

# Fish marketing and trading in Albania

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## Abstract

An overview on the current situation (2001-2002) of fish marketing and trading in Albania is presented. Details are given on the national policy and legislative framework, fishery production, aquaculture production, the fish processing industry and marketing, the fish catch distribution system and fish prices. Some recommendations to overcome the problems of the current development of the Albanian fish market are described.

## 1. Introduction

Albania is located along the eastern seaboard of the Adriatic and the Ionian Seas, bounded by Montenegro and Kosovo to the North and Northeast, Macedonia to the East and Greece to the South. There are significant water resources in the form of large lakes, flooded valleys, agricultural and drinking water reservoirs, irrigation canals, coastal lagoons and of course the Adriatic and Ionian Seas.

Albania has a coastline of about 450 km and territorial waters 12 miles wide; moreover, there are several coastal lagoons with a total surface area of 10,000 ha, three lakes with a total surface of 300 km<sup>2</sup> and around 700 reservoirs with a total surface of 12,000 ha. The fishery sector in Albania has regional importance though on national scale it is not as critical as agriculture. This sector is providing revenues to government from license fees and other taxes. At the same time, it is receiving no government subsidies and pays the same tax on fuel, the major expenditure like the other sectors of Albanian economy.

The potential sustainable catch from these waters has been assessed at between 14,000 and 17,000 t of fish and shellfish annually (about 8000-9000 t of marine fish; 3000 t harvested from lagoons, inland waters and aquaculture; and 3000 t of bivalve molluscs. The contribution from the marine, freshwater and mollusc sectors (the published statistics do not seem too precise during the nineties) has remained roughly constant with an average percentage contribution 57-60%, 20-23% and 17-23% for the years 1984 to 1993. In the forty-five years to 1991, Albania was governed as a largely closed command-led economy. Under this structure the fishery resources of the country were closely managed for productivity using systems of communal management and exploitation. Marine harvests exceeded 8,000 t per year, much of it in the form of small pelagics, whilst freshwater harvests were in excess of 2,000 t per year, with the bulk in the form of Chinese carps. In addition, mussel cultivation in Butrinti lagoon in the south of the country yielded production of several thousand tons a year.

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With the economic disruption that followed the fall of communism, and later with the financial collapse of 1997, fisheries constituted one of the few resources that could be readily exploited for food and for cash income, with limited practical barriers to participation in these fisheries. The decade from 1991 has accordingly seen heavy and often indiscriminate exploitation of the country's fishery resources, with the more traditional fishermen joined by the unemployed. Although increasing order has been brought to the control and management of these fisheries as the decade has progressed, most freshwater resources, and arguably also the marine resources (though marine resource management is subject to complex externalities) have been over-exploited. Accordingly they must be recognised as being in slow and fragile recovery. Official statistics suggest that both freshwater and marine fish landings are well down on levels achieved under communist rule, with freshwater landings under 1,000 t and marine landings a little over 2,000 t per year.

Though these figures should be treated with some circumspection, and accepted as only reflecting a partial picture of fish exploitation, these figures are a poor measure of the potential harvest that the country's natural resource base could support.

The Albanian fisheries economy can be roughly valued on the basis of estimated current landings of 2,000 t of mixed marine species and 1,000 t of mixed freshwater species. At average first-hand sale prices of about US \$ 2.80 (lek 400) / kg for marine fish, US \$ 1.90 (lek 270) / kg, this equates to a total first-hand sale value of US \$ 7.50 M. In the order of two-thirds of marine landings, comprising the more valuable sizes, qualities and species of fish, is exported, primarily to Italy, contributing perhaps an additional 50 per cent of first-hand value to GVP (say 1,340t at US \$ 3.50; equivalent to 2.35 M). The remainder of the marine catch, plus most of freshwater landings, are distributed and consumed within Albania, in whole and gutted form, contributing perhaps a further 30 per cent to GVP (US \$ 0.70 M).

The total direct economic value of Albanian fish landings thus amounts to something like US \$ 10.55 M. In addition to the above, Albania also imports a sizeable amount of fresh and frozen fish for domestic consumption. Import figures for 2001 suggest that 2,048 t of fresh, frozen and processed fish was brought into the country (assumed for domestic consumption), with a value of some US \$ 1.68 M (average price US \$ 0.82/kg). In 2001, average per capita fish consumption was about 1.5-1.7 kg (Carleton C., Flloko A., 2001), some general information is given in Table 1.

Table 1. Some general data.

Area	28 748 km <sup>2</sup>
Length of coastline	450 km
Population (1990)	3 255 891
PCE per head (2001)	1200 US\$
GVP (2001)	10 550 000 US\$
Value of imports (2001)	1 036 350 US\$
Value of exports (2001)	588 350 US\$

## 2. National policy and legislative framework

Albania has faced a difficult and turbulent decade. Ten years ago, it was the most isolated country in Europe. Early efforts to introduce democracy and to build a market economy were severely damaged by the lawlessness and economic collapse, which followed the failure of the pyramid schemes in 1997. In 1999, it bore a huge burden during the Kosovo crisis; at the height of the crisis, Albania was host to over 460,000 refugees. Albania has made considerable progress since 1999. Economic decline has been reversed and in 2000 GDP grew by 7.8%, in line with growth rates reported for 1999 (+8.0%) and 1998 (+7.3%). Privatisation of small and medium enterprises can now be considered as completed and, with some delay, privatisation of larger companies is also progressing. Important progress has been made in securing government revenue through reform of the customs and tax services, Albania's trade regime has been modernised and liberalised and Albania became a WTO member in September 2000.

