

New Types of Land Ownership to Sustain Life on Land

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1. Introduction

Sustainable Life on Land, the fifteenth UN Sustainable Development Goal, calls for protecting, restoring and promoting sustainable use of terrestrial ecosystems, including agricultural subsystems. Related to agricultural production, Targets 3 and 5 of SDG 15 are particularly relevant. Target 5 regards “taking urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species” (Wood et al. 2018; Blicharska et al. 2019). The need for such action is as critical in Europe as it is in other regions with intensive farming and industrialized agriculture (Dudley and Alexander 2017). Besides the loss of biodiversity, the European agricultural sector faces severe challenges of farmland degradation (Panagos et al. 2018; Panagos et al. 2016; Panagos et al. 2019; EEA 2020). Therefore, in our inquiry into newly emerging organizations governing agricultural land resources, we consider their contribution also to Target 3 of SDG 15, “Combat land degradation, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world”.

Various kinds of agricultural farming practices, notably ecological or regenerative farming, but also no-till farming practices and integrated pest management, which emphasize soil protection and the growth of healthy crops with the least possible disruption to agroecosystems, share these target goals as well. However, as these practices come at costs to farmers, they are adopted less broadly than socially desired. Therefore, fighting land degradation and protecting biodiversity in connection with the agricultural use of land have, for a long time, been the subject matter of political debates and interventions (European Commission 2006, 2020). Agri-environmental schemes (AES) under the Common Agricultural Policy of the European Union are an example of such political efforts. Nevertheless, even this most widespread mechanism to encourage farmers with financial compensation to engage in more sustainable practices has been assessed rather critically. Hardy et al. (2020), for example, evaluated the effectiveness of these measures as rather weak as half of the schemes have not increased species richness. To increase their effectiveness, Fleury et al. (2015)

suggested that local collective actions and participative governance are required to complement and support the AES.

The notion of the benefits of a natural resource participatory governance is also supported by the commons literature that points to the particularity of natural resource management. For example, Basurto et al. (2013) referred to natural resource governance arrangements as being responsible for conservation behavior and success. More cooperative forms are thought to be more conducive to sustainable natural resource use. Further, in the area of land tenure, the institutional shift from private (individual) to collective property rights to land has long been asserted as a way of improving incentives to use land in a more societally desirable and sustainable way (Bromley and Hodge 1990). The wide range of land governance arrangements emerging across and within European regions provides evidence of the ongoing institutional shift that may reflect the diverging motives of alternative governance formations. The joint and community-supported land governance arrangements subject to this study could be expected to more likely follow motives such as resource conservation, sustainable management and restoration.

However, cooperative land governance has been discussed in the recent literature as only one potential mode of the ecological transition of land use. Other measures such as knowledge transfer, supporting new entry into farming and farm succession, access to land or changing symbols of farmers' identity have also been pointed to as potential facilitators to achieving the Life on Land SDG. Carlisle et al. (2019), for instance, identified stagnant farm succession and barriers for new entrant farmers who are more likely to adopt agroecological practices with more diversified cropping and livestock systems as barriers to be eliminated. To achieve this, they suggested pushing the role of ecologically skilled farmers and less farming intensity that would reduce the harmful use of non-renewable resources.

The positive role of new entrants into farming for achieving the Life on Land SDG has been highlighted in several other studies. For instance, Zagata and Sutherland (2015) found new entrants into farming to be more interested in and responsive to environmental issues. Correspondingly, they represent a disproportionate number of organic farmers, particularly in Western Europe, where they achieve greater environmental outcomes (*ibid.*). Another role of new entrants into farming was found in their potential to change symbols and the inherited farming identity (Sutherland and Calo 2020). Farm identity means that farmers want to demonstrate a certain role performance, such as weed-free fields. According to Sutherland and Calo (2020), this kind of inherited farming identity represents another barrier to achieving the Life on Land SDG, as it might hinder the ecological transition of farming. To get

rid of such barriers, symbols need to change, and according to Sutherland and Calo (2020), new entrance into farming might be the time to question these symbolic values. There are also several studies supporting that farmers' age relates to views on sustainability (Comer et al. 1999; Vanslebrouck et al. 2002). However, Zagata and Sutherland (2015) questioned the usefulness of concentrating on age (i.e., being young) as a factor of more sustainable farming, promoting the factor of new entry.

Nevertheless, to contribute to long-term sustainability goals, entrant farmers require support mechanisms in order to remain in farming. They need exchange platforms and political market support mechanisms as well as access to land, facilitated, for example, by the cooperative governance forms considered in this contribution (Sutherland and Calo 2020). The role of knowledge as a factor of the adoption and development of more ecological farming practices, particularly for entrant farmers, was assessed by Calo (2018). He pointed out that extension and educational programs for entrant farmers do often not answer to their needs. However, even well-trained and successful farmers with environmental ambitions, such as protecting biodiversity, face structural challenges such as access to land or securing product markets. Thus, to facilitate the ecological SDG 15, educational programs may need, beside mediating entrepreneurial knowledge, to include tools for dealing with the above-mentioned structural challenges. With relevant training, farmers promoting environmentally friendly practices could better enter farming and stay successful in business (Calo 2018).

