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THE FISHERIES SECTOR IN ITALY IN THE FACE OF INTERNATIONAL COMPETITION AND INTERNAL STRUCTURAL PROBLEMS

JEL classification: Q22, Q27

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Abstract. *The paper presents a critical analysis of the fisheries and aquaculture sector on the eve of a new reform anticipated by the Green Paper of 2009 and by the Commission Communication on the Reform of the Common Fishery Policy (CFP) of 2011.*

The paper uses the main statistical sources available to analyse the evolution of production and trade at worldwide, European and Italian level. The time series used covers the period from 1990 to 2009.

Particular attention is devoted to the Italian situation, evaluating the trade performance in Europe and also considering the evolution of the structural characteristics of the Italian fleet, catches

and revenues by species, categories and different systems of fisheries. With a highly fragmented structure of its production capacity and a gradual decline in catches, in recent years, the fishing industry has seen a decline of about 20% in revenues. However, the fisheries sector continues to play an important role in Italy both in the maintenance of the social fabric and in terms of the conservation and enhancement of cultural identities.

Finally, the paper develops a brief summary of legislative actions that have characterized the CFP until the recent reform proposal.

Keywords: Fishery, CFP, International trade

1. Introduction

The Green Paper (COM, 2009) on reform of the EU's Common Fisheries Policy (CFP) starts by expressing hopes for an ideal scenario for the medium term (2020) in which the fish market is booming once again, excessive and indiscriminate exploitation of fish stocks is a thing of the past, the fishing industry has finally reached stand-alone financial solidity, and industry operators are able to ensure complete transparency with regard to the traceability of the raw material "from net to plate."

The current state of affairs, however, falls far short of this, testifying to the overall failure of the 2002 reform. A combination of measures - limiting the number of fishing days, setting maximum sizes for national fishing fleets, combined with recovery of fish stock and management plans (Cosvap, 2005) - has failed to have an impact, even minimally, in correcting a scenario that has become even worse, setting off a vicious self-perpetuating circle (MiPAAF, 2007a). In fact, stock depletion generates a reduced capacity for fish reproduction from which the inevitable decline in catches follows, leading to further pressure on the marine environment arising from

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the need to compensate for the loss of economic viability of fishery (Pauly et al., 2002; Trevisan, 2003). Hence the need for further reform.

It is to be hoped, however, that events in the fisheries sector will not match those that for thirty years have characterized agriculture within the European Union. Here again, the objectives were to ensure, on the one hand, food supply at reasonable prices for consumers and, on the other, to support reasonable incomes for producers. History teaches us that mountains of public money have been spent over many decades without having provided exactly spectacular results. It needs to be said, in fact, that some measures put in place via the market have worsened territorial and social disputes and generated additional dualism and marginalization.

The fisheries situation is different and, in some respects, clearer, primarily because the product is seen much less as a "basic right" and because the issue itself is more straightforward. There is an oversized fleet that has seriously undermined the ability of fish stocks to recover to a level consistent with its rational and profitable future exploitation. Moreover, despite the crisis making its effects felt, and even affecting food consumption, the demand for fish on European markets is holding up and imports are continuing to rise, now coming to account for almost 50% of total consumption.

The policy for the sector needs to discover how to make two basic features compatible: the urgent need to recreate the raw material (reconstituting the stock) and the ability to meet market demand sustainably, which, as mentioned, may prove stable even in times of crisis (Le Gallie, 2003).

The first aim of the paper is to describe the evolution of the international scenario characterized, during the last decade, by a growth of production of more than 30% and by a profound change in the competitive scenario. The paper also attempts to outline the recent development of the European context within which the EU-15 has registered an increase of 20% in the trade deficit. Finally, in the light of the new reform proposal, the Italian situation will be analysed in more detail, leading up to some final considerations.

2. The common fisheries policy

The (now EU) Common Fisheries Policy was established with the Treaty of Rome in 1957 under Article 38. In 1972, the first, northern, enlargement of the EEC to include Great Britain, Ireland and Denmark (with very large fishing fleets) radically changed the preexisting equilibrium requiring the establishment of a common market organization capable of implementing an authentic structural policy covering fishing. The Exclusive Economic Zones (EEZ) were thus laid down, with which exclusive rights for coastal fishing were extended from 12 to 200 miles, essentially denying the member states of the Community the principle of freedom of access to the sea. Thus, the Community recognized the specific problems of fisheries, such as access to common resources, the conservation of stocks, structural policies for the trawler fleet and the complex issues of international relations arising from fishing itself.

Ten years later, EC Regulation 170/83 established the new generation Common Fisheries Policy (CFP) in a much more explicit recognition that the crucial feature of the sector is its exploitation of a renewable resource, hence trying to achieve a sort of programming for access to it and regulating the relative intensity of exploitation. The principle of relative stability introduced the problem of conservative management of fisheries resources, and in this regard, put forward management tools such as the Total Allowable Catch (TAC) and quotas.

The new policies introduced were not slow to express their overall ineffectiveness and the imbalance between the capacity of the existing fleet and the potential of the programmed catch sharpened further. Therefore EC Regulation 3760/92 was introduced to provide the new concept of “fishing effort” together with a more efficient licensing system to regulate access to fisheries as well as proposing a reduction in the EU fleet, but accompanied for the first time by structural measures to mitigate and cushion the subsequent loss of jobs in the industry.

A decade further on, none of the goals of balance and stock conservation could be said to have been achieved. Indeed, the general increase in consumption, EU enlargement and the introduction of new fishing systems raised the depletion risk for many stocks, so that by the end of 2002, further reform was adopted, which came into force on 1st January 2003, built on four pillars:

- renewal of stocks;
- reduction of the impact on marine ecosystems;
- guarantees with regard to the supply of consumer markets within the EU;
- containment of the economic losses in the industry and the simultaneous minimization of job losses.

The key element underpinning the 2003 reform is that of sustainable development and, indeed, the new CFP became an integral part of Community policies for sustainable development, putting environmental aspects on an equal footing with economic and social concerns. It was laid out in three specific regulations: EC Regulation 2371/2002 (conservation and sustainable exploitation of fisheries resources), EC Regulation 2369/2002 (structural policy in the fisheries sector) and Regulation 2370/2002 (EU emergency measures for the scrapping of fishing vessels).

In redefining the goals, the new CFP envisaged a longer term approach that referred to multi-annual recovery plans for particularly depleted fish stocks, and multiannual management plans for all the others, while seeking to address the problem of overcapacity in the fleet, which continues to represent one of the crucial aspects of the issue, the rationale used being that of redirecting aid to Community policies for sustainable development (improvement of safety conditions on board, product quality, adoption of selective fishing techniques and the equipping of fishing fleets with satellite monitoring systems) (Arnason, 2011).