The democratic developments in Albania made the liberalisation of the socio-economic activity of the country indispensable, and this started mainly through the liberalisation of both domestic and foreign trade. Albania has introduced a free open trade system. Albanian fish exports are normally free of restrictions (except for bivalve molluscs and live fish). Albania has still excise duties above the Community for certain products. On the other hand, tariff duties on imports are being progressively reduced. Albania has also abolished quantitative restrictions or measures having an equivalent effect. Albania has tended towards greater and greater liberalisation. From 1998 to the present the level of customs tariffs for imported goods in Albania has decreased. So, the maximum level of tariffs in 1998 was 30% and it has been gradually reduced year after year reaching the level of 15% in January 2001. Custom tariffs for agricultural products have been reduced in the last years. All custom tariffs were *ad valorem*; there were no products on which Albania applied specific or combined duties.

Albanian fish imports are submitted to a simple tariff system of 4 levels: 0%, 2%, 10% and 15%. Import tariff of 2% is applied to the fishery inputs. This benefit offered by trade liberalisation contributes in the entry of inputs that have a significant role in the productivity and quality improvements of Albanian products. Currently the regime of export-import of goods is completely free, except the goods that are considered as dangerous. The import – export is carried out in full compliance with international rules, according to the sectors. There are no export bans or restrictive measures; neither are there export taxes or any other tax of the same effect. The Value Added Tax (VAT) is the final tax applied to imports and industry production. It is a broad base tax, which is applied on all sources of goods and services. It is applied at a single rate, 20%, on all goods and services. It is important to recognise deductible value of VAT for all cases when the fish processing industry purchases raw material directly from the producers. According to Albania's membership of the World Trade Organisation, customs taxes for all fish species and other fish products became zero on January 1, 2002 (from the previous 2, 10 and 15 percent) (Ministry of Agriculture and Food, MAF, 2002).

The fishery policy in Albania should have these objectives: to ensure responsible fishing; to program and realize management in fisheries; to provide measures for storage (based on

biological criteria for marine ecosystems and inland waters); to develop aquaculture in sea and inland waters; to promote and regulate the scientific and technological research on the conditions and safeguarding of resources and harmonious development; to guarantee constant development of fishing and aquaculture activity and good social economic conditions for producers and to guarantee the interest of consumers by the introduction of high qualitative standards in market of fish products.

The other part of the fisheries policy in Albania concerns the use to which the fisheries activity and product is put. The activities can be aimed at satisfying producers, consumers, or both. A prime objective of fish marketing development should be to ensure that fish obtain the highest price possible. This will be achieved by ensuring that the quality is as high as possible, and providing the best market access. The best markets for Albanian fish require whole, fresh fish, thus the handling requirements are that the catch is sorted, adequately and properly iced and boxed at sea and stored at temperatures just above freezing point. After this, the less handling the better. The shorter the time between capture and sale the better.

Albania has frequent and direct links to one of the best fish markets in the world (Italy) and Greece, another important market for fish, is nearby. Other markets on which fish fetch high prices are France and Spain, both within marketing distance. To maximise fish sale prices, fish auctions need to have sufficient product, both in quantity and variety, to attract foreign buyers; and, the selling, packing and storage facilities must be absolutely first class. Sales should take place at a time which is most convenient for buyers. For example, this may mean varying the time of sales to enable product to be dispatched on the next ferry departing for Italy. Thus the major requirements are volume and variety of product, quality and convenience. I believe that there will not be sufficient production in Albania to justify more than one regional-class auction and thus a central site should be selected and infrastructure developed so that the product landed at the other three main centres can be moved to the main auction for sale. If the site is Dürres, national policies should be adopted that encouraged landings of fish from Montenegro to also be sold through the auction (MAF&Eastfish, 2000). For these reasons a prime objective of fishery policy should be to optimise fish marketing. For exports this would be done by developing a world-class single national auction facility. While Albanians have not been major traditional consumers of fish products, experience elsewhere in the world has shown that this is usually because of lack of exposure rather than because of unchangeable market preferences. Market promotion should be undertaken to encourage fish consumption, particularly of small pelagic species, freshwater and marine, in the fresh fish form as this will remove the need for any canning or other preservation activity. Such a domestic marketing campaign should be part of the next initiatives.

Immediate goals in the fisheries sector in Albania are to harmonize the national fisheries legislation, to monitor and control the level of the fishing effort in both marine and fresh waters to ensure that it is sustainable, to monitor and control quality of fish products, to provide some physical infrastructure (ports, fish markets) and some education and training, and to undertake marine and freshwater stock assessment work as required to manage the fisheries concerned, to create an information and statistical fishery system, to create the organizations of producers etc. There is no specific legislation that regulates fish marketing and trading in Albania. International conventions are, however, applied with regards to the public health and based

on laws No.7908 (Fishery and Aquaculture) and No.7674 (Inspection and Veterinary service) the Ministry of Agriculture and Food issues the necessary authorisation.

