

Chapter 18

Institutional Analysis of Land Tenure System in Post-socialist Russia: Actors, Rules and Land Use



O. P. Fadeeva and I. S. Soliev

Abstract Governing land tenure and particularly ownership rights to land in post-socialist Russia is a long-term process that involves changes in norms, rules and administrative procedures. We analyse the land privatization reform in the context of evolving institutional limitations caused by the discontinuity and inconsistency of reform: domination of common (shared and joint) ownership, complications related to registering titles and lease agreements, and weakening of the state's role in controlling sustainability of land use. The agricultural districts of the Kulunda region of Altai Krai serve as a case study to show that, because of the development of informal local practices, the institutionalization of land relations is increasing as the investment appeal of the agricultural sector grows. Materials from in-depth interviews, participant observation, informal conversations and interactions, stakeholder workshops and statistical reports, are used to analyse existing practices in the interaction of the key actors in processes that are shaping up the current land tenure system. We discuss implications of the identified inconsistencies for long-term stability of the land tenure system and sustainability of land use. We will show that insecure formal land rights and the partly not functioning governance system pose high risks for innovation in agriculture. We observe that informal practices emerge to fill the flaws in the formal institutional arrangements, thereby increasing the relative stability of the resulting land use model. However, the overall prevalence of informal practices hinders the ability of actors to make long-term plans based on reliable expectations, raising equitability concerns and undermining efforts to shift to new technologies.

Keywords Privatization · Land reform · Ownership rights · Land tenure · Land use practices · Informal institutions · Kulunda region · Altai Krai

O. P. Fadeeva (✉)

Institute of Economics and Industrial Engineering, Siberian Branch of the Russian Academy of Sciences, 17 Avenue of Academic Lavrenitiev, 630090 Novosibirsk, Russian Federation
e-mail: Fadeeva_ol@mail.ru

Novosibirsk State University, 1 Pirogova street, 630090 Novosibirsk, Russian Federation

I. S. Soliev

Department of Agricultural, Environmental and Food Policy, Martin-Luther-Universität Halle-Wittenberg, 06099 Halle (Saale), Germany

© Springer Nature Switzerland AG 2020

M. Frühauf et al. (eds.), *KULUNDA: Climate Smart Agriculture*, Innovations in Landscape Research, https://doi.org/10.1007/978-3-030-15927-6_18

259

18.1 Introduction

Russian land reform, with its first and most radical steps taken in the early 1990s, represents an attempt of transition to a new model of institutional regulation of land tenure system in agriculture (Buzdalov 2012; Uzun 2008). The reform aimed at bringing about a complete replacement of collective and state farms with a multitude of private farms and independent peasant landholders (Kalugina 2016). The privatization of farmlands and their redistribution based on needs and capacities were at the core of the reform. At the same time, the reform required that certain institutional adjustments be made, at least: to establish a new regulatory framework for privatization and trade of farmland; to regulate processes and records in relation to accounting, monitoring and control of land use; to develop standards and measures to ensure environmental sustainability of land use, as well as more fundamental norms for development and implementation of land use projects (Barsukova and Zvyagintsev 2015; Uzun and Shagayda 2015).

According to new economic institutional theory, clear and secure tenure system plays a major role in sustainable and equitable allocation and use of key resources such as land (Demsetz 1967; Barzel 1989; Feder and Noronha 1987). The establishment and protection of property rights, which define ownership and access to land, help cope with market fluctuations and shocks, as well as create conditions for increased investment activity and adoption of new technologies (such as those described in Chap. 16, for example, no-till systems to prevent soil erosion). These processes, in turn, are expected to contribute to the improvement of the quality of land use in the long run (Ault and Rutman 1979; Featherstone and Barry 1993).

At the same time, new institutional theory puts a strong emphasis on the necessity of taking a holistic approach in analysing and implementing policy interventions. Increasingly influential scholarship on institutions, transaction costs and larger-scale societal transformations (e.g. Ostrom 1986; North 1990; Williamson 1998; Meadows 1999) stresses that, particularly in cases of reforms with multitude of actors and priorities, changes are often needed on more than any single institutional level to bring about the targeted outcomes; and while the land reform discussed here represents a formal institutional change, it is often existing institutional arrangements that are formed over decades to centuries and millennia (e.g. norms, beliefs, perceptions, see also, next Chap. 19 on importance of institutional compatibility) and accompanying informal institutional practices (e.g. rules not defined in formal documents such as oral agreements), which reinforce or resist the change, determine the success of the reform. This is also in line with path dependency theory that views a change as an outcome of clash between drivers pushing towards a change and sources of path dependency resisting a change (for a summary of theoretical debate see Soliev et al. 2017).

