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Sicily case study reports
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1. National background

1.1 General description of the location at the national level

Italy is located in Southern Europe and consists of the Italian Peninsula and several islands including the two largest, Sicily and Sardinia. The country has a total area is 301,230 km². Hilly areas are more prevalent than mountain areas and plains; the average altitude of the area is about 337 m above sea level. Mountains are present in most of the territory. A large part of the southern Alpine system, for a length of about 1,000 km, belongs to Italy. The Apennine mountains are located along the entire Peninsula, from Liguria to Sicily. Including the islands, Italy has a coastline of around 7,500 km on the Adriatic, Ionian and Tyrhenian seas. Due to the great extension of the peninsula, the climate of Italy is highly diverse. In most of the northern and central interior regions, the climate ranges from humid subtropical to humid continental and oceanic. The coastal areas of Liguria, Tuscany and most of the South generally fit the Mediterranean climate stereotype. Conditions on peninsular coastal areas can be very different from the higher ground and valleys of the interior, particularly during the winter months when the higher altitudes tend to be cold, wet, and often snowy. The coastal regions have mild winters and warm and generally dry summers, although lowland valleys can be quite hot in summer. Average winter temperatures vary from 0 °C on the Alps to 12 °C in Sicily, and the average summer temperatures range from 20 °C to over 30 °C.

Italy is subdivided into 20 administrative regions. Five of these regions, including Sicily, have a special autonomous status that enables them to enact legislation on some of their local matters. The country is further divided into 110 provinces and 8,100 municipalities (comuni). Sicily, the southernmost Italian region, has a population of 5 million with Palermo as capital. The territory of the region consists almost entirely of the Sicilian island, the largest island in Italian and Mediterranean, and the remaining part is formed by the Aeolian, the Egadi, the Pelagie, Pantelleria and Ustica islands. It is the largest region of Italy and its territory is divided into nine regional provinces and 390 municipalities. It is bordered to the north by the Tyrrenian Sea, to the south by the Strait of Sicily, on the east by the Ionian Sea and north-east by the Strait of Messina, which separates it from Calabria. Sicily has a coastline of 1,130 km. The northern coast on the Tyrrenian Sea is high and rocky with frequent and large bays, such as the Gulfs of Castellammare, Palermo, Termini Imerese, Patti and Milazzo. The southern coast is generally sandy and uniform, while the Ionian coast to the east is more diverse. The climate of Sicily is Mediterranean, with warm summers and mild winters. On the coast, especially the south-west, the climate is affected by the African winds which determine very hot summers. Along the Tyrrenian coast and in inland areas, the temperature is lower, the winters are colder and rainfall higher. Especially during the summer, the sirocco wind from the Sahara desert is frequent and rainfall is scarce.
1.2 Demographics

With 60.8 inhabitants (June 2012), Italy is the fourth largest country in the European Union by population (after Germany, France and the United Kingdom), and its population density is 202 inhabitants per km², higher than the EU average. The population is concentrated mainly in the coastal areas and plains of the country.

From the beginning of twentieth century until 1980, the population increased from fewer than 35 million to more than 55 million. From 1980 to 2001 the Italian population remained essentially unchanged and began to increase again in the first decade of the third millennium, mainly due to immigration. As reported in Figure 1 the Italian population has increased by 6.4 % between 2002 and 2011, moving from 57 million to more than 61 million.

![Figure 1. Trends in Italian population over the period 2002-2011](image)

The Italian population age structure is typical of developed countries with an older population due to long life expectancy, a low death rate and a low birth rate. People over 65 years represent almost 20 % of total population in 2011, while those younger than 18 years old represent 18 %. From 2002 to 2011, the older age classes 40-65 and over 65 have increased substantially, by 15 % and 17 % respectively, more than the overall increase in population (6.4 %).
Figure 2. Trends in Italian age structure over the period 2002-2011

Almost 93% of population living in Italy is of Italian origin, while 2% is from EU countries and 5% is from non-EU countries. The most important non-Italian community is that from Romania, which accounts for almost a million of inhabitants. Other important communities are those from Albania and Morocco with almost half a million inhabitants each.