Concerning Fishery Regulations there are some of the general rules regarding fishing activities, according to season and fishing areas. These are listed: the minimum harvestable size lists of a number of commercially important marine and freshwater fish species; a number of marine and freshwater fish and molluscs of which, under the current legislation, any kind of exploitation is strictly forbidden; the closed seasons for selected commercially important finfish species in Albania. The fishery sector is regulated by a series of closed fishing seasons that vary depending on the fishing ground.

### 3. Fishery production

The fisheries sector in Albania could be classified in these main activities: capture fisheries, aquaculture, fish processing industry, and marketing and trade. Fishery production by category could be classified in capture fisheries and aquaculture fisheries. The capture fishing sector in Albania has substantial potential for development. Such development may both create sector employment and contribute to GDP. Although the quantity of marine resources of Albania is relatively contained due to the size of the country, several species appear to be highly valued in the world market. One other advantage is that Albania is physically well placed for marketing its products into the EU market.

#### 3.1 Capture Fisheries

The capture fisheries sector in Albania comprises the following important activities: marine fisheries, coastal fisheries (inshore and lagoons) and inland fisheries.

##### 3.1.1 Marine Fisheries

Fishing activity takes place along the entire 450 km length of Albania's coastline, including its territorial waters 12 miles offshore, bordering the international boundary. It is however concentrated along the continental shelf zone, which on the Adriatic side in the north extends 25 miles, but only 2-4 miles on the side of the Ionian Sea.

The entire fishing fleet has been privatised. The fishing fleet in Albania exercises these fishing methods: trawling, purse seining and selective catch (artisanal). In 1990, the fishing fleet numbered 110 vessels. Since privatisation during 1992-1994, the marine fishing fleet has grown and changed in structure. Table 2 indicates these changes for the period 1990 to 2002 (MAF, 2002).

Table 2. Number of fishing vessels according to fishing method, 1990-2002.

Type of catch	1990	1993	1996	1999	2002
Trawling	72	74	105	108	131
Selective	0	0	55	48	66
Purse seining	38	46	8	18	8
Multipurpose	-	-	-	-	7
<b>Total</b>	<b>110</b>	<b>120</b>	<b>168</b>	<b>174</b>	<b>212</b>

Tables 3 and 4 below indicate the types of vessel, number of fishing vessels by fishing method in each port in 2002.

Table 3. Types of vessel in the Albanian fishing fleet.

<b>Class</b>	<b>Engine size (HP)</b>	<b>Fishing method</b>
Trawlers	200 - 600	trawlers
Coastal	80 - 140	lines, gill-nets, etc.
Purse seiners	150 - 300	purse seiners

Table 4. Number of fishing vessels by fishing method in each port in 2002.

<b>No Port</b>	<b>Number of vessels</b>				
	<b>Trawlers</b>	<b>Selective</b>	<b>Purse seiners</b>	<b>Multi purpose</b>	<b>Total</b>
1-Shengjin	19	10	1	-	<b>30</b>
2-Durres	62	12	2	-	<b>76</b>
3-Vlore	43	20	5	7	<b>75</b>
4-Sarande	7	24	-	-	<b>31</b>
<b>Total</b>	<b>131</b>	<b>66</b>	<b>8</b>	<b>7</b>	<b>212</b>

The marine fishing fleet is based in four harbours: Shengjin, Durres, Vlore and Sarande, amounting to 212 vessels in 2002. From the fishing fleet there are actually 33 vessels not involved in fishing activity (29 in Vlore, 3 in Sarande and 1 in Shengjin).

The increased fishing from the Albanian trawlers in near-shore areas and presence of a large numbers of foreign vessels has placed pressure on the demersal stocks of Albania. As a result, there are signs of over-exploitation of demersal coastal fish resources in trawlable areas; catches per unit effort have declined and average sizes of fish caught by Albanian trawlers have become smaller. Trawlers make up the majority of vessels registered. Their catch is estimated about 400-500 kg/day with an effort of 100-120 days/year with boats of more than 200 HP (a few 600 HP vessels also exist). They mainly exploit waters up to 50 metres deep due to biological conservation restrictions. The catch is mostly hake and mullets, cephalopods (cuttlefish, octopus and squid), crustaceans (shrimps) and other demersal fish (sole, turbot, sea bream, gilthead, anglerfish, etc.).

The fish fauna of commercial interest in sea waters comprises several species and groups of demersals, small and big pelagics fishes, crustaceans and mollusks. The most important species of small pelagics are sardine and anchovy, but also mackerels, etc.

Nevertheless, Albania has the potential to explore untapped marine resources with new fishing methods, which may include pelagic species caught by purse-seiners, lampara nets and gill-nets, demersal species in rocky and deep areas applying bottom long-lines or traps.

### **3.1.2 Coastal Fisheries**

Shoreline fishing is undertaken by 66 vessels with outboard motors and about 150 small boats without outboard motors, owned by private groups are currently applying traditional fishing with

gill-nets, hooks, and other selective gears along the coast and in coastal lagoons. All these activities are privately run.

