European Commission

Fish / 2006 / 09

Assessment of the status, development and diversification of fisheries-dependent communities

Mazara del Vallo Case study report

July 2010

Acronyms

LAG	Local Action Groups
FLAG	Fisheries Local Action Group
OP	Operational Programme
FAO	Food and Agriculture Organization, UN
LLS	Local Labour System
ISTAT	Italian National Statistical Institute
IAMC	Institute for the Coastal Marine Environment
CNR	National Research Council
MSP	Mazara Strategic Plan
PRG	Piano Regolatore Generale
PTOP	Piano Triennale delle Opere Pubbliche
PRP	Piano Regolatore del Porto
GSA	Geographical Sub-Area
CPUE	Catch per unit of effort
UNCI	National Association of Italian Cooperatives

Table of Contents

Table of Tables

Table of Figures

1. Introduction

1.1 General description of the location

Mazara del Vallo represents the main Italian fishing port. Fishing activity is almost exclusively devoted to catch demersal stocks. The main fleet segment is represented by demersal trawlers with an overall length between 24 and 40 metres. This fleet is specialised in catching crustaceans (mainly red shrimp and deepwater rose shrimp) in deep sea water. The economy of Mazara del Vallo is strongly dependent on fisheries. The local community has growth in strict connection with the development of the fishing sector. This sector is currently affording a situation of crisis mainly determined by the strong increase in fuel price, but also by the augmented imports from other country and the overexploitation of marine resources. The economic sector is very specialised and the lack of diversification represents a critical factor for the future of Mazara.

1.2 Location

The community of Mazara del Vallo is located in the province of Trapani (NUTS3: ITG11) in Sicily (NUTS2: ITG1). Sicily is an Italian region and represents the biggest island in the Mediterranean Sea. The area of Mazara consists of 275 km^2, which latitude is included between 12° 31’ 14’’ E and 12° 45’ 34’’ E, and the longitude is included between 37° 34’ 26’’ N and 37° 48’ 09’’ N. The nearest administrative centre is represented by the Comune di Mazara del Vallo.

Figure 1: Map showing location of Mazara del Vallo in Sicily

1.3 Key geographical characteristics of the community

Mazara was founded by the Phoenicians in the 9th century BC, with the name of Mazar (the Rock). During its history, Mazara was occupied and controlled by many different populations, like Greeks, Carthaginians, Romans, Vandals, Ostrogoths, Byzantines. In the year 827, Mazara was occupied by the Arabs, who made the city an important commercial harbour. That period was probably the most prosperous in the history of Mazara. A period of political, economic and demographic decline for Mazara is represented by the Aragon domination from 1282 to 1409. In the 18th century, the city was controlled by the House of Savoy, Austrians and then Bourbons. In 1860 the city was finally conquered by Giuseppe Garibaldi and the Mille, thus joining the newly formed Kingdom of Italy. The city was known as Mazzara del Vallo until the Second World War, following which the spelling was changed to Mazara del Vallo.

The climate in Mazara is temperate compared with other Sicilian areas. Mean temperature are between 8°C during the winter and 30°C during the summer. However, during the winter, temperatures do not generally fall under 12°C. Rainfall is low and a wind from North-West is typical in the area, while the wind speeding from South-East is less recurrent.

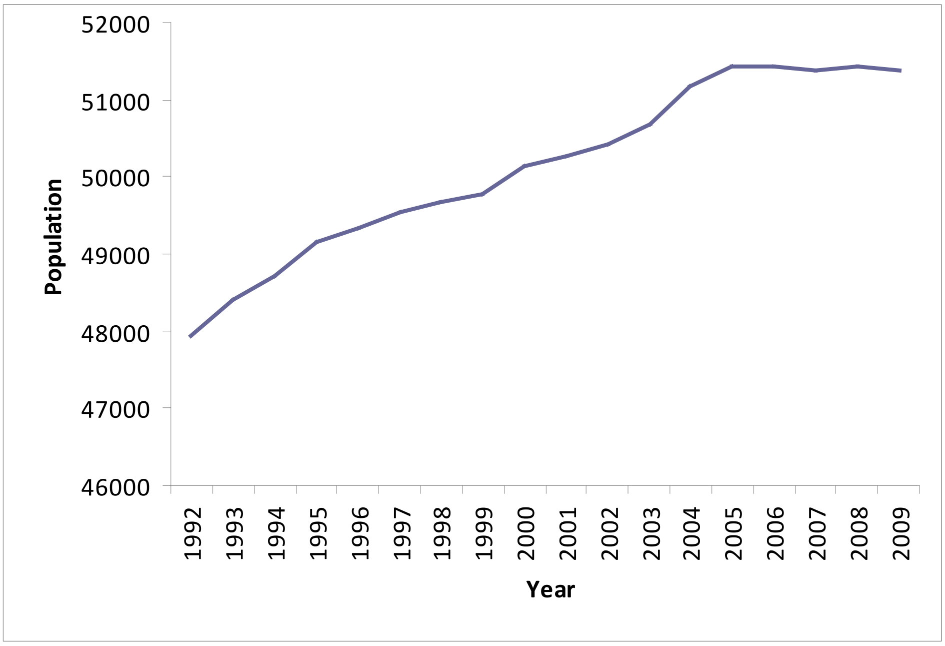
2. Demographic aspects

2.1 Population and population age structure

On 1st of January 2009, the total population in Mazara was estimated in 51,385 people by ISTAT (the Italian National Statistical Institute). Based on census data collected by ISTAT each ten years since 1951, the population of Mazara has shown an increasing trend in the last 50 years. This trend is probably related to the immigration flows from other Sicilian areas and other Mediterranean countries. In particular, immigration from Tunisia has been very significant in the last 30 years. The phenomenon of immigration has been strictly related to the development of the Mazara fishing sector and the consequent employment opportunities in the sector.

Figure 2 shows the trend in the population of Mazara in the last 18 years. An average rate of annual increase in population of 0.5% has been registered from 1993 to 2005, while in the last 4 years the number of people living in the area is remained stable. This trend is contrasting with the evolution of the Italian population in the same period. Indeed, Italian population has been stable until 2002, when Mazara population was increasing, and has increased at an annual average rate of 0.7% from 2003 to 2009, including the period when Mazara population remained stable. The different evolution of the population at national and local level can be related to the phenomenon of immigration.

Figure 2: Changes in the population of Mazara del Vallo (1992-2009)

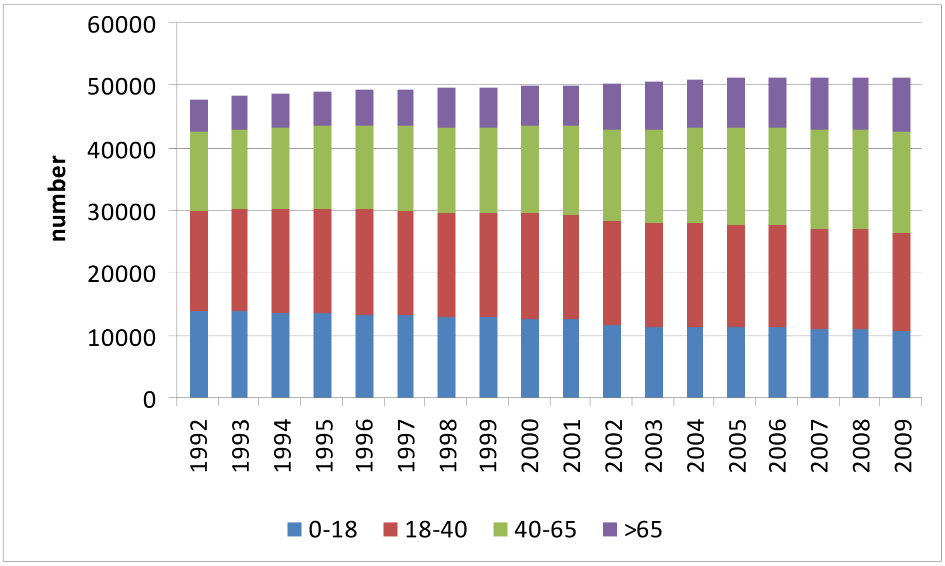


Source: Italian National Statistical Institute (ISTAT)

The composition of the population of Mazara by age-class shows a prevalence of people under 40 years old, who represent almost 52% of total population (2009 data). However, this percentage has been constantly decreasing since 1992 when was estimated in 63%. In particular, an annual average decreasing rate of -1.5% has been estimated for the age class less than 18 years old over the period analysed. On the contrary, people in the age classes 40-65 and over 65 have shown an increasing trend with annual average rates of 1.5% and 3.1% respectively.

Comparing with the population structure at national level, people living in Mazara show an average age younger than that estimated for Italy. At national level, the people under 40 years represent less than an half of the total. However, the difference in the population age structure between Mazara and Italy shows a constant reduction over the period analysed. At national level, an increasing trend in the people under 18 years old started in 2003 and is still continuing. Furthermore, even though the people in the age classes 40-65 and over 65 have shown increasing trends also at Italian level in the last 20 years, the annual average rates of increase are lower than those estimated for Mazara (at national level, 0.8% and 2.0% respectively). This means that the trend in becoming older is stronger for Mazara than the rest of Italy.

Figure 3: Age structure of population in Mazara del Vallo (1992-2009)



Source: Italian National Statistical Institute (ISTAT)

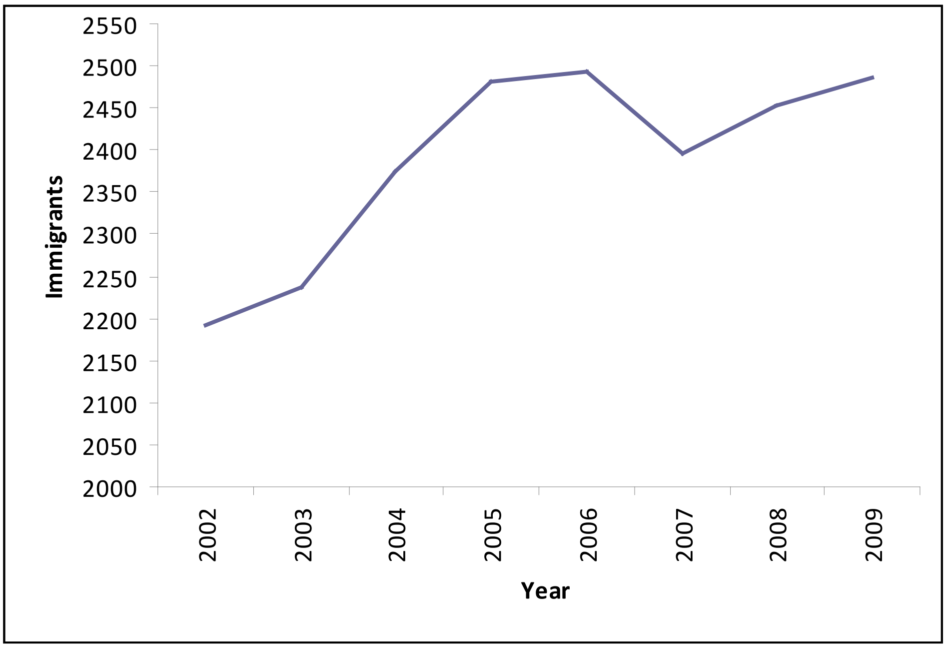
2.2 Ethnicity and migration

Mazara has represented for long time one of the Italian cities with the highest percentages of immigrants. In 2009, a total of 2,487 immigrants have been registered in the city, mainly from nearby Tunisia but also the other countries of the Maghreb. The Figure below shows an increasing trend in the number of immigrants registered in Mazara from 2002 to 2005. In the last 4 years the number of immigrants is stable with a reduction registered in 2007.

