

Conservation Activities in the Olo River

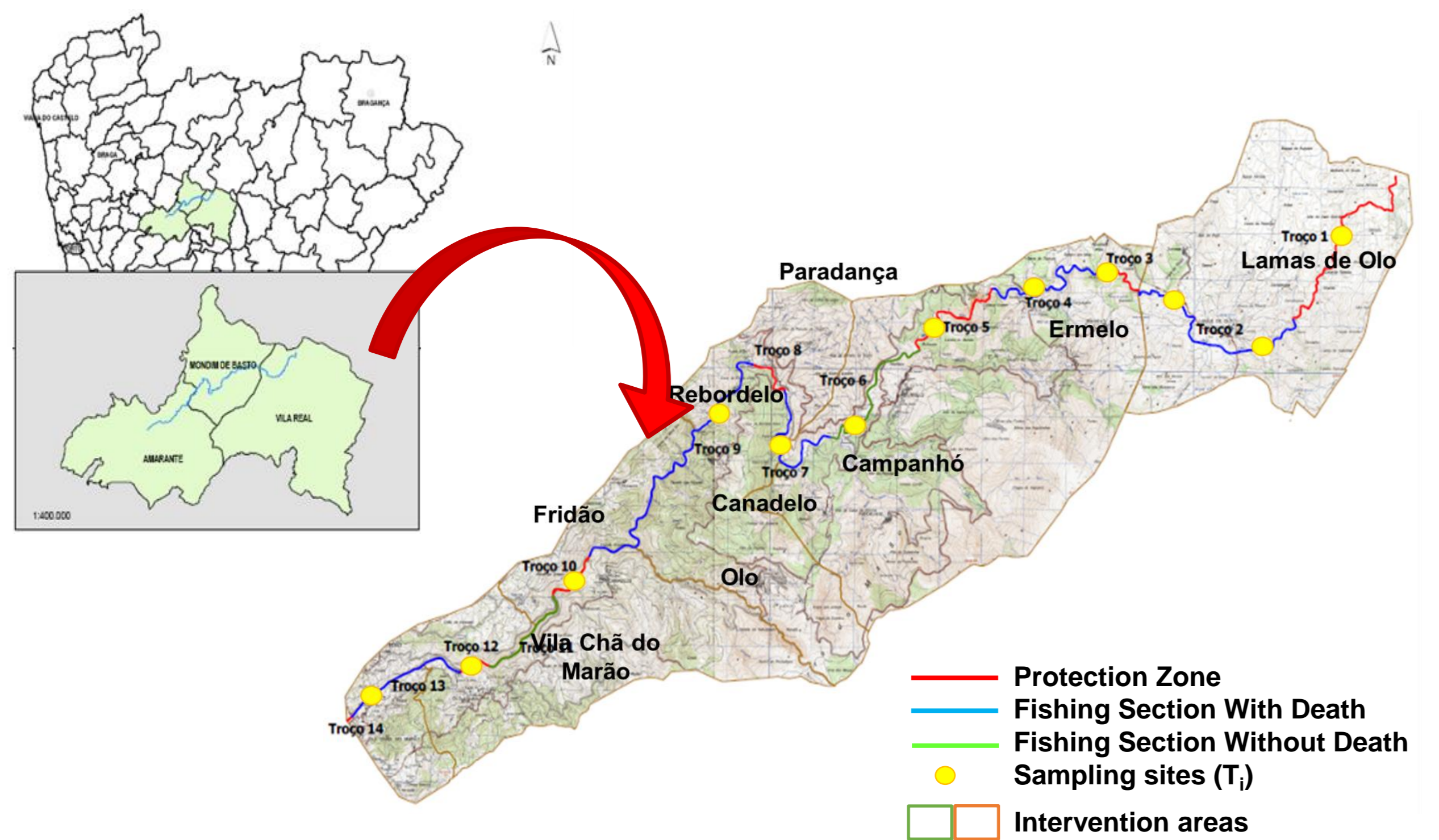
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Introduction

The management model of the river Olo sport fishing has made a decade of existence in 2018. This watercourse extends over a considerable area of the Alvão Natural Park (PNAL), flowing through valleys embedded in the counties of Vila Real, Mondim de Basto and Amarante. The studies carried out in 2007 and 2013 allowed the design of a Sport Fishing Management Plan at the river basin scale. This watercourse has been subject, since 2008, to a special regulation - Zone of Reserved Fisheries (ZPR). Based on the river management it is now possible a better knowledge of fish population parameters, such as age, growth, physical condition, as well as their relation with the different habitat types.

