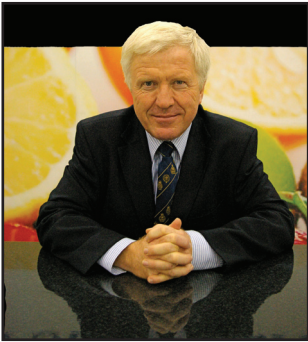


A different kettle of fish!

An insight into the offshore fisheries of Cyprus



By Professor
John Moverley

Cyprus is the third largest island in the Mediterranean, situated in the eastern part of the basin with a population of over eight hundred thousand. It has an exposed coastline of about 500 miles and indeed,

apart from Nicosia, all the other cities are located on the coast. In May 2004, the Republic of Cyprus joined the European Union.

As a UK resident, my initial thoughts of Cyprus are as a year round tourist destination, located as it is in the world with its beautiful beaches, mountains and other visitor facilities. However the country has so much more to offer and this article looks at just one area, its fisheries. It is said that Aphrodite was born from the sea at a location between Paphos and Limassol, hence her name: 'born of foam.' Today that sea is the key place for a rapidly developing fish industry and one of real potential in terms of exporting.

The commercial fishery sector in Cyprus comprises principally marine capture fishery and aquaculture although there is some recreational fishing providing good angling for locals and visitors. With limited fresh water availability, aquaculture in Cyprus mainly refers to marine with open sea cage culture used. After some years

of research, the first marine fish fattening unit, which used land based coastal installations, commenced operations in 1988. The first commercial fish farm started production in Cyprus in 1991.

Today, there are eight commercial offshore cage fish farms, four marine hatcheries and a shrimp farm. The latter adopts unique biotechnology techniques and produces approximately 30% of the total production from aquaculture in the Mediterranean, a significant business. The main species of marine fish farmed on a commercial basis are the gilthead sea bream (*Sparus aurata*), European sea bass (*Dicentrarchus labrax*), and Northern bluefin tuna (*Thunnus thynnus*) with significant quantities of Sharpnose sea bream (*Diplodus puntazzo*), Shi drum (*Umbrina cirrosa*), Japanese sea bream (*Pagrus major*) and Red porgy (*Pagrus pagrus*). The species currently produced and sold in most quantity are sea bream and sea bass. Freshwater fish cultured in Cyprus on a commercial basis includes rainbow trout.

Whilst not a high percentage of the Gross National Income, the fisheries sector is an important one and, as said, a developing element in the economy especially of several coastal areas, since it generates significant income and work opportunities, thus contributing to the social and economic welfare of the local residents. This article makes specific reference to the activity of four of the Cyprus fisheries, tracing their recent developments in terms of production and export. My research has provided an exciting picture and one which will be of interest to all buyers and consumers of fish.

Blue Island

The company's headquarters and processing facilities are in Nicosia, whilst the farming unit, which was established in 1993, is located just outside Limassol. The hatchery unit specialises in breeding fry focussing mainly on sea bream and sea bass. It can claim to be the first hatchery in the Mediterranean to succeed in producing all year round sea bream fry by using the photoperiodic method which simulates optimal circumstances for the impregnation of the parent fish. It has also successfully mass bred a range of new fish species to bring to the market meeting customer needs. Blue Island, from its own production and from other fishing companies in Cyprus and the Mediterranean, trade in a very wide range of fish aside from its core sea bream and sea bass mariculture. Such fish include mullet, dentex, trout and many more.

From the hatchery, stock are transferred to the open sea farming unit located in an area chosen for the constant flow of strong under water sea currents which results in the fish living in very similar conditions to those in the wild with the fish fed on 100% pure fish and fish based products. This system, widely adopted by the sector, is considered to have the least impact on the environment and provide the best possible conditions for the fish in terms of animal welfare. The company owns high quality floating facilities fully maintained and managed to keep fish loss to a minimum.

From the farming unit, once the young fish reach the required weight, they are transferred to the processing facilities. In 1999/2000, the business implemented a major upgrade and operates a fully mechanised facility to de-scale and gut fish. It has the ability to process, package and store fish in accordance to HACCP and European Union guidelines, has a full export licence and can handle both fresh and frozen fish. The factory also accommodates specific processing requirements of other non-European countries with which the company is involved. Production currently is at 1300 tons a year and the company has obtained a fishing licence which will increase capacity by a further 1000 tons.

Blue Island markets the fish using both private and own label to retail and wholesale outlets with supplies to supermarkets through other distributors. Its principal fish processing products are fish fillets, fish burgers, smoked fish and marinated fish, mainly sea bream and bass. Currently just 10% of the fish go to export but, as part of the expansion, the plans are to significantly increase this. Blue Island has involvement in tuna and swordfish fishing through the two related companies, Alieas Alieftiki and Niras Trawlers. Further information on this company and its business can be found on the website www.blue-island.com.cy

Kimagro Fish Farming

The business is based in Limassol where the environment and climate conditions are considered ideal especially for producing high quality farmed sea bass and bream. The owner of the business is Antonis Kimonides who studied Marine Biology in France before successfully obtaining a Masters in Oceanography in 1983. There followed a series of high level appointments, including a period with the UN Food and Agriculture Organisation, before he became Manager of Sagro Aquaculture Limited in 1988, a position held until 1993.

Antonis has a passion for the sea and a vision of producing the highest quality fresh fish in the Mediterranean. Kimagro was founded in 1989 and uses innovative aquaculture technology facilitating the highest levels of husbandry practice. They were the first company in Cyprus to research and develop the open sea fish farming concept in floating infrastructures and the unique platform structure which emerged, can be said to have revolutionised the fish farming industry in Cyprus. The cages allow for better husbandry practices and an automatic feeding system, improving the prospects of producing high quality fish.

