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COMMITTEE ON AGRICULTURE

Twenty-eighth Session

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Governance of tenure of water resources for food and agriculture

Executive Summary

With more than 733 million people currently living in areas of high or critical water stress, and a projected 30 percent increase in global water demand by 2050, the question of water resources allocation has never been more important. Agriculture is by far the largest user, accounting for 72 percent of global water withdrawals. At the same time, agriculture faces increasing competition from industry, cities, and the environment. To overcome such challenges, it is time to address the water tenure and responsible water governance.

Some water tenure arrangements derive from formal law, while others are customary arrangements, which may or may not be recognized by formal law. Customary tenure arrangements relating to natural resources can assist in securing the tenure of a wide range of individuals and groups, including vulnerable populations, Indigenous Peoples and local communities. Different types of water tenure arrangements confer varying degrees of participation and inclusiveness, security, equity, sustainability, transparency, accountability and efficiency in allocation.

Water was not included in the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forests and Fisheries in the Context of National Food Security (VGGT)*, endorsed by the Committee on World Food Security (CFS) on 11 May 2012. FAO and its partners have spearheaded initiatives which show that a water tenure approach offers a unique perspective to understand the complexity of water rights and allocation systems and identify actionable and context-specific avenues to improve the governance of water tenure, as well as increase equity and security for water users.

Increasing water demand, coupled with the predicted impacts of climate change, poses a significant challenge for all countries in the context of food security. It will be necessary to strike a balance between the security necessary for investment and a sufficient flexibility, so that water is managed in a transparent and equitable manner to address the impacts of climate change and evolving needs. The responsible governance of water tenure can be an important vehicle for achieving this balance.

A Global Dialogue on Water Tenure, sponsored by FAO, can lead to an agreement on voluntary guidelines defining principles for responsible governance of water tenure through an inclusive and consultative process that includes relevant stakeholders and complemented by technical guidelines which could assist Members on development and implementation of policies for a responsible governance of water tenure in the context of achieving food security.

Suggested action by the Committee

The Committee is invited to:

- *recognize* the importance of water tenure for the responsible governance of natural resources;
- *appreciate* FAO's support to countries through a "Global Dialogue on Water Tenure" and *look forward* to receiving regular updates on progress; and
- *encourage* Members to actively engage in the "Global Dialogue on Water Tenure".

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I. The challenge of access to water resources for food security under conditions of water scarcity and climate change

1. With more than 733 million people currently living in areas of high or critical water stress[1] and a projected 30 percent increase in global water demand by 2050,[2] water allocation has never been more important. Agriculture is by far the largest user, accounting for 72 percent of global water withdrawals, mostly for irrigation[3]. Yet, to feed a projected global population of 10 billion in 2050, agricultural production will need to increase by almost 50 percent,[4] with much of this growth being achieved through irrigation.

2. Agricultural water use faces increasing competition from industry, cities and the environment. And, a degraded environment makes human and animal diseases more likely as recognized by the One Health approach.[5] Looming over this picture is climate change, which is predicted to have significant impacts on water availability around the world.[6]

3. The challenge facing countries is both quantitative and qualitative. On the one hand, it is a matter of *how much* water is available in rivers, lakes, streams and aquifers and *how much* should be allocated to different water use sectors (household, agriculture, industry, the environment, etc.) On the other, it is a matter of *how* water with different quality is allocated for different uses by various groups, and of *how* decisions on allocations and tenure arrangements are made. In the face of this challenge, it is time to seriously address the issue of water tenure and its responsible governance.

II. What is water tenure?

4. A working definition of water tenure, validated at an FAO Expert Roundtable on Water Tenure in 2019, is "the relationship, whether legally or customarily defined, between people, as individuals or groups, with respect to water resources."[i]

5. There are differences between water tenure and land tenure. Some concern the different nature of the resources: water is flowing, fugitive, and is renewed through the hydrological cycle, while land is fixed and immobile. Some relate to the ways in which people use them: while land can be occupied, most uses of water resources include its impoundment and abstraction from a natural source. Others involve the nature of peoples' relationships with the resources: private ownership of water resources, for example, is not possible in most jurisdictions.