In the last 5 years, the percentage of immigrants on the total population of Mazara has been estimated in a stable 4.8%. Until 2006, this level resulted higher than the percentage registered at national level. On the contrary, in the last three years the percentage of immigrants on the total Italian population has registered remarkable increases achieving a level of 6.5% in 2009.

Most of the immigrants is employed in the fishing sector. It seems that almost an half of the people employed in this sector is from Tunisia. However, the Tunisian community in Mazara has also opened a number of shops and commercial activities selling typical Arabic products.

Figure 4: Changes in the population of immigrants in Mazara del Vallo (2002-2009)



Source: Italian National Statistical Institute (ISTAT)

3. Economic aspects

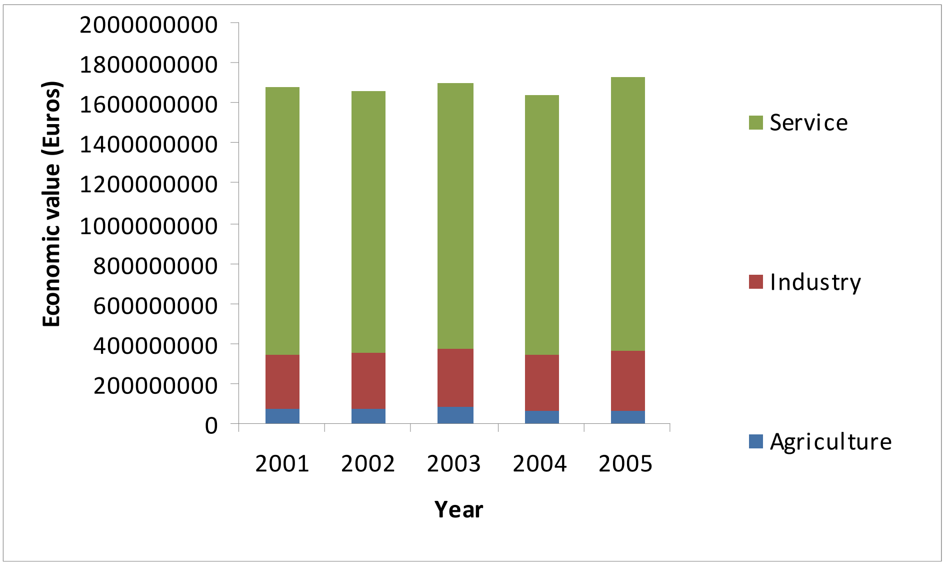
Fishing is the main economic sector in Mazara del Vallo. More than 25% of the total employed people is involved in fishing and related sectors. Other relevant sectors are represented by commerce, manufacture and building. The growth of the city, especially in the 80s, has been strongly connected to the development of the fishing sector. In that period, the fleet has increased in number achieving the peak of its dimension in the 90s. The main fleet, represented by trawlers with an overall length between 24 and 40 metres, have focused its activity in the demersal fisheries of crustaceans. This fishery, characterised by the exploitation of fishing areas very far from the Sicilian coasts, requires a significant consumption of fuel. The increase in fuel price registered in the last years has produced a dramatic decline in the profitability of the local fishing sector. Given the strong dependency of the local economy on fisheries, the crisis in the fishing sector is indirectly affecting also the other economic sectors.

3.1 Importance of economic activities

Data on turnover and value added by economic sectors in Mazara del Vallo are not available. The minimum geographical level considered by the Italian Statistical Institute is represented by the Local Labour System (LLS), where data on value added are disaggregated by primary, secondary and tertiary sectors. Mazara del Vallo is included in the LLS of Marsala, which includes also Marsala and Petrosino. Mazara represents around 37% of total population living in the area of the LLS, and covers almost 50% of the total area of the Marsala SLL. However, given the strong dependence of Mazara from the fishing sector, the economic structure of the Marsala LLS cannot be considered representative of the peculiarities of the community under analysis.

Figure 5 shows the value added by the main economic sectors for the Marsala LLS in the period 2001-2005. These data show a very small relevance of the agriculture sector for the economy of the area, representing less than 5% of the total added value. As agriculture includes also the fishing sector, these data cannot be considered as representative of the Mazara del Vallo economic structure.

Figure 5: Gross Value Added for main economic sectors in the Local Labour System of Marsala (2001-2005)



Source: Italian National Statistical Institute (ISTAT)

To have a more consistent indicator of the relevance of the economic sectors in the economy of Mazara, the only available data are related to the census of industry and services conducted each ten years by ISTAT. Table 2 shows the data on employment by economic sector collected by the last two census in 1991 and 2001. Employment data are described in the next section. However, 2001 data allow us to identify in the fishing and related activities the main economic sector in Mazara, followed by commerce, manufacture and building. More recent data provided by the Chambers of Commerce and elaborated for the Mazara Strategic Plan (www.pianostrategicomazara.net), a study financed by the local municipality, are reported in Table 1. These data show the evolution of the number of registered firms by economic sector in Mazara. Even though the methodology applied for the elaborations is not known and the number of registered firms cannot be considered a reliable indicator of the relevance of an economic sector, the relative change from 2000 to 2007 (last column in Table 1 seems to be consistent with the qualitative information collected by the discussion with the focus groups. In particular, among the main economic sector identified by Table 2, only the fishing sector shows a decrease from 2000 to 2007 estimated in almost 8%.

Table 1: Number of registered firms by economic sector in Mazara del Vallo

Sector	2000	2001	2002	2003	2004	2005	2006	2007	Var. % (2000-2007)
Agriculture	939	892	850	845	834	808	786	742	-20.98%
Fishery and related sectors	331	324	318	314	300	291	305	305	-7.85%
Mineral extraction	3	5	8	8	9	9	9	8	166.67%
Manufacture	500	502	504	494	511	506	521	522	4.40%
Production and distribution of energy, gas and water	4	4	4	4	4	4	5	5	25.00%
Building	441	430	435	445	456	490	519	544	23.36%
Commerce	1,401	1,430	1,477	1,492	1,523	1,566	1,571	1,566	11.78%
Hotel and restaurant	130	133	135	141	137	141	149	149	14.62%
Transport	99	99	96	92	95	96	97	95	-4.04%
Financial services	60	73	73	71	70	69	77	74	23.33%
Other services	157	169	173	181	185	198	205	206	31.21%
Education	21	22	23	23	25	28	28	30	42.86%
Welfare services	41	41	40	39	31	35	36	37	-9.76%
Other public services	133	137	142	138	146	147	150	153	15.04%
Other sectors	339	355	390	412	453	464	434	455	34.22%
Total	**4,599**	**4,616**	**4,668**	**4,699**	**4,779**	**4,852**	**4,892**	**4,891**	**6.35%**

Source: Elaboration on Chamber of Commerce data

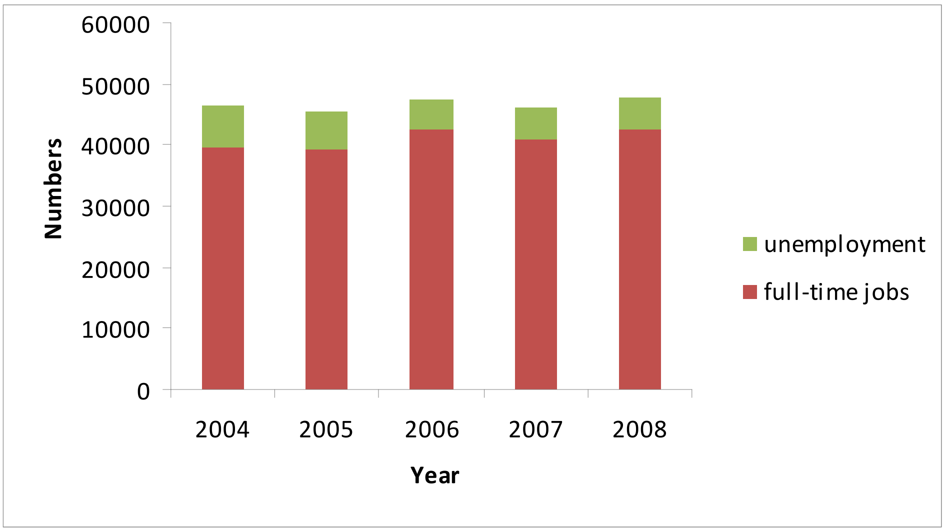
As stated above, Mazara del Vallo is the main Sicilian port for demersal fisheries. The fleet of Mazara, with the exclusion of the oceanic vessels, represents 8% of the total number of Sicilian vessels. However, given the bigger size of Mazara vessels, this percentage raises up to 25% in kW and 40% in GT. Indeed, the local fleet represents the industrial fleet of Sicily as the main fleet segment in Mazara consists of trawlers between 24 and 40 metres length.

3.2 Employment and unemployment

As for the value added data, also statistics on employment are available at the geographical level of LLS. In the area of Marsala, the total number of full time employees has increased of 7% from 39,752 in 2004 to 42,613 in 2008. In the same period, the number of unemployed people has decreased of 25% from 6,879 to 5,177. However, as highlighted above, these variations cannot be extended to the reality of Mazara because the peculiarities of the local economic structure.

The only available data for Mazara are related to the last census conducted by ISTAT in 2001. The unemployment rate, given by the ratio between people looking for a job and the total of people working and looking for a job, was estimated in 29.6%. This index was higher in Mazara than in Sicily (26.5%) and Italy (11.6%). Another index of interest to have an overview of the labour sector is represented by the employment index, given by the ratio between employed people and total people able to work (population over 15 years old). This was estimated in 30.5% for Mazara, 31.5% for Sicily and 42.9% for Italy.

