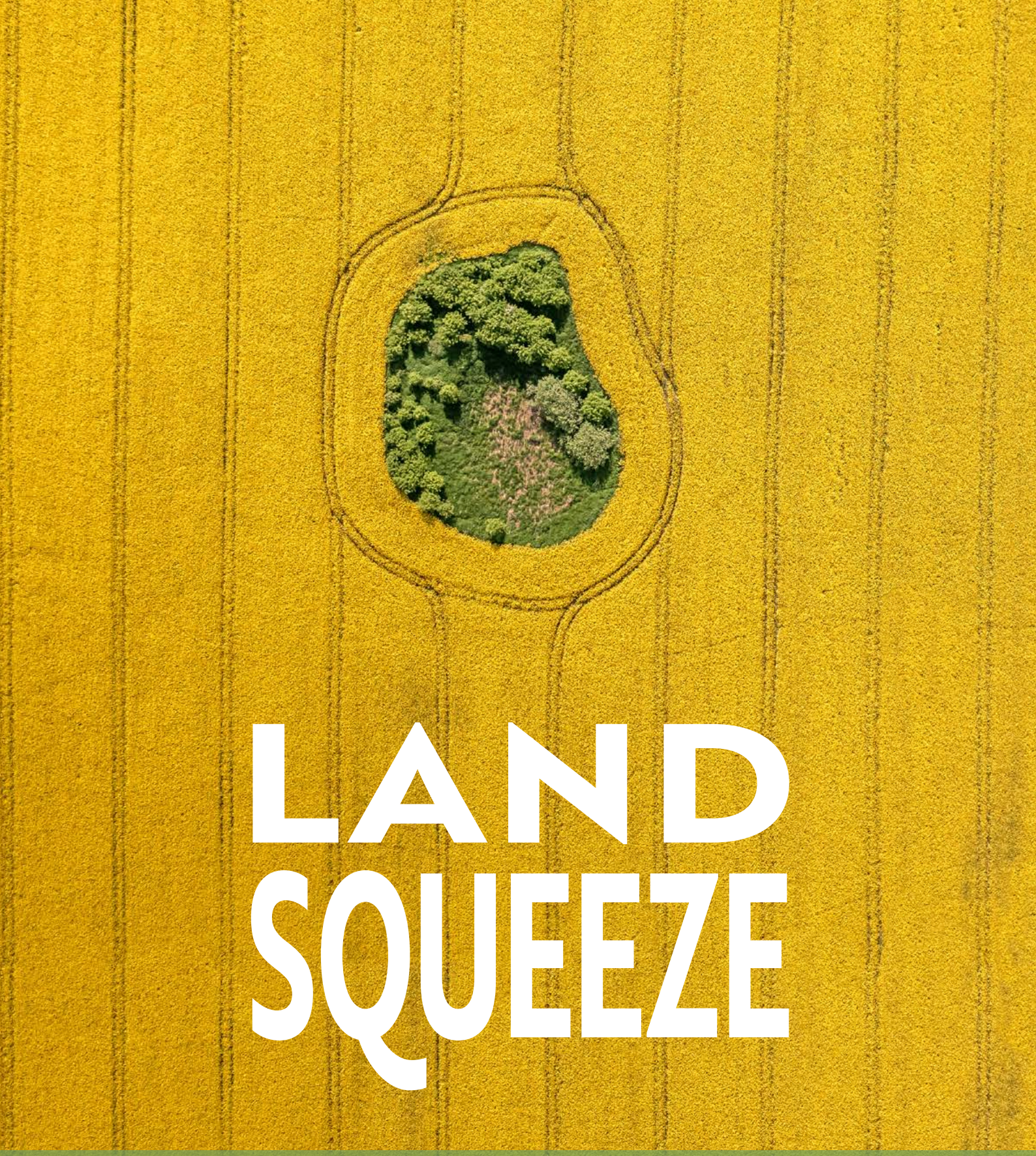

LAND SQUEEZE

What is driving unprecedented pressures on farmland and what can be done to achieve equitable access to land?

iPES FOOD
INTERNATIONAL PANEL OF EXPERTS ON SUSTAINABLE FOOD SYSTEMS

LAND SQUEEZE

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

Land is critical to the lives, livelihoods, and food security of millions of people across the world. But a series of unprecedented pressures on global farmland are now accelerating and converging. This *land squeeze* is driving a surge in land inequality, rural poverty, and food insecurity – and risking a tipping point for smallholder agriculture.

Access to and control over land has been shaped by long-standing processes of discrimination, oppression, and dispossession. Today, farmers, pastoralists, Indigenous Peoples, and marginalized groups are facing renewed threats as the pressures on land evolve and multiply, while new generations face huge barriers to accessing land and entering agriculture.

The financial crash and food price crisis of 2007-2008 unleashed a huge wave of land grabs. Investors, agri-food companies, and sovereign wealth funds succeeded in appropriating large swathes of farmland in the Global South.

The 'land rush' tailed off post-2013, but the pressures never went away. Ten years on, the world is now facing a multi-dimensional *land squeeze*. This time around, the threats are arguably even greater, as land grabs proliferate into new and obscure forms, and farmers and communities are squeezed from all sides.

WHO AND WHAT IS DRIVING THE LAND SQUEEZE?

We identify four trends that are driving the land squeeze and exacerbating land inequality around the world:

1. LAND GRABBING 2.0

Large swathes of land are being swallowed up each year – and land ownership transferred from farmers to financial actors – through new waves of 'land grabs'. The food price spikes that accompanied the COVID-19 pandemic and the war in Ukraine have revived "feed the world" narratives, sparking a renewed push to secure land for export commodity production, with agribusinesses, investors and foreign governments finding new ways to unlock and appropriate farmland.

- Governments are facing **renewed calls to deregulate their land markets and adopt pro-investor policies**. In Africa and Asia, large swathes of land are being appropriated through 'special economic zones' and 'growth corridors', in the context of expanding bilateral trade and investment agreements (including South-South deals).

- In parallel, **'water grabs' and 'resource grabs' are on the rise**, i.e. land deals focused on securing control of critical resources and rapidly extracting value from them (e.g. through water-intensive cash cropping). These deals occur at various scales, with smaller deals going under the radar despite major impacts on smallholders and local communities.

- **Powerful actors are flooding into increasingly financialized land markets.** Agricultural investment funds rose ten-fold from 2005 to 2018, and now regularly include farmland as a stand-alone asset class, with US investors doubling their stakes in farmland since the pandemic. Meanwhile, agricultural commodity traders are speculating on farmland through their own private equity subsidiaries, while new financial derivatives are allowing speculators to accrue land parcels and lease them back to struggling farmers – driving steep and sustained land price inflation.

- A major push to **digitize land registers** is underway in the Global South. Although intended to strengthen land tenure, these processes could end up feeding financial markets with data and exacerbating land grabs.

- A rising number of land grabs are **abandoned along the way**, with land typically sold on to new investors – and lasting damage to local communities and land tenure systems.

2. GREEN GRABBING

Land is an important carbon sink and home for biodiversity. But as environmental goals are enshrined in international environmental agreements, interest in land-based conservation, carbon removal and offsetting is rising fast – unleashing a new wave of 'green grabs', which now account for around 20% of large-scale land deals. Governments and large corporations are appropriating huge swathes of land through top-down conservation schemes that exclude local land users and small-scale food producers – those bearing the brunt of climate change – including carbon and biodiversity offsets, 'biodiversity net gain' initiatives, and large-scale (non-biodiverse) tree planting schemes.

- Governments have pledged to allocate **land areas equivalent to total global cropland** – almost 1.2 billion hectares of land– for 'carbon removal' initiatives alone.

- Carbon and biodiversity offset markets are facilitating huge land transactions and bringing farmland and forests under the control of major polluters. By 2023, **carbon offset markets were already valued at USD 414 billion globally**, a figure projected to rise to USD 1,800 billion by 2030. Fossil fuel giant Shell has set aside more than USD 450 million for offsetting projects. Some 25 million hectares of land have been snapped up by a single 'environmental asset creation' firm, UAE-based Blue Carbon, through agreements with the governments of Kenya, Zimbabwe, Tanzania, Zambia, and Liberia.

- Under the guise of 'nature-based solutions', **business-as-usual investments and top-down conservation schemes are being advanced** – raising concerns that powerful actors will use new global biodiversity goals (the '30 by 30 target') to push through massive green grabs.

- Land and resources are also being appropriated for biofuels and green energy production – including **water-intensive 'green hydrogen' projects**, and the conversion of farmland to solar parks – creating risks and trade-offs for local food production.

3. EXPANSION & ENCROACHMENT

Huge areas of land are also being taken out of agriculture – often coercively – and repurposed for extractive industries and mega-developments, in a context of rapid and often unsustainable economic expansion. In particular, a global mining boom – driven by rising demand for critical minerals – is ramping up the pressures on farmland.

- **Mining projects accounted for 14% of recorded large-scale land deals** over the past ten years, swallowing up some 7.7m hectares of farmland.

- These land conversions are particularly **damaging for food producers and communities** – regularly sparking mass displacement, land conflicts, and wholesale degradation of surrounding environments.

- Instead of protecting communities, **dubious investment laws protect the polluters**: for example, several transnational companies successfully sued the Colombian government for attempting to halt a large-scale mining project.

- Meanwhile, in Asia and Africa in particular, **prime farmland continues to be lost to rising urbanization and mega-infrastructure developments**.

4. FOOD SYSTEM RECONFIGURATION

Alongside the persistent and proliferating threats of land grabbing, rampant agri-food sector consolidation, the ongoing spread of industrial agriculture, and concomitant diet shifts are rapidly degrading land and eroding farmers' and communities' control over their land and how it is used.

- **The integration of smallholders into corporate value chains** (e.g., through contract farming schemes) is allowing agri-food companies to gain effective control **over farmland and impose production choices and conditions – often locking farmers into unsustainable land use and precarious livelihoods.**

- High input costs, spiraling land prices, and boom-bust cycles are endemic in corporate-controlled industrial food systems. These dynamics are creating **systematic economic precarity for farmers** – effectively forcing them to 'get big or get out'.

- Increasingly **techno-centric, capital-intensive, and chemical input-intensive modes of agriculture** are driving the upscaling of farms and consolidation of farmland – especially now through digitalization of agriculture.

WHAT ARE THE IMPACTS AND WHERE ARE WE HEADED NEXT?

This *land squeeze* is eroding meaningful access to and control over land for farmers, pastoralists, Indigenous Peoples, and marginalized groups. These pressures are critically undermining small-scale food producers' livelihoods, and pushing them towards a dangerous tipping point – posing grave threats to food security.

Proliferating forms of land grabbing are exposing farmers and communities to dispossession and eviction, and other grave human rights violations. Accumulation *without* dispossession is also taking place, as agribusinesses exert growing control over food chains and farmland.

Through these converging aspects of the land squeeze, **land concentration is rising in all regions and reaching unprecedented levels**.

A recent study found that 1% of the world's largest farms now operate 70% of the world's farmland. The concentration of farmland is particularly acute in North America, Europe, and Latin America – with the top 1% controlling 80% of Colombian farmland, and a fraction of Brazilian holdings (0.3%) accounting for 25% of the country's farmland. In parallel, **many farmers, particularly in Asia and Africa, are left with fragmented and/or very small plots**, undermining their livelihoods.

Around the world, fossil fuel-intensive industrial agriculture, mining projects, and other extractive activities are driving **land degradation** through their direct impacts, and through their role in driving climate change – itself a major and growing contributor to desertification, erosion, and other forms of land degradation. Some 80% of global arable lands are now affected by land degradation, trapping more than 1.3 billion food producers on unproductive land.

These outcomes could reach a tipping point over the coming years, as different forms of land grabbing converge and ratchet up, and the floodgates are opened to huge and destabilizing influxes of capital. In the wake of the 2007-08 crisis, investors turned to farmland – an illiquid, less speculation-prone commodity than real estate – to make their portfolios more secure, although farmland remained a relatively small percentage of their investments. Since then, farmland derivative markets have become increasingly complex, and financiers have found new ways of making farmland a more appealing investment. The emergence of carbon and biodiversity offset markets is also bringing vast sums of money – and new interests – into land markets, raising the risks of speculation and land price bubbles. Agribusinesses are also speculating on land through their own private equity funds. Through these new vehicles and instruments, powerful actors are circumventing barriers and ushering unprecedented capital flows into land markets, transforming land into a truly liquid, fungible asset, and accelerating the transfer of land ownership from farmers to financial actors.

These trends are now creating **a dangerous interface between small-scale farmers on one side and huge institutional investors, fossil fuel companies and real estate developers** on the other – between actors who live from the land, and others whose interest is in maximizing its tradability and theoretical value, and for whom surging land prices are a positive. In a number of regions, increasingly financialized land markets are contributing to steep and sustained inflation of farmland prices, with the sheer amount of capital serving to move markets and decouple land prices from any realistic valuation. Alongside this financial clout, the actors now entering land markets have the political clout to shape the broader investment climate and policy incentives (e.g. to shape rules around offsetting or biofuel mandates to their advantage).

Further, a vicious cycle is taking root: **the emerging land squeeze is exacerbating persistent rural poverty and livelihood pressures on small-scale food producers**, **creating vulnerability to various forms of land appropriation**, and paving the way for further land concentration, fragmentation, and degradation. An increasingly consolidated, export-oriented industrial food system is degrading land, squeezing farmers' livelihoods, and creating insurmountable barriers to entry for new farmers. Farmers are increasingly compelled to enter industrial chains on unfavourable terms – propagating unsustainable practices that further degrade land and undermine livelihoods in the longer term. Ultimately, in a context of spiraling land prices *and* persistent livelihood precarity, holding onto or buying land is economically unviable for farmers and new entrants. As a result, selling up to land speculators and holding companies (and then re-leasing land from them) – or exiting agriculture – becomes the only viable option. Through these processes, farmers and communities lose control and lose economic bargaining power, leaving them vulnerable to various forms of land grabbing to facilitate large-scale export commodity production, mining projects, infrastructure developments etc. These processes deliver few benefits and scant compensation for communities, and ultimately reinforce rural poverty and out-migration from rural areas. This rural exodus contributes to urban expansion, and more encroachment on farmland, while emptying the countryside and legitimizing the spread of large-scale industrial agriculture.

WHAT IS ENABLING THE LAND SQUEEZE? FAILED POLICY REFORMS, SKEWED ECONOMIC INCENTIVES, POWERFUL INTERESTS, & MISGUIDED ASSUMPTIONS

Small-scale food producers, Indigenous Peoples, pastoralists, and other rural communities are pushing back against the land squeeze – from group farming and community land-sharing initiatives to social movement-led resistance to land grabs. In some cases, governments have enacted policy reforms aimed at securing land tenure, regulating land markets, and curbing harmful extractive activities, as well as supporting community-led land stewardship and food systems. However, these efforts have generally failed to address the scope and scale of the challenge – and have been undermined by broader incentives that are skewed in favour of big interests:

- **Small-scale farmers and marginalized groups are losing control over land through a combination of *tenure insecurity, economic insecurity,* and *political insecurity***. Over decades, the attempts made to formalize land ownership and tenure (e.g. through land titling schemes, and more recently,

digitalization of land registers) have left a mixed legacy. In a context of depressed incomes, spiraling land prices, mounting farm-level debt, and huge power imbalances (in land markets and agri-food systems), targeted land titling reforms are not enough to achieve security of tenure – and can actually have the opposite effect. In particular, commons-based and customary forms of tenure are susceptible to being eroded through formalization processes because of egregious power imbalances.

- **The *land squeeze* reflects a flawed top-down development paradigm, and a systematic failure to address rural poverty and support livelihoods.** Rather than strengthening small-scale producers and rural communities, governments around the world are promoting top-down, extractive, resource-intensive modes of development (large-scale mines, export agriculture, energy production for export, valorization of natural capital through offsets, etc.). Even when they are not designated as such, rural areas around the world are being turned into *de facto* special economic zones. These orientations are a response to prevailing advice from global institutions, skewed economic incentives that reward commodity extractivism over sustainable food production – and the need to generate export earnings to address the mounting cost of debt repayments.

  Further, the emergence of green grabbing, and the land pressures arising from demand for transition minerals, reflect **the failure to build genuine and just ecological transition pathways** rooted in community participation and consideration of livelihood impacts – what is often referred to as a 'just transition'.

- **The land squeeze is underpinned by ongoing trade liberalization biases and privileged treatment of investors.** Trade liberalization/export orientation is a key component of industrial food systems, contributing to the pressures those systems place on small-scale farmers' livelihoods (and ultimately their land tenure). Meanwhile, through 'export corridors' and 'Special Economic Zones' – a form of *de facto* trade liberalization – large swathes of farmland are being reappropriated, with little transparency, and major impacts on small-scale food producers and local communities. Bilateral/regional trade and investment agreements are also continuing apace, with the latest agreements paving the way for large-scale energy transfers (e.g. green hydrogen exports from North Africa to Europe) that come with major land and resource implications. Finally, through 'investor-state dispute settlement' clauses, trade agreements also lock in powerful protections for foreign investors, emboldening agribusinesses and mining firms to undertake risky forms of land grabbing. These investor protections – now being applied regularly in the agri-food sector – provide cover for large-scale

land appropriations and effectively reconfigure property rights in a way that excludes small-scale food producers and rural communities and undermine their social and economic rights, including the human rights to land and food.

- **Long-standing assumptions about efficient land use continue to prevail, creating a favourable context for land grabs, green grabs, and the broader land squeeze.** Governments' willingness to erode their farmland and agricultural base reflects assumptions about the ability to derive food security from global trade – an assumption that looks particularly fragile in light of recent trade disruptions and food price spikes. Relatedly, the assumption that we can sustainably produce more food on less land (linked to 'land sparing' and 'sustainable intensification' narratives) through climate-smart technologies and efficiency gains is guiding various decisions around land, including the decoupling of conservation and food production, and the general de-prioritization of small-scale food producers. Finally, the idea of *structural transformation* continues to guide development thinking, i.e., the assumption that poverty reduction can and should occur via reducing the labour intensity of agriculture, and the shifting of labourers from rural to urban areas.

THE WAY FORWARD

To halt the land squeeze, restore equitable access to land, and rebuild smallholder livelihoods, it is necessary to stem the emerging land grabs and green grabs, and to undertake bold social and agrarian reforms, building on the innovative and powerful steps farmers and communities are already taking to defend their land, assert their rights, and forge new collective forms of ownership and financing. We therefore advance three key sets of recommendations:

1. Build integrated land, environmental, and food systems governance to halt green grabs and ensure a just and human rights-based transition.

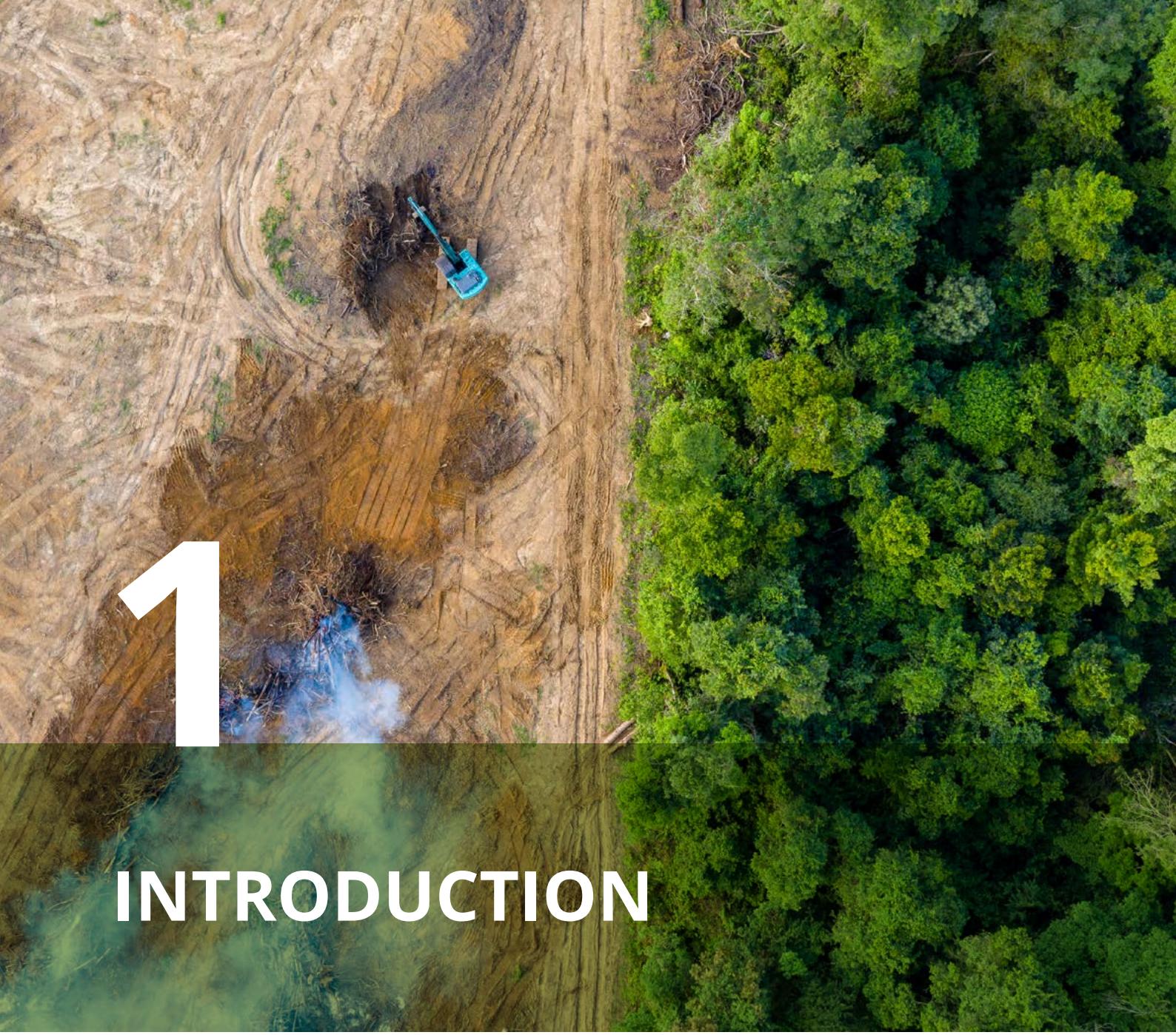
New inclusive governance mechanisms are required to bring together different policy imperatives, reconcile competing land uses, and place local communities and human rights at the heart of decision-making, including via democratic spatial planning and accountable 'land agencies'. Community-managed land systems are the best example of how to reconcile ecosystem protection and food production, and these approaches – currently peripheral in the Global Biodiversity Framework – should become a central tool for meeting global biodiversity goals.

2. From commodity to community: get speculative capital out of land markets and get land into the hands of farmers.

With huge sums of money and powerful actors flooding into land markets, urgent action is required to restore these markets to their essential functions and values. Governments must make the 'true cost' of net zero pledges visible, make non-market mechanisms the backbone of climate action, and ultimately phase out market mechanisms for carbon removals. Caps on farmland investment are also required, as well as giving farmers and communities rights of first refusal on land sales, and supporting group farming, common land trusts, and other innovative forms of ownership and financing.

3. Forge a new social contract, and a new generation of land and agrarian reforms.

A new deal for farmers and rural communities is needed to break the vicious cycle of rural poverty, livelihood insecurity and land inequality. Access to land and secure tenure must be combined with systemic, structural support for small-scale food production, pensions, insurance, and debt relief for farmers, investment in rural infrastructures, and an end to harmful trade liberalization. To achieve these goals, it may be necessary to undertake comprehensive land and agrarian reform processes, and bold steps to redistribute land.



1 INTRODUCTION

Land is critical to the lives, livelihoods, identities, and food security of millions of people. Land struggles, competing land claims, and unequal access to land are longstanding. But today, the threats are accelerating, as old and new dynamics combine – from the ongoing push to privatize and financialize land to the 'green grabs' taking place in the name of green growth; from the relentless expansion of extractive industries to the consolidation of industrial agri-food chains.

In other words, **we are witnessing an unprecedented land squeeze**, resulting in widespread land degradation and loss, land fragmentation, land concentration, a surge in land inequality, rural poverty, and food insecurity – and potentially a tipping point for smallholder agriculture.

In Section 1, we summarize the negative processes affecting land access for small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups, and consider the consequences for food security and food sovereignty. In Section 2, we ask what is driving these processes, recapping the historical roots of today's land inequality (2.1), and zooming in on four sets of current-day dynamics that are exerting pressures on farmland and exacerbating land inequality in its various dimensions (2.2). Finally, in Section 3, we ask what land governance approaches are needed to build a basis for food sovereignty and unlock co-benefits for food security, climate, and biodiversity.

In Box 1 below, we explain the terms and the actors that will be referenced through the report.

BOX 1.

The diverse meanings and values of land, and the many actors affected by the land squeeze

For farmers and other rural peoples, land is the most important productive resource, and access to land often ensures access to other basic necessities for life, livelihoods, self-sustainment, and wellbeing, as well as providing critical access to water, forests, and coastline.[1] For those who live off the land and many others, land is part of their history, identity, and spirituality and conveys a sense of place and belonging.[2] Land is also highly political and tied to sovereignty and national wealth: owning land has historically determined political participation,[3] while for rural dwellers and others, land is linked to a sense of identity, culture, and citizenship.[4]

These deep connections to land underpin diverse systems for land use and governance around the world – systems that are perpetually threatened by long-standing processes of oppression and dispossession that privilege some modes of land governance over others (see Section 2.1). Many groups see grazing lands, wetlands, and other lands as a commons and not something that can be individually owned and alienated, in stark contrast to the dominant idea of land as private property. Further, Indigenous Peoples, peasants, pastoralists, and other rural communities around the world have crafted landscapes integral to their traditional food systems since time immemorial, and their right to these ancestral lands is enshrined in international law on account of the inseparability of land and Indigenous culture and self-determination.[5] Indigenous Peoples' land claims therefore do not commonly concern "access to land", but rather recognition, demarcation, and restitution of lands and territories that have been stolen, occupied or polluted, and prevention of theft, destruction, and eviction from domains they currently inhabit.

