

# UNCTAD's sector definition, indicators and data source for oceans-based sectors for the Oceans Economy and Trade Strategies Project

**DRAFT Working document.**

*version 22 February 2019*

UNCTAD identified 12 sectors relevant to a development strategy focusing on the ocean/blue economy. These 12 sectors comprise both goods and services. The 12 sectors are classified in three categories:

- I. Goods Sectors
- II. Services Sectors
- III. Energy as a joint goods and services sector (it is not possible to differentiate)

To assess the trade potential for each these sectors, UNCTAD compiled a series of indicators. These indicators are comparable across sectors of the same unit of analysis and can share the same data sources. Indicators within the same sector may not be available at the same level of disaggregation.

The objective of this exercise is to help identify four sectors with highest trade potential, for which the consultant will produce more detailed factsheet under the UNCTAD-DOALOS Oceans Economy and Trade Strategies (OETS) Project. This identification requires a clear decision matrix. In addition to the indicators listed for each sector, some basic facts on both supply and demand trends and dynamics should be provided at the regional and world level. The list provided is illustrative and uses HS codes (2012), W120 Trade in Services Classification and the UN CPC V2.1 (2015) (only for services not fully covered by W120).

It is important to note that data on goods is more available and to a greater level of disaggregation. In the case of services, even if classifications exist, the gathering of data is usually much aggregated and sometimes does not exist. In services, more data can be found in tourism, maritime transport, and ports services.

## I. Goods Sectors

A. Marine Fisheries	Indicators
<p><b>Note 1: The sector</b> comprises the following products in the Harmonized System (HS) 2012. Note <b>that</b> only 4-digit entries) are reported. However, whenever possible the analysis should be undertaken at the 6-digit level.</p> <p>03.01 Live fish (excluding 0301.11, 0301.19)</p> <p>03.02 Fish, fresh or chilled, excluding fish fillets and other fish meat of heading 03.04</p> <p>03.03 Fish, frozen, excluding fish fillets and other fish meat of heading 03.04.</p> <p>03.04 Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen.</p> <p>03.05 Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking process; flours, meals and pellets of fish, fit for human consumption.</p> <p>03.06 Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; smoked crustaceans, whether in shell or not, whether or not cooked before or during the smoking process; crustaceans, in shell, cooked by steaming or by boiling in water, whether or not chilled, frozen, dried, salted or in brine; flours, meals and pellets of crustaceans, fit for human consumption</p> <p>03.07 Molluscs, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; smoked molluscs, whether in shell or not, whether or not cooked before or during the smoking process; flours, meals and pellets of molluscs, fit for human consumption.</p> <p>03.08 Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, salted or in brine; smoked aquatic invertebrates other than crustaceans and molluscs, whether or not cooked before or during the</p>	<p><b>Note:</b> When relevant and available, data should be collected over the last 5 year.</p> <ul style="list-style-type: none"> <li>• Growth (volume, value and unit value): sector as whole and HS6 products</li> <li>• Exports               <ul style="list-style-type: none"> <li>○ Share in total domestic and world exports: sector</li> <li>○ Share in sectoral domestic and world exports: products</li> <li>○ Revealed Comparative advantage (Balassa Index, Productivity estimate, CEPII RCA)</li> <li>○ ITC Export Potential</li> <li>○ Diversification potential path as suggested by the Atlas of economic complexity</li> <li>○ Top 10 destination countries (share in sectoral exports)</li> <li>○ Exports quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013)</a>)</li> </ul> </li> <li>• Imports               <ul style="list-style-type: none"> <li>○ Share in total domestic and world imports: sector</li> <li>○ Share in sectoral domestic and world imports: products</li> <li>○ Top 10 source countries (share in sectoral imports)</li> <li>○ Imports RCA (Balassa Index)</li> <li>○ Import quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013), IMF, and Feenstra and Romalis</a> )</li> </ul> </li> <li>• Trade balance</li> <li>• Sector Employment               <ul style="list-style-type: none"> <li>○ Number of workers</li> <li>○ Share in total employment</li> <li>○ Informal employment (number and share in sector workforce)</li> </ul> </li> </ul> <p><i><b>Note:</b> if possible information should be provided also by gender, age and level of education</i></p>