The post-Soviet land reform in the Russian Federation, due to its discontinuity and inconsistency, provides an opportunity to analyse why formal institutions did not function efficiently or help to achieve the main goal of the introduced regulation—the creation of secure land tenure system and support for stable land markets. The

liberalization of markets, if not reinforced by the appropriate formal and informal institutions, can lead to outcomes contrary to desired expectations. One risk associated with market liberalization is that a price mechanism that balances demand and supply in a market may destabilize the positions of producers (in our case previous state employees) during the transition. From a broader sustainability perspective, with the lack of knowledge, skills, technologies and initial capital, which would allow a competitive participation in a more open market, local producers might have to lower prices, which jeopardizes their financial stability potentially leading to collapse of the internal market (Fligstein 2001; North 1990). From an equitability perspective, in a transition where knowledge and skills of a vast majority of population suddenly becomes largely irrelevant in light of privatization, market liberalization might as well create an environment leading to a concentration of wealth in the hands of few individuals who might take advantage of those more vulnerable (Theesfeld 2018). This goes as well for markets for localized resources, primarily land and labour. In this instance, however, it is reasonable to expect high costs for skilled labour due to lack of sufficient supply, which produces the same results as in the commodity markets—a rise in (agricultural) producers' costs and a decline in profit. In the meantime, discontinuity and inconsistency in formal institutions (e.g. new official regulation) might increase transaction costs (e.g. administrative costs of implementation of a new reform that does not clearly define roles and responsibilities) further jeopardizing the establishment of a secure land tenure system.

In the remainder of this chapter, we concentrate on disentangling the formal and informal elements of the complex land reform in post-socialist Russia and the implications from their interaction. First, we describe the materials and methods applied in the research and establish key developments at the outset of land privatization processes relevant to our study. Then, we discuss the curious case of collective land ownership formed as a result of reform and particular limitations associated with the current land tenure system such as procedures undertaken to allocate and register ownership rights. It is followed by a discussion of findings documenting the emergence of informal practices accompanying the reform, their implications for establishing a secure land tenure system, equitability among actors participating in the emerging land market, and sustainability of land use.

18.2 Research Materials and Methods

Institutional arrangements affecting the land reform in Mamontovskiy district, one of the agricultural districts of Altai Krai in Russia, as well as the combined effect from these arrangements on the implementation of the land reform and on introducing technological innovation in the agricultural sector, were investigated as a case study. Specific attention was paid to causes leading to the emergence of informal practices, and their effects on the overall land tenure system. Data collection included archival research to identify official government documents introducing land reforms, participant observation during the research period from 2013 to 2016, a number of

informal conversations and interactions, semi-structured interviews with key informants on specific topics, and a number of workshops with the participation of local stakeholders within the framework of the Kulunda project. Further, official statistics for Mamontovskiy district on agricultural activities of employees of the agricultural enterprises and farms within the territory of the district, as well as broader statistics for Altai Krai on land tenure were used to verify some of the findings from the field research. The semi-structured interviews were conducted with a total of 24 decision-makers, which included heads of district and federal authorities ($n = 3$), heads of agricultural enterprises ($n = 3$), heads of farms ($n = 15$) and heads of local municipalities ($n = 3$). Further data were obtained from seven interviews with farmers from four other districts of Altai Krai to understand broader validity of the findings within the same administrative division of Russia. Application of a variety of research methods allowed for triangulation to ensure that complexities of the local reality were correctly understood.

18.3 The Post-Soviet Land Reform of Russia in the 1990s

During the reform, state farmlands were divided into four groups. First, about 60% of lands of former collective and state farms were transferred to a common (joint or shared, discussed in the next section) ownership of their current and former employees, and to those employed in the social sector; while occasionally some of these lands were transferred directly to individuals without having to share with others (National Report 2015). Second, some lands of former collective and state farms were transferred to the so-called district redistribution funds to be managed by district administrations who became responsible for their further transfer. Third, rural (village) administrations received a certain share of lands of the former collective and state farms for development purposes not directly related to agriculture. Fourth, some of the lands remained the property of the state at the federal level.