The rising land pressures described in this report have impacts on a wide range of actors and groups in all world regions, in terms of their access to and control over land, and the broader integrity of their territories and land use and governance systems. In this report, we focus in particular on the impacts of the 'land squeeze' on the following, overlapping groups of actors, for whom land is critical to lives and livelihoods, and the attainment of food sovereignty: small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups.[6]

1.1. LAND DEGRADATION, FRAGMENTATION, AND CONCENTRATION: A DETERIORATING PICTURE OF LAND INEQUALITY TODAY

The pressures on land – and on the lives and livelihoods of those who depend on it – have never been greater. Notwithstanding regional differences, it is possible to identify a number of clear common trends that are systematically threatening access to and control over land for small-scale food producers, peasants, pastoralists, Indigenous Peoples and marginalized groups, undermining their livelihoods, and driving a surge in land inequality:

Land degradation & land loss

As will be described in Section 2, large swathes of farmland are being reappropriated worldwide for fossil fuel- and chemical-intensive industrial agriculture, mining projects, and other extractive purposes. These processes are contributing to rising land degradation around the world, both directly (through unsustainable land use) and indirectly (through their role in driving climate change, which accelerates land degradation), with massive impacts on the livelihoods of small-scale food producers, local communities, and marginalized groups.

Although the focus is on the specific challenges faced by small-scale food producers, the report is ultimately concerned with the impacts on all farmers: a majority of farms – even mid- and larger-sized – are facing hardship in the face of unfavourable economic conditions, including spiraling land prices and an increasingly powerful agri-food industry. Further, the report is also concerned with the impacts of the land squeeze on all food insecure groups (including urban poor). In the final stages of the report, we zoom out to discuss equitable development and food system transformation pathways more broadly. While fishers are subject to some of the same dynamics as land-based food producers, they feature only fleetingly in the report, and the specific challenges for ocean governance will be addressed in future IPES-Food reports.

The global picture of land degradation is alarming. More than 70% of the Earth's land area has been altered from its natural state by human activity and up to 40% of the world's land is degrading.[7] Land degradation takes multiple forms and is severely affecting farmland, afflicting around 80% of global arable lands[i] and trapping more than 1.3 billion food producers on unproductive land – with many forced to migrate.[8]

> ***"Up to 40% of the world's land is degrading"***

Destruction of soils is a critical form of land degradation. Aridity and soil degradation are advancing rapidly, now affecting 40% and 20% of global arable land respectively.[9] Additional forms of land degradation include soil salinization, desertification, and erosion due to rising sea levels and flooding – leading in some regions to a substantial loss of suitable land for food production, with particularly acute impacts on the poorest and most marginalized populations.[10] The contamination of soils with organic and inorganic toxins – through pesticides, wastewater irrigation, and mining and industrial waste – is another growing component of soil and land degradation.[11]

All of these trends are driven or exacerbated to various degrees by climate change. In particular, climate change is a major driver of soil salinization, erosion, desertification and aridity, but the full picture is complex and includes unsustainable land use, the expansion of land-degrading forms of agriculture, and human settlement.[12] Further, land degradation – and particularly the loss of soil biodiversity – results in the release of soil carbon stores, creating a dangerous feedback loop between climate change and land degradation.[13]

Degradation of farmland, declining soil health, and desertification are growing problems in all world regions, and are systematically undermining access to good quality land for smallholders and marginalized food producers.[14] Some trends are affecting specific regions and population groups particularly acutely. More than one third of degrading farmland is found in Asia and Africa, with African farmland worst affected by land degradation overall.[15] In Asia, India is a hotspot for land degradation, with more than 70% of its arable land undergoing one or more forms of land degradation.[16] Home to around 3 billion people and covering nearly half of global land, drylands are severely impacted by desertification, leading to biodiversity loss and groundwater depletion, with detrimental impacts for agricultural productivity and for the lives and livelihoods of pastoralists and other communities depending on these lands.[17]

Meanwhile, sea water encroachment is causing loss of agricultural lands in coastal regions and river deltas (e.g., through salinization, erosion, and extreme weather events), with coastal communities also threatened by long-term land loss through sea-level rise.

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i Meaning that the land is affected by 1 of 5 land degradation processes: aridity, vegetation decline, soil erosion, soil salinization and soil organic carbon loss. Prăvălie, R., Patriche, C. V., Borrelli, P., Panagos, P., Roșca, B., Dumitrașcu, M., Niță, I., Săvulescu, I., Bîrsan, M., & Bandoc, G. (2021). *Arable lands under the pressure of multiple land degradation processes. A global perspective.* Environmental Research, 194, 110697.

Over the coming years and decades, climate change is expected to accelerate these changes with devastating consequences for various regions, including the Indian Ocean island nations and the Atlantic coast of North America.[18]

While climte change is also opening up 'frontier farmland' in some northern regions, cultivation of this land comes with a number of risks and challenges – including the release of carbon stores – and cannot be seen simply as a substitute for land that is lost or degraded in other regions (see Box 2).

BOX 2.

Opportunities and challenges as climate change opens up 'frontier farmland'

While climate change is leading to loss of productive lands across the world, the boreal regions in the Northern Hemisphere and mountainous regions across the world might actually see their farmland expand by almost as much as 77%, according to some preliminary studies.[19] In Canada, research suggests there is potential to double the country's farmland to 185 million hectares – even when accounting for changing soil profiles, though more studies are required.[20] However, there are many uncertainties and trade-offs. Frontier agricultural land holds important carbon stores, which would drive up global warming if released.[21] Expansion of cropland into the Arctic regions could likewise pose a risk to the right to land of the regions' Indigenous Peoples and would do little to address the food insecurity arising from climate change and inequality experienced by communities in the Global South.

Land concentration

As will be described in Section 2, huge swathes of land continue to be appropriated for large-scale export agriculture and other extractive uses. These trends are contributing to rapidly advancing concentration of farmland, both in terms of land area and distribution of land value.[22]

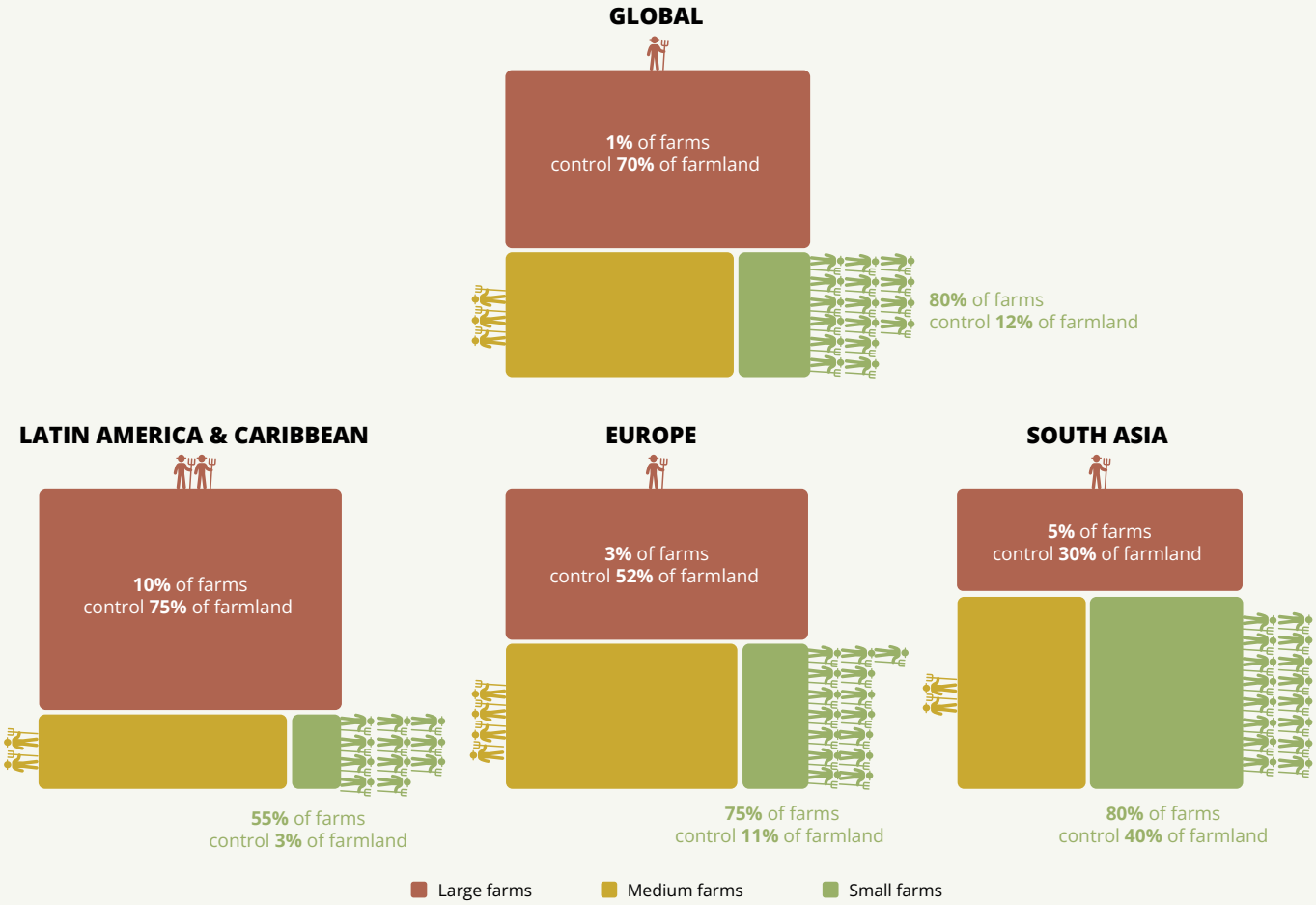
A recent study by the International Land Coalition showed that **land inequality is rising across all world regions**, and 1% of the world's largest farms now operate 70% of the world's farmland. At the other end of the spectrum, 84% of the world's farms control just 12 % of farmland (see Figure 1).[23] This reflects a clear global trend in terms of land ownership and control, whereby big farms are getting bigger, while the vast majority of smallholders and other marginalized food producers struggle to obtain secure access to sufficient productive land.[24]

The extent of land concentration and the pace of change varies considerably between regions. Latin America is home to some of the most concentrated land ownership in the world, with a growing number of mega farms controlling thousands of hectares apiece. The largest 1% of farms in 15 Latin American countries hold more than half of all agricultural land: in Colombia just 1% of landowners hold over 80% of farmland;[25] in Brazil, 0.3% of all agricultural holdings own 25% of the country's farmland.[26]

In North America and Europe, there is also a trend towards larger average farm sizes, and fewer farms in total – with small farms rapidly disappearing and smallholder agriculture declining. In these regions, what would previously be characterized as a mid-size farm is now considered small. For example, while the EU's total agricultural land remained virtually unchanged from 2005-2020, some 4.6 million small farms (<5 hectares) disappeared from the landscape, while large farms (>100 hectares) increased by 20% over the same period – and now account for more than half of EU farmland.[ii]

ii Today, farms with at least 100 hectares account for 3.6% of the total number of farms, but collectively make up more than half (52.5 %) of the total used agricultural area (UAA) in the EU. Eurostat (2022). *Key figures on the European food chain – 2022 edition.*

FIGURE 1.1
THE GLOBAL STATE OF LAND INEQUALITY AND LAND CONCENTRATION



Note: Farm size varies globally. What is considered a large or small farm differs significantly across regions. Globally, the top 1% of farms are larger than 100 hectares, while the smallest 80% are under 2 hectares. In South Asia, the top 5% of farms are greater than 5 hectares and the bottom 80% are under 2 hectares. In Europe, the largest 3% of farms are over 100 hectares, while the smallest 75% are under 10 hectares. In Latin America & the Caribbean, the largest 10% of farms exceed 100 hectares, and the smallest 55% are under 5 hectares. (Data collected from Anseeuw, W., & Baldinelli, G.M. (2020), Bauluz et al. (2020), Lowder et al. (2016), Oxfam International (2016), TNI (2016), USDA (2017).

Although average farm size remains low in Africa and Asia, this masks rapid changes in land distribution and farm sizes – with burgeoning mega-farms at one end of the spectrum, and increasingly small plots at the other end.[27] In Asia, overall land inequality has risen by 11% since 1980.[28] Today, the top 10% of land owners in China account for 50% of land (in value terms), while some 50% account for only 11% of the land value; similarly, in India the top 10% own 45% of farmland.[29]

Land concentration is complex to grasp and measure: the lack of standardized data makes it challenging to produce a single picture of land concentration at a global scale, or to make robust comparisons between regions and constituencies. Further, as will be explored in Section 2, transnational corporations are investing in land via increasingly complex business structures and financial schemes, creating *de facto* concentration in the hands of powerful actors.

Land fragmentation & declining farm size

While land concentration is a rising concern, **many of the world's poorest farmers are affected by the declining size of their farmland**. Some 84% of the world's farmers cultivate plots of under 2 hectares,[30] with average farm size remaining below 2 hectares in Africa and Asia.[31] In a number of contexts – including in Ghana, Mozambique, Senegal, and other parts of Sub-Saharan Africa,[32] as well as across Asia[33] – producers are being confined to shrinking plots of land as a result of demographic growth, sub-divisions, and land grabs.

Another related trend is land fragmentation, which refers to households managing multiple parcels of land at the same time.[34] While in some cases this may be a deliberate cultural practice linked to resilience and diversification, reliance on small, often dispersed plots can also be a result of difficulties accessing larger or more proximate plots of land – and is sometimes a legacy of historical and present-day land grabs. For example, in cases where governments have sought to 'compensate' communities for large-scale land deals, this has typically taken the form of dividing a limited amount of land into prohibitively small plots and distributing it among local smallholders.

Cultivating a very small plot (or plots) of land can pose major challenges in terms of livelihoods and economic viability.[35] While this is a concern for farmers around the world, the issue of very small/declining or fragmented agricultural plots is particularly acute in formerly socialist countries where land has been subject to processes of de-collectivization, and in regions undergoing a renewed push to privatize the commons.[36] In the latter, the splitting of communal pastures and rangelands can lead to dispossession, evictions, and significant livelihood threats to pastoralists who are cut off from critical resources or herd migration routes,[37] as well as many other rural/food producing communities who rely on communal lands.

> ***"Loss of access to and control over land for small-scale producers is posing threats to world food security"***

Land fragmentation and concentration can occur in parallel or in sequence. In some former socialist countries in Eastern Europe, for example, a highly fragmented landscape post-collectivization has given way to rapid increases in average farm size, and 'monocultural land management',[38] in the wake of post-Soviet liberalization and privatization policies,[39] and the rapid spread of industrial agriculture.[40]

1.2. HOW RISING LAND INEQUALITY THREATENS THE FUTURE OF FARMING AND WORLD FOOD SECURITY

Today's reality of land degradation, concentration, and fragmentation means shrinking land available for (sustainable) food production, and rising inequality in terms of land ownership, access, and control, as small-scale food producers, local communities, and marginalized groups are struggling to maintain secure access to the land and territories they need to sustain their livelihoods and feed their communities.

Global hunger surged through the pandemic and the food price spikes of 2022, and the UN's latest world hunger update in June 2023 found that more than 2.4 billion people are moderately or severely food insecure.[41] **Renewed land pressures are clearly exacerbating hunger worldwide**. Accelerating land degradation and land loss are already driving severe food insecurity in the most affected regions (e.g., coastal communities, especially in small island developing states and for Indigenous Peoples in Asia and the Pacific), and these impacts could spiral as industrial agriculture spreads, unsustainable land use continues, and climate change worsens.[42]

Further, as will be discussed in Section 2, small-scale food producers are facing a broader loss of access to and control over land. These strains risk undermining the fundamental viability of small-scale food production, and thereby posing grave threats to world food security. One study suggests that as much as 70% of the world's population is fed by 'peasant food webs'.[iii] In some contexts the figure may be higher: an FAO study indicates that small-scale and family farmers produce 80% of the food supply in sub-Saharan Africa and Asia.[43] As small-scale food production is undermined by land degradation, shrinking size, fragmented plots, or swallowed up into bigger holdings, the implications for food security are massive.

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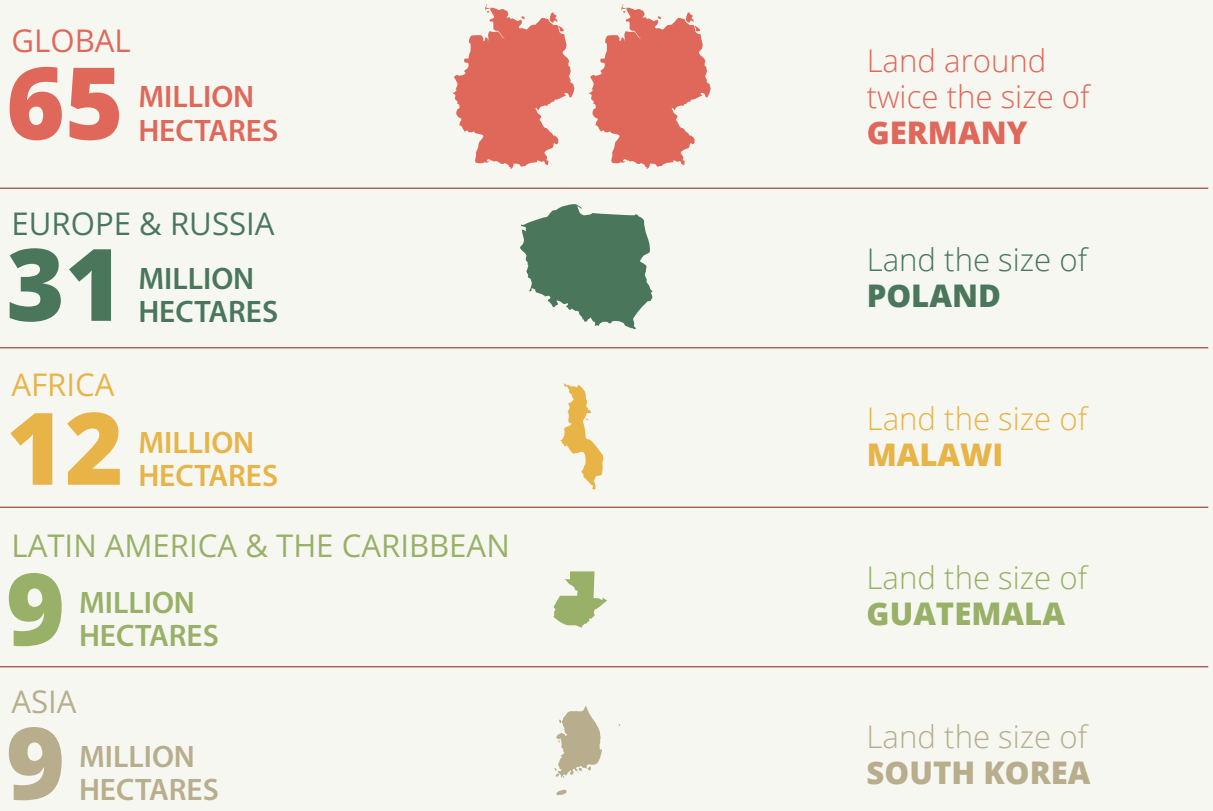
iii Global food security figures are highly contested. While an FAO-led study estimated that small farms feed 35% of the population, civil society organizations have critiqued the definition of small farmers, and the exclusion of artisanal fishers, pastoralists, and urban food producers from the figures. When the limitations are addressed, the figure increases considerably, with peasant food webs estimated to feed at least 70% of the world's population, in terms of food actually consumed, as opposed to total agricultural production. AFSA, A Growing Culture, ETC Group, GRAIN, Groundswell International, Institute for Agriculture and Trade Policy, Landworkers Alliance, & The Oakland Institute. (2022, February 2). *Peasants still feed the world, even if FAO claims otherwise.*

FIGURE 1.2

SINCE 2000, LAND HAS BEEN SNATCHED UP IN TRANSNATIONAL DEALS EQUIVALENT TO THE SIZE OF THE FOLLOWING COUNTRIES



Data collected from LMI, 2024.

The concomitant concentration of land and food production in corporate-controlled industrial food chains may deliver large volumes of commodity crops. However, as recent trends have clearly shown, access to nutritious food will remain out of reach for the poorest in increasingly industrial systems,[iv] while land degradation and livelihood pressures will continue to grow – reinforcing poverty and hunger.[44,45]

Over time, **the pressures of a tightening land squeeze risk critically undermining smallholder-led food systems and their capacity for renewal and resilience**. Already, land degradation is combining with broader livelihood pressures – including crippling debts – to undermine farmers' wellbeing and mental health: every day, four farmers in India take their own lives as a result of these strains.[46] In this context, and with the promise of relatively better economic prospects outside of rural areas, younger generations are increasingly unwilling to take on farms.[47,48,49]

Further, secure access to land underpins smallholder and Indigenous food systems and is fundamental to communities' ability to adapt to shocks (e.g. climate events) and continue stewarding land, ecosystems, and biodiversity[50] – underlining the cascading dangers as these systems are weakened.

It is therefore crucial to take stock of the whole range of pressures on land, and the multi-faceted, multi-dimensional land inequality that they are driving. The distribution of land ownership – typically used as a proxy for land inequality – is an important dimension of the problem, but does not capture the broader pressures on diverse forms of tenure, use, and control of communal land. Nor does it capture the state of play vis-à-vis the diverse meanings and values, beyond purely economic functions, that land represents to different groups (see Box 1).

iv The 2023 SOFI report also found that more than 42% of humanity - 3.1 billion people – are unable to afford a healthy diet. FAO, IFAD, UNICEF, WFP and WHO. 2023. In *Brief to The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural–urban continuum*. Rome, FAO. https://doi.org/10.4060/cc6550en.

In considering the various drivers of the land squeeze (in Section 2) and pathways beyond it (Section 3), we are therefore guided by a broad understanding of the problems to be addressed. **Human rights frameworks address the multiple dimensions of land inequality** and are therefore a crucial reference point throughout this report. Secure access to and control over land for cultivation, grazing, gathering, and other forms of food production, and to maintain cultures, traditions, identities and livelihoods, underpins the realization of a range of human rights, including the right to food.[51]

Further, the evolving human right to land in the international human rights system brings forth many of the perspectives described in Box 1, including the recognition of land as a fundamental right for those who depend on it for their food systems, social interactions, and spiritual practices.[52] Relatedly, **food sovereignty and land sovereignty offer comprehensive frameworks for understanding the multi-dimensionality of land inequality**,[v] and a powerful vision for the future of food systems, grounded in the right to adequate, sufficient, healthy and sustainable food, as well as people's control over their own food systems. These frameworks, described in Box 3, will provide a compass for the recommendations to address the land squeeze in Section 3.

BOX 3.

Food sovereignty and land sovereignty

Food sovereignty is defined by social movements as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems". The vision of food sovereignty was elaborated by a diverse range of social movements uniting farmers, Indigenous Peoples, women's collectives, urban gardeners, fishers, pastoralists, and others at the Nyéléni 2007 Global Food Sovereignty Forum in Mali. Since then, food sovereignty has become a unifying framework for food systems transformation, built around seven principles: 1) focuses on quality food for people; 2) values food providers; 3) localizes food systems; 4) puts control locally; 5) builds knowledge and skills; 6) works with nature; 7) and, added by Indigenous Peoples movements, food is sacred.[53]

Access to land and territories has been an essential component of the food sovereignty movement since its inception, as it grappled with the questions of who controls the essential resources for food production, for what purposes they are put to use, and who decides what is grown (or not), how, where and for whom. Food Sovereignty thus rests on placing "control over territory, land, grazing, water, seeds, livestock and fish populations on local food providers" and respecting their rights to use and share these resources in socially and ecologically sustainable ways.[54]

In today's context, with increasingly complex pressures on land, scholars and activists have warned that calls for improving land tenure security are insufficient to achieve food sovereignty. As an alternative frame – and as a call to action – Borras and Franco put forward the concept of land sovereignty, defined as "the right of working peoples to have effective access to, use of, and control over land and the benefits of its use and occupation, where land is understood as resource, territory, and landscape."[55] This definition of land sovereignty can be seen as a pillar of food sovereignty and the right to food.[56]

v In line with the land sovereignty framework (see below), in this report we consider land inequality to have five dimensions: 1) distribution of land by size, value, and quality; 2) security of tenure; 3) control and decision-making power over the land; 4) ability to obtain value/benefits from the land; and 5) intersectional marginalization of some land users vis-à-vis others. Wegerif, M. A. C. & Guerena, A. (2020). *Land Inequality Trends and Drivers*. Land 9, no. 4: 101.

2

WHAT IS DRIVING LAND INEQUALITY?

In this section, we ask what is driving the negative trends described above and exacerbating land inequality in its various dimensions. In Section 2.1, we provide a brief overview of the underlying structures, processes, and assumptions that have embedded pervasive land inequality – and broader inequalities – in many societies. In Section 2.2, we zoom in on four sets of dynamics that are ratcheting up land pressures and exacerbating land inequality today – i.e., four drivers of the land squeeze. While this section will therefore focus on the vast challenges and barriers to achieving equitable access to land, it is worth noting that the picture is not wholly negative. Around the world, farmers, communities, and governments are pushing back against these pressures in innovative and powerful ways – and those examples will be explored in Section 3.

2.1. THE DEEP ROOTS OF LAND INEQUALITY: LONG-STANDING ASSUMPTIONS THAT UNDERPIN THE LAND SQUEEZE

Historical dispossession of smallholders, Indigenous Peoples, and other traditional communities – based on widespread forms of oppression and discrimination – have had profound impacts on who has access to land today, and how we understand, value, and govern land.

Long-standing agricultural and economic development imperatives, and dominant beliefs about how humans interact with ecosystems, have also shaped today's land relations. These elements are therefore essential to understand today's rising and multidimensional land inequality and are described in brief below.

The myth of idle land and the dismantling of the commons

Land-based commons form the backbone of Indigenous, peasant and pastoralist food systems. But over centuries, these systems – often portrayed as 'backward' and 'inefficient' – have been progressively weakened,[57] and the myth of abundant, under-utilized, empty and, hence, 'available' land has taken root.