Figure 3. Origin of Italian population in 2010

Figure 4 indicates that the immigrant population has been always higher than emigrants during the period analysed. This represents the main reason for the increase in the Italian population registered in the last ten years. Both immigrants and emigrants show an increasing trend. Fluctuations in the immigration trend are due to the immigration policies and the administrative regularisations of illegal immigrants decided by the Italian Government in some specific periods.
Life expectancy has been increasing for both sexes over the last ten years and in 2010, a life expectancy of 79.1 years for men and 84.3 for women was recorded in Italy (Figure 5).

Sicily is the fourth most populated region in Italy with a population of 5 million (2011) and a population density of 200 inhabitants per km². In the first half of the twentieth century, Sicily had one of the most negative net migration rate among the regions of Italy because of the emigration of millions of people to North America, South America, Australia, and other European countries. This resulted in an increasing
trend in a population weaker than in other parts of Italy. Since 1981, Sicilian population is quite constant at around 5 million. Over the last ten years, as reported in Figure 6, Sicilian population has increased by just 1.7% moving from 4.97 to 5.05 million.

Figure 6. Trends in Sicilian population over the period 2002-2011

The Sicilian population age structure is that typical of developed countries with an older population on average due to long life expectancy, a low death rate and a low birth rate. Compared with Italy, Sicily is slightly younger. People over 65 years represented 18% of total population in 2011, while the people younger than 18 years old were around 20%. Between 2002 and 2011, the older age classes 40-65 and over 65 registered an increase of 13%, while people younger than 40 decreased by 7%.

Figure 7. Trends in Sicilian age structure over the period 2002-2011
Around 97% of population living in Sicily is of Italian origin, while 1% is from EU countries and 2% is from non-EU countries. The most important non-Italian community is that from Romania, which accounts for around 40,000 people. Other important communities are those from Tunisia, Morocco and Sri Lanka.

Figure 8. Origin of Sicilian population in 2010

Figure 9 shows that in the period analysed immigrants have been always higher than emigrants. Furthermore, immigrants show an increasing trend, even with fluctuations due to the administrative regularisations of illegal immigrants decided by the Italian Government in some specific periods. On the contrary, trend in emigrants seems to be declining at least in the second part of the period analysed.

Figure 9. Trends in migration in and out of Sicily over the period 2002-2010
In 2010, a life expectancy of 79.1 years for men and 84.3 for women has been registered in Sicily. Even though life expectancy is increasing in the last ten years for both male and female, these levels are lower than the average values calculated for Italy.

![Life expectancy trend](image)

**Figure 10. Trend in life expectancy for Sicilian men and women over the period 2001-2010**

### 1.3 Employment opportunities/sector overview

According to the International Monetary Fund, Italy was the ninth-largest economy in the world, the fifth-largest in Europe and the third-largest in the Eurozone in terms of nominal GDP in 2012. With a GDP of EUR 1.58 billion, the Italian economy, like all advanced economies, is highly oriented towards the service sector, which in 2011 accounted for almost three-quarters of the value added. Agriculture represents around 2% of GDP, while 25% is produced by industry and building sector. Italy and its economy can rely on a workforce of around 23 million people. According to 2012 data provided by ISTAT, 3.7% of the workforce is employed in agriculture, 27.8% in industry and 68.5% in services. Compared to 1995 (values of 6%, 30.9% and 63.1%, respectively), there was a decrease in the share of people employed in the primary and secondary sectors in favour of the tertiary sector, which is a trend common to all industrialised countries. The employment rate increased from 2002 to 2008 achieving the value of 58.7% and declined in subsequent years as a consequence of the economic crisis which began in 2008. The most recent value was estimated in 2012 at 56.8%. The unemployment rate, which in the past had also reached high values, decreased constantly until 2007 at 6.1%. Since 2008 unemployment has started to rise due to the economic crisis reaching 8.4% in 2010 and 2011, and 10.7% in 2012. However, the rate of unemployment, if broken down at regional level, indicates relatively low values in the North and significantly higher values in the South.
With a GDP of EUR 86,837 million in 2011, Sicily represents the eighth richest region in Italy. Agriculture represents 3.5 % of the GDP, industry and building sector account for 15 % and the tertiary sector for around 80 %. In 2012, the total number of people employed in Sicily was 1.4 million. The service sector employs around 75 % of the total workforce. Agriculture, which is particularly important in Sicily compared with the rest of Italy, accounts for 8 %, while industry and building sector represent 9 % and 7 % of the total respectively. Agriculture, with important productions of wheat for pasta, olives for the oil, the cultivation of grapes to produce wines, and the various types of fruit, including citrus fruit, represents an important sector in Sicily. About three quarters of the Sicilian territory is used for agricultural use. A relevant sub-sector is represented by tourism, which is progressively increasing thanks to Sicilian natural and historical heritage. Today Sicily is investing a large amount of money in the hospitality industry in order to make tourism more competitive, however, Sicily continues to have a GDP per capita below the Italian average and higher unemployment than the rest of Italy. In 2012, the unemployment rate in Sicily was estimated at 18.6 %, much higher than the average for Italy. The trend in unemployment is similar to that of Italy: decreasing until 2007 (13 %) and increasing thereafter.