<p>smoking process; flours, meals and pellets of aquatic invertebrates other than crustaceans and molluscs, fit for human consumption.</p> <p>0511.91 Animal products; of fish or crustaceans, molluscs or other aquatic invertebrates and dead animals of chapter 3,</p> <p><b>Note 2:</b> The sector comprises the following products in the Standardized International Trade Classification (SITC), Revision 2 at 4-digits:</p> <ul style="list-style-type: none"> <li>• 341</li> <li>• 342</li> <li>• 343</li> <li>• 344</li> <li>• 366</li> <li>• 3501</li> <li>• 3502</li> <li>• 3503</li> <li>• 3504</li> </ul>	<ul style="list-style-type: none"> <li>• FDI inflows and outflows in the sector (if available by mode and motivation)</li> <li>• Number of enterprises businesses in the sector (exporting versus non-exporting)</li> <li>• Market access conditions: Tariffs and Non-Tariff Measures (unctad.org/ntm).</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">UNCTAD Stats  <a href="http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx">http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx</a></p> <p style="text-align: center;">UNCTAD countries profiles  <a href="http://unctadstat.unctad.org/CountryProfile/en-GB/index.html">http://unctadstat.unctad.org/CountryProfile/en-GB/index.html</a></p> <p style="text-align: center;">WTO trade profiles  <a href="http://stat.wto.org/Home/WSDBHome.aspx?Language=">http://stat.wto.org/Home/WSDBHome.aspx?Language=</a></p> <p style="text-align: center;">First Global marine assessment:  <a href="http://www.un.org/depts/los/global_reporting/WOA_RegProcess.htm">http://www.un.org/depts/los/global_reporting/WOA_RegProcess.htm</a></p> <p style="text-align: center;">ITC Export Potential Map  <a href="http://exportpotential.intracen.org/#/home">http://exportpotential.intracen.org/#/home</a></p>	

World Bank: World Development indicators

[https://knoema.com/WBWDIGDF2017Sep/world-development-indicators-wdi?gclid=EAlaIqobChMlr7zhrpOd1wIVBDPTCh02zQ4LEAAYAAAEgleGPD\\_BwE](https://knoema.com/WBWDIGDF2017Sep/world-development-indicators-wdi?gclid=EAlaIqobChMlr7zhrpOd1wIVBDPTCh02zQ4LEAAYAAAEgleGPD_BwE)

World Bank: WITS

<http://wits.worldbank.org>

Export Quality

<https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Export-Quality-in-Developing-Countries-40536>

Atlas of Economic Complexity

<http://atlas.cid.harvard.edu/>

National Statistics

Labor and Households Surveys

Enterprises Surveys

Customs Data on trade transactions (firm level data)

Atlas of Economic Complexity

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CEPII-Unit Values

[http://www.cepii.fr/CEPII/en/bdd\\_modele/presentation.asp?id=2](http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=2)

Non-tariff measures :

[Unctad.org/ntm](http://Unctad.org/ntm)

B. Aquaculture (Production)	Indicators
<p><b>Note1:</b> Products as defined in FAO classification</p> <p><b>Note 2:</b> The data are coded using the FAO International Standard Statistical Classification of Fishery Commodities (ISSCFC) which is derived from the United Nations Standard International Trade Classification, Revision 3 (SITC Rev. 3) and linked to the Harmonized</p>	<ul style="list-style-type: none"><li>• Contribution to GDP: sector and products (Harvested vs farmed product)</li><li>• Growth (volume and value): sector and products (Harvested vs farmed product)</li><li>• Share of certified production (both wild and aquaculture)</li><li>• Species coverage (produced and exported as reported in A)</li></ul>

