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RESEARCH ARTICLE

Collective land arrangements that decommodify land for agroecological transformations

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Rights and access to land are major pressing issues among mainly first-generation agroecological farmers in the Netherlands. Due to short-term tenure contracts and high land prices, these farmers face an insecure future. Because of this, they are often unable to make long-term ecological investments, such as planting trees and taking measures to improve soil health. A growing group of farmers are devising new, more communal forms of land ownership and tenancy, that counter market forces and existing policies. In this article, we shed light on these farmers' discourse and how it informs the construction of new forms of land ownership and tenancy. In the related research project written and led by farmers, information has been gathered in the form of meeting minutes, interviews covering problems and perspectives related to the land tenure regulation, and commons. This information has been systematized and validated by farmers. Agroecological farmers find themselves in an uncomfortable situation that is challenging in 2 ways. On the one hand, they are calling for revision of land tenure regulations to ensure long-term land contracts for their existence and on the other hand they are seeking to replace property rights in favor of more collective possession-based arrangements. Our analysis shows how a discourse of decommodification seems to underlie the strategies and practices implemented by farmers. It focuses on place-based developments to secure the autonomy of farmers and communities. We argue that, to safeguard the possession and use of land for agroecological farming in the future, both developments of land decommodification (long-term tenancy and commons) should be supported. This can be done by integrated policies on land sale and lease that align with the ecological carrying capacity and agroecological production capacity of land, and that ensure compensation for monetary downgrading of agricultural land.

Keywords: Land tenure regulations, Land prices, Commoning, Farmer-led data collection, The Netherlands, Agroecology

Introduction — "Farm viability by collective land ownership"

"Farm viability by collective land ownership" is a statement made by an agroecological farmer in the Netherlands and is used here to highlight a shift in focus from the farmer to the farm. Collective ownership promises to secure access to land and the use of sustainable practices for current and future generations. This discursive shift prioritizes stewardship, caring for land, soil health, biodiversity, water, nutritious and culturally appropriate food as a collective responsibility. This collective responsibility and stewardship need to be brought back into focus, especially in the Global North, as affluence and high environmental and social footprints in high-income countries induce major environmental and social impacts across the globe (Wiedmann et al., 2020). Increasingly, agroecology is recognized by farmers, policymakers, and researchers as a promising food system approach to ensure transformative change in the way we produce and consume our food (Petersen et al., 2012; Gliessman, 2018; FAO, 2019). The distinctive character of agroecology is that it mimics ecological processes for agricultural purposes (Schutter, 2010; Pimbert, 2015) and that interconnected, agroecological principles cover environmental, sociocultural, economic, and political dimensions, as stated in the Nyéléni Declaration on Agroecology (Nyéléni Declaration, 2015; CIDSE, 2018).

While the Nyéléni Declaration on Agroecology refers to land as a pillar of food sovereignty "*ensuring that the rights to use and manage our lands, territories, waters, seeds, livestock and biodiversity are in the hands of those of us*

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who produce food" this is not a primary focus of many agroecological groups in wealthy countries according to Calo et al. (2023). Our relationship to land and how land can act as the basis for agroecological practices is not always obvious in projects which aim to strengthen agroecology (Calo et al., 2023). The foundational relationship between agroecological movements and land becomes increasingly obvious when rights and access to land are denied, impeded, or reduced. This is an ever-increasing issue around the globe (Wittman and James, 2022). Taking the example of the Netherlands, land tenure insecurity is a particular obstacle for first-generation agroecological farmers (Toekomstboeren, 2019b; Bakker et al., 2023).

In 2020 the average price for purchasing agricultural land in the Netherlands was the highest in Europe (71,225 euro per hectare arable land) (Eurostat, 2022a), only topped by single regions such as the Canary Islands. For land lease prices, the Netherlands scored second-highest just below Italy, with 824 euro per hectare arable land and/or permanent grassland (Eurostat, 2022b). The price of land was and still is high mainly due to the high productivity of Dutch dairy farming, which has a high dependency on inputs and external land use (Silvis and Voskuilen, 2018). This intensive dairy farming is exceeding planetary boundaries (Erisman, 2021) and land politics plays a key role in this. One example is that no legal limitation exists on the livestock units permissible per hectare which align with the ecological carrying capacity of land.

The financial model of agricultural land, as a commodity, promotes investment and speculation in land and this has further exacerbated the price increases (Regt, 2003). One of the factors also contributing to the high land prices relates to farmers' pensions or financial security in retirement. For many farmers a high market value when selling agricultural land and holdings, also within family transfers, benefits them, as this pays for their retirement. For many farmers, their precarious situation in later life is mainly due to a lack of adequate public or private pension arrangements for independent workers and small companies. The latter is hardly addressed by scholars.

With high land prices and hardly any regulations in the sales markets (Swinnen et al., 2016), buying land is very difficult, especially for first-generation farmers. They are faced with high land lease prices and short-term leasing contracts (Toekomstboeren, 2019b; Bakker et al., 2023). In 2020, about 29% of the Dutch agricultural land was leased (CBS, 2021) and with the liberalization of the lease regulations in 2007, approximately 90% of new leases are short-term. In practice this usually means 6 years or less (1- or 2-year contracts are not uncommon) (LNV, 2020). The latter shows the complex situation these farmers find themselves in. Many first-generation farmers have joined the peasant association *Toekomstboeren*, the Dutch chapter of the worldwide peasant movement "La Via Campesina." They are building sustainable models of agriculture, for example, community-supported agriculture (CSA) systems and are experimenting with regenerative practices to promote biodiversity and soil health, which requires long-term investment in their land. However, they are constantly unsure about the renewal of their contracts (Toekomstboeren, 2019b). Dutch female farmers in particular face even greater difficulties than their male counterparts and have many more hurdles to jump for land ownership. In 1956, the "Actual Incompetence Act," that impeded women from buying land, was abolished. In 2016, approximately 5% of women manage agricultural land in the Netherlands (Eurostat, 2019). Furthermore, agricultural land and holdings in family farms passed down within families make it difficult for (migrant) farmworkers and new entrees to possess any agricultural land.

Calo et al. (2023) noted that in the Global North land reform is hardly on the agenda and that most land initiatives operate within the property-based scheme. The land reform Scotland Act 2016 is an exception in this regard, as it grants rights to a community to purchase land for sustainable development from unwilling sellers. Recent developments, such as the "voluntary" buyout by the Dutch national government of farms that have been classified as major nitrogen emitters in the vicinity of congested nature reserves, also illustrate the potential for land reform in the Netherlands. Although this major reform tackles climate change and eutrophication, it demonstrates that land reform is not unthinkable. The Dutch national government has secured the first right to buy land from those major nitrogen emitter farms for sustainable development and land use. Purchased land by the Dutch National Land Bank will be used to achieve the goals of the National Rural Area Program. These are nature restoration and improvement of water quality to combat climate change (RVO, 2023). To date a pro-poor land reform agenda is missing to ensure that released land will (also) become available for new entrees and less capitalized agroecological farmers. This poses the question: Can the recent environmental tipping points and EU enforcement for greater sustainability force an opening to put land reform on the agenda in the Netherlands? What bottom-up strategies exist for navigating the exclusionary land markets in the Netherlands?

