



The image shows the front cover of a report titled 'THE EU BLUE ECONOMY REPORT 2022 ANNEXES'. The title is written in large, bold, blue capital letters, with '2022' in green. The background features a light blue and white wavy pattern representing water, with a faint image of a large cargo ship in the upper right corner. The overall design is clean and professional, with a color palette dominated by blues and greens.



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ANNEX 1
MEMBER STATE PROFILES

The following chapter provides an overview of the Blue Economy in the individual EU-27 Member States. It does not include the emerging sectors and focuses purely on the established ones, as this ensures a comparable analysis across all MS. A brief description specific to each MS is provided, complemented by a table illustrating the evolution of the Blue Economy for the seven established sectors in terms of employment and GVA. This year's edition of the Blue Economy Report supersedes the 2021 Blue Economy Report; in this edition, the 2019 data is final. Unfortunately, at the time of the elaboration of this report, Eurostat has only reported 2020 turnover data at an aggregated level, which is not suitable for this analysis. Additional information, detailed by sub-sector and activity for the EU and each Member State is provided in Annex 2.



Belgium's Blue Economy (established sectors) provide around 35 850 jobs and generates almost €4.5 billion in GVA in 2019.

The contribution of the established Blue Economy to the Belgium economy is at 1%, remaining stable compared to 2009 and outperformed the national economy: Blue Economy GVA increased by 49% while the national economy increased by 38% compared to 2009. In terms of jobs, the Blue Economy's share has increased from 0.7% to 0.8%. In absolute terms, Blue Economy jobs increased by 18% compared to 2009.

Port activities represent 42% of all Blue Economy jobs and 40% of the GVA. In fact, the second busiest (container) port in the EU is located in Belgium: the Port of Antwerp. Marine living resources (20%) and Coastal tourism (22%) are also important generators of employment while Maritime transport is also a key contributor to GVA (32%). Marine renewable energy is a vibrant and growing sector in Belgium.

Belgium Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	5.5	5.7	6.5	6.9	6.6	6.1	6.4	6.6	6.9	7.6	7.1
Non-living resources	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1
Ocean energy	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.2	0.3	0.9	0.5
Port activities	9.9	10.4	10.0	10.5	10.1	10.6	10.9	11.2	11.5	14.3	15.0
Shipbuilding and repair	2.9	1.9	1.8	1.8	1.7	1.6	1.5	1.4	1.3	1.4	1.4
Maritime transport	6.3	6.9	6.3	6.7	5.0	3.8	4.5	4.2	3.9	4.1	4.0
Coastal tourism	5.8	5.7	5.8	6.1	6.1	6.5	6.3	6.2	6.7	9.1	7.8
Blue economy jobs	30.5	30.7	30.6	32.1	29.7	28.9	30.0	29.9	30.7	37.4	35.8
National employment	4,389	4,451	4,470	4,479	4,485	4,497	4,499	4,541	4,587	4,699	4,771
Blue economy (% of national jobs)	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	0.8%	0.8%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	344	415	396	413	405	399	427	441	485	508	542
Non-living resources	3	10	6	4	8	6	6	8	7	7	7
Ocean energy	3	7	25	32	53	84	87	76	77	117	118
Port activities	1,531	1,565	1,429	1,605	1,621	1,561	1,886	1,566	1,962	1,780	1,807
Shipbuilding and repair	219	160	177	109	96	86	26	106	102	130	123
Maritime transport	651	757	734	1,169	905	819	1,265	1,268	1,351	1,237	1,439
Coastal tourism	249	239	254	267	279	299	294	277	320	446	428
Blue economy GVA	3,002	3,153	3,021	3,598	3,368	3,254	3,990	3,743	4,304	4,225	4,465
National GVA	309,512	324,347	336,110	345,069	350,969	360,582	373,302	384,171	398,134	409,856	426,010
Blue economy (% of national GVA)	1.0%	1.0%	0.9%	1.0%	1.0%	0.9%	1.1%	1.0%	1.1%	1.0%	1.0%

Bulgaria

The Bulgarian Blue Economy (established sectors) employs 93 330 people and generates around €1.03 billion in GVA. The contribution of the Blue Economy to the national economy in terms of jobs is 3.2 % and in GVA 1.9 %, a significant decrease compared to 2009 (9.2 % and 4.7 % respectively). This decrease is mainly due to the decrease in Coastal tourism. Overall, Blue Economy GVA decreased by 33 %, compared to 2009, underperforming compared to the +64 % of the national economy. In terms of jobs, the Blue Economy's share, at 3 % in 2019, declined 67 % compared to 2009.

Coastal tourism is by far the largest contributor to Bulgaria's Blue Economy. In 2019, the sector represented 79 % of Blue Economy jobs and 68 % of GVA. Even if already substantial, these are well below the figures reported for the period 2009 to 2011: at around 90 % for jobs and 80 % for GVA. The significant drop in 2012, largely extending over the entire period analysed, may in part be due to the terrorist attacks on Israeli tourists at Burgas airport in July 2012, and in part due to the return of the traditionally popular destinations of Turkey, Egypt and Tunisia to the tourist market after the Arab uprising (2010-2012).

Shipbuilding and repair and Marine living resources are also important generators of GVA, at 12 % and 9 % respectively, both of which have been growing in recent years.

Bulgaria Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	7.7	8.0	7.9	7.7	7.9	7.8	8.1	8.6	10.0	9.0	8.8
Non-living resources	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	7.2	5.9	5.0	4.8	4.0	5.5	5.8	4.7	4.3	3.9	3.6
Shipbuilding and repair	6.9	6.2	5.7	5.1	4.9	4.9	5.1	5.5	4.9	5.3	5.2
Maritime transport	2.1	2.1	2.0	1.9	1.5	1.8	1.7	1.8	1.8	1.8	1.7
Coastal tourism	265.5	183.9	191.6	63.9	62.5	46.9	47.8	74.1	53.3	78.1	73.9
Blue economy jobs	289.5	206.2	212.1	83.5	81.0	67.0	68.7	94.8	74.4	98.1	93.3
National employment	3,156	2,991	2,885	2,854	2,849	2,887	2,934	2,915	3,032	3,029	3,095
Blue economy (% of national jobs)	9.2%	6.9%	7.4%	2.9%	2.8%	2.3%	2.3%	3.3%	2.5%	3.2%	3.0%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	43	45	49	63	62	60	67	78	87	89	97
Non-living resources	3	6	43	48	29	22	9	12	11	14	17
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	120	109	81	72	67	86	102	68	78	78	62
Shipbuilding and repair	63	46	38	48	62	66	52	76	91	96	118
Maritime transport	37	36	39	40	39	27	30	35	36	34	38
Coastal tourism	1,258	890	997	387	416	288	335	614	442	668	696
Blue economy GVA	1,525	1,133	1,245	656	675	548	595	883	747	979	1,029
National GVA	32,478	33,060	36,071	36,383	36,059	37,239	39,434	41,869	45,183	48,634	53,247
Blue economy (% of national GVA)	4.7%	3.4%	3.5%	1.8%	1.9%	1.5%	1.5%	2.1%	1.7%	2.0%	1.9%

Bulgaria has a maritime cluster for the sustainable development of the Bulgarian maritime economy through partnerships and joint actions of all stakeholders and members¹. Members include SMEs, NGOs, educational institutions, and research and development organisations. The Marine cluster Bulgaria (MCB) acts towards the creation of favourable conditions for development and enhancement of the competitiveness of the Blue Economy by introducing new organisational, product, market and technological solutions, training, implementation of best practices, as well as for its promotion at a national and an international level. The MCB is a full member of the European Network of Maritime Clusters and the Association of Business Clusters in Bulgaria.

¹ <https://www.marinecluster.com/en/>

Czechia is a landlocked country and the Blue Economy (established sectors) is not a major contributor to its economy as a whole (around 0.2%). However, Blue Economy jobs and GVA have increased in recent years. In absolute terms, the Blue Economy's employment increased by 35 % between 2009 and 2019, and by 30 % in terms of GVA. In terms of jobs, the Blue Economy's share has increased 29 % since 2009.

Port activities is the most significant sector of the Blue Economy, contributing to 52 % of the employment and 61 % of the GVA. Living resources follows with 26 % of the jobs and 22 % of the GVA; while Shipbuilding and repair represent 17 % of the jobs and 14 % of the GVA.

Czechia has no maritime ports. Hamburg has been one of the region's most important trading partners and a significant transshipment port for Czech and Slovakian foreign trade since the 14th century. In 2019, more than 500 000 containers were transported on hinterland services between the Port of Hamburg and Czech container terminals. Of these, approx., 490 000 containers went by rail². Apart from goods for the Czech market, transit cargoes are also dispatched via Czechia onwards into Slovakia, Austria and Hungary.

Czechia Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	3.7	4.2	4.2	4.0	4.0	4.1	4.1	4.2	4.2	3.8	3.8
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	4.6	4.9	5.3	5.8	5.6	5.4	5.8	6.4	6.7	7.5	7.5
Shipbuilding and repair	1.6	2.4	1.9	1.9	1.9	2.4	2.2	2.4	2.4	2.5	2.4
Maritime transport	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.7
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy jobs	10.6	12.3	12.0	12.4	12.1	12.6	12.9	13.5	13.9	14.4	14.4
National employment	2,658	2,599	2,588	2,565	2,557	2,579	2,623	2,668	2,698	2,739	2,779
Blue economy (% of national jobs)	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	89	101	99	99	99	97	98	99	102	101	101
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	224	224	223	233	226	184	195	200	227	257	282
Shipbuilding and repair	33	69	46	52	53	59	59	54	60	68	63
Maritime transport	10	9	10	9	9	9	10	11	13	15	16
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy GVA	355	402	377	393	388	350	362	362	402	441	461
National GVA	134,449	141,715	148,041	145,076	141,198	141,582	151,603	158,535	172,041	186,728	199,689
Blue economy (% of national GVA)	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

² <https://www.hafen-hamburg.de>

Denmark

The Blue Economy's share in Denmark's national GVA was at its highest in 2011 (6.3 %) over the reporting period. It has decreased since and is currently at slightly over 5.2 %. In absolute terms, Denmark's Blue Economy GVA increased 28 % compared to 2009, mostly thanks to Maritime transport. A similar pattern emerges for employment. For the period analysed, the share of employment provided by the Blue Economy has grown by 30 % compared to 2009 (and by 35 % in absolute terms) and currently sits at around 4.4 %; meaning that over 4 % of all Danish jobs derive directly from Blue jobs.

The Blue Economy (established sectors) employs around 122 750 people and generates over €14 billion in GVA. It is dominated by Coastal tourism in terms of jobs, contributing 61 % of the total Blue Economy in 2019. In terms of GVA, Maritime transport is the largest contributor (45 %), followed by Coastal tourism (22 %) and then Marine non-living resources (16 %).

