Executive Summary

This introductory paper aims to provide an overview of the importance of natural resources related to agriculture and its interconnection with land and water resources for sustainable and resilient agrifood systems. It provides a summary of the four technical topics to be discussed at the Forty-third Session of the European Commission on Agriculture: integrated land and water resources management (ECA/43/23/4); governance of tenure (ECA/43/23/5); land degradation neutrality (ECA/43/23/6); and water governance (ECA/43/23/7). The aim in discussing these topics is to foster collaboration and coordination among stakeholders, potentially leading to harmonized and integrated land and water policies and regulations across sectors and countries.

I. Background

1. Natural resources, biodiversity and ecosystems are the foundation of agrifood systems; day by day it is evident that ecosystem, economic and social services are the cornerstone for food security and improved livelihoods. The unsustainable management of land, soil and water can lead to land degradation, erosion, decreased soil quality, depletion of nutrients, soil and water pollution, and drops in ground water levels – with consequent decreases in crop yields and livestock production, affecting diet quality, food security and human health.

2. In the current scenario of global climate crisis and the increasing frequency and intensity of extreme weather events, land degradation and water scarcity have reached the limits of productive capacity, with activities derived from agriculture production systems putting enormous pressure on land, soil and water.

3. The impacts of accumulating pressures on land and water are felt widely in rural communities, particularly where the resource base is limited and dependency on land and water resources is high, and to a certain extent in poor urban populations where alternative sources of food are limited.

4. To address these challenges, the need for coordinated and integrated management between the water and land sectors is becoming urgent. Management options are available to sustainably increase productivity and production levels if innovation in management and technology can be scaled up in the
transition to green agrifood systems. However, none of these can go far without planning and managing land, soil and water resources through effective land and water governance (FAO, 2021b) and implementing integrated water and land policies. Such policies need to provide strong and equitable public governance that secures the resource rights of food for insecure people and creates incentives for investment in sustainable natural resources management. Policies also need to build resilience to climate change, generating benefits for both food security and nutrition and ensuring a better environment.

5. Integrated planning and use of resources and the implementation of sustainable practices can help maintain ecosystems; improve land, water and soil quality; reduce input use; and strengthen the resilience and adaptation capacities of farming systems to extreme weather events linked to climate change.

6. The sustainable use of these resources is key to achieving climate mitigation and adaptation targets. For example, the wise use of soils alone can potentially sequester one-third of greenhouse gas emissions from agricultural land (FAO, 2021a).

7. To ensure the sustainable use of land and water resources, a national and regional multisectoral approach is imperative. This approach would provide policy guidance, establish governance structures and share good practices that contribute to a more sustainable and resilient agrifood system, bolster ecosystem services, conserve biodiversity and improve nutrition and livelihoods.

8. Advancing land and water governance through supporting important transformative changes in agrifood systems globally is explicitly embodied in the FAO Strategic Framework 2022–2031 and its four betters – especially a better environment and better production, in line with the following Programme Priority Areas: Climate change mitigating and adapted agrifood systems (BE 1); Prevent and reverse ecosystem degradation (BE 3); Innovation for sustainable agriculture production (BP 1); and Blue transformation (BP 2). It is also reflected in FAO strategies and policies, including the FAO Science and Innovation Strategy, the FAO Strategy on Climate Change, the FAO Strategy for Private Sector Engagement, the Vision and Strategy for FAO’s Work in Nutrition, the FAO Policy on Gender Equality 2020–2030, and the FAO Strategy on Mainstreaming Biodiversity across Agricultural Sectors. This collaborative effort would seek to contribute to the achievement of the goals of the three Rio Conventions, especially the United Nations Framework Convention on Climate Change, Paris Agreement. This effort also would focus on the achievement of the Sustainable Development Goals (SDGs), including SDG 2, SDG 6, SDG 14 and SDG 15, and especially Target 15.3 and Target 6.4, thereby supporting the attainment of the 2030 Agenda for Sustainable Development towards more efficient, inclusive, resilient and sustainable agrifood systems.

9. The United Nations Biodiversity Conference in 2022 adopted a landmark agreement to guide global action on nature through 2030, targeting the effective conservation and management of at least 30 percent of the world’s land, coastal areas and oceans, demonstrating increasingly ambitious global effort.

