Executive Summary

Land and water resources, vital for global food security, are being degraded and depleted. These natural resources must be managed sustainably in order to support agricultural production, reverse land degradation and combat climate change.

Tenure systems regulate and define who can use which resources, for how long and under what conditions. When land and water tenure systems are governed responsibly, access to natural resources is more equitable, decisions are taken in a transparent and participatory manner, and land and water resources are managed more sustainably.

Countries in Europe and Central Asia have diverse histories, farm structures and land and water tenure systems. Nevertheless, there are steps that all countries can take to manage their natural resources in a more sustainable way and avoid land degradation. Integrating land and water management through a land and water nexus approach and coordinating efforts to sustainably manage natural resources will maximize environmental, social and economic sustainability.

FAO’s experience has shown that employing land policy instruments such as land consolidation, particularly in a multipurpose approach, can support integrated land and water management.

I. Introduction

1. Land and water are fundamental natural resources for environmental sustainability, agriculture and rural development. Multiple crises in the world today are putting enormous pressure on land, water and other natural resources. By 2050, the agriculture sector globally will need to produce 56 percent more food\(^1\) to feed an estimated 9.7 billion people (World Resources Institute, 2019).

\(^1\) Relative to food produced in 2010.

Documents can be consulted at [www.fao.org](http://www.fao.org)
2. Land degradation, insecure tenure rights to natural resources and unsustainable land and water management practices are factors that increasingly exert stress and deteriorate the irreplaceable natural resources on which we all depend. To support agricultural production, reverse land degradation, combat climate change and achieve the Sustainable Development Goals (SDGs), natural resources, including land and water, need to be managed sustainably and seen not as two separate resources but rather as integrated.

3. Both responsible tenure governance and land degradation neutrality are key elements of achieving multiple SDGs and their respective targets. The operational interlinkages between responsible land governance and sustainable development are increasingly recognized, and more particularly between tenure security and sustainable land management, soil health, land restoration, combating desertification, land degradation and drought.

4. This background document focuses on the governance of tenure, including the importance of secure tenure rights and the potential of land policy instruments, in the context of integrated land and water management for sustainable development in Europe and Central Asia. This and a second background paper, “Overview of land degradation neutrality in Europe and Central Asia (ECA/43/23/6),” form the background documents for the technical session on land governance and land degradation neutrality for the Forty-third Session of the European Commission on Agriculture.

5. The background and importance of governance of tenure for natural resources is presented in Section 2. Section 3 provides relevant context by describing farm structures, the development of agricultural land markets and tenure security in Europe and Central Asia. Section 4 details guidance on the integration of governance of tenure in land degradation neutrality work. The potential of multipurpose land consolidation and land banking instruments in support of integrated land and water management is outlined in Section 5. The final section, Section 6, provides the conclusions and recommendations of both background documents related to land tenure and land degradation neutrality for members and for FAO to respond in a holistic and integrated way to the governance of tenure in the natural resources-related challenges facing the region.

II. Background

6. Land and water are inextricably linked, particularly for agricultural production. Land and water resources are also on the front line of the fight against climate change. Multiple crises in the world today are putting enormous pressure on land, water and other natural resources. By 2050, water shortages could affect 5 billion people around the world (UNCCD and FAO, 2020), and it is projected that there will be a 30-percent increase in global water demand (FAO, 2021). Agriculture, accounting for 72 percent of water withdrawals, is the largest user of water globally (FAO and UN Water, 2021). In the Europe and Central Asia region in 2020, agricultural withdrawals of water accounted for 20 percent of all water withdrawals in Europe, 68 percent of water withdrawals in the Caucasus, and 77 percent of water withdrawals in Central Asia (FAO, 2023). Climate change is increasing water stress, which would in turn affect land use, energy systems and agricultural production (Botta, Griffiths and Kato, 2022).