In response to decreasing access and opportunities to buy land, coupled with insecure leasing arrangements, a growing group of agroecological farmers are developing new forms of communal land ownership and land tenancy arrangements. In this article, we explore these bottom-up developments and aim to answer the research question: What are the commonalities among these new communal land arrangements? To answer this question, we build on agrarian studies and critical property studies that challenge and expand our thinking on current property regimes and we use empirical data that show the diverse political reactions from below regarding land developments (Hall et al., 2017). We also discuss our findings to explore possibilities for land reform.

Land commodification and decommodification processes

Commodification and property titles

When discussing alternative land arrangements, it is important to specify different types of access to land, as

they may adhere to different logics and discourses. Gerber and Gerber (2017) propose to distinguish between "property" and "possession" as these concepts adhere to different logics. Property is a nonmaterial addition to possession—a title awarded by the state to individuals, collective, or the state—that allows the commodification of land through sale and lease. In possession-based systems it's not possible to extract nonmaterial resources from their context, and they therefore do not provide opportunities for speculation. Farmland may be accessed through use rights. In *The Great Transformation*, Polanyi (1944) describes how the current property-based system took shape throughout the past centuries: as land and labor became a commodity during the Industrial Revolution, over time human economy was equated with market economy. The privatization of state-owned enterprises based on the neoliberal discourse from the 1980s onward accelerated this development. This obscured other ways of arranging production and distribution and narrowly confined the interpretation of highly diverse economic practices (Peredo and Mclean, 2020).

The trading of land resulted in prices that are not determined by the ecological carrying capacity and agricultural production capacity of land, but by the exchange value. High land prices (both sale and lease) and frequent change of owner/tenant incentivized monoculture and intensive agricultural practices and fossil-based inputs to maximize yields for short-term gains. These extractive quick-fix land use practices can result in short-term benefits such as increase in yields, but in the long run cause loss of biodiversity, decline of soil health as well as negatively affects the provision of ecosystem services that are important for agriculture (Foley et al., 2005; Gomiero, 2016; Rotz et al., 2019; Schils et al., 2022). The exchange value of land is too high for agroecological farming practices that aim to balance the productive and ecological capacity of the land (Lamine et al., 2021).

Although developments in the direction of commodification have been strongly present, there are also counter movements. Peredo et al. (2020) talk about a "double movement" and argue that the very conditions of amplified marketization provoke attempts to counter its effects. Thus, commodification and decommodification processes do not merely coexist, they affect one another. Counter movements can take different shapes. Appadurai (1988) identified various stages of decommodification: goods and services can be decommodified, partially decommodified or the commodity value can be suspended for a defined time. Borras et al. (2015), Bezner Kerr et al. (2022), and Calo et al. (2023) also point at the role the state can play in acquiring and redistributing of land, regulating and restricting powerful actors in land sales and purchases, and in adjusting legal frameworks.

Re-emergence of commons

With climate change, an aging farmer population, and a declining succession rate for farms in the Netherlands and across Europe, a political taboo on land intervention politics is lifting and new socio-legal configurations for communal land arrangements are also being discussed. Stock et al. (2015) propose to think about these new configurations in terms of food utopias as this enables us to explore the boundaries of what is thinkable and possible to put into practice. The *commons* concept can be used to envisage a food utopia for agroecological food systems, helping us to stretch our imagination of future land relations.

In recent years, *commons* initiatives based on collective action and self-organization have been emerging in the Netherlands (De Moor, 2013), particularly in agriculture (Toekomstboeren, 2022b). De Moor (2013) describes this phenomenon as a reaction to processes of privatization and developments in the market. De Moor also points to the double movement of commodification and decommodification taking place at the same time. When privatization results in disadvantages for citizens, citizens start organizing themselves. This dynamic has been repeating itself, and the current wave of collective action is seen as a reaction to the neoliberal politics being implemented since the 1980s. Many of these self-organized collectives are described as new forms of commons, that can be characterized by patterns and principles of commoning as described by Ostrom (1990) and Bollier and Helfrich (2014). The latter authors argue that the commons is an insurgent worldview "based on a deep relationality of everything" (Bollier and Helfrich, 2020, p. 43). This worldview holds that objects, processes, phenomena, and identities emerge through relationships with other things and are interdependent. This contradicts the current dominant political economic worldview in which everything is separated, inert objects are to be acquired and protected, and people are independent individuals that act rationally in the interest of themselves (Bollier and Helfrich, 2020). Because a commons-worldview is deeply relational, it acknowledges the countless factors that we, as humans, interdepend upon to live and thrive. Individual well-being depends upon collective well-being. While this principle is practiced in many aspects of life, commodification of public affairs—as is common policy since the 1980s—tends to disrupt interdependencies and create or exacerbate precarity (Greer, 2016).

Commons classify as possession-based systems in which the economy is (re)embedded in social relations and the aim is to achieve an ecological optimum to avoid overexploitation and underutilization (De Moor, 2009). They refer to the use and intrinsic value of land itself instead of market value (De Moor, 2015). Bollier and Helfrich (2014, p. 175) describe the commons as "a self-organized system by which communities manage resources (both depletable and replenishable) with minimal or no reliance on the market or state." He further explains it as a wealth inherited, or created, that is passed on undiminished or enhanced to the next generation. As such, it consists of three elements: a (natural) wealth/resource, a community with shared values and practices, and peer governance (Bollier and Helfrich, 2014). However, the commons have no guarantee for entirely equitable distributions of social benefits, as historical examples show (Bravo and De Moor, 2008; Curtis, 2016). Curtis (2016) and Bravo and De Moor (2008) explain that

historical commons were often in the hands of powerful groups and only ensured an equilibrium of the ecological system. Bravo and De Moor (2008) note that in the 18th and 19th centuries equality became central in the revised meaning of communities around commons. In relation to law, it is important to notify that commons departs from people as social entities. The current property-based system departs from a contractual relationship between persons instead of a relation of a group of people "community" with land itself (Wittman and James, 2022).

History shows that two relationships are essential, the relationship among people to ensure equity among people, and the relationship between a group of people and the land to ensure an ecological equilibrium. Furthermore, the risk of commodification remains and requires carefully weighing changing needs. De Moor (2015) identified criteria to help establish a resilient system: utility, sustainability, and degree of participation.

Commoning and regulating land sale and tenure are decommodification processes that reduce exposure to market forces of price, supply, and demand in varying degrees. In this way enabling sustainable livelihoods by not (having to) exceed the ecological carrying capacity of land. Decommodification can be operationalized into three integrated processes: immunization from market dependency, the construction of social entitlements, and the restoration of human nature relationships. Understanding pluralistic approaches for dealing with land uncertainty through the concept of decommodification opens a way to reflect upon these approaches and to disclose how decommodification is achieved, to a certain extent, by these three integrated processes. It may even create a juridical argument why the property model needs to be reviewed to align with other government programs focusing on promoting soil health, biodiversity, and water quality (Carlisle, 2019; Calo et al., 2023).

Methods

This ongoing farmer-led research (MacMillan, 2018) started in autumn 2018. The agroecological farmers association *Toekomstboeren* secured funding for the POP3 Project, "New land arrangements for sustainable agriculture." They managed and directed the project, including the parts that had a research focus. This helped to overcome some of the key challenges of participatory action research such as risk of co-option, power inequalities, and decentralizing of control (Cornish et al., 2023). In **Figure 1**, we give an overview of how the farmer-led research was done.