Denmark Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	8.6	8.1	8.5	8.9	8.7	8.7	8.7	8.4	8.3	8.2	7.9
Non-living resources	2.6	2.6	3.0	4.6	3.0	3.0	2.7	2.2	2.0	2.8	2.7
Ocean energy	0.2	0.4	0.5	0.5	0.6	0.8	0.9	0.7	0.8	0.7	1.0
Port activities	3.4	3.3	4.0	4.3	5.5	5.9	5.7	5.4	5.7	5.6	5.6
Shipbuilding and repair	4.5	4.3	4.3	3.4	3.3	3.6	3.6	3.2	3.3	3.3	3.5
Maritime transport	27.1	26.9	31.2	32.1	32.7	33.7	34.2	28.6	27.7	27.7	27.3
Coastal tourism	44.0	60.3	46.2	42.4	55.2	59.5	64.0	66.8	82.5	78.9	74.7
Blue economy jobs	90.6	105.9	97.7	96.1	109.0	115.4	119.9	115.3	130.4	127.2	122.7
National employment	2,658	2,599	2,588	2,565	2,557	2,579	2,623	2,668	2,698	2,739	2,779
Blue economy (% of national jobs)	3.4%	4.1%	3.8%	3.7%	4.3%	4.5%	4.6%	4.3%	4.8%	4.6%	4.4%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	645	749	712	682	698	733	834	862	844	817	805
Non-living resources	5,092	6,026	6,757	6,082	5,308	4,054	4,014	1,528	1,505	1,649	2,295
Ocean energy	38	100	117	127	204	247	280	390	471	435	585
Port activities	390	385	403	428	637	604	593	706	676	667	690
Shipbuilding and repair	293	271	279	199	199	238	256	281	300	284	304
Maritime transport	2,855	2,923	2,981	2,725	3,675	4,287	5,098	3,573	4,562	3,956	6,330
Coastal tourism	1,677	2,268	2,161	2,059	2,784	2,983	3,198	2,753	3,202	3,068	3,030
Blue economy GVA	10,989	12,722	13,410	12,302	13,504	13,147	14,273	10,094	11,561	10,876	14,039
National GVA	199,423	209,840	213,908	219,795	223,851	230,587	236,922	245,680	254,031	261,418	268,462
Blue economy (% of national GVA)	5.5%	6.1%	6.3%	5.6%	6.0%	5.7%	6.0%	4.1%	4.6%	4.2%	5.2%

Denmark is among the world's leading maritime nations and the Blue Denmark is one of Denmark's industrial strengths³. The Danish maritime industry has a solid position on the world market thanks to the high technological and specialised products and solutions. Indeed, Denmark is the world's fifth largest maritime shipping nation⁴ – surpassed only by Greece, Singapore, China and Japan. Open access to global transport markets is an important condition for the Danish merchant fleet. More than 90 per cent of the cargoes carried by the merchant fleet are carried between foreign ports⁵. Maersk Line is Denmark's and the world's largest container shipping company, with more than 600 ships. Large Danish shipping companies, such as Norden, DFDS, Clipper, J. Lauritzen and Torm, are also strong players in areas such as product tankers, bulk carriers and service vessels for the offshore industry. Since 2018 the Danish government amended the rules on ship registration, under which ship owners from third countries are no longer required to satisfy the establishment criterion by primary or secondary establishment. The bill aims to increase transparency for ship owners seeking to enter ships into the Danish Ship Register.

³ The Blue Denmark consists of ship owners, yards, equipment manufacturers, service and repair organisations, ship designers, shipping and logistics organisations, shipbrokers, ports, offshore organisations within oil & gas and offshore wind, organisations within the scrapping and recycling industries, maritime educational institutions, maritime trade associations and specialised centres – small, medium and large organisations across the country. (<https://www.marcod.dk>).

⁴ Measured by the number of merchant ships operated by country.

⁵ <https://dma.dk/>

The German Blue Economy (established sectors) provides about 527 350 jobs and generates around €32.2 billion in GVA. The national GVA has been on the rise over the whole period, increasing 42 % compared to 2009. However, the same cannot be said of Blue Economy GVA, which showed some variability throughout the same period, with its contribution to national GVA at its lowest in 2014-2016. In absolute terms, Blue Economy GVA increased by 29% compared to 2009 while its share towards the national GVA decreased by 9%. On the other hand, the Blue Economy's share of employment has remained relatively steady at around 1.1 %-1.3 %. In absolute terms, Blue jobs increased 17 % compared to 2009 values, outperforming the national employment, which increased by 9 % over the same period; indicating that Blue job's share increased by 8 %.

According to the data available, Germany's Blue Economy is dominated by Maritime transport, contributing 38% to the overall Blue Economy GVA in 2019. In fact, Germany ranked first in terms of GVA for Maritime transport, generating 36% of the EU total in 2019. Port activities (19%) and Coastal tourism (17%) are also important contributors. In terms of employment, Coastal tourism produced 36 % of all Blue jobs, followed by Maritime transport (26 %) and then Port activities (17 %).

Germany is split over two sea-basins: the North Sea and the Baltic Sea. The Port of Hamburg is Europe's third busiest port (see section 4.4). German ports are important high-tech hubs and also a service provider for the offshore wind power sector. Although data are currently unavailable, Marine renewable energy (offshore wind) is a rapidly growing sector in Germany; the largest producer in the EU⁶.

Germany Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	44.7	45.1	44.7	46.9	42.3	42.7	46.4	46.7	49.4	58.2	55.2
Non-living resources	0.3	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.3
Ocean energy	-	0.1	0.2	0.2	0.3	0.5	2.6	3.8	5.4	6.1	8.5
Port activities	74.4	74.3	58.2	63.2	67.0	99.2	104.4	112.2	123.8	92.5	89.2
Shipbuilding and repair	39.6	36.1	35.7	35.1	39.4	39.9	40.0	42.1	40.6	47.5	49.9
Maritime transport	109.4	115.7	126.1	117.6	120.6	117.7	122.3	125.3	132.6	138.2	135.4
Coastal tourism	180.5	186.9	171.4	155.8	161.0	152.9	157.6	156.2	159.4	191.3	188.8
Blue economy jobs	448.9	458.7	436.7	419.3	431.1	453.1	473.6	486.6	511.6	534.1	527.3
National employment	37,309	36,845	37,543	37,814	38,129	38,393	38,657	39,633	39,945	40,096	40,520
Blue economy (% of national jobs)	1.2%	1.2%	1.2%	1.1%	1.1%	1.2%	1.2%	1.2%	1.3%	1.3%	1.3%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	1,940	1,724	2,018	2,729	2,047	1,911	2,284	2,315	2,543	3,075	3,148
Non-living resources	58	71	71	72	58	38	32	26	30	36	36
Ocean energy	-	8	26	32	40	65	356	525	753	846	1,221
Port activities	3,940	4,201	3,663	4,441	4,148	5,346	5,446	6,589	6,824	5,570	6,268
Shipbuilding and repair	2,250	2,289	2,373	2,412	2,608	2,651	2,283	3,104	3,236	3,338	3,876
Maritime transport	12,490	12,636	12,190	11,573	12,248	9,993	10,654	9,089	11,870	11,206	12,220
Coastal tourism	4,329	4,504	4,031	3,705	3,891	3,943	4,143	4,282	4,316	5,504	5,412
Blue economy GVA	25,008	25,433	24,370	24,964	25,040	23,947	25,197	25,930	29,572	29,575	32,181
National GVA	2,192,834	2,305,684	2,418,099	2,465,800	2,527,883	2,635,393	2,725,924	2,821,803	2,922,328	3,012,310	3,106,663
Blue economy (% of national GVA)	1.1%	1.1%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	1.0%	1.0%	1.0%

⁶ According to BWO (the Association of German Offshore Wind Farm Operators represents all organisations that develop, construct and operate wind farms in Germany), the expansion of offshore wind power capacity exceeded that of onshore capacity for the first time in 2019. The industry currently creates a revenue of nearly €9 billion and directly employs 27 000 people, almost half of which work in North Rhine-Westphalia, Baden-Württemberg and Bavaria. The comprehensive value chain (development, construction, operation) creates additional jobs in many businesses.

Estonia

The Estonian Blue Economy (established sectors) employs over 40 540 people and generates over €1.1 billion in GVA. The Blue Economy's contribution to the Estonian domestic GVA stands at around 4.3%, a 33% drop compared to 2009. In absolute terms, the Blue Economy GVA increased 33% compared to 2009. However, growth of the overall national economy (in GVA) outperformed the Blue Economy, increasing 97% compared to 2009. In terms of employment, the Blue Economy share decreased 38% compared to 2009, from 10.3% to 6.4%. The Blue Economy continues to be dominated by Coastal tourism, which contributed with 69% of the jobs and 50% to overall Blue Economy GVA in 2019, while Port activities generate 22% of the GVA and 9% of the jobs.

Estonia Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	4.3	4.3	4.5	4.7	4.6	4.5	4.9	4.4	4.2	3.3	3.1
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	3.6	3.9	4.0	4.1	3.9	4.1	4.1	4.2	3.8	3.7	3.6
Shipbuilding and repair	2.3	2.4	2.5	2.6	2.6	2.6	3.0	2.8	3.2	3.4	3.4
Maritime transport	2.1	1.9	1.9	2.1	2.2	2.3	2.4	2.4	2.4	2.5	2.5
Coastal tourism	47.2	44.9	40.5	36.1	32.7	29.3	28.6	29.9	29.3	28.4	27.9
Blue economy jobs	59.6	57.5	53.4	49.5	45.9	42.8	42.9	43.7	42.9	41.3	40.5
National employment	577	555	585	598	603	605	611	612	625	627	632
Blue economy (% of national jobs)	10.3%	10.4%	9.1%	8.3%	7.6%	7.1%	7.0%	7.1%	6.9%	6.6%	6.4%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	43	44	43	47	48	46	48	47	47	48	50
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	217	269	295	307	312	313	272	255	232	225	234
Shipbuilding and repair	46	49	50	54	58	72	73	68	82	110	111
Maritime transport	62	39	39	83	80	91	122	103	116	131	132
Coastal tourism	425	440	459	444	415	384	402	444	451	496	525
Blue economy GVA	792	840	886	936	914	906	918	916	928	1,010	1,052
National GVA	12,346	13,020	14,777	15,791	16,691	17,614	18,042	18,692	20,619	22,662	24,342
Blue economy (% of national GVA)	6.4%	6.4%	6.0%	5.9%	5.5%	5.1%	5.1%	4.9%	4.5%	4.5%	4.3%

The European Commission approved under EU state rules, five schemes to support maritime transport. One of the schemes, which encourages ship registration in Europe and contributes to the global competitiveness of the sector without unduly distorting competition, is implemented in Estonia with the introduction of a tonnage tax and seafarer scheme.