Along the Albanian coast there are eight coastal lagoons, with a total surface area of about 10 thousand ha. Coastal lagoons are licensed to private cooperatives and entrepreneurs. Lagoon fishing follows traditional methods such as gill-nets and fish barrier. This fixed fishing gear based on the principle of V shaped traps is made of plastic pipe in the channels connecting the lagoon to the sea. Some of these boats are situated in the coastal lagoons, above-mentioned harbors and other places along the coastline. About 100 boats are equipped with outboard motors. Annual lagoon production varies from 50 to 150 kg/ha of mainly sea migratory species as grey mullets (*Mugil* spp., *Liza* spp. and *Chelon* spp.), seabass, seabream, eel, and mussels in Butrinti lagoon.

### 3.1.3 Inland Fisheries

Inland waters include: natural lakes (of about 25,000 ha), hydropower dams (of about 7,000 ha), agriculture reservoirs (of about 3,000 ha) and rivers. Fishing activity in inland waters is mainly based in three major natural lakes Shkodra, Ohrid and Prespa Lakes. The main fish species are Chinese carps (*Hipophthalmichthys molitrix*- silver carp and *Ctenopharyngodon idella*- grass carp), common carp-Cyprinus carpio, salmonids (such as *Salmo letnica*-koran and *Salmothymus ohridanus*-belushka in Ohrid lake), eel etc.

Albania is a country rich in water, many artificial lakes were built for energy production and irrigation. In the reservoirs created by hydroelectric power stations and in the agriculture reservoirs, new fish and juvenile fish of the cyprinidae family have been introduced in addition to the endemic fish species belonging mainly to the cyprinidae family.

Table 5 lists the most important species landed, and Table 6 lists landings according to fishing grounds and methods in 1992, 1994, 1997, 1998, 1999, 2000 and 2001 in Mt.

Table 5. The most important marine and freshwater species.

Systematic group	English name	Albanian name	Scientific name
<b>Bivalves</b>	mussel	midhje	<i>Mytilus galloprovincialis</i>
“	clams	vongola	<i>Chamelea gallina</i>
“	clams	verace	<i>Ruditapes</i> spp.
<b>Cephalopods</b>	common cuttlefish	sepie	<i>Sepia officinalis</i>
“	squid	kallamar	<i>Loligo</i> spp.
“	octopus	oktapod	<i>Octopus</i> spp.
<b>Crustaceans</b>	shrimp	karkalec	<i>Penaeus kerathurus</i>
“	rose shrimp	“ thellesie	<i>Parapenaeus longirostris</i>
“	lobster	aragoste	<i>Palinurus</i> spp, <i>Homarus</i> spp.
<b>Fish</b>	shark	peshkaqen	<i>Squalus</i> spp., <i>Scyliorhinus</i> spp.
“	smoothhound	pellumb	<i>Mustelus mustelus</i>
“	angelshark	skadhina	<i>Squatina</i> spp.
“	ray	raja	<i>Raja</i> spp.
“	sardine	sardele	<i>Sardina pilchardus</i>
“	sardinella	renge	<i>Sardinella aurita</i>
“	anchovy	acuge	<i>Engraulis encrasicolus</i>
“	rainbow-trout	trofte ylberi	<i>Oncorhynchus mykiss</i>
“	endemic trout	koran	<i>Salmo letnica</i>

“	common carp	krap	<i>Cyprinus carpio</i>
“	silver carp	ballgjer	<i>Hypophthalmichthys molitrix</i>
“	prussian carp	karas	<i>Carassius auratus</i>
<b>Fish</b>	bleak	gjuhce;cironke	<i>Alburnus spp.</i>
“	european eel	ngjale	<i>Anguilla anguilla</i>
“	european hake	merluc	<i>Merluccius merluccius</i>
“	john dory	kovac	<i>Zeus faber</i>
“	grouper	kerr	<i>Epinephelus spp.</i>
“	seabass	levrek	<i>Dicentrarchus labrax</i>
“	horse mackerel	stavrid	<i>Trachurus spp.</i>
“	red mullet	barbun	<i>Mullus spp.</i>
“	axillary seabream	spalce	<i>Pagellus spp.</i>
“	bogue	vope	<i>Boops boops</i>
“	dentex	dental	<i>Dentex spp.</i>
“	seabream	koce	<i>Sparus aurata</i>
“	atlantic mackerel	skumer	<i>Scomber scombrus</i>
“	bonito	pallamid	<i>Sarda sarda</i>
“	grey mullet	qefull	<i>Mugil spp., Liza spp.</i>
“	gurnard	gjel	<i>Trigla spp.</i>
“	flounder	shojze	<i>Platichthys flesus</i>
“	brill	romb	<i>Scophthalmus rhombus</i>
“	sole	gjuhez	<i>Solea spp.</i>
“	angler	peskatrice	<i>Lophius piscatorius</i>

On the basis of the above there are at least some opportunities to return the volume of marine resource catches to levels achieved in the 1980s. In addition there is identified need to stabilise fish stock health in the main freshwater lakes in terms of both stock and fisheries management.

Table 6. Fish landings in Mt., 1990, 1991, 1996 and 2001.