In the UK and subsequently in other European contexts, common lands were subjected to 'enclosures'[58] from the 15th century onward, as the interests of powerful land users took precedence and private property regimes were established.[59] Dispossession accelerated globally through this period, with colonial powers applying the *"terra nullius"* doctrine and other legal innovations to justify the theft of so-called 'wastelands' and the dismantling of Indigenous and traditional land management systems.[vi] Across the Americas and in settler colonies worldwide, Indigenous lands and land practices – including nomadic cultures – have been swept aside, and social, political, economic, legal, and cultural structures established mirroring those in settlers' homelands.[60]

In the 20th century, traditional, peasant, and Indigenous land management systems were dealt a further blow by renewed attacks on the commons. 'The Tragedy of the Commons', a 1968 article by Garrett Hardin – whose worldview has subsequently been recognized as a white supremacist, racist one[61] – propagated the unfounded view that in the absence of private property, farmers had no incentive to take care of the land.[62] The ongoing myth of inefficient commons and empty lands underpinned the push by international development organizations and governments over subsequent decades to identify idle, vacant, or wasteland and privatize these lands to make them available for investment in large-scale agriculture, infrastructure, extractive industries, or, increasingly, restoration projects (see Section 2).

Racist, class-based, and patriarchal discrimination and marginalization

Discrimination based on race, class, caste, religion, and gender has played a huge role in driving land inequality, and economic dispossession more broadly. Using and manipulating social constructs like race and class, colonial and other authoritarian practices brutally exacerbated hierarchies in many societies. Today's struggles for equality in land access can be directly linked to forms of discrimination imposed by European colonialism.[63] Across many regions of Africa, Asia, and Latin America, colonial powers used race as a tool to force Indigenous, enslaved, and indentured workers into a deadly economic apparatus in plantations, mines and, eventually, factories, while managerial positions were given to white settlers and local elites.[64]

In many societies, racism has been embedded in laws, norms, and customs to justify the exclusion of people of colour from holding economic and political rights. Such overtly racist laws were often implemented after slavery was abolished to keep populations politically and economically subjugated – as exemplified by the US's Jim Crow laws or South Africa's Apartheid regime. Post-abolition Brazil also pursued a form of customary racial segregation, which excluded racialized peoples from accessing certain spaces, jobs, financial services, and land. *De facto* racial segregation continues to shape land inequality in Brazil to this day.

Through these and associated class structures, communities and individuals have been held back in their ability to access, accumulate, generate, use, and pass on wealth – including, crucially, restrictions on land access and ownership.

Gender was used to further divide colonized societies' labour and land relations. While Indigenous societies had their own gender systems and social differentiation, settlers and traders mapped European ideals of femininity and masculinity to relegate 'female' bodies to perform the unpaid, reproductive labour and care work that sustained the plantation economy.

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vi For example, in India, uncultivated land was termed as 'wasteland', under British colonial rule in the late 19th century, since the land did not provide land revenue, and taken over by the revenue department of the government. Baden-Powell, B. H. (1882). *A Manual of the Land Revenue Systems and Land Tenures of British India*. Superintendent of Government Printing; see also Singh, S. (2013). *Common lands made 'wastelands': making of the 'wastelands' into common lands*. In the 14th Global conference of the international association for the study of the commons, June).

This reinforced the patriarchal structures that exclude women and gender non-conforming people[vii] from fully participating in a society's economic and political processes, trends that underpin today's gendered land access inequality.[65] Although in recent times many countries have adopted gender equal inheritance laws, long-standing (and often pre-colonial) patriarchal social norms remain deeply embedded and continue to prevent women from accessing land.[66]

Although there are important regional differences, women still own and control less farmland than men globally[67,68] – despite the evidence showing that when women own land it is linked to better outcomes for child health and education,[69] and a lower risk of domestic violence.[70]

BOX 4.

How social and racial inequalities translate into land inequalities

- In **South Africa**, decades of land reform have failed to reverse the impacts of colonialism, post-colonial (Union period) discrimination, and apartheid, with black South Africans today owning just 4% of the country's farmland despite constituting 80% of the population.[71]

- In **Canada**, English Common Law was deployed to legitimize the theft of Indigenous territories and distribute it to white, European settler-families. This stolen land, whether bought through the market or acquired through inheritance, forms the backbone of Canada's family farm agricultural system. Simultaneously, Indigenous Peoples were excluded from practicing modern agriculture through the Indian Act and the Permit System[72] or even engaging in the colonial economy, and confined to reserves.[73] The same laws that facilitated settler-colonialism created a hostile environment for racialized migrants that persists today, and presents significant economic hurdles to acquiring land.[74] Today, most Canadian farmland remains in the hands of white, settler-descendants – many of whom are now facing barriers to land access and security through farmland financialization and increasing land concentration and consolidation into megafarms.

- In **Brazil**, farmland ownership is highly concentrated in the hands of wealthy, white, settler-descendent landowners despite the country's diverse demographics. Despite the fact that there are more Black than white farmers in the country (2.6 million vs. 2.2 million), white farmers compose the vast majority of landowners of properties above 5 hectares. Black farmers own only about 20% of 1,000-10,000-hectare properties, and 12% of farms exceeding that size.[75] With notable exceptions, several Brazilian governments have carved alliances with big agribusiness to implement policies and agrarian-environmental projects that have blocked Black communities' land claims, revoked granted titles, and prevented land reforms. These state-sanctioned land grabs are part of Brazil's long history of white settler-supremacy that has kept Black, Brown, Indigenous Peoples, and peasants landless,[76] and fearing for their lives when fighting for their right to land.[viii]

- Research from the **US** points to structural racism in the growing concentration of farmland, with black-owned farms disappearing at a disproportionate rate.[77] Indigenous Peoples across the world regularly experience land inequality as part of a wider struggle for their internationally recognized rights to their ancestral territories and ways of life.[78]

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vii Here used as an umbrella term to encompass all forms of deviation from the heteropatriarchal cisgendered norm, including but not limited to queer and trans folk, and intersex people.

viii In Brazil, recent research shows 3 human rights activists were killed per month between 2019 and 2022, the majority of which were Indigenous Peoples. Justiça Global. (2023, June 14), *Na linha de frente: violência contra defensoras e defensores de direitos humanos no Brasil (2019 a 2022)*.

Productivist and modernist biases

These historical trends interact with long-standing extractivist and productivist approaches to land and natural resources. In the 19th century, Malthusian theory – which posited that human population would grow at a faster rate than resources could be replenished[79] – created a heightened sense of competition for scarce resources.[80] These concerns reinforced the imperative to bring supposedly under-utilized (common) lands into 'efficient' food production systems. Alongside major technological developments, this underpinned agricultural intensification and the rise of industrial agriculture through the 20th century (see Section 2.2, Driver 4).

In the post-war decades, ensuring food security for a growing population became a primary concern for many governments in the Global North and South.[81] This led to policies focused on intensifying food production, underpinned by a productivist discourse, which emphasized technology-driven efficiencies – with relative indifference to questions of *where*, by *whom*, for whom, and on *whose* land, additional food must be produced, nor for the environmental implications of intensification.[82,83] For example, the European Union's Common Agricultural Policy (CAP) was created in 1962 with the goal of increasing agricultural productivity, ensuring a fair standard of living for farmers, and creating a stable market for agricultural commodities. In the US, similar thinking underpinned new incentives to maximize large-scale commodity production, with smallholders instructed to "get big or get out".[ix]

Meanwhile, in the Global South, modernization narratives became dominant.[x] As colonial regimes ended and national development plans were drawn up, land, agriculture, and rural development were increasingly seen through the lens of modernity.

Thus, governments and international lending institutions began to prioritize the building of 'modern' (industrial) economies based on rapid urbanization and 'modern' science and technological advancements, at the expense of small-scale/peasant farming, and traditional or vernacular forms of land and territorial governance.

These dynamics fed into the Green Revolution. Starting in India in a context of acute food shortages in the 1960s, Green Revolution approaches – through the adoption of hybrid seeds, irrigation, and chemical inputs – enabled countries to raise their production of staple crops and increase their self-sufficiency. Land concentration followed in a number of contexts, as farms upscaled to absorb the costs of the Green Revolution package, and governments (e.g. in Brazil and the Southern Cone) adopted policies geared towards promoting technological uptake by large-scale farms and multinationals.[84]

Following the debt crisis of the early 1980s, 'structural adjustment' programmes sent new imperatives of privatization and liberalization through developing economies. The concomitant withdrawal of the state from key functions exacerbated some of the negative impacts that were arising in the wake of the Green Revolution – including environmental degradation and economic precarity for smallholders. In this context, land reform came back onto the global development agenda by the 1990s, with the World Bank and IMF introducing 'market-assisted' land reforms[xi,85] based on "willing-seller-willing-buyer" mechanisms, and pushing for titling-based land tenure reforms[86] – marking a major turning point from previous generations of radical land and agrarian reforms aimed at addressing structural inequality.

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ix This phrase is often attributed to Earl Butz, US secretary of agriculture (USDA) under Presidents Richard Nixon and Gerald Ford, whose policies undermined many of the farmer protections instituted through the New Deal. See more: Philpott, T. (2008, February 8). *A reflection on the lasting effect of 1970s USDA secretary Earl Butz*. Grist.

x Since the Second World War, modernization has been the most powerful paradigm in shaping development. Based on neoclassical and neoliberal political theories rooted in the Enlightenment, this paradigm prioritizes economic growth through industrialization, the construction of formal infrastructure, and the development of technology based on Western science. Institutionally, modernity involves processes of capital accumulation, industrialization through technology to transform nature into a subject controllable by humans, and state surveillance backed by military power. See Melkote, S. R., & Steeves, H. L. (2015). *Communication for development: Theory and practice for empowerment and social justice.* BGSU Faculty Books. 5. Chapter 3. See also Gilman, N. (2003). *Mandarins of the future: Modernization theory in Cold War America*. jhu Press.

xi Market assisted land reforms (MALR) were introduced as "a new solution to old problems". Instead of expropriating large landowners and redistributing land among landless and nearly landless peasants, the World Bank introduced this approach to encourage "willing-sellers" to negotiate deals with "willing-buyers", with the state merely facilitating the process through grants and similar supportive methods. See more here: Aiyar, Swaminathan, Parker, Andrew, Van Zyl, Johan. (1995). *Market-assisted land reform : a new solution to old problems (English).* Washington, D.C. : World Bank Group.

Fortress conservation, the commodification of nature, and the green economy

Today's green economy agenda (discussed in detail in Section 2.2) has its roots in long-standing and contentious approaches to land conservation. Colonial narratives about land degradation – often based on misreadings of landscape ecologies and the management practices of local populations – were used to justify the appropriation and enclosure of land, or to restrict existing land users' practices. In parallel, restrictions in the name of protecting forests and watersheds were introduced to serve colonial economic goals, representing an early form of 'fortress conservation'.[87]

> ***"Today's green economy agenda has its roots in long-standing & contentious approaches to land conservation"***

Narratives around land and land conservation took a drastic new turn at the beginning of the 21st century, as climate change and ecological breakdown became major political concerns. Many actors have responded to the ecological crisis by demanding a paradigm shift in our relationship to land and nature, while developing countries – through the initial Rio conference and beyond – have insisted on the need for equity goals to be reconciled with the environmental agenda. However, as 'sustainable development' emerged as a mainstream concept in the post-Rio context, powerful actors have increasingly been able to dilute the initial ambitions and void it of any real meaning – reasserting a focus on 'efficient' use of land and resources,[88] placing the emphasis on (limitless) 'clean' economic growth,[89] and positioning nature as an "economic asset" to be harnessed (e.g., through the delivery and monetization of "ecosystem services") in order to improve livelihoods,[90] and even as a roadblock against harmful extractive development.[91]

The normalization of land inequality

By the time of the global financial crisis and food price crisis of 2007-2008, land relations had been profoundly transformed, setting the stage for the 'land rush' that followed the financial crash – and today's multi-dimensional land squeeze.

Racist, patriarchal, and class-based structures had been exacerbated through colonial and post-colonial land use and ownership patterns, and normalized through private property tenure systems and land market liberalization – resulting in women, Black, Brown, and Indigenous Peoples, pastoralist communities, and other marginalized rural workers, albeit in distinct ways, being less likely to have secure access to land (see Box 4).

Further, peasant agriculture and commons-based land management had been comprehensively disparaged in mainstream discourse. Meanwhile, productivism had been embedded into the thinking of leading international institutions[92] and the policy incentives of major economies – with subsidy programmes across the Global North increasingly geared towards large-scale farms,[xii,93] and industrial agriculture spreading around the world.

Crucially, green economy narratives had been embedded in global discourse, culminating in the 'Rio+20' UN Sustainable Development Conference in 2012, where the World Bank, OECD, and UN Environment Program presented flagship reports promoting green growth – an economic strategy for sustainably managing 'natural capital' and decoupling economic growth from environmental degradation.[94] Subsequently, market-based conservation approaches like REDD and later REDD+ have gained increasing traction, alongside proliferating carbon market tools, and a growing focus on offsetting environmental damages and ensuring net gains globally – as a means

xii In the EU, the CAP shifted towards area-based payments from the 1990s onwards, benefitting larger holdings and with detrimental impacts on smallholders. Lillemets, J., Fertő, I., & Viira, A. H. (2022). *The socioeconomic impacts of the CAP: Systematic literature review*. Land use policy, 114, 105968.

of achieving 'carbon neutrality'[xiii] or 'land degradation neutrality' (see Box 5).[xiv] Alongside proliferating public and private 'net zero' pledges, green economy approaches are expanding into ever-broader calls on governments and industry to harness natural capital, including land, resources, and natural processes like carbon sequestration, as a development strategy.[95]

In other words, the non-marketable place-based relationships that communities have long established with land have once again been sidelined. Instead, ecological imperatives have been integrated into prevailing economic orthodoxies, unleashing efforts to quantify, commodify, and financialize the free and commonly shared provisions of the natural world that had so far escaped the market economy.

BOX 5.

REDD and REDD+

The REDD+ framework stands for Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, while the "+" is for additional forest-related activities that protect the climate. This voluntary scheme provides results-based payments to developing countries for emissions reductions through decreased deforestation.[96] Initially discussed at COP11 (UNFCCC) in 2005 under the acronym REDD, it evolved into REDD+ in 2007 as part of the Bali Plan and was subsequently included in the Paris agreement in 2015.[97] Activities under REDD+ are structured around five goals: (i) reducing emissions from deforestation; (ii) reducing emissions from forest degradation; (iii) conservation of forest-carbon stocks; (iv) enhancement of forest-carbon stocks; and (v) sustainable management of forests. Developing countries are required to undergo a phase of national strategy development, implementation, and result-based action assessment in order to participate.[98] REDD+ schemes have been highly criticized for their inefficiencies, and for violating human rights, particularly those of Indigenous Peoples.[99,100]

2.2. THE FOUR DRIVERS OF THE LAND SQUEEZE

Today's land inequality is rooted in long-standing processes, structures and narratives that uphold powerful interests and exclude certain groups. However, those processes are continually evolving, and it is crucial to capture the latest, emerging dynamics as they drive land inequality in the present. Below, we zoom in on four sets of dynamics through which land, and control over land, are being appropriated by powerful actors – in other words, four drivers of the land squeeze. Some of these trends are well-established, others are more emergent, and all are linked on some level to policies and governance, and their capture by powerful interests.

DRIVER 1.
Land grabbing 2.0:
deregulation, financialization & rapid resource extraction

DRIVER 2.
Green grabbing:
big conservation, carbon offsets & 'clean fuel' expansion

DRIVER 3.
Expansion & encroachment:
mining, urbanization & mega-infrastructure developments

DRIVER 4.
Food system reconfiguration:
agri-food sector industrialization & consolidation

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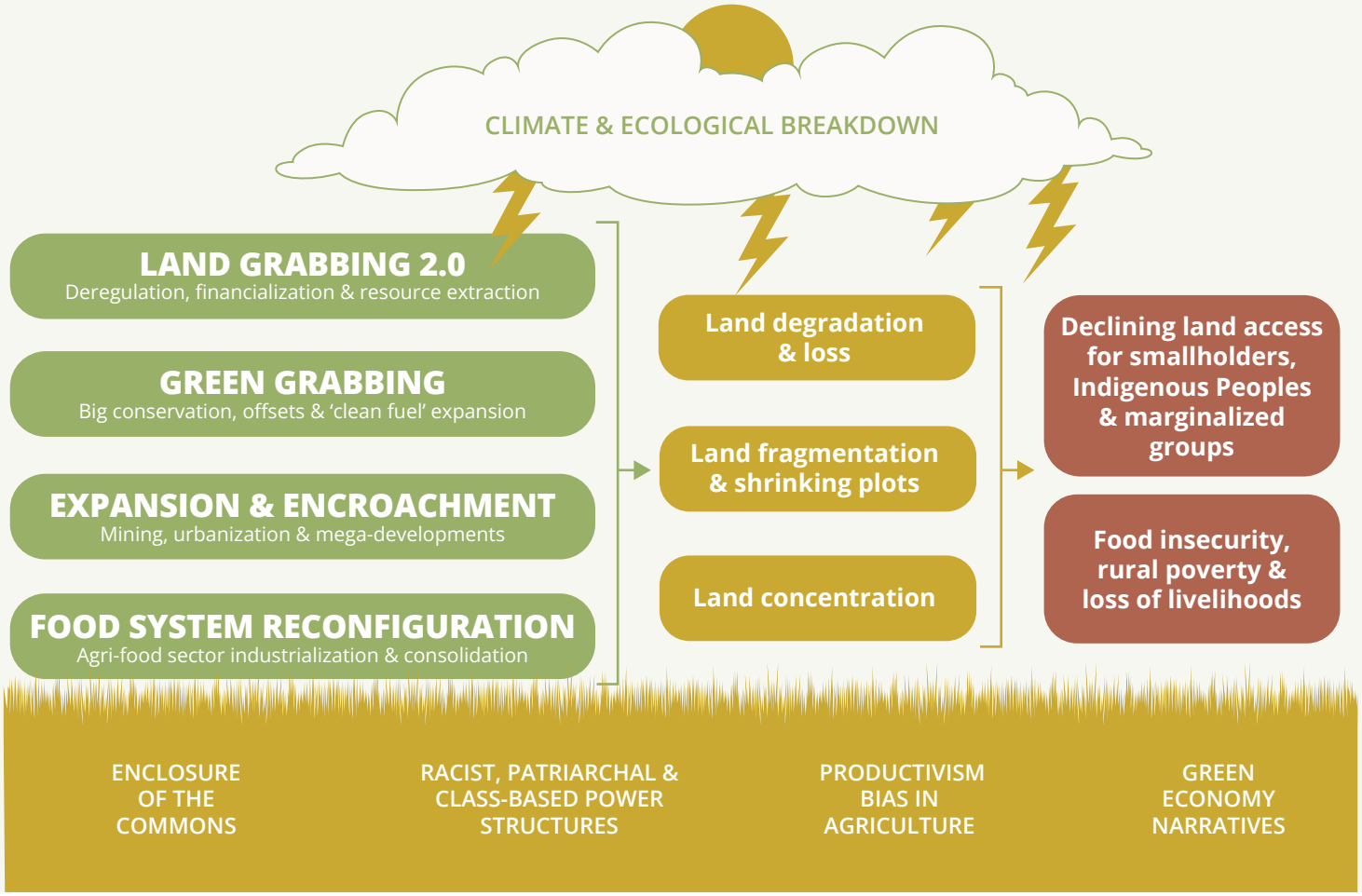
xiii Carbon neutrality refers to "the idea of achieving net zero greenhouse gas emissions by balancing those emissions so they are equal (or less than) the emissions that get removed through the planet's natural absorption". UNFCCC. (2021, February 26). *A Beginner's Guide to Climate Neutrality*.

xiv Land degradation neutrality, enshrined in the UNCCD, refers to "a state whereby the amount and quality of land resources necessary to support ecosystem functions and services to enhance food security remain stable, or increase, within specified temporal and spatial scales and ecosystems". UNCCD. *Land Degradation Neutrality*.

FIGURE 2.
THE LAND SQUEEZE: WHAT IS DRIVING LAND INEQUALITY?



DRIVER 1

LAND GRABBING 2.0:
Deregulation, financialization & rapid resource extraction

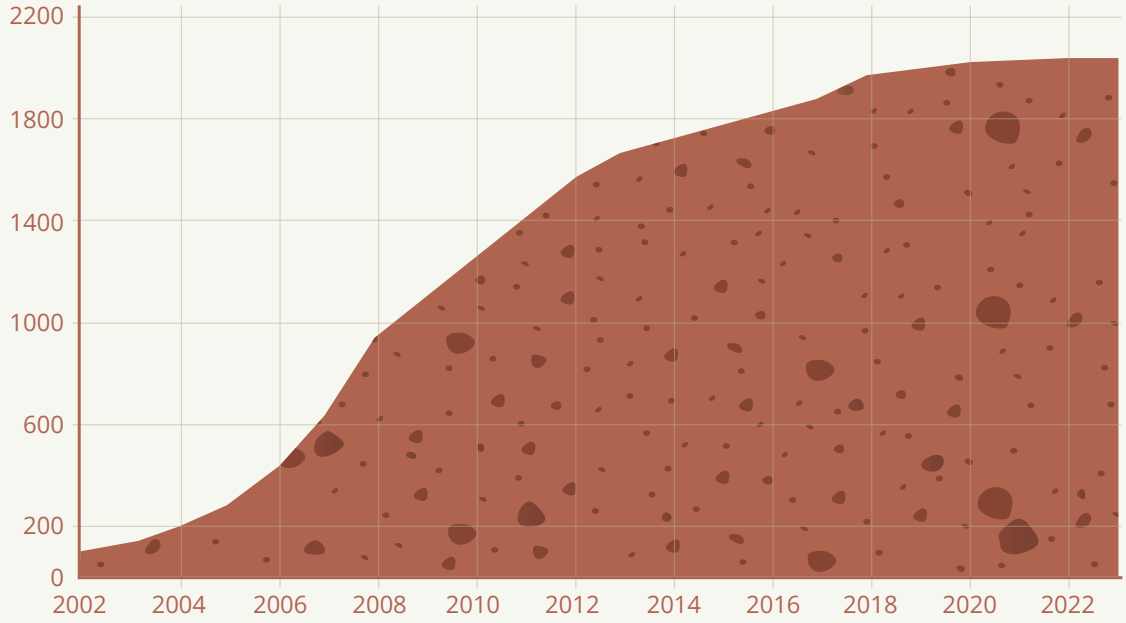
Coercive appropriation of land has taken place through history in various forms, at national and international scales, representing a persistent threat to small-scale food producers and marginalized groups. In particular, large swathes of land have been appropriated through the privatization of common land – a long-standing 'development' imperative.[101]

These trends continue to this day, in a phenomenon now recognized as 'land grabbing', referring to "the appropriation of control (whether through ownership, lease, concession, contracts, quotas, or general power) of larger than locally typical amounts of land by any persons or entities (public or private, foreign or domestic) by any means ('legal' or 'illegal') for purposes of speculation, extraction, resource control or commodification at the expense of agroecology, land stewardship, food sovereignty and human rights".[102]

Land grabbing has become synonymous with the large-scale land acquisitions that accelerated after the 2007-2008 financial crisis and accompanying food price spikes. The so-called 'land rush' saw a surge in large, transnational investments in farmland, driven largely by agri-food corporations and private investors, with financial actors looking to invest 'footloose capital'. Sovereign wealth funds also emerged as key players, with "finance-rich, resource-poor" countries seeking "finance-poor, resource-rich" land to ensure their food and energy security.[103, 104]

> ***"Large swathes of land have been appropriated through the privatization of common land"***

FIGURE 3.
NUMBER OF CONCLUDED TRANSNATIONAL LAND DEALS (2002-2022)



Source: Land Matrix Initiative, 2024

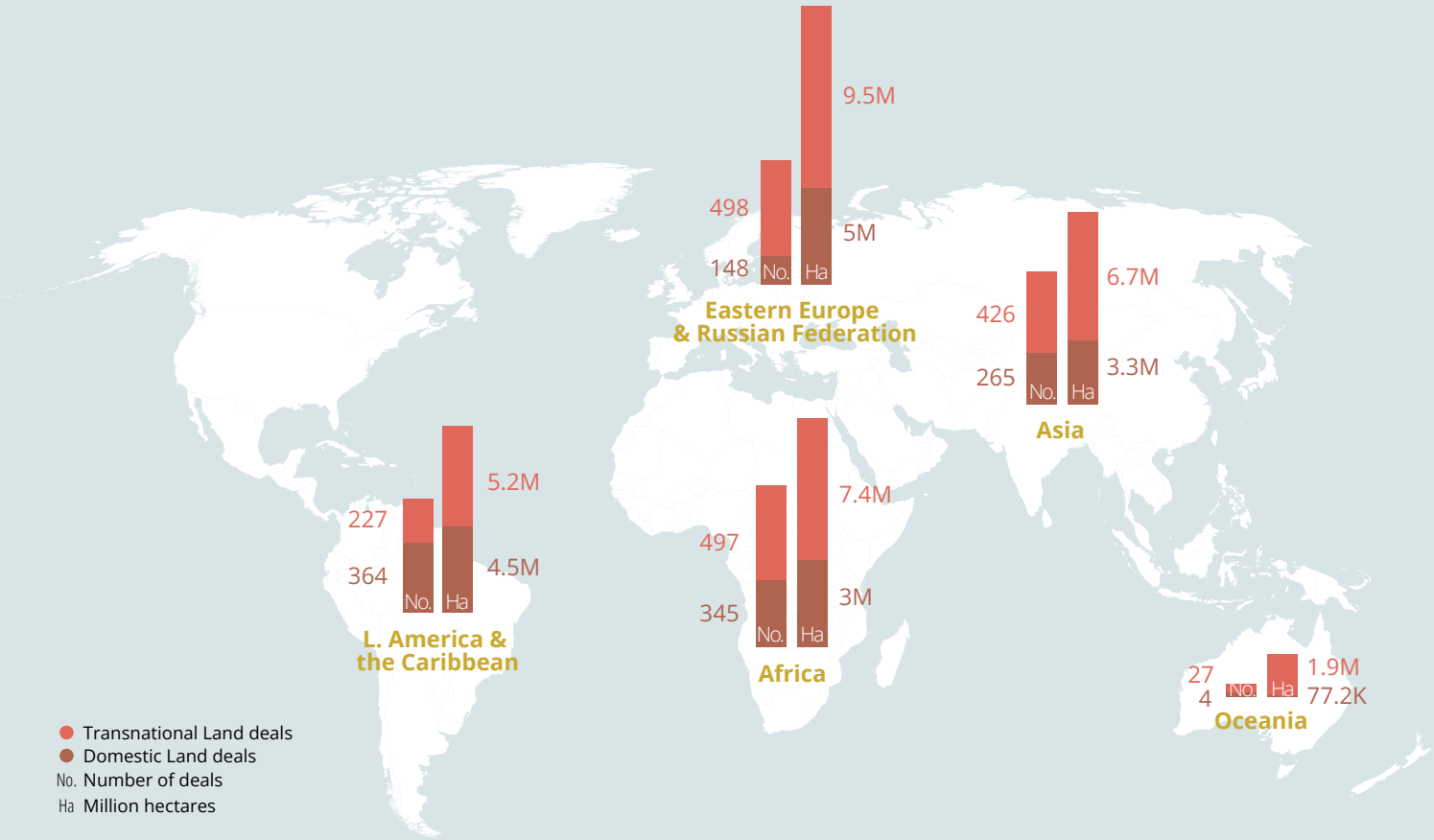
The land rush appears to have leveled off around 2013, as investors found new outlets in a rebounding global economy, and scrutiny of land grabs started to rise,[105] thanks to civil society initiatives such as the Land Matrix Initiative, an independent platform monitoring large-scale land acquisitions around the globe, and steps by national governments to apply the CFS's Voluntary Guidelines on the Responsible Governance of Land Tenure (VGGT).[106]

However, these steps have clearly been insufficient to stem the pressures on land. While media coverage and general attention has waned, land grabs have continued apace. Today, agribusinesses, investors, and foreign governments are finding new ways to financialize, unlock, and appropriate farmland.