There are about 10 000 active seafarers in Estonia, about half of whom sail under the flag of a foreign country and a large share of them lack social security as they work on third-country-flagged vessels which do not offer the seafarers adequate levels of social security⁷. Reducing bureaucracy and simplifying requirements in joining the Estonian Ship Register will contribute towards bringing ships back under the Estonian flag and will develop the maritime sector further. The Tonnage Tax Scheme and Seafarer Scheme is to raising the international competitiveness of the Estonian and, as a result thereof, the European shipping industry and maritime sector as a key sector of the economy in the international market.

Another important area is passenger shipping, which is directly linked to tourism. In 2019, 10.64 million passengers passed through the harbours of Port of Tallinn, and it is 20, 381 passengers more than a year earlier. Most of the passengers were serviced at Old City Harbour; the most popular shipping route was Tallinn-Helsinki (ca 80 km route) with 8.8 million passengers⁸. In fact, Tallinn makes it to the top 20 of EU ports by number of passengers (see section 4.4). Although a big part of the income of the transportation section comes from the transfer of goods and passengers, services connected with transportation are also important, especially logistics and warehouses.

⁷ https://ec.europa.eu/competition/state_aid/cases1/202017/281883_2149331_168_2.pdf

⁸ <https://www.ts.ee/en/>

According to the data, the Irish Blue Economy (established sectors) employs around 69 750 people and generates over €2.8 billion in GVA. The share of the Blue Economy in the national Irish GVA is relatively low (around 1 % over the reporting period) and has overall decreased by 21 % compared to 2009. In absolute terms, Blue Economy GVA increased by 72 % while the national GVA increased by 118 %. For employment, the share of Blue Economy jobs is still at its highest level for the period under analysis (contributing 3.1 % to all employment). In absolute terms, Blue Economy jobs increased by 78 % compared to 2009, against 13 % for the national employment.

Overall, GVA increased in all the blue sectors apart from Port activities, which decreased by 13%. Likewise, total jobs increased, however, the number of jobs decreased in Marine living resources (-15%) and Maritime transport (-6%). Coastal tourism saw a significant increase in jobs, +136% compared to 2009. Ireland's Blue Economy is dominated by Coastal tourism, which contributed 80% to jobs and 58% to GVA in 2019, followed by the Marine living resources (contributing 14% to Blue Economy jobs and 18% to the GVA).

Ireland Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	11.1	10.1	8.6	8.6	8.7	8.9	9.1	9.5	9.0	9.8	9.4
Non-living resources	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	2.6	2.5	2.5	2.5	2.4	2.4	2.5	2.6	2.7	2.8	2.7
Shipbuilding and repair	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.8
Maritime transport	1.2	1.2	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1
Coastal tourism	23.6	26.1	29.3	33.1	33.4	34.0	37.2	41.0	50.1	53.1	55.7
Blue economy jobs	39.3	40.8	42.4	45.9	46.3	47.0	50.6	55.0	63.6	67.7	69.8
National employment	1,970	1,878	1,839	1,830	1,885	1,933	1,993	2,065	2,123	2,175	2,235
Blue economy (% of national jobs)	2.0%	2.2%	2.3%	2.5%	2.5%	2.4%	2.5%	2.7%	3.0%	3.1%	3.1%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	474	493	539	564	527	586	538	643	619	611	519
Non-living resources	5	-	3	1	-	7	11	4	4	8	4
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	225	208	197	200	205	202	204	229	226	212	195
Shipbuilding and repair	49	49	52	43	51	50	49	53	52	64	61
Maritime transport	174	193	198	187	209	209	263	274	277	348	396
Coastal tourism	722	742	847	953	1,021	1,051	1,180	1,457	1,662	1,794	1,651
Blue economy GVA	1,649	1,681	1,834	1,940	2,025	2,102	2,239	2,664	2,841	3,034	2,828
National GVA	152,177	152,147	154,883	158,399	164,565	178,572	244,490	254,011	277,246	303,076	331,412
Blue economy (% of national GVA)	1.1%	1.1%	1.2%	1.2%	1.2%	1.2%	0.9%	1.0%	1.0%	1.0%	0.9%

⁹ National reporting by Ireland on its ocean economy differs due to differences in definitions and methodology (e.g. basic prices instead at factor cost). In addition, due to confidentiality with data, the figures presented differ to national reporting (e.g. Eurostat data does not include data for some sectors such as shipping and oil & gas).

Greece

The Blue Economy established sectors in Greece employ around 570 017 people and generates over €8.3 billion in GVA. Overall, Blue Economy jobs increased by 4 % and GVA decreased by 37 % compared to 2009. Nonetheless, the share of the Blue Economy to the national economy continues to be substantial: in terms of jobs, the Blue Economy contributes 15 % of all national jobs, the highest share in the EU. In terms of GVA, Greece ranks fourth with the Blue Economy contributing to 5.1 %. Greece's Blue Economy is dominated by Coastal tourism, which contributed with 85 % to Blue Economy jobs and 66 % to Blue Economy GVA in 2019. Maritime transport¹⁰ is also a large contributor, with 17 % of the GVA and 5 % of the employment, while Marine living resources generates around 6 % of jobs and GVA.

Greece Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	15.6	16.6	15.9	42.6	39.6	36.4	37.9	38.3	35.5	35.0	33.3
Non-living resources	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	6.8	6.7	6.1	5.7	6.3	14.0	15.6	15.5	14.9	14.7	14.6
Shipbuilding and repair	9.5	9.0	6.5	6.6	5.7	8.1	7.8	8.4	8.1	8.5	9.4
Maritime transport	23.6	21.1	20.9	19.2	18.1	21.9	20.7	20.3	20.1	23.4	25.7
Coastal tourism	493.3	396.4	283.7	178.9	225.9	293.7	243.0	315.8	361.5	492.5	487.0
Blue economy jobs	548.9	450.0	333.3	253.1	295.7	374.1	325.1	398.4	440.1	574.2	570.0
National employment	4,459	4,289	3,963	3,608	3,438	3,466	3,543	3,591	3,663	3,724	3,800
Blue economy (% of national jobs)	12.3%	10.5%	8.4%	7.0%	8.6%	10.8%	9.2%	11.1%	12.0%	15.4%	15.0%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	237	301	332	223	182	283	262	649	530	495	499
Non-living resources	4	5	5	5	4	4	3	6	4	2	0
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	331	342	276	257	268	539	718	767	781	746	751
Shipbuilding and repair	441	265	235	200	175	196	218	186	175	165	198
Maritime transport	1,123	788	713	784	724	1,030	1,234	1,126	1,119	1,248	1,374
Coastal tourism	11,006	8,399	5,750	3,294	3,961	3,885	3,404	3,627	4,973	5,315	5,490
Blue economy GVA	13,142	10,101	7,310	4,761	5,314	5,937	5,838	6,361	7,582	7,971	8,313
National GVA	212,391	199,644	181,909	168,979	160,237	157,913	156,613	154,044	157,526	160,789	164,096
Blue economy (% of national GVA)	6.2%	5.1%	4.0%	2.8%	3.3%	3.8%	3.7%	4.1%	4.8%	5.0%	5.1%

According to the Union of Greek ship owners¹¹, 2016–2017 saw the first signs of improved market conditions for global shipping after a long and deep recession. However, the pace of global economic activity remained weak throughout 2019, with declining momentum in manufacturing activity and rising trade and geopolitical tensions, especially between the United States of America (U.S.) and China, and the COVID-19 outbreak has sharply reduced the demand. Greece remains the world's largest ship-owning nation¹². The Greek fleet represents around 20.7 % of global tonnage and 54 % of the total EU-controlled tonnage. The Greek-flagged merchant fleet ranks eighth internationally and second in the EU (in terms of dwt) after Malta. In 2019, Greek ship owners control 32.6 % of the world tankers' fleet, 15.2 % of the world chemical and products tankers, 16.3 % of the global LNG / LPG fleet, 21.7 % of the world bulk carriers and 8.9 % of the world container vessels¹³. In 2020, the Greek-owned fleet grew by over 4 % to approximately 364 million dwt. Greece represent the backbone of EU shipping, continuing to increase its share of the European Union (EU)-controlled fleet. The Greek-owned fleet represents 58 % of the EU-controlled fleet. More than a third of the Greek-owned fleet or 1,706 vessels, fly an EU Member State flag¹⁴. As such, Greek shipping plays an indispensable role in world seaborne trade including the EU's export – import trade and in particular in securing the EU's energy needs through the provision of reliable, efficient, green and safe sea transportation. The contribution of Greek shipping to the country is multifaceted and not limited to the receipts in the Services Balance of Payments from maritime transport services. It ranges from indirect economic investments, to employment opportunities and to raising the profile of the country internationally by being a strategic trade.

¹⁰ According to a study (Deloitte) for the year 2019, the maritime transport sector alone generated €12.9 billion in GDP, contributing 6.6 % to the Hellenic GDP.

¹¹ <https://www.ugs.gr/en>

¹² IHS Global Limited, January 2020.

¹³ <https://www.ugs.gr/en/greek-shipping-and-economy/greek-shipping-and-economy-2020/>

¹⁴ <https://www.ugs.gr/en/greek-shipping-and-economy/greek-shipping-and-economy-2021/>

The Spanish established Blue Economy sectors employ around 905 650 people and generates almost €32.8 billion in GVA. The Blue Economy has had a positive impact on the Spanish economy and employment rates.

In Spain, the share of Blue Economy GVA to the national economy increased by 8% compared to 2009, reaching its highest point in 2018 (3%, and 2.9% in 2019) and growing at a faster pace than the overall national GVA (+21% compared to 2009 versus +12%). On employment, the contrary pattern emerges. The share of Blue Economy jobs to national employment decreased by 1% compared to 2009. Although national employment increased by 3% compared to 2009, Blue Economy jobs grew 2% and were at higher levels by 2019 than in 2009.

The Spanish Blue Economy is dominated by Coastal tourism, which contributed 78% to Blue Economy jobs and 72% to GVA in 2019. The Marine living resources sector is also an important contributor, with 13% of the Blue Economy jobs and 11% of the GVA. Port activities also contribute with 11% to Blue Economy GVA.

In fact, in the EU, Spain ranks first in terms of GVA for Coastal tourism and Marine living resources, generating 29% and 19% of the EU total, respectively.

