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Water Governance for Agriculture and Food Security

Executive Summary

Agriculture, which accounts for 70 percent of all water uses, is increasingly required to 'make its case' for its share of water to enable food production and ensure food security. At the same time, the sustainability of agricultural water use is under increasing scrutiny. In recent decades, attempts to solve the growing water issues have focused on management issues without considering the governance dimension, and mostly on a sectoral basis. While successful in many ways, this approach seems to have reached its limits.

The issues of optimal allocation of scarce water resources, increasing productivity of water, modalities of control, access, use and management of water by different stakeholders are closely related, and there is a need to consider how the issues of control over, competition for, and access to water resources should be dealt with, together with the issues of efficient and effective management.

Over recent years, efforts to support more effective water governance have intensified, with several initiatives promoted by international organizations. These initiatives are helping advance knowledge and promote more effective governance. However, they do not fully integrate the dimension of the critical linkage between water, land, agriculture and food security. Due to its fundamental importance for effective water allocation and management, a new emphasis on the governance dimension is essential to allow FAO to better assist member countries in making the institutional, legal, and political adjustments that are required to effectively cope with emerging water issues.

This paper describes FAO's work on water and proposes a framework for FAO to engage more systematically in water governance, and establish its policy and domains of intervention in the following mutually supportive areas:

- 1) Addressing the linkages, boundary conditions and interfaces between agriculture, water and related key sectors and elements such as food, land, energy, natural resources, societal goals, and major drivers of change.
- 2) Moving the scale of intervention from management to governance of water for agriculture, and pointing to the underlying issues that management approaches alone cannot solve; and,
- 3) Addressing governance issues of access, rights and tenure from the perspective of sustainability, inclusiveness and efficiency.

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Suggested action by the Committee:

The Committee is invited to:

- 1) Take note of the ongoing and proposed efforts to more systematically integrate the governance dimension in FAO's work on water, and provide further guidance on them.
- 2) Endorse the proposed work and its processes for integration in ongoing and future work plans of the Organization.
- 3) Recommend that FAO member countries consider incorporating water governance for food security and sustainable agriculture in their policies and priority frameworks as well as in their collaboration with FAO and other relevant partners.

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I. Introduction

1. Global projections indicate that demand for freshwater will increase significantly over the coming decades due to population growth, diversified diets, economic development, urbanization and climate change. Agriculture accounts for 70 percent of total global freshwater withdrawals and more water will be needed for agricultural production, as 60 percent more food will be required to feed the world by the year 2050. Furthermore, the dynamics of water allocation often do not favour agriculture, which is increasingly required to ‘make its case’ in claiming its share of water for food production and food security against increasingly strong pressure from cities, industries, energy, and against growing claims to ensure that enough water is available to support the functioning of major freshwater ecosystems.

2. Despite the clear linkages between its multiple functions, water is managed today at all levels in a fragmented manner. Water-related responsibilities at the government level are often dispersed across several institutions and effective coordination is an exception rather than the norm, both at the decision-making level and at the level of implementing entities.

3. A stronger focus on water governance is needed as, on the one hand, water management alone is showing to be less and less effective to solve the problems, and, on the other, the sectors and issues (such as those involving water, food and energy) are so interlinked that no sector can operate rationally in isolation. The justification for the work described in this paper resides in the benefits coming from providing member countries and relevant stakeholders with a coherent and systematic perspective on and associated options for water governance with a focus on sustainability and food security, along with a coherent approach for sound, implementable and replicable work.

II. Water governance milestones

4. Up to the end of the last century, questions of water *management* have dominated the discussions, efforts and proposed solutions to water problems. Today this approach seems to have reached its limits, and at the turn of the century governance of water resources has emerged as a prominent issue for the international community, with significant implications in terms of food security and economic development. In broad terms, water governance refers to the processes, actors, and institutions involved in decision-making for the development and management of water resources and for the delivery of water services, encompassing the political, administrative, social and economic domains along with the formal and informal systems and mechanisms involved.

5. The importance of governance for the achievement of sustainability was highlighted during the Earth Summit in 1992, and in 2002 the World Summit on Sustainable Development launched a “Dialogue on Effective Water Governance”. The Bonn International Conference on Freshwater in 2001 acknowledged the water governance challenge as a top priority area. In the first edition of the World Water Development Report, the UN system’s water coordination platform, UN-Water partners collectively stated that “water crisis is essentially a crisis of governance”. At FAO, the Committee on World Food Security (CFS) has recognized the importance of the governance issues and asked the High Level Panel of Experts on Food Security and Nutrition (HLPE) to prepare a report on Water and Food Security for its 42nd session in 2015. Water governance is one of the four components of the report in the HLPE scoping paper, with the focus described as “the governance of water management for food and nutrition security.”