Finally, among the most relevant points of the reform worth noting (which characterized the sector as a sort of supply chain) is included the direct involvement of fishermen and aquaculture sector workers in the implementation of new standards through the establishment of RACs (Regional Advisory Councils) on which local authorities, consumer organizations, representatives of science and environmental groups are also represented.

Despite its apparent regulatory and cultural ‘re-set’, the 2003 reform also failed to reach its fundamental goals, and in 2008 the Commission adopted the Green Paper on reform of the Common Fisheries Policy which, in 2011 (COM, 2011), generated a new reformed CFP package that includes:

1. a legislative proposal for basic regulation (in place of Reg. 2371/02);
2. a new legislative proposal for a market policy;
3. a communication on the external dimensions of the CFP.

The new reform package confirms the use of long-term plans, this time following an ecosystem rationale that applies the precautionary principle. It is anticipated that the long-term plans

should be ready by 2015, and based on the different types of fishing rather than on individual stocks.

The proposal also attempts to address the issue of discarding at sea species caught but not marketable¹, banning it and including an obligation to land the entire catch, allocating the non-marketable portion for purposes other than human consumption. This hypothetical rule envisages, of course, the implementation of documentation systems and very complex controls and many have already expressed their doubts with regard to the effectiveness of the rule. Another very important element of the proposal is the establishment of a system of transferable fishing quotas for large-sized fleets (vessels over 12 metres in length) with the possibility of renting or exchanging shares granted exclusively between operators within the same country, which, in the case of serious infringements would result in the revocation of the licence.

Finally, the proposal provides for specific rules in support of artisanal fleets, lines for the development of sustainable aquaculture and the further decentralization of governance.

As far as market policy is concerned, the current system, which provides for the destruction of excess fish, should be replaced by a simplified storage system for its removal and any subsequent re-marketing of fish products in order to contribute to market stabilization.

In line with the provisions of the 2003 reform, the current proposal fully adopts the principles of sustainability and should not only allow the recovery and subsequent conservation of stocks but also less dependence of the sector on public support policies. To this end, the reform proposes the adoption of the parameter MSY (Maximum Sustainable Yield) as a guiding principle to determine the maximum utilization of the resource consistent with the principle of maximum productivity, establishing that the support accorded to the aquaculture sector should be set as a priority (Cosmina et al., 2007).

3. The international framework

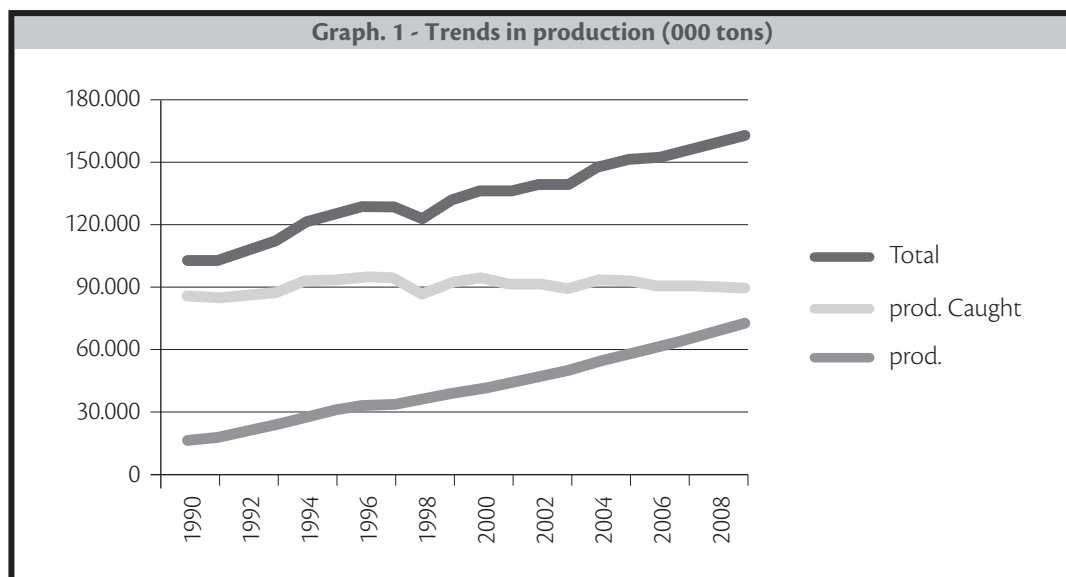
In the last two decades, world production of fish has reached almost 163 million tons, an increase of 60%. What chiefly accounts for this overall performance is “non-fished” production (i.e. farmed) which has gone from 16.8 million tons in 1990 to 73 million tons in recent years (see table 1 and graph 1).

Tab. 1 - World production of fish, 1990 -2009 (000 tons)

	1990	1994	1998	2002	2006	2009
Total world production of which:	102.848	121.147	123.313	139.542	152.299	162.882
Caught fish	86.008	93.349	86.852	92.162	90.912	89.837
Raised fish	16.840	27.799	36.461	47.381	61.387	73.045

Source: calculated on FAO data

¹ It should be remembered in this connection that currently the percentage of discards is around 23%, and, depending on the type of fishing and the fish stocks covered by the catch, this can rise to much higher levels.

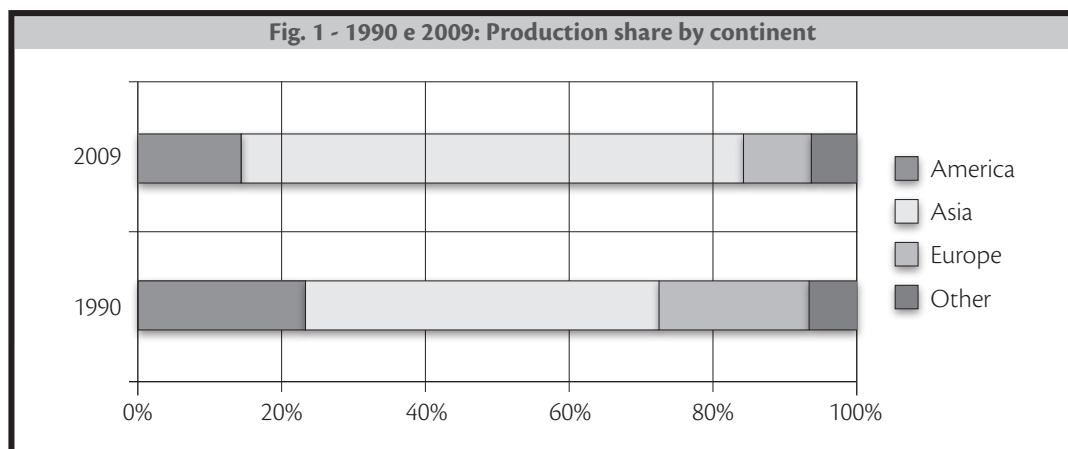


Profound and significant changes have taken place in the distribution of fish production by continent (see table 2), with Europe and America witnessing their production sharply reduced, and Asia, with over 113 million tons, showing a growth of 125%.