Spain Evolution of the Blue Economy established sectors											
Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	134.9	134.4	126.8	119.5	115.3	114.6	114.0	113.8	116.5	115.9	119.3
Non-living resources	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	51.8	45.5	43.2	40.2	38.0	37.5	38.9	37.3	39.7	41.7	41.6
Shipbuilding and repair	28.5	25.6	24.3	23.6	21.0	21.5	22.7	23.8	24.9	26.5	25.5
Maritime transport	13.0	12.7	12.4	12.2	12.0	11.8	12.1	12.7	13.2	14.4	14.2
Coastal tourism	660.3	602.4	575.9	528.9	555.4	523.4	539.6	597.1	629.9	729.7	704.9
Blue economy jobs	888.6	820.7	782.7	724.5	741.9	708.9	727.4	784.8	824.3	928.4	905.7
National employment	18,957	18,574	18,271	17,477	17,002	17,211	17,717	18,183	18,649	19,136	19,568
Blue economy (% of national jobs)	4.7%	4.4%	4.3%	4.1%	4.4%	4.1%	4.1%	4.3%	4.4%	4.9%	4.6%
GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	3,088	3,125	3,207	2,930	3,063	3,332	3,239	3,501	3,678	3,650	3,687
Non-living resources	10	13	13	18	40	27	14	14	14	10	10
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	3,596	3,428	3,346	3,236	3,015	2,990	3,116	3,060	3,278	3,518	3,531
Shipbuilding and repair	1,253	1,468	1,182	1,159	862	1,135	945	884	830	1,043	1,050
Maritime transport	783	826	728	744	727	757	872	949	978	930	862
Coastal tourism	18,370	16,971	16,510	14,855	16,065	15,506	17,037	18,537	20,263	23,940	23,631
Blue economy GVA	27,100	25,832	24,986	22,941	23,772	23,745	25,224	26,944	29,040	33,092	32,770
National GVA	1,002,045	985,479	980,239	948,339	932,448	939,949	978,469	1,010,688	1,053,191	1,087,968	1,125,144
Blue economy (% of national GVA)	2.7%	2.6%	2.5%	2.4%	2.5%	2.5%	2.6%	2.7%	2.8%	3.0%	2.9%

Shipping, Marine living resources and Coastal tourism continue to be vital contributors to the Spanish national economy. Spain has the fourth-largest economy in the Eurozone with 8.95 of the EU's GDP, after Italy (12.8%), France (17.4%) and Germany (24.7%)¹⁵, and the country is the second-most popular tourist destination in the world with 84 million of international tourist arrivals in 2019¹⁶. In 2020, the relaxation of travel restrictions for vaccinated travellers, coupled with progress made in the roll-out of COVID-19 vaccines, contributed to lifting consumer confidence and gradually restoring safe mobility in Europe. However, Spain recorded as decreases of 55% in international arrivals¹⁷. Spain is split over two sea-basins: the North Atlantic and the Mediterranean Sea and is the largest capture fisheries producer in the EU (in landings weight and value) (see section 4.1).

Three of the top ten busiest container ports in the EU are in Spain, all located in the Mediterranean: Port of Valencia (4th), Port of Algeiras (6th) and Port of Barcelona (9th) in 2019. The ports of Las Palmas and Bilbao, both outside the Mediterranean, make it to the top 20. The country receives 80% of its imports and sends out over 50% of its exports through seaports

The ports of Santa Cruz de Tenerife (Canary Islands) and Palma de Mallorca (Balearic Islands) are in the top 20 of EU ports by number of passengers. Spain has also the third-largest fishing fleet in the world, meaning that ports play an important role in national prosperity.

¹⁵ <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20200508-1>

¹⁶ <https://www.e-unwto.org/doi/pdf/10.18111/9789284422456>

¹⁷ UNWTO World Tourism Barometer 2021.

France

The French Blue Economy (established sectors) employs around 374 460 people and generates over €22.4 billion in GVA. Overall, the percentage of the Blue Economy in terms of GVA has decreased compared to 2009 and in fact, was at its lowest during the period 2015-2019 (contributing a meagre 1 % share). While in absolute terms Blue Economy GVA has been quite volatile over the period analysed, it increased by almost 22 % compared to 2009.

The significant GVA increase in Shipbuilding and repair (+128 %) counterbalanced the 27 % decrease in Port activities compared to 2009. In contrast, national GVA in France has increased 22 % over the entire period but increased by only one percentage point more than the Blue GVA (+23 % compared to 2009). As for employment, at a national level it remained rather steady over the period of analysis, increasing only 3 % compared to 2009, whereas Blue Economy employment decreased by 7 %. This reduction is largely the result of a 38 % decrease in the number of jobs in Port activities and 16 % in Marine living resources.

The Blue Economy in France is dominated by Coastal tourism, which contributed with 54 % of the Blue Economy jobs and 51 % of the GVA in 2019. Marine living resources, Port activities and Shipbuilding and repair are also important contributors.

France Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	71.2	70.6	65.5	68.1	65.3	63.4	61.3	62.8	57.0	59.3	59.6
Non-living resources	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.2	0.2	0.2
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	58.9	58.9	59.4	65.6	62.9	59.0	63.8	59.9	42.4	38.3	36.5
Shipbuilding and repair	30.8	31.6	32.1	33.2	34.6	34.5	33.1	33.3	35.3	39.1	41.1
Maritime transport	32.7	32.0	29.6	29.5	31.1	33.7	34.4	26.4	32.5	33.8	33.7
Coastal tourism	206.7	196.6	202.1	181.7	190.9	198.8	169.5	181.5	191.2	198.7	203.4
Blue economy jobs	400.9	390.1	389.2	378.5	385.2	389.8	362.5	364.3	358.6	369.4	374.5
National employment	26,289	26,338	26,327	26,335	26,311	26,326	26,348	26,443	26,655	26,886	26,964
Blue economy (% of national jobs)	1.5%	1.5%	1.5%	1.4%	1.5%	1.5%	1.4%	1.4%	1.3%	1.4%	1.4%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	2,524	2,737	2,743	2,775	2,821	2,780	2,925	3,042	2,871	2,958	2,903
Non-living resources	37	39	42	41	46	28	32	26	11	25	39
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	4,594	4,096	8,184	4,222	4,329	4,053	4,153	4,044	3,252	3,275	3,358
Shipbuilding and repair	1,461	1,852	2,117	2,189	2,257	2,100	2,146	2,373	2,618	3,070	3,323
Maritime transport	1,408	3,329	1,861	2,615	2,475	2,769	2,900	1,577	1,373	1,440	1,465
Coastal tourism	8,391	8,541	9,201	8,150	8,823	8,885	8,476	8,299	10,629	11,072	11,346
Blue economy GVA	18,415	20,594	24,148	19,993	20,752	20,615	20,632	19,362	20,754	21,840	22,436
National GVA	1,750,127	1,797,790	1,848,583	1,875,325	1,899,841	1,927,230	1,967,466	1,996,790	2,043,997	2,090,925	2,156,687
Blue economy (% of national GVA)	1.1%	1.1%	1.3%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%

Mainland France is split over two sea-basins: the North Atlantic and the Mediterranean Sea. In addition, France possesses a string of overseas territories in the Caribbean, Indian and South Pacific oceans. Despite the extensive coastlines and abundant islands of Overseas France, the importance of the Blue Economy, although greater than for France as a whole, is still limited: 8 800 firms and 12 500 jobs (depending on the scope used) with significant variations between territories. Yet, the French overseas territories face fierce regional competition in the sectors of maritime freight, tourism and aquaculture. The fishing and aquaculture industries suffer more specifically from a skills gap¹⁸.

France has several maritime clusters¹⁹. The French Maritime Cluster (FCM) was created in 2006 and brings together all the actors of the maritime ecosystem, from industry to maritime services and activities of all kinds. The FCM is made up of more than 430 entities: companies of all sizes, competitiveness clusters, federations and associations, laboratories and research centres, schools and training organisations, local communities and economic players, as well as the French Navy. The FCM supports its members in the sustainable and responsible development of their activities and projects, in France and abroad, through various actions²⁰.

¹⁸ Source: <https://blocnotesdeleco.banque-france.fr/billet-de-blog/leconomie-bleue-dans-loutre-mer-quels-enjeux-pour-demain>

¹⁹ <http://www.clusterobservatory.eu/>

²⁰ <https://www.cluster-maritime.fr>

The Croatian Blue Economy (established sectors) employs 162 260 people and generates around €3.6 billion in GVA.

The Blue Economy contributes 8 % to the national economy in terms of GVA and 9.9% in terms of jobs. Overall, Blue Economy GVA increased 29% compared to 2009 due solely to Coastal tourism and Marine living resources. Shipbuilding and repair, Port activities, and Marine non-living resources all saw decreases compared to 2009. Conversely, Blue Economy jobs decreased 10% compared to 2009, increasing only in Marine living resources and Maritime transport. Marine non-living resources and Shipbuilding have lost a significant amount of jobs compared to 2009 (98 % and 54 %, respectively).

The Blue Economy in Croatia is clearly dominated by Coastal tourism, which contributed with 79% to jobs and 81 % of GVA in 2019. Marine living resources (7 %), Maritime transport and Shipbuilding and repair (both with 5 %) are also important contributors in term of Blue Economy jobs.

Although in decline, the shipbuilding sector continues to be one of the most important industrial sectors in Croatia. The current Croatian shipbuilding industry is almost negligible in the context of global shipbuilding; however, it has a significant role within the national economy. Production portfolio consists of new buildings of various size(s), repair, conversion and offshore constructions. Currently however, several important shipyards are facing severe financial problems and an uncertain future.

Croatia Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	9.3	9.1	8.8	9.2	9.5	9.7	9.2	11.6	11.4	11.4	11.6
Non-living resources	7.5	5.6	4.9	6.5	5.7	6.4	6.6	1.3	1.2	1.2	0.2
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	5.5	5.2	5.9	5.5	5.5	5.3	5.3	5.2	4.8	4.7	5.1
Shipbuilding and repair	17.7	16.6	15.4	13.8	14.7	9.6	9.9	10.2	10.8	10.4	8.1
Maritime transport	6.9	7.1	7.3	7.1	6.8	6.8	6.9	7.1	7.5	7.3	8.6
Coastal tourism	133.9	193.0	149.6	127.9	112.0	123.0	102.3	98.7	125.3	124.3	129.7
Blue economy jobs	180.8	236.6	191.9	170.0	154.2	160.8	140.1	134.1	161.0	159.4	163.3
National employment	1,708	1,649	1,584	1,528	1,494	1,542	1,559	1,567	1,603	1,630	1,650
Blue economy (% of national jobs)	10.6%	14.3%	12.1%	11.1%	10.3%	10.4%	9.0%	8.6%	10.0%	9.8%	9.9%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	54	59	64	67	85	56	125	120	164	159	155
Non-living resources	101	75	66	88	78	86	94	83	44	52	13
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	147	124	124	117	117	121	120	131	114	110	132
Shipbuilding and repair	277	292	237	157	117	103	139	103	148	89	140
Maritime transport	217	197	193	169	197	172	235	185	202	213	233
Coastal tourism	2,002	2,974	2,326	2,072	2,161	2,297	2,080	2,176	2,769	2,862	2,926
Blue economy GVA	2,797	3,721	3,009	2,670	2,755	2,836	2,792	2,798	3,442	3,484	3,599
National GVA	38,560	38,297	38,242	37,009	36,447	36,200	36,968	38,633	40,551	42,448	44,770
Blue economy (% of national GVA)	7.3%	9.7%	7.9%	7.2%	7.6%	7.8%	7.6%	7.2%	8.5%	8.2%	8.0%

Italy

The Italian Blue Economy (established sectors) employs around 531 750 people and generates over €24.4 billion in GVA. In 2019, it contributed with 2.4% to national jobs and 1.5% to national GVA. The share of Blue Economy GVA underwent a low period between 2011 and 2015 but has returned to 2009 figures. Blue Economy jobs also appear to be recovering, albeit at a slower pace. In absolute terms, Blue jobs have decreased by 13% compared to 2009 while GVA has increased by 14%, slightly more the increase in national GVA (13%). Apart from Maritime transport and, to lesser extent, Marine living resources, all other sectors have seen significant drops in employment compared to 2009. On the other hand, only Marine non-living resources has seen a substantial decrease in GVA (-64%) compare to 2009.