1.4 Institutions and services
The Italian welfare state consists of the National Health Service, the education system, a system of unemployment benefits, the pension system, elder and disabled care, and other social assistance services. The National Health Service (Servizio Sanitario Nazionale – SSN) is a public and universal system aimed at guaranteed healthcare for all citizens and immigrants. The SSN is mainly dealt by regions, which control the local health agencies and set the level of user charges, however under the control of the Health Ministry. Education is free and compulsory for children between 6 and 16 years of age. It includes five years of universal primary school, three years of secondary school and finally four or five years of high school leading to a "diploma", which, in turn give access to professions. Unemployment is targeted using three main tools: (i) cash transfers based on contributions (indennità di disoccupazione) aimed to obtain up to the 40 % of the previous wages for up to seven months; (ii) the Redundancy Fund (Cassa integrazione guadagni) aimed to help the factories in financial difficulties by relieving them from the costs of unused workforce, supporting those workers that might lose part of their income (the workers receive the 80 % of their previous wages under a maximum level established by the law); (iii) mobility allowances (Indennità di mobilità) which aim to support workers for an additional period up to 12 months when the Redundancy Fund has not enabled the company to re-establish a good financial situation. Other services provided by the public sector in Italy are: the pension, which system has changed many times in the last twenty years with the last reform in 2012; maternity leave, which consists of two months before and three months after birth; family benefits related to family size and income; social services to the elderly, the invalid, and needy families; a contribution of around EUR 500 to disabled people who require continuous care.

1.5 Fisheries
The Italian fishing fleet, with more than 13,000 vessels, is one of the most important in Europe and represents an important share of the whole Mediterranean industry. Italian fleet represents about 16 % of the total EU fleet. More than 9,000 vessels are smaller than 12 metres in length, giving the fleet its
characteristics of a small scale artisanal fishery. Fishing gears are scattered all over 8,000 km of coast and production is landed in a large number of sites. The fishery is both multi-species and multi-gear. Apart from small pelagic species and some specific fishery (shrimps, swordfish, tuna, clams), each gear competes with all remaining for the catch of the 140 and more existing commercial species. The landings in volume, accounting for 210,000 tonnes, represent a relatively modest share of about 5% of total EU landings. However, the economic value of landings, equivalent to EUR 1,090 million, represent a much higher share (19%) because landings mainly consist of species with a high market value. The fishery industry represents around 0.1% of national value added. However, fishery plays an important role in areas heavily dependent on fishery and with scarce employment opportunities. The total number of employees in the Italian fishing sector is estimated at 28,700.

In Italy, Sicily is the most important NUTS II region for fish production with more than 45,000 tonnes (21% of total Italian production), which is equivalent to EUR 287 million (26% of Italian production value). The Sicilian fleet represents 23% of the total number of Italian vessels and around 30% of the total tonnage active in the Italian fishing sector. The importance of Sicily in the Italian context is registered also in terms of employment in the sector. Indeed, Sicily represents the most relevant Italian region with 7,600 people employed, which is equivalent to 26% of people employed in the Italian fishing sector.