Commodity Description and Coding System of the World Customs Organization (formerly the Custom Co-operation Council) and to the FAOSTAT classification	<ul style="list-style-type: none"> <li>• Number of aquaculture facilities/aquaculture output</li> <li>• Number of fishermen/fishing vessels</li> <li>• Status of key stocks within EEZs</li> <li>• Share of internal consumption vs export</li> <li>• Share of industrial vs small scale, artisanal and subsistence fishing</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">FAO  <a href="http://www.fao.org/fishery/statistics/en">http://www.fao.org/fishery/statistics/en</a></p> <p style="text-align: center;">FAO State of World fisheries and aquaculture 2016  <a href="http://www.fao.org/3/a-i5555e.pdf">http://www.fao.org/3/a-i5555e.pdf</a></p> <p style="text-align: center;">FAO Fishermen  <a href="http://www.fao.org/fishery/statistics/global-fishers/3/en">http://www.fao.org/fishery/statistics/global-fishers/3/en</a></p> <p style="text-align: center;">Standards in the blue economy  <a href="http://www.iisd.org/ssi/standards-and-the-blue-economy/">http://www.iisd.org/ssi/standards-and-the-blue-economy/</a></p>	

C. Seafood processing	Indicators
<p><b>Note 1:</b> The sector comprises the following products in the Harmonized System (HS) 2012, both at 4-digits and 6-digits.</p> <p>1603. Extracts and juices of fish or crustaceans, molluscs or other aquatic invertebrates</p> <p>16.04 Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs</p> <p>16.05 Crustaceans, molluscs and other aquatic invertebrates, prepared and preserved</p> <p>2301.20 Flours, meals and pellets, of fish or crustaceans, molluscs or other</p>	<ul style="list-style-type: none"> <li>• Growth (volume and value): sector and products</li> <li>• Exports <ul style="list-style-type: none"> <li>○ Share in total domestic and world exports: sector</li> <li>○ Share in sectoral domestic and world exports: products</li> <li>○ Revealed Comparative advantage (Balassa Index, Productivity estimate, CEPII RCA)</li> <li>○ ITC Export Potential</li> <li>○ Diversification potential path as suggested by the Atlas of economic complexity</li> <li>○ Top 10 destination countries (share in sectoral exports)</li> <li>○ Exports quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013)</a>)</li> </ul> </li> </ul>

<p>aquatic invertebrates unfit for human consumption</p> <p>2501.00 Salt (Table salt including sea salt)</p> <p><b>Note 2:</b> The sector comprises the following products in the Standardized International Trade Classification (SITC), Revision 2 at 4-digits:</p> <ul style="list-style-type: none"> <li>• 141</li> <li>• 371</li> <li>• 372</li> <li>• 8142</li> </ul>	<ul style="list-style-type: none"> <li>• Imports <ul style="list-style-type: none"> <li>○ Share in total domestic and world imports: sector</li> <li>○ Share in sectoral domestic and world imports: products</li> <li>○ Top 10 source countries (share in sectoral imports)</li> <li>○ Imports RCA (Balassa Index)</li> <li>○ Import quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013)</a>)</li> </ul> </li> <li>• Trade balance</li> <li>• Sector Employment <ul style="list-style-type: none"> <li>○ Number of workers</li> <li>○ Share in total employment</li> <li>○ Informal employment (number and share in sector workforce)</li> </ul> <p><i>Note: if possible information should be provided also by gender, age and level of education</i></p> </li> <li>• FDI inflows and outflows in the sector (if available by mode and motivation)</li> <li>• Number of enterprises businesses in the sector (exporting versus non-exporting)</li> <li>• Level of value addition</li> <li>• Market access conditions: Tariffs and Non-Tariff Measures (<a href="http://unctad.org/ntm">unctad.org/ntm</a>).</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">UNCTAD Stats  <a href="http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx">http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx</a></p> <p style="text-align: center;">UNCTAD countries profiles  <a href="http://unctadstat.unctad.org/CountryProfile/en-GB/index.html">http://unctadstat.unctad.org/CountryProfile/en-GB/index.html</a></p> <p style="text-align: center;">WTO trade profiles  <a href="http://stat.wto.org/Home/WSDBHome.aspx?Language=">http://stat.wto.org/Home/WSDBHome.aspx?Language=</a></p> <p style="text-align: center;">First Global marine assessment:  <a href="http://www.un.org/depts/los/global_reporting/WOA_RegProcess.htm">http://www.un.org/depts/los/global_reporting/WOA_RegProcess.htm</a></p> <p style="text-align: center;">ITC Export Potential Map</p>	

