

DORY - Capitalization actions for aDriatic marine enviroNment pRotection and ecosYstem

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1. INTRODUCTION

The present report, corresponding to the deliverable **D.5.1.1- n.2 Cross-Border Know-How Exchanges** details the outcomes of the Fisheries and Aquaculture Operators Exchange organized in the framework of the **Activity 5.1 “Knowledge transfer to fisheries and aquaculture operators”** aimed to ensure that the knowledge generated within the project and the practices implemented at cross-border level towards the achievement of a more sustainable exploitation of marine resources are shared among sector operators. The action foresees the realization of exchange programmes among fisheries and aquaculture operators to raise awareness and foster their active involvement in the application of common crossborder measures for the sustainable management of fisheries activities and for the implementation of low-impact aquaculture practices. CB study visits allowed operators to exchange practices and will be conducted also at field, visiting pilot actions site-

2. WP5: TRANSFERRING KNOWLEDGE AND EXPLOITATION OF DORY RESULTS

The first knowledge transfer was organised by Zadar County and the Development Agency of the Split-Dalmatia County (RERA) on the 2nd, 3rd and 4th October 2018. The second knowledge transfer was organised by the Friuli Venezia Giulia Region with the support of the Veneto region on 19th, 20th and 21st March 2019. All the institutional representatives of DORY partnership as well as some delegations of fishing and aquaculture operators joined the two events.

2.1 Knowledge transfer in Croatia – 1st Operators cross-border exchange (Zadar and Spli 02/04 October 2018)

The event began at the fishing port of Zadar, where a brief meeting between Italian and Croatian operators took place. Subsequently the group carried out a visit to the fish processing industry of "Cromaris" company, equipped with the most innovative technological equipment for the selection, decapitation, evisceration, filleting and packaging of fish farmed at sea, mainly Sea breams (*Sparus aurata*) and Sea basses (*Dicentrarchus labrax*). Characterised by a production capacity of approximately 160 kg of fish per minute, fishes are refrigerated or threaded and stored in Protective Modified Atmosphere and finally traded mainly in Italy and Germany. After the visit to the industry, the group joined a boat trip to visit to the "Cromaris" fish farming facilities at sea, by Ugljan island. The group was informed about the efficiency of the farms, consisting of 60 offshore cages with a diameter of 20 to 32 meters and a height of 38 meters and on the functionality of the technological system for feeding the farmed fishes.



Later the group joined the fish farming areas for the Bluefin Tuna (*Thunnus thynnus*), owned by "Kali Tuna" company. The facilities, consisting of 24 large floating cages (about 36 meters in diameter and 40 meters deep), provides for the fattening of specimens of Bluefin Tuna, caught at a size of about 10 kg and fed with blue fish (anchovies, sardines, herrings) up to a size ranging between 45 and 70 kg. All the bred product is sold on the Japanese market. At the end of the visit to the breeding facilities, the delegation was taken back to the port of Zara for a meeting with local operators.



The second day began at the tourist port of Split with destination Supetar, on Brač island. Upon arrival, the delegation was welcomed by a group of Croatian operators who led the participants to Postira, at the "Sardina" fish processing company. The industry, working since 1907, was expanded and restructured in 2013 thanks to EC funds, to the actual production capacity of 40 million boxes of fish product per year. The industry mainly processes Sardines (*Sardina pilchardus*), Mackerels (*Scomber scombrus*) and Yellow-fin Tunas (*Thunnus albacares*). Fish products are steam cooked and placed manually in special packets; subsequently the mechanised line proceeds to insert them in closed boxes, labelled and sterilized at temperatures above 100°C and subsequently prepared for the marketing. The plant is completely autonomous and has freezing cells, areas dedicated to making meal fish and oil fish.



At the end of the visit there the additional activities of the company were illustrated: 7 fishing boats operating with the purse-seine system for small pelagic, several aquaculture plants that produce annually more than 1200 tons of valuable fish (sea bream, sea bass and Bluefin tuna) and a site for the production of the Mediterranean Mussels (*Mytilus galloprovincialis*). The company also owns some sales points for the marketing of its own product. The event closed the third day at the Institute for Oceanography and Fisheries in Split with the discussion of two topics: establishment of a restricted zone for fisheries and envisaged measures for the Pomo pit; results from the meetings with operators and proposed management measures for Cuttlefish and Sole stocks as scenarios developed by the "DISPLACE" tool for maritime spatial planning. At the end of the discussion, the members of the technical board and the steering committee continued working on the progress of DORY project while the operators carried out a guided tour of the Institute premises.