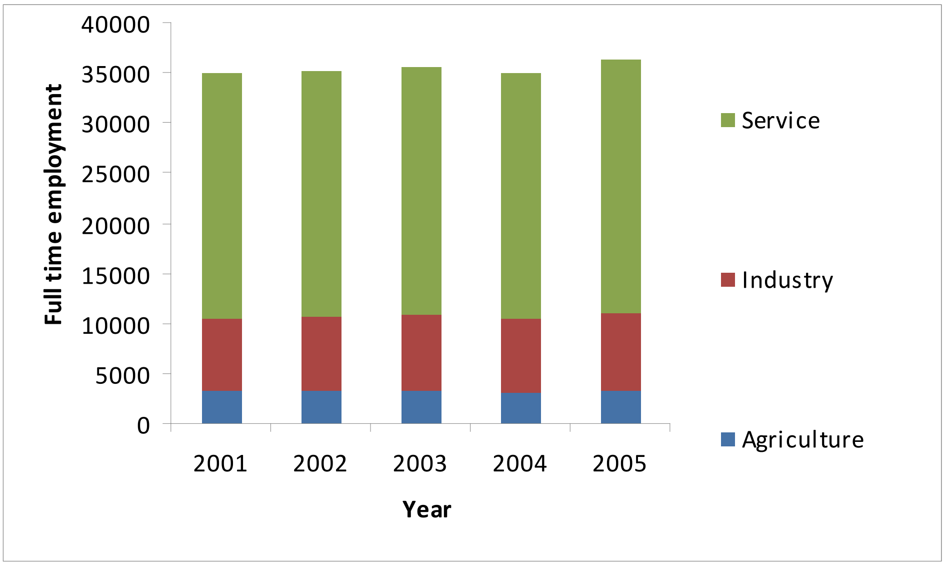
Figure 6: Employment in the Local Labour System of Marsala (2004-2008)



Source: Italian National Statistical Institute (ISTAT)

The Figure below shows the levels of employment by primary, secondary and tertiary sector for the Marsala LLS in the period 2001-2005. As for value added at LLS level, the relevance of the agriculture sector, estimated in less than 10% in terms of employment, seems to be not representative of the Mazara economy. More coherent data are from the 2001 census. Table 2 shows the ISTAT data on the number of employees by economic sector in Mazara in 1991 and 2001. Data on fishing sector in 1991 seem to be not realistic as people employed should be at least ten times what is reported by ISTAT. However, 2001 data seem to be more realistic showing a strong relevance of the fishing sector, which can be identified as the main economic sector of Mazara del Vallo.

Figure 7: Employment for main economic sectors in the Local Labour System of Marsala (2001-2005)



Source: Italian National Statistical Institute (ISTAT)

Table 2: Employees by economic sectors in Mazara del Vallo

	1991		2001	
Sector	**number**	**percentage**	**number**	**percentage**
Agriculture	3	0.06%	41	0.55%
Fishery and related sectors	188	3.70%	1,905	25.62%
Mineral extraction	0	0.00%	1	0.01%
Manufacture	1,210	23.80%	1,320	17.75%
Production and distribution of energy, gas and water	0	0.00%	17	0.23%
Building	566	11.13%	764	10.27%
Commerce	1,857	36.53%	1,844	24.79%
Hotel and restaurant	249	4.90%	267	3.59%
Transport	65	1.28%	162	2.18%
Financial services	116	2.28%	64	0.86%
Other services	347	6.83%	560	7.53%
Education	91	1.79%	65	0.87%
Welfare services	190	3.74%	241	3.24%
Other public services	202	3.97%	186	2.50%
Total	**5,084**	**100.00%**	**7,437**	**100.00%**

Source: Elaboration on ISTAT data

Data available on the labour sector of Mazara del Vallo are not sufficient to estimate a trend in the dependency of the local economy on the fisheries sector. However, it is well known that the development of Mazara in the last 30 years has been strictly associated to the fishing sector. An indication of the fisheries dependency can be derived by Table 2. In 2001, 1,905 people were employed in fishing and related sectors, equal to a percentage of more than 25% of total employment in the area. Even though more recent official data are not available, the number of people currently involved in these sectors can be broadly estimated in a number between 1,700 and 1,800 (1,274 in the catching sub- sector and a number between 400 and 500 in processing and fish commerce). This highlights that the dependency of Mazara economy on the fishing sector remains at high level.

3.3 Infrastructure

Mazara del Vallo is connected to the rest of Sicily by a regional train service. The connections between Mazara and Palermo, the regional administrative centre, are served by a private bus service and by car via the A29 highway (also known as Palermo-Mazara del Vallo). The other motorway passing through the area is the road 115 to Marsala and Trapani in the north direction and Castelvetrano in the south direction. During the summer period, Mazara is also connected via ferry to the island of Pantelleria and the port of Hammamet in Tunisia.

The closest airport to Mazara is Birgi in Trapani (40 km far from Mazara), which is served prevalently by low-cost companies. The main Sicilian airport is Punta Raisi (also known as Falcone e Borsellino) in Palermo. This is 110 km far from Mazara and is well connected to Milan, Rome and other European capitals.

Mazara has a hospital consisting of 9 departments able to accommodate around 180 people, and 19 local units distributed in the community area. The private health sector consists of a number of cooperatives devoted to assist elder and disabled people.

22 kinder gardens, equally divided in public and private, are mainly located in the area at the north of the city centre. A total of 18 public primary schools and 16 public secondary schools (4 schools of first grade and 12 of second grade) are present in Mazara covering homogeneously the community area needs. The second grade schools cover different disciplines, from classical to scientific, artistic and linguistic. Furthermore, given the strong fisheries dependency of the community, a number of technical, commercial and other institutes teaching works related to the sea are also present in Mazara. Regarding the research, the Institute for the Coastal Marine Environment (IAMC) of the National Research Council (CNR) is located in Mazara nearby the so called channel port (porto canale).

The potentiality of Mazara del Vallo from a cultural and touristic prospective is particularly interesting. The characteristic Arabic and medieval city centre and the Arabic area, called “Kasbah”, host a rich number of churches and historical monuments. There are also two natural protected areas managed by WWF, Capo Feto and Lago Preola, and the coastal area presents beaches which can be devoted to tourism. Unfortunately, the touristic resources of Mazara are not sufficiently valued and well maintained. Furthermore, the presence of touristic infrastructure is very limited. Only 23 hosting structures, consisting of 6 hotels, 10 bed-and-breakfast, 1 camping and 6 other structures, were available in Mazara in 2007, for a total hosting capacity of 1367 people.

3.4 Local development plans

In 2008 the city of Mazara del Vallo has commenced a process, promoted by the local administration, to define a strategic plan for the city. The Mazara Strategic Plan (MSP) is a programming tool aimed to define a vision of the city in the future. The MSP has recently been completed and will be available in a short time. However, an intermediate report of the work done and the results obtained is already available and downloadable from the website of the project, www.pianostrategicomazara.net.

At the moment, the main programming documents are the Global Territorial Development Plan (Piano Regolatore Generale (PRG)) approved by the regional administration in 2003 and the Triennial Plan of Public Infrastructures (Piano Triennale delle Opere Pubbliche (PTOP) covering the period 2008-2010. The main new infrastructures planned in the PRG are:

- A new rail way outside the city centre. This should substitute the existing rail way passing through the city centre, which produces problems in traffic of the city. The existing rail way should be substituted by an urban road.

- A new road to connect Mazara to Trapani, the province administrative centre. This should improve also the connection to Palermo.

- A new touristic port. The new port should be located on the western side of the existing port and directly connected to a road which brings to the road 115 to Marsala, the motorway to Palermo and the new road foreseen by the PRG to Trapani.

In 2006 the local administration approved the guidelines for the new Port Development Plan (Piano Regolatore del Porto (PRP)) of Mazara del Vallo. The plan was mainly directed to improve the following sectors: fishery and related sectors, logistic, tourism, environmental education and education in the field of marine economic activities, artisan and commerce. The main variations can be resumed as follows:

- A redefinition of the activities in the channel port to make this area more homogeneous with the historical centre. To this end, fishing and ship building sectors should be moved to other areas and substituted by touristic, cultural and spare time infrastructures.

- The construction of a multi-functional centre, including a new fish market, a fishery and sea thematic park, an institute for teaching the works related to the sea and a museum of marine archaeology, in the area between the western pier and the channel port.

- The construction of the new touristic port on the east side of the existing port. The new PRP modified the location of the new touristic port foreseen by the PRG. However, the new local government has decided a further change in the location of this port, which should be located now in the channel port.

- The west side of the existing port should host industrial activities, like ship building and other services to the commercial port.

4. Fisheries and aquaculture sub- sector

As stated above, Mazara del Vallo is the main Sicilian port for demersal fisheries. The fleet of Mazara, with the exclusion of the oceanic vessels, represents 8% of the total number of Sicilian vessels, 25% of total engine power and 40% of total tonnage. In 2008, almost 8,000 tons, equal to a value of 71 million Euro, were landed by the Mazara fleet. Mazara landings represent 18% and 25% of the total Sicilian production in weight and value respectively. More than 85% of Mazara production is landed by demersal trawlers with an overall length between 24 and 40 m. These landings amount to almost 90% of the total landed value. Trawlers over 24 m length represent the main fleet segment of Mazara. Target species for this fleet segment, and consequently for the Mazara fleet, are giant red shrimp, deepwater rose shrimp and Norway lobster. Giant red shrimp and Norway lobster are particularly important not only for their high price, but also because contribute significantly to the total income. A quarter of total landing value is due to giant red shrimp and a 10% to Norway lobster. However, the most important species in terms of contribution to the total income is represented by deepwater rose shrimp (around 30% of the total).

Aquaculture is not present in Mazara. As for the other fishing related sub- sectors, processing has a discrete relevance and is not strictly connected to the catching sub- sector as most of the processed product is imported. The ancillary sub- sector is present in Mazara with two firms involved in ship building and a number of other firms involved in the cold industry and in the production and maintenance of fishing gears.

