

Juvenile bluefin tunas can dive to depths of more than 1000 meters

30 September 2009

According to the AZTI-Tecnalia researchers, the first estimations of the geographical location of the recovered tag revealed that this fish had undertaken migrations between the Azores and Portugal during the winter, later to return to the Gulf of Bizkaia in spring and also that it had dived, during the winter, to depths of more than 1000 metres.

The bluefin tuna was tagged 26 of August 2008 in the Gulf of Bizkaia at coordinates 43°34'N and 2°00'W and that day it measured 89 cm. fork length and its weight was 13.5 kilograms. When caught, it was at 44°44'N and 2°49'W, weighed 22.3 kilograms and its length was 104 centimeters. The electronic tag used in this case was provided for the project by the University of New Hampshire in the United States, within the remit of the cooperation agreement for the tagging of juvenile bluefin tuna in the North Atlantic. The fishing was undertaken with the collaboration of the San Sebastián and Hondarribia Sailing Clubs.

Conventional tagged fish are identifiable by a visible tag on the second dorsal fin of the fish. During the release, once its biological data - species and size - have been noted and the time, date and position of the catch, as well as the state of the sea, amongst other parameters, the animal is tagged and freed. When the fish is caught again the information is sent to AZTI-Tecnalia, where it is analyzed together with all other recapture details. In this way, comparing initial and final information helps to determine variables such as growth and [migration](#) rates, data that is of great interest to the scientific community, the fishing sector and can help the stock assessment.

However, in this case, the electronic tag used was surgically implanted in the peritoneal cavity of the fish and, besides the previously mentioned data, it also stored information about temperature, pressure and light intensity, which enables a detailed monitoring of the medium in which the fish

is moving at any time and an estimate of its geographical position. In order to download the stored information the whole fish has to be sent to AZTI-Tecnalia.

It is not the first time that a tagged fish has been recovered. In fact, the crew members of the recreational craft, Tía Rosario, which tagged this fish, also released a bluefin tuna undertaking a transatlantic migration on 25 July 2005: the fish was subsequently found off the coast of Massachusetts (USA) on 14 September 2007. It measured 68 centimeters and weighed 5.5 kilograms when it was tagged in the Gulf of Biscay; 775 days later it was found measuring 114 centimeters and weighing 30 kilograms. The fish had travelled 3,330 marine miles, some 6,000 kilometers (measured as the crow flies).

The fishing campaign of keeping tuna fish alive for tagging purposes has been carried out in the Basque Country for seven years now, promoted by the Basque Government on signing the joint working agreement between the Basque Federation of Sailing and Recreational Fishing Associations (FASNAPER) and the AZTI-Tecnalia Technological Centre - experts in Marine and Food Research. Since then, Basque recreational vessels have tagged 4,074 [fish](#) - albacore tuna, bluefin tuna, bigeye [tuna](#) or skipjack, in the contest category of both sportive activity and recreational fishery. This collaboration with recreational fishermen is key activity promoting a responsible fishing and complementary to scientific tagging surveys. To date, 123 such recreational vessels have been involved in these campaigns.

Source: Elhuyar Fundazioa

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