7. Tenure systems regulate and define who can use which resources, for how long and under what conditions. Land tenure is the relationship among people, as individuals or groups, with respect to land. The rules of land tenure define how access is granted to use, control and transfer land (FAO, 2002). The term “water governance” encompasses the political, legal, social, economic and administrative systems that determine how water is managed. The responsible governance of water resources implies transparency,
cohesion, and use of good practices when the rules and processes through which decisions about water management are made, implemented and monitored (FAO, 2020a).²

8. The right to property, which often encompasses agricultural land and land use, is considered a self-standing right and there are a number of international human rights instruments with standards applicable to land. These include the Universal Declaration of Human Rights, and the International Convention on the Elimination of All Forms of Racial Discrimination (Office of the United Nations High Commissioner for Human Rights, 2015). The right to land and other natural resources (including water) is recognized in the United Nations Declaration on the Rights of Peasants and other People Working in Rural Areas.


10. Women are often excluded from participation in the day-to-day processes of land tenure governance, have limited capacity to influence decision-making (FAO, 2013), and have less secure rights to land than do men, including in Eastern Europe and Central Asia (FAO, 2016a). Women are rarely registered as owners or managers of agricultural land or holdings, and even in situations where women legally own land, they sometimes cannot exercise their rights over the land due to registration practices that favour male family members (FAO, 2016a, 2020b). Closing the gender gap in land and water tenure security has positive impacts on natural resources management, investments in agriculture and food security (FAO, 2016a, 2023b).

11. To sustainably increase agricultural production and meet the food needs of the future, there must be an increase in investment in agriculture. For small, medium and large farms alike, secure tenure rights are often a precondition for investment in agriculture (IFAD, 2015). Not only are food producers more likely to invest in sustainable farming practices when they have secure rights to land, but tenure security is often a condition for accessing financial services (ILC, FAO and GLTN, 2021).

12. Land is needed to produce food; yet in many countries, land without a reliable source of clean water will not produce sufficient yields in a sustainable manner. On the contrary, there is a risk of land degradation, desertification, drought and land abandonment when agricultural lands lack a sufficient water supply. The agriculture sector is the main user of water, and the demand for water is projected to significantly increase in the coming decades (FAO, 2014). Water shortages will lead to increasing competition among regions and countries and could cause disputes or even violent conflicts (Wang et al., 2022).

13. When tenure systems for land and water are not governed responsibly, those resources will not be managed responsibly (FAO, 2016b). The unsustainable use of land and water can lead to land degradation, erosion, decreased soil quality, depletion of nutrients, and drops in groundwater levels. Unhealthy soils release more greenhouse gases into the atmosphere; this perpetuates the vicious cycle of climate change, water scarcity and poor soil quality (FAO, 2021).

14. Thinking of land and water as a nexus reinforces the notion that there is a complex and dynamic relationship between land and water (Rights and Resources Initiative and Environmental Law Institute, 2020). Efforts to, for example, increase agriculture production and improve land management must consider

² While this background paper focuses on tenure governance in the context of integrated land and water management, water governance is more closely explored in the background paper Importance of water governance for enhancing water security in Europe and Central Asia (ECA/43/23/7).
the impacts on and synergies and trade-offs with water resources. A nexus approach also considers the various dimensions of land and water equally (FAO, 2014).

III. Farm structures, tenure security and land markets in Europe and Central Asia

3.1 Farm structures in Europe and Central Asia

15. While all land and water resources need to be governed responsibly, it is important to note that the context within which these resources are located matters. The Europe and Central Asia region is diverse and spans a wide range of territories, topographies, tenure systems and farm structures. In the EU-27 and European Free Trade Association countries, tenure rights are formalized and generally considered secure, and medium to large commercial family farms are the dominant farm structure. In most countries in Eastern Europe and Central Asia, with the exception of Belarus and Ukraine, the farm structures are dominated by smallholders. In a few countries, the farm structures are characterized by a dualistic system whereby a few large corporate farms exist alongside many small farms. The farm structures evident today in most Eastern European and Central Asian countries are the result of the land reforms implemented from 1990 onwards as part of the transition to market economies (Hartvigsen, 2013). In many countries, particularly in the Western Balkans and South Caucasus, land fragmentation is excessive. As an example, in Albania, Armenia, Bosnia and Herzegovina, Georgia, Kyrgyzstan and North Macedonia, the average farm sizes are between 1 ha and 3 ha (Gorgan and Hartvigsen, 2022), while the EU-27 average is 17.4 ha (Eurostat, 2022).