Despite knowledge transfer, access to land and successful farm succession all being critical conditions for adaptive changes and an ecological transition of land use, without land tenure security, these changes are further unlikely to take place. For instance, Calo (2020) stressed the relation of land tenure distribution and the fight against biodiversity loss. He pointed out that the power to decide on land is inevitably intertwined with the capacity to adapt. This is why a core challenge of meeting the SDG on Sustainable Life on Land is the way land property rights and markets are structured. The socio-legal commitments to private property and the current interest in farmland as a financial asset suggest that a change to more sustainable land use practices will require land governance innovations. Therefore, to understand the progress towards and potentials of achieving SDG 15, it is important to study the emerging forms of land ownership.

In the following, we present unique developments of ownership to land in Germany. In Germany and other European regions, we particularly observe a growth in community- and civil society-supported (community-supported hereafter) organizations of farmland ownership that are mobilizing financial resources for

joint land acquisition and promoting delivery of the ecological targets. Some of the endeavors may appear in a way similar to crowdfunding initiatives (Behrendt et al. 2018) or impact investing (Höchstädter and Scheck 2015), where investees do not seek competitive returns on their investments, which, however, result in innovative land governance arrangements. These aim to control resource access, but even more normatively to define the use of land (Bahner et al. 2012; Bahner 2015). Their initiators and supporters often perceive land as commons (Fabjančič 2016; Bahner et al. 2012) and thus ultimately aim at withdrawing land from future market exchange. Their driving belief is that sustainable use of land cannot be achieved when ownership of land is private (individual) and is directly linked to profit- or production-maximizing endeavors (ibid.). Instead, ecologically and socially sustainable use of land is perceived to be best achieved within a “steward-ownership” model with clear criteria and social practices stipulated by a larger community (members or the public). Some community-supported land organizations form in tandem with joint farming communities and aim at environmentally sustainable communal living. Common to all is their self-initiated ecological and also often social value added.

Having described the general impediments to and possible factors of adaptive change and ecologic transition in line with the Sustainable Life on Land SDG, we identified the role and unique potential of the emerging community-supported land organizations, especially if they also adopt the above-described measures such as targeting new entrants into farming or facilitating knowledge generation and transfer. In this chapter, we inquire into the scope of the emergence and diversity of these organizations. In doing so, we respond to the following question: What are the governance interventions of key land commoning efforts in Germany? More specifically, we ask whether such forms of joint farmland ownership are driven by motives congruent with SDG 15 and form governance structures and rules of cooperation with farmers or farming communities that support their achievements.

Based on a German-wide scoping study, we will first introduce the diversity of legal forms of organizations that support such new forms of community-supported land ownership in Germany. This will provide a first perspective on the different legal requirements and opportunities to steer and restrict the property rights to (i) the use of land of the engaged farmers and (ii) the returns of the investees. It will help to assess the formal opportunities to secure ecological farming practices. Second, we will show the geographical dispersion of the partner farms in Germany. This will provide a first indication of the general role such new forms could play as a focal point for social innovation with an ecological impact (Moore et al. 2012; Westley and

McConnell 2010; Kunze 2015). Case studies of two forms of community-supported farmland ownership will exemplify the motives and governance structures for the ecological conditions as well as cost–benefit distribution among stakeholders making such structures possible. We will conclude with opportunities such organizational forms could bear for the fulfillment of SDG 15 and how they can be supported.

2. New Forms of Governing Land Ownership and Use

Community-supported organizations of land ownership can be found in various legal forms under the German business and corporate law. Due to the previously reported organizations' aim to mobilize societal support (Bahner et al. 2012; Rüter et al. 2013), we assumed their broad social outreach and thus active online presence that allowed us to base our scoping analysis on an online search. We created a German-wide sample that covers the wide spectrum of the legal forms and organizational constellations. The online search followed a deeper analysis of the organizations' available documents. Only those organizations were considered in which the providers of financial capital support ecological outcomes without expecting (a) full financial returns or (b) other forms of capitalizing on their investment.

To measure the actual impact on ecology (such as humus content or soil erosion data), a long-term dynamic study with ecological indicators would be needed. However, the static approach at hand allows offering a good indication about the opportunities to shift the agricultural production towards haltering biodiversity loss and sustain soils by certain conditions farmers need to agree on in exchange for receiving the option to lease land plots or to access land through partnerships with community-supported organizations that act as stewards.

2.1. Organizational Diversity and Outreach

There are six different legal organizational forms (excluding the group of “others”) of how community-supported organizations of farmland ownership appear in the current agricultural sector (Figure 1). Within the 56 organizations which we studied, we found 31 agricultural homesteads officially registered with a publicly beneficial pursuit under three legal forms. These are publicly beneficial limited liability companies (LLCs), registered associations and foundations. Checking for their outreach, these organizations are represented in rural areas with one homestead location. In contrast, as shown in Figure 2, the BioBoden Cooperative, for example, provides a network of 68 partner farms spread across the whole of Germany.