III. Ongoing water governance programmes and initiatives

6. Over the last years, efforts to support governance in the water sector have intensified and several relevant initiatives have been promoted by international organizations:

- The Water Governance Facility (WGF), a joint initiative of the United Nations Development Programme (UNDP) and the Stockholm International Water Institute (SIWI), provides assistance and technical support to countries in areas such as integrated water resources management, transboundary water, water supply and sanitation, adaptation to climate change, gender, and integrity, to promote progress on water governance.

- The World Bank and the Global Water Partnership have worked on the concepts of ‘Effective water governance’ and ‘Good governance for good water management’, mostly in the framework of integrated water resources management. In 2007 the World Bank published a study on ‘Making the most of scarcity: accountability for better water management results in the Middle East and North Africa’, highlighting the critical importance of agricultural water governance issues.
- More recently, the Organisation for Economic Co-operation and Development (OECD) has launched the Initiative on Water Governance, a network of public, private and not-for-profit actors, to support better governance in the water sector through experience sharing, analytical work and peer-to-peer dialogue, gathering an inventory of water governance tools, practices and guidelines.
- The Groundwater Governance Programme is a joint initiative of FAO, the United Nations Educational, Scientific and Cultural Organization International Hydrological Programme (UNESCO IHP), the International Association of Hydrogeologists (IAH), the World Bank and Global Environment Facility (GEF), coordinated by FAO. The Programme's overarching goal is to put on the agenda of decision-makers the governance required to sustain the socio-economic benefits of groundwater and avert the impending water crisis. Implemented since 2011 through a consultative process with groundwater stakeholders worldwide, the Programme builds on existing knowledge and experience to develop a “Shared Vision” on groundwater, including guiding principles and processes, and a “Framework for Action”, with context-specific policy and institutional and investment arrangements.

7. While these initiatives help advance knowledge and promote more effective governance in the field of water, they do not sufficiently integrate the critical linkages between water, agriculture and food security.

IV. FAO’s past and ongoing work of relevance to water governance

A. FAO Water Scarcity Programme

8. The FAO water scarcity programme has been built progressively over the years in response to emerging challenges and in close consultation with relevant statutory bodies. In particular, following the recommendation of the Evaluation of FAO’s Role and Work Related to Water¹, an FAO Water Platform was established in 2010 and a draft strategic vision for water in FAO was developed, reflecting the importance, objectives and cross-disciplinary nature of water in FAO’s mandate.

9. During the biennium 2012-13, a Comprehensive Programme for Coping with Water Scarcity was initiated under Organizational Result F02. It aimed at supporting countries to address water scarcity in agriculture and strengthen their capacities to improve the water productivity of agricultural systems at national and river-basin levels, including transboundary water systems. The Programme adopted an integrated approach to water scarcity, from water capture to demand management, technological and managerial upgrading, and improved approaches to water resources assessment and monitoring. It is backed by FAO’s global monitoring capacity on water and agriculture (AQUASTAT). FAO also carries out the analysis of water-related legal, institutional and administrative frameworks in selected countries.

10. The approach of the Comprehensive Programme was further refined in the FAO’s Reviewed Strategic Framework, with greater focus on regional priorities, enhancing multi-disciplinary approaches and building partnerships. Water issues addressed by the Comprehensive Programme during the previous biennium cover a range of key priorities relevant for the Strategic Framework, such as making agriculture, forestry and fisheries more sustainable and productive and building a common vision for sustainable food and agriculture across different agricultural production systems. The Comprehensive Programme also addressed several aspects of relevance to current work on poverty reduction, food security and resilience.