As the LMI's recent synthesis report warned, the COVID-19 pandemic and the war in Ukraine have sparked high/volatile food prices and revived "feed the world" narratives and calls for a reinvestment in agriculture and other sectors to stimulate growth.[107] There is also a growing premium on securing access to water via land acquisitions. Although these developments are still playing out, we now appear to be on the cusp of a renewed push to deregulate land markets and secure land and resources for export commodity production.

These emerging trends in land grabbing, and their implications for small-scale food producers, peasants, pastoralists, Indigenous Peoples and marginalized groups, are described below:

FIGURE 4.
CONCLUDED LAND DEALS WITH AGRICULTURE AS THEIR PURPOSE
number of deals and land area (millions of hectares) 2000-2023



Data obtained from the Land Matrix Initiative, August 2023. These numbers reflect the total area that has changed control/ownership.

Land grabs are increasingly being deployed to seize control over freshwater, forests, and coastline, and to extract rapid value from these resources.

Unlike the mega-acquisitions that characterized the previous land rush, land grabs of all sizes are now being deployed to seize control over key resources, such as freshwater and coastline – a form of land grabbing that can also be understood as 'resource grabbing'. While some of these deals are captured by global land databases, others go under the radar by virtue of their size.

New research compiled by GRAIN through the *farmlandgrab* project shows that land investors are increasingly enticed by water access, and are appropriating access and control of water away from peasant communities and smallholders amidst risks of a global water crisis.[108]

In a number of cases, companies are buying up relatively small parcels of land with abundant water access and using these to grow water-intensive crops such as berries that fetch high prices in export markets. The deals tend to be in locations where water is already scarce, aiming for resource extraction within 10-15 years, meaning that any employment created will be short term, and the impacts on local food production systems are likely to be severe. A recent analysis of 160 land deals across 39 countries from 2005-2015 highlights that while conditions of water scarcity already existed prior to land acquisitions, investors have targeted land with preferential access to surface/groundwater and have exacerbated water scarcity through the adoption of water-intensive crops and the expansion of irrigated cultivation – generating competition for water in 67% of cases, with a high risk of small-scale farmers' needs being subordinated to those of large agribusinesses.[109]

These trends appear to be particularly prominent in cash crop production in Latin America, where transnational agri-food corporations, usually backed by foreign investors, have been buying up plots of various sizes and gaining control of large swathes of farmland and forests.[110,111] For example, over 2010-2012, Cargill acquired nearly 52,576 hectares of land in Colombia (six times the size of Manhattan) via purchasing and consolidating 40 campesino (peasant) properties.[112] More recently, the Olmos irrigation and hydropower megaproject in Peru is aimed at stimulating rural development by bringing water across the Andes to irrigate the arid Olmos Valley and open up 38,500 hectares of land for farming. However, land has been controversially sold off to big corporations for highly resource-intensive production, including a 500-hectare blueberry farm acquired by Canadian pension fund PSP Investments – a major financial player with nut plantations in Australia and California and berry farms on nearly every continent[113] – while only a tiny area of 5,500 hectares still belongs to small farmers who have historically owned it.[114]

> ***"Investors are exacerbating water scarcity through the adoption of water-intensive crops & the expansion of irrigated cultivation"***

Similar 'resource grabs' can be observed in other sectors and other regions. Through a 50-year lease granted in 2009, a Saudi development fund acquired 10,000 hectares of land in Ethiopia's Gambela region for rice cultivation and export and was granted authorization to construct a dam and some 30 km of canals to irrigate the project, despite severe water scarcity in the region.[115]

Short-term, small- and mid-sized resource grabs are combining with ongoing large-scale land deals to disrupt farming systems, undermine livelihoods, and exacerbate various dimensions of land inequality.

Land acquisitions can leave a long legacy, even when they lead to rapid re-sale, or when deals are abandoned along the way – a trend that peaked around 2010 but is on the rise again since 2015.[116] When land grabs are abandoned, projects typically pass onto other investors rather than land being returned to communities, meaning that land deals have long-lasting effects on land tenure systems.[117]

Governments of "finance-poor, resource-rich countries" continue to facilitate land grabs through pro-investor policies – in line with the advice of global lenders.

Once again, 'finance-poor, resource-rich' countries are being encouraged to capitalize on their natural resources by opening up to foreign investment, in spite of the risks associated with the resource grabs described above, and land grabbing more broadly. Until recently, the impetus has come from the World Bank's *Doing Business Index*, launched in 2002 with financial support from the US government. However, it was widely criticized for promoting irresponsible deregulation and a 'race to the bottom',[xv] and the scheme was discontinued in 2020. Nonetheless, similar approaches are now being revived through the World Bank's *Business Ready (B-Ready)* project, whereby quantitative assessment of countries' business environment for private sector development are published annually, covering most economies worldwide.[118] Described as a "new corporate flagship project", B-Ready assessments are "focused on the regulatory framework and the provision of related public services directed at firms and markets," with indicators that reward countries for lifting restrictions on domestic or foreign firms to own or lease land (property), and for digitalizing land governance (a trend with complex implications – see below).

Various forms of deregulation and land market liberalization are now being pushed, in line with the prevailing orthodoxies. US- and European-led initiatives to develop 'growth corridors' in Africa proliferated in the wake of the 2007-2008 food price spikes, leading to coercive attempts to appropriate control of land for agribusinesses, including via land titling schemes

xv For example, through the 280-organization strong Our Land Our Business Campaign, civil society groups have shown that the Index has sparked a 'race to the bottom', with governments deregulating land markets, curtailing labour rights, and removing social and environmental safeguards in order to improve their ratings and attract investment.

and land auctions.[xvi] Similar goals continue to be pursued through the rebranded, Gates Foundation-led 'AGRA' initiative, and through the 2023 Dakar 2 'Feed Africa' Summit convened by the African Development Bank.[xvii] Meanwhile, under the Belt and Road Initiative (BRI), extensive regions of Asia and Africa are being repurposed into agri-commodity production and distribution networks controlled by and serving China's domestic market.[119] Another related vehicle for opening up land markets is the designation of Special Economic Zones (SEZs). Agriculture-focused SEZs are on the rise in Africa, and tend to offer benefits such as dedicated infrastructure, customs facilitation, and advantageous (light) regulatory frameworks.[120]

In parallel, robust investor protections – typically taking the form of Investor-State Dispute Settlement provisions (ISDS)[121] – are being systematically introduced through Bilateral Investment Treaties (BTI) and Free Trade Agreements (FTA), and are emboldening companies to proceed with questionable land deals. According to the LMI, more than 1,000 ISDS provisions have been introduced since the year 2000, often with highly ambiguous land clauses, and little compliance with the Voluntary Guidelines on the Responsible Governance of Land Tenure (VGGT).[122] Further, these protections are being actively invoked where farmland is concerned. By 2019, agriculture was in the top ten sectors subjected to investment arbitration claims in Africa,[123] with investors now receiving hefty compensation for discontinuation of land transactions – and in other cases succeeding in blocking agrarian reforms by putting legal challenges to states (or threatening to do so).[124] These protections are therefore shielding transnational landholding investors against the land claims of Indigenous Peoples, pastoralists, and other rural communities seeking access to land to meet their nutritional, cultural, identity and spiritual needs.

Through these and other mechanisms, governments are increasingly reclassifying land as "vacant" and/or "idle", appropriating that land as state property, and subsequently granting concessions to agribusinesses. In doing so, they are reinforcing long-standing historical processes (described in Section 2.1) whereby existing land users have been sidelined, and so-called 'wastelands' have been subject to enclosures and dispossessions.[125,126] For example, Kenya's Ministry of Agriculture has signed a cooperation agreement on over 200,000 hectares of land with the International Finance Corporation (a World Bank member) to make 'unutilised land' available for private sector commercial agriculture.[127] In Uganda, the tensions inherent in these approaches came to a head in violent clashes between industry and smallholders, with the Minister of Lands urging Ugandan citizens to see land not as "a cultural and social commodity, but as an economic commodity".[128]

Research focused on the Mekong Delta region has also shown that some of the land granted for SEZs is fertile farmland (or forests, wetlands) that may be occupied and used by communities, often under customary tenure arrangements – with the state assuming ownership of these lands, with little or no compensation, systematic coercion of existing land users, and the granting of land concessions without informing or consulting local communities.[129]

A specific set of dynamics can be observed in former socialist countries, where processes of decollectivization have left a mixed legacy that is still playing out today – in some cases taking the shape of rapid deregulation and market integration, and acute risks of land grabs. There is evidence to suggest positive benefits from decollectivization in some regions, especially where farmers were able to pool their land and undertake forms of 'group farming'[xviii] – although conflict has sometimes undermined these

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xvi For example, countries who participated in the G8 NAFSN (a program that aimed to lift millions of people in Africa out of poverty by 2022) adopted "Country Cooperation Frameworks" (CCFs) in which the main land policy instrument was land certification also known as titling. This raised concerns as the commodification of property rights may threaten local land tenure security. Indeed, this process can lead farmers to pay taxes they cannot afford, cause the poorest farmers to mortgage their land to obtain credit, or directly incite them to sell their land. All the more so as land certification often goes hand in hand with land speculation, heightening land prices, which then forces farmers trying to compete with market prices to expand or sell their land. Titling schemes can also lead to land auctions, which mainly benefit those with greater purchasing power at the expense of the poorest. De Schutter, O. (2015). *The new alliance for food security and nutrition in Africa*. European Parliament's Committee on Development.

xvii CSOs in Africa have warned that a push to commercialize and ultimately to grab farmland might arise from the Summit, given its focus on top-down public-private partnerships, fertilizer, and commodity crop production. See AFSA. (2024). The Costs to Smallholders of AfDB's Feed Africa Initiative A Closer Look at the 40 Country Compacts.

xviii For example, research in Kyrgyzstan, Romania, Germany, and Nicaragua indicates that many households saw benefits in group production and actually formed new collectives or stayed in smaller reformed collectives; in a number of cases, these new group farms have even shown higher productivity than individual family farms. Agarwal, B. (2010). *Rethinking agricultural production collectivities*. Economic and Political Weekly, 45(9), 64–78.

initiatives over time.[xix] However, in a number of countries, the decollectivization process has resulted in small plots of land, reduced agricultural production, stymied rural development – and ultimately, rural exodus and re-concentration of farmland in the hands of investors.[130,131] As land market reforms in Ukraine have recently shown, these risks are particularly acute when legal safeguards are lacking and integration into the market economy is rushed through (see Box 6).

BOX 6.

Precarious livelihoods following decollectivization and market economy integration

- In **Hungary, the Czech Republic, Slovakia** (previously, Czechoslovakia), and **Poland**, from the early 1990s onwards, collective farms were broken up and private plots of farmland were dispersed among a large number of landowners, sometimes without any direct link to agriculture, while the 'less efficient' farms have been gradually eliminated.[132] Even where restrictions on foreign land ownership and land speculation have been adopted, privatization has allowed investors to acquire land through local brokers or with farmers themselves, who have become active agents in land markets.[133] In **Estonia**, the post-1990 land reform likewise dissolved large communal holdings and farmers were granted small pieces of land that were sometimes located far apart or in some instances simply inaccessible. Such fragmented farming landscapes continue to undermine the livelihoods of farmers in Eastern Europe.[134]

- **Kyrgyzstan** was the first of the Central Asian republics to implement land privatization as the country rapidly transitioned to a market economy.[135] In 2001, new regulations allowed citizens to own agricultural land. This led to smaller and smaller farms and a general decline in economic conditions, yet farmers prefer to own plots (as they feel more secure) instead of working on collectives.[136] Nonetheless, forms of collectivity remain: large, legally-registered organizations are still in place, while new cooperative farming models are seeing family members claim adjacent land parcels through land re-distributions.[137]

- **Vietnam** undertook land reforms in the 1980s and dismantled state-run cooperatives and collectives, assigning the land to individual households. The country's integration into the global economy subsequently devalued agricultural activities with negative consequences for peasants and smallholder farmers.[138] Unable to make a decent living, many peasant families have left the land since 2010. This rural exodus has helped pave the way for the state to seize land for infrastructure or agricultural commercialization.[139]

- **Ukraine**'s 2001 Land Code had granted farmers small plots of land (of about 4 hectares each) and introduced a moratorium on land sales. But in 2021, land markets were opened up as part of the IMF's loan conditions and World Bank prescriptions.[xx] Then, in January 2024, the cap on land sales was raised to 10,000 hectares. This has unleashed a tide of speculative investment and strengthened the hand of powerful interests, with oligarchs and large agribusiness now controlling over 28% of the country's arable land, and agribusinesses and investors gearing up to acquire additional farmland following the latest easing of restrictions.[140] Private banks are now closely involved in planning for Ukraine's post-war recovery, which is likely to involve further commercialization of the country's farmland – to the detriment of small-scale farmers and peasant communities.[141]

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xix In Romania, following the decollectivization of agricultural land, many farmers pooled their land by forming associations, both formal and informal. However, mainly due to aging, conflicts among farmers and economic challenges, some of these group farms have now become inactive but many have survived, and new ones are emerging. Agarwal, B., Dobay, K. M., and Sabates-Wheeler, R. (2021). *Revisiting group farming in a post-socialist economy: The case of Romania*. Journal of Rural Studies, 81, 148-158.

xx According to the Oakland Institute, the IMF, the World Bank, and the European Bank for Reconstruction and Development (EBRD) played a key role in opening up a land market in Ukraine to allow agribusiness and investors access to Ukraine's farmland. In addition to calling on the moratorium to be lifted, the World Bank has heavily invested in individual land titling programmes and auctioning of state land. Oakland Institute. (2023). *War and Theft: The takeover of Ukraine's agricultural land' Available*.

The rise of South-South land deals is changing the face of land grabbing – but the outcomes are similar for local communities.

Another key dimension of today's large-scale land acquisitions is the increasing role of 'South-South' investment. China, Brazil, India, and other emerging economies are becoming increasingly prominent in FDI flows, agri-food trade, and development cooperation, with South-South trade now accounting for a quarter of total agricultural trade flows.[142,143] Duly, South-South land investments are rising fast – targeting land in Asia and Africa in particular.

This trend clearly signals the fact that land grabbing is now a global phenomenon, reflecting important shifts in the world order.[144] While viewed by some as an opportunity for solidarity and mutual learning, South-South land deals appear to be reinforcing existing dynamics in terms of patchy rights protections and lacking accountability and transparency. For example, research in Mozambique and Ghana found shortcomings in terms of participation, with space lacking for reflexive debate on agricultural development pathways – and the general replication of dominant dynamics and biases (e.g., the integration of smallholders into global value chains).[145] Coercive dynamics also appear to be the norm in large-scale deals driven by Gulf states – as they bring massive oil wealth into land markets (including via carbon offsets, see Driver 2). For example, the 'Green Pakistan Initiative', launched in 2023 with USD 30-50 billion of investment from the Gulf states, is purportedly focused on putting Pakistan's fertile land and hard-working farmers to 'better use' and improving self-sufficiency in key foodstuffs[146] – but, working through local 'farms' and intermediaries, the initiative has already provided cover for what appears to be an egregious land grab for corporate export agriculture on some 2,000 hectares of so-called 'deserted' land.[xxi]

In this context, critical scholars have identified South-South land deals as "a new form of imperialism [...] to meet the needs of the rapidly expanding industries and consumer markets of rising powers".[147]

Land is being 'assetized' through new financial instruments, driving land price volatility, undermining security of tenure, and making it harder for farmers to hold onto their land.

Financial instruments for land investment are rapidly proliferating, and huge sums of capital are now flowing into land markets, leading to complex and opaque forms of land appropriation.

> ***"From 2005-2017, around $45B USD of institutional capital was invested in farmland"***

From 2005-2017, some USD 45 billion of institutional capital (e.g., from pension funds, insurance companies, and endowments) was invested in farmland.[148] Nearly 45% of all farmland investments in 2018, worth roughly USD 14.8 billion, transited through pension funds and insurance companies.[149] This capital has been brought into land markets through an explosion of agricultural investment funds, which increased tenfold over 2005-2018 (from 45 to 523), with 161 of these funds considering farmland as a stand-alone asset class.[150] By 2023, there were some 960 active funds specialized in food and agricultural assets, managing over USD 150 billion in assets.[151] The COVID-19 pandemic, and its impacts on supply chains, have led to a surge in interest in farmland as an asset class especially in the U.S., where the value of farmland in the hands of investors has more than doubled since 2021, standing at USD 16.6 billion at the end of 2023.[152]

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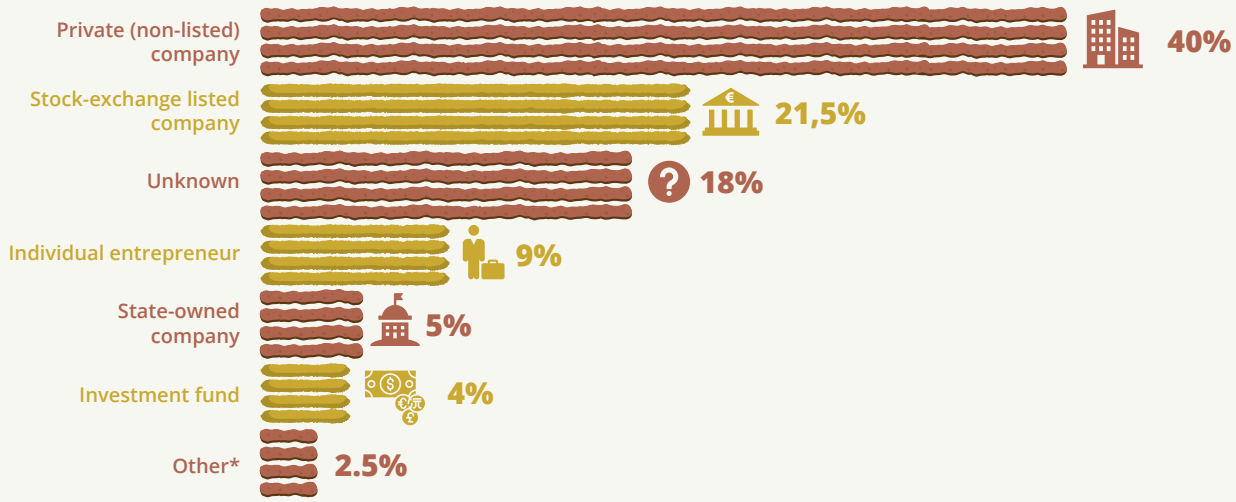
xxi The Khanewal Model Farm owned by the Fauji Foundation (associated with land grabs for ex-military personnel housing) has already acquired just over 2,000 hectares of 'deserted' land to pilot a corporate agriculture model to be rolled out across the country. The Pakistan Military Monitor. (2023, July 28). *Pak army's new land grabbing company*.

FIGURE 5.
LAND DEALS BY INVESTOR TYPE



*Including semi-state-owned companies, Multilateral Development Bank (MDB), private equity firms, investment banks, NGOs (church, universities, etc.), government, insurance firms, asset management firms, commercial banks, bilateral development banks/development financial institutions. Data collected from LMI, 2024.

Sovereign Wealth Funds were major protagonists in the post-2008 land rush, and they are playing a central role again in today's land squeeze – including via private equity funds. Some 42 Sovereign Wealth Funds now hold investments in food and agriculture, accounting for 2-3% of their total investments, a significant number given that these funds hold some USD 10 trillion globally.[153] As of 2023, the top in agriculture are COFIDES in Spain, RDIF in Russia, Temasek and GIC in Singapore, Mubadala and ADQ in the UAE, PIF in Saudi Arabia and QIA in Qatar.[154] Working through the medium of private equity funds, in which they may hold controlling shares, Sovereign Wealth Funds are combining land investments with sweeping stakes across the agri-food sector.[xxii] Out of the 54 agri-focused private equity funds targeting African agriculture in 2013, 27 were backed by development finance institutions, including the Commonwealth Development Corporation.[155]

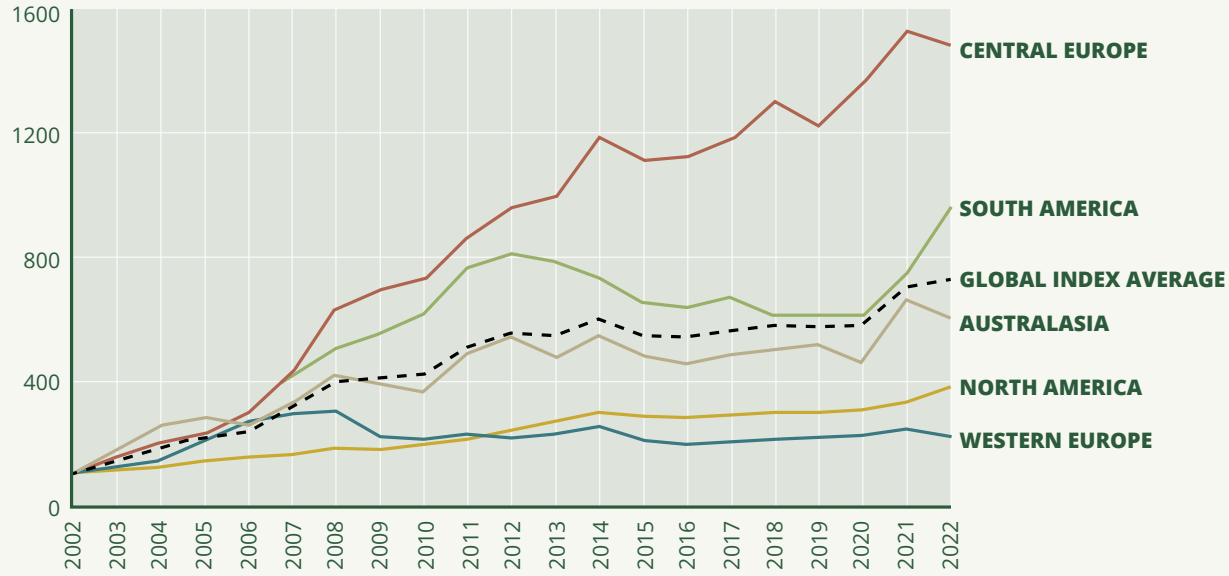
Meanwhile, new financial derivatives instruments are wrapping up farmland investments into ever-more opaque and complex forms, and opening the door to rampant land speculation. For example, Real Estate Investment Trusts (REITs) buy up farmland – often from the same farmers they will then lease the land to – and aggregate mortgages of several farmers into one unit, then sell shares of varying sizes to many holders, treating farmland ownership as a business in and of itself.[156]

Further, the world's dominant agricultural commodity traders increasingly speculate on farmland through their own private equity subsidiaries. The most prominent of these is Cargill's Black River Asset Management LLC, now split into three employee-owned firms each still connected to Cargill investments,[157] which launched three agricultural private equity funds in 2016. In these and other cases, investors are overcoming barriers to foreign/investor land ownership by working with local front organizations or via investment hubs in tax havens.

Farmland financialization is driving negative impacts for small-scale food producers through steep and sustained land price inflation. For example, in the UK, an influx of investment from pension funds and private wealth contributed to a doubling of farmland prices from 2010-2015.[158] Similarly in Brazil, the states experiencing the greatest investor speculation on farmland saw an average 200% increase in land prices from 2008-2017 – with prices soaring by 451% in Maranhão.[159] Land price inflation is particularly acute in North America, where speculative investment is rife, e.g. with investor-landowners snapping up smaller plots and consolidating them into lucrative

xxii For example, Brazilian agribusiness giant Atvos, is now controlled by UAE-based Mubadala Capital, through its controlling stake in the Lone Star Fund. See Sauer, Sérgio. (2024, March). *Eco-agrarian question: land and green grabbing in the Brazilian agricultural frontier*. Conference Paper no. 22. LDPI 2024-International Conference on Global land grabbing.

FIGURE 6.
GLOBAL LAND PRICES ON THE RISE SINCE 2002



Source: Savills, 2023

Note: The Global Farmland Index is based on the average value of crop or arable land in USD per hectare in 15 key farmland markets. Values are relative to those in the year 2002 (2002 = 100). Average values are used as there can be significant local or regional variation within each country

large-scale leases.[160] These trends have contributed to a quadrupling of land prices in the US agricultural heartlands of Iowa (2002-2020),[161] and 30 consecutive years of land price increases in Canada – which spiked by 12% in 2022 and another 8% in 2023.[162]

Ratchet effects have been observed in Saskatchewan, home to over 40% of Canada's farmland, where large investor landowners consolidate large tracts of land into single farm leases, contributing to a squeeze on available land and concomitant price inflation (to the benefit of those investors), as farmers seek to rent farmland to pay their mortgages. These trends present major barriers to land access for small-scale and entrant farmers:[163,164] although high land prices can benefit farmers seeking to exit the sector, many have their hand forced by rising debts and/or the need to fund retirement.