<b>Fish grounds/ methods</b>	<b>1992</b>	<b>1994</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
1. Marine Fisheries	1920	757	716	1847	1485	1613	2100
- trawling	1657	529	652	1602	1313	1410	1700
- pelagic	263	190	49	216	140	60	250
- purse seining	-	38	15	29	32	143	150
2. Coastal & lagoon	241	108	215	466	640	264	310
3. Freshwater	108	93	58	351	627	1198	850
4. Fish Farming	-	-	16	20	40	15	60
5. Mussels	300	300	104	-	200	200	350
6. Other bivalves	300	400	-	-	-	-	-
<b>Total</b>	<b>2869</b>	<b>1658</b>	<b>1109</b>	<b>2684</b>	<b>2992</b>	<b>3290</b>	<b>3630</b>

The main opportunities associated with these capture fisheries probably, however, lie in increasing the overall value of these fisheries - through improved targeting of fishing operations, cost control, improved handling and preservation of fish, and improved marketing - rather than simply increasing catches. Currently valued at some USD 10 m per year, it is not unreasonable to expect to be able to achieve economic growth in sector output of 10 to 20 per cent per year as a result of volume and value improvements. Thus, if a feasible growth rate of



some 15 per cent per year could be achieved in five out of ten years, this would double the overall value of capture fisheries output by 2010 (MAF, 2002).

### 3.2 Aquaculture

Commercial freshwater aquaculture in Albania started at the end of sixties. Warm water freshwater species (originally based on common carp, to which Chinese carps were introduced at the beginning of seventies) represent the major aquaculture production in our country. Cold water salmonides, principally *Oncorhynchus mykiss* and *Salmo letnica* are another important group for aquaculture production in Albania. Due to the economical and political transition period, production declined sharply but the last two years showed a positive trend.

Bivalves culture (especially *Mytilus galloprovincialis*) began more recently and the average production was about 2000 tons/ year and with a maximum about 5000 tons in the year 1990. Shrimp culture is still a new activity. There is only one shrimp culture farming in Albania. As regards marine aquaculture there are three small cage culture fish farms in the Saranda region for sea bream and sea bass. There are lots of possibilities to develop the marine aquaculture in Albania.

Carp aquaculture, which is based on the rearing of Chinese and common carp, is traditionally developed in Albania and it is the most widespread aquaculture practice. Maybe Albania is the first Eastern European country to introduce Chinese carp, first in 1959 and after that in 1969. For the first time we achieved artificial reproduction and mass production of fingerlings at 1972. From this time until 1990 constructing new fish farming centers all over the country with a total surface area of 215 ha, the production of fingerlings for restocking purpose arrived at more than 32 millions fingerlings of about 8 - 10 g, each. On the other hand, part of these fingerlings was used as stocking material in the fattening ponds of the semi-intensive fish farming. There were about 200 ha in, all fattening ponds and the average yield was 2 - 2.5 ton/ ha with a maximum of 5 ton/ha. In 2001, the carp production was 15 t fish and 5 million fingerlings.

Trout farming. There was also one trout farm (*Oncorhynchus mykiss*) covering 4.2 ha raceways near Saranda with a yearly production of about 250 t. The fingerlings were produced locally in a 1 ha hatchery and the pellets were imported from France and Italy. There is an excellent abundant freshwater source but the trout farm suffered from a poor feed conversion rate, low international market prices and high cost of imported feed. Currently this trout farm is out of action but there are three small private initiatives for trout cultivation with a total production about 15 t in 2001.

With the beginning of the privatization process all the hatcheries and fish farming centers both for carps and trout cultivation are privatized, but few of them are in operation. So there are working now 8 hatcheries with a total surface of about 40 ha and a yearly production of about 3 million fingerlings. This sharply declines in the fingerlings production occurs due to the political and economical transition period (absence of legal framework and financial support, land ownership problem, water price liberalization etc.). On the other hand this lack of fingerling production influences the poor stocking rate of the reservoirs, natural and

artificial lakes, and, directly, the fish catch. Besides licensed professional fishermen, there are some illegal and abusive fishermen in these ecosystems, so the problem is more complicated and the fish production has fallen.

Shrimp farming: The farming of marine species is in the initial stages of development in Albania. There is only one extensive shrimp culture farming at Kavaja with a total surface of 215 ha. It was built 30 years ago and the main production until 1992 were the fingerlings and finfish of Chinese carps. In the year 1994 a Joint Venture was founded with Italian partners named 'KAP' (Kavaja Aquaculture Production). They carried out a reconstruction of the farm and are working now on a surface of 120 ha for extensive cultivation of shrimp *Peneaus japonicus*. Annual production during the last years was from 7t to 15 t (10 t in 2000). In the near future they have foreseen that half of the farm will continue with shrimp culture and the other half of the farm is prepared to begin with species like sea bass and sea bream. There are some attempts by owners of fish farm of Narta (200 ha) to put it in operation by founding a Joint Venture with an Italian partner. Being near to the sea this fish farm shown some advantages for foreign investors

Bivalve farming: Bivalve culture has been developed since the beginning of the '60 in the coastal lagoon of Butrinti. Fixed structures are used for the production of the mussels (*Mytilus galloprovincialis*). Due to the very good environmental conditions in this lagoon, about 80 fixed concrete units were constructed there at the end of the seventies. Since this time the production of the mussels has growing year by year, arriving a maximum of 5000 tons/year in the last years of the '80s. During the last years mussel breeding was practically stopped, for internal organisational reasons, but above all because of the block on exports imposed by the EC in October 1994 for sanitary reasons, applicable to all living products of the fishery sector. There have been some attempts by private groups to put about the half of the fixed structures in operation, mainly for local market, hoping in the opening of the exportation to the EC countries in the near future. The annual mussel production in 2001 was 350t.