16. The fragmentation of agricultural land, in terms of both ownership and use, has resulted in land parcels and farms in rural areas that are too small to be viable in countries with farm structures dominated by smallholders. This can be a major constraint for agricultural growth and increased income generation (FAO, 2020b), not only, but also for the sustainable use and management of agricultural lands.

3.2 Tenure systems and tenure security in Eastern Europe and Central Asia

17. Similar to the diverse farm structures of the various countries in the region, the tenure systems also differ from one country to another. In the majority of countries in Eastern Europe and Central Asia, most of the agricultural land is held in private ownership. Belarus, Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan are exceptions in the region; agricultural land there generally remains owned by the state, and farmers have rights to use agricultural land for varying time periods (Gorgan and Hartvigsen, 2022).

18. While private ownership is often characterized as a secure form of tenure right, it is not the only kind. Other types of tenure rights, such as long-term use rights, communal rights or collective rights, also can be very secure. Those types of tenure rights that afford land users a high degree of long-term security to the land they use are more desirable. Not only are land users more likely to invest in their land, manage land more sustainably, and increase their opportunities to access financial services, but secure land rights also are correlated with other positive effects, such as household food security and improved nutrition (Landesa, 2012).

19. Compared to other regions in the world, tenure rights in most of the countries of Europe and Central Asia are perceived to be secure by those holding the rights to land; approximately 84 percent of the population perceive their tenure rights to land as secure, compared to 72 percent of adults globally.

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3 Family farms are farms which are managed and operated by a family and predominantly reliant on family labour (FAO, 2020b).
4 FAO has 17 programme countries and one territory in the Europe and Central Asia ECA Region: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyz Republic, Republic of Moldova, Montenegro, North Macedonia, Serbia, Tajikistan, Turkmenistan, Türkiye, Ukraine, Uzbekistan and Kosovo*. *All references to Kosovo should be understood to be in the context of United Nations Security Council resolution 1244 (1999).
(UNECE, 2022). However, there are some countries, particularly in Central Asia, where tenure rights to land are often perceived as more insecure and not well protected.

20. In all countries, land tenure rights are generally formalized in national land administration and land registration systems, although variations exist in terms of accuracy, modernization and digitalization. Even though citizens in the region generally enjoy more secure tenure rights, many countries face broader and sometimes systemic problems within their land administration system and, consequently, agricultural land markets (Gorgan and Hartvigsen, 2022).

21. At present, many countries in the region continue to suffer from incomplete and inaccurate land records information. Some registration problems are relatively easy to solve, such as misspelled names of owners. Others, however, can be more complicated and costly to solve (for example, inconsistencies between cadastral maps and the situation on the ground or inaccuracies of boundaries). In many countries, informal land transactions and unresolved inheritance are common, which undermines the efficient functioning of agricultural land markets (Gorgan and Hartvigsen, 2022).

3.3 Agricultural land markets

22. A recent analysis of agricultural land markets in countries in Eastern Europe and Central Asia revealed that markets are generally weak and there is a high degree of informality. The primary reasons for informality vary from country to country but can include high transaction costs (particularly compared to the value of the land), complicated and time-consuming registration procedures, and corruption (Gorgan and Hartvigsen, 2022).

23. Particularly in rural areas, well-functioning agricultural land markets are of vital importance for agricultural and rural development. They allow for transfers of land to more efficient users and producers (Vranken, Tabeau and Roebeling, 2021) and can also provide access to land for new entrants (e.g. young farmers) and other vulnerable groups.

24. When tenure security exists, effective and efficient land markets (whether sales or rental) underpin the capacity of banks and other financial organizations to lend money to landowners and farmers and are often instrumental in the development of credit markets. This can allow for greater private investments in agriculture and rural areas. Smallholders and family farms often face challenges in accessing credit, particularly because their assets (such as land) are either not accepted as collateral or are accepted on a low loan-to-collateral ratio (FAO, 2020b). On the other hand, lending and credit institutions do not fully appreciate or recognize the value of land as collateral, especially if the land parcels are small and fragmented.

