



## The Italian system in action

The Italian marine aquaculture system is giving a strong support to MADE project, to increase the sustainability of the program. Marine aquaculture is a new sector in Egypt and GAFRD is strongly committed to bridging the technological and production gap. One of the keys to achieve the success is represented by the human resources. The on-the-job training courses organised in GAFRD k21 hatchery in Alexandria over the last production season (2011/2012) have paved the way for the next technical step.

## Hatchery manager training

A high level training scheme for “Marine Hatchery Managers” has been recently carried out in Italy for 9 GAFRD technicians, under CIHEAM IAM Bari international umbrella and validation.

MADE PMU proposed the training ToRs to IAM Bari, and its connected commercial hatchery, Aquacultura Ionica, located in Taranto in the Puglia Region, because this farm has technological characteristics that can be replicated in Egypt. Bioreactor units operate for algae production, for achieving very high density in optimum hygienic conditions. Rotifers are fed on high nutritional value artificial feed and Artemia new technology approach for cystic decapsulation by magnetic equipment.

Mechanic and biological filters operate in each productive sector (breeders, larval, nursery and Pre-fattening) to ensure optimal water quality in closed circuits. Sea bass and sea bream larval rearing relies on green water technology, which is the key for good results in terms of fingerlings quality production.

Other technological solutions and approaches could be equally attractive, such as, for instance, water treatment by ozone, the liquid oxygen and heater units in titanium to increase/maintain rearing units water temperature to 20°C.

## Egyptian technicians at work

The Egyptian technicians worked all the sectors of the hatchery: algae, rotifers, Artemia, broodstock larval rearing and fingerling pre-fattening. Attention has been given to the rearing phases, in terms of feeding and environment parameter control (photoperiod/lights and water temperature). Aspects of larval and nursery sectors management have been observed, particularly for the swimming/air bladder development and the correlated skeleton diseases. Several management aspects have been focussed on and implemented: tanks cleaning and disinfection, broodstock management and eggs collection, size grading, swimming bladder fishes selection, feeding, and harvesting.

After their training in Italy, the Egyptian technicians will be working in Egypt in the MADE project, which will thus ensure a high level of project sustainability in terms of training of trainers, extension service to the private sector and management of the new infrastructure that the project planned to build.



## NEWS IN EVIDENCE

Bari, 31 May 2012. Official ceremony in CIHEAM IAM Bari as final stage of the hatchery manager training. The IAM Bari Director Cosimo Lacirignola expressed his satisfaction for the results achieved in terms of know-how and professional capacity acquired by the 9 GAFRD technicians through very intense training in Ionica Acquaculture Hatchery.

Mr. Mohamed Elaraby, the Egyptian technical coordinator, stressed the achieved results in terms of know-how and professional capacity acquired. Elaraby also thanked the IAM Bari and Ionica Hatchery staff for technical support and hospitality. The Egyptian technicians received a Training certificate with the logo of Italian Cooperation, CIHEAM IAM Bari, GAFRD and MADE, a most valuable paper in the Mediterranean aquaculture context.



## MICROSCOPE

The Egyptian private farmers are looking for fingerlings of good quality and appropriate sizes (from 3/5 to 20/40 gr), to ensure appropriate planning of density in the rearing units (cages and ponds) and good management plan in terms of feeding and harvesting. This target can be achieved in two ways. On the one hand, fingerlings can be imported from other Mediterranean Countries where hatchery know-how is fully developed. Fingerlings production in the Mediterranean area achieved the target of 506 million sea bass fingerlings and 645 millions sea bream (2007). However, agreements with foreign hatcheries for importing fries/fingerlings have 3 possible risks. The first one is to import diseases. The second one is connected to the quality of fish, and the third to the stress for transport, which may in turn cause diseases. On the other hand, national hatcheries can be set up for the production of fingerlings of good size and quality. This would be, of course, the best scenario. The Italian technical assistance intends to give a peculiar contribution to the sector, transferring not only operative capacity but also technologies, and thus supporting the dialogue between actors in the Egyptian and Italian private and public sectors while proposing a productive process that could best suit both private sector need and the dynamics of the new market.



Mr. Mohamed Elaraby

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## FOCUS: NETWORK CONTRACT AND HUMAN RESOURCES

Training planning has been implemented with a “network contract approach”, in which several Institutions and Companies are common objectives and results.

### GAFRD/MADE Training target

The trained Egyptian technicians must ensure a high level of project sustainability, in terms of training of trainers, extension service to private sector and management of the new hatchery that MADE project will build.

### The Project team

Roberto UGOLINI, MADE Project Manager  
Mohamed ELARABY Abdou (Technical Coordinator)  
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### CIHEAM Mediterranean network

CIHEAM is an International Inter-governmental Organization and Network including 13 Mediterranean countries. Egypt is one of the members of the network that has its headquarters in Paris (Agreement of 21 May 1962). The operational structure includes 4 Mediterranean Agronomic Institutes.

### IAM Bari Technical support

Biagio DI TERLIZZI (IAM Bari Project Manager)  
Ms Silvana CAMPANALE (Organization Management)  
Antonio PRISCIANTELLI (IAM Bari Assistant Project Manager)

### Aquaculture Ionica hatchery

MADE PMU and IAM Bari organized the training in Aquaculture Ionica, a modern Italian hatchery with productive capacity of 5-8 millions of fingerlings/year. This hatchery has several important characteristics that can be replicated in the Egyptian context.

### Acquacoltura Ionica staff

Francesco SANTAMARIA (General Manager)  
Alessio BRASACCHIO (Algae sector)  
Ms. Stefania LENTINI (Artemia sector)  
Lorenzo INTERMITE (Prefattening sector)  
Francesco LATERZA (Administrative management)  
Marco NOTARANGELO (Broodstock management)  
Stefano PANUNZIO (Rotifers section)  
Agostino TOTAGIANCASPRO (Technological implants)