The cage farming of marine finfish is in its first year of production in Albania. The last year five private entrepreneurs are licensed to begin the cage farming of marine finfish (seabream - *Spaurus aurata* and seabass - *Dicentrarchus labrax*) in the few units (about 16 units and 8000m<sup>2</sup> marine waters), and the first production (in 2001) was about 20 t. a lot of good places for this aim have been identified along the littoral zone of the Ionian sea and there are not constraints owing to the other users. The lack of funds seems to be for the moment the most important constraint to overcome in close collaboration with foreigner investors and other international donors.

#### **4. Fish Processing Industry and Marketing**

Real knowledge of the marketing possibilities, national and international, will greatly help the fishery sector to develop better. Until the beginning of the 1990s the fish processing industry in Albania consisted of five factories producing preserved fish. However, since the beginning of the 1990s, and as a result of private enterprise and free competition, many

fishing, marketing and processing enterprises have been established. Fish processing has a good future export and offers employment possibilities in Albania. EU processing industries already invested in the processing plan in Albania and import raw material. The local market is hungry for cheap protein such as fish. There is a large space to market locally produced carps and marine fish in all cities and villages. The HACCP (Hazard Analysis Critical Control Point) system has already become a standard for all the EU exporters and Albanian processing industries must also comply with the EU standards.

Today there are 36 approved establishments (for export to the EU) that carry out processing and marketing activities for fish and fish products. All these establishments are private companies. However, the figures cannot be taken at face value, and should only be used to give an indication of the processing activities. In most cases, the figures came from informal surveys rather than systematic data collection. However, with the vast majority of these companies being formed since 1992, it shows the rapid recognition by Albanian entrepreneurs of the potential value of the fledgling processing industry as viable business ventures. In many cases, companies were already looking for investment into larger and better-designed factories or were in the process of upgrading and expanding their plants. However, it must be remembered that the 1997 pyramid scandal had a significant effect on investment, with several companies having premises destroyed during the aftermath of the collapse of the pyramid schemes and considerable losses of savings.

The fish processing industry in Albania is mainly concentrated in areas near the main harbours. These are (from north to south) Shengjin, Durres, Vlore and Sarande. Table 7 lists the 34 companies with some key statistics about each company. The companies receive, process and export fresh fish products, mainly to Italy and Greece. There are also three companies producing salted anchovies (canned or bottled) for export. Raw material is imported, mainly from Italy, Spain, Morocco and Argentina, and either arrives as frozen block or already salted in barrels. The domestic market also consumes some imported fish and fish products. These imports were initially destined for consumption, and later, as mentioned above, as raw material for processing (MAF&Eastfish, 2000).

Table 7. Fish establishments and processing factories, in 2002.

<b>Name</b>	<b>Town</b>	<b>Production(t/yr)</b>	<b>Products</b>
Konservimi Adriatik	Durres	not functional	canned, jars
Vival Novosel	Vlore		fresh/frozen fish
KAP Kavaje	Kavaje	10-30	fresh fish
Albamar	Durres	50-60	“
Aulona-Peshk	Vlore	60	“
Pesca Adriatik	Vlore	130	“
Sangiovani	Lezhe		“
Italpeshk	Durres		“
Peshk Karavasta	Lushnje		“
Toma	Lezhe	156	fresh/frozen fish
Ihtisara	Sarande	50	fresh fish
Limjon Peska	Sarande	75	“
Acquario-Sali Peshk	Vlore	100	“
N. Peshkimi			“

Adriapeshk		50-60	“
Goga-Shengjin		215	“
Rayk			“
Llajo			“
Fridi		50-60	“
Albit Company	Lezhe		“
Zhaku Butrinti	Sarande	50	“also live mussels
Dental Shengjin	Lezhe	220	fresh fish
Tekos Dvoran	Korce		“
Aleksandros	Sarande		“
Inca Lezhe	Lezhe		canned, jars
Inktioadria	Durres		“
Rozafa	Lezhe		fresh/frozen fish
Poseidon	Lezhe		canned, jars
Adria Mare	Durres		fresh fish
Mare Adriatik	Lezhe		“
Adriatik	Lezhe		“
Eurofish	Lezhe		canned, jars
Alxiar	Vlore		fresh fish
Jon Impex	Vlore		“

The main strength of the industry relates to its harmonised status as a fully approved “third country” for the “placing on the (EU) market of fishery products”. Albania has enjoyed this status for several years, and was one of the first Central and Eastern European countries to gain this status. Even today, only Russia, Estonia and Poland are also fully approved third countries. This allows the fishing industry to export to its near neighbours, Greece and Italy, which they do on a daily basis. This puts Albania in a strong position compared to its neighbours. One positive aspect is the widespread use of ice for fresh fish, at least in the processing plants, and all factories have (operating at between 1-4°C), and several had cold stores (-20 to -30°C). Secondly, most plants also had appropriate flooring (mostly coated concrete) and walls (mostly tiles) for processing fish, which did indicate some level of understanding of the fundamental requirements for factory design and operation under good manufacturing practice (MAF&Eastfish, 2000).