4.1 Details of the local fishing fleets

The Mazara fishing fleet consists of 278 vessels with a total tonnage of just over 29,000 GT and an engine power of approximately 79,000 kW. The fleet of Mazara is mainly devoted to demersal fisheries. In terms of units, more than 90% is composed by demersal trawlers and small scale vessels with an overall length lower than 12 metres. Demersal trawlers between 24 and 40 metres length represent almost an half of total vessels active in the area. This is also the most important fleet segment in terms of both fishing effort and production levels. The fleet segment amounts to 75% of the total fleet in terms of GT and 74% in terms of kW installed, and plays also an important role from a social point of view employing more than one thousand people. Trawlers over 24 metres length registered in Mazara do not limit their fishing activity in the area of GSA 16, but operate in a wide area of the Mediterranean Sea. Initially these vessels were used to fish in the GSAs from 12 to 16 (Strait of Sicily and adjacent areas), but since 2004 their activity has been extended to the Aegean and South-Levantin waters. The target species landed by this fleet segment are deepwater rose shrimp, giant red shrimp, Norway lobster, European hake, striped and red mullet. The exploitation of the fishing areas in the Aegean and South-Levantin waters is almost exclusively devoted to the giant red shrimp fishery. The decision to focus their activity on this fishery was due to economic reason as red shrimp represents one of the most valuable stock and was not exploited by other fleets. Furthermore, in 2006 the decision of Libya to extend their territorial water of 62 miles has reduced the fishing areas available for the fleet of Mazara in the south of Sicily determining the need to find other fishing zones. However, the red shrimp fishery has been profitable also because the low fuel costs. In the last years, the strong increase in fuel price has reduced dramatically the profitability of a fishing activity which is practised very far from the Sicilian coasts and requires a significant consumption of fuel. At the moment, this fishery is almost completely stopped.

Local actors reacted to the increasing fuel price by stopping the fishing activity and waiting for vessels scrapping subsidies under EFF. During the focus group, local operators informed that more than 70 requests have already been submitted for vessel scrapping. Some other trawlers decided to continue their fishing activity abandoning their usual fishing areas and moving closer to the coast.

No new initiative was put in place by local authorities as they have no specific competence on the fishing sector. At Italian level, specific management plans, including decommissioning plans, have been developed for each GSA in Italian waters and category of fishing activity (these cannot be specific for Mazara, but the management plan for trawlers in GSA 16 is mainly devoted to Mazara fleet). In particular, a reduction of 25% of Sicilian trawlers has been approved by the central administration and should be realized in two periods, 2008-2010 and 2011-2013. More details are in the Sicily section of the Regional case study report.

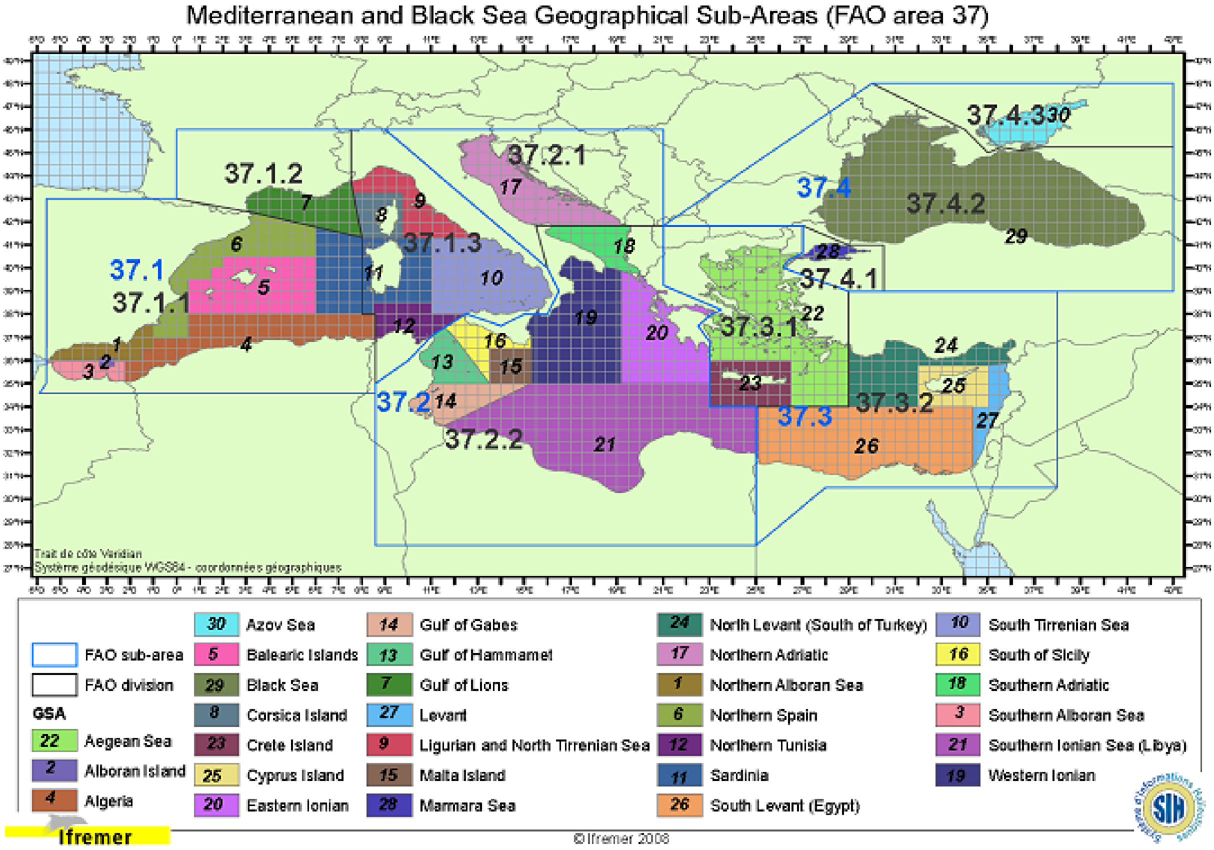
In terms of number, small scale fishery represents the second fleet segment in Mazara consisting of 99 vessels. These use many different fishing gears, like pots and nets, and fish a large number of species mainly in the coastal area of GSA 16. Other fleet segments present in Mazara are polyvalent passive and longlines. However, these fleet segments represent a very small percentage of total fleet. In Table 3, the relevance of the oceanic fleet, consisting of the vessels active in the oceanic waters, like Mauritania, South Oriental Africa and Guinea Bissau, is also reported. Unfortunately, no specific economic data are available for this fleet.

Table 3: Fleet segments in Mazara del Vallo (2008)

Segment (length class)	Number of vessels	main gears used	Number of crew (average)	Main species fished (list at least 3 and up to 5 for all fleet types)	Main fishing locations (GSA)	Trip length (average days)
VL1224	21	Demersal trawlers	3-4	deepwater rose shrimp, European hake, striped mullet, cephalopods	16	1-2
VL2440	137	Demersal trawlers	7-8	deepwater rose shrimp, red shrimp, Norway lobster, European hake, striped mullet, red mullet	12, 13, 14, 15, 16 22, 23, 24, 25, 26	7-24
VLXX12	99	Small scale fishery	1-2	finfishes nei, common cuttlefish	16	1
VL1224	5	Polyvalent passive	2-3	finfishes nei, swordfish	16	1
VL1224	3	Longlines	3	swordfish, finfishes nei, albacore	12, 13, 16	1-6
VL40XX	13	Oceanic fleet	n.a.	crustaceans, cephalopods, finfishes nei	Mauritania, South Oriental Africa, Guinea Bissau	

Source: Elaboration on IREPA data

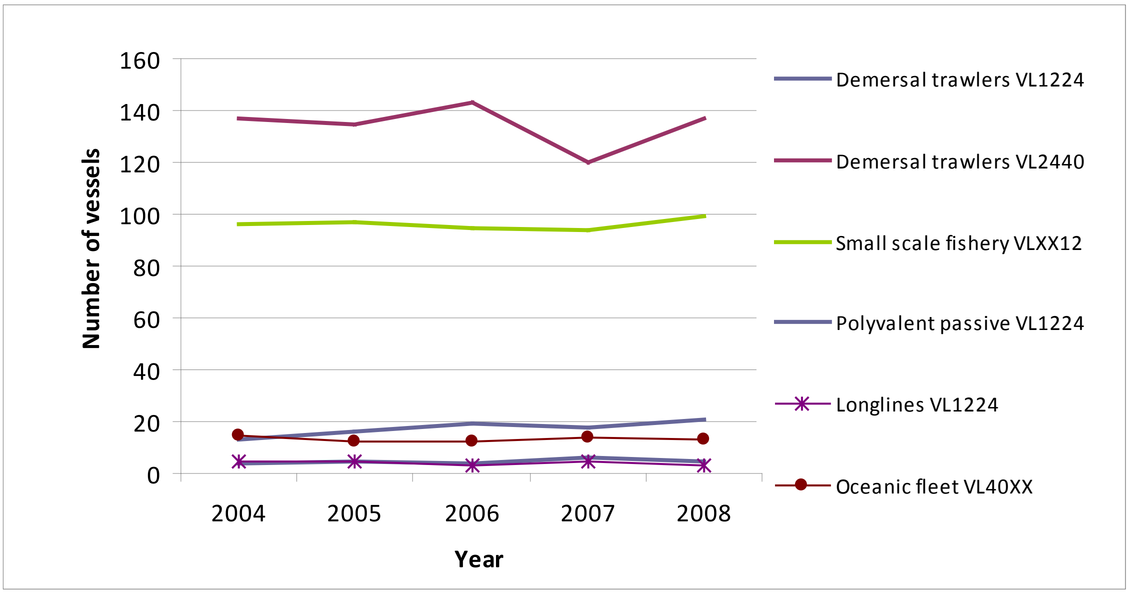
Figure 8: Mediterranean and Black Sea Geographical Sub-Areas



The following three Figures show the evolution of the Mazara fleet by fleet segment in the period 2004 – 2008 in terms of number of vessels, gross tonnage and engine power. In the period under analysis, a stable trend in the total number of vessels has been recorded. A similar dynamic has also been recorded in total kW and GT. The only change in the total vessels number is registered in 2007 due to a temporary decrease in demersal trawlers between 24 and 40 metres length.