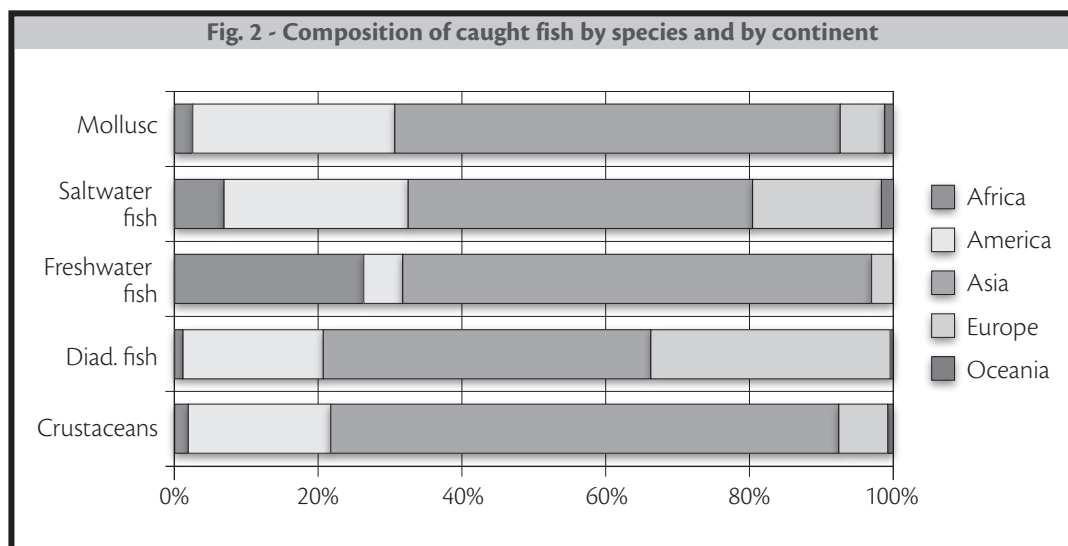
Continent	1990	1994	1998	2002	2006	2009
America	24.257	31.974	19.788	26.445	25.126	23.642
Asia	50.427	64.700	76.206	86.239	101.770	113.585
Europe	21.637	17.642	19.366	17.594	15.854	15.872
Other	6.527	6.832	7.953	9.265	9.549	9.782
Total	102.848	121.147	123.313	139.542	152.299	162.882

Source: calculations on FAO data

This marked divergence means that in 2009, compared to 1990, the weight of Europe and North America in the equation dropped from 45% to 25%, with Asia's share increasing from 49% to 70%, resulting in the breakdown shown in figure 1.



The leadership of the Asian continent is confirmed for any type of species caught, as shown in figure 2.



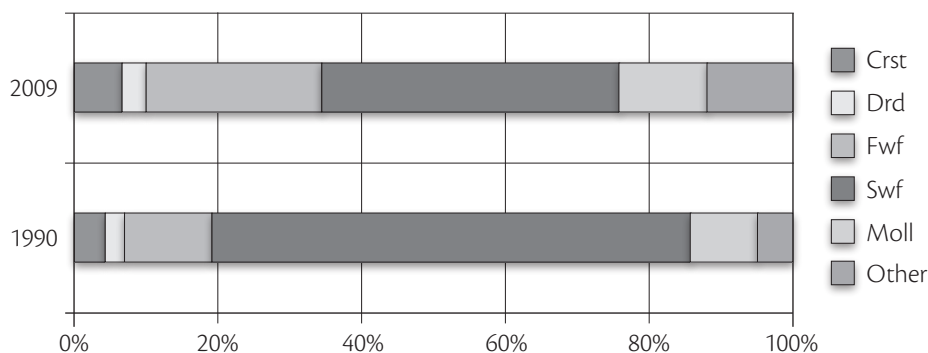
In table 3 world fish production is classified by groups of species. Marine fish make up by far the largest proportion followed by freshwater fish and shellfish. This said, whilst the group exhibits a trend that is essentially flat, all other groups of species have registered significant increases, sufficient to significantly alter the composition of the production mix, as indicated in figure 3.

Tab. 3 - World production of fish by categories of species, 1990 -2009 (000 tons)

Species (ISSCAAP division)	1990	1994	1998	2002	2006	2009
Crustaceans	4.687	5.820	7.190	8.406	10.064	11.183
Diadrom fish	2.776	3.021	3.593	4.049	4.620	5.439
Freshwater fish	12.529	16.636	21.976	26.349	33.762	39.542
Saltwater fish	68.335	73.590	65.451	70.180	67.797	67.212
Mollusc	9.100	13.368	15.184	18.038	19.999	20.087
Other	5.421	8.714	9.918	12.520	16.057	19.419
Total	102.848	121.147	123.313	139.542	152.299	162.882

Source: calculations on FAO data

Fig. 3 - World production by species



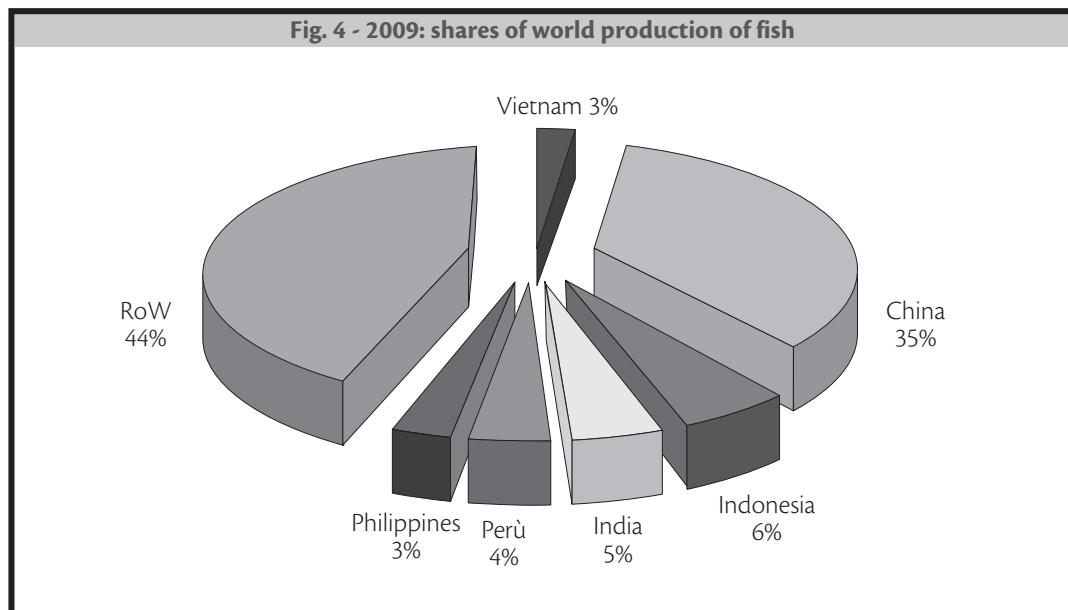
The most significant change occurring in the time period in question, however, affects the type of production, divided according to “fished” and “non-fished” (see table 4). While, in 1990, the non-fished proportion represented only 16% of total production, more recently this has risen to 45% of total production, mostly freshwater and diadromous fish, shellfish, and the rest.