The Blue Economy in Italy is largely dominated by Coastal tourism, which contributed 57% to Blue Economy jobs and 44% to GVA in 2019. Marine living resources and Maritime transport are also an important contributor to the Blue Economy, generating 14% each of jobs and 11% and 20% of GVA, respectively. In fact, all established blue sectors are important contributors to Italy's economy, apart from Marine non-living resources and Marine renewable energy. At the EU level and in terms of GVA generation, Italy ranks third in Coastal tourism, Maritime transport, Marine non-living resources and Shipbuilding and repair generating 13%, 14%, 16% and 19% of the EU total. Italy also ranks fourth in Marine living resources (14%) and fifth in Port activities (8%).

Further deterioration in Marine non-living resources is expected as the Italian government, as well as, Bulgaria, Croatia, Cyprus, Denmark, Germany, Greece, Ireland, Italy, Malta, the Netherlands, Poland, Portugal, Romania and Spain still have not prohibited oil and gas exploration and/or exploitation off their coasts²¹.

Italy Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	73.5	73.6	72.2	74.6	71.6	70.5	69.6	72.2	72.3	74.7	74.2
Non-living resources	11.2	11.1	10.8	10.3	9.6	9.6	9.5	6.3	2.0	2.2	2.2
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	38.9	37.1	35.2	34.3	34.5	33.5	33.8	35.2	34.9	35.2	36.1
Shipbuilding and repair	45.8	41.4	38.0	34.4	32.3	32.7	34.0	35.4	39.2	40.1	42.1
Maritime transport	45.3	42.9	41.7	43.0	41.8	60.7	63.3	63.8	67.9	69.0	73.0
Coastal tourism	396.6	331.2	261.5	235.4	222.0	199.6	204.9	227.7	244.2	307.3	304.1
Blue economy jobs	611.2	537.2	459.4	431.9	411.9	406.6	415.2	440.6	460.5	528.7	531.7
National employment	22,147	21,961	22,037	21,891	21,420	21,458	21,634	21,938	22,161	22,333	22,443
Blue economy (% of national jobs)	2.8%	2.4%	2.1%	2.0%	1.9%	1.9%	1.9%	2.0%	2.1%	2.4%	2.4%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	2,380	2,380	2,523	2,195	2,231	2,156	2,548	2,621	2,623	2,666	2,761
Non-living resources	2,074	2,071	2,014	1,703	1,324	1,199	1,385	1,287	739	819	742
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	1,732	1,922	1,877	1,994	2,047	1,983	2,142	2,194	2,222	2,229	2,350
Shipbuilding and repair	1,894	1,664	1,848	1,457	1,489	1,736	1,694	2,092	2,555	2,785	2,997
Maritime transport	3,175	4,310	3,595	3,443	3,595	4,118	4,741	4,534	4,768	4,772	4,918
Coastal tourism	10,158	9,978	8,040	6,939	6,621	6,290	6,902	7,918	8,551	10,524	10,678
Blue economy GVA	21,413	22,326	19,896	17,730	17,307	17,482	19,412	20,646	21,457	23,795	24,446
National GVA	1,425,157	1,449,430	1,480,875	1,458,007	1,451,514	1,462,745	1,488,049	1,522,917	1,557,833	1,583,358	1,604,402
Blue economy (% of national GVA)	1.5%	1.5%	1.3%	1.2%	1.2%	1.2%	1.3%	1.4%	1.4%	1.5%	1.5%

²¹ https://surfrider.eu/wp-content/uploads/2020/05/manifesto_web_v3.pdf

The Blue Economy established sectors in Cyprus employ around 40 400 people and generate almost €1.2 billion in GVA, representing a 5.9% share of the national economy measured in GVA and 10% of the jobs in 2019. The Blue Economy's contributions to both national GVA and employment have remained relatively stable throughout the period of analysis (2009-2019). While Blue GVA (in absolute terms) has increased 12% compared to 2009, its share has decreased by 5.7%; i.e., the national economy increased more than the Blue Economy.

As an island state, it is not surprising that the Blue Economy in Cyprus is dominated by Coastal tourism, which represents 85% of Blue-based jobs and 78% of the GVA in 2019. Port activities and Shipbuilding and repair contribute a further 7% and 8% in terms of GVA, respectively.

The EU Commission, under EU state aid rules, has approved the prolongation of Cyprus's tonnage tax scheme, which applies to ship ownership, ship management and ship chartering activities. Cyprus was the first open registry to have a Tonnage Tax System (TTS) approved by the EU and this system was extended in 2019 for another ten years. The system's prolongation provides a stable fiscal environment for Cyprus Shipping in the long term²². The system contributes to the competitiveness of the EU Maritime transport sector while supporting Europe's high environmental and safety standards.

Cyprus Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	1.7	2.1	2.1	2.0	2.2	2.1	2.2	2.2	2.2	2.3	2.4
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	1.1	1.3	1.4	1.2	0.9	0.8	0.9	0.9	1.1	1.2	1.2
Shipbuilding and repair	0.1	0.2	0.2	0.3	0.5	0.6	0.9	1.2	1.3	1.6	1.6
Maritime transport	4.3	4.7	4.6	4.3	4.2	4.0	3.8	1.0	1.0	1.0	1.1
Coastal tourism	29.5	29.9	27.7	25.8	27.4	27.2	23.2	28.9	32.0	33.8	34.2
Blue economy jobs	36.7	38.2	36.0	33.6	35.2	34.8	31.0	34.1	37.5	40.0	40.4
National employment	371	382	386	375	357	355	350	354	370	390	403
Blue economy (% of national jobs)	9.9%	10.0%	9.3%	9.0%	9.8%	9.8%	8.9%	9.6%	10.1%	10.2%	10.0%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	18	18	26	18	26	25	25	31	38	30	31
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	85	96	101	91	80	77	80	82	64	77	83
Shipbuilding and repair	5	6	8	15	15	22	32	43	67	78	90
Maritime transport	172	182	148	128	118	109	99	28	43	46	52
Coastal tourism	755	752	741	712	762	730	619	797	851	884	900
Blue economy GVA	1,036	1,054	1,023	963	1,001	962	854	981	1,063	1,114	1,156
National GVA	16,420	17,109	17,594	17,239	15,992	15,249	15,609	16,517	17,373	18,261	19,442
Blue economy (% of national GVA)	6.3%	6.2%	5.8%	5.6%	6.3%	6.3%	5.5%	5.9%	6.1%	6.1%	5.9%

²² <https://www.dms.gov.cy>

Latvia

The Latvian Blue Economy (established sectors) employs around 38 235 people and generates over €674 million in GVA. Overall, Blue Economy GVA increased by 75 % compared to 2009 and jobs by 15 %. Jobs increased in the Port activities sector (38 %), Coastal tourism sector (42 %), and Maritime transport sector (10 %) while decreasing in all other Blue Economy sectors analysed.

The share of the Blue Economy towards national GVA increased by 11 % between 2009 and 2019. The same trend can be observed for employment (15 %). The percentage of Blue Economy employment in terms overall employment levels increased by 16 % during the reporting period. Latvia's Blue Economy is dominated by Coastal tourism, which contributed to 61 % to jobs and 46 % to Blue Economy GVA in 2019. Port activities are also an important contributor, generating 16 % of jobs and 32 % of GVA.

Latvia has three major seaports and seven smaller ports. Riga is the biggest port in Latvia and second biggest in the Baltic States reaching 32.6 million tonnes in cargo turnover in 2019, and 23.7 million tonnes in 2020²³. The port of Ventspils is one of the leading deep-water ports of the EU on the East coast of the Baltic Sea, servicing the largest vessels entering the Baltic Sea throughout the whole year and with an annual turnover of around 986 thousand tonnes in 2019 and 1.1 million tonnes in 2020²⁴. Liepāja is the third biggest city in Latvia with old manufacturing traditions with a cargo turnover of 255.6 thousand tonnes in 2019, and 297.5 thousand tonnes in 2020²⁵. Shipbuilding and repair and Maritime transport are also noticeable sectors but have remained rather stagnant over the period analysed. The development of a Latvian maritime cluster could help foster cooperation and integration between the maritime sectors may help boost the Blue Economy as a whole.

Latvia Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	7.8	7.9	7.3	7.8	8.1	7.6	6.2	5.8	5.5	5.2	4.8
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	4.5	4.4	5.2	5.5	5.7	6.2	6.5	6.2	6.2	6.1	6.3
Shipbuilding and repair	3.1	2.5	2.5	2.8	2.7	2.4	2.4	2.7	2.6	2.5	2.3
Maritime transport	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.4	1.5	1.4
Coastal tourism	16.5	15.4	14.5	16.7	32.3	24.9	23.0	20.1	22.5	25.4	23.5
Blue economy jobs	33.1	31.3	30.7	34.0	50.1	42.4	39.2	35.8	38.3	40.7	38.2
National employment	872	825	837	849	864	857	867	860	861	872	870
Blue economy (% of national jobs)	3.8%	3.8%	3.7%	4.0%	5.8%	4.9%	4.5%	4.2%	4.4%	4.7%	4.4%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	61	67	64	79	91	80	75	66	64	76	78
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	128	118	174	201	199	212	225	224	212	219	218
Shipbuilding and repair	35	29	31	32	33	32	32	32	32	25	32
Maritime transport	28	21	15	12	13	21	24	22	24	28	33
Coastal tourism	133	136	138	158	347	265	251	226	257	311	312
Blue economy GVA	385	371	422	482	682	611	607	570	590	658	674
National GVA	16,919	15,843	17,965	19,557	20,126	20,831	21,467	21,867	23,387	25,311	26,607
Blue economy (% of national GVA)	2.3%	2.3%	2.4%	2.5%	3.4%	2.9%	2.8%	2.6%	2.5%	2.6%	2.5%

²³ <https://rop.lv/en/port-statistics>

²⁴ <https://www.portofventspils.lv/en/port-in-general/port-in-numbers/>

²⁵ https://www.sam.gov.lv/en/statistics/statistics_ports_rail_07.2020.pdf

The Lithuanian Blue Economy (established sectors) employs around 26 450 people and generates over €750 million in GVA. Overall, Blue Economy GVA increased 80% compared to 2009 while its share to the national economy increased by 11%. In 2019, the Blue Economy GVA contributed 1.7% to the national economy (measured in GVA), slightly higher than in 2009 (1.6%). In terms of employment, Blue Economy jobs increased by 67% in absolute terms compared to 2009, while its share to national employment increased by 3.6%, from 1.9% in 2009 to 2.0% in 2019. That is, national job growth was slower than jobs in the Blue Economy.

