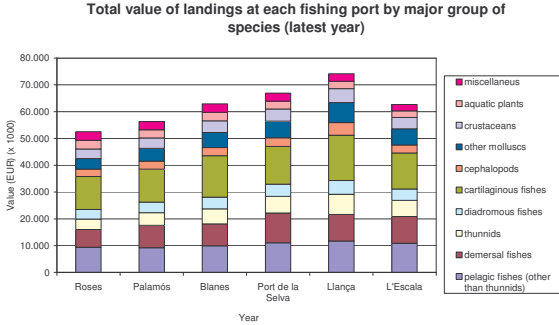
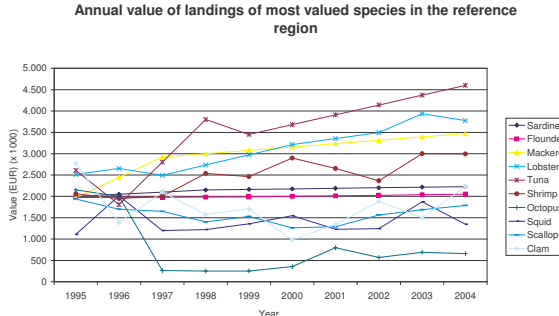
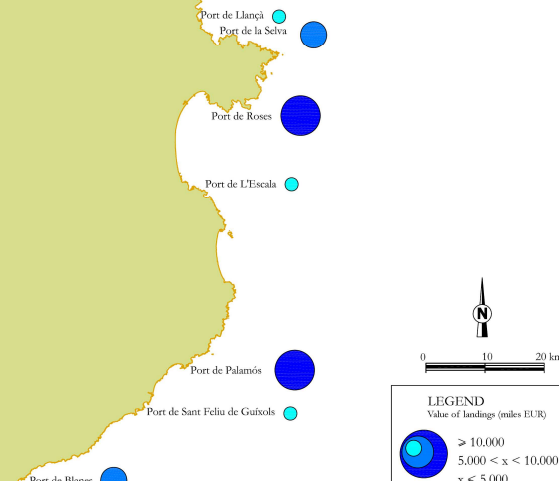


Indicator	
23	Fish stocks and fish landings
Measurement	
23.3	Value of landings by port and species
What should the measurement tell us?	
<p>Fisheries constitute a part of the economy as a source of income for local fishing and retail trade in some coastal areas. For many ports, the fishing industry is their lifeblood, therefore, it is important that the revenues from fishing allow a part of the coastal population to earn enough to live on.</p> <p>With a sustained decrease in landings, an increase in prices is to be expected for species with a high demand in the market. However, there is no advantage in an increased value of landings if this is a result of the scarcity of fish stocks caused by over-fishing. This situation may finally lead to the abandoning of a specific fishery in some coastal areas due to unsustainable cost-benefit ratios.</p> <p>Nevertheless, an increase in fish prices can originate from a lower level of captures, due not to a scarcity of fish stocks but to stricter regulations (respect for TAC, reducing the fishing effort by reducing the fleet, etc.), which, with a reduction of costs, may lead to the maintenance of the fishing profits and hence to economic viability for fishermen involved, which can be seen as a positive development.</p> <p>Hence, the same trend of values of landing can be interpreted as positive or negative depending on the cause of the variation of prices (reduction of stocks, more appreciation from consumers or captures reduction as result). The interpretation must be made together with the other measurements of this indicator.</p> <p>The measurement can be elemental to telling us whether or not fisheries policies are working (we would expect to see maintenance of the value of landings).</p> <p>At the same time, we want to make a picture of the relative importance of regional units (from individual fishing ports to NUTS 3) to work out the share that the value of fish landings per port contributes to the total value of landings in the reference region.</p>	
Parameters	
(i)	Annual value of landings by port in the reference region
(ii)	Total value of landings at each fishing port by major group of species, for the latest year
(iii)	Annual value of landings by the most commercial species in the reference region

Coverage	
Spatial	Temporal
All fishing ports in the reference region ⁽³⁾ . On any geographic scale required	Annually since at least 1995 but earlier if possible ⁽¹⁾
Data sources	
<p>The data required must describe the annual series of value of landings per port and per species.</p> <p>Different countries produce a variety of fishing statistics. Data on the value of landings per port and species must be obtained from the competent national or regional authorities and administrations responsible for fisheries. This data can also be obtained by contacting fishermen's guilds and ports individually.</p> <p>In addition to the national/regional data sources, at European level, each country reports monthly data on the quantities (tonnes) of fishery products landed in its ports. These data are available from the EUROSTAT database at national level only (not disaggregated by port or region). All countries reporting to international organisations are included in the data-base. The EU-15 and EU-25 totals include data for those countries for the period prior to their accession to the EU. The data are the value of landings (expressed in EUR) of all fishery products in the reporting country, regardless of the nationality of the vessel making the landings.</p> <p>FAO/FIDI also makes the global annual catch and landings statistics per country available to the public in a compiled annual yearbook in both hard copy and digital format (either on CD-ROM or downloadable from the FAO Fishery Department web site in the section Statistics). Although FAO data bases don't provide value of landings (in EUR), finding efficient ways to combine FAO data bases with national/regional sources of data for the computation of value of the landings estimates is one of the targets (value can be obtained from landings data by means of a simple calculation when the price per year for a species is known) ⁽²⁾</p> <p>In order to allow inter-annual comparability between value of landings, values must be inflation-corrected. For this, the series of the Harmonized Consumer Price Index (HCPI) of the reference region for the period under study must be obtained. The HCPI differs from the CPI (Consumer Price Index) in such a way that the former provides a common measurement of inflation that facilitates making comparisons between European Union (EU) countries and between these and non-EU countries. This index can be obtained from the national statistics institute of each country. For calculations at EU level, EUROSTAT also provides the European Union consumer price index (EUCPI). Before the creation of monetary union, this index was calculated from the HCPI of the fifteen European Union member states but, since the calculation of the Monetary Union Consumer Price Index (MUCPI) as a weighted average of all HCPI from the twelve Monetary union countries, the EUCPI is calculated as the weighted average of MUCPI and HCPI of countries that do not form part of the monetary union.</p>	