6. Nevertheless, there are many similarities between land tenure and water tenure. While many types of water tenure arrangements derive from formal law, others do not. As with land tenure, responsible water tenure arrangements can prevent conflict, poverty, food insecurity and environmental degradation. Secure water tenure arrangements are necessary to encourage investment in water resources. Given the vital importance of encouraging water use efficiency, particularly in irrigation, this last point is particularly relevant: who will invest in improved water management without secure water tenure? How to balance the enormous need for investment in water resources

[1] FAO and UN Water. 2021. *Progress on the level of water stress: Global status and acceleration needs for SDG indicator 6.4.2, 2021*. Rome. https://doi.org/10.4060/cb6241en.
[2] Under a Business as Usual Scenario, FAO. 2021. *The State of the World's Land and Water Resources for Food and Agriculture - Systems at breaking points. Synthesis report 2021*. Rome. https://www.fao.org/documents/card/en/c/cb7654en
[3] FAO and UN Water. 2021. Op. cit.
[4] FAO. 2017. *The future of food and agriculture – Trends and challenges*. Rome. http://www.fao.org/3/i6583e/i6583e.pdf
[5] https://www.fao.org/one-health/en/
[6] Climate models predict decreases in renewable water resources in some regions (mid-latitude and dry subtropical regions) and increases in others (mainly high and humid mid- latitude regions). Even where increases are projected, there may be short-term shortages due to the changing streamflow caused by greater variability in rainfall. FAO. 2021. Op. cit.

infrastructure, including for agriculture, water supply hydropower and climate change adaptation,[7] while ensuring the protection of existing uses and users?

7. Access to water for household and agricultural use is key for millions of smallholder farmers and their families to sustain their livelihoods, as well as for inland fishers and those who depend on wetland products. Seventy-seven percent of smallholder farms in low- and middle-income countries are located in water scarce regions, and less than a third have access to irrigation.[8] In many countries, access to and use of water resources in rural areas is governed by customary arrangements, which may or may not be recognized and protected by formal law, and by a range of informal water tenure arrangements. A key challenge to sustain and improve water and food security for rural populations, particularly in areas affected by water scarcity, is to include such types of water tenure arrangements in the effort to effectively manage water resources.

8. Customary tenure arrangements for natural resources can play a significant role in securing the tenure of a wide range of individuals and groups, including Indigenous Peoples and local communities (IPLCs), and particularly the women within those communities.[9] The community-based tenure systems employed by IPLCs worldwide regulate access to and use of natural resources on at least half the world's land mass, including over 60 percent of the land in Sub-Saharan Africa.[10] Secure community rights to use and govern freshwater for multiple purposes are necessary for the survival, health, food security and livelihoods of communities, but also for supporting their abilities to effectively steward water resources in their territorial resource management practices, while preserving communities' cultural identities and knowledge.[11] Customary laws can also be amenable to flexible conflict resolution mechanisms around natural resources.[12] The recognition of IPLCs' water tenure is also aligned with the progressive articulation of international legal definitions of territorial and land-related rights of these communities, which include rights to their water resources.[13]

9. Beyond the socio-legal difference between different types of tenure arrangements, a water tenure assessment can shed light on the economic impacts of different types of tenure arrangements and on the basic issues of equity in terms of who holds which rights of the resource, and how secure those rights are. As with land tenure, governance issues are as important as the arrangements themselves in terms of decision-making, efficiency, transparency, and administration.

10. Of the different types of water tenure arrangements identified so far, the ones deriving from formal law include:

a. water rights that derive from land tenure or past water use;

b. permit-based water rights to abstract, impound and use water that derive from water laws or acts, as well as simplified rules for the use of water resources by small-scale users;

c. water rights created on the basis of foreign investment concessions, often for hydropower or agribusiness purposes;

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[7] Significant investments in storage, through the construction of new reservoirs will be necessary to capture run-off arising from altered precipitation patterns.

[8] FAO. 2021. Op. cit.

[9] See e.g. Platteau (1996). *The Evolutionary Theory of Land Rights as Applied to Sub-Saharan Africa: A Critical Assessment, Development and Change 27(1)*: 29-86.

[10] Rights and Resources Initiative (RRI). 2015. *Who Owns the Land in Africa? Formal recognition of community-based land rights in Sub-Saharan Africa.* https://rightsandresources.org/publication/who-owns-the-land-in-africa .

[11] Troell and Keene. 2022 (forthcoming). *Legal Recognition of Customary Water Tenure in Sub-Saharan Africa: Unpacking the Land-Water Nexus*. IWMI Research Paper.