10. In 2012, the United Nations Committee on World Food Security endorsed the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT). The VGGT are among the first international instruments that provide comprehensive guidance on the governance of natural resources. When the process of developing the VGGT started, it was initially envisaged that water tenure would be part of the VGGT and that the high-level principles of the VGGT would be further developed in the form of specific technical guidelines on water tenure (FAO, 2016).

11. Moreover, applying a holistic, intersectoral approach to avoid, reduce and reverse land degradation is connected to Strategic Objective 1 of the United Nations Convention to Combat Desertification (UNCCD) 2018–2030 Strategic Framework, which aims to improve the condition of affected ecosystems, combat desertification and land degradation, promote sustainable land management and contribute to land

12. In the European Union Green Deal, approved in 2020, the Farm to Fork Strategy and Biodiversity Strategy synergistically interconnect to drive sustainable land and water management, fostering a transformative agrifood system. In addition, the newly adopted nature restoration law places recovery measures on 20 percent of European Union land and sea by 2030 and covering all degraded ecosystems by 2050.

II. Challenges at regional level

13. The Europe and Central Asia region encompasses a great deal of natural, economic and social diversity. As a result, the nature and extent of food insecurity problems vary throughout the region (FAO, 2017), which spans a wide range of territories, topographies, tenure systems and farm structures.

14. The Europe and Central Asia region is facing several challenges related to water and land. A significant concern is degradation, which varies across countries and subregions of the region. In Central Asia, estimates are that from 4–10 percent of cropland, 27–68 percent of pastureland and 1–8 percent of forested land are degraded in each country (Quillerou et al., 2016). More than half the land in Central Asia is salinized, making soils unsuitable for growing crops. The main underlying causes include unsustainable agricultural practices, such as overgrazing, the excessive use of chemical fertilizers and pesticides, improper and unmaintained irrigation techniques and infrastructure, monoculture farming and improper water management practices such as inefficient irrigation systems and improper drainage, which frequently result in soil waterlogging and salinization. In western and northern Europe, land degradation is a consequence of land use change through increased urbanization and the development of new infrastructure, while in the Mediterranean region, soil degradation is primarily caused by soil loss through erosion. The insecurity of tenure of land and water resources further exacerbates management problems.

15. In Europe overall, 40 percent of the surface water bodies are in good or better ecological status, while 60 percent did not achieve good status (European Environment Agency, 2018). Water resources and ecosystems in the Europe and Central Asia region are also affected by climate change. Reductions in precipitation due to the anticipated adverse impacts of climate change may lead to a rise in water withdrawal for agriculture from surface- and ground-level sources. When water is substantially withdrawn for agriculture, the result is higher levels of water stress. By 2030, it is expected that every country in Central Asia and the Caucasus, except Georgia, will be experiencing “high” or “extremely high” levels of water stress. This is also anticipated for some countries in the Commonwealth of Independent States, such as the Russian Federation and Ukraine, for North Macedonia and Türkiye in Southeastern Europe, and for several European Union countries, including Greece, Italy, Portugal and Spain (Van ’t Wout, Celikyilmaz and Arguello, 2021).

16. The lack of coordination among the water, agriculture, forestry and energy sectors prevents an integrated approach in the management of watersheds and has produced, in some cases, contradicting policies and suboptimal development results. Therefore, integrated and multisectoral planning of land and water resources is urgently needed.
17. The population in the Europe and Central Asia region is expected to increase by 23.7 million between 2025 and 2050 (Worldometer, 2023), with over 80 percent residing in urban areas; thus, the demand for food and feed will increase and the per capita available land for food production will decrease.\(^1\) This, in turn, will put additional stress on existing natural resources, including land and water. Meeting SDG 2 in Europe and Central Asia thus requires the promotion of agricultural practices for the sustainable management of water and land, in addition to energy-saving technologies. Future food demand must be met on existing agricultural land through sustainable intensification and the improved use of natural resources (FAO, 2017).

III. FAO’s response

Global level

18. FAO’s responses to water-related issues include the establishment of the Global Framework on Water Scarcity in Agriculture in 2017 to support countries in achieving the SDGs (specifically, SDG 6 and SDG 2, while also contributing to the attainment of SDG 1, SDG 3, SDG 5, SDG 13, SDG 15 and SDG 17).

19. A global water information system, AQUASTAT, established by FAO, is known to be the most-quoted source on global water statistics. It collects, analyses and disseminates data and information by country, by region and for the world and plays a key role in the monitoring of SDG 6 and, in particular, Indicator 6.4 on water stress and water use efficiency.