The lands transferred to individuals included croplands, pasture lands, and hay fields. They were distributed according to norms that were defined by decision of the heads of district administrations. The size of the land share for each new owner was calculated based on two indicators—the total areas of farmland to be transferred to common ownership and the total number of applicants for those lands. A district norm in hectares of average-quality land was therefore determined. Differences in soil fertility were factored into even out variation in the quality of croplands to be privatized. The shares allocated as part of the common property were measured not in hectares, but in point/hectares, with the idea to allow for a fairer evaluation of the land parcels' quality. Land belonging to private citizens could be used to expand private household farm plots or establish private farms. It could be sold, given away, exchanged, or inherited. Land ownership was not tied to the requirement to personally use the land. Shareowners could lease their land to an enterprise or to local farmers.

The farmlands that left after the land was transferred to the employees of agricultural organizations and equivalent groups of rural residents were consolidated into

district redistribution funds. The lands in these funds were leased to existing business entities. These funds were formed under the responsibility of district administration heads. Interview information indicated that according to a tacit understanding, the least valuable lands were transferred to the fund. In the early days, up to 10% of the farmlands of former collective and state farms were concentrated in funds, and early in the reform, they could be used by their former users without a lease until legal claimants for these lands showed up. Later, lands confiscated with court order due to legal violations or of out-of-business farmers were added to the fund, if they had the right to use the land for life (or if the right was inheritable). Lands with unidentified owners were also included in these funds.

Land under the management of rural administrations was intended for the development of settlements and for individual housing construction. Some of the lands became the property of owners of private farmsteads within the boundaries of the parcels they were actually using. In addition, lands were set aside for the needs of orchard and gardening associations, summer cottage construction, and the development of animal husbandry according to norms established by administrative divisions of the Russian Federation.

Finally, non-farm lands used for infrastructure, roads and other facilities within the boundaries of former collective and state farms remained state property on the federal level. They were transferred for perpetual use to the enterprises that were the successors to the former collective and state farms (business partnerships, associations, production cooperatives).

18.4 The Curious Case of Collective Land Ownership

An important feature of land reform was the collective nature of the allocated property rights to land. Instead of individual parcels with clear boundaries, rural residents received the right to land within the limits of common—either joint or shared—property. In the first case, the title to the land (land parcel) was indivisible. In the second case, each participant received the right to a land share, whereby any individual shareholder could enter into transactions (lease, sell or divide into individual parcels) provided that the other shareholders agreed with the intentions of this individual shareholder. Operationally, the process of privatization comprised several steps. First, a list of applicants for common tenure had to be approved at a meeting. Second, the head of district administration had to accept the request of the applicants on transferring the state land to their ownership (whether joint or shared). Each applicant could apply for an individual parcel before the parcel was transferred to common ownership. This required the filing of a separate application to the head of the administration. Farm enterprise employees could also submit a request for individual parcels. They could increase the sizes of their holdings by combining their land shares with the shares of their relatives and friends.

The collective nature of land ownership assumes a consensus among and the obligatory participation of each of the right holders in the registration of the title.

Not all shareholders were able to conform to established rules, which increased the transaction costs in the creation of the new tenure system. This approach to privatization was an impediment to the intended rapid redistribution of land. In 1996, a moratorium on the sale of farmland was introduced, which led to the development of a market for leasing land shares. In 2002, this moratorium was lifted. Early in the reform, it was assumed that land (as well as other state property associated with agricultural land) would be privatized in several phases. In the first phase, the former collective and state farms were appointed as intermediaries in the transfer of land titles to individuals. The land and the private titles were transferred to the operational management of the heads of entities that were supposed to facilitate the next phase of privatization. However, this process largely lacked transparency, and there were no mechanisms for overseeing the procedures of transfer, which in many cases prevented potential shareholders from registering their rightful claims. As Fadeeva (2013) and Shagayda (2013) document, a significant proportion of them did not come into possession of their rights, partly because their land was registered as the authorized capital of private companies (joints stock or other form) and was later seized or sold to third parties as a result of bankruptcy or resale of those enterprises.