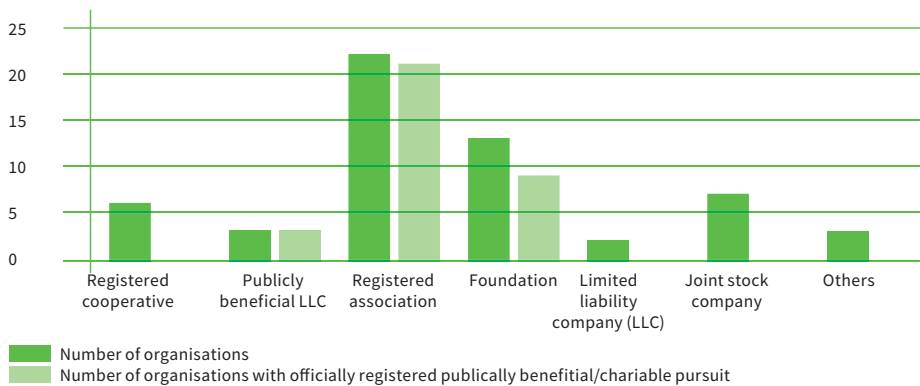


Figure 1. Legal forms of community-supported organizations of land ownership.
Source: Graphic by authors.

Depending on the legal form of the organization that constitutes the new community-based land ownership, the individual supporters (shareholders/members/investors) do not necessarily come from the rural areas where the actual farming takes place. People can invest in agricultural land funds, become a member of a soil cooperative, get financially engaged in an association or become a stockholder of a stock company without regional ties. Although we talk about new community-supported organizations of land ownership, the capital providers/supporters do not actually become land owners registered in the German land registry. Formally, the associations, foundations, corporations, partnerships or cooperatives own and manage the land on behalf of the investors and communities.

2.2. Partner Farms and the Ecological Target Delivery

The partner farms, who are supported by such new organizations of land ownership through long-term rental relationships and rental rates often below market rates, have to follow various ecological guidelines, ranging from broad aims of eco-farming to directly specifying production procedures. Thus, de facto the partner farms do deliver the ecological target. By target delivery, we refer to the tenants' contribution to Targets 3 and 5 of SDG 15, primarily to preserving biodiversity and to combating land degradation. The partner farms are mostly individual farms of various legal forms, but also farming communities or farm managing consumer cooperatives.

The spatial distribution of the partner farms exemplified for the registered cooperatives in Figure 2 shows their geographic outreach. The distribution shows a German-wide land governance model with an environmental orientation.

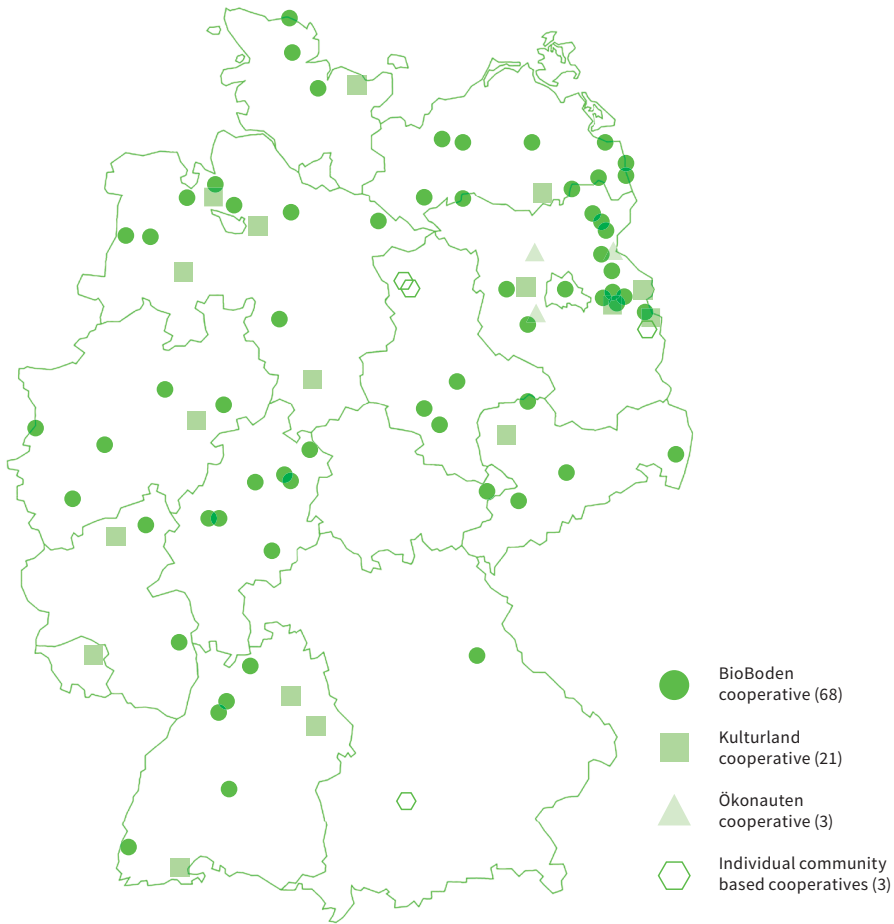


Figure 2. Geographic distribution of partner farms of land cooperatives. Source: graphic by authors created with ESRI Deutschland. **Note:** The individual community-based cooperatives are two consumer group-owned cooperatives, *Kartoffelkombinat* and *PlantAge*, and the ecovillage community cooperative *Sieben Linden*.