[12] Se e.g., World Bank (2003), *Land Policies for Growth and Poverty Reduction. A World Bank Policy Research Report*. Oxford University Press. Oxford

[13] See, e.g., The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), Arts. 25, 27-8; a. ILO Convention No. 169 on Indigenous and Tribal Rights, Art. 15; African Commission on Human and Peoples' Rights (ACHPR). July 2019. Guidelines on the Right to Water in Africa. Available at: https://www.achpr.org/presspublic/publication?id=83 . Para. 3.3; and the UN General Assembly Declaration on the Rights of Peasants and Other People Working in Rural Areas, Arts. 17, 18, 21.

d. powers conferred on irrigation, industrial or regional development agencies to develop water infrastructure and to supply water in bulk;

e. rights of contract holders for bulk water supply, including industry, water utilities, individual farmers or water user organizations;

f. rights of water user organizations' members against their respective water user organization, which depend almost entirely on the good governance of these organizations; and

g. minimum environmental flow requirements.

11. At the same time, the different relationships with water resources that do not derive from formal law (i.e. water tenure arrangements) can be identified as:

a. arrangements that derive from customary or local law;

b. relationships that derive from religious or spiritual practices;

c. informal arrangements that may arise because laws are not properly implemented or relate to activities that are tolerated by the authorities, perhaps because they cannot implement the water law, which also include illegal use or "water theft";

d. "assumed" tenure arrangements that arise when it is erroneously believed that public water users do not need, or have already obtained, permits required by law; and

e. "unrecognized" water tenure, which arises when specific relationships, such as the use of water by land fishers, are not recognized by water laws that are primarily concerned with the impoundment and abstraction of water.

12. New types of relationships, which are emerging, include the notion of legal personality for rivers, which is also a type of water tenure arrangement.

13. Different types of tenure arrangement confer varying degrees of security. In terms of formal water tenure arrangements, the degree of security that they create depends on a range of issues, including the duration of the rights conferred and, crucially, the extent to which governance arrangements are implemented.

14. At the same time, all water relationships relating to the same resource are interrelated. The construction of a hydropower dam upstream, for example, may have significant adverse impacts on all downstream uses. Without secure water tenure, such uses may easily be overlooked.

III. FAO's recent work on water tenure

15. When the process of developing the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forests and Fisheries in the context of National Food Security (VGGT)* began, the original intention was to include water tenure. One of the first definitions of land tenure in an FAO publication explicitly referred to water, and included by implication water tenure as part of land tenure.[14] Some preliminary work was undertaken accordingly,[15] even though the term water tenure was not of common usage. When the CFS officially endorsed the VGGT on 11 May 2012, water tenure was omitted.

16. FAO continued to explore the usefulness of the water tenure concept, which was discussed at an expert meeting on water governance and tenure held at FAO headquarters in 2014. Three case studies in India, South Africa and Spain were published in the 2016 study *Exploring the concept of water tenure*.[16]

[14] "*Land tenure is the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land. For convenience, "land" is used here to include other natural resources such as water and trees*" (FAO. 2002. *Land tenure studies* N°4, Rome.)

[15] Expert group meeting on the Voluntary Guidelines on Governance of Tenure of Land and other Natural Resources held at FAO headquarters, in Rome, on 24 November 2008.

[16] http://www.fao.org/3/i5435e/i5435e.pdf

17. In 2019, the Expert Roundtable on Water Tenure was held, and the project Knowing-Water Better (KnoWat) was launched, which links water accounting and water tenure assessment in Rwanda, Senegal and Sri-Lanka. The KnoWat project has also held a highly successful online seminar series, the Water Tenure Mondays, sharing water tenure experiences from around the world. Water tenure also has been addressed as part of the Water Scarcity Initiative for eight countries in the Near East and North Africa: Algeria, Iran, Jordan, Lebanon, Egypt, Morocco, Tunisia and Palestine. Furthermore, preliminary water tenure assessments have recently been completed in Indonesia and Viet Nam as key elements of FAO's Asia Pacific Water Scarcity Programme. FAO has collaborated with the Environmental Law Institute (ELI), which has undertaken pioneering work on community-based water tenure.