18.5 Procedures for Allocating Land Parcels

During the early waves of reform in 1992–1993, the privatization of land administered by a separate enterprise led to the appearance of indivisible vast parcels that included tens and hundreds of individual fields, hay lands, and pastures. The total area of a parcel could reach thousands of hectares, and it could have hundreds of owners, who were supposed to meet to discuss all the issues related to land use and reach unanimous decisions. This made management of the common land very difficult and hindered the attempts to carve out individual smaller parcels from it, including for establishing smaller private farms. Procedures for sharing common ownership were therefore developed further. The new procedures introduced in 1994 (see also Chap. 17 by Ponkina et al.) enabled a shareholder or a group of shareholders to set aside parcels within their shares for private farms or for leasing, sale, or contribution to authorized capital. On the level of Russian regions, restrictions against over-fragmentation of lands were introduced. The federal-level administrative divisions of the Russian Federation were given the right to set dates for the beginning and ending of farmland privatization, and to develop regional land allocation rules, set the lengths of land leases, etc. The legislative bodies of Russian regions set their own standards for the minimum size of parcels that could be formed (surveyed) towards consolidated land shares. This decision reflected the regional authorities' preference regarding the size of business entities engaging in farm production in their area. The enlargement of land parcels gave the advantage to medium and large land users.

The physical allocation of new land parcels for farming took place after shareholders' collectives formed. Those who organized themselves in collectives were primarily shareholders who agreed to lease their lands to private or other farms.

Potential land users (tenants) took the minutes of shareholder (owners) meetings to land authorities, requesting the allocation of parcels from the land on which the Soviet farm organizations located there once worked. The allocation of parcels for newly formed private farms was not always accompanied by the provision of public land planning services or even with works to identify boundaries. This prompted the growth in cases of land grabbing and other violations of the law (Shagayda 2013).

18.6 Problems Registering Land Titles

Registration of land titles began only five years after privatization was launched. In 1998, Russia established a unified electronic public register of real-estate titles and transactions. The register keeps record of changes in relation to property rights and includes acts of registration of the property rights to land, lease agreements, purchase-sale transactions, and inheritance acts. Rights are registered only when parcels are registered in the cadastre, which assumes the existence of surveys of specific parcels, including those newly formed from land shares. The cadastre work is done at the expense of parcel owners. When the register was created, with the rush to get it into operation, a part of the paper-based information on parcel boundaries and rights to land shares was not included. As a result, many existing titles had to be re-registered (Uzun and Shagayda 2015).

To confirm their land rights, all owners had to have a land survey at their expense. In the case of common shared ownership, the shareholders were responsible for handling registration and cadastre matters. This involved serious outlays in terms of money, as well as time, since they had to conduct the physical survey to clarify the boundaries of the land shares they want to register, visit various departments and organizations at district centres as well as go through the lengthy processing of documents.

On the one hand, because cadastral registration and registration of land titles and transactions were based on applications, this procedure was largely voluntary for shareholders. On the other hand, the state lost important levers to influence and monitor the status of land resources, and large amounts of land went unregistered. In addition, according to the law, a lease agreement with a term less than a year does not have to be registered. This makes it possible to put into circulation parcels that have not undergone cadastral registration and do not have definite legal status. As a result, this loophole combined with the high transaction costs of registration procedures led to an expansion of the practice of informal (non-contractual) short-term lease relations. This practice, however, seriously weakens the position of the parties in such an informal transaction. Tenants (land users) have no guarantees that the lease term is sufficient to pay back the investment. Property owners (landowners), in this instance, likewise, cannot be certain that their rights will be protected. At the same time, this creates a situation making it hard to consider long-term oriented investments, for example, in soil quality.

18.7 Consequences and Institutional Limitations of Land Reform

Summarizing the results of 25 years of land reform, one should acknowledge that its results do not entirely match the expectations of reformers or of society as a whole. Privatization did not create a class of full-fledged landowners interested in preserving the land and in increasing its fertility and market value. The allocation of land shares on the basis of place of employment and place of residence rather resembled the distribution of free gifts, not the transfer of rights and obligations to responsible owners. Today, many shareholders cannot control the actions of the actual land users or influence the selection of agricultural technologies that will be used. They are not always able to influence the lease rates or the terms of the agreements, they conclude. In general, the strengths of actors on local markets are not equal, so the weaker ones have to accept the terms of the more powerful (larger) actors, especially as local authorities often promote the interests of the latter.

One might state that in post-socialist Russia opportunities for efficient trading in farmlands and for the dissemination of new land use technologies are facing a number of institutional limitations, which include but are not necessarily limited to the following:

- the land tenure system, as well as specification and registration of titles, is not fully formed;
- transaction costs associated with bringing unclaimed and unworked land into circulation are sufficiently high to hinder the process;
- the rights of landowners, especially in relation to common shared ownership, and land users are insufficiently protected;
- the role of local authorities in monitoring the terms of and quality of land use was lost or significantly weakened.