3.4 Water governance in Europe and Central Asia and the current status

25. In Eastern Europe and the South Caucasus, through the European Union Water Initiative 2006–2016, water governance improved with more transparency in decision-making related to water resources and improved coordination among government institutions. Cooperation among countries, many of which share water resources such as lakes and river basins, was also strengthened in many cases through, for example, transboundary assessments and bilateral negotiations for joint management of water resources (European Union, OECD and UNECE, 2016).

26. In Central Asia, land and water rights have always been strongly interlinked. Changes to how land and water were governed affected land use and subsequently resulted in land degradation. Half of the pastures and more than half of the 8 million ha of irrigated land are degraded (Strikeleva, Abdullaev and Reznikova, 2018). Irrigated agriculture is the largest water user in Central Asia (Han et al., 2022;
Saidmamatov et al., 2023). Water quality and quantity are expected to continue to decline over the next ten years (Saidmamatov et al., 2023). It is therefore imperative that investments in water-saving technologies and modern irrigation are increased in order to preserve crucial water resources and to increase agricultural production with less water use.

27. The population in Central Asia is estimated to increase by over 30 percent, up to a total of approximately 100 million people, by 2050. As populations grow, urbanization advances and economies diversify into manufacturing, processing and other industries, pressure on the region’s water, energy and land resources is predicted to further increase in the coming decades (Botta, Griffiths and Kato, 2022). Although approaches to water governance differ in the subregions, all countries in Europe and Central Asia will face the same challenges to responsibly manage their water resources, including the impacts of climate change and competing water demands.

IV. Guidance on the integration of governance of tenure in land degradation neutrality work

4.1 Technical guide on integration of governance of tenure in land degradation neutrality

28. The other background paper for this technical session, “Overview of land degradation neutrality in Europe and Central Asia (ECA/43/23/6),” provides a more detailed narrative of the concept of land degradation neutrality, the land degradation neutrality framework, and achieving and monitoring land degradation neutrality. This section focuses on the integration of governance of tenure of natural resources in land degradation neutrality (LDN) work and illustrates that tenure also should be considered in other natural resources projects, such as sustainable forest management.

29. Land degradation neutrality is a state whereby the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems (UNCCD, 2015).

30. There is a strong linkage between land tenure and land degradation. Insecure tenure is one of the reasons sustainable land management practices are not widely adopted (FAO and UNCCD, 2022). Climate change and land degradation are also closely associated in many parts of the world. The negative effects of climate change, compounded by tenure insecurity, can have a devastating consequence, particularly for smallholder farmers, resulting in increased land degradation (Unruh et al., 2019).

31. In 2022, FAO and the United Nations Convention to Combat Desertification Secretariat published a technical guide to integrate the principles of the VGGT into the implementation of LDN. The guide intends to support policymakers and decision-makers by making them aware of how secure tenure rights can contribute to LDN and provide possible solutions to land tenure challenges.

32. Key messages from the technical guide include:

- Secure tenure increases the positive impacts of LDN initiatives for people and the planet.
- Addressing tenure in LDN initiatives begins with the assessment of local needs and conditions.
- Meaningful and inclusive consultation and participation is essential to ensure that legitimate tenure rights are not overlooked in LDN initiatives.

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• Gender-responsive approaches can address underlying inequalities in control and access to land resources and are needed for realizing transformative change.

The guide provides nine action-oriented pathways that provide practical solutions to tenure-related challenges in the context of legal frameworks, national plans, strategies and action programmes.

4.2 Practical experiences from Europe and Central Asia in integrating tenure governance in land degradation neutrality projects

33. FAO is one of the few organizations recognizing the importance of tenure and its integration in LDN and sustainable land management initiatives. FAO is supporting many countries in their efforts to achieve LDN. In Georgia, for example, an LDN project that aims to restore and sustainably manage degraded pasturelands has thoroughly integrated tenure governance in the national pastureland management policy document it developed. The tenure system for pastureland is identified as a crucial factor for sustainable management of pasturelands, and those systems should be altered or designed to foster optimal use of pasture resources in the country.

34. In the Republic of Moldova, FAO is supporting the creation of an enabling policy environment for integrated natural resources management to achieve LDN. Officials from the government and civil society were trained on how the VGGT have been applied for sustainable natural resources management in the region. The officials also were shown how the guidelines could be utilized as a framework for developing strategies, policies and legislation in the Republic of Moldova.