20. FAO Members emphasized during the Forty-third Session of the FAO Conference in Rome in July 2023 that water management needs to be integrated at all levels, inclusive of all stakeholders, and coherent across dimensions ranging from forestry and soil to energy and One Health; they also stressed the need for improved water governance to ensure efficient, sustainable and equitable allocation and usage.

21. Integrated land use planning is needed at different levels of decision-making to promote the sustainable and efficient use of resources, safeguard ecosystems, and cope with the current and future challenges of population growth and increasing demands. The overall aim is a systematic assessment of land potential and alternatives for optimal land and water use and improved economic and social conditions through participatory processes and with the involvement of different sectors and stakeholders, generating multiple benefits and opportunities for local and national economies and private/public investments. FAO is currently in the process of a wide consultation for finalizing the guidelines for integrated land use planning.

22. As soil is another essential resource and a vital part of the natural environment, the Global Soil Partnership, hosted by FAO, was established in 2012 as a mechanism to develop a strong interactive partnership and enhanced collaboration and synergy of efforts among all stakeholders. From land users through to policymakers, one of the key objectives of the Global Soil Partnership is to improve governance and promote the sustainable management of soils.

23. During the 2022 United Nations Climate Change Conference, FAO established the Food and Agriculture for Sustainable Transformation Initiative (FAST), a multistakeholder partnership acting as an accelerator to transform agrifood systems to deliver triple wins – for people, for climate and for nature. FAST is designed as a catalyst, building on ongoing global and regional initiatives and coalitions to drive effective actions and avoid duplication.

\(^1\) From 2000 to 2019, agricultural land per capita declined by 22 percent worldwide (FAO, 2021b).
Regional level

24. In response to the above-mentioned challenges, FAO began supporting the programme countries of the region through various projects and actions.

25. The challenges of land and water at the regional level are addressed through two programmatic umbrellas:

26. Regional Initiative 1 on empowering smallholders, family farms and youth through inclusive rural transformation, digitalization and innovation aims to support inclusive growth for rural economies based on sustainable use of natural resources.

27. Regional Initiative 3 on managing natural resources sustainably and preserving biodiversity in a changing climate is designed to support Members in strengthening national capacities and providing mechanisms for achieving sustainable natural resources management through transitioning to more resilient and sustainable agrifood systems.

28. Under its programmatic umbrella, the FAO Regional Office for Europe and Central Asia aims to enhance water policy in Central Asian agrifood systems by conducting studies on water policies, establishing a subregional water policy platform to facilitate dialogue, and reviewing policies on the governance of water resources in agrifood systems in Central Asia. In Azerbaijan, to enhance the resilience of the most vulnerable communities, it was planned to set up adaptive policies on land use, integrate into the tourism value chain and water management, and contribute to a better environment.

29. FAO actively aids countries in achieving LDN by generating on-the-ground information, data and tools to combat land degradation, desertification and drought. It promotes sustainable integrated land use planning, land management practices, soil resource management and drought management while emphasizing the links among LDN, food security, poverty reduction, biodiversity and ecosystem services. FAO adopts coherent approaches to address governance, gender and local community aspects within the role and mandate of the United Nations Convention to Combat Desertification (UNCCD), collaborating with other international organizations to secure attention, create an enabling environment and improve funding for such initiatives.

30. In 2022, FAO and the UNCCD Secretariat published a technical guide intended to support policymakers and decision-makers by apprising them of how secure tenure rights can contribute to LDN and provide possible solutions to land tenure challenges. FAO recognizes the significance of tenure integration in LDN and sustainable land management initiatives and is actively supporting numerous countries in their LDN efforts. For instance, in Georgia, a LDN project focuses on restoring and sustainably managing degraded pasturelands and has effectively integrated tenure governance into the national pastureland management policy document. In the Republic of Moldova and Ukraine, FAO is supporting the creation of an enabling policy environment for integrated natural resources management to achieve LDN. In a sustainable forest management project in Uzbekistan, FAO is raising awareness and providing support on land tenure issues in the forestry sector.

31. In Ukraine, to support the restoration of land, soil and agricultural livelihood activities in areas severely affected by mining and the explosive remnants of war, FAO and its partners are jointly implementing an integrated project that uses satellite imagery to identify and map lands that require demining and then clearing those lands from mines and other explosive remnants, in close coordination with communities, local authorities and the Ministry of Agrarian Policy and Food of Ukraine.