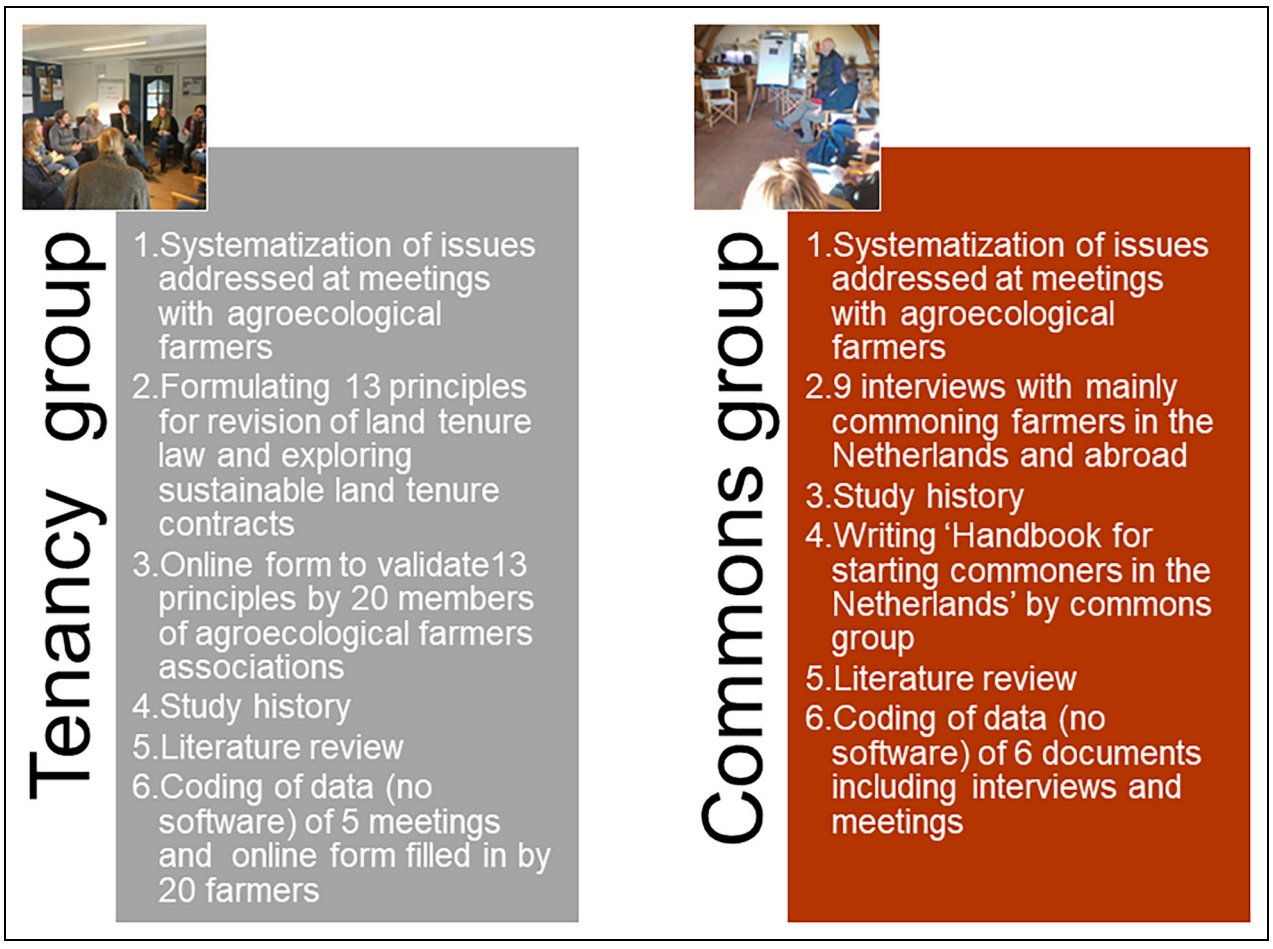

Figure 1. Steps of farmer-led research. The figure outlines the research steps that the 2 groups (tenancy and commons), as subgroups of an existing land research group of the farmers' association *Toekomstboeren*, did to perform their research. Source: Authors.

The project started with systematizing the outcomes of meetings on land issues held by *Toekomstboeren* (Toekomstboeren, 2019a). By systematization (Diez-Hurtado, 2001; Souza et al., 2012) we mean reflecting on the relevance, replicability, validity, innovation, and sustainability of the land issues discussed in the meetings. *Toekomstboeren* facilitators, for example, asked if an issue was relevant to all farmers participating or whether a land arrangement proposed by a participant was also imaginable if contextualized in another setting. After 3 meetings on land issues 2 groups of participating farmers indicated their willingness to work further on either land tenancy or commons. The existing land group of *Toekomstboeren* responsible for arranging research funding to work on new land arrangements subsequently subdivided into 2 groups namely "land tenancy" and "commons." After the joint first step of systematizing, the 2 groups followed their own paths to achieve useful results for the farmers involved. In both groups, a smaller group studied the historical context to enhance the understanding of societal developments and through this, learned from history (Step 3 in commons group and Step 4 in tenancy group; **Figure 1**). Ultimately, the authors of this article, among which included researchers, farmers, and farm workers with an academic background, carried out a literature study to see how we could understand, analyze, and compare the research results (Step 5 in **Figure 1**). In this step, "choosing a theoretical framework" not all farmers active in the 2 groups were involved, but only the first 3 authors of this article. To analyze the collected data, we started deductively with coding using 3 integrated processes inherent to decommodification, as identified by De Moor (2015), namely "immunization from market dependency," "arrangement of social entitlements," and "restoring human-nature relationships." Inductively, we added the following additional codes, "reversing power relations," "transcending generations," and "place-based." To include emerging codes, all documents were analyzed twice (Step 6 in **Figure 1**). All codes together show the 6 integrated processes (**Table 1**) inherent to decommodification described in Result section.

Table 1. Six integrated processes inherent to decommodification

Source of Integrated Process	Processes Identified
De Moor	1. Immunization from market dependency.
	2. Arrangement of social entitlements.
	3. Restoring human–nature relationships.
This project	4. Reversing power relations.
	5. Transcending generations.
	6. Place-based.

Source: Authors.

Tenancy group and commons group

Each group consisted of approximately 5 farmers or rural workers and 1 researcher who are all active members of the agroecological farmers' association *Toekomstboeren*. Of 350 members, many are first-generation farmers, and include small-scale horticulture, arable, animal, mixed farms, and CSA farmers.

Systematization of the input collected at the first 3 farmers' meetings by the tenancy group led to the development of 13 principles for the revision of land tenure regulations. These were further validated through an online questionnaire filled in by 20 farmers connected to the Federation of Agroecological Farmers. This Federation consists of 5 agroecological farmers' associations, of which *Toekomstboeren* is one. The other members include the Association of Biodynamic Farmers, the Dutch CSA Network, Bio-Tuinders, and the Biocyclic-Vegan Agriculture Network. In addition, the tenancy group organized meetings with actors involved in revision of land tenure regulations to mutually inform each other. Actors consisted of the public officer in charge of facilitating the process toward revision of land tenure regulations and a professor in agrarian law involved in the assessment of lease regulations.