Tab. 4 - Composition of world production by categories

Species	1990		2009	
	Captured	Other	Captured	Other
Crustaceans	83,9	16,1	52,6	47,4
Diadromous fish	56,5	43,5	35,0	65,0
Freshwater fish	43,0	57,0	22,5	77,5
Saltwater fish	99,5	0,5	97,1	2,9
Molluscs	60,3	39,7	32,7	67,3
Other	29,7	70,3	6,8	93,2
Total	83,6	16,4	55,2	44,8

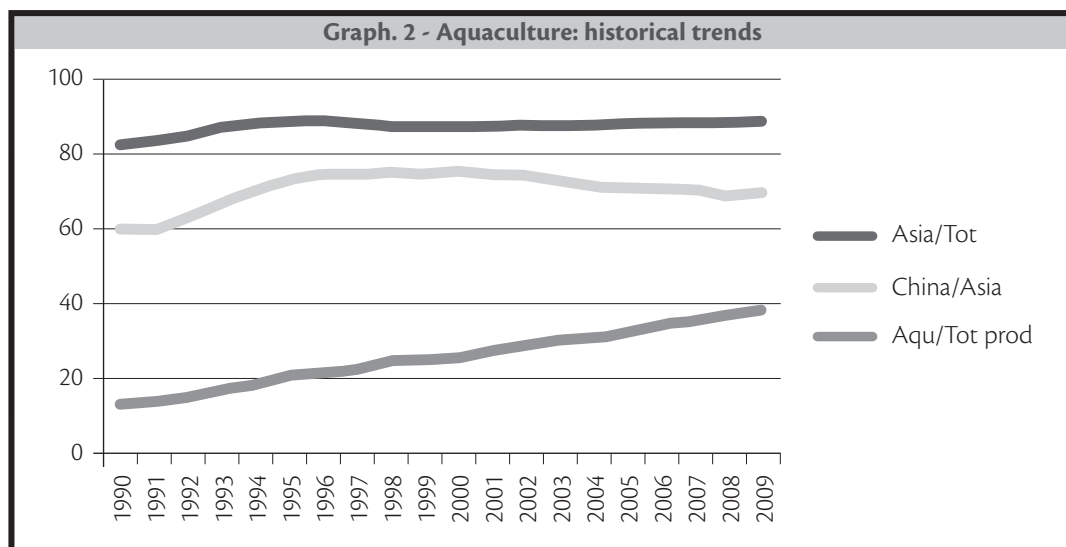
Source: calculations on FAO data

The major producers, as may be expected, are the Asian countries, the largest being China which in 2009 accounted for 37% of world production. Although far behind in terms of percentage shares, it is followed by Indonesia, India, Vietnam, and the Philippines, and the only non-Asian country, Peru (see figure 4).



This final situation is a result of trends that have seen a substantial stability in production in all countries except those in Asia, for which the production in some has tripled (Indonesia), quadrupled (China) or even quintupled (Vietnam).

One of the most significant changes occurring over the last 20 years or so has been the composition of output by type of process that has seen a significant growth in aquaculture production compared to the direct catch, increasing from 16% to 45% of the total. If one excludes the production of those species not intended for human consumption (sponges, pearls, corals, aquatic mammals, etc.), from 13 million tons in 1990 it reached 55 million tons in 2009, i.e. a level four times higher than that at the start. Of the farmed product, 89% is located in Asia (49 million tons) and, of this, over 62% is Chinese, with the trends shown in graphic 2.



4. The European context

Europe has seen its contribution to world production of fish diminish considerably to a market share of around 10% of entire world production. Apart from Norway, in no country within Europe is the level of production of major significance. It is important to note, however, that the fortunes of many local communities are tied to this sector, often living almost exclusively on the basis of the economic state of their fisheries. The situation of the European Union is shown in table 5.

Tab. 5 - Europe: fish captured by country (000 tons)

Nazione	1990	1993	1996	1999	2002	2005	2009
Denmark	1.476	1.614	1.682	1.405	1.442	911	778
France	698	679	642	657	703	598	431
Germany	326	253	236	239	224	286	250
Ireland	248	308	365	319	319	297	299
Italy	374	398	368	285	272	298	254
The Netherlands	406	462	411	515	464	555	382
Portugal	333	296	265	213	203	212	200
Spain	1.131	1.100	1.190	1.194	891	854	905
Sweden	251	342	371	351	295	256	203
Great Britain	772	865	876	841	690	670	591
Other European Countries	14.010	10.475	11.434	10.422	10.048	9.126	9.094
Total	20.025	16.791	17.840	16.440	15.551	14.064	13.387

Source: calculations on FAO data

In the countries where fishing is most important, production has declined over the last decade by about 30% and the extent of the structural nature of this process is evident from the fact that this decrease in production has been simultaneously accompanied (see table 6 below) by a scrapping of the fleet expressed both in numerical terms and in terms of tonnage; that is to say it has drastically reduced both the fishing capacity and the potential fishing effort.

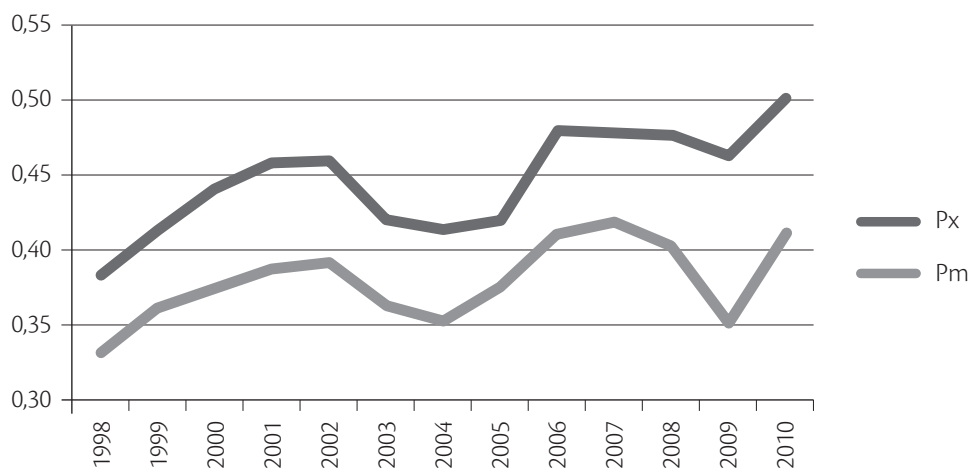
Tab. 6 - EU: Fishing fleet by Countries								
Nazione	Number of vessels				Gross tonnage			
	2000	2005	2010	Δ	2000	2005	2010	Δ
Spain	16.678	13.700	10.847	-0,35	521.838	487.556	414.527	-0,21
France	8.181	7.857	7.242	-0,11	224.077	215.052	174.461	-0,22
Italy	17.369	14.401	13.515	-0,22	232.467	212.929	186.079	-0,20
The Netherlands	1.101	829	849	-0,23	212.466	171.672	147.520	-0,31
Portugal	10.692	9.155	8.492	-0,21	117.313	107.566	101.483	-0,13
Greece	19.962	18.269	17.168	-0,14	107.407	93.515	88.288	-0,18
Great Britain	7.643	6.768	6.422	-0,16	265.145	218.532	207.608	-0,22
<i>Source: calculations on FAO data</i>								

