imagine transfers of land for the purposes of small-scale new entrant land access and agroecological production.

DISCUSSION AND CONCLUSION

The international cases above demonstrate the way norms of property act as an upstream driver of agricultural land use. In some cases, like in Australia and Japan, a virtuous logic of private property is deployed to shore up farmland for investment and consolidation, closing down pathways for new land governance regimes inclusive of demands for agroecological transformation, such as those made by the Australian Food Sovereignty Alliance (<http://afsa.org.au/>). The vignettes from Canada, France, and Scotland, show how attention to identifying new socio-legal logics of property open up cracks in the capitalist agrarian system and offer a chance for agroecology to flourish within.

The cases demonstrate a diversity of approaches to contesting dominant land relations that reflect a creative use of both existing and novel legal maneuvers (i.e., legislative reform, preservation of the common form, regulation of land use, preemptive, and absolute rights). These contestations occur amidst a socio-political context marked either by inherited strong inequities (Scotland) or by accelerating corporate dynamics leading to “contemporary” inequities (Canada, France), with distinct narratives and rationales motivating change. Where a challenge to entrenched property regimes appears, the role of the state is crucial, deploying an intervention in land relations to achieve potential agrarian reforms, rather than relying on market-based interventions (Holt Giménez and Shattuck, 2011).

Even though the conditions and scale of production differ widely, the Australia and Japan cases show how entrenched property regimes can inhibit more equitable pathways to food system reform. These regimes may be able to respond to increasing environmental demands for narrowly defined resilient agriculture, but may reproduce land access inequities that prevent meaningful agroecological transition (Holt-Giménez et al., 2021). Here the role of the state is also central, but instead of citizen-led reform, a path toward an entrenched ownership model of property regimes is favored.

We argue that these cases show how technical interventions to promote food system resilience must be coupled with land tenure counter movements, else be stymied by the socio-legal power of property entitlements (Blomley, 2005). Without such attention to challenging the dominant property imaginations of the global North, the resilience concept fails, as its critics suggest, to support processes critical to transformation, such as rejecting stable yet unequal socio-ecological systems, clarifying the role of state politics in generating adaptability for some, and analyzing how agency is formed in terms of capacity to adapt to harmful change (Olsson et al., 2014). Instead of purely technocratic calls

³ Crofting is a form of small-scale land tenure that is specific to the North, West and island regions of Scotland. Crofters are guaranteed pre-emptive rights to the land as long as the land is used for productive use, usually for food or fiber production, although this was recently expanded to other rural economic activities. Crofting lands are usually co-located small parcels of secure tenancies in lower terrain, with the upland habitat being managed as a common grazing area amongst the community of crofters.

⁴ It is reported that 50% of rural private land in Scotland is held by only 438 owners (Wightman, 2013).

for resilience in the agricultural sector (Walsh-Dilley et al., 2016), a focus on land tenure and property relations helps to bring the largely apolitical “resilience” framework squarely back into the realm of questions of power relations and the distribution of benefits (Calo, 2020b; Holt-Giménez et al., 2021).

Our perspective aligns with a rising awareness that the maintenance of Westernized liberal property regime waters down well-intentioned interventions in the overlapping agricultural (Shoemaker, 2021), climate (Baker et al., 2017), global public health (del Castillo, 2021) and affordable housing (Desmond and Gershenson, 2017) crises. The institution of property has long been critiqued from academic sectors for relying on settler colonial imaginaries of liberty and dominion in ways that prevent pathways to egalitarianism. The epistemic character of Westernized property regimes may be at an inflection point where a diverse transdisciplinary constituency can mobilize the emergence of new emancipatory land logics. We argue that a creative 21st century land reform is a mandatory project that must co-inform questions of equitable and transformative food systems resilience in the global North.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

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AUTHOR CONTRIBUTIONS

AC conceived of the paper and authored drafts of the introduction, literature review, and discussion. Each author contributed equally to developing the international vignettes (AMc, AC, and KS: Scotland, SRS: Australia, CP, AB-L, and PG: France, NB, AMa, and AD: Canada, MK and SM: Japan) All authors contributed equally to feedback and copyediting of all sections.

FUNDING

This work was supported by the Rural & Environment Science & Analytical Services Division of the Scottish Government (as part of the 2016–2022 Strategic Research Programme), the French National Research Agency (ANR) via the JASMINN project n° ANR-14-CE18-000, the Natural Environment Research Council NE/V007823/1, and by the Research Institute for Humanity and Nature (RIHN: a constituent member of NIHU): the FEAST Project (No. 14200116).

ACKNOWLEDGMENTS

The authors acknowledge Jennifer Sowerwine the two reviewers who provided helpful feedback on the original version of this manuscript.

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