In Brazil, farmland financialization is especially acute – and the risks are growing. Huge influxes of capital are seeing land values increasingly detached from agricultural fundamentals, and control shifting to new configurations of actors: oil companies are now controlling bioethanol production (and through that, large swathes of land); leading commodity traders (SLC Agrícola and Brasil Agro) moved 80% more funds in 2020-2021 relative to the previous period; and individual investors are piling into derivative markets (accounting for 40% of maize futures contracts in 2021).[165,166]

In some cases, distant institutional investors have been implicated in grave rights abuses. The biggest investor in farmland today is the US-based Teachers Insurance and Annuity Association (TIAA), which pioneered investment in farmland as a speculative asset, and today owns more than 930,000 hectares of farmland worldwide.[167] TIAA recently came under fire for violent land grabs that have come to light in Brazil, involving deforestation and alleged murders of land defenders.[168]

Another important knock-on effect from the financialization of farmland is the erasure or masking of local specificities in land tenure, as land is packaged into a standardized, legible, and investible product.[169]

BOX 7.

How the financial sector takes control of farmland and agriculture

Farmland is a peculiar asset class. Since it is more difficult to convert into liquid wealth than real estate, it rarely is the centerpiece of an investor's portfolio. However, this very illiquidity makes farmland a highly stable investment that is particularly useful in times of crisis (e.g. the 2008 crash, or the 2020 COVID-19 supply chain blocks). On the ground, this process occurs through several mechanisms:

- Investors often acquire land by buying it from individuals seeking to turn a profit from their land. Oftentimes, these are older farmers, who need to sell their farmland to afford retirement, or indebted small-scale food producers who have no option but to sell their land to the highest bidder and become contracted farmers in what was previously their land. It is also common for investors to use insidious divide-and-rule tactics to convince members of tight-knit communities to turn on their fellow farmers, and sell land - thus inviting a wave of speculation.

- Investors often acquire farmland through legally dubious or illegal means. For example, Brasil Agro, a US and Argentinian-financed company, has been accused of creating phantom affiliate companies to bypass the Brazilian congress and acquire 280,000 hectares where it has already cut down more than 21,000 hectares worth of native forests.[170] In some cases, financial investment in land has been linked to the prosecution or even murder of local land rights defenders.[xxiii]

- Investors often benefit from a permissive policy environment. In Brazil, the 2020 Agro Law allows rural land to be granted as a collateral to foreign investors. The 2021 Agribusiness Investment Fund Law (FIAGRO) allows investors to trade farmland bonds, alongside credit securities, thus effectively deregulating the farmland market and making it more attractive to speculative transnational capital.[171]

A renewed push is underway to formalize land titles and digitize land registers – steps that can protect smallholder land access, alongside major risks of land grabs.

Formalization and land titling processes have played a crucial role in strengthening land tenure security in a number of contexts. In a favourable socio-economic and governance environment, land titling can benefit smallholder farmers by enhancing tenure security,[172] while also potentially improving access to credit.[173] A well-defined, gender-responsive land certification program can also close gender gaps by improving farm productivity for women,[174] and enabling women to receive compensation in land rental markets.[175]

Further, the creation of markets for land rights is generally considered to facilitate redistribution of land to most productive users, offering a way out for those who find farming to be unprofitable.[176]

However, decades of land titling reforms have left a mixed legacy, with the benefits often undermined by the asymmetrical and discriminatory enforcement of different rights. Today, renewed efforts are being rolled out to formalize land tenure, including a new focus on digitizing land registers. Through these processes, some of the misguided assumptions and pitfalls of past reforms are resurfacing, and new risks are emerging.

Firstly, titling reforms continue to focus on individual titling, sidelining the opportunities for shared and multiple rights as in customary systems.[xxiv,177]

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xxiii Since 2012, over 1700 land defenders have been murdered around the world. 9 out of 10 of those killings were recorded in Latin America, and 1 in 5 in the Amazonian rainfor*est. See here: Global Witness. (2022). Annual report 2022. Rising to the challenge of a world in crisis*.

xxiv These customary land rights often play a critical role in livelihoods, social relations, and ecological functions, and by collapsing all rights within individuals, there is the risk of excluding legitimate claimants - usually those who hold less social power. Formalization processes that focus on individual titling have therefore often negated the distinct land "interests" of women, young people, and seasonal users, among others. Due to economic factors, ideology, and the influence of power holders, women (as well as youth and ethnic minorities) tend to lose the few rights they had and generally are not able to participate fully in the land market.

Due to economic factors, ideology, and the influence of power holders, women (as well as youth and ethnic minorities) tend to lose the few rights they had.[178] Studies in Eastern Africa suggest that titling schemes are not proving successful in granting access to land to marginalized women, and that customary law allows both women and men to access land more easily.[179]

Secondly, reforms have been pursued without considering the broader economic context. As noted above, the potential of titling reforms to support smallholders and local communities depends on the economic context: it is clear that in the absence of adequate support for small-scale food producers (e.g., social protection, access to markets, debt relief, rural development), the formalization process poses risks to those groups – potentially leading to the asymmetrical and discriminatory enforcement of rights to the benefit of investors, and thereby raising the risks of coercive land appropriation.[180]

Thirdly, the potential of collective titling schemes is being insufficiently harnessed. A study comprising 100 countries showed that 73% of states offered community titling options, with these schemes being implemented post-2008 in one quarter of those cases.[181] Collective titling schemes can relieve the pressures on communities to sell commonly held lands. However, these titles are often weaker than individual titles, and countries are generally failing to follow through with key legal and regulatory steps to ensure that common land can be registered and protected – while in some cases, long-standing schemes are now unraveling in the face of deregulation (see Box 8).

BOX 8.

Collective land titling: persistent challenges

- **Brazil**, **Cambodia**, and **Tanzania** are among several governments that have backtracked on key provisions by enacting contradictory policies, forcing already-titled common land to be divided, expanding the definition of "public property" to encroach on community lands, and/or discarding recently enacted community property protections.[182]

- In **Mexico**, since its independence in the late 1800s, the government created the ejido system as part of its agrarian reform to award land from expropriated landowners to communities, through collective titles.[xxv] Since 1991, when Mexico signed the NAFTA trade agreement, the state stopped designating new ejidos, and allowed former ejidos to be rented or sold for profit – thus ending the Mexican agrarian reform. Although not all ejidos opted to privatize, in the municipalities of San Andrés Cholula and Santa Clara Ocoyucan, the privatization of ejidos has undermined and fragmented the collective system, paving the way for the construction of gated communities.[183] The number of ejidos has decreased nationally at a rate of 10% between 2007 and 2017,[184] with further liberalization now on the cards in the province of Oaxaca.[185]

- In **Kenya**, the Maasai group ranches that were collectively titled in the 1970s have now been mostly subdivided or dissolved. Formalization was intended to strengthen tenure security, but the new "group ranch tenure" granted substantial powers to elite representatives (primarily male elders), who were able to treat the communal land as de facto private property, paving the way for group ranges to be subdivided into private plots that were too small for seasonal grazing. Many of the subdivided plots are now being bundled together into plots greater than 10,000 hectares and leased long-term to conservation NGOs to help meet government-mandated environmental targets.[186]

xxv To most ejido members, land is much more than a commodity and represents a life-long struggle for liberty and the pivotal asset saving peasant farmers from becoming day labourers. See: USAID. (2011). *Mexico - Property Rights and Resource Governance*.

Finally, international institutions and governments have been pushing for the digitization of land governance to replace "outdated" paper-based land registries and cadasters with "modern" administration systems.[187] This process, entailing the collection, processing, storage and use of digital information related to land and other natural resources (see Box 9), has been hailed as a way to improve tenure security, efficiency and transparency, and even as a roadblock against land grabs.

However, the digitization of land administration poses serious risks for smallholders – especially in the Global South.[188] Firstly, it assumes that land right holders have access to the necessary hardware and software, which is not always the case. Secondly, digital land registries allow land to become easily accessible to international investors, who gain access to privileged land-quality information (such as soil quality, water availability, surrounding infrastructures) to facilitate their investments.

Thirdly, the digitization of land cadasters allows for more transactions to take place in the virtual sphere, through privately owned blockchain technologies that allow investors and states alike to evade accountability. For instance, evidence from India suggests smallholders have been manipulated and harassed to take part in the new blockchain land administration system.[xxvi]

So far, the main beneficiaries of digitized land governance are public and private investors, who obtain easy access to location-specific land data and online land transactions in an unequal digital literacy and landscape. Indonesia's new World Bank-sponsored 'eLand' system, which renders land data and transactions available to investors online, has been criticized by CSOs for enabling land grabs.[189] Similarly, in Brazil, digital land registries have facilitated land grabs by erasing customary rights and allowing corporations and elites to claim land belonging to Indigenous Peoples and peasant communities.[190]

BOX 9.

How land governance is being digitized: The Bhoomi Project in India

The Bhoomi Project was launched by the Indian state of Karnataka in 2004 to create an interoperable, centralized database of digitized land records, covering resource endowments (i.e., soil quality, size, shape, water availability), productivity (yields, cropping), and economic claims (legal rights, registration, and taxation). This database could be accessed in real-time by government departments and private agencies to verify ownership claims over land parcels.[191]

The Bhoomi database had several liabilities built into its system. Firstly, it deliberately excluded collective titles and common land stewardship ruled by customary laws. Land parcels considered to have "complex tenure types" were simply classified as "state property". In one fell swoop, Indigenous Peoples and other rural communities were rendered marginal, and their claims to land were erased - thus allowing private investors and local elites alike to treat these as "vacant" or "fallow" lands.

Moreover, despite the narrative of progress associated with this, and similar schemes, in reality digital land registries are rarely updated in real-time. This lag creates distortions between what is captured on data, and what reality actually looks like, allowing parcels to be subject to several competing titles.

Ultimately, this project reinforced pre-existing social power hierarchies, and is considered to have accelerated the process of land grabbing as it put a price on acquiring private titles on common land. The Bhoomi program is just one of hundreds, if not thousands, of similar digitization projects leading to the erosion of traditional land rights across the globe. Once data is digitized, it opens up new frontiers for investors by standardizing information about land, making it easier to transform into an asset class, tradeable from anywhere in the world. For instance, BlackRock uses a custom-made software (Aladdin) for mass-scale data analysis, giving the asset management firm privileged access to a private global database of farmland and adjacent cost-risk calculations.[192]

xxvi According to participants at IPES-Food's Africa land dialogue, the scheme has been plagued by failure to inform communities about what is happening, the equipment being used, or even what kind of data is being collected, where it will be stored, how it can be accessed, and for what purpose. See: IPES-Food. (2024). *Sub-Saharan Africa regional land dialogue*.

DRIVER 2

GREEN GRABBING:
Big conservation, offsets & 'clean fuel' expansion

Climate change, extreme weather, and desertification are driving land loss and land degradation. Biodiversity loss is also advancing rapidly and threatening basic functioning of ecosystems and the future of food production. The harshest impacts are falling on the populations who have contributed least to ecological breakdown, and with the fewest means to adapt to and withstand these changes – including small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups.

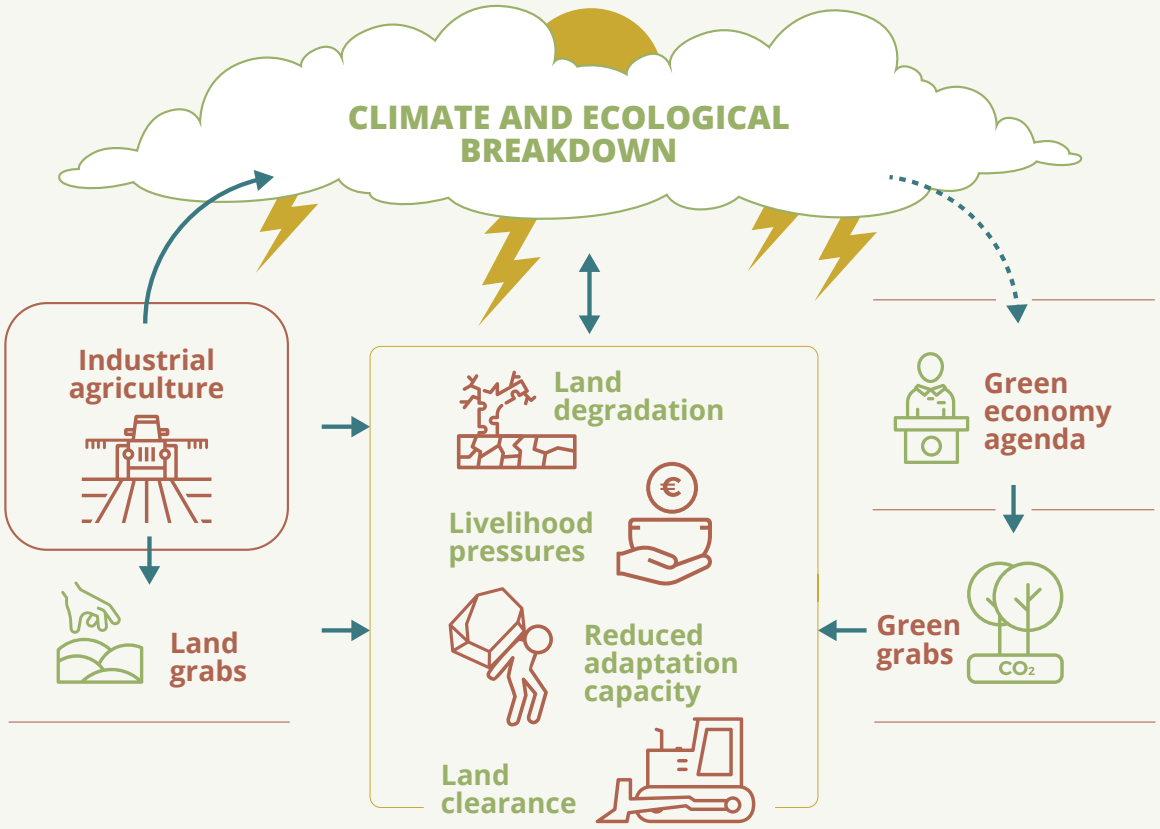
Political attention is finally being paid to these critical challenges, including recognition of land as a crucial carbon sink, and a home for biodiversity. However, some of the solutions being advanced in the name of tackling the climate and biodiversity crises are generating enhanced competition for land, and thus additional threats to the most affected groups. As environmental goals are enshrined in international environmental agreements, governments and large corporations are appropriating huge swathes of land through top-down conservation schemes that exclude local land users and small-scale food producers, including carbon and biodiversity offsets, 'biodiversity net gain' initiatives, rewilding schemes, and large-scale (non-biodiverse) tree planting schemes.

These appropriations of land can be understood as forms of 'green grabbing'. Like the land grabs to which they are analogous, the term signifies a restructuring of ownership, rights, and control of land and resources that were either privately, publicly, or commonly owned – or not owned at all – into the hands of more powerful actors. Although green grabs are not a new phenomenon, they have surged over the past decade. Land transfers for biofuels, green energy (e.g. solar parks), and conservation schemes are now outstripping more conventional land grabs as the dominant type of large-scale land acquisition, accounting for around 20% of the land deals captured in the Land Matrix database.[xxvii] As will be discussed below, an important new trend in green grabbing is what Fairhead, Leach, and Scoones have called the "economy of repair" – where land and nature are valued and appropriated not just for their use, but also for their ability to help repair or offset damage done to natural ecosystems.[193]

Below we explore the various forms, dimensions, and mechanisms through which green grabs are advancing, and the implications for equitable land access and food sovereignty:

xxvii The real figure is likely to be higher: appropriation of land and resources in the green economy takes various forms and is hard to track. Data obtained from the Land Matrix Initiative database in February 2024.

FIGURE 7.
THE CLIMATE-LAND-FOOD NEXUS



While biodiversity and nature protection are finally subject to binding international agreements, top-down 'fortress conservation' approaches are now generating major risks for land users.

It is now widely understood that protecting the world's remaining land-based biodiversity and restoring degraded lands are essential to protect the integrity of planetary systems and future food security. Over recent years, these imperatives have been reflected in targets set by the UN Convention on Biological Diversity (CBD) and the UN Convention on Combating Desertification (UNCCD), culminating in the '30 by 30' target enshrined in the Global Biodiversity Framework (GBF) (see Box 10).

In order to meet these goals, governments are drawing up plans to scale up a range of conservation projects, including protected areas, habitat restoration and green infrastructure initiatives (as part of 'biodiversity net gain' projects[xxviii]), conservation banks,[xxix] and payments for ecosystem services.

Although the GBF stipulates that the human rights of Indigenous Peoples and local communities must be respected when implementing the targets, there are major question marks about how this will be achieved in practice, with many concerned that they will reinforce 'fortress conservation' approaches,[194] and some even warning that they could spark the "biggest land grab in history".[195]

xxviii Biodiversity 'net gain' (BNG) projects aim to quantifiably increase biodiversity compared to a baseline. See for example: Department for Environment, Food & Rural Affairs. (2023, February 21). *Understanding biodiversity net gain*. Gov.UK.

xxix Conservation banks are another common initiative which involve using offsetting markets to permanently protect densely resourced areas. In the US for instance, to compensate for the unavoidable negative impact of projects on species, the US Fish and Wildlife Service grants bank owners a specified number of habitat or species credits that can be purchased by project developers. Agricultural lands can also serve as habitat banks if they are managed as species' habitats. US Fish & Wildlife Service. (2019). *Conservation Banking Incentives for Stewardship.*

BOX 10.

The Global Biodiversity Framework "30 by 30" target: what prospects for addressing these targets with communities

The Kunming-Montreal Global Biodiversity Framework (GBF) was adopted under the UN Convention on Biodiversity in December 2022 and lauded as a major deal for nature. The GBF sets out four goals for 2050 and 23 targets to be achieved by 2030. The GBF's headline target (Target 3) asks states to ensure and enable the protection (i.e., conservation and management) of at least 30% of terrestrial and marine areas by 2030. Meeting this '30 by 30' target entails placing an additional 15% of the world's land area under some form of environmental protection in the next six years, and the establishment of multiple new marine protected areas.

At COP15 in 2022, Indigenous Peoples and Local Communities representatives (IPLC), CSOs, and NGOs fought to include human rights safeguards in the framework to avoid Target 3 creating incentives for land grabs. Critically, Target 3 lists "Other Effective Area-Based Conservation Measures" (OECMs) as an alternative to protected areas, paving the way for community-led conservation, including agroecology or agro-forestry projects, to be supported in support of these targets. Further, Target 18 requires states to phase out harmful subsidies by at least $500 billion per year by 2030 and scale up incentives for protecting biodiversity, which could be used to subsidize agroecological practices – as is recommended in Target 10.

Increasingly, conservation/nature protection initiatives are being positioned under the heading of 'nature-based solutions' – and there are concerns that existing land users and their rights will be sidelined as a result. Although the term has now been defined at UN level,[xxx] civil society groups and social movements have been critical of the breadth of the concept. Land rights are seldom mentioned in the context of NBS schemes – or are made subject to voluntary application and self-assessment.[196] Further, NBS is typically used to refer to a panoply of practices including monoculture plantations and soil carbon farming[197] – risks also highlighted by IPES-Food in an analysis of the way different terminologies are used and abused in global governance spaces.[198] As a broadly-framed concept, NBS can be used to legitimize, promote and 'greenwash' practices such as single-species plantation forestry, [199] as well as large-scale sustainable intensification – thereby covering projects that may amount to forms of harmful land grabbing or green grabbing.[200] A member of the Hupa Indigenous people in the US called nature-based solutions "just a continuation of colonialism to commodify our Mother Earth" and a way "to access unseated territories of Indigenous peoples".[201]

Further, the discrimination and violence that has been a hallmark of historical land relations continues to surface in conservation and nature protection schemes (see Section 2.1). For example, the establishment of national parks has led to the displacement of local people, such as the Herero communities who were evicted from Etosha National Park (Namibia)[202] or the communities neighbouring the Serengeti National Park (Tanzania)[203] – sometimes perversely resulting in the loss of biodiversity, as accountability for protecting ecosystems and nature is dissipated.[204] Further, there are troubling accounts of protected areas being enforced by military actors who use force against local land users.[205] Another poignant example is the way nature protection laws and conservation imperatives are being used in Israeli-occupied Palestine to restrict Palestinians' land access and outlaw traditional food harvesting.[206]

More broadly, there has been a systematic failure to value the agro-biodiversity inherent in diversified, agroecological and peasant farming systems, and the ecosystem care inherent in Indigenous people's land management practices.[207] Green grabs in the name of biodiversity and nature protection are therefore a serious risk, making it crucial to rethink mainstream conservation approaches, and to center small-scale food producers and marginalized groups in addressing ecological challenges (see Section 3).

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xxx Nature based-solutions (NBS) are defined by the United Nations Environment Assembly of the United Nations Environment Programme as 'actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits'.' United Nations Environment Assembly of the United Nations Environment Programme. (2022). *Nature-based solutions for supporting sustainable development*. UNEP/EA.5/Res.5.

Initiatives based on 'carbon removals' and 'carbon sinks' are placing huge swathes of land off limits for food production.

Carbon removal initiatives, generally framed in terms of reaching "net zero", have become the primary measure in governments' climate pledges.[208] These strategies are contributing to the pressures on land, and on local food systems, as farmland previously used for food production and gathering is designated for tree-planting, revegetation, or other forms of carbon sequestration.[xxxi]

Climate goals generate complex trade-offs within agriculture, and between food production and other forms of land use. A recent study demonstrated that the land required for afforestation and biofuel plantations in the IPCC's 2018 climate mitigation scenarios is similar to the amount of land appropriated in the post-2008 global land rush.[209] But rather than managing these trade-offs carefully, governments are making massive pledges with little regard for existing land users and the impacts on food security. The 2022 Land Gap report warned that as governments rush to include land-based carbon removals in their national net zero pledges, the sum-total of pledges adds up to almost 1.2 billion hectares of land – equivalent to current global cropland,[210] and potentially conflicting with and/or impeding the achievement of biodiversity targets.[xxxii]

Closer examination of climate pledges reveals clear and present risks to small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups. As the Land Gap report finds, over half of government carbon removal pledges involve afforestation and risk interfering with small-scale farmers' and, especially, Indigenous Peoples' land use.[211] These pledges therefore appear to be underpinned by unrealistic and unfounded assumptions about large land areas being somehow unutilized (e.g. so-called 'wastelands') – myths that continue to be propagated by global lenders and powerful actors (see Box 11) – as well as showing clear disregard for the affected communities.

Today's carbon removal pledges reflect a failure to join up land, agriculture, and climate strategies in coherent ways: instead of focusing on high-emitting sectors like intensive livestock production, governments are pursuing land-based climate strategies that risk undermining the most sustainable production systems, i.e. those that are already reconciling food security, climate mitigation and ecosystem protection.

BOX 11.

Land up for grabs? Green economy narratives in Africa

According to the African Development Bank, "Africa offers the private sector trillion-dollar investment opportunities in climate and green growth sectors". In its strategy, the AfDB emphasized that 65% of the world's "uncultivated arable land" is in Africa, and that governments should use climate finance and industrialization to take full advantage of the continent's "predominant types of renewable capital (...): primarily land, forest, cropland, pasture and protected areas". In the IPES-Food Africa regional dialogue, this narrative was highlighted as a key driver of dispossession. Indigenous Peoples from the Cherangany Hills in Kenya emphasized the need to recognize pastoralist food systems as such, instead of labeling them as occupying "uncultivated land" that can be used for carbon farming.

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xxxi Natural revegetation, afforestation, and lignocellulosic crops for bioenergy, possibly coupled with a developing technology like carbon capture and storage, are the most common land-based climate change mitigation options. Gvein, M. H., Hu, X., Næss, J. S., Watanabe, M. D. B., Cavalett, O., Malbranque, M., Kindermann, G., & Cherubini, F. (2023). *Potential of land-based climate change mitigation strategies on abandoned cropland*. Communications Earth & Environment, 4(1).

xxxii "Since states have pledged 120 million square kilometers for land-based CDR, these commitments potentially conflict with the "30x30" target, especially if global cropland for food production is to be maintained. Consequently, some land-based CDR strategies may directly or indirectly impede the achievement of the "30x30" target, which could be deemed inconsistent with international law." Günther, P., & Ekardt, F. (2023). *Balancing climate goals and biodiversity protection : legal implications of the 30x30 target for land-based carbon removal*. Frontiers In Climate, 5.

Burgeoning markets for carbon and biodiversity offsets are driving dangerous dynamics, creating double threats to small-scale producers and marginalized groups.

As described under Driver 1, the increasing financialization and assetization of land is a major facilitator of land grabbing. Growing markets for carbon credits/offsets – and now also biodiversity offsets – are rapidly turning the ecosystem functions of land into fungible assets to be traded on derivatives markets, adding a new layer of financialization, and bringing a further influx of capital into land markets.

Emerging in the wake of the Kyoto Protocol, carbon offset markets are based on the idea of governments and corporations offsetting a given set of emissions by drawing down carbon in other locations, e.g. through carbon capture and storage or so-called nature-based projects.[212] Carbon credits are now traded through mandatory cap-and-trade systems for industry – including government-regulated exchanges in the EU and in California – as well as through voluntary (private-led) carbon markets. The latest climate agreements now allow governments to count emissions reductions achieved in another country – and traded via carbon markets – in their NDCs, sparking further expansion of offset markets.[xxxiii]

Similarly, markets for biodiversity and land degradation offsets are emerging to compensate for unavoidable biodiversity loss and to achieve No Net Loss biodiversity (NNL).[xxxiv] Although biodiversity offset markets are less developed than for carbon, with no international marketplace,[xxxv] common metrics are now emerging.[213] These tools are being taken up in the remit of infrastructure projects and urban expansion, to compensate for the residual biodiversity impacts of a project (through the application of "measurable conservation outcomes") and with a view to achieving 'no net loss', and preferably a 'net gain' of biodiversity.[214]

A number of additional financial instruments are emerging in this space, including the UNCCD-backed 'land degradation neutrality fund'.[215]

Offset markets and associated approaches are increasingly held up as a key path to climate change mitigation, and an optimal solution for channeling climate finance to the Global South.[216] Biodiversity offsets and credits have also been identified under the GBF as innovative means of increasing funding for biodiversity protection.

