

ACTION NAME: D7 Shad, evaluate the efficiency of the project actions on its population
D7 Shad follow-up
Special Conservation Zone (SCZ) being acted upon:
SCZ Bidasoa River
LINK WITH NATURA 2000
The action is encompassed within the following SCZ Management Plan Operational Objectives: 5.1.1 Establish the state of preservation of the Atlantic salmon, shad, sea lamprey and European bullhead.
Key Elements of the promoted SCZ -
Shad is one of the key elements considered in managing the SCZ “River Bidasoa”, and the demolition of obstacles features among the main proposals put forward for improving the state of preservation.
PLACE OF ACTION AND MUNICIPALS:
Bera and Lesaka
Date
2017-2018
Budget
€38,572
Related project actions
Due to the requirements of the species and its current and potential geographical distribution, the most significantly related preservation actions are C6 “Permeation of Endarlatsa” and C7 “Permeation of Bera”
Description of the action - OBJECTIVES
The aim of this follow-up action is to assess the efficiency of the preservation actions related to the shad, by comparing initial and final indicator values for reproduction of this species in the adapted stretches of the Bidasoa, which is envisaged to be affected by the project actions.
Description of the action - BACKGROUND
Shad is a species that lives in the sea and reproduces in rivers. It is distributed along the Atlantic coast of Europe. Until the mid 19th century it was a thriving species that sustained important fishing businesses in various countries. However, it is currently thought that various populations from the north of Europe, as well as those in Morocco, are extinct, whilst in the vast part of the remaining distribution areas it is considered rare. The only relatively large populations can be found in some rivers in France and Portugal. The main reasons the shad is under threat, are: (1) migration barriers, (2) water pollution, (3) modification to habitat, and (4) over-fishing. In Navarre the only shad population (Alosa alosa) can be found in the Bidasoa river. Its presence in the lower stretches of the main channel of the Bidasoa has been confirmed since at least 1978.

Description of the action – DESCRIPTION OF FOLLOW UP

Due to the fact that the shad is only present in the river during the reproductive season, the use of **techniques** requiring any kind of manipulation (e.g. electric fishing, trapping, capturers) that put the species at risk in terms of reproduction or survival have been ruled out. However, the exclusively nocturnal reproductive habits of the shad and their cumbersome copulation make it possible to enforce a control methodology and estimate the abundance of the reproductive population based on the number of copulations during the reproductive period. Two night-vision cameras and observers equipped with light sources will be placed in the known spawning grounds.

With these techniques the **indicator** value “Copulation rate” of the shad will be estimated, defined as the number of copulations observed related to the number of hours of observation (copulation/hour), calculable both for each nocturnal sample and for the total for the reproductive season.

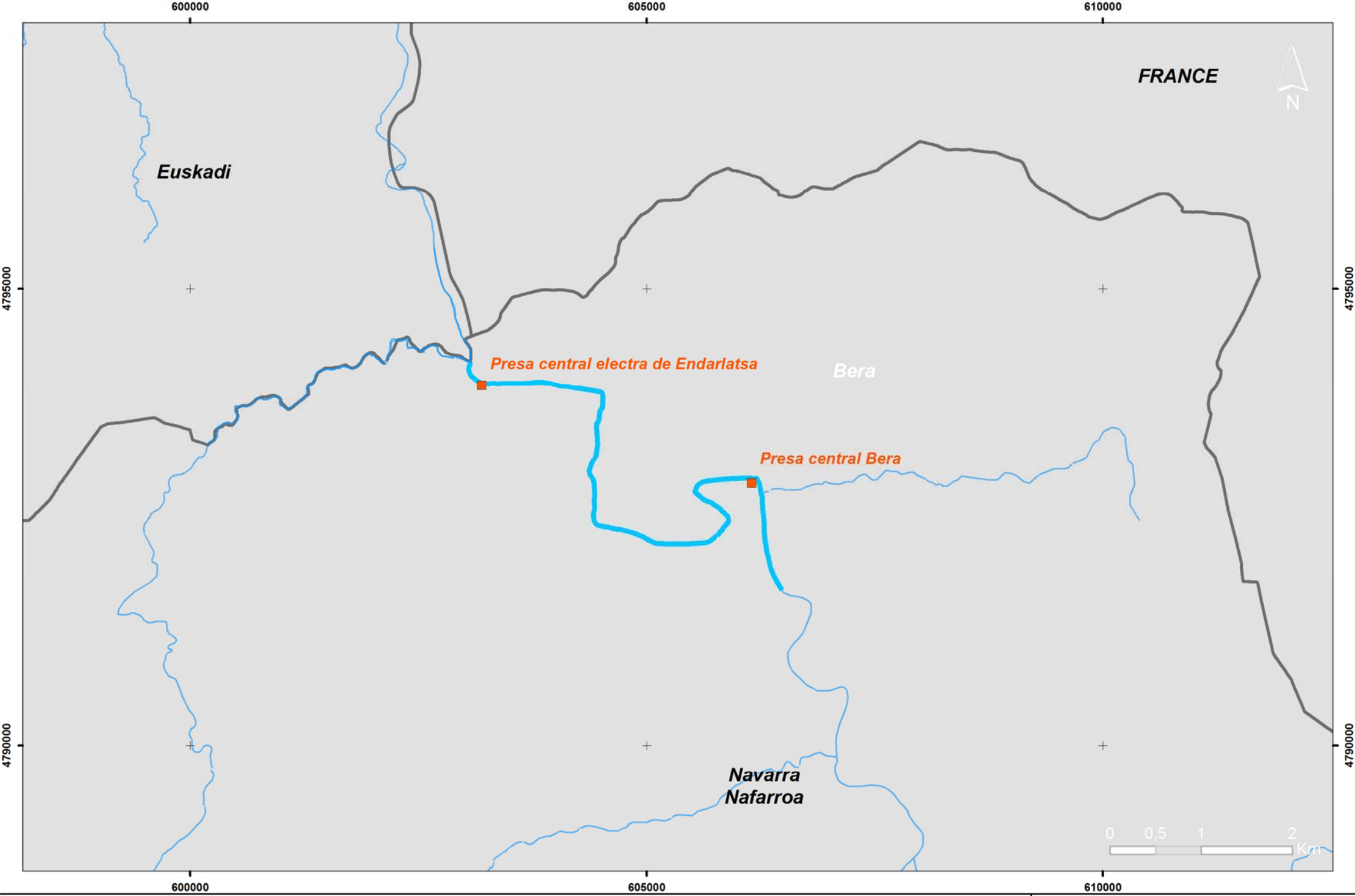
In terms of the **work field**, the works carried out in the lower stretch of the SCZ “Bidasoa River”, from the border of Navarre with Gipuzkoa and France up to the waters above the San Martín dam in Bera (C7).

With regards to the **seasonal distribution** of the follow-up, the plan is based on a comparative scheme between the initial state, or that prior to action, and the final state, or that after action.

JUSTIFICATION What are the desired results? – ENVISAGED RESULTS

The expected results for this action are:

- Establish the initial and final values of the “Copulation Rate” indicator of the shad.
- Assess the efficiency of the related preservation actions, comparing initial and final assessments.



D7: Shad follow-up