Methodology		
Steps		Products
1	Identify the existing fishing ports in the reference region and their geographic position	List of fishing ports and their position in the reference region
2	Obtain annual series of value of landings by port and by species ^(1,2,3)	Annual value of landings by species at each fishing port of the reference region (raw data)
3	Obtain the HCPI/EUCPI series corresponding to the period under study ⁽⁴⁾	Serial of annual HCPI/EUCPI for the period under study
4	Divide each value of landing obtained in step 2 by the HCPI or EUCPI of the corresponding year	Harmonized inflation corrected annual value of landings by port and species
<i>All the following steps are to be taken by using the inflation-corrected values of landings obtained in step 4</i>		
5	Add up the annual value of landings by port	<u>Annual value of landings by port</u> (Graph 1)
6	By means of GIS or map technology for the latest year, represent the value of landings of individual ports by circles proportional to the total value of landings in the region	<u>Value of landings of individual ports at regional/national level for the latest year of data</u> (Map 1)
7	For the latest year and for each fishing port, add up the total value of landings by major groups of species ⁽⁵⁾	<u>Total value of landings at each fishing port by major group of species</u> (Graph 2)
8	Add up the annual value landings by species from all ports of the reference region	Total annual value of landings by species in the reference region
9	Represent the annual value of landings of the ten most valued species (those for which the highest total value of landings during the period considered are obtained) in your reference region	<u>Annual value of landings of the commercially most important target species in the reference region</u> (Graph 3)
Presentation of the data		
Graph 1	Trend in the annual value of landings by port in the reference region	<p style="text-align: center;">Annual value of landings by port in the reference region</p> <p style="text-align: center;">Value (EUR) (x 1000)</p> <p style="text-align: center;">Year</p> <p style="text-align: center;"> ■ Roses ■ Palamós ■ Blanes ■ Port de la Selva, el ■ Llançà ■ Escala, l' ■ St Feliu de Guíxols </p>

<p>Graph 2</p>	<p>Total value of landings by major group of species in every port of the reference region for the latest year</p>	
<p>Graph 3</p>	<p>Trend in the total value of landings of most landed target species in the reference region</p>	
<p>Map 1</p>	<p>Relative importance of value of landings for fishing ports at the regional/national level by circles proportional to the total value of landings for the latest year of data</p>	
<p>Adding value to the data</p>		
<p>1) It would be interesting to draw a picture of the relative importance of fisheries to the global coastal economic activities. For national and local policy-making, it is essential to describe the contribution of fisheries to the economy.</p> <p>2) The data obtained/collected in this measurement is also useful for checking whether fisheries mainly focus on one species (single-species approach) or whether fisheries target more species (multi-species approach). A multi-species approach creates a more diverse market supply and may have a positive effect on fisheries economy as the industry becomes less vulnerable.</p>		

Aggregation and disaggregation

Statistics on the value of landings per port and species can be aggregated on any geographic scale required, from province to country to regional sea to all of Europe.

Value of landings by species can be based or disaggregated on several parameters or levels:

- Administrative geographical areas (e.g. provinces of a country)
- Landing places
- Fishing fleets (Vessel category)
- Commercial landing groups (species groups)
- Fishing seasons
- Fishing grounds

Notes

⁽¹⁾ Data from the pre-1995 period will help identify long term trends in overall landings as well as the relative importance of individual ports.

⁽²⁾ If data on the value of landings are not available, you should obtain the first-sale price of a landed species per year and the data on the landings by species per year (tonnes) from SIF 23.2. Then calculate the value of landings per year by means of the following simple formula:

Value (EUR) = Price (EUR/tonnes) x Landings (tonnes)

⁽³⁾ Make sure that, when you collect the data for processing this measurement you consider the following data requirements:

- ✓ Data from recreational fisheries, mariculture, aquaculture and other fish farming activities are excluded
- ✓ Landings by vessels of the reporting country in foreign ports will be excluded from national statistics
- ✓ In general, data availability limitations for the assessment should be reported on the reporting sheet

⁽⁴⁾ It is important to obtain a unique HCPI/EUCPI series for the whole period under study. This means that the HCPI/EUCPI series for the whole period is based on the same reference year. Using series based on different reference years might not ensure comparability between the period corresponding to one series and the period corresponding to another

⁽⁵⁾ Aggregating data into major groups will make development, representation and understanding of this measurement more easy. All species for which catches are reported to international organisations are included in the Eurostat database. They are identified in the data-base by the internationally assigned three letter identifier (e.g. COD = Atlantic cod, PLE = European plaice). Aggregates of species groups have been developed within the database mentioned using the International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP): <ftp://ftp.fao.org/FI/DOCUMENT/cwp/handbook/annex/AnnexS1listISSCAAPold.pdf>. When aggregating species data you can use both the standard taxonomic classification or the ISSCAAP, which classifies all aquatic species into 50 classes and these in turn are regrouped into the 9 ISSCAAP divisions (or Major groups) of the FAO.

However, we suggest further classification into the following major groups:

cartilaginous fishes	aquatic plants	crustaceans
pelagic fishes (other than thunnids)	demersal fishes	miscellaneous
diadromous fishes	thunnids	
other molluscs	cephalopods	