However, these mechanisms have been hotly debated at recent climate COPs, and many risks and shortcomings are emerging. Firstly, taking advantage of carbon and biodiversity offset markets requires large quantities of land, and the tradability of that land, meaning significant implications for land users' tenure security and human rights.[217]

Secondly, offsets are opening up land markets to huge influxes of money, and powerful new actors – including fossil fuel giants. By 2023, carbon offset markets were already valued at USD 414 billion globally, a figure projected to rise to USD 1,800 billion by 2030.[218] One fossil fuel multinational, Shell, has set aside more than USD 450 million for offsetting projects.[219] Meanwhile, some 25 million hectares of land have been snapped up for carbon projects by a single 'environmental asset creation' firm, UAE-based Blue Carbon, through agreements with the governments of Kenya, Zimbabwe, Tanzania, Zambia, and Liberia.[220, 221] In Kenya, the forceful relocation of up to 700 members of the Ogiek People has been reported in connection with Blue Carbon's investments.[222]

The total amount of land used for biodiversity offsets is not easily discerned, although a 2018 study identified some 13,000 projects across 37 countries, covering some 154,000 km2 of land[223] – an area roughly the size of Bangladesh.

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xxxiii Article 6 of the Paris Agreement established three mechanisms for states to voluntarily cooperate in achieving their emission reduction targets and adaptation aims set out in their Nationally Determined Contributions (NDCs). The article 6.4 mechanism allows for emissions reduction in one country to be credited so they can be sold to companies in another country and counted towards their emission reduction obligations to meet net-zero targets, under supervision of a UN-led body. The rules and procedures for carbon trading under article 6.4 were tabled at COP28 in Dubai and will be taken up again at COP29 in 2024. UNFCCC 'The Paris Agreement: Article 6.4 Mechanism'. Available at: UNFCCC. *Paris Agreement Crediting Mechanism*.

xxxiv No Net Loss (NNL) entails that within a defined project, both species and vegetation types sustain their diversity within and among themselves and neither their long-term viability nor their function as species assemblages or ecosystems are reduced. See: IUCN. (2015). *No Net Loss and Net Positive Impact Approaches for Biodiversity.*

xxxv Unlike with carbon credits, there is no scientific consensus on how best to measure, let alone frame, a biodiversity metric (species diversity, ecosystem function or ecosystem services). Developers can offset directly at their site or purchase offset credits (units of biodiversity conservation outcomes) from a third party managing a parcel of land for its conservation value. IUCN (2014). See: *Biodiversity Offsets Technical Study Paper*.

The expansion of these markets reinforces the risk of evictions, human rights abuses,[224] and the broader reconfiguration of land markets.[225] A number of recent cases have revealed egregious shortcomings in consulting affected communities, in a context of major power imbalances. For example, in Colombia, a dispute surrounding the impact of a carbon credit project on the Indigenous land/territory of Pirá Paraná recently reached the Constitutional Court, based on allegations that the contracting parties did not provide timely information allowing for agreement to be reached with affected communities.[226] In some cases, local communities have faced a double impact from harmful developments, and misguided attempts to offset the damages.

> ***"A growing number of studies are highlighting the role carbon sequestration programs play in fueling corporate power"***

For example, the construction of the Bujagali Dam in Uganda in 2012 undermined the livelihoods of 3,000 local households reliant on fishing and farming in the area. But instead of supporting the affected communities, the harm was reinforced by an offsetting scheme that banned agricultural and fishing practices via enhanced protection of the Kalagala Falls 20km away.[227]

Further, a growing number of studies are highlighting the role carbon sequestration programs play in fueling corporate power. A 2023 report by the Open Markets Institute and Friends of the Earth exposed that all major agribusiness firms, including Bayer, Corteva, and Cargill, have developed carbon payment programs that rely on their own company's proprietary technologies and/or require farmers to use their digital agriculture platforms.[228]

Further, it is becoming increasingly clear that carbon offsetting schemes are failing to achieve their stated goals of climate mitigation.[xxxvi] Although assessment metrics for biodiversity/NNL schemes are less robust,[229] and undermined by boundary and comparability issues,[230] the initial signs are equally concerning: a 2019 global review found no documented positive impacts of forest-based/avoided loss offsets.[231] Further, a 2022 report by the Global Forest Coalition concluded that India's internal NNL-based offsetting was failing to halt deforestation, while incentivizing land concentration and forced land acquisitions, leading to the "irreversible loss of their livelihoods and symbiotic relationships with forests, which is accentuated by the gendered impact on women".[232]

Carbon and biodiversity offsets are therefore a key piece of the puzzle in terms of green grabbing, and the broader land squeeze. There is already ample evidence to suggest that pursuing these approaches without considering how people use the land and ecosystems in question risks undermining food security/food sovereignty and causing harm in either location or both.[233] Recognition of these problems is now growing, and sparking overdue consideration of tighter regulation. These imperatives, and the case for a broader rethink of conservation approaches, are discussed in Section 3.

'Clean fuel' projects, and other top-down renewable energy schemes are creating new demands for land, water, and minerals – with insufficient safeguards for current land users.

Across the globe, countries are adopting and implementing renewable energy strategies and projects to transition away from fossil fuels.[234] While responding to the urgent and critical need to decarbonize the economy, renewable energy projects – particularly those aimed at developing 'clean fuels' – are also placing major new demands on land and water,[235] and generating difficult trade-offs relating to access to land.

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xxxvi Recent studies have shown that the vast majority of forest carbon credits tied to the REDD+ scheme are essentially worthless - that is, the credits sold under the scheme fail to reduce deforestation and offset the majority of emissions claimed by providers. Other common concerns include the risk of double counting emissions reductions and who, between investors, states, and local communities, actually benefits from the funds. West, T. A. P., Wunder, S., Sills, E. O., Börner, J., Rifai, S. W., Neidermeier, A., Frey, G. P., & Kontoleon, A. (2023). *Action needed to make carbon offsets from forest conservation work for climate change mitigation*. Science, 381(6660), 873-877.

These challenges have already played out in the context of biofuel projects, which featured prominently in the post-2008 land rush.[236] While some curbs on production followed, land conversion for biofuels continues to be incentivized through fuel blending requirements in a number of major markets, including the EU, the US, Brazil, India, and Indonesia,[237] with EU biofuel demand expected to increase by 11% in 2024,[238] generating significant land use change and concomitant risks.[239]

Further, the nascent boom in green hydrogen – lauded as a new frontier in renewable energy by the gas industry and large energy importers – is generating particularly acute risks and equity trade-offs.

Green hydrogen, which yields storable energy that can be used for batteries, shipping and other applications,[240] is produced through renewable-fueled electrolysis (splitting of water molecules), in a process that places considerable demands on land and water. With projects already being developed in water scarce areas,[xxxvii] and traditional rangelands once again being mislabeled as "wastelands" and earmarked for large-scale green hydrogen projects,[241] the risks to Indigenous Peoples, pastoralists, and small-scale producers are rapidly becoming clear.

Further, green hydrogen projects are overwhelmingly for export, with the EU looking to double green hydrogen imports by 2030 to support its green energy transition.[242] Large-scale energy transfers of this nature risk advancing a form of "green colonialism" whereby poorer countries redirect their land, resources, and energy towards meeting other countries' needs.[243]

Although the land footprint of solar, wind, and geothermal energy projects is vastly smaller than fossil fuel extraction or biofuel production,[xxxviii] some expanding project types are placing strains on land and resources. In contrast to wind and solar photovoltaic power systems, geothermal and concentrated solar power (CSP) systems use significant amounts of water,[244] and can impact farmers and local communities when rolled out at scale. For instance, the Ouarzazate Solar Plan in Morocco, touted as the world's largest CSP, was built on land owned by agro-pastoralist communities without their consent, and redirects water flows for cooling purposes, in the strained context of a semi-arid region.[245]

In other cases, renewables projects have led to dispossession of farmers as a result of land ownership restructuring and the flooding of farmland, or the undermining of livelihoods through disturbance of grazing grounds or land and animal migration routes.[246] For example, the Indian government has sanctioned 50 solar parks, covering one million hectares in seven states. Over 74% of solar is on land of agricultural (67%) or natural ecosystem value (7%), causing potential food security and biodiversity conflicts.[247] Since 2017, there have been more than 15 instances of conflicts linked with these projects.

Although wind energy has high compatibility with agriculture, in some cases projects have been pursued with inadequate consultation, leading to protests from local communities that have been met with coercion and violence, for example in Mexico and Colombia.[248] In Norway, the construction of wind farms on the Fosen peninsula sparked a contentious public debate about whether the Sami's right to their ancestral lands and reindeer husbandry could legitimately be compromised in favor of the country's energy security and green transition – and in 2021, Norway's supreme court ruled in favour of the Sami.[249]

Arguably, the biggest effects of green energy projects on land access are indirect ones associated with the expansion of mining for transition metals and minerals – a trend that exacerbates a host of risks relating to land degradation and access to land (see Driver 3).

> ***"Green hydrogen is generating particularly acute risks to land rights, as well as equity trade-offs"***

xxxvii More than a third of the biggest green hydrogen projects are planned in countries facing high or extremely high water stress. Corporate Europe Observatory, *The dirty truth about the EU's hydrogen push*, October 10, 2023.

xxxviii Bioenergy crops require approximately 40–50 times more land than solar PV to produce an equivalent amount of energy. Chatham House. (2023). *Land use and energy pressures.*

DRIVER 3

EXPANSION & ENCROACHMENT: Mining, urbanization, and mega-infrastructure developments

Huge areas of land are also being taken out of agriculture – often coercively – and repurposed for extractive industries and mega-developments, in a context of rapid (and often unsustainable) economic expansion. In particular, a global mining boom is ramping up the pressures on farmland. Below, we describe some of the key emerging mechanisms and modalities through which this trend is advancing, and the impacts on small-scale farmers, peasants, pastoralists, Indigenous Peoples, and marginalized groups:

Mining for aggregate, sand and 'transition minerals' is expanding worldwide, leading to the displacement of food producers, Indigenous Peoples, and marginalized groups, and pollution of their territories.

Extractive industries are growing worldwide,[250] generating huge threats to food producers via direct encroachment on farmland and the wholesale pollution of land and water. Mining is especially significant, and a global boom is now underway: demand for sand and gravel is growing rapidly with urbanization;[251] phosphates are required in growing quantities for fertilizer production; and demand for 'transition minerals' is also on the rise (see Box 12).

Using satellite images, a new study published in 2023 estimated that approximately 6.6 million hectares of land is currently used for mining the world over[252] – an area the size of Sri Lanka. Although aggregate data on how much farmland has been lost to or polluted by mining is not easy to find, the numbers are clearly significant. Mining projects accounted for 14% of recorded large-scale land deals over the past ten years, swallowing up some 7.7 million hectares of farmland.[253] Further, 10% of data units in an analysis of one dataset were within protected areas, demonstrating the high risks of land conflicts sparked by mining activities.[254]

The environmental impacts of mining reach far beyond the mining sites themselves, as a result of deforestation (e.g., for road access), pollution of adjacent land and water, and erosion. Sand mining is generating particularly severe environmental impacts, especially across Asia and Africa. It is now responsible for more illegal extraction than even the fossil fuel sector, exacerbating the negative impacts on smallholders and local communities.[255] In Assam and other states in India, the environmental impacts of sand mining range from eroded riverbanks and lost biodiversity to disrupted sedimentation processes and altered river courses.[256] This is leading to land erosion, which in turn causes farmers to lose both their homes and agricultural lands.[257]

BOX 12.

Transition minerals: how the green energy transition is exacerbating the mining boom and its pressures on land

Meeting the Paris Agreement goals means tripling renewable energy capacity by 2030 (from 2022 levels), a shift that will entail a significant rise in demand for minerals: "over 40% for copper and rare earth elements, 60-70% for nickel and cobalt, and almost 90% for lithium". According to the International Energy Agency (IEA), green energy transitions are already triggering a scramble for 'transition minerals' – cobalt, copper, lithium, and zinc among others, also referred to as 'critical minerals' – for solar photovoltaic plants, wind farms, hydrogen energy storage, and batteries in electric vehicles.[258] Companies based in China account for the majority of mining operations for transition minerals, both in China and on the African continent.[259]

With governments fast-tracking projects to support green energy transitions, the mining of transition minerals is generating severe social and environmental impacts (e.g., land and water pollution), with the majority of projects located on or near Indigenous Peoples' or peasant lands.[260] A 2023 report by the Business and Human Rights Resource Center found that over 90 corporations mining minerals for clean/renewable energy production have been associated with hundreds of human rights violations over the past decade, including use of child labour, arbitrary detention and evictions, pollution of lands, and violations of affected communities' right to free, prior and informed consent.[261]

These risks are reinforced by policy incentives that are skewed in favour of mining interests. Under pressure to enable green energy transitions, governments are fast-tracking legislation to incentivize mining projects without due consideration of their social and environmental impacts[262] (see Box 13). Further, trade and investment policies regularly reinforce the rights of mining companies to the detriment of local communities. In mining and other sectors, investors can typically sue using ISDS clauses when investors' 'legitimate expectation' that the land covered by a given deal/concession is not met, or if governments subsequently wish to renege and return land to local communities (see more under Driver 1).[263,264] This drives up the cost of land reform and environmental protection significantly, as investment arbitration is costly, states rarely win, and the sums sued for are extortionate.[265,266] For example, in a recent lawsuit, several transnational companies successfully sued the Colombian government for attempting to halt a large-scale mining project.[267]

In some cases, land ownership laws can favour mining interests over communities. For example, South Africa's Mineral Laws stipulate that all minerals below the ground belong to the state, allowing even seemingly secure land tenure to be overridden[268] – although landmark legal judgments have established guarantees for communities in terms of prior consent.[269]

> ***"Governments are fast-tracking legislation to incentivize mining projects without due consideration of their social & environmental impacts"***

BOX 13.

Mining and the violent displacement of peasants

- In 2016, US-based Mosaic Fertilizantes acquired at least 2,522 hectares in **Catalao, Brazil**, displacing 90 families from their land in the process of establishing phosphate mines. Schools were closed and the peasant families forced to migrate to the outskirts of the nearby city to live in precarious conditions. The families who chose to resist the illegal occupation of their lands faced violent oppression.[270]

- In **Colombia**, illegal mining is closely tied to violent displacement of Afro-Colombians from their traditional lands. Even though Afro-Colombian communities hold only 3% of the land, UNODC documented that 42% of illegal mining occurs on Afro-Colombian lands.[271] The departments of Antioquia and Chocó are particularly affected, and access to gold is a motivation for violence and displacement in these areas.[272] In a single two-week period in 2019, for example, two massacres in the Antioquia department were attributed to a gold mining environment in which "informal miners, illegal armed groups, and multinational miner Gran Colombia Gold are all trying to make money".[273] Following massive Afro-Colombian community displacements in 2008 and 2010, for instance, applications for mining permits in Cauca soared.[274]

In Asia, Africa and beyond, urbanization is advancing rapidly and mega-cities are swallowing up some of the world's most productive farmland.

According to the UNCCD, by 2030 up to 3.3 million hectares of the world's farmland will have been swallowed up by expanding megacities over a 30-year period.[275] Although the loss of prime farmland to urban expansion is a growing problem in parts of the Global North, some 80% of land loss to urbanization is occurring in Asia and Africa.[276, 277, 278] In India, the trends are particularly acute, with 1.5 million hectares estimated to have been lost to urban growth between 1955-1985, a further 800,000 hectares lost from 1985-2000,[279] and steady ongoing losses to this day.[280] Globally, urban encroachment on farmland may become even more acute over time, with almost seven in ten people projected to live in cities by 2050.[281, 282]

These trends are adding to the many other pressures on farmland and narrowing the options for smallholders. Across South Asia, for example, growing urbanization means that getting hold of more land is no longer a possibility for smallholders, while existing land is under pressure from both urban expansion and climate change.[283]

In some contexts (e.g., Southern India), financial and real estate speculators are fuelling and exacerbating the encroachment on farmland for urban development, with high land prices effectively compelling farmers to sell to developers, in a context of scant state support and few viable livelihood options. In the US and Canada, where overall agricultural land has been steadily shrinking – decreasing by some 728,000 hectares per year since 2015 in the US[284] – real estate speculation, and huge influxes of capital from new actors, is accelerating urban expansion into hinterlands. For example, in California, a group of ultra-wealthy Silicon Valley investors, Flannery Associates, has recently been in the spotlight after spending more than US$800 million to acquire over 20,000 hectares of high-quality farmland in Solano County to build an 'urban utopia' from scratch.[285]

Further, urbanization and associated changes in socio-economic status and lifestyle have indirect impacts on land through diet shifts, e.g. towards more animal source foods (see Driver 4).

Across the globe, pastures, cropland, rivers, and wetlands are under pressure from large-scale infrastructure projects.

Closely connected to urbanization, the growth of large-scale infrastructure projects is especially impacting smallholders and rural communities. Since 2003, construction and infrastructure development alone have been responsible for 16% of gross cropland loss globally, and as much as 35% in Southeast Asia.[286]

As well as reconfiguring food production systems (see Driver 1), growth corridors and expanding trade networks dominated by the major powers have

huge impacts on farmland and on small-scale food producers through the appropriation of land for infrastructures.[287]

For example, global watchdogs have documented numerous human rights abuses linked to the seizure of smallholders' and peasants' land in Africa and Asia, as participating governments have prioritized road construction, trade hubs, or other projects in the remit of China's Belt and Road Initiative (BRI).[288]

Although growth corridors are more prevalent overall, Special Economic Zones (SEZs) are also on the rise in a number of African countries and represent another important form of infrastructure-led development.

SEZs (also discussed under Driver 1 in the context of agri-development zones) are designed to circumvent general constraints on appropriating land, typically creating favourable legal and fiscal conditions for investors, and allowing existing land rights to be overridden in favor of loosely defined "public interest". The fact that they are often located near urban centres and key infrastructures means that they exacerbate land pressures in areas where it is already intense. As a result, their creation is frequently associated with bitter land conflicts,[289] with developers and governments systematically failing to protect communities' rights or to offer sufficient compensation for loss of livelihoods (see Box 14).

BOX 14.

Special Economic Zones: insufficient rights protections and derisory compensation

- In **Senegal**, four SEZs – the Diass Special Integrated Economic Zone, Diamniadio International Industrial Platform, Sandiara SEZ and Bargny-Sendou SEZ – aim to develop multiple types of industrial activities including agribusiness, technology and energy. These four SEZs are a part of a broader plan to transform Senegal into what one presidential advisor described as "one big SEZ".[290]

- In **Madagascar**, agriculture-focused SEZs have led to evictions and destroyed livelihoods, with derisory compensation.[291]

- Construction of the Aurora Pacific Economic Zone and Freeport (APECO), in **the Philippines**, has been denounced for human rights violations that allegedly resulted in "legalized land grabbing and eviction."[292]

- Women are typically impacted most from the conversion of cropland and pasture for various infrastructure development purposes. In **Malaysia**, for example, land resettlement schemes, prompted by conversion of land to large-scale plantations or the construction of dams, disproportionately impact women as they lose access to land, forests, foods, crafts, medicines, and fisheries in the process. As a result, women face barriers to carrying out their traditional activities and livelihoods such as crafting, foraging medicines and providing food.[293]

DRIVER 4

FOOD SYSTEM RECONFIGURATION: Agri-food sector industrialization & consolidation

Alongside the persistent and proliferating threats of land grabbing, a major reconfiguration of food systems is placing renewed pressures on the livelihoods of small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized communities, and eroding control over their food systems and their land. The spread of industrial agriculture, and concomitant diet shifts, are rapidly degrading land, and placing huge livelihood strains on small-scale food producers. And through rampant agri-food sector consolidation, the leading firms are establishing an ever-tighter grip on food chains, driving upscaling and consolidation of farms – and ever-greater power imbalances in food systems. Key trends and mechanisms are described below:

The integration of smallholders into corporate value chains is allowing agri-food companies to gain effective control over farmland.

De facto concentration and control of farmland is advancing through various approaches that integrate smallholders into corporate value chains. One such business model is contract farming, whereby agribusinesses commit to buying the producers' harvest, while stipulating the purchase of specific inputs such as seeds and fertilizers, and setting the terms of production and prices.[294] Similar dynamics have been established in the remit of 'multistakeholder' and certification-based schemes, e.g., The Roundtable on Sustainable Palm Oil (RSPO), whereby palm oil firms provide credit, infrastructure, and markets to farmers in exchange for their land and labour.[295] These approaches have been hailed as a "win-win" for smallholders and investors, and a way to secure investment in agriculture while avoiding large-scale land acquisitions and their many risks.[296] Schemes of these types are now well-established and steadily expanding across the Global South,[297] with some 417 of the large-scale land deals captured by the LMI (equating to 7 million hectares) focused on contract farming.[298]

However, the outcomes are highly variable and context-dependent, and any advantages may be offset by what appear to be significant risks of farmers losing control over their livelihoods, resources, and ultimately their land. Studies continue to demonstrate that contract farming schemes reduce farmers' autonomy over what to grow, placing *de facto* control of farmland in the hands of the contracting corporation, and transforming farmers into wage labourers on their own land.[299, 300] Farmers may be locked into one part of the food chain and exposed to price shocks.[301] Further, with little incentive to steward the land over the longer term, agribusiness investors may encourage

extractive approaches to yield quick returns,[xxxix] leading outgrower farms to become over-specialized, over-dependent on fertilizers, and ultimately vulnerable to land degradation.[302]

> ***"Contract farming schemes reduce farmers' autonomy over what to grow, placing control of farmland in the hands of contracting corporations"***

Further, the terms of inclusive business schemes can expose farmers to financial risk and undermine tenure security in the longer term. For example, in Colombia, participation in the RSPO required farmers to have clear land titles, and to use the land as collateral for credit – with farmers often becoming heavily indebted and contracting companies able to legally seize their land upon failure to repay loans. Despite these risks, uptake of these schemes remains high, as participation is a *de facto* requirement for farmers to obtain governmental support.[303]

Finally, as part of a broader shift towards export cropping around the world, contract farming can also undermine food security more directly by shifting land/resources away from supplying local markets with nutritionally diverse foods.[304]

The pressures towards upscaling and farmland consolidation are growing in increasingly technology-centric, capital-intensive and specialized industrial food systems.

As described in Section 2.1, productivist and modernist discourses have shaped agriculture and development paradigms over the past two centuries and paved the way for today's dominant industrial agriculture paradigm.

Technological innovation is at the heart of this worldview. Beginning with the invention of the mechanical reaper to increase harvesting efficiency in the mid-1800s and the replacement of labour-intensive steel plows with tractors in the early 20th century, these advancements laid the foundation for the decline of traditional, small-scale, labour-intensive farming practices, the birth of large-scale agriculture – and successive waves of farmland consolidation. The rise of mechanization would later be accompanied by the development of other key technologies that would further solidify the industrial food system model, including the development of chemical fertilizers, pesticides, and hybrid seeds. While promising yield increases, these new products ultimately encouraged the rise of large-scale monocultures, the degradation of soils, and long-term productivity loss – trapping farmers in cycles of chemical-input dependency.[305]

Access and ownership of even the most basic tools can act as a source of social and production differentiation not only between small- and large-scale producers, but also among small-scale producers themselves. Those lacking machinery of their own are often driven to rent or sell their land to larger producers or are forced out altogether as they struggle to compete, resulting in greater land concentration and farmer displacement.

The spread of digital agriculture is now exacerbating these trends and risks creating renewed upscaling/land concentration imperatives. Digital tools, including precision agriculture and data-driven management systems, are frequently designed with large-scale operations in mind in their application and use, creating a significant barrier to entry for smaller farms.[306] Indeed, these systems require significant data analysis and interpretation, often exceeding the capacity and resources of small farms and creating a digital divide. Digital technologies often involve substantial upfront costs for hardware, software, and expertise, which larger farms can spread over a bigger operation.[307]

Further, some digital platforms may serve to lock farmers into using particular equipment or inputs for data collection and analysis. This risks exacerbating ongoing farmer debt – particularly for small farmers with little bargaining power to negotiate deals and packages for these technologies – and the concomitant risks of farmers losing access to/ownership of land.

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xxxix Many contract farming schemes "have their own imperatives of extracting as much profit and resources at the lowest cost within a short period" while adversely incorporating smallholder farmers into capitalist systems of production and trade, state-making projects, and global agroindustrial networks. De L T Oliveira, G., McKay, B. M., & Liu, J. (2020). *Beyond land grabs: new insights on land struggles and global agrarian change*. Globalizations, 18(3), 321–338.

An increasingly monopolistic industrial food chain is squeezing farmers' income, saddling them with debt, and threatening the economic viability of small-scale food production – leading ultimately to loss of control over land.