This has meant that EU imports over the years have gradually risen to reach nearly 6.8 million tons in 2010 as can be seen in table 7.

Tab. 7 - EU (15): Import and export of fish (000 q.)					
Product category	1998	2001	2004	2007	2010
	Export				
Fresh fish, refrigerated and frozen	21.677	25.738	27.839	27.388	30.506
Fillets, and other preparations	5.988	6.573	7.768	7.886	7.434
Crustaceans and Molluscs	6.333	6.957	7.875	8.483	7.920
Total	33.999	39.267	43.482	43.758	45.861
Product category	Import				
Fresh fish, refrigerated and frozen	25.142	27.029	26.316	28.718	29.956
Fillets, and other preparations	14.346	16.056	17.428	19.891	20.454
Crustaceans and Molluscs	12.818	14.769	16.271	18.094	17.294
Total	52.305	57.854	60.015	66.703	67.703
<i>Source: calculations on FAO data</i>					

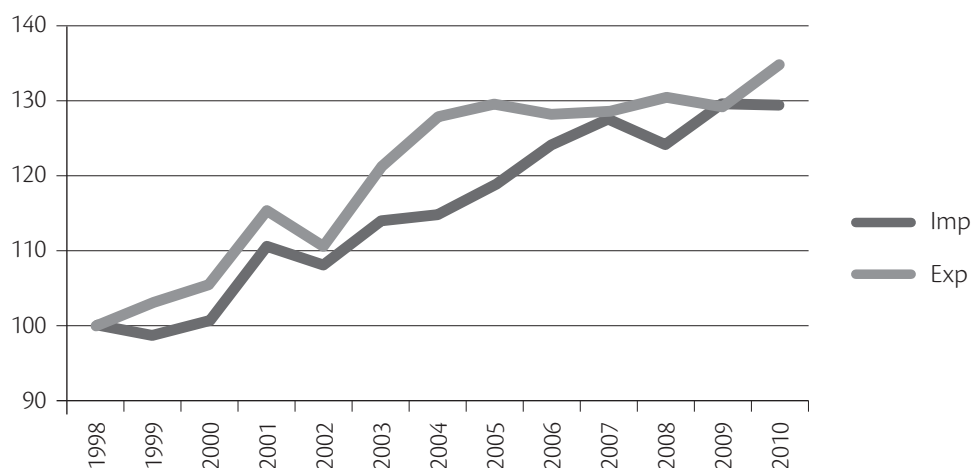
Exports, however, have also grown, and, in the context of decreased production, this would seem to be linked to the presence of significant re-exports of products with higher added value as evidenced by the level of unit values in the form of outflows, systematically higher than that for imports (see graphic 3 in relation to fish preparation).

Graph. 3 - Processed and prepared fish. Import and export prices



It would even seem that this feature has taken on a structural connotation because, although there is a systematic negative balance and an index of trade specialization² that is equally negative, the export trend always lies above that of imports as shown in graphic 4.

Graph. 4 - UE a 15: trends in import and export



² The trade specialization referred to is that summarized in the Normalized Balance provided by the ratio between the total balance of trade (exports minus imports) and the total volume of trade (exports plus imports). For Italy the data in tables 10 and 11 exhibits strong signals suggesting de-specialization in international trade.

The prospectus A on the Financial Framework 2007/2013 of the EFF is shown below to conclude the discussion on the European situation and to synthesize the use of funds made by the major partners and arising from the commitments made with regard to the 5 priority axes.

Prospectus A illustrates the financial framework 2007/2013 of the European Fisheries Fund (EFF) referring both to “convergence” and to “non-convergence”.

Prospectus A - EU a 27: Financial Framework 2007/13 of the EFF (000 €)							
Country	Convergence			Non-convergence			Total
	Funds	Committed funds	Funds paid	Funds	Committed funds	Funds paid	
Austria	187	116	80	5.072	2.812	2.812	5.259
Germany	96.861	55.309	33.545	56.850	30.558	13.878	153.711
Greece	176.837	102.835	26.680	30.996	17.184	5.314	207.832
Spain	945.692	538.111	234.859	186.198	103.229	51.175	1.131.891
France	34.250	18.989	6.181	181.803	100.792	68.087	216.053
Italy	318.282	177.508	79.789	106.061	58.801	24.445	424.343
Slovakia	12.681	6.847	3.733	898	435	179	13.580
United Kingdom	43.151	21.472	6.041	94.677	46.122	13.255	137.828
Portugal	223.943	124.981	59.165	22.542	12.498	5.222	246.485
Hungary	34.291	15.858	5.597	560	259	78	34.851
Ireland	0	0	0	42.267	20.590	20.590	42.267
Cyprus	0	0	0	19.724	10.935	8.910	19.724
Sweden	0	0	0	54.665	30.306	19.495	54.665
Finland	0	0	0	39.489	21.871	11.388	39.489
Belgium	0	0	0	26.262	12.793	3.677	26.262
Denmark	0	0	0	133.675	74.110	44.854	133.675
The Netherlands	0	0	0	48.578	26.932	11.648	48.578
Bulgaria	80.010	38.156	11.201	0	0	0	80.010
Czech Republic	27.107	14.449	7.087	0	0	0	27.107
Latvia	125.016	62.504	39.696	0	0	0	125.016
Lithuania	54.713	28.548	18.446	0	0	0	54.713
Malta	8.372	4.030	796	0	0	0	8.372
Poland	734.093	361.733	139.941	0	0	0	734.093
Romania	230.714	103.832	32.300	0	0	0	230.714
Slovenia	21.640	11.754	3.030	0	0	0	21.640
Estonia	84.568	41.883	20.197	0	0	0	84.568
Total	3.252.409	1.728.916	728.365	1.050.317	570.229	305.007	4.302.726
<i>Source: EU Commission. Fourth annual report on Implementation of the European Fisheries Fund. Brussels, 2011</i>							