35. In a sustainable forest management project in Uzbekistan, FAO is creating awareness and providing support on land tenure issues related to the forestry sector. Best practices related to the responsible governance of tenure of natural resources will be shared, and key national actors will be trained on understanding the importance of tenure for managing forest land sustainably.

36. These practical examples demonstrate that integrating governance of tenure is relevant and important not only in LDN projects, but also in natural resources management projects more broadly. Whether projects target pastureland, forests, river basins or other topographies, the governance of tenure and tenure rights must be understood as an important factor for sustainable management of natural resources.

V. The potential of multipurpose land consolidation instruments in support of integrated land and water management

37. We have in the previous sections seen how closely connected the governance of tenure is with the land and water nexus. In relation to agricultural land, this is in particular the case when ownership and use rights of private farmers and rural communities are affected by climate change, land degradation, droughts and floods. Private farmers and communities and their land rights are also often affected by public interventions and projects implemented to overcome the problems mentioned related to the land and water nexus, e.g. taking out of production privately owned and used agricultural land for afforestation, nature restoration, etc.

38. Many countries in Western Europe have a long tradition of implementing land consolidation projects. The objective of land consolidation has traditionally been agricultural development by reducing land fragmentation and facilitating the structural development in agriculture towards larger and more competitive farms. In most Western European countries, land consolidation has in recent decades developed into a multi-purpose instrument (Hartvigsen, 2022). Multi-purpose land consolidation means that one land...
consolidation project has more specific objectives to pursue. Agricultural development, the traditional objective of land consolidation, often remains the purpose in some parts of the project area, while in other parts there are other aims, often related to nature restoration, improved environment, climate change adaptation and the mitigation or construction of large-scale infrastructure. In addition to land consolidation, land banking instruments have increasingly been applied in a multi-purpose approach in Western Europe (FAO, 2022). Through the combined use of the two instruments, the affected private landowners and farmers can through implementation of land consolidation projects have the opportunity to be compensated in other land for the land that is no longer suitable for agricultural production or that is taken out of production.

39. Land consolidation instruments, particularly when applied in a multipurpose approach, have a high potential throughout the region, including in Eastern Europe and the Western Balkans (Hartvigsen, 2022). Three of the countries – North Macedonia, Serbia and Türkiye – already have ongoing operational national land consolidation programmes, while several other countries are in different stages of introducing land consolidation. FAO has so far supported 12 Members in the region with the introduction of land consolidation and the development of national land consolidation programmes (Hartvigsen, 2019), and the Organization has published normative work to guide the process, including the FAO Legal Guide on Land Consolidation published in 2020 (Veršinskas et al., 2020) and a study on European good practices on land banking (FAO, 2022). Supporting LDN through land administration tools, such as land consolidation and land banking, is one of the pathways in the technical guide on integrating the principles of the VGGT into the implementation of LDN (FAO and UNCCD, 2022).

40. In North Macedonia, including through the European Union-funded MAINLAND project, land consolidation feasibility studies have, with support from FAO, been completed in 14 project areas. Land consolidation plans also have been prepared in nine project areas. In these areas, 2,550 landowners/farmers in total directly benefited in terms of improved land structure, reduced land fragmentation and improved access to irrigation, drainage and field road, and the total number of land parcels was reduced significantly, from 8,237 to 3,344. The average parcel size has at the same time increased from 0.54 ha to 1.34 ha. The concept of integrating land consolidation with the improvement of agricultural infrastructure in the project area in North Macedonia, based on local needs, has been very feasible and has strongly motivated local landowners and farmers to participate in the land consolidation process (Hartvigsen, 2022).

41. Land consolidation instruments applied in a multipurpose approach have a high potential across Europe, and countries in the east can learn from good practices in the west. As discussed in Section 4, there is an urgent need to support the transition towards more sustainable land and water management in Europe and Central Asia. Countries with ongoing national land consolidation and land banking programmes are in a favourable position not only to apply the instruments for agricultural development but also to integrate with improvements to agricultural infrastructure such as irrigation, roads and drainage, based on local needs. This allows farmers, at the same time, to benefit from more efficient farm structures and modern irrigation, contributing to local agricultural development, climate change adaptation, poverty alleviation and improved livelihoods.