<http://exportpotential.intracen.org/#/home>

World Bank: World Development indicators

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Non-tariff measures :

[Unctad.org/ntm](http://Unctad.org/ntm)

D. Blue BioTrade	Indicators
<p><b>Note 1:</b> The sector comprises the following products in the Harmonized System (HS) 2012, both at 4-digits and 6-digits.</p> <p><b>Note 2:</b> sustainably harvested marine based extracts, ingredients and raw material (sponges, fish oils and fats, algae and seaweeds based products - edible and not edible) for the food, cosmetic, phytomedicine and jewel making (when part of living organisms such as pearls and corals)</p>	<ul style="list-style-type: none"><li>• Growth (volume and value): sector and products</li><li>• Exports<ul style="list-style-type: none"><li>○ Share in total domestic and world exports: sector</li><li>○ Share in sectoral domestic and world exports: products</li><li>○ Revealed Comparative advantage (Balassa Index, Productivity estimate, CEPII RCA)</li><li>○ ITC Export Potential</li><li>○ Diversification potential path as suggested by the Atlas of</li></ul></li></ul>

<p>0509 Natural sponges of animal origin</p> <p>1504 Fats and oils and their fractions of fish or marine mammals; whether or not refined, but not chemically modified</p> <p>1504.10 Fish-liver oils and their fractions</p> <p>1504.20 Fats and oils and their fractions, of fish, other than liver oils</p> <p>1212.21 Seaweeds and other algae fit for human consumption</p> <p>1212.29 Seaweeds and other algae other</p> <p>20.08 Fruit, nuts and other edible parts of plants, otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit, not elsewhere specified or included.</p> <p>2008.99 other</p> <p>Ornamental fish (live):</p> <p>0301.1100-- Freshwater</p> <p>0301.19 --Other</p> <p>711709 Natural and cultured pearls</p> <p>050800 Coral and similar materials</p>	<p>economic complexity</p> <ul style="list-style-type: none"> <li>○ Top 10 destination countries (share in sectoral exports)</li> <li>○ Exports quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013)</a>)</li> </ul> <ul style="list-style-type: none"> <li>● Imports <ul style="list-style-type: none"> <li>○ Share in total domestic and world imports: sector</li> <li>○ Share in sectoral domestic and world imports: products</li> <li>○ Top 10 source countries (share in sectoral imports)</li> <li>○ Imports RCA (Balassa Index)</li> <li>○ Exports quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013)</a>)</li> </ul> </li> <li>● Trade balance</li> <li>● Sector Employment <ul style="list-style-type: none"> <li>○ Number of workers</li> <li>○ Share in total employment</li> <li>○ Informal employment (number and share in sector workforce)</li> </ul> </li> </ul> <p><i>Note: if possible information should be provided also by gender, age and level of education</i></p> <ul style="list-style-type: none"> <li>● FDI inflows and outflows in the sector (if available by mode and motivation)</li> <li>● Number of enterprises businesses in the sector (exporting versus non-exporting)</li> <li>● Market access conditions: Tariffs and Non-Tariff Measures (unctad.org/ntm).</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">UNCTAD Stats  <a href="http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx">http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx</a></p> <p style="text-align: center;">UNCTAD countries profiles  <a href="http://unctadstat.unctad.org/CountryProfile/en-GB/index.html">http://unctadstat.unctad.org/CountryProfile/en-GB/index.html</a></p>	



WTO trade profiles

<http://stat.wto.org/Home/WSDBHome.aspx?Language=>

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World Bank WITS

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Non-tariff measures :

[Unctad.org/ntm](http://Unctad.org/ntm)

E. Ships and parts manufacture	Indicators
<b>Note 1:</b> The sector comprises the following products in the Harmonized System (HS) 2012.	<ul style="list-style-type: none"><li>• Growth (volume and value): sector and products</li><li>• Exports<ul style="list-style-type: none"><li>○ Share in total domestic and world exports: sector</li></ul></li></ul>