3. Case Studies of Community-Supported Land Ownership Delivering Ecological Targets

Two case studies will exemplify the new types of governing land ownership, which follow the principle of community-supported organizations of land ownership—*grund-stiftung am Schloß Tempelhof* (a foundation) and *Kulturland Cooperative*. Given the high diversity of organizations of community-supported land ownership as

presented in Section 2.1, these two organizations cannot represent typical cases. We, instead, followed a purposive case selection illustrating expansive influential organizational types. We assume these land governance forms will influence the community-supported land organizations' landscape in the future. The case studies are based on qualitative interviews with initiators and active representatives of the organizations as well as on in-depth qualitative research of the organizations' websites and available online documents, such as the statutes and annual reports, and a review of previous descriptive studies.

Both selected cases represent bottom-up self-help initiatives identifying collective land ownership as a means to achieving their ecological objectives. The first case depicts a development where parts of the civil society, based on their motivation to support a fair distribution and sustainable use and preservation of basic natural resources—including land—get engaged. The second responds to developments in the land market and down-stream market segments perceived as threats to more sustainable—organic and locally embedded—farming. The two case study organizations thus differ in their founding sparks. The first stems from a civil society movement forming a community, while the second one was initiated by farmers. Respectively, we will call them “community-initiated” and “farmer-based” organizations.

Another common aspect to both organizations that importantly shapes their mission is their perception of the resource land as an Allmende (Commons) that should not be governed under a private property regime (Netting 1976; Yussefi-Menzler 2015). Recent developments in the land markets denoted by growing competition and soaring land prices prioritized land acquisition in the organizations' development agenda and unveiled the need for innovative instruments to expand their models through broader societal support.

In the following, we present the two case study organizations and the different governance structures they set up to facilitate their partner farms or farming communities to combat land degradation and to sustain biodiversity as well as to gain societal support for land acquisition.

3.1. *Community-Initiated Case: Grund-Stiftung am Schloss Tempelhof (Foundation) and Community (Cooperative) Schloss Tempelhof*

The charitable foundation *grund-stiftung am Schloss Tempelhof* was established in 2010. Its headquarters is in Kreßberg, located in the Jagstregion, a rural area in Southern Germany, in the state of Baden-Württemberg. It was founded by a community of 20 people organized in a cooperative, *Schloss Tempelhof*, who jointly purchased land and property in the village of Tempelhof for 1.5 million euros in

December 2010.¹ Perceiving land as a commons, the cooperative placed the purchased 32 ha in the foundation *grund-stiftung am Schloss Tempelhof* with the aim to ensure its withdrawal from the land market, and thus to avert future ownership transfer and to promote its long-term sustainable use. The cooperative leased the land back on a long-term basis to retain the user rights. Its 12-member working group for agriculture produces organic food for the community and a contractually linked group of consumers and sells surplus in the local market. Since its establishment, *Schloss Tempelhof* as a cooperative and a self-organized (ecological) village has grown from 20 to 150 inhabitants. Agricultural activity represents nowadays around 30% of its total turnover (Jacobson and Urbain 2018).

The community considers the foundation *grund-stiftung am Schloss Tempelhof*, the owner of the land, as the “guardian” of its visions. It defines the use of land according to socio-ecological criteria promoting sustainability and other broader objectives: “The intention of the Foundation founders is to promote cultural sites, institutions/personalities that/who *protect, preserve and develop our natural foundations of life, our environment with all its creatures, maintain their health and health of the population, care for people and build up solidarity network structures, which enable and encourage a dignified coexistence of the people in self-determination and self-responsibility. A particular concern of the foundation is to promote the realization that land is not a commodity, but a gift from the earth*” (foundation’s statutes in the version dated 25 May 2015). The foundation fulfills specific ecological objectives of nature protection, including promotion of biodiversity, landscape management, plant breeding or research in areas of soil regeneration and increasing humus content (*grund-stiftung am Schloss Tempelhof* 2019).

To increase its outreach, the foundation opened up to communities that share these objectives and that want to secure agricultural land for permanent (long-term) use in congruence with the foundation’s mission. The foundation offers communities the opportunity to lodge their land in their own foundation fund under the umbrella of the *grund-stiftung am Schloss Tempelhof*. The foundation currently accommodates three funds:

- *Gemeinschaft Schloss Tempelhof eG* (since 2010).

¹ In view of the German Land Transaction Act, farmers enjoy preemption rights in land sale transactions, while non-agricultural market actors are permitted to acquire land only if no farmer is interested in the land purchase at equal conditions (further more specific regulations apply). The Schloß Tempelhof community was considered an eligible buyer in view of the Real Property Transactions Act, since farming the land was one of the main intended long-term economic activities of the cooperative.

- *Gemeinschaft Sulzbrunn eG* (since 2015).
- *ZukunftsWerk Fliegerhorst Crailsheim* (without agricultural land cultivation) (since 2020).

These communities (cooperatives) transfer their land ownership to the foundation and likewise lease the property back. The lease relationships are regulated by a long-term lease contract for 99 years obliging the communities to use the land in accordance with the foundation's statutes. The communities pay annual rent (*Erbpacht*) that is allocated to their fund within the foundation and that represents financial resources to be used for various charitable projects carried out by the respective communities. The projects relate, for example, to community development, permaculture and soil regeneration, safeguarding biodiversity, sustainable (living space) construction or youth development.