The farmers engaged in the commons group selected knowledgeable farmers to be interviewed about commons for the handbook (Steps 2 and 4 in **Figure 1**). Farmers were selected if they were working on "food utopias," often by finding creative solutions within existing legislation, or by involving consumers in their farm. Rather than the well-known Dutch national initiatives, such as *Aardpeer* and *Land van Ons* as described by Jellema et al. (2023), the group in this research chose farmer-led initiatives that challenge the property model and who work with territorial possession and use arrangements, including initiatives from the United Kingdom. In contrast, *Aardpeer* and *Land van Ons* still work in the financial model that extracts nonmaterial resources in the form of interest from the land and maintain the market value of agricultural land. The Dutch commons initiatives are very young (mostly not more than 30 years). Therefore, the commons group also interviewed 2 historical commons in the United Kingdom to learn from their ancient common culture and lived experiences. It was also to gain greater insights into how these commons, contrary to ancient commons in the Netherlands, have survived over time. The questions asked by the commons group during the interviews disclose what is relevant to this group of farmers: "How to free land from speculation?" (Yeva, shepherd, NL). Interviews and literature were used by the group to reconstruct the history of the commons in the Netherlands.

Results

Historic waves in tenancy security and commons in the Netherlands

To understand commons and tenancy situations in the Netherlands, a short historical overview was created by the tenancy and commons group. This overview can be seen in **Figure 2** and is crucial to understand the recurring

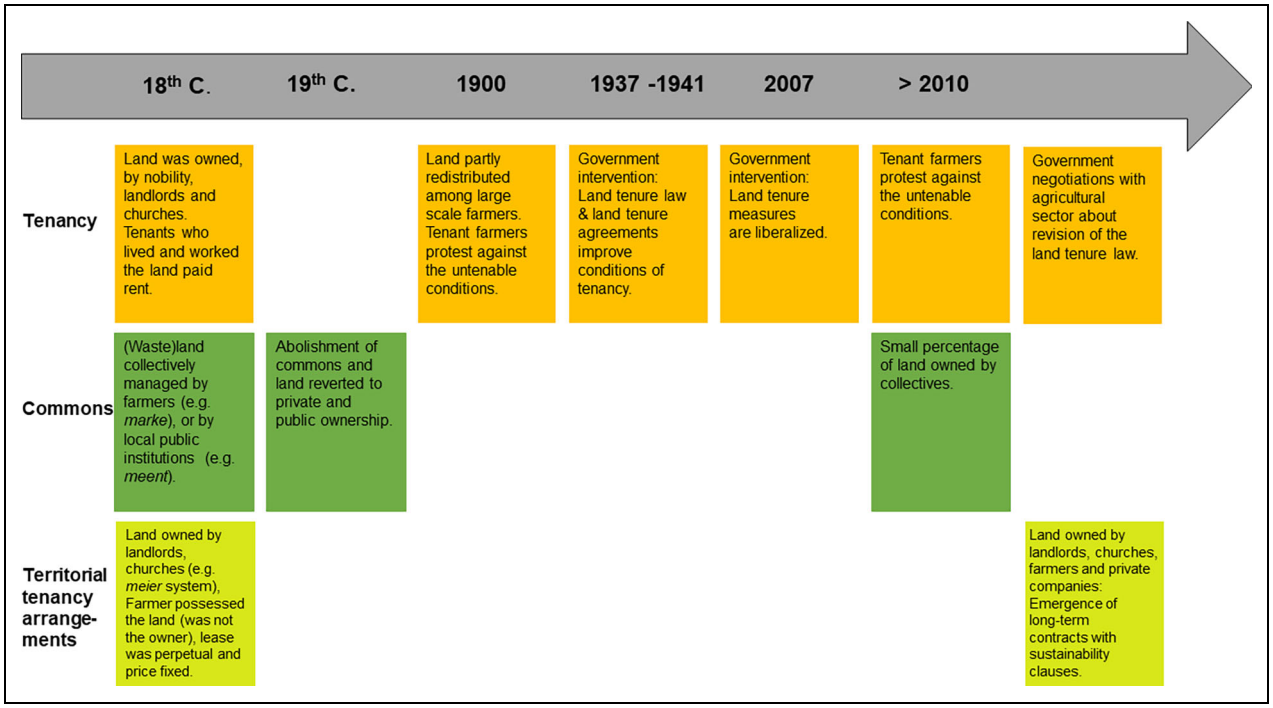

Figure 2. Historic waves in tenancy security and commons in the Netherlands. The figure shows a timeline from the 18th century up to today of major developments related to land tenancy and commons in the Netherlands. Source: Authors.

developments throughout history and to reflect upon the double movements of tenancy security and insecurity, decline, and emergence of commons. It also allows us to identify where the tenancy security and commons currently is in these dialectic processes and provides us with a greater opportunity for breaking these cycles.

Until the end of the 18th century, farmers in the Netherlands mostly worked on the land of the nobility, landlords or churches, or they were part of the community that worked on common land (**Figure 2**). The different types of common land on the sandy soils, waste land in the southeast of the Netherlands, such as "*de marke*," "*de meent*," "*maanlandschappen*," varied in characteristics of the land, the governance, use arrangements, and interface with the state and market indicating processes of commodification and decommodification. Livestock farming in these commons mainly served arable farming purposes (e.g., through the provision of animal manure as fertilizer) ensuring an ecological equilibrium (Demoed, 1987; Paulissen, 2021).

The north of the Netherlands (province Groningen) had its own territorial tenancy arrangement, with so-called entrapped *meiers* (**Figure 2**). *Meiers* were farmers who owned the farm buildings but not the agricultural land they rented. To protect the *meier* with his investments in the farm building, he could not be removed from the land. *Meiers* possessed the land, but they were not the owners. The rent, called "entrapment," was perpetual and the price was fixed. Although land rights were secure, the system of entrapped *meiers* didn't allow division of land and thus, there was no option for rural workers or first-generation farmers to buy their own land and to start their own farm. With the purchase of the right of entitlement, the entrapped *meiers* became large-scale farmers (Formsma, 1981; Paping, 2021) excluding again first-generation farmers. This highlights the need to make land relations that are inclusive.

During the French Occupation (1795–1806), land of the nobility was partly redistributed among tenants. This cannot be considered a pro-poor land reform, mainly because the land of the nobility and of the churches was partly nationalized and sold in large plots to large farmers (Swinnen, 2002). The largest wave of land commodification and privatization in the Netherlands happened in the late 19th century with the abolishment of the commons and the claiming of land previously not used. In the early 20th century, land leasing was widespread: 50% of the agricultural land was leased in 1930 (van den Noort, 1982).

With privatization and the increasing use of land property rights, the market value of land became more important than the use-value of land and its ecological carrying capacity. In the beginning of the 20th century, tenant farmers began to raise their voices. Lease prices were too high, contracts too short, continuation of contracts too insecure, and management for soil improvement and perennial plants not rewarded (van den Noort, 1982). Swinnen (2002) describes how the emancipation of tenant farmers and rural workers was a precondition to influence policymaking and to improve their land tenure rights. To ensure the existence and income position of tenant farmers, a land tenure law was implemented in 1937 and a land tenure agreement in 1941. The regulation of land tenure prices, long-term contracts, continuation rights, and the preemptive rights to buy limited property rights. This

shows a decommodification process. It also shows the political recognition at that time that land security is at the heart of food security. At the same time, this recognition did not eliminate the historical power imbalance between the noble families' heads, churchwardens, and tenants. Tenants still had to comply with the unwritten rules and to deal with the superior attitude of the landowners.

