

Governance Challenges for the Management of Water Resources in Agriculture: The Italian Way

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Abstract : Water management needs to cope with economic, societal, and environmental changes. This could be guaranteed through 'shifting from government to governance'. In the last decades, it was applied in Europe through and within important legislative pillars (Water Framework Directive and Common Agricultural Policy) and their measures focused on resilience and adaptation to climate change, with particular attention to the creation of synergies among policies and all the actors involved at different levels. Within the climate change context, the agricultural sector can play, through sustainable water management, a leading role for climate-resilient growth and environmental integrity. A recent analysis on the water management governance of different countries identified some common gaps dealing with administrative, policy, information, capacity building, funding, objective, and accountability. The ability of a country to fill these gaps is an essential requirement to make some of the changes requested by Europe, in particular the improvement of the agro-ecosystem resilience to the effect of climatic change, supporting green and digital transitions, and sustainable water use. This research aims to contribute in sharing examples of water governances and related advantages useful to fill the highlighted gaps. Italy has developed a strong and exhaustive model of water governance in order to react with strategic and synergic actions since it is one of the European countries most threatened by climate change and its extreme events (drought, floods). In particular, the Italian water governance model was able to overcome several gaps, specifically as concerns the water use in agriculture, adopting strategies as a systemic/integrated approach, the stakeholder engagement, capacity building, the improvement of planning and monitoring ability, and an adaptive/resilient strategy for funding activities. They were carried out, putting in place regulatory, structural, and management actions. Regulatory actions include both the institution of technical committees grouping together water decision-makers and the elaboration of operative manuals and guidelines by means of a participative and cross-cutting approach. Structural actions deal with the funding of interventions within European and national funds according to the principles of coherence and complementarity. Finally, management actions regard the introduction of operational tools to support decision-makers in order to improve planning and monitoring ability. In particular, two cross-functional and interoperable web databases were introduced: SIGRIAN (National Information System for Water Resources Management in Agriculture) and DANIA (National Database of Investments for Irrigation and the Environment). Their interconnection allows to support sustainable investments, taking into account the compliance about irrigation volumes quantified in SIGRIAN, ensuring a high level of attention on water saving, and monitoring the efficiency of funding. Main positive results from the Italian water governance model deal with a synergic and coordinated work at the national, regional, and local level among institutions, the transparency on water use in agriculture, a deeper understanding from the stakeholder side of the importance of their roles and of their own potential benefits and the capacity to guarantee continuity to this model, through a sensitization process and the combined use of management operational tools.

Keywords : agricultural sustainability, governance model, water management, water policies

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