In 2015, the foundation extended its mission and placed a greater emphasis on fundraising for the purchase of land (*Freikauf* of land) (Nelle and Aehnelt 2019). The fundraising activities allow the broader public (society) to support activities and projects of the communities already linked to the foundation as well as the development of other communities with congruent objectives and visions. The introduction of the new objective and the active fundraising tool marks a change in the foundation to an expansive model, in which property is used as a special purpose asset (Nelle and Aehnelt 2019). The foundation's ultimate goal is not to acquire the real estate/land for its own use but to influence the use of the property in the direction of the foundation's mission defined in its statutes. In 2018, the foundation owned ca. 42 hectares of agricultural land and its land value totaled EUR 1,060,000.

The foundation-based land governance structure is schematically illustrated in Figure 3. It demonstrates the above-described interplay between the foundation as the charitable land owner and the cooperatives representing the land tenants. In addition, it illustrates that the governance design allows for mobilizing financial resources from society and the surrounding communities. The SDG 15 Targets 3 and 5 (provision of biodiversity and land stewardship) are thus facilitated by (i) the conditions set in the land rental contracts, as well as (ii) through the societal and community support systems (dark gray blocks). Additionally, community projects related to improving soil conditions and biodiversity are facilitated through the land lease relationship as the foundation returns the majority of the collected land rents to the communities via projects in accordance with the foundation's mission.

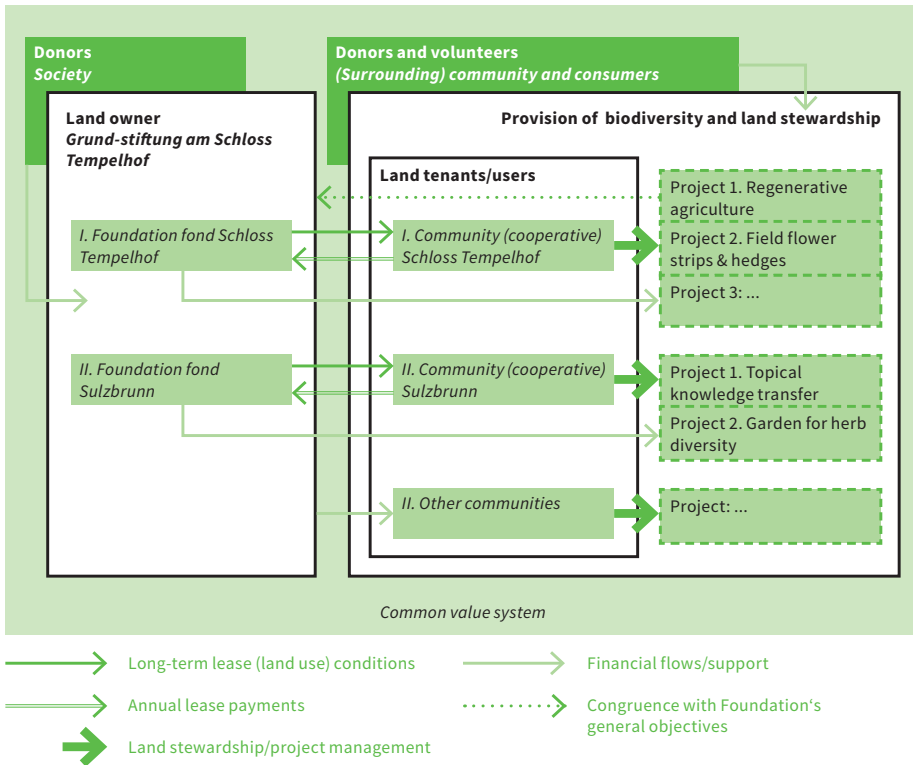


Figure 3. Land governance structure of the *grund-stiftung am Schloss Tempelhof*.

Note: As of 15 September 2020. Source: Graphic by authors.

Of the total expenditures of EUR 98,000 in 2018, the foundation allocated 48% to projects related to nature protection, permaculture and soil regeneration (regenerative agriculture) (grund-stiftung am Schloss Tempelhof 2019).

3.2. Farmer-Based Case—Kulturland Cooperative

Kulturland Cooperative represents a land cooperative open to members of the public interested in supporting collective ownership of land (land commons) and its environmentally and socially accountable governance. The Cooperative purchases arable land, meadows, pastures, hedges and biotopes and makes the land available to regionally integrated organic farms that produce and regionally market food, as well as offering various social or educational services to the outside community.

It was founded in 2013 by a group of experts—researchers and farm consultants—in response to several impulses: (i) they identified then-observed trends in farmland

markets and farm structure development as threatening small-scale organic farming and the sustainability of rural communities, (ii) they observed formations of new organizations of land ownership in Germany and elsewhere and (iii) they were ultimately and most importantly incentivized to action by a concrete case of a farm in need of a prompt response to a sales intent of the leased-land owner. Seeing the last instance as a reoccurring problem of many smaller farms, the founders aimed at establishing a platform that would allow organic and socially accountable farms to secure or extend the farmland in their use as their economic basis and a grounds for social and potentially other public/community-benefitting activities.