## 5. Fish catch distribution system

Albania has enjoyed the status of being allowed to place fishery products on the EU market except shellfish, the export of which to EU countries is banned, and this allows the fishing industry to export to near neighbors, in Italy and Greece. Before the economy was liberalized, exports were minimal. At the beginning of the 1990s, after the political and economic changes within the country began, the export of fish and other aquatic organisms grew, particularly in the private sector. It constituted about 50 % of total production during the period from 1992 to 1998 year, all exported by the private sector. In recent years the export has constituted about 10-15% of total production. There are no limits on the fish products export from Albania. The Albanian traders export the fish on a daily basis.

With the full implementation of the shellfish monitoring system and subsequent lifting of the EU ban, live mussels and other bivalves will also be able to be exported to the EU. The main requirement for the export of live mussels to the EU is the setting up of a shellfish monitoring system to guarantee the safety of bivalves harvested from water bodies. Currently Albania faces a ban due to a previous outbreak of cholera in live molluscs.

This issue is now being addressed through the development (with Italian Government support) of a monitoring system to certify the areas on the Albanian coastline and the inland water bodies that can harvest and export mussels. This is covered by EC/91/492 on placing live bivalves on the EU market. In brief, the situation is that live bivalves from waters classified as A areas (against a set of microbiological, chemical and physical criteria laid down in EU directives) can be exported from approved third countries to the EU. B areas require depuration before consumption. However, bivalves from B areas cannot be exported to the EU even after depuration, but can be used for local consumption. The export of fishery products to non-EU countries is not important for the Albanian fishery sector.

Value and quantity of Albanian fish exports in 2000, 2001 and Jan.& Feb. 2002:

<b>2000:</b>	407 ton	100,328,000 lek *	716,629 US \$
<b>2001:</b>	303 ton	82,369,000 lek	588,350 US \$.
<b>Jan&amp;Febr.2002:</b>	52 ton	13,093,000 lek	92,204 US \$.

The domestic market consumes most of the marine fish, all the freshwater fish and the fish imported. Because the Albanian consumer is poor, fish species sold on the domestic market tend to be of low quality, and therefore low price.

Until the beginning of 1990s no fish imports were recorded. With the liberalization of the economy in the early 1990s, the right conditions for importing fish were created. These imports are destined for consumption, but also as the raw product for processing. Fish is imported mostly from Italy, Greece and Spain. The most popular species imported are fresh sardine and mullet from Greece, salted anchovies from Italy and Spain, and recently frozen hake from Greece.

Value and quantity of Albanian fish imports in 2000, 2001 and Jan.& Feb. 2002:

<b>2000:</b>	1459 ton	93,134,000 lek	665,243 US \$.
<b>2001:</b>	2048 ton	145,089,000 lek	1,036,350 US \$.
<b>Jan&amp;Febr.2002:</b>	633 t ton	24,494,000 lek	172,493 US \$.

\* In 2000 and 2001: 1 US\$ = 140 lek; In 2002: 1 US\$ = 142 lek

Currently there are five Albanian companies importing fish: 2 in Vlore, 2 in Tirane and 1 in Durres. Table 8 lists the fish imported by one of the most important companies (Rozafa, in Tirana), in 2001.

Table 8. Fish imports of Rozafa Company, in 2001.

Species	Products	Imported (ton)
seabass	fresh	30
seabream	“	22
hake	frozen/fresh	10
red mullet	fresh	2
dentex	fresh	1.5
trout	fresh/frozen	1.5
sardinella	fresh/frozen	100
sardine	fresh/frozen	2
horse mackerel	fresh/frozen	15
axillary seabream	fresh	5
bogue	fresh/frozen	5
atlantic mackerel	fresh/frozen	5
grey mullet	fresh	130
cuttlefish	fresh	10
squid	fresh	20
octopus	fresh	8
shrimp	fresh	7
<b>Total</b>		<b>374</b>

The value of this fish imported is 99 350 000 lek or 709,643 US\$. From this company, during 2001, John dory, brill, lobster, sole, salmon etc were also imported in small quantities. (Flloko, 2002). Fish distribution channels in Albania do not have generally intermediaries between producers (fishermen or fish farmers) and consumers.

The distribution channel for fresh fish has these stages: ***Fishermen - Processors (and Wholesalers) - Retailers, Hotel and Restaurants - Consumers.***

In Albanian marine fishery this is the normal fish catch distribution system, but sometimes the business outside these channels can also be used. Some producers are able to sell their production locally direct to retailers or restaurants, but in many cases it is more profitable not to sell directly to retailers. As we mentioned before, today there are approved establishments (for export to the EU) that carry out marketing activities for fish and fish products. All these establishments are private companies. These companies receive, process and sell fish products to retailers and restaurants.

