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ITALY - Country Baseline Study

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Summary

Water and wetland resources in Italy are affected by climate change caused by the greenhouse effect induced by greenhouse gas emissions adding to the natural greenhouse effect.

Although the effects and the extent of these changes are uncertain yet and cannot be easily quantified nor foreseen, a certain consensus however exists on the most important climatic contrast. A drier climate is likely to occur in the 21st century in the Southern part of Europe, and it will have the dual effect of reducing resources while increasing water demands, by intensifying evaporation and worsening droughts.

In fact, while such complex interactions exist also under the so-called "stationary" climatic conditions, it has been established that "there are strong evidence that most of the warming observed over the last 50 years is referred to human activities" and there is a convincing scientific evidence that climate change will pose serious challenges for water and wetland systems.

According to the above, this country baseline study will examine which policies and management practices, Italy has already considered and is planning to implement in order to respond to climate change effects on water and wetland resources.

In particular, the study will point out and suggest feasible climate change adaptation strategies for water and wetland resources, highlighting national and regional priorities.

After a brief analysis of the country context and the identification of key vulnerabilities components of water and wetland resources to climate change (Part A), the study focuses on the national institutional system dealing with climate change, water management and wetlands (Part B), the level of integration of water and wetland resources management and climate change (Part C), and finally the possible adaptation strategies (Part D).

A noteworthy climate variability has been observed during the last decades through the analysis of historical series and scientific data: according to these figures, temperature has increased and rainfall decreased on the overall national territory, giving as overall result drier conditions.

Therefore, water remains a critical factor in Italy in terms of vulnerability of both hydrological cycle and ecological systems as wetland resources, which are closely interrelated.

Part A identifies the key vulnerabilities components of water and wetlands resources to climate change such as water consumption by agriculture, coastlands resources and typical Mediterranean ecosystems.

Part B shows that, if on the one hand the institutional framework of climate change, water resources management and wetlands sectors, taken individually, is broad and well organized, on the other, taking into account the strong interconnection among the three sectors, a closer collaboration would be desirable. The recent reform of the Ministry for the Environment and Territory represents a further important step towards a better co-ordination among all environmental sectors. With the new structure, the Ministry has both an ecosystem protection function, through the definition of sustainable development models, and a new role in planning policy, with the aim to protect the environment.

Nonetheless, other ministries, national administrations, regional and local authorities have also a fundamental role in the management and implementation of selected environmental policy areas.

Part C illustrates that adaptation policies and measures must be identified in the sectoral legislation regarding:

- the soil protection;
- the remediation of contaminated sites;
- the extractive activities;
- the hydrological vulnerability;
- the protected areas;
- the natural habitat;
- the water resources and water preservation.

The research conducted for this study led to the conclusion that Italy does not have a specific legal framework where adaptation to climate change is expressly mentioned.

The recent climate change National Action Plan, prescribed by law number 120/2002 ratifying the Kyoto Protocol, which defines guidelines for greenhouse gases reductions, has not changed this approach.

Emphasis is given to the energy and transport sectors, nonetheless, its approach has a broad, indirect effect on the entire water sector, integrating the existing national and local provisions on water and wetlands.

Hence, the National Action Plan can be seen as a natural step towards the achievement of the goals set by the 2002 Environmental Action Strategy for Sustainable Development.

Thus, if on the one hand, planned measures and policies demonstrate that Italy is moving to comply with the UNFCCC climate change commitments, major efforts must be undertaken to strengthen water and wetland adaptation instruments to climate change policies.

In fact, the UNFCCC includes clauses on the effect that all Parties shall formulate, implement, publish and regularly update national and regional programs containing measures to mitigate climate change and measures to facilitate adequate adaptation to climate change (Article 4, Section 1 (b)). The Convention further records the agreement on the effect that all shall take climate change considerations into account, to the extent feasible, their relevant social, economic and environmental policies and actions, and use appropriate methods, for example impact assessment, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health, and on the quality of the environment, projects or measures undertaken by them to mitigate or adapt to climate change (Article 4, Section 1 (f)).

An appropriate step towards implementation of the above mentioned commitments is the draft of the Third National Communication to the UNFCCC where adaptation planning measures for water and wetland resources are also considered. In fact, Italy is one of the first countries beside the wider-European Union to prepare the Third National Communication to the UNFCCC including a specific chapter with concrete adaptation measures and actions on sea level rise, desertification, agriculture, and forests.

The proposed actions of the National Action Plan and the Third National Communication would suggest that climate change needs to be taken into account in sectoral legislation - as well as policy, planning and management activities in those sectors, at all levels of government, where it is relevant.

Finally, Part D presents different opportunities to reduce the risk of climate variability and change for Italian water and wetlands resources.

A number of key assumptions for developing adaptation responses for water and wetland resources sectors is presented. In addition a series of suggestions is offered to integrate adaptation responses into the water, wetland and climate sectors.

Since it is difficult to predict far in advance how climate change will affect a particular site, the study suggests that it should be better to avoid adaptation measures that could fail or have unanticipated social or economic consequences if climate change impacts turn out to be different than anticipated (IPCC 1998). More appropriate would be “no regrets” adaptation measures that would be justified even in the absence of climate change. Examples of least-regret measures include data and information collection, training and other forms of capacity building, scientific research and institutional development. Another type of least regret measures involves an additional investment in infrastructure with long turnover times to take anticipated climate change into account.