18.8 Structure of Land Tenure in Altai Krai

In 2013, farmland in Altai Krai occupied an area of 11,537.2 million ha, which was about 70% of the region's area. Agricultural lands (arable land, pastures, hayfields, perennial plantings and fallows) occupied an area of 10,597,000 ha (Report on the Status and Use of Land in Altai Krai for 2013 [2014](#)).

In Russia as a whole and in Siberia, in particular, large areas of land have been taken out of production. According to a report from the Ministry of Agriculture, as of 1 January 2014, some 26% of agricultural land in the Russian Federation was not in use (Report on the Status and Use of Agricultural Land for 2013 [2014](#)). Most of the unused land was in the Siberia Federal District (57%), followed by the share of Altai Krai of 5.04 million ha (44%). These data, however, are estimates only. They were obtained based on information from land users, who had an interest in distorting data on the areas in use (at least due to the expanding informal contractual relations), and

from space images, methods for the analysis and interpretation of which are highly contested (Barsukova and Zvyagintsev 2015).

The structure of agricultural land ownership in Altai Krai differs from the national. In Russia as of 1 January 2014, roughly two-thirds of land belonged to national and municipal entities, but in Altai Krai, the dominant stratum of landowners was private citizens, who possessed more than half of the land (53.4% or 6161.2 million ha). The dominant form of land ownership by individuals was common shared ownership (89.1%). Formally, common shared ownership meant that former members of Soviet collective and state farms inherited an equal share in newly organized agricultural production cooperatives. The number of participants in this form of ownership totalled 313,008 people (Report in Altai Krai, 2014). At the time of privatization, applying the allocation criterion discussed earlier, each member of agricultural production cooperatives in Altai Krai was entitled to a land share of 10–12 ha depending on its location. The location of each share was, however, only approximate, largely based on districts, without specified boundaries.

Among the major players on Altai Krai's local markets are business partnerships and companies (e.g. in the form of Limited Liability Companies, Joint Stock Companies), agricultural production cooperatives, and individual private farms. In 2013, a major portion of agricultural land was assigned to agricultural organizations: partnerships and companies accounted for 29% of land (3175.2 million ha) and production cooperatives for 21% (2346.2 million ha). Private farms occupied an area of 2003.1 million ha, which represented 18% of the land of Altai Krai. The average size of one private farm considering the land in use was 447 ha (see further details on the legal forms of actors and statistics of their structure in Chap. 17 by Ponkina et al.).

The Krai's land users mostly cultivate the land they have on the basis of a leasing agreement. By and large, they conclude lease agreements for land parcels formed from the land shares that villages received during privatization (58% of all land in use), as well as for land in district redistribution funds that are managed by district administrations (from 27 to 37%). Out of all the farm entities in Altai Krai, only individual private farms worked on their own land, that is, not on the basis of a lease agreement, and this land represented 15% of the total used by farmers. The proportion of cultivated land owned by business partnerships and companies was far lower—around 5%; that of agricultural production cooperatives was only 1% (Report in Altai Krai, 2014). To accelerate the turnover of land parcels formed from shared land, the Krai rescinded the minimum term for leasing land, that is, this land can change tenants almost every year. The minimum threshold for leasing land from district redistribution funds is seven years.

The local land markets have certain specific features. A number of the rural districts that were studied had a shortage of available land and intense competition among land users. This is despite the apparent abundance of unused land in Altai Krai (44%). However, unused lands are not spread out evenly across districts often making land consolidation and access to infrastructure very difficult. At the same time, as was discussed above, high transaction costs associated with registering land titles and more generally related to procedures of bringing new lands into 'production' reinforce the artificial shortage of land, which will be discussed in more detail

in the subsequent section. In some instances, a few large agricultural enterprises and numerous private farms ensured a high demand for land. In other instances, the demand for land increased after outside actors—the owners of processing enterprises planning to integrate agricultural production into their business or even development companies focusing on housing development in rural areas—came to the district. An entirely different competitive environment developed in districts with an especially arid climate and poor soil quality, where large quantities of cropland were abandoned and the authorities did not know how to attract new producers or restore these lands' quality.

18.9 Secure Land Tenure: A Combination of Formal and Informal Practices

Our field research showed that, in addition to formal rules, there were specific informal rules for interaction among the various actors on local land markets—different groups of agricultural producers, landowners and representatives of local authorities. Informal practices, which compensate for flaws in legislation, help to create conditions for the formation of a relatively secure local land tenure system, the introduction of technological innovations, and the alignment of the interests of landowners and tenants.