¹ PC 103/9

11. A prominent example of the current work plan on water governance is the Regional Initiative on Water Scarcity (WSI) in the Near East and North Africa, under Strategic Objective 2, which has elaborated a Regional Collaborative Strategy on sustainable agriculture water management for food security and a Regional Partnership to support countries in the implementation of the collaborative strategy. The consultative process with countries and partners carried out during the pilot phase of the WSI revealed the need to upscale the water governance dimension, emphasizing the analytical approach applied to the following focus areas: 1. Strategic planning and policies; 2. Strengthening/reforming governance at all levels; 3. Improving water management efficiency and productivity in major agricultural systems and in the food chain; 4. Managing the water supply through reuse and recycling of unconventional waters; 5. Climate change adaptation; 6. Building sustainability, with focus on groundwater, pollution and soil salinity; and, 7. Benchmarking, monitoring and reporting on water use efficiency and productivity.

B. Other FAO activities related to water governance

12. **FAO's new Governance focus:** Governance is one of the two cross-cutting themes of FAO's Medium-Term Plan 2014-17. FAO assists governments and key stakeholders to analyse essential governance challenges for effective policy design and implementation, acting as a facilitator, and offering case studies to support evidence-based decision-making to strengthen governance mechanisms. The approach emphasizes the rules and processes that affect interactions between actors and seeks to incorporate in its framework widely shared principles to enhance legitimacy and effectiveness and support a widely shared, mutual learning governance process.

13. **The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT):** Endorsed by the Committee on World Food Security in 2012, the Voluntary Guidelines provide a set of principles and practices that help countries in establishing laws and policies that better govern land, fisheries and forest tenure rights. At the time of negotiating the VGGT, it was decided not to include water, on the understanding that the complexities of water management and the implications for the establishment of water tenure rights required further reflection. Water is referred to in the preface of the VGGT, where it is acknowledged that "the responsible governance of tenure of land, fisheries and forests is inextricably linked with access to and management of other natural resources, such as water and mineral resources", and states are invited to consider taking the governance of these resources into account in implementing the Guidelines.

14. **Watershed approaches:** FAO has developed conceptual approaches to natural resources management for watershed, landscape and territorial development and ecosystems that address the linkages and competition among the multiple users of resources. These approaches offer the means for implementing decisions and planning processes across different sectors in a sustainable and integrated way. Efforts to harmonize these approaches and increase their coherence and effectiveness are underway in the reviewed Strategic Framework. Water governance is central to successful landscape-related approaches and the river basin or watershed is the natural spatial unit for water management.

V. Approach and principles of FAO's work on water governance

15. The work on water governance is integrated within FAO's Strategic Framework. It contributes to and is harmonized with the cross-cutting theme of governance, helps serving relevant Regional Initiatives, and seeks to ensure coherence with activities related to the governance of other natural resources, notably land. It builds on FAO's past achievements and experience, in particular the 'Comprehensive Programme for Coping with Water Scarcity' and the 'Regional Initiative on Water Scarcity in the Near East and North Africa'.

16. Partnership is key to FAO's work on water governance, within FAO, with other partner organizations (including UN-Water) and with key stakeholders at global, regional and national levels. Internally, it makes use of the recently created FAO Water Platform. Water governance work is tailored to the needs of key levels of decision-making at regional, national and local scale. It recognizes the importance of governance of water in river basins and of the interrelationships between

land and water resources at the watershed/river basin scale. It adopts a non-prescriptive, flexible and demand-driven approach to problem-solving, acknowledging the diversity of situations and contexts in which stakeholders in member countries manage water resources.

VI. Proposed focus areas of FAO's work on water governance

17. Strengthening water governance for agriculture and food security is essentially concerned with enabling effective and efficient problem-solving in ways that are regarded as legitimate by the stakeholders. FAO will adapt existing governance assessment tools or develop new ones to specifically address governance issues related to water and food security and will facilitate the analysis and review of institutions, laws, strategies, planning, and investment frameworks in support of effective governance of water, both in terms of water quantity and quality. It will also promote the development of tools for water valuation in order to better assess trade-offs and co-benefits involved and inform about water allocation mechanisms.

18. The main elements to strengthen the governance dimension of FAO's programmatic work on water are proposed below, structured around key areas where water governance is considered of critical importance.

Water governance in river basins and watersheds

19. Efficient, sustainable and equitable allocation and use of water in the river basin require a good knowledge and understanding of the resource and its use, the capacity to anticipate changes, and a dialogue-based, cross-sectoral and inclusive process to give legitimacy to management decisions, backed by effective policies and institutions. FAO will continue to promote the development and adoption of sound and modern water accounting systems, scenario building and dialogue platforms to inform about decision-making in a context of increasing uncertainty, as well as the adoption of conducive policies, laws and related institutions. The work by FAO to address the Water-Energy-Food nexus is part of these efforts.