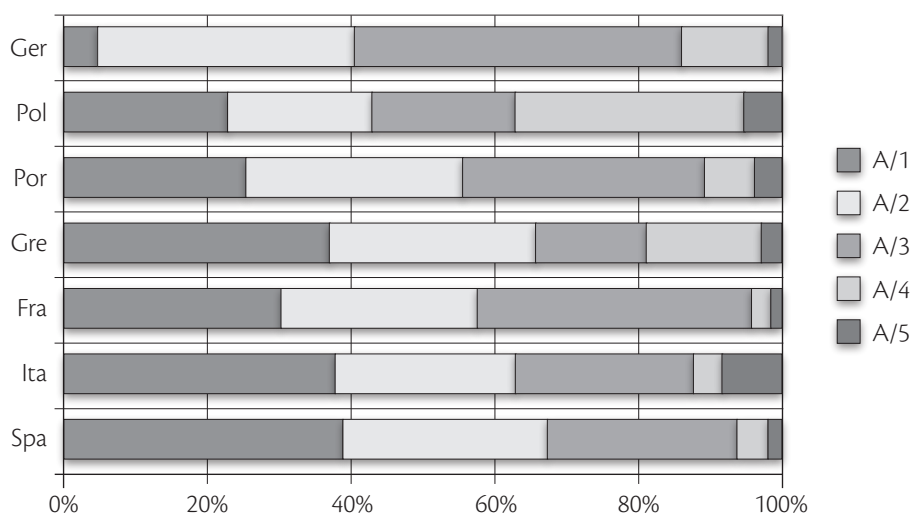
The sum involved is 4.3 billion euros, more than half of which is destined for Spain (26%), Poland (17%) and Italy (10%). Prospectus B gives the distribution of the national totals for each of the five priority axes³ for the countries most involved in the EFF, showing a significant diversity in the programming of expenditure which the major European partners have given themselves.

It is obvious that Germany did not intend to allocate large sums for fleet adaptation, preferring to programme spending measures of common interest. Poland seems to have put sustainable development of fishery zones at the centre of its initiatives, while Italy, Greece and Spain have prioritized the adaptation of the fleet. Common to all countries in the table is aquaculture, fishing on inland waters, and processing and marketing of fish products (see fig. 5).

Prospectus B - EU a 27: Financial Framework 2007/13 of the EFF (000 €)						
Country	Axis 1	Axis 2	Axis 3	Axis 4	Axis 5	Total
	000 Euros					
Spain	442,9	322,0	298,8	49,2	19,0	1.131,9
Italy	161,3	106,1	106,1	17,0	33,9	424,3
France	65,6	59,0	83,0	5,7	2,7	216,1
Greece	77,3	59,7	32,3	33,3	5,3	207,8
Portugal	62,9	74,2	83,4	17,4	8,6	246,5
Poland	168,8	146,8	146,8	234,9	36,7	734,1
Germany	7,5	54,9	70,2	18,6	2,5	153,7
Planned percentage distribution						
Spain	39,1	28,5	26,4	4,3	1,7	100
Italy	38,0	25,0	25,0	4,0	8,0	100
France	30,4	27,3	38,4	2,6	1,2	100
Greece	37,2	28,7	15,6	16,0	2,5	100
Portugal	25,5	30,1	33,8	7,1	3,5	100
Poland	23,0	20,0	20,0	32,0	5,0	100
Germany	4,9	35,7	45,7	12,1	1,6	100
<i>Source EU Commission, Fourth annual report on Implementation (op. cit.)</i>						

³ The five priorities are: A/1 Fleet adaptation - A/2- Aquaculture, inland fishing, processing and marketing; A/3- Measures of common interest; A/4- Sustainable development of fishery areas; A/5- Technical support.

Fig. 5 - FEP: planned expenditure



5. Italian events

Over the last twenty years, the importance of fishing in Italy has been slowly decreasing both with regard to the fished and the non-fished (farmed) production (table 8). However, despite this decline, Italian aquaculture, with over 230,000 tonnes produced in 2010, still plays an important role in the context of the EU, representing a market share of around 15%.

Tab. 8 - Italy: fish raised in aquaculture

Species	Tons	thousand €	Species	Tons	thousand €
Sea bass	9.800	70.500	Mullet	3.800	12.000
Sea bream	8.800	57.200	Clams	120.000	78.000
Trout	40.000	11.200	Cockles	40.000	144.000
Eel	1.200	11.200	Other	7.150	158.800
Sturgeon	1.380	14.000	Total	232.130	556.900

Source: calculations on FAO data

Where, however, things have decisively worsened in recent years is in fisheries. With a reduction of 19% recorded during the 1990s and a further 17% in the course of the past ten years, Italy has reduced its contribution to EU production to just over 3%. The number of boats and their gross tonnage have both fallen by about 10%. The structural characteristics of the Italian fleet are summarized in table 9, showing the prevalence, both in terms of engine power and tonnage, of the trawler system compared with all the other fishing techniques (Irepa, 2007).

Tab. 9 - Specifications of the Italian fishing fleet (2009)

Systems	Number	Gross Tonnage	Power (KW)	Crew	Average days
Trawlers	2.679	113.322	536.656	9.021	158,66
Seine netters	134	10.400	48.349	705	160,54
Seiners	310	19.808	83.690	2.178	100,26
Hydraulic dredges	700	9.289	75.500	1.417	86,59
Small fishing	8.765	16.484	244.198	13.657	130,32
Polyvalent passive	491	6.694	68.437	1.276	134,51
Longliners	192	6.015	38.829	713	126,22
Total	13.271	182.012	1.095.659	28.967	128,16

Source: Calculation on FAO data

In the general context the incidence of “small-scale fishing” is striking, in terms of boats, crews and engine power, and demonstrates the substantial fragmentation of Italian productive capacity and the relative uncertainty overshadowing the entire industry with an average stay of just 128 days at sea for over 13,000 vessels.

The data in table 10 also suggest a substantial crisis, the catch having declined by 20% over the past six years with peaks of 25% for small-scale fisheries, and by as much as 42% for mixed systems.

The reduction in catches has, of course, also reduced revenues that, in 2004, amounted to 1,380 million euros, while in 2009 they totalled 1,102 million euros, a decrease of 20%. These data, given in current values, do not take into account the phenomenon of inflation that, over the six years, has had quite a significant effect on the purchasing power of incomes.