<p>8901 Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods</p> <p>8902 Fishing vessels, factory ships and other vessels; for processing</p> <p>8905 Light-vessels, fire-floats, dredgers, floating cranes, other vessels; the navigability of which is subsidiary to main function; floating docks, floating submersible drilling, production platforms</p> <p>8906 Vessels; other, including warships and lifeboats, other</p> <p><b>Note 2:</b> The sector also comprises the following products in the Harmonized System (HS) 2017 at 6-digits</p> <p>840610 Turbines; steam and other vapour turbines, for marine propulsion</p> <p>840721 Engines; outboard motors for marine propulsion, spark-ignition reciprocating or rotary internal combustion piston engines</p> <p>840729 Engines; for marine propulsion, (other than outboard motors), spark-ignition reciprocating or rotary internal combustion piston engines</p> <p>840810 Engines; for marine propulsion, compression-ignition internal combustion piston engines (diesel or semi-diesel engines)</p>	<ul style="list-style-type: none"> <li>○ Share in sectoral domestic and world exports: products</li> <li>○ Revealed Comparative advantage (Balassa Index, Productivity estimate, CEPII RCA)</li> <li>○ ITC Export Potential</li> <li>○ Diversification potential path as suggested by the Atlas of economic complexity</li> <li>○ Top 10 destination countries (share in sectoral exports)</li> <li>○ Exports quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013)</a>)</li> <li>● Imports <ul style="list-style-type: none"> <li>○ Share in total domestic and world imports: sector</li> <li>○ Share in sectoral domestic and world imports: products</li> <li>○ Top 10 source countries (share in sectoral imports)</li> <li>○ Imports RCA (Balassa Index)</li> <li>○ Exports quality (Unit Values, Quality estimates from <a href="#">Henn Papageorgiou, and Spatafora (2013)</a>)</li> </ul> </li> <li>● Trade balance</li> <li>● Sector Employment <ul style="list-style-type: none"> <li>○ Number of workers</li> <li>○ Share in total employment</li> <li>○ Informal employment (number and share in sector workforce)</li> </ul> </li> </ul> <p><i>Note: if possible information should be provided also by gender, age and level of education</i></p> <ul style="list-style-type: none"> <li>● FDI inflows and outflows in the sector (if available by mode and motivation)</li> <li>● Number of enterprises businesses in the sector (exporting versus non-exporting)</li> <li>● Market access conditions: Tariffs and Non-Tariff Measures (<a href="http://unctad.org/ntm">unctad.org/ntm</a>).</li> </ul>
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Non-tariff measures :

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## II. Services Sectors

F. Marine and coastal Tourism	Indicators
<b>Note 1:</b> Reference classification: WTO W120	<i>Generic</i> <ul style="list-style-type: none"><li>• Contribution to GDP: sector and products</li></ul>

<p>9. TOURISM AND TRAVEL RELATED SERVICES</p> <p>A. Hotels and restaurants (incl. catering) 641-643</p> <p>B. Travel agencies and tour operators services 7471</p> <p>C. Tourist guides services 7472</p> <p>D. Other</p>	<ul style="list-style-type: none"> <li>• Growth (volume and value): sector</li> <li>• Exports <ul style="list-style-type: none"> <li>○ Share in total domestic and world exports: sector</li> <li>○ Share in sectoral domestic and world exports: sub-sectors</li> <li>○ Top 10 destination countries (share in sectoral exports)</li> </ul> </li> <li>• Imports <ul style="list-style-type: none"> <li>○ Share in total domestic and world imports: sector</li> <li>○ Share in sector domestic and world imports: products</li> <li>○ Top 10 source countries (share in sectoral imports)</li> </ul> </li> <li>• Sector Employment <ul style="list-style-type: none"> <li>○ Number of workers</li> <li>○ Share in total employment</li> <li>○ Informal employment (number and share in sector workforce)</li> </ul> <p><i>Note: if possible information should be provided also by gender, age and level of education</i></p> </li> <li>• Firms: number of firms in the sector, size (sales and employees) distribution, share of exporting firms</li> <li>• FDI inflows and outflows in the sector</li> </ul> <p style="text-align: center;"><i>Sector Specific</i></p> <ul style="list-style-type: none"> <li>• Travel data, tourist arrivals and tourists receipts</li> <li>• Share of tourists for leisure and for coastal activities</li> <li>• Number of hotels a 50 Km from the coast</li> <li>• Coastal areas open for touristic investment (if available)</li> <li>• Disaggregated data for type of tourism (sun and sea, cruise, coastal ecotourism, sport, recreation, cultural, diving, marine mammal and bird watching and recreational boating)</li> <li>• Share of marine and coastal ecotourism vs. tourism (if available)</li> <li>• Marine protected area vs. total EEZ</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">UNCTAD-WTO ITC annual trade in services dataset</p>	