The Sicilian fishing fleet consists of more than 3,000 vessels with a total tonnage of approximately 51,000 GT and an engine power of around 250,000 kW. In terms of units, most of the fleet is composed by small scale vessels with an overall length lower than 12 metres. Even though this fleet segment plays an important role from a social point of view employing thousands of people, demersal trawlers represent the most important Sicilian fleet segment in terms of both fishing effort and production levels. Other important fleet segments are purse seiners and longlines, which land almost all the pelagic species production.

Sicily is the Italian region with the highest levels of production in the aquaculture sector. Aquaculture in Sicily represents about 20% of the total Italian production. At the end of 2011, according to a census survey carried out by IREPA and included in the 2011 Annual Report on Fisheries and Aquaculture in Sicily (Rapporto Annuale della Pesca e dell’Acquacultura 2011) published by Regione Sicilia, 12 aquaculture plants were active in Sicily. Seven farms were involved in the fattening of euryhaline species, three of which in the province of Agrigento, two in the province of Trapani and one in the provinces of Messina and Siracusa. Two of these farms are also involved in breeding and fry production. These are among the major Italian hatcheries and are very active and also important internationally. The other five firms are in the provinces of Messina and Siracusa and produce mussels. Only one aquaculture firm is present in the province of Palermo, but this is not active.

Based on the same study carried out by IREPA, a total of 140 people were employed in the aquaculture sector (only sea bream and sea bass cages activity, which is the main type of aquaculture activity in Sicily). Even including the production of mussels, the total number of employees is not much higher. This shows a decline compared with the estimated 240 people for 2007 (Sicily case study in the CFP Impact Assessment study). This reduction can be explained by the reduction in the number of
aquaculture plants and the cessation of activity of two tuna farms in Sicily in 2009 as a consequence of the limitations to the Mediterranean bluefin tuna fishery within the management system of this species.

As for the processing sector in Sicily, data from the Chambers of Commerce for the registered companies in 2012 shows a total of 163 companies, which employ 1,660 people in the fish processing sector. Most of these companies (more than 80%) are located in the provinces of Agrigento, Palermo and Trapani. In the province of Palermo there are 50 companies, which employ around 600 people. These companies are concentrated in the areas of Bagheria (22 companies and 300 employees) and Palermo (11 companies and 160 employees).

Main species processed in Sicily are small pelagic and tuna. The raw material (which is partially processed) for small pelagic (mainly anchovies) is imported from African countries, like Morocco and Tunisia, or from Croatia. Just a small quota of the processed anchovies comes from Sicilian fleets. In this case, the raw material comes from Sciacca, where the most important Sicilian fleet for pelagic fisheries is concentrated. Tunas used for processing do not come from the Mediterranean, but from Pacific Ocean and, to a lesser extent, form Indian and Atlantic Oceans.

Even though fisheries, aquaculture and fish processing sectors in Sicily are particularly relevant compared with the other Italian regions, the level of dependency of the island on fishing and fish related sectors is very low.

1.5.1 FLAGs and LMPs in Sicily

On 29th June 2012 a provisional ranking of the proposals for the establishment of FLAGs was adopted by the Regione Siciliana. On 28th December 2012, the final list of proposed FLAGs was adopted by the Regione Siciliana. The list of proposed FLAGs with information on the location and the date of their formal approval (subsequent to the acquisition of their legal personality) by the Regione Siciliana is reported below:

- The FLAG “Golfi di Castellammare e Carini” located in Castellammare del Golfo (Trapani) at Via Leonardo Da Vinci 22 has been approved on 15th February 2013;
- The FLAG “Il sole e l’azzurro tra Selinunte, Sciacca e Vigata” located in Sciacca (Trapani) at Via Roma 13 has been approved on 15th February 2013;
- The FLAG “Dei Due Mari” located in Portopalo di Capopassero (Siracusa) at Via Lucio Tasca 33 has been approved on 24th May 2013;
- The FLAG “Golfo di Patti” located in Patti (Milazzo) at Piazza Scaffidi 1 has been approved on 26th February 2013;
- The FLAG “Golfo di Termini Imerese” located in Palermo at Via Maqueda 100 has been approved on 30th April 2013;
• The FLAG “Ibleo” located in Vittoria (Ragusa) at Via Nino Bixio 34 has been approved on 6th June 2013;

• The FLAG “Costa dei Nebrodi” with Sant’Agata di Militello (Messina) as main municipality, which decree of approval is not published on the website of the Sicilian Region;

• The FLAG “Torri e Tonnare del Litorale Trapanese” located in Trapani at Piazza Vittorio Veneto 1 has been approved on 24th May 2013;

• The FLAG “Isole di Sicilia” located in Favignana (Trapani) at Piazza Europa 2 has been approved on 26th February 2013;

• The FLAG “Unicità del Golfo di Gela” located in Gela (Caltanissetta) at Piazza San Francesco has been approved on 24th May 2013;

• The FLAG “Riviera Etnea dei Ciclopi e delle Lave” with Aci Castello (Catania) as a reference municipality, which decree of approval is not published on the website of the Sicilian Region.

Regarding the five case studies in the province of Palermo, the selected local communities are part of two FLAGs: the FLAG “Golfi di Castellammare e Carini”, which includes Isola delle Femmine (other municipalities included are Castellammare del Golfo, San Vito Lo Capo, Trapani, Favignana, Balestrate, Terrasini and Trappeto), and the FLAG “Golfo di Termini Imerese”, which includes Santa Flavia, Termini Imerese and Cefalù (other municipalities included are Trabia and Ustica).

Given the relatively recent establishment of the FLAGS in Sicily, these are not yet operative.

On 27th August 2012 a Ministerial Decree by the Ministry of Agriculture, Food and Forestry Policies (MIPAAF) was issued to define the objectives and limits of the Local Management Plans (LMPs) foreseen by the art. 9 of the Reg. (CE) 2371/2002. The decree established the following objectives for the LMPs:

• conservation of the renewal capacity of commercial stocks;

• reduction of the fishing effort to safeguard marine stocks;

• reduction of the fisheries impact on marine ecosystem within the 12 nautical miles.

To pursue these objectives, the decree established that each LMP can be in force only for the specific area defined in the LMP, the LMP cannot be in contrast with the current legislation at higher geographical level, and the management measures in the LMP should be based on the following:

• definition of technical criteria in the use of the fishing gears;

• definition of periods for carrying out the fishing activity for each fleet segment;

• establishment of nursery and stock rebuilding areas.
The proposal and monitoring of the LMPs can be carried out by specific organisations established to this end. In Sicily, these organisations are consortia, like the consortia of management for artisanal fisheries (COGEPAs) or Producer Organisations.

For the Sicilian LMPs, the MIPAAF Directorial Decree 30.08.2012 has adopted the technical measures of the following LMPs:

- LMP of the management unit Isole Eolie;
- LMP of the management unit Mazara del Vallo;
- LMP of the management unit Isole Pelagiche;
- LMP of the management unit Isola di Pantelleria;
- LMP of the management unit from Capo Cavà to Capo Milazzo;
- LMP of the management unit from Capo Passero to Siracusa;
- LMP of the management unit from Castellammare del Golfo to Marsala, including Isole Egadi;
- LMP of the management unit Augusta;
- LMP of the management unit Palermo Est – Golfo di Termini Imerese;
- LMP of the management unit Palermo Ovest and Isola di Ustica.

The last two LMPs listed above cover the coastal area of the Province of Palermo. These were proposed and are monitoring by the “COGEPAs Golfo di Termini Imerese - Palermo Est” and the “COGEPAS Castellammare del Golfo e Palermo Ovest” respectively.

