



**The sorry state of world fisheries presents a business opportunity
for the African private sector - Aquaculture**

by Dr. Dan Cohen

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Fish is a vital source of food for people. It is man's most important single source of high quality protein, providing about 16% of the animal protein consumption by the World population. According to the FAO, about 1 billion people rely on fish as a primary source of animal protein. The value of fish and fish products traded internationally is estimated to be about US\$51 billion per year. Over 36 million people are employed directly through fishing and aquaculture and as many as 200 million people derive direct and indirect income from fish.

Fish is the only important food source that is still primarily being GATHERED, rather than FARMED. World fisheries industries are undergoing a crisis. Two major trends, which are occurring simultaneously at the present, are changing the World seafood and fisheries industry: A sharp decrease in World ocean captures fisheries, paralleled with an increase in World demand for fish products. More than 80% of World fisheries supplies are derived from ocean fisheries. Marine capture fisheries increased 5 fold in the 40 year period from 1950-1990. But in the past 2 decades, World fisheries resource has reached the 'Maximum Sustainable Yield' and has been diminishing, both in terms of volume and more so in terms of value. Since 1990, fish consumption increased 31%, while capture fisheries increased only by 9%. The main reasons for the decline of capture fisheries the world over are ***Over fishing, Pollution and fishing restrictions***, attempting to revert the tragedy of the oceans.

There is not a single country or continent, whether among the highly developed industrial nations (EU, USA, Japan) or the less developed in Africa, which does not feel the burden of this situation in its markets, as well as in its national budgets. In Africa, countries which used to be self sufficient in fishery supplies, are presently in short supply and forced to import fish, using hard earned foreign currency. In Ghana, for example, total fishery output was 450,000 ton in 1992 declining to 350,000 ton in 1998. Meanwhile demand has grown. The difference between present annual production and the estimated requirement of about 700,000 tons per year, is overcome largely from imports. Cote d'Ivoire is dependent on imports to the extent of 70% of its requirements, with a deficit of about 240,000 tons per year. Togo imports more than 50% of its



consumption. In Nigeria, the demand requirement is for 1.4 million ton per year, while the local production, from artisanal and trawling activities, is merely 0.4 million ton per year, forcing importation, costing about US\$ 250 million per year.

The amazing fact is, that wealthy EU countries suffer from the same fate – traditional fish species, for example Cod ('Baccalau'), which used to be a staple fish in European household, is practically extinct. There is more fish in the oceans and the demand is increasing.

These trends will continue to play a major role in the development and behavior of the world seafood industry. Consequently, the price of fish products is increasing steadily all over the World, as the buyers, users and consumers, are on a constant search for new sources of high quality fish, supplied consistently year-round, at stable and competitive prices.

The only practical solution is AQUACULTURE, the husbandry of aquatic food crops. Aquaculture is practiced in almost all countries and continents, supported by Governments, International organizations and financial institutions, and involving agriculture communities as well as the private sector. In many countries, developed and less developed, aquaculture has become a major food production branch, providing employment in rural areas and generating foreign currency. Aquaculture presently contributes some 33 million tons to world fisheries production of 125 million tons in 2000, representing 26.4 % of World fisheries production (FAO).

But , in comparison to the rest of the World, aquaculture in Africa is insignificant. The African continent as a whole, contributes a mere 0.5% of total world aquaculture production. In 1998 (last world report by FAO) the total African production amounted to 77,500 tons, of which 58% was produced in three countries bordering the Mediterranean, principally Egypt. The reasons are of course, complex. But it is important to note, that whereas in many other successful countries (continents), the private sector has taken a lead in aquaculture development, in Africa the main players are Governments and international aid organizations. The predominant approach is to introduce extensive, low cost and – at times - outdated production systems and methods, as means of uplifting the poor rural segment of the population.

Taking a fresh look at this sorry situation, it presents a unique opportunity for the local and foreign business sector in Africa. Aquaculture is a very promising activity, to supply not only the dwindling local market, but also to export to the EU and USA. Climatic, land and water conditions in many African countries are optimal for year round aquaculture production. Proven and advanced technologies, as well as operating equipment are available for large scale implementation and use. It can be shown, that by using proven technologies, a major part of the African national fish requirement could be produced locally, replacing imports and providing employment in rural areas. But most importantly, it presents an opportunity to engage in a new export niche market of high quality aquatic foods (fish and prawns), delivered fresh chilled to a very demanding EU market.

Take the case of tilapia, a well known fish in almost all African countries, consumed locally for centuries. It was never before considered as a potential export item. Yet in



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2002 tilapia fillets, skinless and boneless, have entered the “10 most wanted seafood items” in the USA, and is the third highest seafood imported (in volume), after shrimp and Salmon. Tilapia, along side with Salmon and Catfish, are the three CORE fillets products in US supermarket and chain restaurants in the USA. According to official US data (NMFS), the increase of imports to the USA of fresh and frozen tilapia fillets grew at a rate of about 30% per year since 1992. The data reveal that FROZEN WHOLE AND FROZEN FILLETS come almost exclusively from South East Asia while FRESH fillets are imported almost exclusively from AQUACULTURE PROJECTS in tropical countries of Central America and the Caribbean basin.

While the penetration of tilapia into the USA is an established fact, the EU market is barely exposed to FRESH TILAPIA FILLETS. The Only reason is, that there are no advanced aquaculture projects in the tropical countries near the EU, able to airfreight cost effectively the perishable product.

Not anyone can export fish to the EU, and not any tilapia is suitable for exportation. In the past several years, the importing markets, mainly US and EU, have instituted new health and quality regulations, in light of continued abuse by certain countries. The HACCP quality control system has been extended from the Processing Plants, to include Production Systems. Hence, exporters are obliged to demonstrate the their Production Systems operate environmentally and health-wise according with the highest standards, as determined by the US and EU health Authorities.

The impressive penetration of Tilapia into the mainstream of the seafood industry was made possible by the gained confidence of reputable US food service companies in the ability of the advanced AQUACULTURE production projects, to deliver high quality tilapia fillets, on a consistent basis. ***Aquaculture Production Technology (LTD) (APT)*** has been at the heart of this revolution. The company provides complete ‘Technology Package’ and Professional Services for the engineering design, construction, management and operation of advanced and environmentally sound Tilapia Projects, inclusive of HACCP approved Processing Plants and the supply of high performance hybrid strains. Established in 1982 in Israel, the company has provided its services to tilapia aquaculture projects in Honduras (5,000 ton per year), El Salvador (1,200 ton per year), Belize (1,300 ton per year), Peru (2,200 ton per year) and others.

The field is open to do the same in Africa, to supply local markets and export to the EU.

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