32. These practical examples demonstrate that integrating the governance of tenure is essential not only in LDN projects but also in broader natural resources management projects. FAO has assisted 12 Members
in the region with land consolidation, developing national land consolidation programmes and providing normative work to guide the process.

33. In 2022, the FAO Regional Office for Europe and Central Asia launched the Regional Technical Platform on Green Agriculture, which provides a digital, user-friendly, open, intraregional and interregional gateway for sharing information. It is a knowledge repository that facilitates connections among expert networks regarding various technical areas related to green agriculture, including land management instruments and support for the development of agricultural land markets, LDN, and soil and water management.

Technical topics

34. The Forty-third Session of the European Commission on Agriculture will discuss four technical topics, selected because of their critical importance in addressing the above-mentioned challenges faced by agriculture and natural resources management in Europe and Central Asia. An integrated, holistic approach would enable the optimization of resource management, foster sustainable agriculture, build climate resilience, protect water quality and promote broader societal well-being.

35. During the Informal Consultations held in May 2023, Members of the Europe and Central Asia region identified land and water resources management as a priority area of work for the 2024–25 biennium.

36. The first topic (ECA/43/23/4), agenda item 4, discusses enhancing the resilience and sustainability of national agrifood systems through integrated land and water resources management. The topic tries to build a bridge between water and land resources management, which until today often have been managed with no or limited coordination. It introduces the concept of integrated land and water resources management, which emphasizes the holistic and coordinated management of water resources and land use, enhancing resource efficiency, environmental sustainability and socioeconomic well-being. The need for harmonized policies and regulations across sectors and countries – entailing the aligning of land and water management frameworks, the breaking down of silos, and the fostering of collaboration among relevant stakeholders – is a key consideration. In addition, the establishment of appropriate financial incentive structures is essential to encouraging sustainable practices. Integrated land-use planning provides the mechanisms to consider resources in a holistic manner, leading to the optimization of resources to enhance sustainability and improve food security.

37. The second and third topics (ECA/43/23/5 and ECA/43/23/6), presented under agenda item 5, outline the challenges of land governance and LDN and its joint recommendation. The governance of tenure in the context of integrated land and water management underlines the need for integrating the governance of tenure into natural resource management efforts, including LDN, strengthening the security of tenure of land and water resources, and applying multipurpose land consolidation instruments for integrated land and water management. The background document also draws attention to the importance of water tenure and the good governance of water resources, considering that land and water rights have always been strongly interlinked, particularly in Central Asia. An overview of LDN in the region is provided, including its indicators and interlinkages with land tenure and gender. The joint recommendations call on Members to strengthen national capacities and coordination to align countries’ international restoration commitments across different conventions and to promote the sustainable land management and integrated ecosystem management approaches central to achieving LDN and tailored to the region within an integrated approach.

38. The final topic (ECA/43/23/7), presented under agenda item 6, discusses the importance of water governance for enhancing water security in Europe and Central Asia. Water security is an emerging challenge, and integrated water resources management has gained prominence in recent years. Agriculture, being the largest user of water and a vital part of the solution, necessitates integrated water management inclusive of all stakeholders and coherent across various dimensions. Recommendations to strengthen water
governance include establishing a steering centre for comprehensive water sector reforms, improving legal and policy frameworks, enhancing institutional mechanisms, investing in capacity building, promoting integrated approaches, securing adequate financing, embracing climate resilience, and ensuring transparency and accountability.

39. Energy is often discussed within the water and land nexus. As energy is undoubtedly a crucial aspect of sustainable development and has significant implications for agriculture and natural resources management, it is also mentioned in the background documents. However, it is not discussed as a separate technical topic. Energy is a vast and diverse field with multiple dimensions, including renewable energy, energy efficiency and energy access, each deserving separate and comprehensive discussions.

40. By discussing these topics with the Members, the aim is to foster collaboration and coordination among stakeholders, potentially leading to harmonized policies and regulations across sectors and countries. This, in turn, will enable more efficient, sustainable and equitable allocation and usage of land and water resources. Moreover, the discussions seek to identify practical solutions and recommendations to achieve LDN, improve land and water governance, and promote integrated land and water management for enhanced food security and more resilient agrifood systems, socioeconomic well-being, and environmental sustainability.

References