[https://www.wto.org/english/res\\_e/statis\\_e/trade\\_datasets\\_e.htm](https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm)  
 UNCTAD  
<http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>  
 UNWTO highlights (2017)  
<http://mkt.unwto.org/publication/unwto-tourism-highlights>  
 UNWTO data  
<http://www2.unwto.org/content/data>  
 World Travel and Tourism Council report 2016  
<https://www.wttc.org/-/media/files/reports/economic%20impact%20research/regions%202016/world2016.pdf>

G. Trade in fisheries services	Indicators
<p><b>Note 1:</b> Reference classification: WTO W120</p> <p>F Other business services g. Services incidental to fishing</p> <p><b>Note 2: UN CPC V2.1 2015</b></p> <p>8615. Support and operation services to fishing (and aquaculture)</p>	<p><i>Generic indicators (as above in marine and costal tourism)</i></p> <p><i>Specific sector indicators</i></p> <ul style="list-style-type: none"> <li>• Number of licensed operators</li> <li>• Internal sales</li> <li>• Variety of services provided</li> <li>• Foreign participation in the sector</li> </ul>
<p>No source of data identified at the global level</p>	

H. Maritime transport	Indicators
<p><b>Note 1:</b> Reference classification: WTO W120</p> <p><b>Note 2:</b> use indicators in UNCTAD maritime transport country profile and UNCTADstat Database</p> <p>A. <u>International Maritime Transport Services</u> a. Passenger transportation 7211 b. Freight transportation 7212</p>	<p><i>Generic indicators (as above in marine and costal tourism)</i></p> <p><i>Specific sector indicators</i></p> <ul style="list-style-type: none"> <li>• Seaborne trade volumes (levels; growth rates and country grouping shares)</li> <li>• Container port throughput</li> <li>• Carrying capacity (total and per type of ship)</li> </ul>

<p>c. Rental of vessels with crew 7213  d. Maintenance and repair of vessels 8868  e. Pushing and towing services 7214  f. Supporting services for maritime transport 745</p>	<ul style="list-style-type: none"> <li>• Sizes of the fleet (also by type of ship)</li> <li>• Liner connectivity index (bilateral and national)</li> <li>• Info on GHG emissions from transport</li> <li>• Seafaring jobs</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">UNCTAD-WTO ITC annual trade in services dataset  <a href="https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm">https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm</a></p> <p style="text-align: center;">UNCTAD Review of Maritime Transport  <a href="http://unctad.org/en/Pages/Publications/Review-of-Maritime-Transport-(Series).aspx">http://unctad.org/en/Pages/Publications/Review-of-Maritime-Transport-(Series).aspx</a></p> <p style="text-align: center;">UNCTADstat maritime database  <a href="http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx">http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx</a></p> <p style="text-align: center;">UNCTAD countries profiles:  <a href="http://unctadstat.unctad.org/CountryProfile/en-GB/index.html">http://unctadstat.unctad.org/CountryProfile/en-GB/index.html</a></p> <p style="text-align: center;">IMO Statistics:  <a href="http://www.imo.org/en/KnowledgeCentre/ShipsAndShippingFactsAndFigures/Statisticalresources/Pages/default.aspx">http://www.imo.org/en/KnowledgeCentre/ShipsAndShippingFactsAndFigures/Statisticalresources/Pages/default.aspx</a></p> <p style="text-align: center;">BIMCO-ICS Manpower Report:  <a href="https://www.bimco.org">https://www.bimco.org</a></p> <p style="text-align: center;">WB Stats: World Development indicators  <a href="https://knoema.com/WBWDIGDF2017Sep/world-development-indicators-wdi?gclid=EAlaIqobChMlr7zhrpOd1wIVBDPTCh02zQ4LEAAYAiAAEgleGPD_BwE">https://knoema.com/WBWDIGDF2017Sep/world-development-indicators-wdi?gclid=EAlaIqobChMlr7zhrpOd1wIVBDPTCh02zQ4LEAAYAiAAEgleGPD_BwE</a></p>	