Agricultural producers turn out to have the most interest in the legal registration of land titles and suffer most from the flaws in the existing land tenure system. It is land users, not owners of land shares, who often organize and cover the monetary costs associated with title registration. They also organize surveys of parcel boundaries, put parcels on the cadastral register and prepare documents for registration. They, thereby, help to create conditions for extending the time for beneficial use of land parcels and ensuring the return on their investments. The drivers for the formalization of a secure land tenure system are, as a rule, the heads of private farms and enterprise owners, who have a stake in the long-term development of their businesses.

The interviewed farmers have explained that they undertook the registration of the land of their shareholders around ten years ago. Some of them did not manage to register land according to the old rules with the initial wave of land reform in 1992–1993 (see also the chronology of reforms discussed in Chap. 17 by Ponkina et al.). They had to start from scratch after the legislation on privatization changed numerous times till 1997. Some farmers had problems identifying shareholders or their heirs in order to obtain powers of attorney to complete registration. Another obstacle on this path was that the majority of land users lacked the necessary legal knowledge and money to complete the procedures.

Problems related to establishing boundaries of land parcels pertain not only to shared land but also to lands in district redistribution funds. In a number of instances, the authorities requested land users, who won the right to lease at auction, to bear the costs of the cadastral registration, promising to compensate these costs by a

reduction in future rent. The fact that municipal land is not registered is an obstacle to attracting investments and implementing major projects. As a result of difficulties and costs related to registration, in many cases instead of concluding a long-term lease, municipalities and land users agree on an 11-month lease term, for which cadastral registration is not required. However, the land remains outside the register with dubious legal status and the legal grounds for land use can be easily challenged (Alakoz and Nikonov 2013).

Nevertheless, once registration is completed, as agricultural producers noted in the interviews, leasing land from redistribution funds is the most appealing to them, since this land comes with lower lease rates and a minimum (more reliable seven years) lease term. In this instance, there is no need to enter into negotiations and contractual interactions with numerous parties, as happens when one attempts to lease shared property. At the same time, for local authorities, redistribution fund land is one of many tools for influencing the behaviour of agricultural producers. For example, administration of Altai Krai sets a priority for livestock farms in leasing land from redistribution funds. Another environmental policy option would be to set conditions on particular modes of allowed tillage operation.

Shared land requires that land users take shareholders' demands seriously and seek compromises. In rural settlements where different business entities—large farm enterprises and private farms—engage in production, a fight over shareholders' land is foreseeable. Elements of the fight over shared land are competing for proposals for lease rates and additional services that the land users will provide. Competitors agree on the 'rules of the game' and find compromises in land disputes, thereby guaranteeing long-term land use. The arrangements of the land lease allow rural families to receive rents, monetary or in-kind (feed, land tilling services, freight transport, etc.), which in turn allows these households to preserve their private farms, raise livestock and poultry, and produce meat and milk for sale. Land users occasionally also take over the responsibility to pay the land tax for shareholders.

In the farm milieu, it is also common to encounter 'gentlemen's agreements', prohibiting the enticement of shareholders and employees from some farms to others with more generous offers. In addition, subleases are arranged and arable fields are exchanged often by oral agreement. As a result, these informal arrangements slow the transfer of croplands from inefficient land users to those who managed to increase the land productivity through, e.g. modernization or introduction of new technologies and crop rotation. Likewise, they slow down the consolidation and expansion of lands that might have been more productive and more sustainable.

Moreover, to counter the expansion of large companies, representatives of farm communities agree to act unanimously at land auctions held by district administrations. To prevent the total buy-up of adjacent fields by stronger competitors, they buy some of the parcels they cultivate to create 'overlapping field strips' which does not allow the consolidation of the land.