The LMPs adopted in Sicily have been implemented in September 2012, after their approval through the MIPAAF Directorial Decree 30.08.2012. The monitoring system foresees quarterly reports in March, June, September and December. During the first year of the LMP, only data on fleet, fishing effort, and landings by species and fleet segment are monitored; while from the second year it is foreseen also an evaluation of the effects of the new measures by monitoring specific indicators.

Each year, based on monitoring results, COGEPAs or POs can propose variations to the original LMP. These variations are communicated to the Sicilian Region and, if accepted, transmitted to MIPAAF for their approval.

FLAGs and COGEPAs have a very different structure and objectives. FLAGs have been established in Sicily only in 2013 and represent partnerships among public and private entities. The private entities should include stakeholders from both the fisheries catching sector and other fisheries sub-sector as well as other sectors in the local economy. On the contrary, the COGEPAs (established in 2010 in the North of Sicily) are consortia of fisheries cooperatives where public entities or other economic sectors are not necessarily represented.
The main objectives of FLAG are related to the sustainable development of the local coastal economy as a whole through specific investments in maritime activities. In contrast, the action of COGEPAs is limited to the fishing sector and specifically to the management of local fleets through the definition and monitoring of local management plans (LMPs). COGEPAs are supported by local research institutes for the scientific aspects of the LMPs. Furthermore, this type of co-management is expected to be carried out in cooperation with the Coast Guard, for the enforcement of the new measures to be implemented, and with local administrations and fishermen associations, which are expected to play an intermediary role between the management level (COGEPA) and the fishermen.

1.5.2 Province of Palermo

The Province of Palermo is situated in the northern part of Sicily on the sea shore of the Tyrrhenian Sea. At the end of 2010 the population of the province was estimated at 1.2 million inhabitants, which represents around one fourth of the Sicilian population. With an extension of 4,992 km², the province of Palermo covers 19.4 % of the Sicilian territory. The economic structure of the area is characterised by the prevalence of the services sectors and, in particular, services to the local public administration. The fisheries sector represents less than 1 % in terms of employment. In particular, the catching sub-sector employs around 1,500 people, which represents 0.44 % of total employment in the area.

Along Palermo province coastlines there are a number of landings points with 12 main ports. A fleet of 731 vessels, which represents 24 % in number and 10 % in terms of GT of the total fleet operating in Sicily, is active in this area. The difference between the two percentages is due to the prevalence of artisanal vessels in the province of Palermo compared with the rest of the island. Indeed, vessels lower 12 metres account for 76 % of the total fleet. These vessels are mostly polyvalent and use passive fishing gears. Other important fleets active in the area are bottom trawlers, purse seiners and longlines. Around 30 different commercial species are caught in this area. Among the most important ones, there are both pelagic stocks, like European anchovy and Swordfish, and demersal stocks, like European hake and giant red shrimp.

Processing is another important fisheries sub-sector in the area. In the city of Palermo, in particular, there are 12 processing firms and another three firms in the town of Aspra (Bagheria). The most important maritime activity is represented by the tourism.

Among the 82 municipalities (LAU2 areas) on its territory, 21 are located on the coast of the Tyrrhenian Sea and nine of them are also fleet register offices. The most important LAU2 areas for the fisheries sector are Santa Flavia, Isola delle Femmine, Palermo, Termini Imerese and Cefalù. Santa Flavia (which includes the port of Porticello) is the most important area for the catching sector with around 260 registered vessels. A total of 120 vessels are operative in the port of Isola delle Femmine and other 120 are based in the ports of Palermo (61 vessels) and Mondello (59 vessels), which are part of the LAU2 of Palermo. Termini Imerese with 75 vessels and Cefalù with 57 registered vessels represent the last two most important areas for the fishing sector in the province of Palermo.
The most important LAU2 areas for the fisheries sector in the Province of Palermo - Santa Flavia, Isola delle Femmine, Palermo, Termini Imerese and Cefalù – have been selected as case studies in this project. In the period 2006-2011, the fleet operating in these coastal communities has shown a declining trend, moving from 669 vessels in 2006 to 610 vessels in 2011 (-8.8 %). The declining trend in the number of vessels has resulted in a reduction in terms of total vessel length and total GT, which decreased by 6.9 % and 6.6 % respectively. The smaller decrease in length and GT compared with the number of vessels resulted in an increase in average size of vessels by 2.1 % in terms of length and 2.4 % in terms of GT. Among the five local communities selected as case studies, only Termini Imerese showed a decrease in the average size of the fleet in terms of both vessel length and GT, while Palermo showed a decrease in terms of average GT and an increase in the average vessel length, and the other case studies showed increases in the average size of the local fleets in terms of both length and GT.