The rise of mechanized and chemical farming methods – advancing notably through the Green Revolution – has created financial barriers for the majority of smallholders and marginalized farmers.[308, 309] Over recent decades, input costs have risen substantially, outstripping increases in farmgate prices since the 1990s.[310, 311, 312]

Today, rampant consolidation in the agri-food sector is deepening power imbalances and leaving farmers ever-more vulnerable to rising production costs. By 2020, China's Syngenta Group controlled one quarter of the global pesticide market, while four firms (Syngenta Group, Bayer, BASF, Corteva) controlled 50% of the world's commercial seeds and 62% of the pesticide market – with similar levels of consolidation along the chain. Market control and price-gouging are now common, and were particularly visible in the recent food price crisis. For example, data from GRAIN/IATP show that leading firms hiked fertilizer prices well beyond the rise in production costs, increasing their operating profits to 36%, even as they sold less product.[313]

> ***"Rampant consolidation in the agri-food sector is deepening power imbalances & leaving farmers ever-more vulnerable to rising production costs"***

Meanwhile, growing 'supermarketisation' and consolidation in the processing and retail sectors is creating powerful oligopolies, and leaving farmers increasingly reliant on a small number of buyers, who have the power to dictate prices and conditions, and pass on costs to farmers – with retailers generally prioritizing large-scale producers who can absorb the costs.[314, 315]

In this context, it is difficult for small farms to compete,[316] forcing some small farms to sell up, and others to upscale their operations by purchasing or leasing additional farmland.[317]

In many parts of the world, farmers are facing a rising debt burden and concomitant destabilization of their land tenure. The income squeeze described above is contributing to the debt build-up, but it is also being driven by the financialization of land described in Driver 1, and the boom-bust cycles that are synonymous with today's industrial food systems (see Box 15). In the US, for example, farmers experienced record debt levels in 2023 on the back of rising input prices and soaring land prices – up 23% from mid-2021 to mid-2022[318]– also manifesting in higher land rental prices.[319] Similar trends also buffeted Pakistani farmers: already indebted to landowners who had granted them loans for fertilizer and seeds, and facing exorbitant interest rates on bank loans,[320] many farmers saw their harvests wiped out by the floods of 2022 and were unable to pay back their debts – a situation made worse by exorbitant interest rates.[321]

Sky-high debt levels not only spark devastating human consequences (e.g., the spate of farmer suicides in India), but also end up undermining smallholders' ability to hold onto their own land or pass it onto the next generation. Often, farmers use their land as collateral for loans, leaving them vulnerable to land seizure when loans cannot be repaid. As shown by studies in North America, rising debt coupled with lack of social security provisions (e.g., pensions) is forcing retiring farmers to treat their land as a financial asset and sell to the highest bidder, often through auctions in which farmers are bidding against investors.[322, 323]

These problems are exacerbated by the capture of decision-making in a corporate-controlled food system. The majority of farm subsidies in many countries are channeled to large-scale farms,[324] and the export sector continually prioritized (e.g., through ongoing trade liberalization), while failing to ensure appropriate credit and financial support for small-scale farmers – trends described at length in previous IPES-Food reports.[325,326] Comprehensively reforming agriculture and rural development policies, and rebalancing power in food systems, are therefore prerequisites for building more equitable land access and security of tenure (see Section 3).

BOX 15.

Boom-bust commodity cycles and livelihood risks for farmers

As detailed in a 2023 report from IPES-Food, unsustainable food systems and unsustainable debt are two sides of the same coin – and the boom-bust nature of global agri-commodity markets is a key part of that cycle.[327] Following commodity price booms in the 1970s, food prices collapsed in the early 1980s, contributing to a farm depression that coincided with the developing world debt crisis.[xl] In North America and other agri-exporting regions, farmers had taken on huge debts to invest in new machinery and struggled when prices fell – leading to widespread consolidation across the agriculture, farm machinery, and fertilizer sectors, and a spate of farmer suicides in the US. When global food prices spiked in 2007-2008, the initial boom was followed once again by a commodity crash, starting around 2013-2014. The downturn that followed saw a decline in export earnings and a steady increase in debt-to-GDP ratios for many developing countries, alongside grain import surges that undercut small-scale producers in the Global South. It also hit agribusiness profits and drove an unprecedented wave of agribusiness consolidation from 2015-2018 – particularly in the inputs sector.[xli] Another damaging boom-bust cycle is now underway, with commodity prices soaring in 2022 and farmgate prices subsequently collapsing in 2023 (despite consumer food prices remaining high).

Animal agriculture and industrial commodity cropping are spreading around the world – generating intense pressures on smallholders' access to land and resources, and creating vicious cycles of poverty, food insecurity, and land degradation.

Agriculture is expanding its terrestrial footprint worldwide, but as industrial agriculture advances and combines with dietary change, significant shifts are also underway in terms of *what* is produced, generating major land use changes, and ratcheting up the squeeze on small-scale food producers.

Commodity crops, flex crops, and cash crops are a key source of expansion in tropical areas, posing major threats to forests and other fragile ecosystems.

The recent 'land grabs' captured by the LMI (see Driver 1) are dominated by resource-hungry feed crops, export commodity crops , and land uses that generally degrade soils, pollute, and are carbon-intensive, while delivering little in terms of food security – particularly palm oil, sugar cane, maize, rubber, soybean, and cattle (in Latin America).[328] From 2000-2015, around 5 million hectares of forest – an area the size of Slovakia – were lost each year to deforestation driven primarily by agricultural commodity production, which is now responsible for about 73-80% of deforestation globally.[329, 330]

> ***"From 2000-2015, around 5 million hectares of forest were lost each year to deforestation driven primarily by agricultural commodity production"***

xl It is worth noting that high US interest rises contributed to the developing world debt crisis and farm bust. The boom leading up to it saw over-lending in the Global South, often at negative interest rates due to inflation; attempts to curb inflation through higher rates then made debt payments soar, while the rising dollar made US grains less attractive on global markets and sparked demand for diversified grain sourcing.

xli A Special Report commissioned by the Family Farm Action Alliance highlights how these developments increased the combined market share of the top 4 firms, or concentration ratio 4 (CR4) across the food chain, following patterns of consolidation that typically occur after 'busts'.

FIGURE 8.
LARGE-SCALE LAND DEALS AS DRIVERS OF COMMODITY PRODUCTION

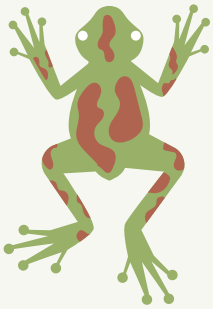
34% of land grabbed since 2000 was from **smallholder farmers**

54% of land grabs are intended to produce **water-intensive crops**

34% of these take place in **dryland zones**

+20% of the global area cultivated for **palm oil production** is the result of large-scale land acquisitions

87% of land grabs are in **regions of medium to high biodiversity**, 39% of which are partially in biodiversity hotspot areas



Source: LMI, 2021

Diet shifts – towards animal source foods, towards ultra-processed foods – are a critical source of pressure on land and a driver of land degradation. Intensive farming and forest clearance are closely linked to the expansion of animal agriculture, with livestock and feed production responsible for some 65% of global agricultural land-use change over the past 50 years.[331] A recent study from the World Resources Institute (WRI) projects that increasing food demand, and particularly higher consumption of animal products, will require an additional 600 million hectares of agricultural land by 2050 under current land use patterns.[332]

It is worth noting, however, that diet shifts are driven in part by the agri-food sector itself, and by the broader socio-economic and demographic impacts of the industrialization of agriculture. Over decades, leading food companies have pursued deliberate research and marketing strategies to reshape diets and food cultures – helping to drive high meat consumption in wealthy countries, and more recently to promote the 'meatification' of diets in low and middle-income countries.[333] Further, meat consumption is linked to population growth and urbanization. But these trends, too, are closely connected to the industrialization of agriculture. Over decades, the increased application of agricultural technologies has driven productivity gains and reduced labour intensity, leading younger people to migrate into the cities.[334] These trends remain particularly acute in areas of the Global South where secure access to productive land is lacking,[335] including areas of South and Southeast Asia, and across Sub-Saharan Africa, where more than 60% of those who migrate from rural, agricultural communities are between 15 and 34 years old.[336]

The upshot of these trends is rapid degradation of land, water, and ecosystems. With about 80% of global arable land being degraded,[337] trapping over 1.3 billion food producers on unproductive land,[338] a vicious cycle of poverty, food insecurity and land degradation is clearly underway. The chemical inputs used in intensive monocropping systems are a major and growing threat to land, water, and ecosystems.

For example, nitrogen run-off from Midwestern corn and soybean farms has created an uninhabitable area or "dead zone" in the Gulf of Mexico that has generated some $2.4 billion per year in damage to fisheries and marine habitat every year since 1980.[339] Worryingly, synthetic fertilizer use continues on an upward trend globally, and is envisaged as the key growth sector for fossil fuel companies through to 2050.[340] And critically, the global industrial food system accounts for around 1/3 of global GHG emissions, of which 71% is linked directly to agriculture and land use, and is thus a significant indirect driver of land degradation and land loss related to climate change.[341]

> ***"A vicious cycle of poverty, food insecurity, and land degradation is clearly underway"***

As industrial agriculture combines with other land pressures (e.g. land grabs, green grabs) to deprive communities of access to land, resources and decent livelihoods, smallholders are sometimes forced to overexploit their land and clear nearby forest for cultivation or grazing[342] – highlighting the interconnected nature of land use challenges, the centrality of decent livelihoods, and the pervasive impacts of industrial agriculture worldwide.

3 CONCLUSIONS AND RECOMMENDATIONS

To recap, those whose lives and livelihoods depend on the land are facing a multi-dimensional land squeeze. Four powerful and interconnected processes are placing unprecedented pressures on land: a new wave of agribusiness- and investor-driven land grabs, a massive surge in green grabs, rising encroachment on and loss of farmland to mining, urbanization and mega-developments, and the erosion of control over food production and land use, in the face of wholesale food system reconfiguration.

This land squeeze is driving widespread land concentration, fragmentation, and degradation, and eroding meaningful access to and control over land for small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups – critically undermining their livelihoods and posing major threats to food security. The land squeeze is also preventing the generational renewal that is critically needed in agriculture. While the land deals recorded by the LMI represent a relatively small share of countries' total agricultural land, the cumulative effects are great: by March 2024, the Land Matrix Initiative (LMI) had recorded nearly 2800 concluded land deals in total, accounting for over 46 million hectares of farmland, with a number of regions heavily affected.[343]

These outcomes could reach a tipping point over the coming years, as different forms of land grabbing converge and ratchet up, and the floodgates are opened to huge and destabilizing influxes of capital. In the wake of the 2007-08 crisis, investors turned to farmland – an illiquid, less speculation-prone commodity than real estate – to make their portfolios more secure, although farmland remained a relatively small percentage of their investments. Since then, farmland derivative markets have become increasingly complex, and financiers have found new ways of making farmland a more appealing investment. The emergence of carbon and biodiversity offset markets is also bringing vast sums of money – and new interests – into land markets. Agribusinesses are also speculating on land through their own private equity funds. **Through these new vehicles and instruments, powerful actors are circumventing barriers and ushering unprecedented capital flows into land markets, transforming land into a truly liquid, fungible asset.**

These trends are now creating a dangerous interface between small-scale farmers on one side and huge institutional investors, fossil fuel companies, and real estate developers on the other – between actors who live from the land, and others whose interest is in maximizing its tradability and theoretical value, and for whom surging land prices are a positive. In a number of regions, increasingly financialized land markets are contributing to steep and sustained inflation of farmland prices, with the sheer amount of capital serving to move markets and decouple land prices from any realistic valuation. Alongside this financial clout, the actors now entering land markets have the political clout to shape the broader investment climate and policy incentives (e.g., to shape rules around offsetting or biofuel mandates to their advantage).

Further, a vicious cycle is taking root: **the emerging land squeeze is exacerbating persistent rural poverty and livelihood pressures on small-scale food producers**, creating vulnerability to various forms of land appropriation, and paving the way for further land concentration, fragmentation, and degradation. An increasingly consolidated, export-oriented industrial food system is degrading land and squeezing farmers' livelihoods. Farmers are increasingly compelled to enter industrial chains on unfavourable terms, propagating unsustainable practices that further degrade land and undermine livelihoods in the longer term. And in a context of spiraling land prices and persistent livelihood precarity, holding onto or buying land is economically unviable for farmers. As a result, selling up to land speculators and holding companies (and then re-leasing land from them) – or exiting agriculture – becomes the only viable option. Through these processes, farmers, and communities lose control and lose economic bargaining power, leaving them vulnerable to various forms of land grabbing for large-scale export commodity production, mining projects, infrastructure developments, etc. These processes deliver few benefits and scant compensation for communities, and ultimately reinforce rural poverty and out-migration from rural areas. This rural exodus contributes to urban expansion and more encroachment on farmland, while emptying the countryside and legitimizing large-scale industrial agriculture.

3.1. WHAT IS ENABLING THE LAND SQUEEZE? FAILED POLICY REFORMS, SKEWED ECONOMIC INCENTIVES, POWERFUL INTERESTS, & MISGUIDED ASSUMPTIONS

Although in some cases governments are now engaging with comprehensive agrarian and social reforms (see Section 3.2), efforts to date have generally failed to address the scope and scale of land inequality, while prevailing policy incentives have enabled the land squeeze and skewed land systems and food systems in favour of powerful interests:

- **Small-scale farmers and marginalized groups are losing control over land through a combination of tenure insecurity, economic insecurity, and political insecurity**. Over decades, the attempts made to formalize land ownership and tenure (e.g., through land titling schemes, and more recently, digitization of land registers) have left a mixed legacy. In a context of depressed incomes, spiraling land prices, mounting farm-level debt, and huge power imbalances, targeted land titling reforms are not sufficient to achieve security of tenure – and can actually have the opposite effect. In particular, commons-based and customary forms of tenure are susceptible to being eroded through formalization processes because of egregious power imbalances.

- **The land squeeze reflects a flawed top-down development paradigm, and a systematic failure to address rural poverty and support livelihoods.** Rather than strengthening small-scale producers and rural communities, governments around the world are promoting top-down, extractive, resource-intensive modes of development (large-scale mines, export agriculture, energy production for export, valorization of natural capital through offsets, etc.). Even when they are not designated as such, rural areas around the world are being turned into *de facto* special economic zones. These orientations are a response to prevailing advice from global institutions, skewed economic incentives that reward commodity extractivism over sustainable food production, and the need to generate export earnings to address the mounting cost of debt repayments.

- Further, the emergence of green grabbing, and the land pressures arising from soaring demand for transition minerals, reflect **the failure to build genuine and just ecological transition pathways** rooted in community participation and consideration of livelihood impacts – what is often referred to as a 'just transition'. The promise of 'green growth' rings hollow: while some limited decoupling of emissions from growth may have occured in the Global North,[344] it has taken place at the expense of similar processes occurring elsewhere – with colonial legacies undermining the prospects for transition in former colonies,[345] and the most extractive and harmful activities generally outsourced to poorer countries.

- **The land squeeze is underpinned by ongoing trade liberalization biases and privileged treatment of investors.** Trade liberalization/export orientation is a key component of industrial food systems, contributing to the pressures those systems place on small-scale farmers' livelihoods (and ultimately their land tenure). Meanwhile, through 'export corridors' and Special Economic Zones – forms of *de facto* trade liberalization – large swathes of farmland are being reappropriated, with little transparency, and major impacts on small-scale food producers and local communities. Further, the emerging green hydrogen economy – with its major demands on land and resources – is premised on exports from South to North, and is likely to be a major driver of future trade agreements (e.g., between the EU and African countries).[346] Finally, through 'investor state dispute settlement' clauses, trade agreements also lock in powerful protections for foreign investors, emboldening agribusinesses and mining firms to undertake risky forms of land grabbing. These investor protections – now being applied regularly in the agri-food sector – provide cover for large-scale land appropriations and effectively reconfigure property rights in a way that excludes small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups, and undermines their social and economic rights, including the human rights to land and food.

- **Long-standing assumptions about 'efficient' land use continue to prevail, creating a favourable context for land grabs, green grabs, and the broader land squeeze.** Governments' willingness to erode their farmland and agricultural base reflect assumptions about the ability to derive food security from global trade – an assumption that looks particularly fragile in light of recent trade disruptions and food price spikes. Relatedly, the assumption that we can sustainably produce more food on less land (linked to 'land sparing' and 'sustainable intensification' narratives) through climate-smart technologies and efficiency gains are guiding various decisions around land, including the decoupling of conservation and food production, and the general de-prioritization of small-scale food producers. Finally, the idea of *structural transformation* continues to guide development thinking, i.e., the assumption that poverty reduction can and should occur via reducing the labour intensity of agriculture, and the shifting of labourers from rural to urban areas.

3.2. THE WAY FORWARD: IMAGINING A FOOD SOVEREIGN FUTURE

As highlighted above, the land squeeze is advancing through multiple forms of land grabbing and appropriation of control, and those processes are underpinned by a whole raft of misguided assumptions and skewed policy incentives – from agriculture, trade, and investment to development and climate policies. These deep-rooted imperatives are setting the parameters for how land is governed and valued, and who has access to it, in a way that locks in severe land inequalities.

However, **small-scale farmers, peasants, pastoralists, Indigenous Peoples, and marginalized groups around the world are pushing back against the land squeeze**, from participatory mapping of territories to innovative group farming initiatives and community land-sharing initiatives. In some cases, governments are supporting these groups, and even starting to engage with reforms that are commensurate with today's challenges as outlined in the examples below.

To halt the land squeeze, and restore equitable and meaningful access to land, it is therefore necessary to build on these positive steps and go much further – to fundamentally change the way we govern land, and to imagine a radically different future.

As explained at the outset of the report, the damaging impacts of the land squeeze can be understood in terms of the erosion of food sovereignty and land sovereignty. Likewise, **pathways towards food and land sovereignty are pathways beyond the land squeeze**. As shown throughout the report, today's land inequality is multifaceted, and in that context, meaningful access to and control over land depends on peoples' degree of tenure security and their ability to enforce their rights. From a sovereignty perspective, what matters, therefore, is not just formal "bundles of rights" to land, but also "bundles of power", i.e., the ability to make or influence decisions about and benefit from land.[347]

The future we aspire to, therefore, is one in which effective control over food systems and land systems is restored to small-scale food producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups. Further, in this food sovereign future, food security is delivered first and foremost through the strengthening of small-scale food production systems. It is a future in which the multiple uses and meanings of land are recognized, and in which land is the basis for varied lives, livelihoods, knowledges, and cultures – rather than a monetary asset.

Below we identify three broad leverage points and 11 specific recommendations to address the drivers of land inequality, restore equitable access to and control over land, and build a pathway towards food sovereignty and land sovereignty.

While the recommendations are primarily focused on governments, we also emphasize the power of collective, community-led action, providing examples throughout that can provide inspiration and guidance.

LEVERAGE POINT 1. Build integrated land, environmental, and food systems governance to halt green grabs, recentre communities, and ensure a just and human rights-based transition

Green grabs are a powerful emerging threat to land users, and one that will only grow as sustainability challenges escalate. Green grabs, like all forms of land grabs, are facilitated when communities lose decision-making power over how to use their land, in a context of broader economic and political disempowerment. Further, all emerging forms of land grabbing reflect the primacy of top-down forms of development that siphon off land to various (often extractive) uses, without considering the connections between different challenges, or the communities currently using – and stewarding – land. To halt harmful green grabs and other emerging forms of land grabbing, decision-making power over land use must be restored to communities. This requires integrated, democratic governance mechanisms to bring together different policy imperatives (i.e., agriculture, land, development, climate, and more) to reconcile competing land uses, find synergies, and place local communities and human rights at the heart of the process – what some have referred to as 'ecological planning'.[348]

Recommendation 1.1. Place the right to land at the heart of climate governance.

The right to land is enshrined in the UN Declaration on Rights of Indigenous Peoples (UNDRIP) and the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP).[xlii] States should now incorporate the evolving right to land into their constitutions and legal frameworks, and affirm that land is not merely property/an economic asset, but a basis of the right to food, and the cornerstone of diverse livelihoods, identities, and cultures. Further, governments should explicitly incorporate the right to land into their environmental and agricultural

xlii Currently, the Right to Land is enshrined in: the UN Declaration on Rights of Indigenous Peoples (UNDRIP), the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP), the Convention on Elimination of All Forms of Discrimination Against Women (CEDAW) General recommendation No. 34 (2016) on the rights of rural women, and the UNCCD comment on rural women.

policies, including national climate mitigation pledges ('NDCs')[349, 350] and implementation and monitoring of the GBF, using the CFS's Voluntary Guidelines on the Responsible Governance of Land Tenure (VGGT)[351] to help reconcile land governance, social responsibility, and environmental protection.

The right to land confers the obligation to redistribute land to address land inequality and ecological destruction, and enshrining it in legal frameworks will therefore support land redistribution where necessary in the face of these rising pressures (see also Recommendation 3.4).

Recommendation 1.2. Strengthen self-determined land governance systems, through democratic spatial planning processes, community-led mapping and digitization, and democratic land agencies.

It is crucial to enshrine and strengthen communities' ability to maintain their land governance systems, including by reproducing knowledge within communities. Further, governments and local authorities should take steps to democratize rural spatial planning, to ensure balance in decision-making over land use for agriculture, energy, housing, transport and infrastructure, and biodiversity rehabilitation. One possibility is for governments to take inspiration from 'SAFER' in France and other land management bodies (see Box 16), to set up regional/local Land Agencies to authorize or refuse proposed transfers of land, pre-empt the sale of agricultural properties and company shares to prioritize agroecological usages, peasant farming, and non-profit uses.[xliii] These and other democratic structures should be anchored in communities' knowledge. Further, governments should support communities in mapping their territories, as a way of enshrining their own land governance systems and related knowledge, and contesting the claims and narratives (e.g., about idle, under-utilized land) used to underpin land grabs (see Box 17).[352] This includes providing financial support for mapping tools, and training to communities who request it. Rather than pressing ahead with digitization of land registers, governments should support communities to use open source blockchain technologies to strengthen their land tenure and scrutinize land deals, as is currently happening in Ghana,[353] and apply the UN's recommendations on collection of data in the context of food and nutrition[354] to protect them against abusive practices.

BOX 16.

Pre-emptive Rights: France and Scotland[355]

In the 1960s, France introduced the *Sociétés d'Aménagement Foncier et d'Établissement Rural* (SAFER) agricultural land governance model, which created 25 public companies with the power to pre-emptively acquire land coming to market in order to fulfill a number of public interest missions, including: the provision of land for new entrants; prevention of concentrated ownership; agglomeration of very small holdings into viable units; and environmental protection. Over the decades, the SAFER model has evolved to keep up with new challenges in land governance. In 2023, the SAFER companies were given power to intervene in the transfer of shares in companies that hold or operate agricultural land.

This model has inspired Scotland's recent land reform, enshrined in the Community Empowerment Act 2015 and the Land Reform Act 2016. Thus, communities in Scotland now have pre-emptive rights to purchase land and, since 2020, to force unwilling landowners to sell their abandoned or neglected properties - as long as a series of criteria are met. The reform also created the Scottish Land Fund, which can grant up to £1 Million to communities lacking funds to enact their pre-emptive rights to buying land. Crucially, Scotland's property law reform could be leveraged as an opportunity to fund the agroecological transition.[356]

xliii Land agencies, to be fully democratic, should bring together all rural constituencies from local authorities, agricultural trade unions, small-scale food producers, Indigenous Peoples, and other land-based marginalized groups, as well as environmental organizations, local consumers, through democratic decision-making processes. See Levesque, R., Martin, T., & Rioufol, V. (2020, July 7). *Combating The Financialisation Of Agriculture: Your Land, My Land, Our Land*. Agricultural and Rural Convention 2020.

BOX 17.

Community-led mapping

- The **Maranhão State in Brazil** offered to train and equip the Guajajara and Ka'por Indigenous communities who had mapped their side of the Amazonian Forest to keep it safe from commercial exploitation.[357]

- In **Indonesia**, communities are using drones to generate high-quality maps to challenge land grabs by corporations. In the mining region of Tayan, the community presented these maps at a regional spatial planning meeting to prove the company had operated outside the concession and had destroyed a nearby lake that was important for their livelihood, and led to the inclusion of customary land rights guarantees within the provincial spatial planning law. The drone technology is now being replicated, with a community training center established at the Swandiri Institute in Pontianak, and plans by the environmental justice network WALHI to introduce the technology across the country.[358]

- The **Bagungu people of west Uganda** are using mapping to restore their native knowledge and practices associated with their sacred land, which have been threatened by colonialism and globalization. By drawing maps representing their territories in the past (through memories and stories of their elders) and the present, the community collectively reclaims their traditional knowledge and practices and learns how to better protect their land and resources and revive associated rituals.[359]

Recommendation 1.3. Implement a community-led, decentralized conservation & renewable energy agenda that centers agroecology, land-sharing, and integrated agriculture-energy projects.

Small-scale food producers, Indigenous Peoples, pastoralists, and other marginalized groups should be at the front and center of environmental conservation and the transition to renewables. Although the Kunming-Montreal Global Biodiversity Framework (GBF) provides only limited mechanisms to invest in community-led conservation projects (i.e., Target 3 on recognition and Target 18 on phasing out subsidies to harmful conservation), these footholds should be expanded and made central to countries' efforts to restore biodiversity and ecosystems. Further, decision-making power over policies to regulate land-use change (from agricultural to conservation or energy production) should be restored to affected communities, e.g. through new-found Land Agencies (see Recommendation 1.2), which could scrutinize and deliberate over energy projects on agricultural land, including agro-voltaic pilot initiatives.

BOX 18.

Community-led green energy and conservation projects

'Off-grid' renewable energy projects in India[360]

In India, rural communities are designing innovative off-grid renewable community energy initiatives. Standalone and micro-grid solar projects have been particularly effective in providing energy to remote rural communities. The Rampura Community Solar Power Plant (CSPP), in Uttar Pradesh, is one of the most promising examples. Financed by Norway-based company Scatec Solar in 2009 the CSSP is an innovative model of collaborative planning and ownership, involving local communities, civil society, members of the local authorities, and industry, organized through a Village Energy Committee, which holds ownership of the plant and is responsible for operations, maintenance, and financial management.

The CSPP emphasizes participatory processes, social mobilization, and capacity building of local communities and authorities to secure common ownership of resources. The CSPP has a plant with 60 solar panels and generates an average energy of 950 kWh per month, which exceeds the village's consumption of 850 units.[361]

Reconciling food security and ecosystem care through grassroots conservation

ICCA/Territories of Life are a network of extremely diverse territories conserved by Indigenous Peoples and local communities with deep connections to a territory, who steward it through a governing structure that fosters the conservation of nature and community's wellbeing, including managed small-scale food production and harvesting activities. While continuing to make crucial contributions, some of these programmes are facing persistent threats, and need to be strengthened and revitalized.