2.2 Knowledge transfer in Italy - 2nd Operators Cross Border exchange Friuli Venezia Giulia and Veneto regions (19 – 21 March 2019)

The knowledge transfer began with a visit to the purifying and dispatch centre managed by ALMAR Soc. Coop. at San Giorgio di Nogaro (UD). The responsible biologist, dr. Aurelio Zentilin, led the delegation in the main productive sectors of the centre and illustrated the activities dedicated to the reproduction and pre-fattening of the shellfish, as well as the management of the culture parks and the fishing of bivalve molluscs in the Northern Adriatic, in particular the Manila clam (*Tapes philippinarum*) reared by the lagoon mudflats and the Mediterranean mussel (*Mytilus galloprovincialis*) reared in suspension on the water column (long-line method). The marketing sector is however also addressed to other species of bivalve molluscs collected in the Gulf of Trieste marine areas, in particular the Striped Venus clam (*Chamelea gallina*), the Smooth clam (*Callista chione*) and the Razor shell (*Ensis minor*).



After the visit to the purifying and dispatch centre, the group moved to Marano Lagunare (UD) and joined a boat trip to visit the production areas and the aquaculture facilities located in the Marano lagoon. There are more than 700 hectares of lagoon mudflats dedicated to clams cultivation and collection, most of which are managed directly by ALMAR, also in association with other companies. Italian and Croatian guests were able to learn the phases of sowing and harvesting that make up the "Marano model".



After the boat trip in the lagoon, a dedicated workshop was held in Marano Lagunare (UD) on the results of the "pilot action for the restocking of the Cuttlefish (*Sepia officinalis*) stock", an activity provided by the WP4 of DORY project and carried out by COGEP, the local Consortium of small-scale fishermen. The important role of the fishermen for the protection of Cuttlefish eggs has been renewed here and consists on self-regulation fishing procedures that provide for the scraping of the eggs laid both on the fishing traps (fyke nets) and on special hand-made collection devices and their protection due to the transferring to a dedicated nursery area.

In the evening the Italian-Croatian group moved to Chioggia (VE) to optimise the timing of the visits planned for the following days in the Veneto region productive areas. The visit of the second day started from the Scardovari Cooperative headquarters, "RO Consorzio Cooperative Pescatori del Polesine", the first in Italy for the production of bivalve molluscs. Here a meeting was held between operators where the main productive and socio-economic characteristics of the consortium were illustrated, as a total of 14 cooperatives and 1450 employees as a whole. Also, here, as in the Marano lagoon, the productive areas are located in the lagoon waters, an extremely productive area, with main production of Clams and Mussels.

Subsequently the two Mollusc collection and packaging centres in the Scardovari area were visited. The visits allowed the guest operators to appreciate the highlights of a supply chain that aims at high quality production. In the last few years, the consortium has succeeded in having the "Mussel of Scardovari" and the "Polesine Clam" labels included in the Register of Italian traditional products recognised with 18.07.2000 Decree of the Ministry of Agricultural Policies and then registered its own trade mark.



Afterwards the group moved to the headquarters of the "fishermen's cooperative of the Adriatic " where the results of the pilot actions of the DORY project obtained at the local level were illustrated. The final knowledge transfer started at the administrative headquarters of the Chioggia (VE) fish market, where the activity of the fish market was illustrated with in-depth information mainly on the controls concerning health aspects. The group visited the Chioggia fish market just following the official opening of the negotiations, which are not held here by an electronic auction, but still take place in a completely traditional manner with purchase proposals that are whispered in the hawker's ear, keeping them untold until the effective sale.



A further exchange has been implemented in the month of August in the Zadar Area focused on sustainable aquaculture methods and technology with the common purposes of operators to increase know how of lower environmental impact farming methods. The participants (mussels farmers) from Veneto Region and Emilia Romagna Region were interested in the innovative and more sustainable methodology applied for farming , the so called "New Zealand method".