



Climate Change and Water. Identification of The Research Needs in Europe

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ABSTRACT

Global temperature is rising and is very likely that will continue to raise throughout Europe during this century. There is a growing consensus among scientists that one of the causes of the occurring climate change are human activities and one of the consequences is that areas with limited water resources will increase. Population growth and the competing needs of water uses are likely to result in an increase of global water demand, estimated around 35-60% by 2025 (E.C., 2012), that could further worsen the situation. This, in turn, will probably determine a growing imbalance between water demand (including natural ecosystem needs) and supply.

These issues have been dealt with by the FP7 founded project ClimateWater (Bridging the gap between adaptation strategies of climate change impacts and European water policies), which aims at the study of adaptation strategies to tackle the consequences of climate change, at the assessment of how these strategies are taken into account by European water policies and at investigating how they respond to the identified needs. The present work reports the results of ClimateWater concerning the research needs still existing on the above mentioned topics, that represent one of the main outputs and synthesizing efforts of the whole project. In particular, the work deals with knowledge gaps still existing regarding the direct effects of climate change on water bodies, the indirect impacts on productive areas that, like agriculture and some industrial sectors, use massive amounts of water. The research needs in some sector that, like alternative sewage treatment, could constitute powerful tools to mitigate or to adapt to climate change impacts, are also taken into consideration.

The analysis carried out, highlighting knowledge gaps in various fields concerning the relationships between climate change and water, also represents a potentially helpful tool for the EU to orient the themes to be included in the future calls of the Horizon 2020 framework programme.

REFERENCES

E.C. 2012. A Blueprint to Safeguard Europe's Water Resources. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. COM(2012) 673 final.