Over time landowners claimed that land lease wasn't financially rewarding. It was more lucrative to sell a farm not in use than a farm that was leased (van den Noort, 1986). In 2007 land tenure measures were liberalized to ensure more rights and revenues for landowners. The latter indicates a process of commodification. The assumption was that this would promote new land tenure contracts. Generally, land tenure is perceived by policymakers as a way for farmers to create room for agricultural investments. What is saved by leasing instead of buying can be used for other agricultural investments. However, the liberalization of land tenure measures resulted in similar problems (short-term land tenure contracts and high prices) as indicated by land tenant farmers in the beginning of the 20th century (**Figure 2**). According to van den Noort (1982), it was obvious that measures that address only rights to exist (term, continuation) or only land prices would not succeed. Options other than liberalization of land tenure legislation were available. van den Noort (1982) pointed to the option of regulating the land sales market and in doing so leasing land would remain attractive for landowners and tenants of agricultural land. The legal framework of regulating land prices was in operation until 1963 and could have been reinforced (van den Noort, 1982). The latter could have been a way to tackle the historical cycle of decommodification and commodification. The political climate in the beginning of the 21st century, however, was not favorable for regulating the agricultural land market. Today, this is different: in the proposed agricultural agreement with the sector land politics are at the core. Also, among farmers, the topic is becoming of increasing urgency. The following section presents the findings after the coding of data gathered in farmers' meetings and interviews.

Six integrated processes inherent to decommodification

The systematization of the issues raised at the meetings with agroecological farmers was translated by the tenancy group in 13 principles for the revision of land tenure regulations (**Table 2**). The following section aims to understand these principles and how they relate to the 6 integrated processes inherent to decommodification, as identified by De Moor (2015) and supplemented by the authors after analyzing the data. Equally, other results of the tenancy and commons group will be discussed within the framework of decommodification. Herewith, commonalities in principles and processes become visible between the tenancy and commons groups, even though strategies and practice in terms of land arrangements diverge.

Process 1: Immunization from market dependency

Dependency on the land tenure system was a recurring issue at the meetings of the tenancy group. A female farmer describes the status of land:

Land is a financial asset. (Maria, CSA farmer, NL)

Table 2. The 13 principles for revising Dutch land tenure regulations (Toekomstboeren, 2022a)

1	There are criteria in lease contracts for ensuring soil quality.
2	Long-term contracts are the norm to improve the soil quality (and thus the ecological, social, and monetary value of the land). That is why our proposal that career lease becomes standard with first right to new career contract/purchase by successor(s) farm. Cultivation lease lapses to prevent farmers failing to invest in soil quality.
3	Lease for sustainable agriculture is not only guaranteed through existing certification labels.
4	All costs of sustainable land management are included in the lease price assessment.
5	Smaller plots than 1 hectare are also eligible for career lease and lease price review.
6	Investments in woody plants (trees and shrubs), soil improvement, biodiversity, and water management can be earned back within the lease term or are transferable.
7	A lease is transferable to farm, rural workers, and/or citizens' initiative, regardless of whether they have family ties to the previous tenant.
8	Barter leases among farmers are possible.
9	Lease to an organized group of farmers and citizens, now often in foundations or associations, is easily possible.
10	Public landowners have an example function and provide standard career leases with sustainability clauses.
11	New leased land of all types of landowners must be publicly announced.
12	The tenant has the right to sustainable living-workspace to be realized on leased land for agricultural activities.
13	The owner can only make rules in all reasonableness regarding use, view, and installation, as these rules can get in the way of contemporary, sustainable agricultural techniques, and way of life. Unwritten rules are not legally valid.

The tenancy group formulated this set of 13 principles by systematizing the input of agroecological farmers at the meetings.

Table 3. Immunization from market dependency

Land Issues Considered	Commons Group	Tenancy Group
Possession and use of land	Possession and use secured by community	Use secured by farmer or organization
Property title	Nontransferable	Principle 2: First right to purchase, new career contract to tenants, limiting transferability of property titles
Market value	Monetary downgrading to align with ecological and agroecological carrying capacity of land	Market interventions proposed: Principle 4: True cost accountability; Principle 6: Ecological investments are transferable

Source: Authors.

According to her, farmers must talk a lot about these issues to raise their own awareness and achieve a change in their mindsets. Most farmers expressed their feelings during the farmer meetings about the insecure situation they find themselves in. Their land tenure contracts are short-term, and with the regular change of tenant farmer, lease prices are rising with each new contract signed. Another issue mentioned is that banks require land security to provide loans. The minutes of the farmer meetings demonstrate a wish to become more independent from the land tenure market and to reverse power relations between landlord and tenant. This links to Principle 2 for revising land tenure, "First right to purchase, new career contract to tenants" means limiting the transferability of property titles. These farmer insights also link to Principle 4 "True cost accounting," and Principle 6 "Ecological investments are transferable" demonstrating a wish to interfere with the market.

The commons group gives insight into this aspect of decommodification in multiple ways. In the handbook for starting commoners, a list is provided with commons initiatives from national to local level, including a description of the way they work and function (Toekomstboeren, 2022b). These initiatives differ in the degree of immunization from market dependency. While Foundation Land for Existence (S*tichting Grond van Bestaan*) aims to monetarily devalue land to zero and therefore, only works with donation money, Biodynamic Land Management (*BD Grondbeheer*) leases land with long-term contracts to farmers and with the lease money they pay out interest on perpetual bond loans. The latter secures the land for (biodynamic) organic farming and the farmer's position but departs from land as a financial asset of which debt must be paid off through leasing. An increasing number of Dutch farmers—many of them small-scale CSA farms—are challenging that notion of farmland as a financial asset:

> *Receiving interest on land is something that I strongly disagree with. I think taking it out of the market would be a good thing. Land should be no one's or everyone's. I'm finding out what the best juridical structure is to accomplish that.* (Valerie, CSA farmer, NL)

At the same time, she acknowledged that farmers need their agricultural land and holdings for a good pension. Buying the land communally can offer a solution to a lack of private capital or bank loans. Also, when short-term tenure contracts prohibit long-term (ecological, monetary, affective, lifetime) investments, collectively buying land can offer new opportunities. By bringing the land in a Community Land Trust, a nongovernmental organization that democratically arranges sustainable land use on behalf of a place-based community, regulations can be included about the nontransferability of property titles, land can be taken out of the market and perpetual possession and use by the community is ensured. Interviews with people of long-established commons in the United Kingdom show how possession and use can be arranged. Vast stretches of land are accessible to a large group of commoners, who each have specific rights to "harvest" from the commons. This provides nonmarketed land resources that generate (economic) resilience and a specific quality of life (noneconomic value) for the commoners. New markets such as carbon markets and environmental payment schemes (payment for ecosystem services), as well as land speculation and gentrification are mentioned as a potential threat to the commons. **Table 3** provides an overview of how immunization from market dependency is promoted within the 2 groups. The numbers in the following tables refer to 13 Principles for revising land tenure regulations in **Table 2**.