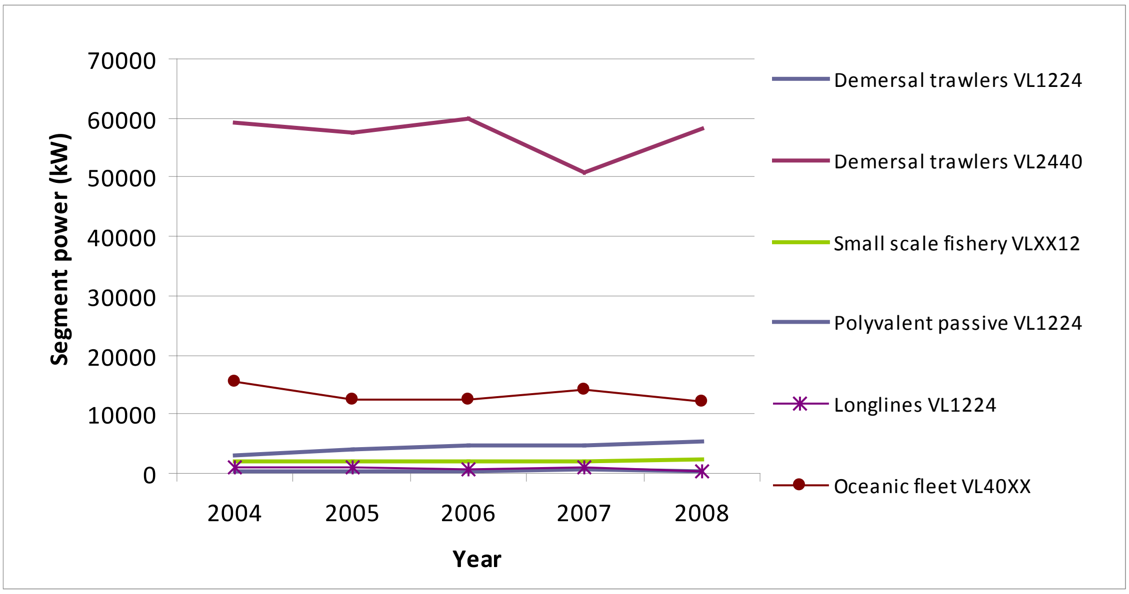
Demersal trawlers between 12 and 24 metres represents the unique fleet segment showing a significant increase from 2004 to 2008. Vessels belonging to this fleet increased of around 60% from 13 to 21 units. In terms of GT and kW, the positive change is registered in 90% and 78% respectively highlighting an increase in the average size and engine power of these vessels. Other fleet segments, like polyvalent passive and longlines, show changes in number, GT and kW. However, given the small number of these vessels, these variations amount to one or two vessels. As the classification of vessels by fleet segment is based on the prevalent gear used and considering that a vessel generally hold a fishing licence for the use of a number of fishing gears, variations of few vessels can be due to a change in the fishing gear used.

Figure 9: Trend in fleet segment number of Mazara fleet (2004-2008)



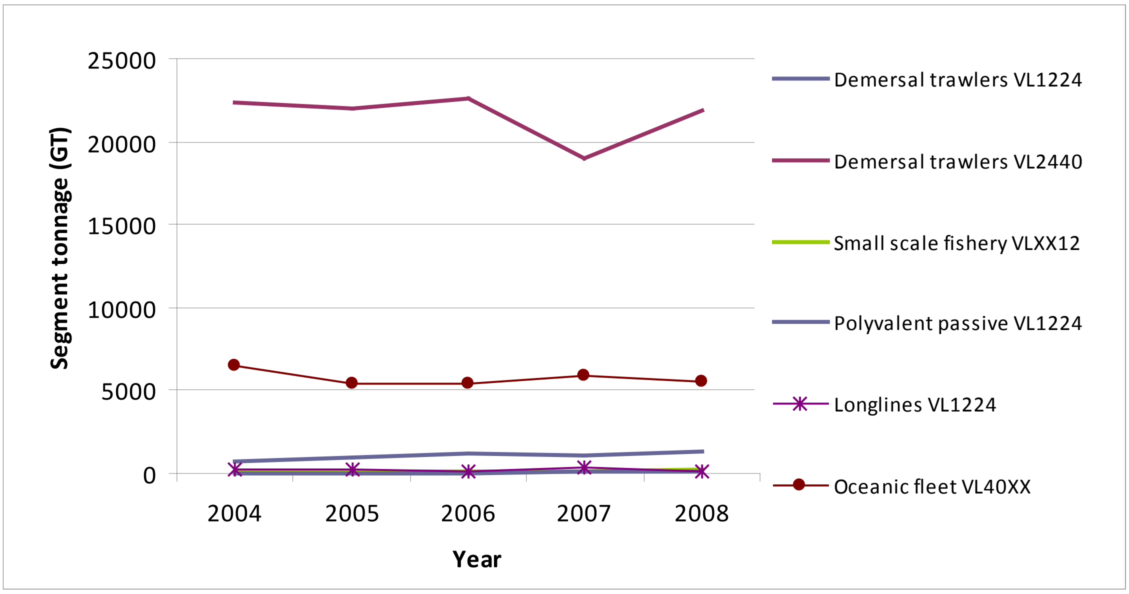
Source: Elaboration on IREPA data

Figure 10: Trend in fleet segment power of Mazara fleet (2004-2008)



Source: Elaboration on IREPA data

Figure 11: Trend in fleet segment tonnage of Mazara fleet (2004-2008)



Source: Elaboration on IREPA data

4.2 Fish stock status

Stocks in the Mediterranean Sea are defined according to the geographical divisions (Geographical Sub-Area (GSA)) FAO-GFCM[1]. Therefore, stock assessment for the main demersal and pelagic species is generally produced by GSA. The Mazara coast falls within the GSA 16 (South of Sicily). However, many stocks fished by the Mazara fleet are distributed in both GSA 16 and GSA 15 (Maltese water).

The assessment produced by STECF-SGMED and SCSA-GFCM on Mediterranean stocks have shown a status of overexploitation for some of the species landed by the Mazara fleet. In GSA 15 (Malta) and GSA 16 (where a conjoint analysis has been conducted), European hake, pink shrimp and giant red shrimp are considered overexploited. These species represent an important part of demersal landings and the effects of overfishing are highlighted also by the reduction in the production levels. Considering pink shrimp, which is the main target species of trawling in GSA 16, different fishing patterns according to the trawler sizes were reported. Trawlers of segment with an overall between 12 and 24 m mainly catch the smaller shrimp, including undersized juvenile. Conversely larger trawlers almost exclusively catch pink shrimp larger than 20 CL mm. This difference is due to the fishing behaviour of trawler segments, operating the smaller boats with poor selective gears and inside the mainly nurseries of the Sicilian southern coast.

[1] FAO, 2001, Report of the 26th session of the General Fisheries Commission for the Mediterranean, Lacco Ameno, Ischia, Italy, 10-13 September 2001.

Table 4 shows also the state of exploitation for the main pelagic stocks in GSA 16, even though the fleet of Mazara is not actually involved in pelagic fisheries. European anchovy is considered overexploited in the area on the basis of the mean exploitation rate, i.e. the ratio between catch and biomass at sea, and because the 2008 biomass is the lowest of the last ten years. According to the same approach sardine is estimated as sustainably exploited.

Table 4: Management and status of the main species in GSA 16

Species	Area	Management responsibility	State of exploitation	Main management regulations affecting the stock
Hake	GSA15-16	EU/Italian and Maltese Governments	Overexploited	Limited vessel licences, time and area closures, mesh size restrictions, minimum landing sizes, minimum distance from the coast
Pink shrimp	GSA15-16	EU/Italian and Maltese Governments	Overexploited	
Red shrimp	GSA 15-16	EU/Italian and Maltese Governments	Overexploited	
Sardine	GSA 16	EU/Italian Government	Sustainable	
Anchovy	GSA 16	EU/Italian Government	Overexploited	
Swordfish	Mediterranean	ICCAT	Overexploited	Limited vessel licences, time and area closures, mesh size restrictions, minimum landing sizes, minimum distance from the coast, gear restrictions

4.3 Fisheries infrastructure

The port of Mazara del Vallo is classified in the list of the commercial ports of regional interest, and the planning and realization of any variation in the port's infrastructures is managed by the regional administration. Mazara harbour consists of four areas: the new port, the west channel port, the east channel port and the touristic port.

The harbour is almost exclusively devoted to fishing vessels. However, the port is characterised by a number of docking sites not sufficient for the fleet. The level of water is not deep enough for the vessels with a high tonnage and levels of landings.

In the last ten years, sport and leisure fishery tourism as well as recreational fishery have increased their importance given the increasing demand. Only two areas in the port are devoted to these activities for a maximum of 166 boats.

Figure 12: Mazara del Vallo Harbour

Legend: 1) new port; 2) west channel port; 3) east channel port; 4) touristic port.

Within the fishing sector, another economic activity of importance is the processing sector. The seafood commerce is characterised by a critical situation of the local fish market, where only 10% of the local production is sold while the majority is directed to Lampedusa and, from there, to Porto Empedocle. The reason for that seems to be the lack of an operative and efficient fish market.

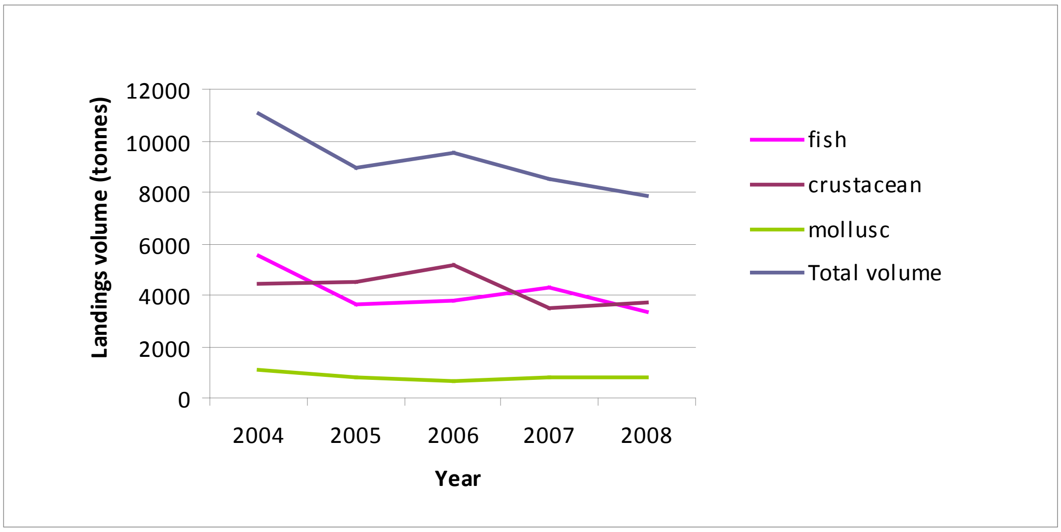
The ship building sector that thrived during the 80s is not currently served by specific infrastructures and services. Given the know how accumulated during the last 30 years in building and repairing fishing vessels, this sector could be reconverted extending the activity to the touristic and recreational fishery as well as to support the current fishing fleet.

4.4 Details of the local catching sub-sector

In 2008, almost 8,000 tons, equal to a value of 71 million Euro, were landed by the Mazara fleet. Mazara landings represent 18% and 25% of the total Sicilian production in weight and value respectively. In the last 5 years, total landings by the local fleet have shown a reduction of 29% from 11,041 tons in 2004 to 7,874 tons in 2008. The trend in landings by group of species, reported in Figure 13, shows that the strongest reductions are related to fish and molluscs. These two groups show reductions of 39% and 29% respectively over the reported period, while the reduction in crustaceans landings amounts to 15%.