I. Marine Biotechnology and bioprospecting	Indicators
<p><b>Note :</b> Reference classification: WTO W120</p> <p>C. <u>Research and Development Services</u>  a. R&amp;D services on natural sciences 851  c. Interdisciplinary R&amp;D services 853</p>	<ul style="list-style-type: none"> <li>• Position in WIPO's Global innovation index</li> <li>• Share of R&amp;D vs. GDP</li> <li>• Share of R&amp;D (public private) in marine biotechnology</li> <li>• Number of marine research projects, centres and vessels</li> <li>• Member of CBD and Nagoya and existence or ABS law</li> </ul>

<p>1. Business services  F. Other business services  e. technical testing and analysis (CPC 8676)  m. Related scientific and technical consulting services (CPC 8675)</p>	<ul style="list-style-type: none"> <li>• Number of patents on marine based inventions</li> <li>• Income for licenses</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">Innovation index  <a href="http://www.wipo.int/publications/en/details.jsp?id=4193">http://www.wipo.int/publications/en/details.jsp?id=4193</a></p> <p style="text-align: center;">Word development indicators  <a href="https://knoema.com/WBWDIGDF2017Sep/world-development-indicators-wdi?gclid=EAlaIQobChMlr7zhrpOd1wIVBDPTCh02zQ4LEAAYAAAEgLeGPD_BwE">https://knoema.com/WBWDIGDF2017Sep/world-development-indicators-wdi?gclid=EAlaIQobChMlr7zhrpOd1wIVBDPTCh02zQ4LEAAYAAAEgLeGPD_BwE</a></p> <p style="text-align: center;">UNESCO R&amp;D indicators  <a href="http://uis.unesco.org/apps/visualisations/research-and-development-spending/">http://uis.unesco.org/apps/visualisations/research-and-development-spending/</a></p> <p style="text-align: center;"><a href="http://www.wipo.int/ipstats/en/statistics/country_profile/">http://www.wipo.int/ipstats/en/statistics/country_profile/</a></p> <p style="text-align: center;">International research vessels  <a href="https://www.researchvessels.org/">https://www.researchvessels.org/</a></p> <p style="text-align: center;">International Oceanographic Commission  <a href="http://www.ioc-unesco.org/">http://www.ioc-unesco.org/</a></p>	

<p><b>J. Port and related logistical services</b></p>	<p>Indicators</p>
<p><b>Note:</b> Reference classification: WTO W120</p> <p>H. <u>Services auxiliary to all modes of transport</u></p> <p>a. Cargo-handling services 741  b. Storage and warehouse services 742  c. Freight transport agency services 748  d. Other 749</p>	<p style="text-align: center;"><i>Generic indicators (as above in marine and coastal tourism)</i></p> <ul style="list-style-type: none"> <li>• Vessel ports calls by region and type (bulk cargo, containers, dry cargo, passengers, tankers, etc.).</li> <li>• Container port throughput</li> <li>• Average port waiting time (all traffic) in days</li> <li>• Position in logistical performance index</li> <li>• Level of implementation of WTO Trade Facilitation Agreement</li> <li>• Level of intermodal connectivity (land, train and air) (if available)</li> <li>• Cargo clearance time in ports</li> </ul>