The Blue Economy in Lithuania is dominated by the Marine living resources, which accounted for 31% of Blue Economy jobs and 27% of GVA in 2019. Port activities and Shipbuilding and repair are also large contributors, generating 25% and 27% of GVA, respectively while providing 13% and 30% of jobs, respectively.

The Lithuanian fishing fleet (Capture fisheries) is composed of a Baltic Sea and distant-water or high-sea fleet, the latter being more important in terms of employment and GVA generated. Capture fisheries generated the 77% of the GVA generated by the primary production. The aquaculture sector, which is dominated by carp (to a much lesser degree by European eel and sturgeon), produced the 23% of the rest of the total primary sector. There are around 95 fish processing firms generating about €129 million, and together with wholesale (€39 million), generate around 85% of the total GVA generated by the Marine living resources.

Lithuania Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	6.8	7.0	6.8	7.0	7.5	7.9	8.4	8.1	7.9	8.2	8.3
Non-living resources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	3.9	3.5	3.9	3.8	4.0	4.0	3.9	4.0	4.0	3.6	3.4
Shipbuilding and repair	6.0	4.3	4.4	4.3	4.7	4.6	4.5	4.8	4.9	6.2	7.8
Maritime transport	2.1	2.2	2.1	2.0	2.0	1.9	1.9	1.6	1.6	1.7	1.5
Coastal tourism	6.2	5.9	5.6	5.5	4.9	5.5	4.5	5.3	5.3	5.4	5.4
Blue economy jobs	24.9	22.9	22.9	22.5	22.9	24.0	23.1	23.8	23.7	25.1	26.5
National employment	1,290	1,224	1,226	1,244	1,264	1,288	1,301	1,318	1,306	1,324	1,324
Blue economy (% of national jobs)	1.9%	1.9%	1.9%	1.8%	1.8%	1.9%	1.8%	1.8%	1.8%	1.9%	2.0%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	84	76	97	95	103	135	121	138	168	196	201
Non-living resources	0	0	0	0	0	0	0	0	0	0	0
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	113	106	129	145	130	149	148	144	166	174	191
Shipbuilding and repair	77	79	56	40	53	68	85	96	108	140	205
Maritime transport	62	65	66	45	45	46	56	45	71	82	78
Coastal tourism	41	42	50	48	46	50	51	68	70	76	78
Blue economy GVA	377	368	397	374	377	447	461	490	581	668	753
National GVA	24,300	25,137	28,119	30,148	31,715	33,044	33,604	35,001	37,975	40,678	43,668
Blue economy (% of national GVA)	1.6%	1.5%	1.4%	1.2%	1.2%	1.4%	1.4%	1.4%	1.5%	1.6%	1.7%

Lithuanian Maritime Cluster (LMC) that has been established in Klaipeda on 30 June 2020, aims to become a platform for the development of high value-added products and services²⁶. The main sectors of the cluster are alternative fuel infrastructure and technologies (LNG, biogas, hydrogen, ammonia), Ports and Shipping Shipbuilding & Repair, and Marine Energy. The predecessor of the new platform was the Lithuanian LNG cluster, which started its activities in 2006 and managed to attract 17 members, representing Lithuanian and foreign business organisations, science and research institutions. Strong partnerships and our determination to expand the range of activities and themes lead us to explore new challenges and possibilities. The LMC includes several activities, such as initiation of innovative technological projects; development of high value-added products/services; development of research infrastructure; development of the start-up ecosystem; networking; pooling/attracting resources; competence development (Blue Growth Leaders Academy program and other initiatives); and dissemination of information about innovative solutions/projects.

²⁶ <https://klaster.lt/en/klateris/jurinis-klasteris/>

Luxembourg

As a land-locked country with no direct sea access, Luxembourg's Blue Economy (established sectors) employs just 420 persons but generates around €33 million in GVA, mainly due to Maritime transport and, to a lesser extent, Port activities. As is to be expected, the direct contribution of the Blue Economy to the national economy, in GVA and jobs, is minimal (0.1 %).

According to Luxembourg Trade & Invest²⁷, Luxembourg's venture into the shipping sector is a remarkable success story. Approximately 1 000 jobs in Luxembourg are linked directly or indirectly to the maritime sector. Ship owners established in Luxembourg provide jobs to around 400 highly-skilled employees on shore and around 4 000 at sea; and a further (approx.) 600 maritime related jobs are located in insurance companies, banks, law firms, consultancy groups and maritime logistics operators.

The Luxembourg Maritime Cluster (LMC)²⁸ is a non-profit organization that promotes and safeguards the interests of its member companies. The LMC serves as a focal point for global maritime stakeholders looking to engage with more than 50 member companies specialized in maritime transportation, dredging, logistics, finance, law, insurance, consulting, safety & security and marine equipment. The cluster contributes to the development of the maritime sector and maritime related services in Luxembourg through the implementation and promotion of communication strategies both in Luxembourg and abroad. Forty-two firms and organisations currently take part in the project.

Luxembourg Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Shipbuilding and repair	-	-	-	-	-	-	-	-	-	-	-
Maritime transport	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy jobs	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.4
National employment	215	219	222	234	236	243	255	259	270	278	287
Blue economy (% of national jobs)	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	0	0	0	0	0	0	0	0	0	0	0
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	6	6	6	5	5	5	5	5	5	5	5
Shipbuilding and repair	-	-	-	-	-	-	-	-	-	-	-
Maritime transport	16	19	20	17	15	19	22	20	27	27	27
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy GVA	22	25	26	23	21	25	27	26	32	33	33
National GVA	33,135	36,137	38,739	39,386	41,527	44,396	47,057	49,771	51,599	54,378	56,488
Blue economy (% of national GVA)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%

²⁷ <https://www.tradeandinvest.lu/business-sector/maritime/>

²⁸ An active member of the European Network of Maritime Clusters. <https://www.cluster-maritime.lu/>

As Hungary is a landlocked country, the Blue Economy is not a main contributor to its economy as a whole. In terms of GVA, its share was around 0.4% in 2019, being the same share as in 2009. In absolute terms, Blue Economy GVA increased by 51% compared to 2009. The Blue Economy established sectors account for 0.4% of jobs, a 34% increase since 2009. It is worth mentioning that Blue Economy jobs have outperformed national levels compared to 2009: Blue Economy jobs grew 59% against 18% for national employment, as well as in terms of GVA, with both the Blue Economy GVA and domestic GVA both increasing by 51% compared to 2009.

The Blue Economy in Hungary is dominated by Port activities, contributing to 47% of the Blue Economy jobs and 53% of GVA. Marine living resources and Shipbuilding and repair are also important contributors.

The Port of Hamburg, the Germany's largest seaport, plays a significant part as a transshipment, storage and distribution centre for Hungary's seaborne foreign trade. The excellent connections in hinterland traffic and the well-established logistics chains make the Port of Hamburg in Hungary an attractive market partner. Hungary is a central hub for the distribution of international flows of goods within Europe. The most important mode of transport to/from Hungary is the train, there are 24 block trains per week from/to Budapest. Over 85% of the goods handled in Hamburg are transported by rail, the proportion of containerized cargo is almost 100%. In addition to the Budapest terminals, other important terminals are Dunajska Streda and Kosice in Slovakia²⁹.

Hungary

Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	3.7	3.4	3.4	3.8	3.8	4.3	4.5	5.1	5.8	5.7	5.8
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	6.2	6.1	9.2	11.1	8.4	10.5	9.3	8.7	8.7	8.8	8.8
Shipbuilding and repair	0.9	0.8	0.6	0.5	0.7	1.8	3.3	3.5	3.6	4.9	3.2
Maritime transport	1.2	1.2	1.1	1.2	1.2	1.0	1.0	1.0	1.0	1.0	1.1
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy jobs	11.9	11.5	14.3	16.6	14.1	17.7	18.2	18.4	19.3	20.4	19.0
National employment	3,864	3,843	3,868	3,924	3,997	4,192	4,300	4,440	4,500	4,548	4,568
Blue economy (% of national jobs)	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	49	47	48	49	57	60	70	83	94	110	113
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	243	274	277	258	262	284	225	180	214	228	254
Shipbuilding and repair	14	15	11	9	13	35	72	72	72	313	84
Maritime transport	12	12	11	21	22	19	21	23	23	19	29
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy GVA	318	348	346	337	353	397	388	357	403	670	480
National GVA	80,130	83,830	86,246	83,808	86,069	89,362	94,382	97,556	106,292	112,914	121,245
Blue economy (% of national GVA)	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.6%	0.4%

Hungary stopped commercial fishing in inland waters in 2016. As a result, the bulk of the domestic fish supply is from aquaculture. In 2019, the sector employed about 2 260 persons, generating a GVA of about €13 million. Common carp remains the most important cultured species, with 82% of the total food fish production. Fish processing is relatively underdeveloped and totals about €15 million in GVA. Many fish producers have on-site fish processing units as a way of adding value to their products and meeting market demand. Most of these do primary processing, such as filleting. There are a limited number of processing plants producing more sophisticated products such as boneless, kitchen-ready products. Several enterprises repackage imported seafood. Foreign trade in fish products has been increasing, however, Hungary mostly exports raw material (live fish), while it imports highly processed value-added products. The majority of the GVA generation comes from wholesalers (about the 72% of the total Living resources).

²⁹ <https://www.hafen-hamburg.de>

Malta

The Maltese Blue Economy (established sectors) employs more than 29 000 people and generates almost €860 million in GVA. As an island state, it is clearly dominated by Coastal tourism, contributing 85 % to Blue Economy jobs and 66 % to GVA in 2019. Marine living resources is also a contributor to Blue Economy jobs (6 %) and GVA (5 %); while Port activities and Maritime transport contributed with 14 % and 10 % of the total GVA.

Although the percentage that the Blue Economy contributes to national GVA grew by 7 % compared to 2009, the Blue Economy GVA has increased by 137 %, hitting its highest point in 2019 for the reporting period. In addition, Malta's national GVA rose sharply between 2009 and 2019 by 121 %. Similar trends are observed in employment where overall, national employment has risen by 58 % while Blue Economy jobs increased by 88 % compared to 2009.