Each of the cages has the capacity for between four and five million fish at any one time.

Kimagro export fish principally across Europe, Russia and around the Mediterranean. By the end of this summer, they will have increased production from five million to seven and a half million fish per year, primarily based on sales of sea bream and bass. By the early part of 2011, they will have fulfilled all the criteria for organic production, widening their potential markets in the UK, France, Germany and the USA although, they will still keep conventional production methods in place for markets in Russia, Israel and specific outlets in Europe. Kimagro put an emphasis on fresh fish quickly delivered. In terms of export, this involves the use of air freight which may cost a little more but allows same day delivery of a fresh not frozen product. The business has invested heavily in facilities and its packaging equipment allows automatic batching of the fish according to grade and weight categories and the clear breakdown of the various sized fish. Further information on Kimagro's business can be found on their website www.kimagrofish.com



Telia Aqua Marine

The company's main activities include the hatching, breeding and sale of fish and seafood. The company also carries out open sea fishing in the Mediterranean and trades through a network of fish markets. Telia Aqua Marine has a substantial breeding facility for both sea bream and sea bass. The hatchery has a capacity for ten to twelve million bringing the fry to the required weight of up to two to three grams each (about 4 months old) before transfer to fish farms. The cycle from egg to delivery takes about 120 days supported by a constant 20 degrees water supply from bore holes.

The export of fry has seen a sustained increase with the main receiving countries being Greece and Israel. The breeding facility has on site almost five million bream and eight hundred thousand bass finger lins (fries) for most of the time. The company produces and sells both fish and fry. The two grow on sites for producing mature fish are located in Liopetri and Zygi with some 48 cages. The production cycle achieved for sea bream is 13 months whilst sea bass take a couple of months more to reach the target weight of 500 grams. The environmental conditions in Cyprus with clear open sea water, slightly

high salinity and mild winters are ideal for producing a top quality product.

Telia Aqua Marine employs some 40 people and, in addition to the fries marketed, produces around 1500 tons of sea bream and 50 to 200 tons of sea bass annually. It adopts HACCP protocols and, combined with its efficient packaging unit, seeks to emphasise freshness alongside quality in its products. The company is strongly positioned in the local market, although over 70% of sales are directed to export, mainly to the Israel market, that can be reached by ferry so that a fresh product can be delivered and guaranteed.

Throughout the fish farming sector in Cyprus, there is a future focus on introducing new species to the market to support the core production of sea bream and sea bass as well as to diversify, through processing, the range of products available on the market. This emphasis is supported by Telia Aqua Marine. Whilst the business does not currently have a website, further information can be obtained by sending them an email central@telia.com.cy



Seawave Fisheries

The firm was established in 1995 in Zygi on the southern coast of Cyprus. It started out with one cage and one hundred tons of production. It now has twenty two cages with a capacity of over three million fish and total production has risen to over 700 tons, mainly sea bream but with some sea bass. Of that total, some 400 tons are for the internal market and the remainder predominantly exported to Israel. Within its staff team, a number of specialists are employed in the fields of fish-stock monitoring, quality control, equipment upgrade/ maintenance, and production planning and control. A continuous upgrade in equipment has been followed, including vehicles, boats, lifting and related equipment. The importance of health and safety is at the core of all practices as is adopting the highest standards of quality control and health and welfare of the fish stock.

The company has a strong research focus. Currently, it acts as a coordinator for the research project entitled 'Operational models for process optimisation in Cyprus' sea fish farming industry', which has the National Technical University of Athens as one of the partners alongside the Frederick Institute of Technology and the Cyprus Research Promotion Foundation. Seawave Fisheries also have taken a lead in a project related to new fish species introduction including *Siganus Rivulatus*, which has common names of rabbitfish and spinefoot.

A new substantial company packaging facility will soon be completed complying with all European food quality and hygiene specifications as well as being able to meet the specific needs of its non European customers. Alexis Loucaides, manager of Seawave Fisheries, confirms the ambitions of his company including significant planned expansion over the next two to three years to 40 cages. This sets a target total production of 1500 tons of fish per year with the core focus remaining on sea bream and bass on a 80/20% ratio.

The business has facilities for private and own label and with the expansion will seek to diversify its export markets although the principal external outlet is still seen as Israel. Current forecasts, once expansion takes place, are towards 25% being sold internally and 75% for export. Further information on the company can be found on its website www.seawave-fisheries.com

A thriving business

My investigations and research for this article have found a growing industry with significant investment taking place in facilities, research and equipment. There is a real emphasis and commitment to complying fully with quality and hygiene standards to meet the requirements of European and indeed all other markets. The main export countries for Cyprus fisheries are the USA, Russia, Israel and the European Union as well as countries in Central and Eastern Europe. Whilst core production remains sea bass and sea bream, new fish species already introduced include dentex, red sea bream, red porgy, marbled spinefoot, shi drum and pandora. It is hoped that markets for these will develop significantly and each company mentioned above is well prepared to meet such increased demand. As example, the Cyprus's Fisheries Department has recently investigated the export of the snaggle-toothed fish to Far East markets where there is significant demand especially in Japan, Korea and China.



The comments in this article on fisheries in Cyprus, with a specific focus on four of the operating companies, provides a picture of businesses which are developing and seeking to expand export markets for their fish and related products. The owners and managers to whom

we have spoken, are enthusiastic about the future and the opportunities. The commercial fishery business has certainly grown from its beginnings in the early 1990s, continues to develop fast and is set to make a very significant impact on export markets in the near future.

