

# Water Management Strategies against Water Scarcity in the Alps



## Summary of the Stakeholder survey

Alp-Water-Scarce encourages the involvement of potential stakeholders in the activities and discussions on water scarcity and its perception in different regions of the Alps from the very beginning. In order to support this task Alp-Water-Scarce established the Stakeholder Interaction Forum as an integral part of the project. The stakeholder survey was initiated by the Mountain Institute, University of Savoy (France) and Gal Appennino (Italy) with the support of the Alp-Water-Scarce consortium.

Furthermore the stakeholder survey underlined the importance of the participative process of stakeholders which is essential for the exchange of experiences, collection of information on water scarcity and distribution of information and knowledge elaborated within Alp-Water-Scarce. This is why the Stakeholder Interaction Forum has a double function: that of gathering and that of disseminating information.

In order to collect information on the perception of water scarcity a stakeholder questionnaire has been developed and translated into 5 different languages (E, FR, DE, IT, SI).

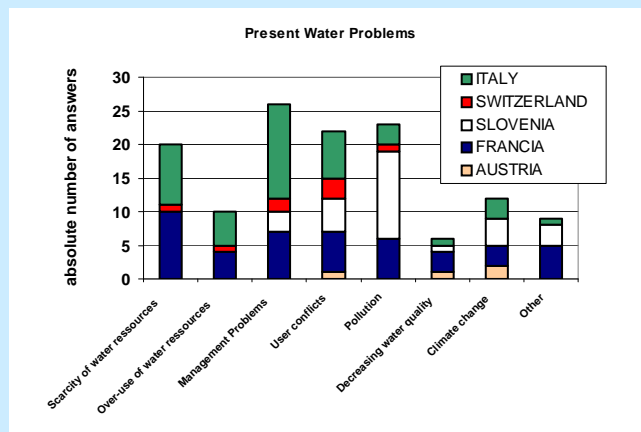
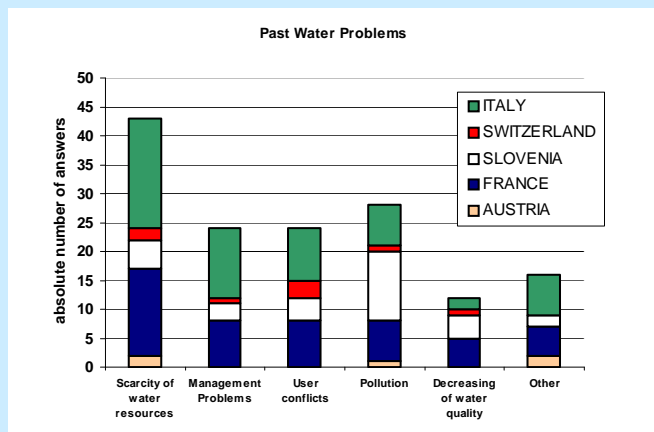
The analysis of 91 questionnaires collected by the Alp-Water-Scarce consortium identified the complexity of problems resulting from water scarcity at different levels.

On a trans-alpine level the outcomes of the stakeholder questionnaire survey are the following:

The main stakeholders involved in the survey and thus dealing with water problems are public bodies (56%) while the remaining 44% are composed of hydroelectric power companies, tourism enterprises, lift operator organisations, drinking water authorities, utility companies, agricultural consortiums, environmental protection associations, angling clubs or fish farms, private companies for environmental planning, meteorological companies, and consulting enterprises.

More than the half of the consulted stakeholders are indirectly involved in water management and 80% indicated that they have had problems related to water scarcity in the past which was related to a “scarcity of water resources” whereas 65% of the stakeholders reported that they have no water-related problems at present. Nevertheless 70% suppose that that climate change will increase water problems in their territory.

When analysing sectors affected by water scarcity, forestry and agriculture are expected to suffer most (33%), followed by tourism and artificial snow making (27%), water sports and fishery (16%), hydropower (13%). Others will be effected as well, such as: natural systems due to excessive withdrawal, drinking water supply and consequently the residents themselves, industry and fire rescue.



Opinion of stakeholders on past water problems

Opinion of stakeholders about current water problems

The main problem reported was that of “scarcity of water resources” with the exception of Slovenian stakeholders that identified pollution as the main issue. The other problems obtained an almost equal weighting.

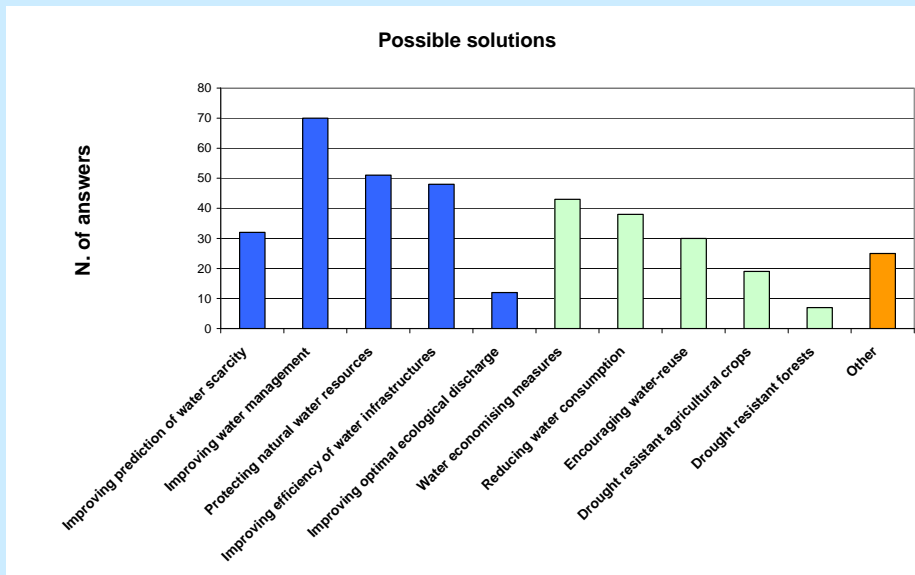
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Stakeholder Report



When asked about possible solutions to overcome the problem of water scarcity in the Alps 70% of the stakeholders mentioned monitoring for the protection of water resources, improvement of water infrastructure and water management, whereas 20% of the responses were related to solving user conflicts. The remaining responses were spontaneous suggestions by stakeholders (for example the creation of water reservoirs at higher altitudes, awareness raising, improving water treatment, water re-use and new techniques for irrigation etc...).



**Possible solutions to water problems identified by stakeholders:**

Blue: actions on measures, protection, equipments;  
Light Green: action on practices;  
Orange: solutions directly proposed by partners.

50% of interviewed stakeholders reported that plans for adaptation measures with regard to the impact of climate change on water resources are already existing.

The stakeholder survey of Alp-Water-Scarce clearly shows that in despite of regional, climatic, physical and socio-economic differences within the investigated areas the types of water problems and suggested solution strategies are surprisingly similar. Furthermore problems related to water quantity is the dominant issue with the exception of Slovenia where water quality is still an issue of concern.

Those states that have extensive pre-alpine areas, such as Slovenia or Austria are more significantly touched by water quantity and quality problems than their higher altitude neighbours. However there are some exceptions, such as Switzerland with its inner alpine dry areas, that are regionally just as affected by water shortage as the drier, southern Mediterranean Alps.

In order to investigate if and to which extend the Alp-Water-Scarce project could help to support or change the perception of water scarcity in the Alps, a second stakeholder questionnaire will be developed at the end of the project in the summer of 2011.

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