Malta Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	1.9	2.0	1.7	1.9	1.9	2.1	2.2	2.0	1.9	2.0	2.0
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.7
Shipbuilding and repair	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6
Maritime transport	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8
Coastal tourism	13.7	12.0	11.9	13.8	18.0	17.4	17.6	20.6	20.6	26.9	29.0
Blue economy jobs	18.1	16.7	16.2	18.4	22.6	22.2	22.5	25.2	25.2	31.6	34.1
National employment	158	160	164	171	179	187	194	205	217	234	249
Blue economy (% of national jobs)	11.5%	10.4%	9.9%	10.8%	12.6%	11.9%	11.6%	12.3%	11.6%	13.5%	13.7%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	-	4	30	32	17	36	31	40	38	3	41
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	95	93	93	93	93	93	93	93	93	108	122
Shipbuilding and repair	13	10	10	9	9	9	9	9	9	9	36
Maritime transport	57	61	61	61	61	60	86	86	86	87	89
Coastal tourism	201	204	202	235	285	285	317	427	441	579	571
Blue economy GVA	363	397	397	414	483	478	545	652	627	820	859
National GVA	5,357	5,791	5,952	6,281	6,722	7,476	8,551	9,180	10,025	10,910	11,826
Blue economy (% of national GVA)	6.8%	6.9%	6.7%	6.6%	7.2%	6.4%	6.4%	7.1%	6.3%	7.5%	7.3%

According to the data, the Dutch Blue Economy (established sectors) directly employs more than 177 000 people and generates over €12.3 billion in GVA. Although the Dutch Blue Economy GVA has seen a 9.7 % increase compared to 2009, its contribution to national GVA was 15 % lower in 2019. In terms of employment, national employment has remained relatively stable over the reporting period (+5.6 % compared to 2009), whereas Blue Economy jobs increased by 32 %, peaking in 2019. Furthermore, the number of Blue Economy jobs' share increased by 25 % when compared to 2009.

Port activities, Maritime transport and Coastal tourism are the main contributors, generating 39 %, 16 % and 18 % of the GVA respectively. Employment is more evenly distributed among the sectors, apart from Marine non-living resources and Marine renewable energy, which provide only 1.1 % and 0.3 % of the Blue jobs, respectively.

Netherlands Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	17.3	17.7	17.5	17.8	17.9	18.3	19.0	19.8	20.5	21.3	21.1
Non-living resources	2.4	1.8	1.8	1.7	1.7	1.9	2.2	2.1	2.0	2.0	2.0
Ocean energy	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.4	0.6	0.6	0.6
Port activities	26.7	27.1	28.6	29.1	29.8	30.9	31.2	32.1	32.6	34.5	35.9
Shipbuilding and repair	17.6	16.9	17.4	17.4	17.5	17.6	18.0	18.0	17.8	17.3	18.0
Maritime transport	32.5	29.6	30.0	33.4	34.3	31.9	31.9	30.0	29.8	29.9	30.2
Coastal tourism	36.8	36.2	34.8	32.7	35.4	33.0	31.2	36.8	35.5	69.2	68.3
Blue economy jobs	133.4	129.5	130.2	132.4	136.8	133.7	133.7	139.3	138.8	174.8	176.0
National employment	8,388	8,313	8,320	8,342	8,272	8,196	8,283	8,391	8,544	8,711	8,857
Blue economy (% of national jobs)	1.6%	1.6%	1.6%	1.6%	1.7%	1.6%	1.6%	1.7%	1.6%	2.0%	2.0%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	819	947	894	913	936	980	1,031	1,172	1,013	1,114	1,086
Non-living resources	3,708	2,955	2,874	3,141	2,727	2,692	2,793	1,661	1,505	1,596	1,455
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	3,307	3,439	3,591	3,647	3,713	3,987	4,163	4,066	4,161	4,297	4,783
Shipbuilding and repair	787	1,228	987	884	1,053	1,039	997	731	936	724	758
Maritime transport	1,719	1,468	1,424	1,493	1,835	2,025	2,376	1,932	2,087	1,917	2,016
Coastal tourism	856	879	889	846	909	912	899	1,091	1,119	2,241	2,184
Blue economy GVA	11,197	10,915	10,659	10,923	11,173	11,634	12,259	10,654	10,822	11,889	12,281
National GVA	561,185	574,280	585,953	590,316	595,709	604,814	620,835	634,824	661,566	692,777	727,746
Blue economy (% of national GVA)	2.0%	1.9%	1.8%	1.9%	1.9%	1.9%	2.0%	1.7%	1.6%	1.7%	1.7%

Note: The total value of the Dutch Blue Economy is underestimated – significant amount of data at Eurostat are unavailable for several sub-sectors and activities.

The Netherlands has four major seaports: the ports of Rotterdam, Amsterdam, Zeeland Seaports, and Groningen Seaports. The Port of Rotterdam is the busiest seaport in Europe by volume of containers with more than 13 000 TEUs per year (see section 4.4). The port has almost every port facility imaginable, including cruise, container, general cargo, oil and gas terminals, as well as bulk terminals and a liquefied natural gas (LNG) terminal. It has a thriving petrochemical industry and several oil refineries. Crude oil arrives by sea to be processed and delivered to areas in the Netherlands, Germany, and Belgium. The port of Amsterdam, Europe's fifth largest port, is another major asset for logistics and distribution operations. In 2020 the Port of Amsterdam achieved a turnover of €158.4 million, coming from harbour dues, rent and ground rent³¹.

³⁰ National reporting by Netherlands on its ocean economy differs due to the lack of EUROSTAT data stemming from confidentiality issues.

³¹ <https://www.portofamsterdam.com>

Austria

The Austrian Blue Economy (established sectors) employs around 6 590 people and generates almost €467 million in GVA. The Blue Economy in Austria only represents 0.1 % of the national GVA, and its share increased by 1.5 % compared to 2009. In fact, Blue Economy GVA increased 41 % compared to 2009 against 39 % for the national economy. In terms of employment, the share of Blue Economy jobs stands at 0.2 % but has increased 14 % compared to 2009. Blue Economy jobs increased by 25 % against 9 % for national jobs overall.

The main Blue sectors in Austria are Marine living resources, Port activities and Shipbuilding. Marine living resources produced €168 million in GVA and provided almost 2 900 jobs in 2019. Port activities produced almost 1 740 jobs and generated €165 million in GVA. Shipbuilding and repair accounted for a further 1 270 jobs and €85 million in GVA.

Despite being a landlocked country, the excellent trade relations between Austria und Hamburg go back for centuries. Since the 1950s, especially, the Port of Hamburg has gained in importance for the Austrian economy. It has been an important transshipment centre since the 1970s. Very good rail links and the Port of Hamburg's worldwide liner service network are appreciated by firms Austria – with Hamburg topping Austria's container traffic table for over 20 years. In 2020, 312 000 TEU were transported between Hamburg and Austria, the main types of goods include wood, paper, beverages, fittings, machinery and equipment³².

Austria Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	2.3	2.4	2.4	2.7	2.7	2.9	2.9	2.9	3.1	2.9	2.9
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	1.2	1.2	1.1	1.2	1.3	1.5	1.5	1.5	1.6	1.6	1.7
Shipbuilding and repair	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.3
Maritime transport	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy jobs	5.3	5.4	5.5	5.5	5.8	6.2	6.3	6.2	6.8	6.5	6.6
National employment	3,909	3,944	3,982	4,013	4,030	4,034	4,068	4,143	4,185	4,241	4,280
Blue economy (% of national jobs)	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	142	145	150	152	158	166	170	171	193	171	168
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	96	91	111	172	487	254	199	194	186	146	165
Shipbuilding and repair	49	72	67	69	68	71	80	82	85	84	85
Maritime transport	46	49	56	43	38	48	48	50	50	50	50
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy GVA	332	358	384	435	751	539	497	497	514	452	467
National GVA	256,671	263,634	276,404	283,548	288,624	297,230	307,038	318,645	330,333	344,659	355,474
Blue economy (% of national GVA)	0.1%	0.1%	0.1%	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%

³² <https://www.hafen-hamburg.de>

Poland

The Polish Blue Economy (established sectors) employs around 146 540 people and generates over €3.3 billion in GVA. It is dominated by Coastal tourism, which contributed 32 % to Blue Economy jobs and 28 % to GVA in 2018.

Poland's national GVA growth has been rising by 65 %, as has Blue Economy GVA, increasing by 46 % since 2009. At 0.7 % in 2019, the share of Blue Economy GVA to national GVA fell 12 % compared to 2009. While national employment grew by 5.8 %, Blue Economy jobs increased 19 % compared to 2009.

Port activities, Marine living resources and Shipbuilding and repair are also important contributors to the Blue Economy, providing 19 %, 28 % and 18 % of the jobs and 23 %, 24 % and 20 % of the GVA in 2018, respectively.

Poland Evolution of the Blue Economy established sectors											
Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	33.2	31.4	29.9	31.3	31.9	35.8	36.4	37.6	38.3	38.7	40.6
Non-living resources	0.4	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	28.0	27.8	28.2	28.7	30.2	28.7	27.8	29.2	31.3	28.6	28.2
Shipbuilding and repair	29.4	23.7	22.0	21.2	21.1	21.2	22.1	23.4	24.4	25.4	26.5
Maritime transport	4.5	4.4	4.3	4.0	4.0	4.5	4.3	4.2	3.9	3.8	3.8
Coastal tourism	28.0	24.4	19.5	62.0	60.7	43.8	49.3	51.8	51.0	49.8	47.2
Blue economy jobs	123.4	112.3	104.4	147.6	148.4	134.3	140.1	146.5	149.0	146.4	146.5
National employment	15,059	14,729	14,834	14,911	14,909	15,222	15,479	15,646	15,872	15,955	15,935
Blue economy (% of national jobs)	0.8%	0.8%	0.7%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	507	511	500	512	508	638	634	565	732	718	814
Non-living resources	18	21	18	16	16	12	11	12	10	9	10
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	563	600	612	617	669	644	635	651	754	796	755
Shipbuilding and repair	713	574	553	447	534	565	602	550	602	628	661
Maritime transport	186	176	244	221	246	213	166	185	168	151	134
Coastal tourism	297	300	250	803	774	625	715	770	834	908	955
Blue economy GVA	2,285	2,182	2,177	2,617	2,747	2,696	2,764	2,733	3,099	3,210	3,329
National GVA	281,933	318,291	334,167	344,985	350,427	364,617	381,735	376,792	410,402	434,406	465,608
Blue economy (% of national GVA)	0.8%	0.7%	0.7%	0.8%	0.8%	0.7%	0.7%	0.7%	0.8%	0.7%	0.7%

The main ports in Poland are Gdańsk, Gdynia, Szczecin and Świnoujście. Gdansk is a major international transportation hub and Europe's fastest growing port, making 3 262 commercial ships annually and 2 068 trucks daily. Gdansk is ideally situated as a gateway port, connecting Nordic countries to central, eastern and southern Europe and it the third places in Baltic shipping total³³.