42. Multipurpose land consolidation is more complex than the traditional facilitation of agricultural development, but it also adds new strong political arguments for introducing land consolidation instruments in countries and ensuring their sustainability.

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VI. Conclusion and recommendations

43. This final section provides policy recommendations to improve land governance and achieve land degradation neutrality in the region. This background document is to be read in tandem with the other background document – “Overview of land degradation neutrality in Europe and Central Asia (ECA/43/23/6)” – related to agenda item 5: Land governance and land degradation neutrality in Europe and Central Asia.

44. Driven by biophysical and socioeconomic factors that are exacerbated by the impacts of climate change, the degradation of land and natural resources is one of the greatest challenges faced by several countries in the region. Restoring degraded land is vital for countries to achieve multiple national and international priorities on addressing climate change, improving livelihoods, reducing desertification, restoring ecosystems and conserving biodiversity.

45. The fragmentation of agricultural land, in terms of ownership and use, can be still a major constraint for agriculture growth, income generation and the sustainable use and management of land in the region.

46. The two background documents have presented the interlinkages between land and water, the importance of governance of tenure for these resources, the concept of LDN and an overview of LDN in Europe and Central Asia. The documents also have showcased the potential of multipurpose land consolidation instruments to support integrated land and water management.

47. The medium-term policy recommendations for governments, academia, private sector, civil society organizations, international organizations, donors and other actors in Europe and Central Asia are the following:

   Integrate the governance of tenure into natural resource management efforts, including land degradation neutrality.

48. The governance of tenure of land, water and other natural resources will support efforts to achieve LDN and the sustainable management of agricultural land, forests, fisheries, rangelands, river basins and other natural resources.

   Adopt a land and water nexus approach.

49. Working to improve land and water management should be done in an integrated way, recognizing the interlinkages between the two resources. The institutions managing land and water resources – whether they are public, private, community, non-governmental, etc. – must coordinate activities to enhance their effects and avoid duplication. This is the only way to reverse the damage already caused to our natural resources and avoid further degradation.

   Strengthen gender equality and increase women’s and youth’s access to land and ensure their involvement in decision-making.

50. Women play a crucial role in the sustainable management of natural resources. This role should be further recognized, and efforts to ensure they can fully enjoy land rights should be enhanced. Gender-responsive actions should be promoted when implementing projects to achieve LDN, and women should be meaningfully included in decision-making processes. By empowering women to participate in the decision-making process of land management, decisions can take into consideration gender specificities and support the closing of gender gaps. Improved access to land for youth, women and men is crucial to the development of sustainable commercial family farms.
Strengthen monitoring capacities on land degradation neutrality, integrated with land governance.

51. National capacity to develop adequate evidence and monitor capacities to measure land-use changes is vital. Countries need to invest in capacity building for monitoring LDN and for integrating elements of land governance in LDN monitoring, including agreeing upon a set of indicators to measure biophysical indicators, not only, but also socioeconomic aspects. This could include understanding the land tenure arrangements in areas that are being targeted for LDN and being monitored.

Strengthen the security of tenure of land and water resources.

52. Reflect VGGT principles in national policies so that legitimate tenure rights are recognized, respected and safeguarded. When users are sure that their access to natural resources are secure and can count on such access for the foreseeable future, they are more likely to care for natural resources and avoid land degradation. Farmers with secure tenure rights are also more likely to invest in the development of their farms.

Foster the development and strengthening of agricultural land markets and increase investments to manage land sustainably.

53. Well-functioning land markets enable more efficient and sustainable use of land. They also can provide access to land for new farmers and can allow for greater private investments in agriculture and rural areas. Managing land in a sustainable manner is good for agricultural production and is therefore good for business. Private and public investments that promote sustainable land management should be increased.

Apply multipurpose land consolidation instruments for integrated land and water management.

54. Land consolidation and land banking instruments, particularly when applied in a multipurpose approach, have a high potential throughout Europe in the same project areas to improve inefficient farm structures and contribute to climate change adaptation and mitigation, LDN, nature restoration, enhanced biodiversity and improved environmental conditions.
References