In districts with a high demand for land, land with unidentified owners has tremendous financial potential. According to the current law, the administrations of rural districts have the right to register the so-called unclaimed shares of villagers. The administration's task is to find out about the nominal owners, collect documents about

their loss of land rights (in case of death and if there are no heirs, or if a notarized abandonment of the land is presented), and then declare these lands ‘unclaimed’ in court. Then, the administrations can transfer ownership of these lands to district redistribution funds with the right to sell or lease them. On the one hand, the procedure is alarming as it seems to provide room for expropriation of less powerful, given the well-documented events of extortion and other threats to property in Russia’s post-Soviet history (see, e.g. Gans-Morse 2013). Although we have not come across such cases in our study, this clearly shows the necessity for a stronger protection of more vulnerable property right holders, on the level that could eliminate loopholes such as the above. On the other hand, this procedure provides a platform to bring new or abandoned lands into production, which appears crucial in Altai Krai for attracting investments and transferring technologies, and generally for moving towards more sustainable land use. There are numerous obstacles on this path, to which one may add that administrations lack personnel and financial capacities necessary to register titles and put land in the cadastral register. If, however, there are actors interested in obtaining access to these resources, the ‘no man’s land’ can quickly gain a legal status.

Powerful Altai farm producers do not hide their plans to expand their land holdings. Some of the private farmers that were interviewed stated that they increased their land by about 10% annually. This growth is delayed by the fact that some shareholders do not want to part with their land rights. Yet, Altai farmers believe that the low cost of land (about 500–700 Euros per share—10–12 ha) and low lease rates (about 70–100 Euros per share or 1–2 tons of grain) are their important competitive advantages which help to keep the cost of production relatively low.

18.10 Land Use Quality Control and Sustainability

Regional offices of Rosselkhoz nadzor (the Russian Federation Federal Service for Veterinary and Phytosanitary Surveillance) are responsible for the quality control of land use. Performing this function competently requires efficient, mobile units on the ground staffed with specialists in land issues. However, the agency does not have these human or administrative resources (see this chapter).

By law, regulatory authorities audit agricultural producers once every three years. Audits are largely perfunctory. The main function of audits is to confirm the proper use of agricultural lands and compliance with certain technological requirements. Inspectors by looking at documents confirm that plant protectants and mineral fertilizers are on hand and correctly applied, that seeds are certified, and that wastes are disposed of, etc. The audit objectives do not include environmental assessment of technologies, crop rotation or the change in soil fertility. The perfunctory nature of audit procedures and regulatory authorities’ non-interference in production processes would allow land users to easily pay off claims against them (they pay fines, give small bribes) and keep inspectors out of areas where they might do real harm to the business.

In the land users' opinion, nominal landowners (shareholders) have little interest in preserving the quality of their land. They are interested only in the amount of the lease fee—and there have been more than a few instances when they were ready to lease their land quickly to another user, if that potential user orally promised a higher payment. They are usually indifferent to the fact that their lands are not planted or cultivated or that weeds and shrubs are overgrowing them. As a rule, lease agreements with owners of land shares, as well as with district administrations when it comes to land in the redistribution fund, contain no special environmental requirements or conditions ensuring long-term sustainability of land resources, for example, on preserving topsoil or protecting against wind and water erosion. There seems to be a naïve expectation that agricultural producers, most of who are on a lease agreement with little long-term security, will assume the responsibility for ensuring sustainability of land resources. In the absence of any serious consequences envisioned in legislation or in lease agreements, this tenure system does not prevent short-term destructive uses of land either. With the lack of interest from the owners to maintain the quality of land and establish tenure systems that are secure in the long-term, it remains a challenge to incentivize producers to invest in preservation and improvement of land quality.

18.11 Conclusions

The institutionalization of the land tenure system through development of informal local practices is increasing as the investment appeal of the agricultural sector grows. The inconsistency and lengthiness of the land reform pose high risks for innovation in agriculture, but low land lease and purchase prices are strengthening the competitive positions of Altai's producers. A combination of formal and informal practices ensures the relative stability of the resulting land use model, but does not always contribute to a growth in the efficiency in agricultural production or to sustainability of land resources. As a rule, farmers do not see investments in land in the context of improving or maintaining the quality of their land resources or increasing the market value of their farms. Evidence shows that most share motives of current profitability and preservation of the business to pass it onto their heirs.

One of the adverse consequences of land reform was the government's loss of control over and management of land resources, on all—federal, regional and local—levels. Local public authorities lost tools and resources for routine monitoring of land use by different groups of agricultural producers, for land planning and cadastral work, and for legal registration of land parcels and lease agreements. Public authorities became unable to obtain accurate, real-time data about the structure and quality of lands or information on the actual land users.