IV. Findings to date

18. The findings from FAO's work to date show that a water tenure approach offers a unique perspective to understand the complexity of water rights and allocation systems. These extremely interesting findings include:

a. water tenure arrangements are complex. Apart from the number of types of water tenure arrangements, the legal framework is often complex too. While most countries have water laws, many other laws and regulations on land, irrigation, energy, and the environment have an impact on water allocation. These linkages must be well understood, and legislative coherence assured to make water allocation transparent and accountable and ensure tenure security of legitimate water uses;

b. with Target 6.5 of Sustainable Development Goal 6 on Clean Water and Sanitation calling for the implementation of integrated water resources management (IWRM) at all levels by 2030, many countries have recently adopted new basic water laws or acts or are in the process of doing so. Implementation and enforcement remain a serious challenge, however, with many water laws not or only partly implemented;

c. institutional arrangements for water tenure governance frequently suffer from overlapping responsibilities and mandates;

d. customary or local law water tenure arrangements are not always recognized by formal water law;

e. some water tenure arrangements, particularly customary ones, are tied to land or other resource rights. These linkages must be well understood;

f. a *bundle of rights* approach may be useful in understanding various rights, duties and practices that comprise water tenure arrangements;

g. in many countries, the limited institutional capacity to implement permit-based water allocation systems results in a focus on larger users, posing a particular challenge to the equitable reach of these systems, leaving many water users, mostly vulnerable ones including small farmers, without legal protection of their water tenure rights;

h. data on available and actual use of water resources is often scarce. This poses a threat to water tenure systems, which should be underpinned by sound water accounting to provide reliable information on water resources. The combination of on-the-ground observation with new remote sensing technology may offer cost-effective ways to improve data availability on water resources.

i. less than 50 countries worldwide have laws or policies that specifically mention women's participation in rural sanitation and water resources management.[17] A recent assessment of 15 countries' legal recognition of community-based water tenure found that laws

[17] FAO. 2021. Op. cit.

regulating community-based freshwater rights are typically gender-blind, providing no specific recognition or protections for women's water tenure rights.[18]

19. A closer examination clearly shows that water tenure is, and can only be, applicable at national level. Just as land tenure rules in a given country can have no impact on the rights and wrongs of a disputed boundary, water tenure arrangements applicable in a country can have no bearing on that country's claims relating to water resources regarding other riparian States.

V. The case for a global dialogue on water tenure governance

20. Increasing water demand, coupled with the predicted impacts of climate change, poses a significant challenge for all FAO Members in terms of water allocation in general, and the governance of water tenure particularly in the context of food security. It will be necessary to strike a balance between the security and certainty necessary for investment and a sufficient degree of flexibility so that water can be re-allocated in a transparent and equitable manner to reflect climate change impacts and evolving needs. This can be achieved through the responsible governance of water tenure.

21. Strengthening the governance of water tenure is a common challenge faced by all countries. Those with abundant water resources and reliable rainfall have hitherto had less need to pay attention to water allocation and the governance of water tenure. This situation is expected to change due to the effects of climate change. In countries with an arid climate, the question of how to allocate scarce water resources risks turning into an existential issue.

22. The challenge is both complex and common to all: how to create mechanisms to recognize legitimate water tenure rights that are not currently protected or recognized in law, to balance security of tenure against flexibility, address groundwater tenure and use, reflect water quality in water tenure arrangements, ensure environmental water needs, and prevent conflict over water resources? In short: how to set up equitable, secure and resilient water tenure systems?

23. No country has all the answers, yet. Solutions will need to be developed by the international community working together. FAO can play a vital role in sponsoring a "Global Dialogue on Water Tenure", through an inclusive and consultative process that includes governments, civil society and other multistakeholder platforms, together in initiating the process. A first step will be to undertake more research into water tenure arrangements and their components, for example by analysing them through a bundle of rights approach, building on FAO's existing work to date. The next step will be to set up a series of exchanges between countries, at both regional and global levels, as to what works, in a given context, and what does not. Through this Dialogue, principles for the responsible governance of water tenure could be recognized. This initiative is aligned with the FAO Strategic Framework 2022-31, in particular the Programme Priority Area "Small-scale producers' equitable access to resources" (BP4).

24. This process could be complemented with a series of technical guidelines on matters such as water rights' administration; tenure arrangements within water user organizations; improving investment agreements that relate to water resources building on the CFS Principles for Responsible Investment in Agriculture and Food Systems[19]; understanding the linkages between land, forest, fisheries, and water tenure; specific considerations for recognizing and protecting women's water tenure rights; and the recognition of customary water tenure arrangements in formal law.

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[i] FAO. 2020. *Unpacking water tenure for improved food security and sustainable development. Land and Water Discussion Papers*. Rome. https://www.fao.org/3/cb1230en/cb1230en.pdf

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[18] Rights and Resources Initiative (RRI), ELI. 2021. *Whose Water? A Comparative Analysis of National Laws and Regulations Recognizing indigenous Peoples', Afro-Descendants' and Local Communities' Water Tenure*. https://rightsandresources.org/publication/whose-water/

[19] Available at http://www.fao.org/3/a-au866e.pdf