Process 2: Arrangement of social entitlements

In the meeting that farmers of the tenancy group had with a public officer, social contracts were discussed. A farmer present contested the proposal of the officer to use exclusive certification schemes as a control mechanism for sustainable land tenure. She explained that quite some agroecological farmers do not work with certification as they are engaged in CSA systems based on trust and transparency. The development of participatory guarantee systems[1] and social contracts about sustainable land use may also fulfill transparency and accountability issues required by the landowner or the government for different purposes. Issues of

1. Participatory guarantee system (PGS) is a quality assurance system of organic and agroecological products that build on social networks of producers and consumers and on trust, and that define, measure, and assess sustainability to induce knowledge exchange and learning (Loconto and Hatanaka, 2018; Kaufmann et al. 2020).

social contracts were also mentioned in questions related to the takeover of land tenure contracts. Both in family farming and in CSA, land is a collective resource, but land tenure is currently geared toward personal agreements and family transfer. These issues have resulted in the formulation of Principle 7 for revising land tenure, "Lease transferable beyond family ties" and Principle 9 "Lease to an organization of farmers and citizens is possible."

Social entitlements in commons are visible in the governance agreements on use to make sure the carrying capacity of the commons is not exceeded. These can become formalized (e.g., the verderers court in the United Kingdom, Robinson, 2019; Verderers of the New Forest, 2023), or statutes and bylaws of the legal entity that holds land ownership in the Netherlands—see for example the prospectus for perpetual bonds of Stichting BD Grondbeheer (2021), a foundation that aims to safeguard land for biodynamic farming, but many of these agreements are informal social contracts based on trust and reciprocity. Farmers in the Netherlands build trust and reciprocity within their community by actively involving people in the land:

> *At the start of the market garden 20 years ago we deliberately chose to work with an association to ensure shared decision making. By giving members a voice, you get credit. They trust you that you will do what is best as a farmer and ask if there is anything they can help with. I think you need a feeling of shared responsibility, and as few rules as possible. Otherwise, people stop thinking and just follow the rules.* (Klaas, CSA farmer, NL)

In CSAs, members share the risk of crop failure and the yield, trusting that the farmer is a capable steward and food producer. In addition to this formal agreement, farmers try to create resilience by building a web of relations:

> *The participants support me in numerous ways. For transport, mowing, advice, and so on.* (Valerie, CSA farmer, NL)

In the centuries-old commons in the United Kingdom, these social contracts exist predominantly between the farmers. For example, because the animals are free to roam, the commoners keep an eye out for each other's animals and take care of them when necessary. Social contracts are tools for managing the commons sustainably, but they also create customs and traditions, shared values and identity, and strengthen reliance on people within the group instead of dependence on the market.

> *Commoning is communal, you have to do it together.* (Lindsey, Commoner Dartmoor Forest Commons, UK)

The handbook also discusses inclusivity and openness to new people. Who is welcome to join and who is not is a debated question and the answer to it will differ from case to case. The commons group writes that ideally everybody who feels directly connected to a common has access, but that concessions might have to be made to prevent exceeding the (ecological) carrying capacity. Interviewed farmers have expressed their awareness of this dilemma and some are actively trying to find a workable answer together with their existing community. One example of this is the community farm *De Meent*, host of one of the meetings of the agroecological farmers organization *Toekomstboeren*, and which actively involves people in asylum procedures and people from the nearby village. To promote their participation, they have arranged transport to the farm and compensation, mostly in kind (warm meal, food, and training) for their voluntary work. This proactive attitude ensured access to farmland, food, and popular education for new inhabitants of the Netherlands. **Table 4** provides an overview of how social entitlements are arranged within the 2 groups. Numbers in the table correspond to the Principles in **Table 2**.

Process 3: Restoring human—nature relationships

Moreover, the farmers describe how their land is for humans and other species, not just agricultural land. Temporality of land tenure is indicated by farmers as the main obstacle to agroecological farming. The short-term land tenure contracts restrain long-term investments, for example, in woody plants and the regeneration of soils to improve soil health. Some farmers indicated that agreements about sustainable land use practices have been made with the landowner:

> *I had a land tenure contract where it was an obligation that you maintain a decent crop rotation. But I find that insufficient when it comes to soil quality, soil life and being careful with the humus content of the soil.* (Maria, CSA farmer, NL)

Table 4. Arrangement of social entitlements

Land Issues Considered	Commons Group	Tenancy Group
Possession and use of land	Farmers and citizens	Principle 7: Lease transferable beyond family ties; Principle 9: Lease to an organization of farmers and citizens possible
Property title	Property title community organization	Principle 7: Lease transferable beyond family ties, limiting transferability of property titles
Market value	If any, monetary value in hands of community organization	Ecological costs shared responsibility: Principle 4: True cost accountability; Principle 6: Ecological investments are transferable

Source: Authors.

Table 5. Restoring human–nature relationships

Land Issues Considered	Commons Group	Tenancy Group
Possession and use of land	Coexistence with nature	Principle 1: Criteria; and Principle 2: Long-term contract to improve soil quality; Principle 3: Divers guarantee systems; Principle 4: True cost accountability; Principle 6: Ecological investments are transferable; Principle 8: Barter lease to increase crop rotation, Principle 10: Public contract with sustainability clauses
Property title	Property title with community organization	Property title with owner
Market value	Restoring human–nature relationships by aligning agroecological production capacity with ecological carrying capacity	Restoring human–nature relationships by aligning agroecological production capacity with ecological carrying capacity

Source: Authors.

Another farmer proposed:

> *Not the highest bidder, but the healthiest soil farmer should have the first choice. In this way, farmers who invest slightly less in the soil will make the change faster to take even better care of their managed plot.* (Jolke, CSA farmer, NL)

Principle 11 for revising land tenure regulations indicates that new available land should be publicly announced to ensure equal access to land. Yet, when new lease land is publicly announced, and this is not coupled with sustainability criteria and agroecology, the land tends to go to the highest bidder, and this is often highly intensive livestock farmers who need more land area to maintain their herd size:

> *Land management organizations (TBOs in Dutch) sometimes choose conventional farmers instead of agroecological farmers because of the higher lease price that a conventional farmer can pay.* (Sytze, livestock farmer, NL)

Local and state governments tend to go for conventional livestock farmers to easily meet policy criteria on extensification to reduce nitrogen emissions. The first-generation agroecological farmers, who argue for the open announcement of new lease contracts, are still experiencing difficulties in this case to obtain lease land or to ensure continuation of their lease contracts.

Quite some principles for revising land tenure center on the human–nature relationships, such as Principle 1 insisting on criteria for improvement of soil health, Principle 2 identifying the need for long-term contracts to build up soil health and take measures to enhance biodiversity, Principle 6 requiring the transferability of ecological investments for longevity, Principle 8 promoting barter leases to increase crop rotation, and Principle 10 the use of public contracts with sustainability clauses.

