



KnoWat: Knowing water better

Towards a more equitable and sustainable access to natural resources to achieve food security

Water tenure assessment for improved policy development

Located in western Africa, Senegal is bordered by Mauritania, Mali, Guinea and Guinea-Bissau. It has a population of around 17 million. In rural areas, agriculture plays a major role in supporting the livelihoods of many households.

Senegal has significant water resources, but they are threatened by excessive use, including the overexploitation of groundwater. Insecure land tenure rights complicate subsistence food production. Poverty and food insecurity are significant problems. Equitable access to water resources is a major challenge as competition and conflict between users increase, coupled with a lack of clarity around access rights.

Senegal's climate is marked by extreme weather events such as floods and droughts. This circumstance has been greatly exacerbated by climate change. Water reservoirs often run dry due to intense periods of drought, affecting people's food security and livelihoods.

Efforts are underway to develop corporate and industrial irrigated agriculture especially in the Senegal River Basia area, where there is easy access to Dakar's main urban market and export markets.



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Getting to know water tenure

Water tenure determines how people obtain rights to water resources, including the right to access, impound, use and manage water, gain access to information and participate in decisions on water resources management. To ensure equitable distribution to all legitimate rights holders and to protect natural ecosystems, it is important that existing water tenure arrangements are coherent and all legitimate tenure rights are recognized by national legislation.

Water tenure arrangements can be very complex and vary considerably, including within the same country, influenced by local and social practices, traditions and status, geography, environment and livelihood practices. Different water tenure arrangements may coexist and/or overlap in the same region and water tenure holders may belong to more than one water tenure arrangement.

The KnoWat project developed a water tenure assessment methodology to identify and analyse the diversity of water tenure arrangements that may exist within a catchment or community. The methodology includes desk research and field data collection as well as capacity building and consultations with decision-makers, national stakeholders and local people that depend on water for their livelihoods.

Water tenure assessment in Senegal: Podor and Saint-Louis

Three field missions took place in the research areas in Podor and the Gorom-Lampsar axis in Saint-Louis. The assessment found that:

- Formal law and customary provisions governing tenure relationships coexist in the research area.
- Some local water users are unaware of water laws and regulations, and some local authorities lack the capacity to implement and enforce water legislation.
- Current legislation is not adapted to new challenges, such as the intensification of agribusiness, climate change and population growth, all of which are putting increased pressure on water use.
- Current legislation around water resources management does not take into account local customs and practices, nor does it consider the circumstances of women, young people and marginalized groups. This leads to unequal access to water resources for some people, negatively affecting their livelihoods, food security and sanitation.
- The large number of water stakeholders and the lack of synergy between them create major constraints for integrated water management.
- Users have little involvement in water policy development and management.
- There is no operational framework for dialogue between actors.

It was recommended that decision-makers take steps to raise awareness among water users of existing water legislation. In addition, water legislation should be reconciled with the local customs and good practices of water users. It was recommended to strengthen the participation of water users in decision-making and reforming the water sector, and to include access to water as a human right in the Senegalese constitution. Measures should be taken to reduce conflicts between users and to ensure availability and more equitable access to water resources for everyone.

Water tenure can be defined as the **relationship**, whether legally or customarily defined, between people, as individuals or groups, with respect to water resources.

See: Hodgson, S. 2016. Exploring the Concept of Water Tenure. FAO Land and Water Discussion Paper 10. Food and Agriculture Organization of the United Nations.

Assessment methodology

01 Preparation

02 Scoping

03 Research

04 Analysis

05 Validation

06 Reporting

Further information

Use the QR code to learn more about the water tenure assessment methodology and the activities implemented in Senegal.



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Promoting water tenure for governance at the local level

To strengthen the capacities of local actors in water tenure governance, the National Council for Consultation and Cooperation of Rural People (CNCR), with support from the Knowat project, trained five local facilitators in water governance concepts and instruments, including the current water law.

The facilitators have contributed to building capacity in their respective localities on the local governance of water resources. Supported by educational material adapted to the local context, the training has strengthened local knowledge of water tenure and water governance concepts, as well as providing practical advice, for example, how to apply for a water permit and how to resolve water resource conflicts.

The training has thus far reached more than a hundred people in the two research locations (Saint Louis and Podor), including young people and women.

The need for local water governance platforms was discussed during the training sessions, which led to the initiation of consultations with broad stakeholder participation. CNCR continues to promote this process. Next steps will include the formal establishment of governance platforms, capacity building for the members and networking at the national level.

CNCR, with support from the Knowat project, organized meetings on national challenges and issues related to water governance with the Steering Committee of the Voluntary Guidelines on the Governance of Lands, Forests and Fisheries in Senegal (COFIL DV/GF) and the Platform of Civil Society Organizations for Water and Sanitation in Senegal (POSCEAS).

The meetings strengthened the link between existing work on land governance in Senegal and the Knowat approach to assessing water tenure. Land stakeholders recognized the relevance of taking water governance into account in their advocacy and awareness-raising work on climate change adaptation.

The Knowat project has strongly supported CNCR's involvement in the World Water Forum, which enabled the mobilization of rural stakeholders and the development of a position paper on their concerns around water management and governance.

These interventions and promising results have enabled the Knowat project to contribute to the revision of the water law in Senegal.



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Towards fairer and more sustainable access to natural resources for greater food security

Rwanda, Senegal and Sri Lanka (2019–2022)

All around the world, countries are struggling to adapt their agricultural and food systems to conditions of climate change and to extreme weather events such as long periods of drought or heavy rains. Water scarcity is expected to increase as is competition for water resources among users. Smallholder farmers are particularly vulnerable to changes in water access and availability: a sudden lack of water due to drought can mean lost income and food, threatening their lives and those of their families. For these reasons, major efforts are needed to address the links between water scarcity, food security and livelihoods in our changing climate.

The KnoWat project takes an integrated approach to water resources management that includes water accounting, water productivity, water governance and water tenure assessments. **Water accounting** is the systematic study of current status and future trends in water supply and demand in a given spatial domain. **Water productivity in agriculture** signifies the ratio between yield and the water consumed by a crop. To support water accounting and productivity assessments, the KnoWat project built the capacities of key partners to apply FAO's Water Productivity Open-access Portal (WaPOR). This tool assesses water consumption in agriculture and the water productivity of agricultural production using remote sensing.

Water governance assessment looks at the broad framework of institutions, finance and the political economy. To better understand water governance processes, the project developed and tested a **new methodology to assess water tenure**, the formal and informal arrangements used to access water. The assessment of water tenure aims to understand the different relationships between people and water resources.

Enriching our knowledge around water through accounting, productivity, governance and tenure assessments helps policy and decision-makers to plan and implement **better policies**, with the ultimate goal of ensuring equitable water allocation for **better livelihoods, food security and healthy ecosystems**, even under conditions of growing water scarcity.



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