Tab. 10 - Trends in catches (tonnes) and revenue (€'000) per system (tonnes and €000)

Systems	2004/05 (a)	2006/07 (b)	2009/10 (c)	(c)/(a)	Revenue 2004	Revenue 2010
Trawlers	100.895	96.805	77.882	0,77	621	536
Seine netters	43.673	47.152	42.896	0,98	50	50
Seiners	43.360	47.247	33.450	0,77	109	50
Hydraulic dredges	20.612	26.005	20.727	1,01	81	63
Small fishing	48.196	44.022	35.978	0,75	341	276
Polyvalent passive	23.846	15.370	13.814	0,58	178	127
Total	280.582	276.600	224.745	0,80	1.380	1.102

Source: Calculations on Mipaaf-Irepa data

In table 11, for 2010, the distribution of catches and related revenues are shown for those regions that, more than others, see fishing as an important activity. In general, over 40% of the value of the catch is concentrated on the Adriatic coast, 27% is landed in Sicily and a further third in the other coastal regions of Italy. The data show that catches and revenues are not distributed on a strictly proportional basis. This can be clearly deduced from the catch/income ratio reported in the last column which shows that Sicily (1.32) has products of far higher value than those from other sources.

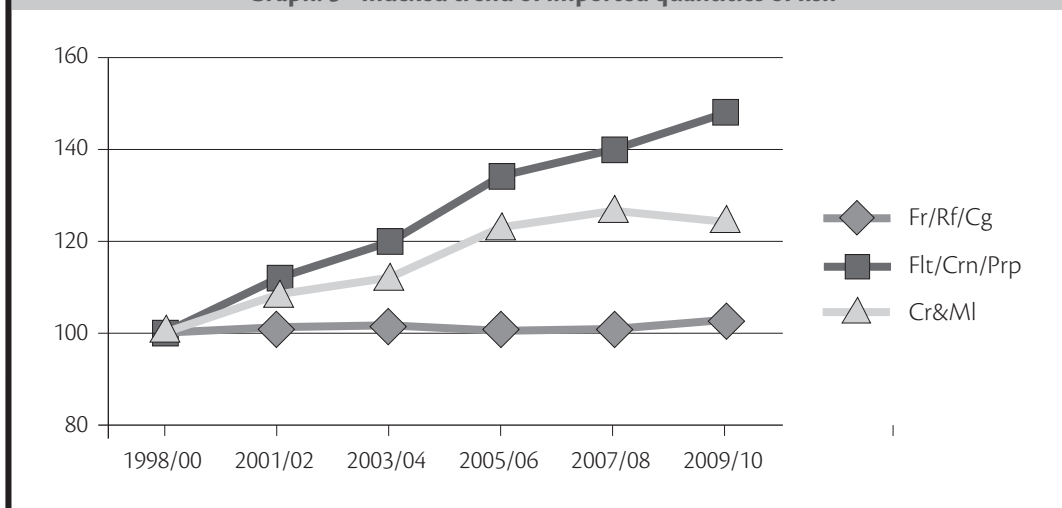
Tab. 11 - Catches by revenues and by region (2010)

Region	Catches (a)		Revenue (b)		(b)/(a)
	Tonnes	%	€000	%	
Puglia	34.842	15,6	184.000	16,7	1,07
Marche	24.992	11,2	120.355	10,9	0,97
Em. Rom	22.181	9,9	56.720	5,1	0,52
Veneto	23.428	10,5	64.490	5,8	0,56
Sicilia	45.032	20,2	293.770	26,6	1,32
Other	72.532	32,5	383.465	34,8	1,07

Source: calculations on Mipaaf-Irepa data

The Italian position in the context of trade, shown in tables 12 and 13, is marked by a substantial stability in the quantities exported set against an increase of over 20% in the quantities imported. In the last two years the ratio between the volumes imported and exported has increased from one to seven, while that for its economic values is from one to nine. The terms of trade also indicate that the implied value of imports is consistently lower than that of exports (overall, € 3,14 a tonne compared to € 4,16 a tonne in 2010) with the exception of crustaceans and molluscs.

Graph. 5 - Indexed trend of imported quantities of fish



On the import side (see graphic 5) the leap in the trade deficit is due not so much to the fresh, chilled and frozen products as to the two other types of product: of 25% for shellfish (i.e. crustaceans and molluscs) and 50% for fish fillets, meat and prepared fish.

Tab. 12 - Italy: fish exports by product category						
Category	1998/00	01/02	03/04	05/06	07/08	09/10
	Quantity (000qli)					
Fish, fresh, chilled and frozen	546	516	538	600	575	567
Fillets, meat preparations and	41	46	46	80	85	85
Crustaceans and molluscs	442	368	340	386	404	393
Total	1.029	930	924	1.066	1.064	1.044
Category	Values (mio Euros)					
Fish, fresh, chilled and frozen	120	126	133	168	164	142
Fillets, meat preparations and	21	23	21	32	39	38
Crustaceans and molluscs	115	149	135	155	154	148
Total	256	298	289	355	357	328
Source: calculated on Eurostat data						

Tab. 13 Italy: fish imports by product category						
Category	1998/00	01/02	03/04	05/06	07/08	09/10
	Quantity (000qli)					
Fish, fresh, chilled and frozen	2.075	2.104	2.109	2.081	2.095	2.125
Fillets, meat preparations and	1.004	1.124	1.203	1.345	1.402	1.482
Crustaceans and molluscs	2.692	2.924	3.014	3.312	3.409	3.354
Total	5.771	6.151	6.326	6.738	6.905	6.961
Category	Values (mio Euros)					
Fish, fresh, chilled and frozen	680	734	732	819	837	889
Fillets, meat preparations and	503	599	588	685	720	763
Crustaceans and molluscs	901	1.096	1.121	1.254	1.283	1.245
Total	2.084	2.428	2.441	2.758	2.841	2.897
Source: calculated on Eurostat data						

The origin of these quantities of imported fish is mostly outside the EU even if Italy's largest supplier would appear to be Spain with a share of nearly 30%. The balance of the discussion changes completely if, rather than considering the quantities imported, reference is made to their value. In this case, the Community partners have more than 60% of the market. Most important in this respect are, in order, the Netherlands, Denmark and France (see figures 6 and 7).