Farmers note that the restoration of human–nature relationships not only benefits soil health and biodiversity but also regenerates themselves:

> *We recognize the value of connection with nature for health and wellbeing. Commoning [in the New Forest] is quite a slow way of life. We don't have high expectations of income and therefore, we're perhaps a little happier, maybe?* (Lindsey, Commoner at the New Forest Commons, UK)

Table 5 provides an overview of how restoration of human–nature relationships is promoted by the 2 groups. Numbers in the table correspond to the Principles in **Table 2**.

Process 4: Revising power relationships

The price of short-term contracts, of 1–6 years, is not eligible for assessment by the chamber of agricultural land (*grondkamer*), which means that there is no control on the lease price in relation to agricultural production capacity of the land. Also, regular contracts longer than 6 years and under 1 hectare of land are also not eligible for assessment, except for horticulture land of minimal 0.5 hectare in the provinces Zuid-Holland and Noord-Holland. This is based on an incorrect assumption that one requires more than 0.5 or 1 hectare of land to be able to have a livable income with farming. This is why below these minimal acreages of agricultural land the lease price is not eligible for assessment. This aligns with the feelings expressed by small-scale farmers. One farmer stated:

> *Small-scale agriculture doesn't seem to exist, also not for banks.* (Doetie, Goat keeper, NL)

This is confirmed in a meeting with an agricultural law expert who was not aware of the problem with the minimal acreage of 1 hectare. As small-scale farmers they feel they are not being taken seriously. A horticulture farmer stated:

> *I am a scribble in the margin for them.* (Esther, CSA farmer, NL)

The minimal acreage for assessing the price has been adjusted throughout the years and followed the growth in average size of a farm in the Netherlands, thereby

Table 6. Reversing power relations

Land Issues Considered	Commons Group	Tenancy Group
Possession and use of land	Possession and use by farmers and citizens	Principle 3: Diverse guarantee systems; Principle 5: Small plots eligible for career lease and lease price review; Principle: 11 Land for lease publicly announced
Property title	Property title community organization	Principle 2: First right to purchase, new career contract to tenants, limiting transferability of property titles
Market value	If any, monetary value in hands of community organization	Principle 4: True cost accounting; Principle 5: Small plots eligible for price review; Principle 13: Abolishment of unwritten rules

Source: Authors.

neglecting small-scale and part-time farmers. Within the research period (2017–2023) power relations shifted. The work of the land tenure group enabled engaged farmers to achieve better land tenure contracts, and the farmers' organizations became a negotiating partner of the government. At a meeting with a public officer to discuss the revision of land tenure regulations, possibilities were discussed to change the taxes on land property, and through these measurements reduce land lease prices. The officer referred to decommodification processes when he referred to the arts, which are also public assets excluded from tax payments.

The land tenancy group has gathered good practices, examples of land tenure contracts including agreements on sustainable land use. In one of these good practices, they have included the option to revise sustainable land use objectives if they aren't sufficient anymore to promote biodiversity and soil health. This contract also includes a point system that leaves space for the farmer to choose between the different measures for sustainable land use. Both aspects of the land tenure contract show that the autonomy of the farmer is more respected and power relations are reversed. Also, commoners mentioned the importance of self-determination as a farmer, and as a community. By using legal structures such as cooperatives and foundations, and through forging mutual interdependence on social relations, farmers strive to reverse power relations. **Table 6** provides an overview of mechanisms to reverse power relations as expressed by the 2 groups. Numbers in the table correspond to the Principles in **Table 2**.

Process 5: Transcending generations

Farmers explain that they want to construct social structures for sustainable land use that transcend their own lives. They want to ensure continuity. Long-term for these farmers transcends the duration of their own activities on the land: it is imperative for them that their care for the land and healthy food is continued when they retire.

> *For the continuity of the farm it is important that the land will be brought into collective ownership. It would be a shame if that value that I created disappeared after I stop, or if something happens to the landowner.* (Valerie, CSA farmer)

The perpetuity of a farm (a "place" with meaning, tradition, long-term care, and investment) was mentioned as a vital aspect, and something that calls for protection. **Table 7** provides an overview of how generational transcendence can be ensured according to the 2 groups. Numbers in the table correspond to the Principles in **Table 2**.

Process 6: Place-based arrangements

Farmers mention that the maximum price is defined by the national government at regional level, whereas in some municipalities there are vastly different soil types. They plea for a more place-based approach by differentiating within the municipal boundaries. Promoting restoration of nature is often mentioned as one of the main reasons to start commoning. As indicated before, this has much to do with the perpetuity or continuation of the farm as a biodiverse place with healthy soil.

Table 7. Transcending generations

Land Issues Considered	Commons Group	Tenancy Group
Possession and use of land	Possession and use remain with community organization	Principle 6: Ecological investments are transferable; Principle 7: Lease transferable beyond family ties
Property title	Property title community organization	Principle 7: Lease transferable beyond family ties, limiting transferability of property titles
Market value	If any, monetary value in hands of community organization	Principle 6: Ecological investments are transferable

Source: Authors.

The reason that I started this permaculture garden was to make a plot of earth more fertile, diverse, and sustainable. (Valerie, CSA farmer, NL)

The commoners in the United Kingdom are even more explicit about their relationship with the landscape in which they live and whose history they want to keep alive:

The New Forest is a landscape that has been grazed for thousands of years. It has shaped the landscape. You can find plants, insects and wildlife that are now rare species. The commoners turn their animals out on the commons and are very connected to the land. (Tom, commoner at the New Forest Commons, UK)

This quote illustrates how centuries of living within a landscape, with only methods of human scale (vehicles are not allowed in some commons in the United Kingdom), the two—people and landscape—have coevolved together. This comes with a certain sensitivity for the interaction between humans and nature that has delivered highly appreciated landscapes:

The forest is a very special place, and if you change one thing, it alters everything. (Tom, commoner at the New Forest Commons, UK)

In that, local and social agency allows for context sensitive practices: commons are essentially place-based. With that come local customs and understanding of the landscape, often passed on from generation to generation or through close observation over longer periods over time. This is a form of inherited ecological knowledge, an indigenous knowledge. **Table 8** provides an overview of how place-based is arranged within the 2 groups. Also, here numbers in the table correspond to the Principles in **Table 2**.

Discussion

Our research question touched upon the commonalities among upcoming forms of communal land ownership and land tenancy arrangements. In our study, the tenancy and commons groups might have appeared as opposing groups in the sense of pursuing different strategies, that is "adaptation" versus "transformation," and how they deal with possession and use, property title and market value of land. In practice, this concerns groups, with some overlap in people, who farm in a similar agroecological way and who are at the same time concerned with tenancy rights out of existence of agroecological farmers and who want simultaneously to rethink and transform the agricultural land use system.

The concept of decommodification allows us to understand the commonalities among both groups by looking at processes and shared principles. Decommodification promotes a greater integration of processes for withdrawing agricultural land from global financial markets and restoring ecological balance and communities. It foresees a shared narrative to *Toekomstboeren's* tenancy and commons group that also puts underlying values such as rootedness, care for nature and future generations, and autonomy at the center. As such, our findings show a multilayered understanding of land decommodification among the Dutch agroecological farmers (De Moor, 2015; Bollier, 2021). Not only is decommodification applied for the practical and highly necessary reason to enable existence of the farm, but both the tenancy and commons group have also articulated nonmaterial, affective, and biophilic values that underlie land decommodification processes.