Trends in total and average fleet size at the local level can depend on a number of factors, which are not easily identifiable. Indeed, each year a number of vessels move from one port to another (generally along the same coast) changing the maritime district where they are registered. The balance between these movements can result in an increase (or decrease) in the number of vessels and in the average size of the local fleet, which are not necessarily linked to the economic performance of the local fishing sector.

The average fleet size at local level can be also affected by the construction of new vessels. A total number of 23 new vessels entered the fleet of these local communities in the period 2006-2011. The phenomenon of new constructions represented 0.6 % of the total fleet on average during the period analysed. In a single year, the influence of new vessels on the local fleets has been lower than 2 % for all local communities and all years. The only exception was Termini Imerese in 2011, when three new vessels (4 %) entered the fleet.

Of the new constructions, only a single vessel (in Santa Flavia) was built using public funds (European Fleet Register). Funds were provided through the FIFG programme 2000-2006, where aid equivalent to 40 % of the total cost of the new construction were provided through European and national funds. The remaining 22 new vessels were built through private investments by the vessels owners.

In Italy, every fishing vessel is required to possess a fishing licence. The licenses can be transferred to a new vessel when an old vessel, of identical or larger tonnage and power than the new one, is permanently withdrawn. Therefore, all 23 new vessels have entered the fleet because 23 old vessels with identical or higher GT and KW have been scrapped. While the new vessels are necessarily the same or lower than the old ones in terms of GT and KW, the overall length (LOA) could be higher.

Consultations with local fishermen concluded that such vessel substitution is generally due to the old age of the vessel. Sicily, with an average age of 34 years per vessel, has the oldest vessels in Italy after Sardinia (where the average age is 34.5 years). The fleet operating in the North of Sicily (where the local communities are located) is the oldest in Italy with an average age of 36.4 years per vessel. When maintenance costs become too high, building a new vessel is the only way to continue the fishing activity. Sometimes, given the traditional and family based characteristics of this activity, the decision to
substitute the old vessel for a new one is generally taken when the fishing activity passes from father to sons.

Even though the new vessel - equipped with new fishing gears, new engine and other technological improvements – is clearly more efficient than the old one, the investment is not generally driven by economic considerations aimed to increase profits. Even in a situation of economic crisis for the sector, the investment in new vessels is aimed at continuing the fishing activity because of the cultural value of fishing to families and the local community and the lack of any real alternative job opportunities.

1.5.3 Links among case studies in the Province of Palermo

The case studies are very similar in certain respects, such as the predominance of small-scale and polyvalent vessels, the family-based business structure, the low salaries and the negative economic performance of the sector. Another commonality is the low level of diversification of working activities among members of the local fishermen communities. The traditional nature of local fishing activities, passed down from father to son, and the lack of alternative employment opportunities present constraints to possibilities for diversification active into other economic sectors.

With the exception of Palermo, where people involved in fisheries activities generally also hold another job, local fishermen in the Northern Sicily work almost exclusively in the catching sector (and the sale of their product). This is particularly true for the town of Porticello (Santa Flavia), where the economy is almost exclusively dependent on fisheries.

Landings are generally sold and consumed locally as fresh fish. The landed product is usually sold by fishermen or wholesalers directly to final consumers or to local restaurants. Wholesalers buy the product in the different ports on the coast to sell it in bigger cities, mainly Palermo. Only in Porticello, which is the most important fishing port in the area, some of the landings are brought to the fish market of Palermo. In Palermo, most of the landings are sold on the road without any hygienic guarantee for final consumers. In Cefalù and Palermo (in particular, in Mondello), which are important tourist localities, some of the landings are sold directly to restaurants. This also takes place in Isola delle Femmine (and in the neighbouring town of Sferracavallo), where there are a number of restaurants which specialise in seafood cuisine.