Fig. 6 - Italian fish imports by origin (quantity)

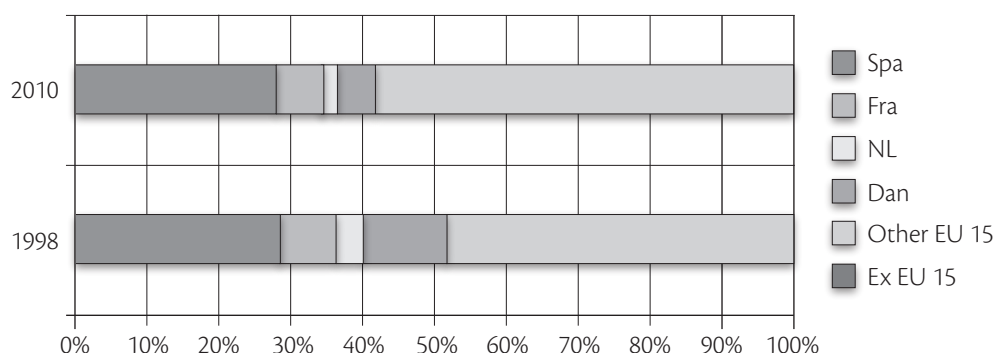
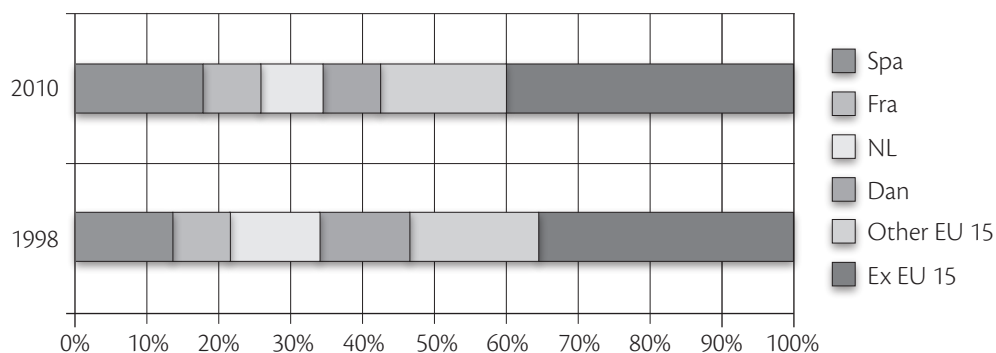


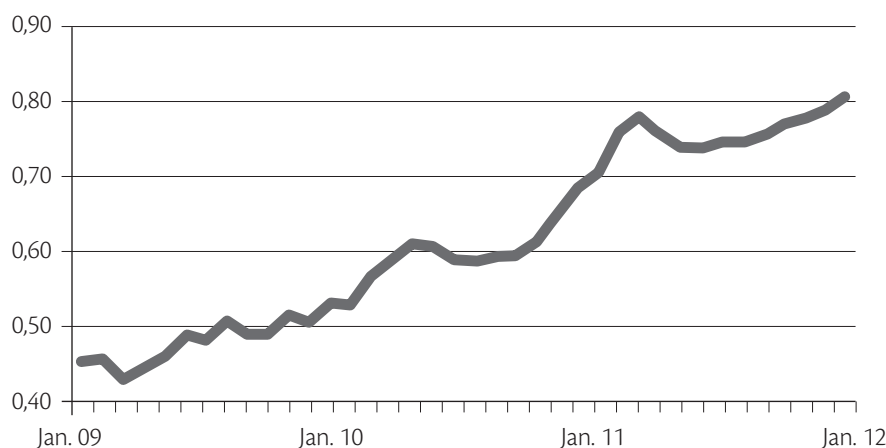
Fig. 7 - Italian fish imports by origin (values)



What ultimately emerges is greater exposure to foreign suppliers. This does not stem from the demand side, which is indeed rather stagnant, but is the result of a shortage of domestic product brought about by the decreased production of the Italian fleet.

This is the scenario in which fishing businesses have found themselves in recent times; one that has become very difficult for a range of reasons. The first is a direct result of the stagnation in demand to which reference was made earlier, and is linked to a fall in prices that has immediately made itself felt in the pockets of the operators in the upstream section of the supply chain. A second source of discomfort lies in the full implementation of the provisions of EC Regulation No. 1967/2006 which made its effects felt throughout 2011, rendering the catch much more difficult to complete. Finally, and certainly not least, given the effect it has had, is the rising price of industrial diesel fuel, as shown in graphic 6, the price of which has rocketed since November 2010 by as much as 30% (April 2011) and that, in early 2012, has unfortunately resumed its upward trend. Given that, within the costs of production, fuel accounts for 50%, when this threshold is exceeded for certain types of fishing, one can easily understand the widespread suffering and discontent that has come to the surface in many Italian flotillas (MiPAAF, 2007b).

Graph. 6 - Fuel: industrial prices (euros)



All this is happening despite significant financial transfers, from both national and European sources, being made to the sector. It is acceptable, therefore, to ask whether national and European economic commitment responds to a precise policy plan or whether the shortcomings of a few years ago referred to in the Commission's Green Paper still persist, in particular as regards:

- the lack of clear policy objectives;
- an unwillingness to ensure compliance with the rules;
- a fundamental weakness of the decision-making system.

6. Conclusions

This study is a critical analysis of fishing and aquaculture, taking into consideration trends in their production and trade at an international, European and national level. The interest in this sector stems from its strategic role for the food industry: fish are a source of animal protein with nutritional characteristics of great importance and represent a significant alternative to meat consumption. However, the sector also has important specific characteristics resulting from its nature in exploiting a renewable resource.

The data show that over the last twenty years both production and trade in fish have been affected by profound changes, the salient features of which are substantial stability in the volume of fishing, a strong increase in the share of production from aquaculture and a progressive strengthening of production with a greater service content (fillets, prepared seafood, etc.). Finally the leading role being taken by Asian countries, especially in the production of farmed fish, should be noted.

The basic stability in the volume of fishing represents an element of considerable interest, especially in the light of strong growth in demand and the progressive upgrading of fleets in particular with regard to deep sea and fishing for pelagic species. It represents evidence, albeit indirect, of the progressive depletion of fish as a resource that has thus fuelled the considerable

growth in production from fish farms. The self-same objectives of the Common Agricultural Policy and those outlined for the fisheries and aquaculture sector, refer to the theme of sustainability ever more explicitly as the directive shaping public intervention. It is no coincidence that among the objectives of the proposed reform re-stocking and subsequent conservation of stocks are cited, to be pursued through the adoption of the parameter of MSY (maximum sustainable yield), and the progressive reduction in the proportion of discards of unmarketable species. This rule is hypothetical, of course, and the implementation of systems of documentation and control are very complex; concerns as to the effectiveness of these norms have been expressed by many commentators.

Finally, as far as the Italian situation is concerned, and in the light of the new reform proposal, the work carried out illustrates the progressive loss in importance of the activities of the “fish industry” and in particular with regard to fishing itself. With a highly fragmented structure of productive capacity and a gradual decline in catches, in recent years the fishing industry has seen a decline of about 20% in revenues. However, the fisheries sector continues to play an important role in Italy both in the maintenance of the social fabric and in terms of the conservation and enhancement of cultural identities. In this sense, the reform proposal seems to give some degree of protection for artisanal fisheries because of their exemption from the application of the system of transferable fishing concessions and the financial measures for the benefit of local economies and small-scale fisheries.

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