Underlying values include (1) decreased market dependency, (2) social entitlements, (3) tending human–nature relationships (De Moor, 2015), and as this study shows (4) reversing of power relations, (5) transcending generations, and (6) place-based developments. Such values have been found to be crucial in transformation toward agroecology (Horlings, 2015; Gosnell et al., 2019; Bakker, 2023) but haven't been linked to the decommodification discourse before. Values and resulting processes as described above, as well as basic needs such as clean water, healthy food and a livelihood, are seen as the outcomes to which any measures should lead. Revising regulations in tenancy and the land sale market can create space and time to achieve those outcomes. These analogue processes are characteristic for the groups of agroecological farmers engaged in this study.

The distinction between "property" and "possession" made by Gerber and Gerber (2017), and market value proved relevant in assessing to what extent a proposal or principle of the commons and tenancy group challenge property titles and the dominant financial model. "Commoning" land and

Table 8. Place-based

Land Issues Considered	Commons Group	Tenancy Group
Possession and use of land	Territorial approach	Principle 12: Right to living-workspace on leased land
Property title	Property title with community organization in the territory	Principle 7: Lease transferable beyond family ties, limiting transferability of property titles
Market value	If any, monetary value in hands of community organization in the territory	Ecological costs shared responsibility, Principle 4: True cost accountability; Principle 6: Ecological investments are transferable

Source: Authors.

possession-based land tenure systems challenge the concept of property and monetary value and depart from the principles of possession and communal use, responsibility and reciprocity. Commons and possession-based systems, in which "decommodification" is a central concept, challenge the current neoliberal paradigm (Bollier and Helfrich, 2014; Lijster, 2022), but perhaps more importantly they provide approaches toward rethinking and transforming agricultural land use systems.

This study shows transformative principles for the revision of land tenure regulations, such as restricting the transferability of property titles by proposing the first right on continuation of the tenancy or purchase to the tenant. The same counts for commons systems of which the examples in this study are more transformative of nature than commoning initiatives described by Jellema et al. (2023) that follow the financial model and maintain the monetary value of agricultural land. So far, the tenancy group has pushed the internal and public debate on revision of land tenure regulations and sustainable lease contracts toward better lease constructs for agroecological farming. Moving forward with negotiations at a detailed level is more toward reforms than transformation of the agricultural land use system. The ongoing negotiations for revising land tenure regulations in the Netherlands has led to greater social organization of farmers' organizations for reestablishing land tenure rights. However, this might lead to a repeat of history. As described in the historic introduction, through social organization of tenant farmers, a land tenure law was implemented in 1937 and a land tenure agreement in 1941 (Swinnen, 2002). Yet this land tenure law and agreement was not aligned with the agricultural land market, and this resulted in landowners preferring to sell a farm not in use instead of a leased farm. An integral approach was missing. Regulating the land sale market parallel with revision of land tenure regulations may ensure that with improving land tenure rights, offering long-term lease contracts is more attractive than speculating with agricultural land.

The latter is crucial to ensure sufficient agricultural land is available for land tenure. This allows farmers to invest their financial capital in other things than in land ownership. This is especially necessary since first-generation agroecological farmers start without or limited financial capital and prefer not to loan or are not eligible for loans from banks. However, the results show that the ongoing revision of land tenure regulations and securing land tenure rights are discussed without considering what needs to happen with the agricultural land market. Thus, an integral perspective on land tenure and the agricultural land market is missing. The 6 integrated processes of decommodification provide a theoretical base to come to this integral perspective.

The link between a good pension for farmers and unrealistic prices for the takeover of agricultural land and holdings is made but can be worked out further in a political agenda on a good pension for farmers that is not based on land property titles. And, to date there is no well-articulated discourse on pro-poor land reform among both tenancy and commons group. In meetings with the public officer on revision of land tenure regulations it has been discussed the options for making land in the National land bank (*Nationale Grondbank*) available for first-generation, less capitalized agroecological farmers but as this wasn't the right institutional setting to discuss this matter there was no follow-up. Generally, the tenancy and commons group lack the capacity to work on these issues as most of this work is done voluntarily besides full-time work as farmers.

Noteworthy is that monetary devaluation (up to 85%) is already happening for agricultural land that is converted to nature area in the Netherlands. This monetary devaluation entails compensation for loss of income possibilities with the conversion of agricultural land to nature area. The instrumentation is there to put also in place for conversion of agricultural land to land used for food production following the agroecological principles. This means that the agroecological production capacity is aligned with the land's ecological carrying capacity and production needs to benefit soil health and biodiversity. No high yields need to be obtained to pay off the high land lease or purchase price at the costs of soil health, and biodiversity, and at costs of agroecological food prices that are affordable by low-income households.

The concept of situational justice might be useful in enabling institutions such as the Chamber of Agricultural Land to also evaluate land tenure prices of agricultural land below 1 hectare. Yet, the Chamber does not do so, which is at odds with general principles of good administration (such as the principle of equality), that obliges the government to treat all cases by the same standards. Furthermore, it could be relevant in the cases of tenant farmers who lose their land to extension of nature, extensification of livestock farming, housing, or infrastructure. Such concepts could ensure that tenant farmers will be treated equally to farmers that own most of their land. Further research can pay more attention to the social class difference of farmers with and without land and capital. In the group of farmers represented in the commons and tenancy group there were few dairy farmers. Therefore, only a few land issues specific to this sector have been addressed.

Conclusion

The work on communal land ownership and land tenancy arrangements by groups of farmers within *Toekomstboeren* is connected by a shared narrative on land decommodification directed toward agroecological farming, resilience, and relative autonomy from global financial markets. This narrative creates a space for agroecological transformation as it fosters the unveiling of principles for land tenure regulations, the showcasing and experimenting with sustainable land tenure contracts and commons constructions. In the past few years sustainable land tenure contracts have become a reality for farmers that have achieved a long-term contract. However, other agroecological farmers still lose (part of) their lands in use due to an increasing need for land for housing and infrastructure coupled with land speculation. In addition, there is an emerging interest in acquiring more land by dairy farmers who want to maintain the same size of livestock instead of

reducing the livestock herd to realize a lower number of livestock per hectare to achieve sustainability goals. Also, diverse commons land initiatives have emerged that advocate for different collective property arrangements.

The processes of improving land tenure rights and creating new commons arrangements both depend on land tenure policies. These policies influence the availability of both land for lease and for sale. Therefore, an integral vision of land policies is needed. The results show that some of the efforts toward improving land tenure rights are transformative in nature, while continuing to work on land tenure rights without an integral approach may end up being adaptive. Importantly, although the initial impetus and articulation of farmers was gaining rights and access to land, this study shows that, for the farmers involved, decommodification processes are not only about the continuity of farms but also about a social and spiritual dimension. Farmers' motivations are grounded in values of care and solidarity. This implies decommodification processes reach further than social contracts, reducing market dependence, and restoring human–nature relationships and are associated with an intergenerational, grounded worldview which challenges anthropocentric power and reverses outdated power relations among landowners and land tenants.

Data accessibility statement

The 6 steps of farmer-led research are depicted in **Figure 1**. Meeting minutes, excel with data retrieved from online form, and interview transcripts cannot be provided for reasons of confidentiality. **Table 1** shows the 6 integrated processes inherent to decommodification and used for coding.

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