The coypu (Myocastor coypus) introduces into Italy: impacts and control strategies

The coypu (*Myocastor coypus*) introduced into Italy: impacts and control strategies

Sandro Bertolino (University of Turin, Italy)

The coypu (*Myocastor coypus*) is a semi-aquatic rodent native to South America, which has been introduced worldwide for fur farming. Animals that escaped from farms or were released into the wild have successfully established stable populations in many countries. In Italy the species is now widespread in the central and northern parts of the country, while it is still localized in the south and in the major islands.

In the areas of introduction, this species is considered a pest because of its negative impact on ecosystems, crops and irrigation systems. Coypus can alter natural habitats by feeding on aquatic vegetation and can harm several aquatic birds by destroying their nests and preying on their eggs. Moreover, this rodent can feed on a variety of crops and weaken riverbanks and dikes through its burrowing activity.

To cope with the threat posed by invasive alien species, the Convention on Biological Diversity calls for a hierarchical approach based on prevention of new introductions, eradication of unwanted alien species, and population control.

Eradication is often discarded as an effective option because there is the perception that is too expensive and that costs outweigh benefits. However, in Italy costs of permanent control of coypus during 1995-2000 (€ 11,631,721) largely exceed costs of coypu eradication (€ 5,000,000 costs up-dated to year 2000) achieved in England in 1989. Furthermore, at the national scale, population control did not contain the species expansion and failed to reduce damage. In this case, the English eradication programme, which was considered very expensive at that time, was the best option in the long term. We suggest that eradication of newly introduced species and of localized populations, must be considered as a priority in a national strategy against alien species.

When eradication is considered not feasible, a control strategy may be implemented. Using the results from a small pilot project on coypu control, we propose a strategic approach to the control of alien species that consider different stages: problem definition, feasibility, definition of objectives, preparing a plan, implementation of the plan, monitoring and evaluation. Monitoring and evaluation are key elements of the strategy; they are necessary to verify if control activities are effective and could produce feedbacks for the previous phases. In our case, the recovery of yellow waterlily (*Nuphar lutea*) in 3 plots and colonization of new ponds by vegetation indicated that coypu were maintained at a level sustainable for vegetation development.