Supplementary Material

**Measuring Blue economy in the EU. Polish experience**

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Table 1. Examples of Marine industries in various countries

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| --- | --- | --- | --- | --- |
| OECD  (OECD 2016, 46-48)[[1]](#footnote-1) | Polska  (Zaucha 2009b) | UE  (Ecorys 2012b, 33-34)[[2]](#footnote-2) | China  (Park & Kildow 2014, 15) | USA  (Park & Kildow2014, 8) |
| *Established* |  |  |  |  |
| Capture fisheries | Fishery and fish processing | Fish for human consumption | Marine fishery ‒ marine fishing, | Living Resources – Marine Fishing, |
| Seafood processing | Fish for animal feeding | Marine fishery service industry and marine aquatic processing, etc.) | Living Resources –Seafood processing, Seafood markets |
| Shipping | Shipping | Deep-sea shipping | sea transportations with vessels as main vehicles, including ocean-going passenger transportation, auxiliary activities of water transportation, pipeline transportation, loading, unloading and transport | Transportation – Marine Deep sea freight transportation, Marine passenger transportation, Marine transportation services, Warehousing |
| Short-sea shipping (incl. Ro-Ro) |
| Ports | Ports | Passenger ferry services |
| Inland waterway transport |
| Shipbuilding and repair | Shipbuilding and repair | Shipbuilding (excl. leisure boats) and ship repair | Shipbuilding industry (building ocean vessels, offshore fixed and floating equipment with metals or non-metals as main materials as well as repairing and dismantling ocean vessels) | Ship & Boat Building Boat building and repair, Ship building and repair |
| Offshore oil and gas (shallow water) | Offshore oil and gas | Offshore oil and gas | Offshore Oil nad Gas (ocean exploration and production activities of mining, transportation, processing of crude oil and natural gas.) | Minerals – Offshore Oil and gas exploration, Oil and gas production |
| Marine manufacturing and construction |  | Water projects | Marine engineering building industry (architectural projects construction and its preparations in the sea, at the sea bottom and seacoast for such uses as marine production, transportation, recreation, protection, etc., including constructions of seaports, coastal power stations, coastal dykes, marine tunnels and bridges, land terminals of offshore oil and gas fields as well as building of processing facilities, and installation of submarine pipelines and equipment, but not the projects of house building and renovation) | Construction – Marine Marine-related construction |
| Marine Transport  (navigation equipment) |
| Maritime and coastal tourism | Maritime and coastal tourism | Coastal tourism | Coastal tourism (tourist business and service activities with the backing of coastal zone, sea islands as well as a variety of natural and human landscape of the ocean, mainly including marine sightseeing, living a life of leisure and recreation, going on vacation and getting accommodation, sports, etc.) | Tourism & Recreation – Coastal Amusement and recreation services, Boat dealers, Eating & drinking places, Hotels & lodging places, Marinas, Recreational vehicle parks & campgrounds, Scenic water tours, Sporting goods retailers, Zoos, Aquaria |
| Yachting and marinas |
| Cruise tourism |
| Marine business services | Services related to maritime transport |  | Marine communications and transportation (other transportation and service activities.) | Transportation –, Marine transportation services, |
| Marine R&D and education | Marine R&D and education |  |  |  |
| Dredging | Coastal protection | Coastal protection |  |  |
|  |  |  | Marine salt industry Refers to the activity of producing salt products with the sodium chloride as the main component by utilizing seawater, including salt extracting and processing. |  |
| *Emerging* |  |  |  |  |
| Marine aquaculture | Marine aquaculture | Marine aquaculture | Marine fishery ‒ marine culture, | Living Resources – Marine Fishing, Fish hatcheries and aquaculture, |
| Deep- and ultra-deep water oil and gas |  | Marine minerals mining |  |  |
| Offshore wind energy | Ocean renewable energy | Offshore wind | Marine electric power industry (activities of generating electric power in the coastal region by making use of ocean energies and ocean wind energy. It does not include the thermal and nuclear power generation in the coastal area) |  |
| Ocean renewable energy | Ocean renewable energy |
| Marine and seabed mining | Aggregates mining (sand, gravel, etc.) | Aggregates mining (sand, gravel, etc.) | Ocean mining industry Includes the activities of extracting and dressing beach placers, beach soil chloride and sand, submarine geothermal energy, and coal mining and deep-sea mining, etc. | Minerals –Limestone, sand & gravel extraction |
| Maritime safety and surveillance |  | Traceability and security of goods supply chains |  | Transportation –, Search and navigation equipment, |
| Prevent and protect against illegal movement of people and goods |
| Environmental monitoring |
| Marine biotechnology | Marine biotechnology, submariner technologies | Blue biotechnology | Marine biomedicine industry ( production processing and manufacturing activities of marine medicines and marine health care products by using organisms as raw materials or extracting useful components therefrom.) |  |
| High-tech marine products and services | Marine clusters |  |  |  |
| Others | Environmental protection | Protection of habitats | Marine chemical industry Includes the production activities of chemical products of sea salt, seawater, sea algal and marine petroleum chemical industries |  |
|  |  | Carbon capture and storage |  |  |
|  |  | Agriculture on saline soils |  |  |
|  |  | Securing fresh water supply (desalination) | Seawater utilization industry ( activities of the direct use of sea water and the seawater desalination, including those of carrying out the production of desalination and applying the seawater as water for industrial cooling, urban domestic water, water for firefighting etc., but not the activity of the multipurpose use of seawater chemical resources) |  |

Source: own elaboration drawing on OECD (2016); Ecorys (2012b); Zaucha (2009b); Park (2014a)

The OECD proposal (2016) was adopted as the leading one when composing Table 1, which divides the industries into those that are already established and emerging.

1. [↑](#footnote-ref-1)
2. Coastal tourism Cruise tourism Yachting and marinas Securing fresh water supply (desalination) Marine aquaculture Offshore wind Ocean renewable energy Aggregates mining (sand, gravel, etc.) Marine minerals mining Traceability and security of goods supply chains Prevent and protect against illegal movement of people and goods Environmental monitoring Blue biotechnology Protection of habitats Coastal protection Carbon capture and storage Agriculture on saline soils [↑](#footnote-ref-2)