In Albania, currently there are no wholesale markets, therefore we can consider these category of traders as processors. Sometimes the establishment owners are also fishing vessels owners (or co-owners).

Table 9 lists the fishing vessels of four Albanian fishing ports and the number of establishments that receive fish from fishermen (AdriaMed, 2002).

Table 9. Marine Fishery - Fish catch distribution system.

Fishing Ports	No. of establish.	No.Vessels in establish.	No.Vessels out establish.	No.vessels out activity	Total Vessels
Durres	8	42(42tw)	34	-	76(20tw,2p,12s)
Vlore	6	33(26tw,7s)	13(4tw,3p,6s)	29	75
Shengjin	5	29(19tw,1p,9s)	-	1	30
Sarande	3	7 (6tw,1s)	21(21s)	3	31
<b>TOTAL</b>	<b>22</b>	<b>111</b>	<b>68</b>	<b>33</b>	<b>212</b>

\*The number in brackets indicates the fishing methods: tw-trawler; p-pelagic; s-small scale.

Some of the establishments export fresh fish products, mainly to Italy and Greece. There are about seven establishments exporting fish: 2 in Durres, 2 in Vlore, 1 in Tirane, 2 in Sarande and 1 in Shengjin.

## 6. Fish prices

Fish prices at landing, wholesale and retail as of 2001 are given in Table 10.

Table 10. Prices of fish produced in Albania, in 2001.

Species	Prices (lek/kg) (1 US \$=140 lek)		
	<i>from fishermen to harvest or processors</i>	<i>from processors to retailers</i>	<i>from retailers to domestic market</i>
sea bass	1000-1200	1250	1500
sea bream	1000-1200	1250	1500
hake	500	530	600
red mullet	600	650	800
dentex	1200	1300	1500
trout	400	450	500
sardinella	100	120	200
sardine	100	120	200
horse mackerel	150	170	240
axillary seabream	800	850	1000
bogue	120	150	220
atlantic mackerel	150	180	250
grey mullet	220	250	320
common cuttlefish	350	450	600
squid	500	550	650
octopus	250	300	420
shrimp	1500	1700	2000

Unit value of imported and exported fish are given in tables 11 and 12.

Table 11. Prices of fish imported, 2001.

Species	Prices ( lek / kg ) (1US \$=142lek)	
	<i>from import</i>	<i>retail</i>
sea bass	600	800
sea bream	600	800
hake	300	400
red mullet	500	700
dentex	800	1000
trout	300	450-500
sardinella	100	180-200
sardine	100	180-200
horse mackerel	150	230-250
axillary seabream	120	200
bogue	140	220
atlantic mackerel	170	250
grey mullet	180	250-280
cuttlefish( <i>clean</i> )	400	600
squid	400	600
octopus	250	400-450
shrimp	1500	1800-2000

Table 12. Prices of fish exported from Albania, in 2001.

Species	Prices( lek / kg )( 1 US \$=142lek)	
	<i>from fishermen to traders</i>	<i>from traders to export</i>
sea bass	1000-1200	
sea bream	1000-1200	
sole	800-900	1100
hake	500	650
red mullet	600	850
dentex	1200	1800
brill	500	800
grouper	600	900
gurnard	550	900
john dory	600	1100
trout	400	
sardinella	100	
sardine	100	
horse mackerel	150	
axillary seabream	800	
bogue	120	
atlantic mackerel	150	
grey mullet	220	
angler	250	400



ray	150	280
cuttlefish	350	
squid	500	
octopus	250	400
shrimp	1500	2100

## 7. Conclusions

There is limited and inadequate information on the market system, but this fact makes some minimal reflections possible. The current situation of the Albanian fish market development demonstrates evident changes that characterise the market structure and organisation, although these changes are limited.

During the recent years, especially after the “financial pyramid schemes” phenomenon, the following could be remarked:

- The producing sector has changed in the last years;
- The increase of domestic fish consumption results from an increase of the market capacity, as well as an increase in production;
- Production export towards countries such as Italy and Greece, represents a good income in foreign currencies that is connected mainly with high-value species (finfish);
- The fish products importation has affected the domestic consumption; this is mainly with reference to the low-value species (small pelagics, grey mullets etc.)
- Considerable production comes from the inland freshwater species with a low economic value. These species are destined for the domestic market and are a low-cost protein source;
- The distribution network is characterised by a simple system: producers-processors-retailers-consumers. This net has weak chains and in the current situation is difficult to qualify the system in the most proper way.

Based on the raw considerations, it is possible to make some recommendations that could serve to overcome the problems of the current development of the Albanian fish market:

- Improvement of the legal framework in order to give to the sector operators, as well as public institutions, more effective ways to import and export fish products;
- Improvement of the production quality, both from the point of view of hygiene and advertising. This should be achieved through all commercial chains, up to the sellers, giving a higher compatibility of the Albanian production for exporting high-value products towards markets such as Italy and Greece;
- Higher knowledge of the national distribution system, in order to achieve the optimisation of the national production as well as the identification of the potential areas for market expansion;
- Identification of markets in neighbouring countries such as Serbia and Montenegro, Kosovo, etc.;

- Giving a higher value of the national production in the domestic and international markets;
- Carrying out a study on the Albanian fish marketing and trade system.

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