Planning map (river Olo) / (2010 – 2018)



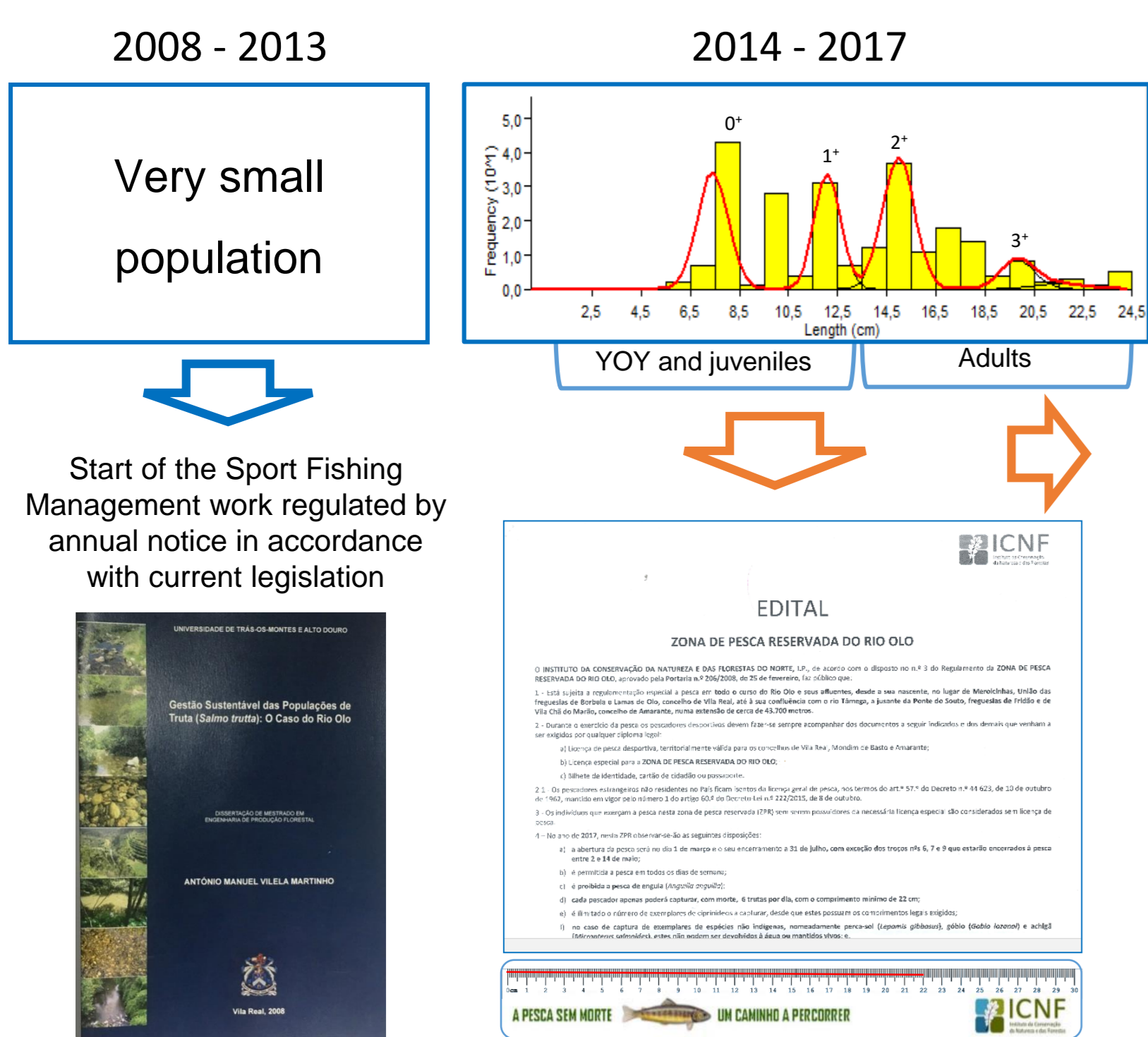
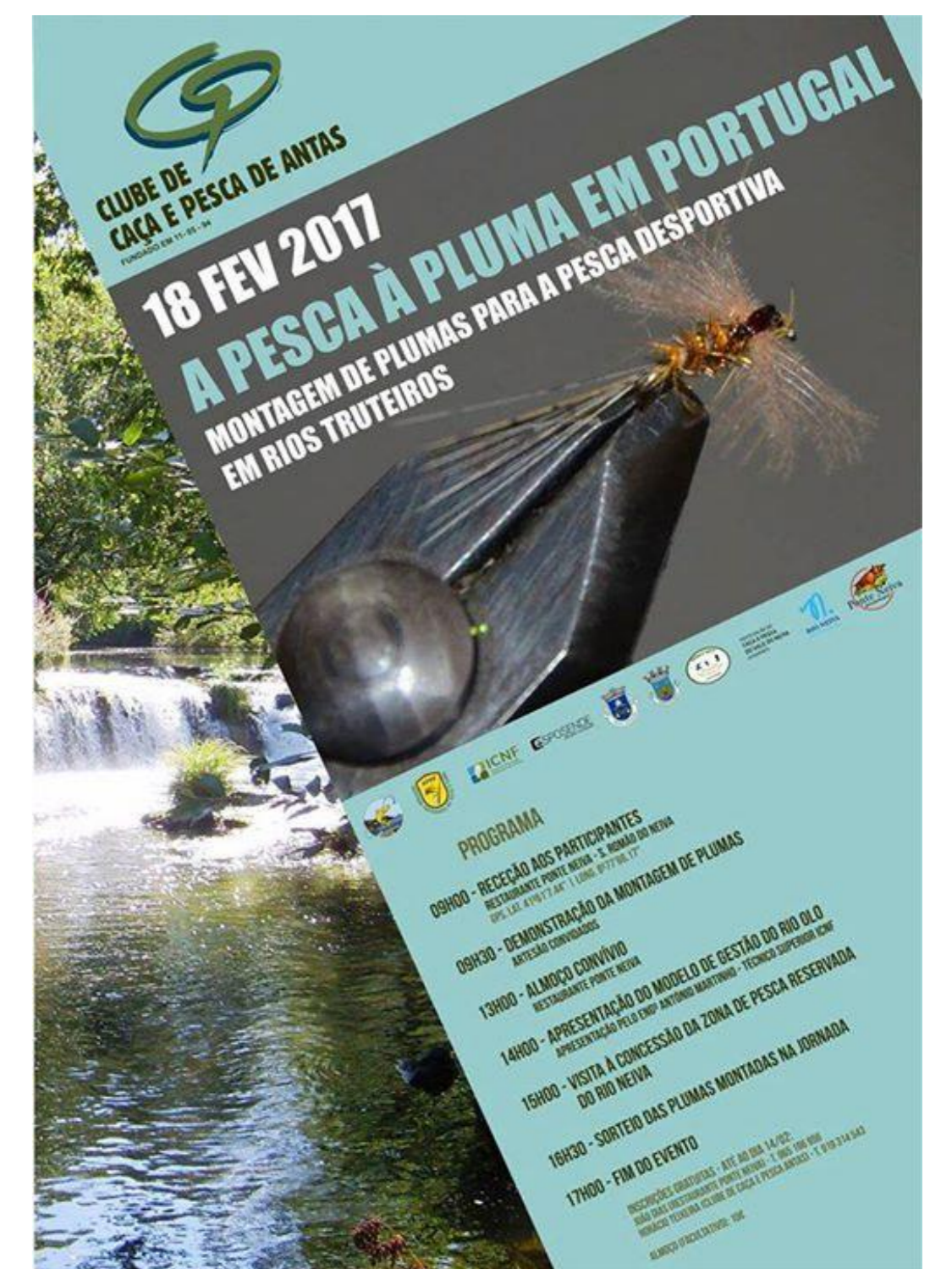
Methodology