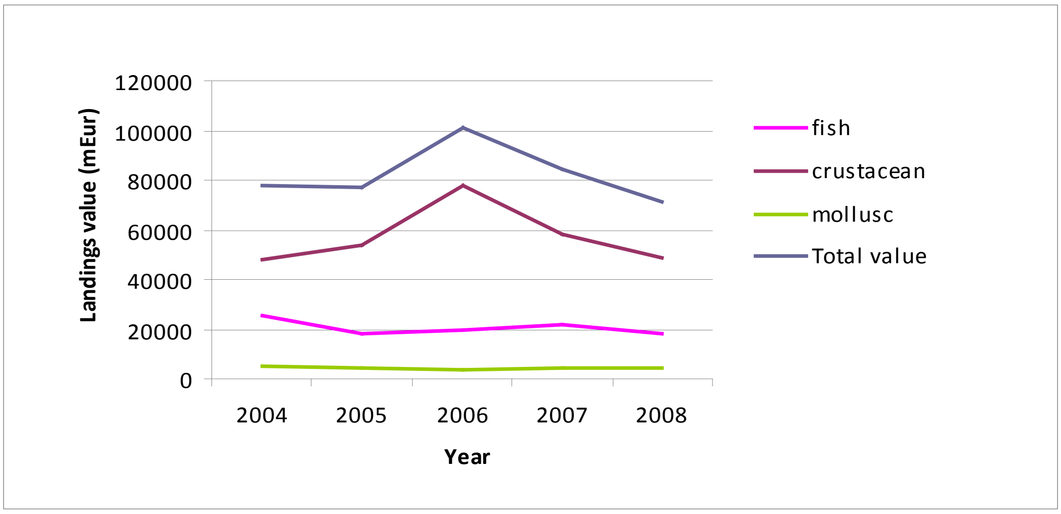
As for the production in value, Figure 14 shows a total reduction of 9% from 2004 to 2008.

Figure 13: Trends in volume of fish, crustacean and mollusc landed by the Mazara fleet (2004-2008)



Source: Elaboration on IREPA data

Figure 14: Trends in value of fish, crustacean and mollusc landed by the Mazara fleet (2004-2008)

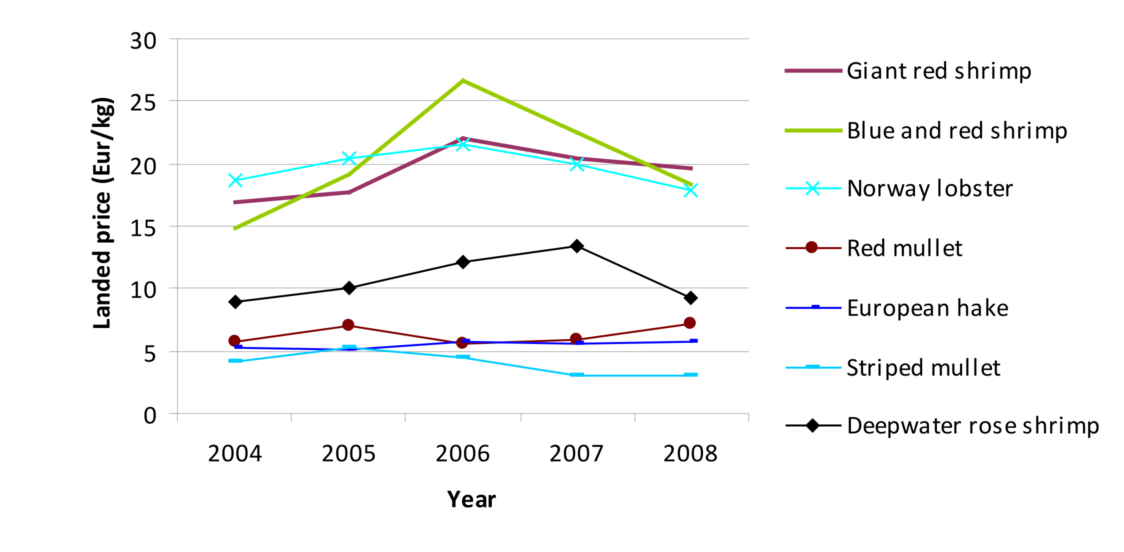


Source: Elaboration on IREPA data

The species showing the highest value are represented by giant red shrimp, blue and red shrimp and Norway lobster with a first sale price equal to 19.66 €/kg, 18.30 €/kg and 17.85 €/kg respectively (2008 data). In the last two years, all these species show a declining trend in their prices after having reached a maximum level in 2006 equal to 22.03 €/kg, 23.68 €/kg and 21.52 €/kg respectively. Giant red shrimp and Norway lobster are important not only for their price, but also because these species contribute significantly to the total income. A quarter of total landing value is due to giant red shrimp and a 10% to Norway lobster. However, the most important species in terms of contribution to the total income is represented by deepwater rose shrimp (30%). Also the price of this species shows a reduction in the last year passing from 13.47 €/kg to 9.24 €/kg.

The strong reductions in the average prices of the most important species for the Mazara fleet is due to both the increasing imports of crustaceans at lower price from other countries and the reduction in the average size of the local product as a consequence of the overexploitation of these resources. The decrease in price and levels of landings represent another important factor of crisis for the local fishing sector.

Figure 15: Trends in price of the main species landed by the Mazara fleet (2004-2008)



Source: Elaboration on IREPA data

The two main factors determining the critical situation of the Mazara fleet are then represented by the increase in fuel price and the reduction in revenues. The decline in revenues has been strongly related to the increase in fuel price, which rose from 0.55 €/litre in 2007 to 0.70 €/litre in 2008. This factor affected Mazara vessels resulting in a reduction in fishing activity, and consequently a reduction in landings and revenues. The demersal fleet of Mazara del Vallo, characterized by the presence of bigger dimension trawlers, has been critically damaged by the increase in fuel price. As a reaction to the increasing price of fuel, a significant number of these vessels have reduced their fishing activity, while others were obligated to stop the activity for long periods or, in some cases, permanently.

Furthermore, the reduced number of fishing days has been associated with a change in the fishing areas. These vessels were used to fish red shrimps and Norway lobsters in the Aegean and South-Levantin waters. As a consequence of the variations in the fuel price, Mazara trawlers have tried to reduce fuel costs abandoning their usual fishing areas and moving closer to the coast. As a result, the landings of red shrimps and Norway lobsters have registered significant reductions. The landings composition has changed increasing the fraction of deepwater rose shrimp. However, this strategy did not meet the expected results because of the reduction of 30% in the price of deepwater rose shrimp.

4.5 Details of the local processing sub- sector

Statistical data on the local processing sub- sector are not available. However, local operators have estimated in around 200 the people employed in this sub- sector. The processing sector in Mazara del Vallo is generally managed by entrepreneurs involved also in the catching sub- sector as ships owners. However, almost the totality of the processed product is not landed by the Mazara fleet.

The only processing process applied to the local production consists in the frozen on board. Furthermore, most of this product, prevalently crustaceans, is not landed in Mazara, but in other Mediterranean ports.

To increase the value added at local level, a new auction hall has been planned (see section 3.4) and should be operative by summer 2010 (as the vice Major communicated during the focus group meeting). However, given the current status of the fishing sector, this seems not to be a priority for the local operators.

4.6 Details of the local aquaculture sub- sector

The aquaculture sub- sector is not present in Mazara del Vallo.

4.7 Details of the local ancillary sub- sector

The ancillary sub- sector is present in Mazara and has seen an evolution parallel to that of the catching sub- sector. As for the processing sub- sector, statistical data are not available. However, a number of firms are active in ship building, production of gear manufactures and cold industry. Representatives of these sub- sectors have participated in the focus groups organised in the second step of this study. However, information on the economic relevance of this sector is not clear. The only available data is represented by a broadly estimation of a number between 200 and 300 for the people involved in fish commerce.

Regarding the marketing of fisheries products and distribution channels, no specific information is available.

5. Governance

5.1 Key local institutions

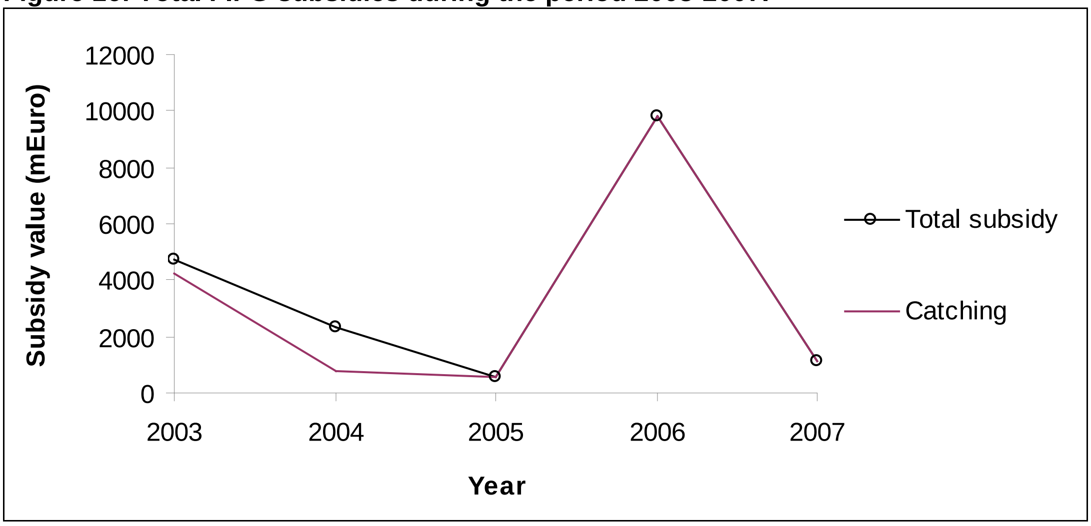
One of the main problems of the fishing sector in Mazara del Vallo is represented by the long distance from all decisional levels. This determines a limited capacity to affect the management decision process at Regional, National and European level. Furthermore, there is not a real leadership representing the fishing sector of Mazara and the stakeholders are not very well organized. Only in 2003, an industrial productive district, the COSVAP, has been created. COSVAP is an association for the valorisation of the sea-catch. This includes 22 subjects between public and private, among which the CNR (National Research Centre) of Mazara del Vallo, the City Hall of Mazara, the Trapani Province, the industries association, the UNCI (National Association of Italian Cooperatives), and the ship owners association of Mazara. More details can be found on www.distrettopesca.it. However, another district, created in 2006 by one of the four owners association, shows positions contrasting with those expressed by COSVAP. Recently, most of the vessels owners have decided to participate in a single association, trying to promote also a producer organization. The need to find an equilibrium in the system is recognised, but this is not easy to realize given the presence of different and somehow opposite interests.