- The **Iña Wampisti Nunke** (Wampi Nation) steward over 1.300 thousand hectares scattered across 22 titled communities in the Peruvian Amazon. The Wampi Nation follows the "life rooted in territory" principle to ensure hunting, fishing and crop cultivation are done within what western thought posits as ecological and social limits.[362]

- The **Homoródkarácsonyfalva village** (Christmas Village) in Romania reclaimed their ancestral rights to manage and steward common pastures, forest and water sources. Their practices include traditional forms of common care, such as "quiet zones" to allow the regeneration of wildlife, as well as no-cut and exclusively seeding-areas for protected oaks.[363]

- In **India**, the Joint Forest Management (JFM) program was launched in the 1990s to transform previously state-managed forest land into commons managed by communities. Women had a leading role in the executive committees of the community institutions created for stewarding processes, resulting in enhanced access to forest resources.[364]

- In **India**, in 2006, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition Of Forest Rights) Act was passed to repair historical injustices, protect the rights of forest dwellers including Scheduled Tribes, Indigenous People, Adivasis and other traditional communities, and acknowledge their essential role in sustaining and managing the forest.[365]

LEVERAGE POINT 2.
From commodity to community: get speculative capital out of land markets, and get land into the hands of farmers

The financialization and assetization of land is rapidly advancing through burgeoning carbon offset markets, new financial derivatives, and agribusiness-tied speculation – prising control away from small-scale farmers and communities and paving the way for various forms of land grabbing and ever-greater concentration of land in the hands of powerful actors. With huge sums of money set to be injected into land markets (especially for offsets), it is crucial to realign land with its real value(s) to communities. This requires states to change the incentives before the floodgates open, and to combine regulation and oversight with support for innovative, bottom-up models of financing and land ownership.

Recommendation 2.1.
Crack down on abusive carbon offsets and apply a Real Zero approach.

Through carbon offsets, huge swathes of land are being appropriated and the financialization of land is being fast-tracked. To tackle offset markets and other speculative capital injections into land, it is crucial to revise article 6.4 of the Paris Agreement (that regulates carbon credit markets) to include True Cost Accounting (TCA), which measures and values the hidden impacts of economic activities on the environment and society, on all "Net Zero" pledges.[366] Carbon market mechanisms for carbon removals should be progressively scrapped to attain Real Zero emission targets, as campaigners across the world are demanding.[367]

In the meantime, governments should ensure all carbon credits are high-integrity verified,[368] alongside implementing strong environmental and human rights safeguards and robust appeal mechanisms.[xliv] In addition, the non-market (NMA) mechanisms under Article 6.8 of the Paris Agreement should become the backbone of countries' Nationally Determined Contributions (NDCs) to achieve mitigation, adaptation, ecosystem integrity, and fulfillment of rights.[369]

Recommendation 2.2.
Cap farmland investment and grant pre-emptive rights to communities.

To halt the flow of speculative capital into farmland and return power back to communities, governments and local authorities must adopt legislation capping how much land an individual or enterprise can own and control. Moreover, governments should include the requirement for free, prior and informed consent as a condition in all agreements that could affect the land accessed by small-scale producers, peasants, pastoralists, Indigenous Peoples, and marginalized groups;[370] they should also oversee the implementation of such pre-emptive rights through innovative governance models, e.g., land agencies (see Recommendation 1.2). Given the role of untaxed, offshored capital in financing large-scale land acquisitions, campaigners are also calling for a Global Tax on transnational corporations, anchored in a new Global South-led UN Framework Convention on International Tax Cooperation, to crackdown on tax havens.[371]

Recommendation 2.3.
Promote alternative forms of land ownership and financing.

Institutional innovations like group farming and alternative financing through commonly held land trusts are helping to address power imbalances and curb the impacts of increasingly financialized land markets. States should support civil society groups and communities in undertaking and scaling out these forms of experimentation, through progressive inheritance taxes (with exemptions for smaller inheritances) that incentivize the transfer of land to new farmers and cooperatives;[372] tax incentives for landlords donating their land to entrant, marginalized farmers; and/or by easing funding and grants criteria to allow access to undocumented migrants.

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xliv The IUCN Policy on Biodiversity Offsets calls for offset schemes to follow a Rights-based approach, and that projects be closely monitored and evaluated. Human Rights Watch. 'COP28: Carbon Market Rules Should Protect Rights' (March 2023).

BOX 19.

Examples of legislation capping farmland acquisition

- In **India**, land acquisition per landowner has been capped since 1972 at 10 to 54 ha (or slightly higher in hills and deserts), depending on the state and land quality.[373] However, this is now in the process of being dismantled. Since 2013, a total of 11 states in India have now changed their land ceiling laws by allowing non-agricultural actors to buy land, removing or relaxing land purchase ceilings, allocating surplus land to non-landless actors, easing rules on idle land, or removing income restrictions on buying agricultural land.[374]

- In **Prince Edward Island (PEI), Canada**, the Land Protection Act caps the amount of land a person can own at 400 hectares, or 1,200 hectares for corporations. Participants in the IPES-Food North America/ Turtle Island Territories dialogues considered it a radical piece of legislation, but emphasized the dangers of loopholes such as exceptions regarding hereditary succession in the legislation.[375, 376]

- In **the US**, Minnesota's Corporate Farm Law bars corporations, limited liability companies, pension or investment funds, trusts, and limited partnerships from farming, owning, or leasing farmland altogether in the State. Similar bills are being debated in the Canadian provinces of Quebec and Saskatchewan.

- Via Campesina's proposal for an **EU Land Directive** includes a 500 hectare cap on purchases and any other form of control over agricultural land (including direct ownership, ownership of shares, control through subsidiaries, leasing, subcontracting and provisioning).[377]

Recommendation 2.4. Curb agribusiness' power to distort markets through robust anti-trust legislation.

Ever-more powerful agribusinesses play a key role in speculating on farmland and ratcheting up land prices, as well as creating intolerable livelihood pressures (e.g., through input price-gouging) that compel farmers to cede their land to markets/ investors (by selling up), or to lenders (as collateral for loans).

Adopting and enforcing robust antitrust laws – as advocated repeatedly by IPES-Food[378] – is one crucial avenue to curb concentration in agricultural supply chains and curtail the power of agribusinesses and food industry actors to control prices and conditions to the detriment of small-scale food producers. There is now growing momentum for cracking down on the market power of agribusinesses, for example in the US.[xlv]

xlv For instance, an immediate and indefinite moratorium was introduced in 2022 to halt large agribusiness, food and beverage manufacturing, and grocery retail mergers. See more here: Sen. Booker, C. (2023, May 18). *Booker, Tester, Merkley, Warren introduce bill to impose moratorium on large agribusiness mergers.* This followed other antitrust measures. See here: Food and Water Watch. (2023, May). *Why antitrust laws matter more than ever in agriculture and food*.

BOX 20.

Alternative ownership & financing models

- **Climate Land Leaders** (CLL), in the US, offers a platform through which landowners can permanently give land to entrant farmers who do not have the resources to buy land at market prices.[379] In Monterey, California, a project pools resources from different partners (philanthropists, traditional lenders, grants) to help marginalized farmers buy land. So far, they have acquired 71 hectares of land.[380]

- **Harmony Farms** in Iowa, US, provides farmers of refugee backgrounds with access to land to help them build equity. The Latino Economic Development Center (LEDC), U.S., helps migrant farm workers secure access to land through loans and grants.

- The **African Climate Foundation** in South Africa is transferring currently unoccupied land owned by private landowners, corporations, and similar, to local farming communities.

- The US non-profit organization **Agrarian Trust** created the Agrarian Commons model, where agrarian commons operate as landholding entities in the country. Each commons is co-managed by farmers, community stakeholders and the Agrarian Trust, who raises funds to allow local commons to buy and lease land for local, entrant farmers. Initially, each holding encompasses two farms and can then expand up to ten or twelve.[381]

Institutional innovations: Group farming[382]

Group farming is an important institutional innovation that could address smallholder problems of small size, fragmentation and landlessness.[xlvi]

In India, voluntary group farming has proved highly successful in some states in increasing smallholder women's access to land, providing viable livelihoods, and empowering them. Women, in groups of 4-10, collectively cultivate leased-in land, pooling their labour and capital and sharing costs and returns. Kerala has some 70,000 all-women group farms involving over 300,000 women. Starting as neighbourhood savings-and-credit groups, they access subsidized credit through a national government bank scheme, and receive training in new agricultural practices and financial incentives from the state government, as part of Kerala's Poverty Eradication Mission, Kudumbashree. They grow both food and cash crops organically and agro-ecologically. Economically, group farms have yielded higher outputs and profits than individual family farms. Socially, the women have gained new respect from their families and communities; and politically, many have been elected to village councils.[xlvii]

On a smaller scale, group farming has been successful too in some other states, such as Telangana, as well as Bihar and West Bengal where mixed-gender groups have also emerged. In all regions, during COVID lockdowns, group farms reported being more food secure and economically resilient. India's experience provides lessons for other countries.

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xlvi Agarwal, B. (2018). Can group farms outperform individual family farms? Empirical insights from India, World Development, 108: 57-73.

xlvii Sugden, F., Agarwal, B., Leder, S., Saikia, P., Raut, M., Kumar, A., Ray, D.. (2021). 'Experiments in farmers' collectives in eastern India and Nepal: Process, benefits, and challenges', Journal of Agrarian Change, 21(1): 90-121.

LEVERAGE POINT 3.
Forge a new social contract, and a new generation of land and agrarian reforms

As demonstrated through this report, the land squeeze is creating vicious cycles of rural poverty, livelihood insecurity, and land inequality. Comprehensive actions are required to create new socio-economic realities and break this cycle – nothing short of a new social contract, or a new deal for farmers and rural communities. Access to land and secure tenure must be combined with systemic, structural support for small-scale food production, as well as corollary investment in rural infrastructures, social policies and public goods, and steps to reverse the productivist bias currently underpinning agricultural and trade policies. In some cases, these goals may be best achieved through comprehensive land and agrarian reform processes, potentially requiring bold steps to redistribute land. All forms of comprehensive social and agrarian reform can be guided by the 5Rs framework (see Box 21), which establishes principles to guide the realization of the right to land, and the attainment of food sovereignty.

Recommendation 3.1.
Strengthen small-scale food producers' livelihoods through fair prices, financial support, and agroecological transition payments.

The precarious economic conditions in industrial food systems are a key driver of the land squeeze and the undermining of farmers' livelihoods. It is therefore urgent to change the incentives and provide a pathway to viable livelihoods. Fair prices and decent incomes are a key piece of the puzzle: steps should be explored to support fair prices, taking inspiration from Minnesota's Revenue Protection Policy,[383] or Minimum Support Prices (MSP) as implemented in India[xlviii] and China.[xlix]

More broadly, access to markets is crucial to break the reliance on powerful agribusiness buyers. For example, steps can be taken to strengthen smallholder-led, remunerative territorial markets;[384] public procurement contracts can also be reoriented towards small-scale agroecological producers, who are often excluded due to unfair competition with multinational corporations.[385]

BOX 21.
The 5Rs framework

The 5R framework proposed by Borras and Franco proposes five key principles to embed the **right to land** in food systems transformation towards **food sovereignty**.[386]

- **Recognition:** rural working people's access to land should be protected, regardless of whether they have access to land in the present, or not – this included recognizing, by statutory and/or customary laws, the Right to Land to those that were forcibly displaced or coerced to move;
- **Restitution:** seeks to restore access to land and adequate infrastructures (e.g. clinics, schools, transport, nurseries) to those people who unjustly lost it due to involuntary and/or coerced dispossession;
- **Regeneration:** the strengthening of the ecological foundations and requirements to ensure the survival and health of generations to come;
- **Representation:** ensuring political and economic decisions are made by and for *all* small-scale food producers, local communities, and other marginalized groups who rely on land for their livelihoods;
- **Redistribution:** posits that democratic governments should redistribute unjustly concentrated land to landless and nearly landless small-scale food producers, local communities, peasants, Indigenous Peoples, pastoralists, and other marginalized groups.

xlviii In India, a minimum price is set and guaranteed for specific crops at the beginning of the sowing season to protect farmers against extreme price falls. See: Committee on Doubling Farmers' Income, Department of Agriculture, Cooperation and Farmers' Welfare, Ministry of Agriculture & Farmers' Welfare. (2017, August). "March of Agriculture since Independence and Growth Trends" - Historical Analysis and Examination of India's Agricultural Production and Farmers' Income. Volume 1.

xlix China has implemented a minimum grain procurement price policy for wheat and rice. See: Su, M., Heerink, N., Oosterveer, P., Tan, T., & Feng, S. (2021). *Impacts of China's Minimum Grain Procurement Price Program on Agrochemical Use: A Household-Level Analysis*. Agriculture, 11(10), 910.

Further, as now widely acknowledged, agricultural subsidies must be thoroughly repurposed. In particular, it is critical to correct incentives for upscaling/farmland consolidation (e.g., subsidies based on farm size). Across these policies, support must urgently shift towards agroecological transition, as a means of securing livelihoods, and in order to address the severe threat of land and soil degradation.

Recommendation 3.2. Build public pension and insurance systems to secure farmers' livelihoods and facilitate managed transfer of land to new farmers.

Governments need to adopt ambitious welfare measures that respond to the needs of small-scale food producers, Indigenous Peoples, pastoralists, and other rural communities. Pensions are a particularly important factor in the land squeeze: while private pension funds are one of the major drivers of speculative land investment (and have been associated with land grabs), a lack of access to public pensions and broader social protections is one of the factors undermining farmers' livelihoods and land tenure. All food producers, regardless of their contracts,[l] should have access to public pensions and benefits such as parental leave, sick leave, and unemployment,[387] to ensure the fulfillment of basic human rights, and to pave the way for generational renewal. This requires working closely with trade unions, migrant worker-led grassroots organizations, and other associations of precarious rural workers to design context-specific policies. Moreover, smallholders should have access to public insurance programs against yield losses, especially for those transitioning to agroecological practices.[li] In parallel, spiraling farm level debt must be addressed, and some governments are now taking on the challenge – for example, the Philippines' new Agrarian Emancipation Act (2023), which forgives farmers' debt.[388]

These steps must come alongside revitalized rural development strategies that deliver essential public services to all (e.g. healthcare, water, sanitation).

Recommendation 3.3. Re-design the trade and investment architecture to achieve food sovereignty.

As described above, trade liberalization and the prioritization of investor interests are key cross-cutting enablers of the land squeeze. In particular, trade liberalization continues to undermine small-scale farmers' livelihoods and curtail their ability to control food systems and land. Rethinking the trade architecture is therefore a crucial piece of a new social contract for farmers and rural areas, and a key step towards achieving food sovereignty. Bilateral/regional trade deals are a key tool for prising open agriculture and land markets, and it is essential to scrutinize these deals and their impacts on smallholders' livelihoods and access to land, and particularly to phase out harmful investor protections ('ISDS' clauses). Further, the global trade architecture is ripe for reform. A number of actors, including the UN Special Rapporteur on the Right to Food and La Via Campesina, are calling for agriculture to be taken out of WTO agreements, and are putting forward alternative ways of managing agricultural trade in line with food sovereignty goals – ideas that should be comprehensively explored.[lii]

Recommendation 3.4. Enact redistributive agrarian reforms.

In some countries and regions facing severe, multifaceted land inequality, dedicated radical land reform programmes are needed to stem the land squeeze and restore equitable land access. In line with the 5Rs framework, redistributive land reforms would need to be complemented by various steps to secure rights, as well as comprehensive economic support for smallholders and for those receiving land (so that they are able to retain it) – taking the form of policy and governance reform, as well as empowering collective action.

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l Many landless rural workers are employed on temporary, seasonal, and other types of precarious contracts - or even with no contract at all. See: ILO. (2022). *Decent work deficits among rural workers.* Thus, social security systems tying benefits to secure employment risk leaving the most marginalized rural communities behind. Similarly, landed small-scale food producers, due to low annual incomes, often struggle to afford retirement.

li For example, the National Farmers Union (NFU) in Canada, which is calling for a Guaranteed Basic Income program and changes in the Employment Insurance system for Canadian farmers or farm workers.

lii UN Special Rapporteur on the Right to Food has proposed the replacement of the WTO Agreement on Agriculture with multiple international food agreements conceptualized within the existing framework of the GATT, which already allows various types of food systems to exist, in partnership with other institutional actors - namely the ILO, and an improved CFS. See: Fakhri, M. (2020). *The right to food in the context of international trade law and policy*. Note by the Secretary-General. 75th Session.

Redistributive reforms should also abide by the principle of restitution, especially to ensure those evicted and dispossessed by wars and military occupations have their land returned to them as part of any peace agreement. As described in Box 22, comprehensive land and agrarian reform processes have been undertaken over recent decades, in some cases involving significant redistribution of land to smallholders and disadvantaged groups (including victims of war, conflict, and occupation) – with potentially transformative consequences, where reforms have established and retained a comprehensive, justice-focused vision.

Land is the very basis of the lives, livelihoods, identities, and food security of millions of people. Ten years on from the land rush, we are witnessing an unprecedented land squeeze – and livelihood pressures are pushing smallholder agriculture towards a dangerous tipping point. But manifold examples of farmer- and community-led resistance and innovation are pointing the way forward, and nascent reform processes are starting to grapple with the breadth of the challenges at the interface of land and food systems. By building on these seeds of change, we can ensure that today's land squeeze is not a tipping point but a turning point, and the start of a journey towards meaningful and equitable land access – and towards a food sovereign future.

BOX 22.

Comprehensive land and agrarian reforms

South Korea: A success story (1948-1957)[389]

South Korea offers one of the most interesting cases of agrarian land reform in recent history. The country inherited an extremely unequal land system from Japan's colonial occupation. By 1948, 60% of South Korea's population were landless peasants, whereas 3% of the population owned 64% of land. In the 1940s, a strong peasant movement gained traction in Korea's countryside, with peasants refusing to pay their dues to landowners. At the time, the country was militarily occupied by the US, which feared this peasant movement would lead to the expansion of Communism – as had happened in North Korea. Through the land reforms that followed, the authorities conducted a study of landlord-tenant relationships, bought the land from the previous landowners over a 10-year period, and sold the land to peasants - who made the payment with rice harvests – culminating in **more than 50% of the landowners' land being redistributed**. Rules were introduced limiting land ownership to three jungbo (equivalent to one hectare), and only to those cultivating or managing it themselves, with a ban on tenancy and renting arrangements.

The government also provided extensive support to local village governments to assume land administration functions, as well as subsidizing farmers' access to fertilizers and other inputs. Following the reform, South Korea's agriculture achieved an annual growth rate of 4%. To this day, landlordism is forbidden in South Korea's countryside.

Philippines: A cautionary tale (1988 - ongoing)

Following the ousting of autocratic dictator Ferdinand E. Marcos in 1986, the new democratic government set out to enact an ambitious land-to-tiller land reform consecrated in the Comprehensive Agrarian Reform (CARP) Law of 1988. Smallholders and landless peasants willing to cultivate were recognized as beneficiaries of the CARP, which encompassed a total area of 8.1 million hectares. Half of this land has already been redistributed between the beneficiaries, while the other half composed of forestland was transferred into customary tenure of local communities.

The program stipulated that all land suitable for agricultural production (including land held by multinational corporations) is eligible for redistribution into family-sized farms (variable caps according to crop) to be given to landless peasants (i.e., with less than 3 hectares of land).[390] In line with the World Bank's 1975 Land Reform guidelines, the program stipulated that dispossessed landowners are entitled to compensation (negotiated case-by-case), and may retain up to 5 hectares of their properties.

As of today, the government claims that 76% of the CARP area was redistributed, with large plantation landowners refusing to give up their properties. However, the program was skewed from the start in favor of the landed gentry through a series of loopholes (including exemptions for timberlands, and permanent exclusions on specific private farms used for prawn farming, fishponds, commercial livestock and poultry raising).

Further, the World Bank financed CARP extension programs that benefitted agribusinesses and the landlord elite by allowing them to convert their lands into other uses. Ultimately, the CARP created a class of landed poor peasants – with farmers still making up over 30% of the country's poorest – rather than fulfilling its promises of social equality.[391]

Zimbabwe: Radical, anti-colonial agrarian reform (2000-2010)[392]
In 2000, President Robert Mugabe launched the Fast Track Land Reform Program (FTLRP), a redistributive agrarian reform program, which sought to return land that had been stolen by white, mainly British, settler-colonists to Indigenous Black African farmers and peasants.[liii]

Through to its conclusion in 2010, over 13 of the 15 million hectares of land controlled by white farmers were transferred to over 240,000 mainly rural Black families – but also some urban poor families – who received an average of 20 hectares. Around 22,000 properties, averaging 100 hectares each, were also given to Black entrepreneurs. By 2009, less than 400 individually-owned white farms remained (the majority of which retain very large landholdings), and more than 77% of foreign-owned farms were expropriated and redistributed. However, the largest agro-industrial estates were not expropriated, though they did lose some land and/or were partially occupied by landless peasants.

The FTLRP was undermined by some corruption scandals, including capture of land by elites. Moreover, some ethnic groups were over-represented in certain provinces, while certain family-lineages benefited more than others.[393]

However, the common narrative of a "failed land reform" marred by violence and "crony capitalism" should be questioned – especially since it served as a justification for the US and EU to impose illegal sanctions on the country, severely restricting its access to credit, aid, preferential trade tariffs, and debt relief over the past 24 years.[394]

Despite sanctions, by 2010 13% of Zimbabwe's agricultural land was in the hands of Black mid-sized farmers, and 70% was owned by small-scale farmers. Beyond the statistics, many more families benefited from the agrarian reform – either by having "illegally" occupied plots of land or because much of the redistributed land was shared communally or through rental agreements within communities. The agrarian reform increased women's access to land ownership with 12-18% of women owning land, although most women still only have access to land as spouses – which speaks to the underlying patriarchal structures in Zimbabwe.[395] Despite persistent gender inequalities, families with land are still better off than families without.[396]

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liii In 1985, the government launched a first attempt through market sales of land led by state land acquisition and redistribution. The following year, the Economic Structural Adjustment Program saw the start of a neoliberal agrarian reform.

Colombia: An agroecological land reform for the 21st century (2022 - ongoing)

Land ownership in Colombia is among the most concentrated in the world. This pattern of concentration has been at the root of armed conflict with domestic guerillas. During the violent armed conflict, 8-9 million people were forcibly displaced, especially peasant families, Indigenous Peoples and communities of African descent living in the agricultural frontiers. In the process, 8 million hectares of land were hoarded by landlords.[397] This has been an important component in the process of expansion of intensive agriculture and mining in areas with the most fertile soils – including Cargill's infamous grab of over 50,000 hectares between 2010 and 2012.[398]

Agrarian reform was the subject of the first of the legally binding Peace Agreements signed between Colombia's government and the FARC. The current government started implementing this agreement in 2022, through the reactivation of the National System for Agrarian Reform (instated in 1994 but never used),[399] and recognition of the UN Declaration on the Rights of Peasants (UNDROP).[400]

The first act of the agrarian reform took place in March 2023, when President Gustavo Petro bought and redistributed 29 properties, worth USD 22 million, spanning over 3,500 hectares to 6,195 families. More than 3,200 hectares were given to Indigenous communities, and the rest of the land was redistributed between peasant families.[401] Later in the year, the parliament approved a constitutional change recognizing Peasants as right holders enjoying special constitutional recognition and protections.

The ongoing agrarian reform builds on the *Zonas de Reserva Campesina* (ZRC, peasant reserve areas), a legal classification created in 1994,[402] which recognizes the need to protect peasant agroecological agriculture to prevent the expansion of the agroindustrial frontier, address the concentration of farmland, and ensure sustainable rural development. In December 2022, for instance, the government declared the Páramo de Sumapaz,[liv] the largest of its kind in the world (40% the size of the Bogotá region), as a peasant reserve. This has allowed the area to be protected from industrial agriculture, while allowing peasant communities to use that land for their economic sustenance, while regenerating soil, protecting native seeds, and developing local democratic decision-making bodies.[403] By the end of 2023, 5 additional ZRCs had been created, and the government earmarked 20-25 more areas as potential ZRCs.[404]

In parallel, a rural right to food plan, *Plan Nacional Rural del Sistema para la Garantía Progresiva del Derecho a la Alimentación,* has been adopted, with a focus on the need to support agroecological practices, territorial markets, and peasant and Indigenous local economies to achieve sustainable rural development and food sovereignty.[405] However, peasants and agroecology are still not mentioned in the government's National Development Plan (PND), with Via Campesina raising concerns about some of its orientations.[406]

As the process evolves, there are challenges in retaining a peasant vision of environmentalism and social democracy, and risks of reverting to problematic *willing-seller-willing-buyer* models of land reform. In this context, calls have been made for the government to apply the 2022 Constitutional Court ruling on public idle land, as a basis for pressing ahead with more ambitious redistributive programs.[407]

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liv A paramo is an alpine ecosystem classified between a meadow and mountain scrub. The majority of paramos are located in the Andes, and other mountainous regions of Central and South America.

FIGURE 9.

LAND SQUEEZE

CONCLUSIONS

- An unprecedented land squeeze is accelerating land inequality, rural poverty & food insecurity.
- Powerful governments, investors & agribusinesses are gaining control over land through new waves of land grabbing.
- Major new pressures are emerging from green grabs for carbon offsets, big conservation, 'clean fuels' & minerals.
- Farmers & rural communities are losing land access, as economic & tenure security deteriorate - making smallholder agriculture increasingly untenable.

LEVERAGE POINTS FOR CHANGE

- Halt green grabs & remove speculative investment from land markets.
- Establish integrated governance for land, environment & food systems to ensure a just transition.
- Support collective ownership & innovative financing for farmers to access land.
- Forge a new social contract & create a new generation of land & agrarian reforms.

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The International Panel of Experts on Sustainable Food Systems (IPES-Food) is a global think tank and expert group guiding action for sustainable food systems around the world. Bringing together 25 groundbreaking thinkers and practitioners from diverse fields and world regions, we conduct research, provide policy recommendations, and advocate for sustainable, equitable, and healthy food systems worldwide. Rooted in science, and grounded in the realities of those on the front lines of hunger and climate crises, IPES-Food has since 2015 been a leading voice advancing policy solutions and bringing together alliances to address the most pressing questions for food and farming. The panel is co-chaired by Olivier De Schutter, UN Special Rapporteur on extreme poverty and human rights, and Lim Li Ching, Senior Researcher at Third World Network.

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