The methodology adopted was based on the information collected, over time, allowing the adoption of measures to improve the state of conservation of aquatic ecosystems. Among these, we highlight those that involved the management of the main fish species (*Salmo trutta*) and those related to the recovery of the riparian vegetation. The production of brown trout, reared at the Torno Aquaculture Station (Serra do Marão) from parents caught in the upper reaches of the Olo River (upstream of the Fugas de Ermelo), allowed the stocking of the same river zones (*ex-situ* conservation action) after the habitat rehabilitation, mainly through the plantation of riparian vegetation (*Salix* spp., *Fraxinus* spp. and *Alnus glutinosa*), along the river banks, practices in use since 2015.



Results

The implementation of conservation, fish stocking and habitat restoration actions (e.g. removal of trash, consolidation of banks with riparian vegetation, brown trout stocking with fry and embryonated eggs, exclusive use of fishing artifacts consistent with fishing practice without death, increase of the minimum legal fishing measure of brown trout from 19 to 22 cm) led to the increase of the recruitment and density of brown trout populations in the managed areas. Awareness-raising actions developed among fishermen and other stakeholders, contributed to a more sustainable practices of the sport fishing and to the improvement of the river Olo conservation status. The afforestation actions proved to be inefficient due to a disordered grazing activity.

Conclusions

The success of the activities carried out should continue to be the target of new monitoring. Among these evaluations, we highlight those associated with the introduction of embryonated eggs and juveniles (Young-of-Year) and the restoration of riparian vegetation (*ex-situ* conservation actions). Awareness-raising activities developed by fishermen and other development promoters, stimulating more sustainable sport fishing practices, should be continued in order to contribute to the improvement of their conservation status and the development of these mountain regions.

Bibliographic references

Martinho A.M.V. 2008. Gestão sustentável de populações de Truta (*Salmo trutta*): O Caso do Rio Olo. Dissertação de Mestrado em Engenharia de Produção Florestal. Universidade de Trás-os-Montes e Alto Douro, Vila Real. 153 pp.
 Martinho A.M.V. 2014. Plano de Gestão da Pesca Desportiva da Zona de Pesca Reservada (ZPR) do Rio Olo. Divisão de Licenciamento e Avaliação de Projetos, Dptº de Conservação da Natureza e Florestas do Norte, ICNF. Vila Real. 74 pp.