	<ul style="list-style-type: none"> <li>• Transport costs (port charges)</li> </ul>
<p>Data Sources:</p> <p style="text-align: center;">World Bank logistical performance index  <a href="https://lpi.worldbank.org/international/global">https://lpi.worldbank.org/international/global</a></p> <p style="text-align: center;">UNCTAD Review of Maritime Transport  <a href="http://unctad.org/en/Pages/Publications/Review-of-Maritime-Transport-(Series).aspx">http://unctad.org/en/Pages/Publications/Review-of-Maritime-Transport-(Series).aspx</a></p> <p style="text-align: center;">UNCTADstat maritime database  <a href="http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx">http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx</a></p> <p style="text-align: center;">National transport data observatories (but not available worldwide)</p> <p style="text-align: center;">Trade Facilitation  <a href="http://www.unescap.org/resources/escap-oecd-handbook-indicators-trade-facilitation">http://www.unescap.org/resources/escap-oecd-handbook-indicators-trade-facilitation</a></p>	

K. Coastal and marine Environmental Services (Environmental Services)	Indicators
<p><b>Note 1:</b> Reference classification: WTO W120</p> <p>6. ENVIRONMENTAL SERVICES</p> <p>A. Sewage services 9401</p> <p>B. Refuse disposal services 9402</p> <p>C. Sanitation and similar services 9403</p> <p>D. Other 9404-9409</p> <p><b>Note 2:</b> UN CPC V2.1 2015</p> <p>94 Sewage and waste collection, treatment and disposal and other environmental protection services</p> <p>941 Sewerage, sewage treatment and septic tank cleaning services</p> <p>942 Waste collection services</p>	<ul style="list-style-type: none"> <li>• Provision, export and import of coastal management, protection and restoration</li> <li>• Number of firms providing coastal and marine environmental services</li> <li>• Providers of marine biomass measurement services</li> <li>• Number of carbon sequestration and restoration project</li> <li>• Number of existing and future marine and coastal related REDD+ projects</li> <li>• Total of GHG storage in REDD + projects</li> </ul>



<p>943. Waste treatment and disposal services  944 Remediation services  945 Sanitation and similar services  949 Other environmental protection services n.e.c.</p>	
<p>Data Sources (Very aggregated data):</p> <p style="text-align: center;">UNCTADStat  <a href="https://unctadstat.unctad.org/EN/">https://unctadstat.unctad.org/EN/</a></p> <p style="text-align: center;">WTO Data portal:  <a href="http://data.wto.org/">http://data.wto.org/</a></p>	

### III. Energy as a joint goods and services sector

L. Ocean energy & renewable energy (in this case)	Indicators
<p>Note: No classification available, sources list below based on IPCC references</p> <p>List of applicable technologies and related goods</p> <p>Marine and coastal off shore wind  Wave, Tidal and Ocean Current Technologies  Submarine Geothermal Energy  Marine biomass based biofuels  Chemical Potential of Seawater</p> <p>General classification for energy related services in the WTO (W120) (only those applicable to non-fuel-based energy generation). W120 is not very good in providing a classification on energy. It is probable that data can only</p>	<ul style="list-style-type: none"> <li>• Import dependency (%) (e.g. fuels)</li> <li>• Coastal/offshore wind electricity production</li> <li>• Submarine geothermal electricity/heat production</li> <li>• Waves, tidal and current electricity production</li> <li>• Algae-based and other marine biomass biofuel production (litres)</li> <li>• Oceans-sourced electricity as a percentage of total electricity consumption</li> <li>• Incentives for investing and produce oceans-based energy enacted? (Yes/No - if yes please detail)</li> </ul>

<p>be found at the producer level, if any.</p> <ul style="list-style-type: none"><li>• Related services (transport, construction, consulting and distribution and engineering)</li><li>• Services incidental to energy distribution (CPC 887)</li></ul>	
<p>Data Sources:</p> <p>UNCTAD-WTO ITC annual trade in services dataset <a href="https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm">https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm</a></p> <p>IRENA data and country profiles: <a href="http://resourceirena.irena.org/gateway/dashboard/">http://resourceirena.irena.org/gateway/dashboard/</a> <a href="http://resourceirena.irena.org/gateway/dashboard/?topic=18&amp;subTopic=45">http://resourceirena.irena.org/gateway/dashboard/?topic=18&amp;subTopic=45</a></p> <p>IEA statistics: <a href="https://www.iea.org/statistics/">https://www.iea.org/statistics/</a></p>	