Although located in Hitzacker in Lower Saxony, the Cooperative has a broad geographic focus; it supports farms across Germany (see Figure 2). Its agenda is not to acquire land available on the market, but to respond to applications of organic farmers with a concrete land purchase issue. The expansion of the Cooperative is therefore dependent and driven by farmers' interest. As of autumn 2020, *Kulturland* purchased land in support of 22 farms (partner farms hereafter).

The Cooperative was initially soliciting financial support of land purchases mainly from the surrounding community of farms for which the farmland was purchased. Its approach has thus been particularly compliant with consumer-supported farms that are principally characterized by a strong link to and support from the consumer community but have no platform for governing land ownership or its share. As a result, 50% of *Kulturland's* partner farms are set up as community-supported agriculture (Carlson and Bitsch 2019). In recent years, *Kulturland* expanded its member recruitment to the broader public by designing online crowdfunding campaigns. The crowdfunding tool attracts financial supporters from areas beyond the farms' surrounding communities.

The financial supporters who, through the *Kulturland* model, become land cooperative members are not-for-profit impact investors whose interests lie in contributing to the long-term security of farmland for locally embedded organic production. Although having the option to choose from concrete crowdfunding campaigns, they become cooperative members without any linkage to a specific farm. With a membership share price of EUR 500, the membership is attainable for small investors from the general public. This geographically non-restricted fundraising and low membership share price concept allow for flexible fund acquisition and cooperative expansion. As of July 2021, *Kulturland Cooperative* has 947 members and owns 270 hectares of agricultural land.

Kulturland Cooperative represents in its structure an intermediary between the farms and society. Its role is to bring together the interested parties and carry out necessary transactions related, among others, to farmland purchase, its funding, land

use governance and member support. The Cooperative acts as a financier and a guardian organization, ensuring that the partner farms produce ecologically and are regionally integrated. The conditions on partner farms are specified by a land lease contract and include: maintaining organic farming according to EU standards; care/cultivation of nature conservation on at least 10% of the land area; and annual implementation of at least two out of six possible activities for regional integration (open farm, regional product sale, educational work, preservation of biodiversity, cultural events, work with supervised/handicap persons) (Kulturland Genossenschaft 2017). In particular, conditioning land lease to organic farming, maintenance of nature conservation areas and preservation of biodiversity contribute to Targets 3 and 5 of SDG 15.

Due to its main focus on the intermediary function in land acquisition and lease transactions, *Kulturland Cooperative* has the potential to offer a simple and secure long-term land governance structure. The potential simplicity of the land governance is, however, not provided for due to the legal framework of farmland sale transactions in Germany, in which a possible solution for a non-farming community to acquire land is through involving farmers in land purchases. For this reason, *Kulturland Cooperative* establishes limited partnership with each farmer to purchase land. The farmers are the executive party in these legal entities and the *Kulturland Cooperative* is the limited partner providing capital for the land purchase. This is illustrated in Figure 4.

The contract of special limited partnerships between *Kulturland Cooperative* as the financier and the farmers as the complementary parties does not purely represent a formal solution to the state land sale regulations. By consensus, the partnerships set the rules of cooperation between the two parties; the land rental contracts are, however, concluded between the special limited partnership firms and the farms separately. As the general partners of the Special limited partnership, the landlords (farmers) are in fact their own lessors. As long as the farm complies with the above-listed conditions of the rental contract, it can dispose of the land indefinitely (Kulturland Genossenschaft 2017).

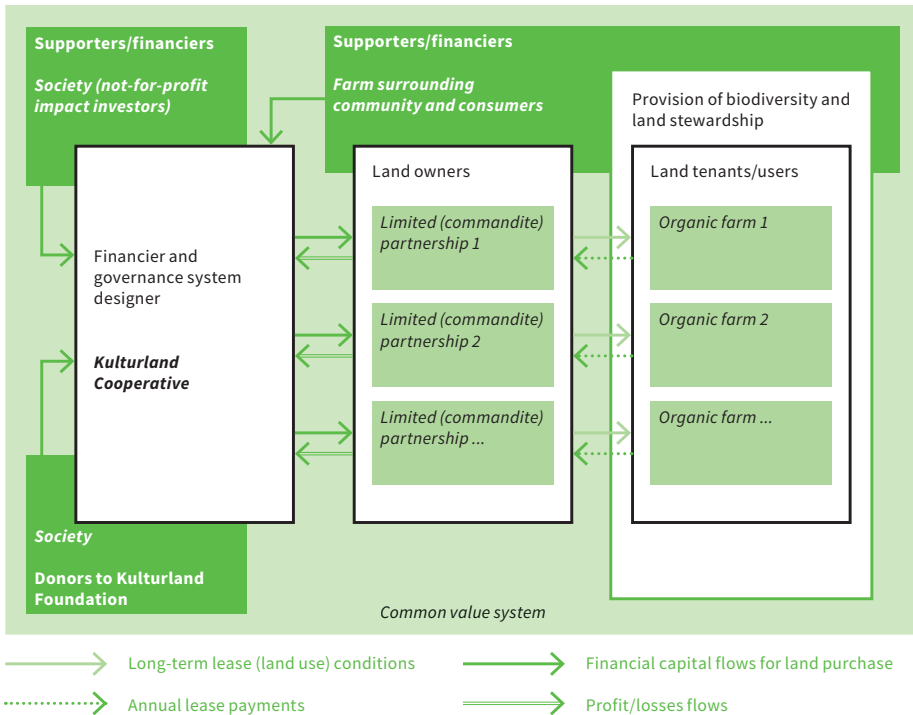


Figure 4. Land governance structure of *Kulturland Cooperative*. Source: Graphic by authors.

