

Scientific Sessions. “Alien Invasive Species in riparian environments”. Conclusion’s document.

Everyone alert against Alien Invasive Species (AIS).

Scientific sessions entitled “Alien Invasive Species in riparian environments”, held at the Main Hall at the Chamber of Commerce of Murcia, came to an end after two days of intensive work: 27th & 28th of January, 2015. Several experts from all over Spain have gathered in them, coming from all kinds of organizations: public administrations, public companies, Universities, Consortiums and private companies, all of them with a common denominator: their knowledge of Alien Invasive Species (AIS).

During the sessions, a broad variety of species were discussed: from plants to several types of animals; from species found at the Segura River Basin since centuries ago, to other species not yet settled, but whose sole mention makes us become alert, because of the damages they can produce, should an invasion really take place. Other projects and activities focused on AIS with different approaches were also introduced: some of them try to improve the management of all AIS present at a given territory, while others focus in concrete species that create a problem at a certain environment.

The talks had a great attendance (almost 100 people), and the audience did not hesitate to add their input, either at the Q&A rounds after each talk, or at the discussion groups at the end of every set of talks.

With the aim of summarizing the contents of the sessions, the following conclusions about the most relevant concepts discussed during the talks have been drafted:

- Rivers are more vulnerable to AIS, since they are the place where every natural flow of water, matter and energy is directed within a basin. Also, they act as dispersion highways for AIS, once they have settled in them.
- The stretch of the Segura River in which project RIPISILVA intends to work has areas of Indigenous Riparian Forest in different status of preservation, and the efforts must be focused on enhancing and expanding those well preserved, through different techniques to fight AIS, specially the giant reed or *Arundo donax*.
- Just as important as managing existing AIS, is to prevent the arrival of other species present at nearby areas, where they produce considerable economic, ecologic and even sanitary damages; for instance, the zebra mussel, *Dreissena polymorpha*, the apple snail, *Pomacea spp.*, and several species of aquatic plant species with a surface covering behavior. Project RIPISILVA must analyze preventive and monitoring measures to prevent their arrival through an Early Alert Network.

- Public participation, general public awareness raising, and volunteering activities are fundamental tools in the fight against AIS, and without them no goal can be achieved. Nevertheless, this must not mean a discharge of responsibility by the different public administrations, holding the competence for the different areas engaged in managing and preventing AIS.
- Public administrations must work in controlling, restraining and eradicating AIS, favoring indigenous species and integrating Good Practices and procedures of collaboration with other administrations in terms of general operations, management of natural resources, investments and administrative SOPs, beyond the fulfilment of Royal Decree 630/2013, regulating the Spanish Catalogue of AIS.
- Whenever possible, several techniques against AIS present at a territory must be tested, in order to determine which of them is more effective. Techniques working best at an area, could not be the best option at a different place, even working on the same species.
- Valorization alternatives for AIS are dangerous, since they could potentially promote their expansion rather than their control.
- The fight against AIS must be held through time and have long-term financing. Guard must not be lowered, and control measures only work after several years.
- Further consideration is needed about the interpretation of the presence of AIS when grading the ecological status of water bodies, according to the Water Framework Directive. The approach of focusing the efforts in research, prevention and enhancing the ecosystems' resilience is interesting.
- The fight against AIS must not discriminate whether the main damage caused by a given AIS is ecological or economical, since they are both of the utter importance.
- AIS can consume great economic resources. The cost of preventing them today is much smaller than the cost of managing them once they are settled.
- Scientific knowledge of AIS' biology and ecology is fundamental to develop adequate tools to fight them.
- We must think about the best policies to prevent the arrival of new AIS.
- Fish species are especially vulnerable to AIS, because river basins act like an evolutionary and genetic island, and that makes them more sensitive to alterations. Same as with every other AIS, in order to make an effective management it is fundamental to control the main ports of entry into the basin.
- The role of humans takes no argument in every case of AIS expansion, and the fight against them is relevant because they can alter our economy, our environment and our way of life. Mankind holds the responsibility and the capacity to better manage its activities, so that they don't have a negative incidence.