5.2 Public intervention

From 2003 to 2007 a total of 18.5 million Euro was directed to the Mazara fishing sector under the FIFG programme. Almost the entire amount was allocated to the catching sector for construction, modernisation or scrapping of vessels. Only in the first two years, subsidies were used also for schemes devoted to “Exportation, Reassignment and Transfer to third country” and “Joint enterprises”.

The trend in total subsidies is shown in Figure 16. The peak registered in 2006 is due to scrapping for more than 90%. The effects of 2006 scrapping costs are reflected in the number of vessels of demersal trawlers with an overall length between 24 and 40 m, which showed a reduction of 23 units from 2006 to 2007. However, this reduction was followed by an increase of 17 vessels in 2008. This is probably due to the purchase of vessels from other Italian regions. We can also envisage the possibility that vessels scrapping subsidies have been used to buy vessels from other areas. In this sense, vessels scrapping could be used to demolish old vessels and buy more efficient ones. However, there is no specific data to confirm this.

Figure 16: Total FIFG subsidies during the period 2003-2007.



Source: Pew/Poseidon

Table 5: Public intervention in Mazara del Vallo area, 2001 to 2007

Public investment	Source of funding	Investment cost (€)	What was the investment intended to achieve?	What were the expected outcomes	What were the actual outcomes
Construction of new vessel (2003, 2005 & 2006)	EU (29-35%), Local Government (4-5%) and 67-60% private investment	10,519,163.00	increase the fleet	Increase of number of vessels and fisheries capacity	The expected outcomes achieved
Exportation/Reassignment/Transfer to third country (2003)	EU 50% & Local Government 50%	497,860.00	Increase of Exports	Increase fish exports to other countries	The expected outcomes achieved
Increase in processing capacity (2003)	EU (29-35%), Local Government (21-25%) and Private Investment (50%)	1,800,317.10	Increase processing units	Increase of the processing capacity	The outcomes achieved, the processing capacity increased
Joint enterprises (2001)	EU 50% & Local Government 50%	2,327,028.25	Establishing of new joint enterprises	Increase the joint enterprises	The outcomes achieved, the joint enterprises increase
Modernisation of vessel (2003-2007)	EU (13-35%), Local Government (2-5%) and Private Investment (85-60%)	10,563,480,96	Modernisation of the fleet	Increase fishing capacity and improve work condition of fishermen	The outcomes achieved, conditions improved
Trade Operations (setting up producer organisations, aid to assist their drive to improve quality etc.) (2003, 2005 & 2007)	EU (34-58%), Local Government (24-50%) and Private Investment (0-42%)	4,418,792.56	Strengthening producer organisations for promoting products	Establishment of new production organisations, better quality of products	The outcomes achieved, new organisation established and products quality improved but not remarkable
Promotion (campaigns, trade fairs, surveys etc.) (2003 & 2005)	EU (31-50%), Local Government (22-50%) and Private Investment (0-47%)	2,638,875.52	Promotion of fish products through studies, campaigns and other	To increase fish products demand	The outcomes achieved, the fish products demand increased
Vessel scrapping (2001-2007, excluding 2005)	EU 50% & Local Government 50%	26,885,903.61	Renewal of fleet, reduction of fleet	To renew the existing fleet and reduce the number of vessels in order to reduce the fisheries pressure	The outcomes achieved, part of the fleet was renewed

6. Stakeholder analysis

As required in the methodology adopted for this study, the data collected during the first step and the trend observed have been shown to a selected group of stakeholder belonging to the community of Mazara del Vallo.

The approach followed during the focus group was aimed to validate the trend identified on the data available, look for additional data and information, debate on the potential future development and diversification of Mazara community socio-economic structure.

The meeting of the focus group was hosted in Mazara del Vallo by IAMC-CNR on 9th April 2010. The list of stakeholders having took part in the meeting is reported in the following table.

Table 6: Stakeholders of Mazara del Vallo involved in the focus groups

Name	Organization	Tel. number	E-mail address
Quinci G. Battista	Mazara Municipality (Vice Major)	+39923671111	
Arena Nicola	Il gambero e la triglia del Canale (Producers Organization)	+393920579226	nicolaarena56@tiscali.it
Ignazio Piazza	Pesca Sicilia Occ. (Producers Organization)	+393886097651	ipiazza@libero.it
Roberto Ingargiola	Ship owners association	+390923652613	
Lino Tumbiolo	Ship owners association	+390923933355	
Emilio Sardo	Consorzio Piccola Pesca Mazara (Small Scale Fisheries)	+390923907513	sardoemilio@libero.it
Aiello Salvatore	Cooperativa Uragano (Small Scale Fisheries)	+390923906833	salvatoreaiello@inwind.it
Salvatore Asaro	Il Carpentiere (Ship Building)	+390923942864	giaminoasaro@alice.it
Nicolò Valenti	Alfa Cold s.r l.	+390923908653	alfacold@virgilio.it
Nicola Lanza	Lanza sea food s.r l.	+390923940294	lanzaseafood@libero.it
Piero Truglio	Net Fishing sas	+390923933462	netfishing.mazara@alice.it
Francesco Marrone	Business consultant	+393385082692	
Fabio Fiorentino	IAMC-CNR (Institute for the Coastal Marine Environment)	+390923948966	fabiofiorentino@iamc.cnr.it
Vita Cangitano	IAMC-CNR (Institute for the Coastal Marine Environment)	+390923948966	vitacangitano@iamc.cnr.it
Giuseppe Pernice	IAMC-CNR (Institute for the Coastal Marine Environment)	+390923948966	giuseppepernice@iamc.cnr.it
Giusto G. Battista	IAMC-CNR (Institute for the Coastal Marine Environment)	+390923948966	giustobattista@iamc.cnr.it

7. Qualitative interpretation and analysis

7.1 Key events and drivers of change

Demographic aspects

The number of people living in Mazara has shown a strong increasing trend for many years, but from 2005 Mazara population is stable. The increase trend observed is probably related to the immigration flows from other Sicilian areas and other Mediterranean countries. In particular, immigration from Tunisia has been very significant in the last 30 years. The phenomenon of immigration has been strictly related to the development of the Mazara fishing sector and the consequent employment opportunities in the sector.

In the last years the level of immigrants in Mazara has probably achieved its maximum level and started a slight decline given the reduction in the local employment opportunities. On the contrary, the phenomenon of immigration remains very consistent at national level. From a statistical prospective, the increase of immigrants in Italy is due also to the regularization of illegal immigrants conducted by the last two Italian Governments.

The Tunisian community, which has represented a stable presence in the city for more than 30 years, was increasing until 2005 and remaining stable thereafter. The constant level of inhabitants is strictly related to the local economic situation and the reduced employment opportunities which have determined an increase of migration flows towards other Italian areas (especially the Northern Italy) for younger people. This phenomenon has reinforced the trend in becoming older of the Mazara population.

Economic aspects (all sectors)

Extending the analysis to the local economy as a whole, Mazara shows a level of fisheries dependence very high if compared with the same index at regional level. The economy of Mazara is driven by the fishing sector. The crisis of the sector in Mazara is affecting also the other economic sectors, like commerce and ship building. In 2001, more than a quarter of people employed were involved in fishing and related sectors, while in Sicily this index has been estimated in less than 1% in 2005.

Current data on turnover and value added by economic sectors for Mazara del Vallo area are not available. According to data from the census 2001 (ISTAT) the fishing and related activities are the main economic sectors in Mazara, followed by commerce, manufacture and building. The growth of the city, especially in the 80s, has been strongly connected to the development of the fishing sector. In that period, the fleet has increased in number achieving the peak of its dimension in the 90s.

Also according to the data from census 2001 (ISTAT) the unemployment ratio in Mazara area is higher than Sicily and Italy and the employment index is less compared to Sicily and whole country. The strong difference in the indexes between Mazara (and Sicily) and Italy is due to the historical difference in economic development between the Northern and the Southern part of the country. However, as Mazara does not represent one of the most productive areas in the region, the indexes are also lower than those registered at Sicilian level.

Fisheries and aquaculture aspects

Catching sub-sector

From an economic prospective, the Sicilian fishing sector has been negatively affected in 2008 by the increase in fuel price. Indeed, Mazara landings represent 18% of the total Sicilian production in weight and 25% in value. Therefore, the strong reduction in the income registered in the last years for the fleet of Mazara is affecting significantly the entire fishing sector at regional level.

Mazara fishing sector depends almost exclusively on the giant red shrimp (*Aristeomorpha foliacea*) and deepwater rose shrimp (*Parapenaeus longirostris*) fisheries practised by big size trawlers in waters very far from the Sicilian coasts. The specificity of this fishery has been for a long time the strength point of the Mazara fleet, but the lack of diversification in fishing activities has recently become the weakness point. The main factors responsible for the current situation of crisis have been identified in the increasing fuel price, the high consumption of fuel due to the specific fishing activity and the lack of technological progress (especially in terms of fuel save technology), the overexploitation of demersal stocks and the declining crustaceans price due to the imports from other countries.

The status of the stocks in GSA 16 is generally overexploited. This impacts negatively on both Sicilian and Mazara fisheries profitability. However, demersal stocks seem to be in a worst condition than pelagic ones. As the fisheries in Mazara is predominantly demersal and the fleet income is strictly dependent on crustaceans, Mazara is more vulnerable to the impoverishment of marine resources than the rest of the Sicilian fleet.

Given the peculiarities of the local fishing activity, the Mazara fleet is particularly affected by restrictions due to areas closures (as the 2006 Libya decision to extend their territorial waters of additional 62 miles). Also the mesh size restriction planned by the Mediterranean Regulation 1967/2006 will likely affect more Mazara than the rest of Sicily, given the predominance of demersal fisheries.

The Mazara fishing fleet consists of 278 vessels mainly devoted to demersal fisheries. More than 90% of the fleet is composed by demersal trawlers and small scale vessels with an overall length lower than 12 metres. Demersal trawlers between 24 and 40 metres length represent almost an half of total vessels active in the area.

The production shows a total reduction of 9% from 2004 to 2008. However, the reduction is related to the last two years as landings value increases until 2006, and decrease thereafter. Indeed, in the last two years, the reduction in total revenues is estimated in 30%. The evolution of total income shows a slope very similar to that registered for crustacean. This group of species, including high value species like red shrimp and Norway lobster, represents almost 70% of total income.