3.3. Comparison of Governing Ecological Targets

We will compare and analyze the presented cases in two respects. First, we focus on the different governance mechanisms ensuring ecological target delivery. These selected enforcing criteria draw on Basurto et al. (2013), who state that different incentives for conservation are responsible for different governance arrangements of natural resource management with regard to their conduciveness to environmental conservation. As a second criteria to compare the selected organizational forms, we use the mechanism of how supporters get involved and rewarded, as a means for long-term satisfaction with the organization that contributes to its durability.

3.3.1. Regulating Target Delivery—Rental Contract and Foundation Statutes

Kulturland Cooperative, although initiated by a farmer, was set up by a few initiators from the expert/advisor community who designed the land cooperative. The separation between land users and the governance designer (the cooperative),

who is the collective owner and steward of the land with a majority of non-farming members, distinguishes this governance model. Its main objective is to secure land for organic farmers across Germany. Other studies have shown that organic farming has been the engine of the sustainable development process, counteracting depopulation and providing a viable economic alternative for rural areas (Zezza et al. 2017). Another objective of the Cooperative is to govern additional environmental and social target delivery. The Cooperative formulates its respective objectives in the statutes; the conditions on land use ensuring the objectives' enforceability are, however, defined more specifically in each individual rental contract, with the farmers managing, individually or in partnership, the leased land. The clarity and enforceability of the rules are important preconditions for the legitimacy and transparency of the organization—necessary conditions for receiving public support and for attracting new supporters. It is the lease contract conditions that regulate the direct target delivery here.

The foundation *grund-stiftung am Schloß Tempelhof* was initiated by the land owner/user community and thus directly reflects the (farming) community's values and objectives. The community of individuals jointly managing the land evolved around one farm and village that greatly contrasts with the mostly individually managed partner farms of *Kulturland Cooperative* spatially distributed across Germany. Due to the uniformity of the land user, the core land financier and the governance designer, there is no issue of legitimacy and the rules of land use and thus ecological target delivery are specified more generally. This is despite the formal separation of land use and ownership as the land was transferred to the foundation. Specific to this land use governance is then the limited option to change the foundation statutes.

Both models contribute to the ecological target delivery also indirectly since they target specific groups of farmers or deliver additional services discussed as important factors of ecological transition in Section 1. *Kulturland Cooperative*, besides securing land of existing organic farms, also facilitates access to land for start-up farms, thus broadening the area on which land and natural resources are used more sustainably than without the collective land acquisition and the related land use conditions. The new entrants' role for the adaptive ecological processes was demonstrated in the previous literature (see Section 1). *Kulturland Cooperative* further provides for long-term tenure security that reduces farmers' risk of loss of investment in environmental practices including soil regeneration. The Cooperative also facilitates crowdfunding for farms' investment projects, designs models for farm succession and offers related extension and seminars to farmers, thus filling in the gap in information

transfer and addresses the structural barriers to advancing towards environmental sustainability targets.

The *Schloß Tempelhof* community partnering with *grund-stiftung am Schloß Tempelhof* is also engaged in knowledge generation and transfer. It is active in research of agro-environmental practices, particularly regenerative agriculture, develops information and training material and provides educational seminars.

The selected case studies illustrate that the analyzed land organizations and partnering communities follow the sustainability objectives for agriculture and, for that, combine various means of achieving these targets. They link the land governance arrangements with additional measures to grow to their environmental ambitions.

3.3.2. Acquiring Funding—Investments with Waiving Economic Returns and Donations

The ability to fundraise is an important determinant of organizational sustainability and its long-term success in environmental target delivery. The form and the size of the target delivery support is strongly related to the motivation of supporters and to the origin of the land acquisition funding. The different structures of land financiers thus considerably distinguish the two case studies.

Withholding the land from the farmland market, the aim of *Kulturland Cooperative*, prevents future land value increases, sustaining land rents at a predictable and low level for farmers. The foregone economic returns to capital providers (members) are expected to be compensated by the target delivery by the partner farms. The collected rents are used only for the Cooperative's running cost. Supporters—here members of the Cooperative—participate financially without any expectations on economic returns. The partner farms thus share the costs of target delivery with the Cooperative. This system holds as long as the majority of the members remain with the cooperatives. After five years of membership, the members have the right to withdraw their capital. Should numerous members decide to exit, the Cooperative may be forced to sell some plots and free the land from the conditional use. There are, however, the land tenants who have, based on the rental contract, the right of first refusal of the purchase of the land for the original purchase price, if it were to be sold. Assuming shared values between the cooperative and the partner farms, the continuity of the sustainable use of resources may be secured even then. An interesting development in that respect is the initiative from *Kulturland Cooperative* to form a foundation for members wanting to donate their shares and thus to prevent potential future sale of the farmland.

