

## **EMERGING ISSUES**

This meeting was a valuable occasion to assess the situation in the Alps, the stage of implementation of standards, plans and programmes, as well as the issues that are still open regarding the important matter of the production of hydroelectric energy. In this respect, the need was highlighted to provide concrete responses to two distinct environmental policies, one on water (2000/60/EC directive) and one on climate (2009/28/EC directive); these directives are the reference also for the regions that do not belong to the EU (Switzerland and Liechtenstein) but that belong to the Alpine Convention.

The production of hydroelectric energy in mountain regions has always been an important resource, a wealth generating factor, but also an element that affects the landscape and river ecosystems, which however has been generally accepted by local populations, at least so far.

However, the need to foster energy production from renewable sources to comply with the obligations imposed by European directives (2001/77/EC, now replaced by 2009/28/EC) has implied a considerable increase in government incentives, making projects cost-effective that until a few years ago would not even be taken into consideration. In effect, this translated into a boom of applications for concessions for new hydroelectric power plants, especially of small size, that would be added to the already high number of existing facilities.

The features of water as a limited asset, associated with some typical traits of the relevant industry and with other local and environmental aspects, however, make the full exploitation of the available resource for the production of energy non sustainable. The following reasons can be listed among many more: conflicts in the use of water resources; the environmental impact of the hydroelectric use of water; the impact of production and of the construction of hydroelectric power plants on the landscape; the established presence of large systems and large basins that cover the nearly total availability of large water diversions; the desire to diversify investments and the economy in mountain areas where hydroelectric power plants are located.

Recently, a growing need has been observed among Alpine populations to limit the further exploitation of waters, while also having a greater share in the allocation of the relevant economic yield of the hydroelectric industry with greater benefits for local areas, similarly to that which already happens in some Alpine areas (Autonomous Provinces of Trento and Bolzano). In Italy, these needs have generated law-making initiatives such as the approval of article 15 of law 122 dated 30 July 2010, which gives the Provincial Authorities the opportunity to be part in the management of the power plants, as well as an immediate increase in fees.

The scope of these law-making initiatives has not yet been fully understood. While it is generally accepted that fees can be a significant tool for the government of the creation and allocation of yield, for example by differentiating them on the basis of the effects of the action on the watercourse, or by establishing mechanisms to remunerate those who take steps to recover/improve the ecosystem functions of the water course, there are serious doubts about the penetration of the Public Sector in the industries which it regulates, especially with respect to plant concessions and management. The controlling entity and the controlled entity should in fact be distinct entities with distinct roles.

Regarding economic incentives for the production from renewable sources, such incentives should be linked not only to the production of energy, but also to the impact of the plant on the surrounding landscape. The reduction of these incentives is to be wished for when it is

accompanied by a streamlining of the authorization procedure. With respect to this, it is worth noting that in Italy, through decree dated 10.09.2010, the “Guidelines for the concession of plants supplied by renewable sources” have been approved.

The process for the concession and assessment of new hydroelectric power plants should be based on a two-tier procedure: one of regional strategic pre-planning (which does not mean the administrative entity but the local entity which is more appropriate for performing the analysis, such as for example, the basin or the sub-basin) which must establish where new plants can be built and, at a local level, how the plant should be built.

The benefits of pre-planning mechanisms are now widely recognized, in order to ease the definition of areas where new plants should be installed. These mechanisms should give the opportunity to detect suitable, less favourable and non favourable areas, taking into account the framework directive and other environmental and social-economical criteria, including other water uses. The use of preplanning systems would foster the concession process making the whole procedure more transparent and quicker.

Strategic preplanning is however a general and rough assessment which does not consider project and site-specific information. A second level of assessment is therefore necessary, which implies an in-depth local assessment of the actual project submitted, which considers criteria regarding the plant and site-specific details and other local social-economical issues so that all relevant criteria can be weighed (at this level, the environmental impact assessment must be carried out, when it is prescribed by regulations).

Voluntary environmental certification of hydroelectric energy producers represents a possible tool for the solution of local conflicts between the needs of production and the needs of protection of water courses.

Being the prerequisite for the subsequent assessment and decision regarding the authorization of the individual project, regional strategic pre-planning should be carried out as soon as possible to avoid a general freeze of all new concessions.

As to operating plants, the modernization and the strengthening of the existing infrastructures is absolutely necessary, in order to reduce to a minimum the need for new sites to develop further hydroelectric capacity. The economic incentives for these plants should be connected to the degree of environmental improvement to mitigate the impacts on the ecology and on the landscape and to accelerate the achievement of the objectives defined by regulations or even to go beyond minimum requirements.

In conclusion, workshop participants agreed in believing that the development of renewable energies, including hydroelectric energy, must be strongly supported, but it is also important that the development is compatible with environmental protection needs.