Water tenure

20. In many places, formal and informal water governance regimes have not kept pace with growing competition for water and are not conducive to its efficient and equitable management. Mechanisms to reflect values under scarcity and to enhance efficiency of use are generally lacking. Furthermore, farmers' water use rights are often informal and not protected by law or registered formally. The concept of water tenure can be a useful tool to extend the debate beyond water rights and administration and to understand linkages with land tenure, resources use efficiency and food security. FAO will gather evidence and engage in reviews, reflections and discussions with key stakeholders on the concept of water tenure and seek to develop a common understanding of its use as a governance instrument. This could, at a later stage, lead to a better integration of approaches to water tenure rights with recognized mechanisms such as the VGGT.

Governance of irrigation

21. The work on governance of irrigation involves tools and activities for irrigation modernization to support government institutions and other stakeholders, including water users organizations, to establish the enabling environment and strengthen institutional mechanisms for addressing the complexities of irrigation management. The direct objective is to support countries in increasing water productivity in irrigated agriculture, as a central solution to the water scarcity issue.

22. The work on modernization supports countries to assess the potential for increasing water productivity, and to identify the priority actions to fill these gaps and the associated costs, as well as the expected benefits for farmers' livelihoods, food security, economic returns and potential water savings. The interventions to improve productivity often need to be undertaken at different levels (country, region, basin, scheme, farm, plot). They include agricultural and water policy reforms, the design of the governance and institutional frameworks, incentive and regulatory measures for agricultural water users, targeted agricultural investments, improved market access, infrastructure

modernization, technology, mechanization, land reform, improved farm-management practices, better extension and water services, access to finance, etc.

Groundwater governance

23. The Groundwater Governance Programme implemented by a team of partners including FAO, is articulated around the implementation of the Framework for Action to strengthen groundwater governance, and the improvement of resource management and protection. The main components of the programme are the elaboration of a global Code of Conduct for groundwater governance and support towards the achievement of improved groundwater governance in a set of pilot countries and shared aquifers.

24. While certain groundwater governance provisions can be regarded as 'generic', such as the broad legal framework, the information/knowledge base, fundamental institutional capacity, and adequate and balanced financial investment, the Framework for Action recognizes that other governance provisions need to be specific to local contexts.

Governance of water for pollution control and water quality management

25. Water quality is another global challenge closely linked with agriculture, as both cause and victim of water pollution. Water quality governance is a complex subject, often non-existent, or lacking fundamentals and strength and prone to corruption. In partnerships with stakeholders, particularly the United Nations Environment Programme (UNEP) and the World Health Organization (WHO), FAO's work on water quality governance is focused on the development of tools (tailored quality standards, treatment and recycling guidelines, environmental impact assessment, measurement and monitoring, etc.), and on strengthening regulations and institutional reforms for water quality management and pollution control.

Putting food security at the centre of the international water debate

26. FAO will continue emphasizing water for food security and sustainable management of natural resources in agriculture in the international water debate at all relevant levels. This will be done through strategic partnerships with international institutions and stakeholder groups, and by taking advantage of prominent fora where key decisions are made or influenced. An example is the collaboration with the World Water Council for the joint organization of a High-Level Panel on Water for Food, under FAO leadership, during the upcoming 7th World Water Forum in 2015, where the approach of water governance for agriculture described in this paper will be discussed.

27. FAO will also continue to lead activities on food security and sustainable agriculture through the multi-stakeholder UN-Water mechanism and its programmes on water scarcity, water governance, the UN-Water advice on a possible sustainable development goal (SDG) on water, and the World Water Development Report. Water is also a priority area in the post-2015 development agenda proposed by the joint work of the three UN Rome-based agencies.

28. Recognizing that quality data and information are essential for water governance, FAO will maintain its global water monitoring capacity focus, supporting global efforts towards monitoring of water-related targets of the forthcoming SDGs.

VII. Suggested action by the Committee

29. The Committee is invited to:

- a) Take note of the ongoing and proposed efforts to more systematically integrate the governance dimension in FAO's work on water, and provide further guidance on them.
- b) Endorse the proposed work and its processes for integration in ongoing and future work plans of the Organization.
- c) Recommend that FAO member countries consider incorporating water governance for food security and sustainable agriculture in their policies and priority frameworks as well as in their collaboration with FAO and other relevant partners.