

OBJETIVE 4: BIOLOGICAL PARAMETERS

4.F.- STOCK STRUCTURE

Objective: To increase the knowledge of stock structure of red tuna and sword fish. The active incorporation of participating Organizations/Countries in the dynamics of the recommended research through the project YEAR of the Red Tuna (BYP) of ICCAT: electronic marking and genetic analysis.

Methodology: Informing of activity on marking-recatch. Participation in the marking activity. Acquirement of biological samples (muscle, heart and liver) for genetic analysis.

Results: 110 samples collected by the participants of the present project for the year 1999 in order to perform genetic identification analysis. During the period of 10/1999, Dr. El Tawil participated in the creation of a Working Group held at the University of Girona (Spain) where at a meeting with Dr. Plá and collaborators, the preliminary analysis of the first group of red tuna samples caught by tuna traps in Libya were analyzed and whose results will later be presented.

With respect to the study on stock structure by the means of marking, an electronic marking activity using pop-off satellite tags was undertaken at the tuna traps of Barbate (Cadiz, Spain) in which 23 red tuna adult samples were marked. The Working Group on electronic marking, which was held at the same location and dates as abovementioned, included the participation of D.A.Nouredine (INRH-Morocco), D. A Hattour (INSTM-Tunisia) y D. J.M de la Serna (IEO-Spain). Scientists from the European Union (FAIR Project - 97/3975 EU) also attended this meeting and an agreement was reached in which a program would be created together with the marking program in order to improve the results which had been obtained up to that moment.

MOROCCO (INRH)

Objective 4.1

In the month of July, a scientist from INRH participated in the Working Group on electronic marking together with other scientists from the FAIR Project-97/3975 EU. During this session, 23 red tuna adults were marked using the pop-off satellite. Similarly, the marking activity has been informed to all Moroccan ports. The result of this activity is the co-operation of electronic marking by Moroccan fisheries in the Gibraltar Strait.

SPAIN (IEO)

Objective 4.2

In 1999, a strong information campaign on the activity of marking – recatch was undertaken as a means of increasing the knowledge of the stock structure and migratory patterns of the large pelagic species, especially red tuna. In order to do this, marking-recatch posters were distributed in the more important ports and tuna traps on the Spanish coast with the objective of making the fishing sector more conscious. The result of this activity was the recuperation of various markings which had been done on red and white tuna by different Research Organizations who were notified by various fishers of the markings, which were later sent to the involved Organizations such as ICCAT.

A Working Group on electronic marking with the participation of scientists from the FAIR Project-97/3975UE and scientists from the FAO Project-COPEMED/Tunas'99 was organized by the Oceanographic Centre of Malaga IEO and took place from 26 to 29 July 1999. At this meeting and with the participation of COPEMED countries, discussion took place on new methodologies of marking and the planning of a strategy together with marking which would improve the objectives/results of the European Union Project. During the course of this Working Group, 23 adult tunas from the tuna traps at Barbate were marked electronically using the “pop-off satellite tags”.

By this means and by following our project objectives which originate from the ICCAT recommendations in its program Year of the Red Tuna (BYP), a total of 20 samples of muscle, heart and liver from red tuna were collected for further genetic analysis whose results were presented at the Ad Hoc Group CGPM/ICCAT (Malta – September 2000).

TUNISIA (INSTM)

Objective 4.3

In the year 1999, 85 biological samples of muscle, heart and liver were collected from red tuna caught by Tunisian fisheries for posterior genetic analysis within the study of stock structure planned in the creation of the Project COPEMED and co-ordinated from the BYP Program of ICCAT. Therefore, a scientist from INSYM participated in the electronic marking activity of red tuna which took place at the tuna traps of Barbate (Spain) together with other scientists from the European Union.

MALTA (NAC)

Objective 4.4

During the months of May and June, muscle samples from red tuna caught by superficial long line fishing were collected. The samples were sent to the University of Girona (Spain) for genetic analysis. In total, 20 samples were collected.

LIBYA (MBRC)

Objective 4.5

For the study of stock structure, red tuna 70 samples caught by tuna traps were collected. The samples were duly preserved and sent to the University of Girona (Spain). In october 1999, a scientist from MBRS participated in the analysis of these samples together with scientists from the above-mentioned university. The results obtained in the stock structure study from the analysis of these samples from Libya are presented in the publications chapter of the presentation (SCRS-00/124).