The foundation *grund-stiftung am Schloß Tempelhof* did not originally have the role of acquiring land. The land was transferred from the farming community that

purchased it. The community that acquired and operates the land was the full carrier of the target delivery costs. It formed the foundation to guard the irreversibility of its mission and to generate through rental payments additional funds that would be used only in accordance with the community's objectives. The willingness to absorb the cost of sustainable use of resources and of the delivery of broader societal objectives legitimized the community to donations from society. With the first donations to the foundation, the communities farming the foundation's land started sharing the costs of the target delivery with the donating society.

4. Discussion and Conclusions

Our German-wide scoping study of community- and society-supported organizations of land ownership delivered insights on the large diversity of land ownership arrangements for environmental target delivery—reaching from collective ownership within corporations, partnerships and cooperatives to associations and foundations. These are found linked to unique and innovative forms of sustainable land use governance within partnership arrangements with farms, as shown in the closer investigation using two case studies.

The two examples of the new land governing organizations have shown very distinct possibilities of how to contribute to the transition towards sustainability with the help of community and societal support. Both organizations adopt the right of defining conditions of land use in exchange for long-term tenure and below market price rental conditions for farmers. It is thus the partner farms to these organizations who ultimately preserve biodiversity and combat land degradation, consequently supporting SDG 15.

The relative importance of such new governance forms cannot be expressed in the absolute numbers of partner farms, or the share of cultivated agricultural land, but by their mere existence and their survival that matter for social innovation to start off (Westley and McConnell 2010). Thus, an important criterion of the collective land organizations' success, from the perspective of SDG 15, is the long-term security of their target delivery. This regards the stability of sustainability objectives, a stable and growing supporter base (fundraising) and partnering farmers' viability.

The selected case studies illustrate that the analyzed land organizations and partnering communities follow long-term sustainability objectives for agriculture and, for that, combine various means of achieving these targets. They link the land governance arrangements with additional measures to grow to their environmental ambitions—by supporting farms' viability and succession or through knowledge facilitating the adoption of sustainable practices.

However, we find significant differences in the way the organizations secure their funds and their long-term objectives. While the funds/assets and goals of a foundation are permanently anchored by the law, in the case of a cooperative, they are subject to the amendable statutes. It could be well believed that individuals, who engage with the cooperatives described above, are willing to financially participate without profit, sharing the same long-term objectives as members of a foundation. Nevertheless, the legal form of a registered cooperative principally allows changes under conditions set in the statutes. *Kulturland Cooperative* thus restricts through these conditions the statutes' changeability, as well as lowering the incentives to change the collective land use objectives, potential sale of plots and the right to withdraw membership shares in the early years of membership. Despite the risks of members' mobility, the societal trends suggest sufficient interest in replacing potentially dropping out members in support of a positive sustainability impact.

Achieving stability of conservation objectives requires durable organizations that also need to support social sustainability. Thus, we would like to point out the potential social implications of the new organizations for rural communities and thereby motivate future research. To achieve sustainability goals, the environmental target delivery should not come at a cost to rural communities but rather be aligned with social sustainability targets. The conditions on farmers' partnerships with *Kulturland Cooperative* include items in support of a "regionally integrated organic agriculture". The partner farms thus have to implement annually at least two out of six possible activities for regional integration. These can include open farm days, product sale on farm, educational work, cultural events or work with people in care. These activities are oriented outward toward the local or regional community. Such activities could have an integrative influence on the surrounding community members and groups and thus facilitate local social cohesion as well as increasing trust and solidarity between the farmers and the rural community. The latter may be particularly important in case of new entrants into farming. However, it remains a question whether these semi-occasionally performed activities are sufficient to have such social implications.

A relevant aspect for some of the described farming communities with implications for the original rural community is that they were established by newcomers to the regions. By that, they may be expected to have strongly contributed to the economic value of the acquired local assets as well as the local community's vibrancy. However, getting (mainly urban) people without an agricultural connection involved in the management of land may suffer from the risk of rural gentrification. Studies by Sutherland (2012) and Mamonova and Sutherland (2015) showed that

the degree and risks of gentrification depend on who the new acquirers of land are and to which degree they displace native inhabitants in the process of the local establishment. However, to understand these complex social processes and their implications for original rural societies calls for more in-depth research.

According to Target 15 of SDG 15, financial resources should be mobilized and significantly increased from all sources to conserve and sustainably use biodiversity and ecosystems. Thus, if more studies could show that such new community-supported forms of land ownership can implement SDG 15 and that the elaborated governance forms ensure durability, the initiatives would, in line with SDG Target 15, additionally qualify for some form of state support.

Besides financial state support, legal state support in terms of reducing administrative barriers of agricultural land acquisitions for the new governance types of joint land ownership is also an issue. For instance, in order to conform with the Real Property Transactions Act (Hoffmeister 2018)—the most relevant legal ordinance as regards agricultural land transfer in Germany to non-farmers—*Kulturland Cooperative* forms limited partnerships to function as the owner of the land. This results in administrative and other transaction costs for the Cooperative and, at the point of establishment, also the farmer—funds that are, in the case of a foundation, used towards various charitable projects including initiatives supporting SDG 15. As there is no equal treatment of the diverse legal forms allowing community-supported acquisition of farmland, it leads to the distortion of competition among institutional innovations. The possible legal framework amendments restricting access to land to non-agricultural investors and, at the same time, allowing community-supported land purchases are subject to current political federal state-level debates (see, e.g., Rüter 2020; Balmann 2020).

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