Existing government support measures do not directly encourage the introduction of new technologies. New support mechanisms are needed to encourage (i) an increase in the quality of land use and introduction of technologies aimed at more sustainable land use; (ii) less burdensome procedures for legalizing titles (with com-

pensation of costs to survey and register land, especially in areas with challenging natural conditions and climate) and putting unclaimed, abandoned lands into circulation; and (iii) better—clear and long-term—protection of the rights of landowners, particularly in the case of common shared ownership, as well as land users, especially those who might not be in the position to bear high transaction costs of the current land tenure system.

References

- Alakoz VV, Nikonov AV (2013) Land management—investment map of Russia in the agrarian sector. *Land Manag, Cadastre Monit Lands* 4:6–12 (in Russian)
- Ault D, Rutman G (1979) The development of individual rights to property in Tribal Africa. *J Law Econ* 22(1):163–182
- Barsukova SYu, Zvyagintsev VI (2015) Land reform in Russia in 1990–2000s, or how land reform was “reformed” during the departmental reorganization. *J Inst Stud* 7(2):84–98 (in Russian)
- Barzel Y (1989) *Economic analysis of property rights*. Cambridge University Press, Cambridge
- Buzdalov IN (2012) Land reform: looking through the prism of the plan. *AIC: Econ Manag* 7:3–17 (in Russian)
- Demsetz H (1967) Toward a theory of property rights. *Am Econ Rev* 57(2):347–359
- Fadeeva OP (2013) Siberian rural areas: land and labour in local contexts. *EKO* 5:29–47 (in Russian)
- Fatherstone A, Barry K (1993) Goodwin factors influencing a farmer’s decision to invest in long-term conservation improvements. *Land Econ* 69(1):67–81
- Feder G, Noronha R (1987) Land rights systems and agricultural development in Sub-Saharan Africa. *Res Obs* 2(2):143–169
- Fligstein N (2001) *The architecture of markets: an economic sociology of twenty-first-century capitalist societies*. Princeton University Press, Princeton
- Gans-Morse J (2013) Threats to property rights in Russia: from private coercion to state aggression. *Post-Soviet Aff* 28(3):263–295
- Kalugina ZI (2016) Modernization of the Russian village: economic results and social consequences. *Sci Europe* 2(10):86–95
- Meadows D (1999) *Leverage points: places to intervene in a system*. The Sustainability Institute, Hartland, VT, pp 1–19
- National Report on the Status and Use of Land in the Russian Federation for 2014 (2015) Federal Service for State Registration, Cadastre and Cartography under the Ministry of Economic Development of the Russian Federation, Moscow (in Russian). URL: <https://rosreestr.ru/upload/Doc/16-upr/%D0%B4%D0%BE%D0%BA%D0%BB%D0%B0%D0%B4%202014.rar>. Accessed 19 May 2018
- North D (1990) *Institutions, institutional change and economic performance*. Cambridge University Press, Cambridge
- Ostrom E (1986) An agenda for the study of institutions. *Public Choice* 48:3–25
- Report on the Status and Use of Agricultural Land for 2013 (2014) Federal State Funded Science Institute Rosgosinformagroteh under the Ministry of Agriculture of the Russian Federation, Moscow (in Russian). URL: https://www.rosinformagrotech.ru/sites/default/files/files/ispolzovanie_zemli_2014.pdf. Accessed 19 May 2018
- Report on the Status and Use of Land in Altai Krai for 2013 (2014) Altai Krai Department of the Federal Service for State Registration, Cadastre and Cartography, Barnaul (in Russian)
- Shagayda NI (2013) Agricultural land in Russia: 20 years after reform. *EKO* 5:5–22 [in Russian]

- Soliev I, Theesfeld I, Wegerich K, Platonov A (2017) Dealing with “baggage” in riparian relationship on water allocation: a longitudinal comparative study from the Ferghana Valley. *Ecol Econ* 142:148–162
- Theesfeld I (scheduled for 2018) The role of pseudo-commons in post-socialist countries. In: Hudson B, Rosenbloom J, Cole D (eds) *Routledge handbook of the study of the commons*. Routledge’s Handbook Series. Routledge Publishing
- Uzun VY (2008) Land reform in Russia: myths and reality. *Voprosy Ekonomiki* 10:139–155 (in Russian)
- Uzun VY Shagayda NI (2015) Agrarian reform in post-Soviet Russia: mechanisms and results. Russian Academy of National Economy and Public Service under the President of the Russian Federation, Moscow. <http://dx.doi.org/10.2139/ssrn.2672054> (in Russian)
- Williamson OE (1998) Transaction cost economics: how it works; where it is headed. *De Econ* 146(1):23–58