More than 85% of Mazara production is landed by demersal trawlers with an overall length between 24 and 40 m. These landings amount to almost 90% of the total landed value. Demersal trawlers lower than 24 m represent the second most productive fleet segment with less than 10% of total physical production and just 6% of total landed value.

Processing sub-sector

The processing sub- sector in Mazara del Vallo is generally managed by entrepreneurs involved also in the catching sub- sector as ships owners. However, almost the totality of the processed product is not landed by the Mazara fleet. This is imported by other countries and just processing in Mazara. As a consequence, the Mazara processing sub- sector is less vulnerable to the situation of crisis of the catching sub- sector then what could be supposed. Local operators have estimated in around 200 the people employed in this sub- sector.

The only processing process applied to the local production consists in the frozen on board. Furthermore, most of this product, prevalently crustaceans, is not landed in Mazara, but in other Mediterranean ports.

Aquaculture sub-sector

The aquaculture sub- sector is not present in Mazara del Vallo.

Ancillary sub-sector

The ancillary sub- sector is present in Mazara and has seen an evolution parallel to that of the catching sub- sector. A number of firms are active in ship building, production of gear manufactures and cold industry but there are no available data. The number of people involved in fish commerce is estimated between 200 and 300.

Regarding the marketing of fisheries products and distribution channels information that came up from the focus group discussion, can be summarised as follows:

- Just 10% of the local production is sold in the local market, while the majority of the catches fished in the South of Sicily is landed in Lampedusa and, from there, transported to Porto Empedocle.
- Most of the landings of deepwater rose shrimp, which contributes to total income for a 30%, is exported to Spain.
- A significant quota of giant red shrimp catches fished in the Aegean and South-Levantin waters was used to be landed in Crete and sent to Italian markets by using container ships.

Governance aspects

The Mazara and the Sicilian fleets operate under the same national management regime. Therefore, management costs can be expected to be similar.

Mazara del Vallo has a long distance from all decisional levels. This determines a limited capacity to affect the management decision process at Regional, National and European level. Furthermore, there is not a real leadership representing the fishing sector of Mazara and the stakeholders are not very well organized.

In the area there is, since 2003, an association for the valorisation of the sea-catch, the COSVAP. Also since 2006 has been operating one more district which shows positions contrasting with those expressed by COSVAP.

7.2 Adaptation

Demographic aspects

Mazara community has been adapted to the increase of the population recorded due to the immigration flows. In the last 5 years, the percentage of immigrants on the total population of Mazara has been estimated in a stable 4.8%. Most of the immigrants are employed in the fishing sector. It seems that almost an half of the people employed in this sector is from Tunisia. However, the Tunisian community in Mazara has also opened a number of shops and commercial activities selling typical Arabic products.

Economic aspects (all sectors)

According to the Chamber of Commerce data elaborated for the MSP, the number of registered firms by economic sector in Mazara show an increasing trend from 2000 to 2005, and a stabilisation in the period 2006-2007. With the exception of fishery and related sectors, all the most important economic sectors in the area, like commerce, manufacture and building, show increasing trends in the data period. On the contrary, the number of firms involved in fishery and related sectors decrease from 2000 to 2005, and remain stable in the following two years.

Fisheries and aquaculture aspects

Catching sub-sector

A stable trend in the total number of vessels has been recorded for the period 2004 – 2008. In 2007 a temporary decrease in demersal trawlers between 24 and 40 metres length due likely to the scrapping of old and inefficient vessels by using FIFG subsidies was observed, but nowadays their number is at a level close to that of 2006.

The target species landed by this fleet segment are deepwater rose shrimp, giant red shrimp, Norway lobster, European hake, striped and red mullet. The exploitation of the fishing areas in the Aegean and South-Levantin waters is almost exclusively devoted to the giant red shrimp fishery. The decision of the vessel owners to focus their activity on this fishery was due to economic reason as red shrimp represents one of the most valuable stock and was not exploited by other fleets. Furthermore, in 2006 the decision of Libya to extend their territorial water of 62 miles has reduced the fishing areas available for the fleet of Mazara in the south of Sicily determining the need to find other fishing zones. However, the red shrimp fishery has been profitable also because the low fuel costs. In the last years, the strong increase in fuel price has reduced dramatically the profitability of a fishing activity which is practised very far from the Sicilian coasts and requires a significant consumption of fuel. At the moment, this fishery is almost completely stopped.

The increase in fuel costs has determined a reduction in fishing effort and a change in fishing areas. Even though the price of crustaceans is very high, fishing very far from the coast needs a high consumption of fuel, and then very high fuel costs. Moving to less productive fishing areas has determined a decline in catch per unit of effort (CPUE) for trawlers over 24 metres length. Then, reductions in landings can be explained as a result of the reduced fishing effort (directly linked to the increase in fuel costs) and the reduced CPUE (indirectly linked to the increase in fuel costs through the change in fishing areas).

Local actors reacted to the increasing fuel price by stopping the fishing activity and waiting for vessels scrapping subsidies under EFF. During the focus group, local operators informed that more than 70 requests have already been submitted for vessel scrapping. Some other trawlers decided to continue their fishing activity abandoning their usual fishing areas and moving closer to the coast.

No new initiative was put in place by local authorities as they have no specific competence on the fishing sector. At Italian level, specific management plans, including decommissioning plans, have been developed for each GSA in Italian waters and category of fishing activity (these cannot be specific for Mazara, but the management plan for trawlers in GSA 16 is mainly devoted to Mazara fleet). In particular, a reduction of 25% of Sicilian trawlers has been approved by the central administration and should be realized in two periods, 2008-2010 and 2011-2013.

Processing sub-sector

From the focus group meeting it was evident that there was no concerted action agreed among the stakeholders to promote the added value of the seafood landed. Mazara (and Sicily) could become famous for its deep-sea red shrimp fishery, in which they are highly specialized. Most people ignore that the red shrimps that they eat are landed in Mazara. Deep sea fishing of red shrimp from 800 metres depth with the proper marketing approach can give an added value to the promotion of this product. In addition it can be accompanied by “Sicilian recipes” and other local products (wine) that can give an added value in these products. Axis 4 can significantly contribute in this. Our perception from the focus group discussion was that the involved stakeholders were ignorant of this opportunity and they never attempted to such a marketing approach in collaboration with the Pesca tourismo initiative.

7.3 The future

In 2008 the city of Mazara del Vallo has commenced a process, promoted by the local administration, to define a strategic plan for the city. The Mazara Strategic Plan (MSP) is a programming tool aimed to define a vision of the city in the future.

The main new infrastructures planned in the PRG are: a new rail way outside the city centre, a new road to connect Mazara to Trapani and a new touristic port which will contribute to the area’s development.

In 2006 the local administration approved the guidelines for the new Port Development Plan (Piano Regolatore del Porto (PRP)) of Mazara del Vallo. The plan was mainly directed to improve the following sectors: fishery and related sectors, logistic, tourism, environmental education and education in the field of marine economic activities, artisan and commerce.

Fisheries and aquaculture aspects

Catching sub-sector

The PTOP foresees a number of projects of strategic importance for the city of Mazara, which are also included in both the PRG and the PRP. In particular, the construction of the new touristic port and the new fish market, and the improvement of the usage conditions for the fishing fleet along the river Mazaro.

The intermediate report of the MSP highlights the critical condition of the fishing sector, the main economic sector in the Mazara economy in during the last three decades. The difficulties in the sector are associated to both exogenous factors, like the impoverishment of natural resources and the increase in fuel price, and endogenous factors related to the limited attitude to technical innovation and the insufficient development of the fishery related sectors. The current version of the MSP suggests that economic sectors like fish commerce and processing, should be reinforced to compensate the reduced profitability of the catching sector. Ship building, agriculture (and viticulture, in particular) and tourism are other sectors representing opportunities of development and diversification for the local economy.

Processing sub-sector

To increase the value added at local level, a new auction hall has been planned and should be operative by summer 2010 (as the vice Major communicated during the focus group meeting). Also Axis 4 can significantly contribute to promote the added value of the seafood landed.

Governance aspects

Recently, most of the vessels owners have decided to participate in a single association, trying to promote also a producer organization. The need to find an equilibrium in the system is recognised, but this is not easy to realize given the presence of different and somehow opposite interests.

7.4 The role of public intervention in the past and in the future

Public sector support has been always important in enabling fishing-dependent communities to adapt to change. And indeed relying on public sector support appears to be a defining feature of the sector.

In the area for the period 2003-2006 over 20 million Euros were spent for the increase of number of vessels, their capacity and their modernisation. While over 26 million Euros were spent for vessel scrapping.

Also in 2003 the export sector was funded with over 490,000 Euros achieving nowadays high percentages of catch exports to other countries. The promotion of fisheries products had good results for the area and helped to the exports too.

Over 1.8 million Euros were absorbed by the processing sub-sector that further strengthened its production capacity.

In the area of Mazara del Vallo more than 4 million Euros invested for the setting up of producer’s organisations and the quality improvement but the results did not meet the initial expectations.

The establishing of new Joint enterprises in 2001 absorbed over 2 million Euros.

7.5 Conclusion

In conclusion, this report has demonstrated a number of clear trends and important factors with regards to the fisheries sector and the wider economy in Mazara. The area is strongly dependent on the fishing sector, most notably on demersal fisheries and mainly deepwater rose shrimp, giant red shrimp, Norway lobster, European hake, striped and red mullet. This dependence is the result of the historical strength of the Sicilian fishing fleet, their ability and strategic decision to exploit giant red shrimp fishery in distant areas such as the Aegean and South-Levantin waters (almost exclusively), and the favourable fuel prices in the beginning of the century. The Mazara del Vallo fishing sector itself has faced a number of significant threats in recent years, most importantly rising production costs, and restriction of the fishing grounds towards Libya after 2006. This has resulted in corresponding declines of the fishery as nowadays this fishery is almost completely stopped. The sector undergoes dramatic changes with more than 70 requests already been submitted for vessel scrapping and a reduction of 25% of Sicilian trawlers has already been approved by the central administration and should be realized until 2013.

The heavily industrial nature of the Mazara fishing fleet did not allow development of alternative activities such us fishing tourism despite the fact that there was a pioneering regulatory framework in place in Italy during the last 10 years for such activities. The community seems to be in a very difficult position and without clear plans for the future. Local actors reacted to the increasing fuel price by reducing drastically the distance of their trips and even stopping the fishing activity and waiting for vessels scrapping subsidies under EFF.

All these pressures affect significantly the future of this vibrant sector. Due to the high specialisation in demersal deep sea fishing, the future seems not to be that bright within the fisheries community. An alarm signal has already been activated in Mazara del Vallo and the solutions are neither apparent nor easy.