The Palermo fish market is mainly supplied by products from large fishing fleets such as those based in Mazara, Sciacca, Porticello, and from other countries like Tunisia and Morocco. Therefore, there are no links between local production in Palermo and the local fish market. As reported above, only landings from Porticello are occasionally sold in the Palermo fish market. The other fish market in the study area, even if not comparable with that of Palermo, is in Porticello, but this is not completely operational.

The fish processing sector in Northern Sicily is concentrated in Bagheria and Palermo, although there are a few firms in Cefalù. Nevertheless, fish processing firms obtain their raw product from Tunisia, Morocco and Croatia for small pelagic species (mainly anchovies) and from the Pacific Ocean for tuna. Therefore, there it is not linked to local fish production.
Sip building is concentrated in Palermo and Porticello. The shipbuilding industry is very important in Palermo, but is focused on the design and construction of merchant ships and has no links with the local fishing sector. Similarly, the ship building companies in Porticello are almost exclusively involved in repairing non-fishery related boats. Generally, fishermen operating in Northern Sicily do minor repairs themselves or, if necessary, use the shipyards located in Porticello.

As described above, there are very few interactions among the five local communities. The main interaction, which is not mentioned above, is probably that related to the stocks exploited by these fleets. As Mediterranean stocks are defined at GSA level, vessels based in the different ports and coastal localities share the same stocks. Both demersal and small pelagic stocks are shared by all fleets based in GSA 10, which includes the Tyrrhenian coasts of Campania, Calabria and Sicily. While large pelagic stocks, like tuna and swordfish, are shared at a higher geographical level. This is reflected in the levels of local management of the catching sector, which are based on geographical levels broader than the single coastal community. In particular, the COGEPAs “Golfo di Termini Imerese - Palermo Est” and the COGEPAs “Castellammare del Golfo e Palermo Ovest”, which are in charge of the management at local level, cover the whole area of Northern Sicily.

The analysis of these case studies has shown that almost all fleets are affected by declining economic performance. The main reason for this is the reduction in landings (especially of demersal stocks). Indeed, the only fleet segments not showing such a declining performance are those predominantly involving pelagic fisheries, such as the purse seine fleet.

The reduction in landings and revenues is shown by IREPA data from 2006 to 2011 and confirmed by local fishermen. However, the reasons for this decline are not completely clear as stock-assessments have been carried out for very few stocks. Potential reasons or the declines have been identified through the analysis of case studies:

- **EU and international regulations:** Fishermen think that the reduction in landings of demersal stocks is due to EU and international regulations. The EU prohibited the capture of a certain group of pelagic species, including tunas and swordfish, (Annex VIII of Reg. CE/1239/1998) by all types of driftnets. This has affected negatively the local vessels which were involved in fishing for tuna and swordfish using driftnets in the past. Furthermore, this has forced larger vessels (those previously involved in large pelagic fisheries) to compete for the same species of smaller vessels, mainly demersal species. This has increased the fishing effort on these species and presumably reduced stock biomass.

- **Increase in fuel price:** The increase in fuel price has caused larger vessels (bottom trawlers, in particular) to attempt to reduce their operational costs by fishing closer to the coast. This has had an impact on the juveniles of demersal stocks, reducing the biomass and producing a decline in the levels of landings.

- **Illegal fishing:** as reported by local fishermen, the area of Northern Sicily is characterised by the presence of a substantial number of illegal fishermen, who are hidden under the definition of recreational fishing. These pseudo-sport fishermen, who operate throughout the year in an
intensive way, have contributed to increased fishing effort with a consequent deterioration of the status of local stocks.

- **Other factors:** other factors having affected the biomass of local stocks can be related to the level of pollution in the waters. Industrial and port activities, particularly in Termini Imerese and Palermo, might have an impact the status of marine resources, causing a decline in biomass and consequently in landings.