Poland also has a considerable fish processing and trade sector, one of the largest in Europe. In fact, the activity 'Processing and preserving of fish, crustaceans and molluscs' with €481 million contributed to 14 % of overall Polish Blue Economy GVA in 2019. It plays a major role in supplying the EU with processed fish products such as smoked salmon and trout, canned herring, mackerel, and sprat, and ready-to-eat fish products like salads and fish marinades. Other products include fresh and frozen cod fillets, ready-to-prepare frozen fish fillets, freshwater and diadromous fish such as pike-perch, as well as fresh and frozen whole fish like trout and sprat. It is estimated that more than 2/3 of the Polish fish processing production is exported, with more than 90 % consumed internally in the EU. More than 50 % of the production is exported to Germany, with the majority of the remainder destined for the United Kingdom, France, and Denmark.

³³ <https://www.portgdansk.pl>

Portugal

The Portuguese Blue Economy (established sectors) employs around 254 450 people and generates over €5.8 billion in GVA. Blue Economy GVA increased by 74 % compared to 2009 while jobs increased by 52 %. The share of Blue Economy GVA to national GVA also saw a significant increase of 47 % and the share of Blue Economy jobs by 46 % compared to 2009. In comparison, the national GVA increased by 18 % while national employment increase by 4.2 % on 2009 figures.

The Blue Economy in Portugal is highly dominated by Coastal tourism, which contributed 82 % to Blue Economy jobs and 76 % to GVA in 2019. Marine living resources is also an important contributor, providing 14 % of jobs and 13 % of GVA in 2019. Port activities bring in 6.3 % of the Blue GVA but 1.9 % of the jobs.

Portugal has the largest Exclusive Economic Zone (EEZ) in Europe and became the first EU Member State to prepare a Satellite Account for the Sea.

Portugal Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	41.2	39.7	40.9	38.5	38.5	37.5	36.8	37.0	35.2	35.8	35.2
Non-living resources	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	4.5	4.5	4.4	4.2	4.2	4.3	4.3	4.2	4.1	4.5	4.7
Shipbuilding and repair	6.0	4.2	4.2	3.9	3.9	4.1	4.4	4.0	4.0	4.3	4.6
Maritime transport	1.7	1.7	1.7	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.7
Coastal tourism	114.1	113.4	86.1	95.9	109.2	116.3	117.8	123.2	156.5	212.2	208.0
Blue economy jobs	167.6	163.7	137.4	144.2	157.5	164.0	165.0	170.0	201.7	258.6	254.5
National employment	4,427	4,365	4,315	4,112	4,034	4,158	4,233	4,303	4,459	4,572	4,612
Blue economy (% of national jobs)	3.8%	3.8%	3.2%	3.5%	3.9%	3.9%	3.9%	4.0%	4.5%	5.7%	5.5%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	640	642	672	623	605	626	662	756	736	766	776
Non-living resources	2	2	2	2	2	2	2	2	2	2	2
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	310	321	321	322	330	334	321	343	333	368	367
Shipbuilding and repair	145	110	100	97	109	115	141	135	132	124	127
Maritime transport	73	60	62	55	64	89	77	82	83	77	98
Coastal tourism	2,182	2,124	1,574	1,638	2,083	2,262	2,279	2,543	3,420	4,480	4,449
Blue economy GVA	3,351	3,259	2,732	2,737	3,193	3,428	3,483	3,859	4,705	5,815	5,818
National GVA	155,547	157,971	154,128	147,215	149,802	151,136	156,517	161,993	169,642	176,311	184,208
Blue economy (% of national GVA)	2.2%	2.1%	1.8%	1.9%	2.1%	2.3%	2.2%	2.4%	2.8%	3.3%	3.2%

Romania

The Romanian Blue Economy (established sectors) employs around 63 440 people and generates almost €1.1 billion in GVA. The national GVA has seen a significant increase in recent years (+77% compared to 2009), however the Blue Economy GVA has been more volatile. Increasing by 17.6% compared to 2009. Employment has increased slightly nationally (3.4%) and in terms of the Blue Economy (-24%). The share of Blue Economy to national jobs and GVA is not very significant, less than 1%, and has decreased over the period analysed (-34% and -26%, respectively).

Shipbuilding and repair and Coastal tourism are the largest contributor, with 35% and 32% of Blue Economy jobs and 37% and 28% of GVA.

Romania Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	7.0	8.0	6.3	6.6	6.1	6.4	7.3	6.1	6.4	6.2	6.0
Non-living resources	9.1	8.5	7.4	5.3	5.6	5.5	4.8	4.3	3.8	1.6	1.6
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	19.9	19.4	20.2	18.3	14.7	14.0	13.7	12.4	11.5	10.8	10.5
Shipbuilding and repair	31.4	23.8	23.2	23.0	24.3	25.8	26.8	24.7	22.8	22.3	22.2
Maritime transport	3.7	3.7	3.2	3.0	2.9	2.7	2.8	2.7	2.8	2.8	2.7
Coastal tourism	12.0	8.4	9.6	14.6	13.9	13.4	13.6	15.5	15.5	22.9	20.4
Blue economy jobs	83.0	71.8	69.9	70.7	67.6	67.8	69.0	65.6	62.8	66.5	63.5
National employment	7,435	7,189	7,117	7,178	7,159	7,260	7,352	7,400	7,596	7,635	7,691
Blue economy (% of national jobs)	1.1%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%	0.8%	0.9%	0.8%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	71	54	42	46	64	80	95	78	68	85	81
Non-living resources	72	29	20	23	30	39	21	14	21	26	33
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	315	332	319	268	239	195	300	255	242	251	186
Shipbuilding and repair	293	364	329	245	297	275	327	322	294	356	388
Maritime transport	70	65	63	60	59	66	55	58	57	64	72
Coastal tourism	79	58	70	102	98	114	119	163	172	286	299
Blue economy GVA	901	902	843	743	787	769	917	891	854	1,068	1,059
National GVA	113,846	111,912	115,988	116,971	126,843	133,177	140,928	152,853	169,988	184,952	201,834
Blue economy (% of national GVA)	0.8%	0.8%	0.7%	0.6%	0.6%	0.6%	0.7%	0.6%	0.5%	0.6%	0.5%

Slovenia

Although a coastal state, Slovenia has a coastline of only 47 km. The Slovenian Blue Economy (established sectors) employs around 8 350 people and generates almost €320 million in GVA. The Blue Economy represents 0.8 % share of the national economy and 0.9 % of employment. In absolute terms, Blue Economy GVA increased by 38 % while Blue jobs increased by 1.3 % compared to 2009. While the national GVA remained relatively stable over the first part of the period analysed, it grew towards the end of the reporting period, resulting in a 33 % increase from 2009. In terms of employment, national jobs increased 1.5 % compared to 2009.

Slovenia's Blue Economy is dominated by Coastal tourism in terms of employment and Port activities in terms of GVA. Coastal tourism generated 45 % of the Blue jobs and 32 % of the GVA, while Port activities, contributed 32 % to Blue Economy jobs and 48 % to GVA.

Slovenia Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.8
Non-living resources	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	2.7	2.5	2.5	2.3	2.1	2.0	2.2	2.2	2.3	2.5	2.7
Shipbuilding and repair	0.8	0.9	0.8	0.7	0.7	0.7	0.8	0.9	0.6	0.7	0.7
Maritime transport	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Coastal tourism	3.4	3.3	3.1	2.9	2.5	2.9	2.5	3.0	2.9	3.9	3.8
Blue economy jobs	8.2	8.1	7.8	7.4	6.7	7.0	6.9	7.4	7.0	8.3	8.3
National employment	948	932	907	899	881	886	894	896	936	954	962
Blue economy (% of national jobs)	0.9%	0.9%	0.9%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.9%	0.9%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	20	18	23	19	20	17	19	19	19	21	25
Non-living resources	2	4	5	3	4	4	3	3	4	4	4
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	109	129	138	130	117	117	126	135	143	153	153
Shipbuilding and repair	14	31	25	23	25	25	32	38	17	19	18
Maritime transport	14	16	13	26	13	14	17	17	14	16	16
Coastal tourism	73	74	73	70	53	62	59	75	73	101	103
Blue economy GVA	232	273	278	270	231	240	255	288	270	313	319
National GVA	31,725	31,694	32,266	31,475	31,509	32,532	33,592	34,953	37,350	39,839	42,038
Blue economy (% of national GVA)	0.7%	0.9%	0.9%	0.9%	0.7%	0.7%	0.8%	0.8%	0.7%	0.8%	0.8%

Slovakia

As a landlocked country, the Blue Economy is not a main contributor to Slovakian national economy as a whole. However, while national GVA grew steadily throughout the reporting period, overall increasing 46% compared to 2009, Blue Economy GVA increased by 442%.

On employment, Blue Economy jobs (established sectors) also increased more than national jobs, 103% against 8% compared to 2009, respectively. The main responsible for this increase is Port activities that saw substantial growth for the period, with GVA increasing over 1 090% and jobs by 335%.

Slovakia Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	2.3	2.0	2.0	1.9	1.8	1.8	2.0	2.0	2.2	2.0	2.7
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	1.5	1.9	1.8	1.8	2.9	3.0	3.2	3.8	4.6	6.0	6.5
Shipbuilding and repair	0.8	1.0	1.1	0.6	0.6	0.6	0.5	0.5	0.6	1.2	1.2
Maritime transport	0.7	0.7	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy jobs	5.4	5.6	5.6	4.8	5.8	5.9	6.3	6.8	7.9	9.8	10.9
National employment	2,422	2,372	2,368	2,382	2,383	2,416	2,473	2,542	2,574	2,606	2,618
Blue economy (% of national jobs)	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	23	22	16	22	14	13	11	0	21	14	14
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	- 12	8	4	2	31	71	59	70	76	120	120
Shipbuilding and repair	6	9	9	6	7	8	7	7	9	22	23
Maritime transport	16	15	15	20	11	16	17	18	18	16	20
Coastal tourism	-	-	-	-	-	-	-	-	-	-	-
Blue economy GVA	33	53	43	50	64	109	93	94	124	172	177
National GVA	57,994	61,659	64,088	66,775	67,265	68,843	71,777	72,948	75,786	80,495	84,652
Blue economy (% of national GVA)	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%

Finland

The Finnish established Blue Economy sectors employ more than 54 000 people and generates over €2.8 billion in GVA.

Finland has seen a small decrease in how much the Blue Economy contributes to its national GVA: from around 1.6% in 2009 to 1.4% in 2019. Finland's national GVA increased by 31% compared to 2009 while Blue Economy GVA increased by only 9%. Similarly, the share of Blue Economy jobs to the national employment has also decreased. While national jobs increased by 2.5%, Blue Economy jobs remained stable compared to 2009.

The Blue Economy in Finland is dominated by Coastal tourism, which contributed 44% to Blue Economy jobs and 36% to GVA in 2019. Most employment is also concentrated in Coastal tourism. In fact, it is the only Blue Economy sector that saw an increase in employment (+31% compared to 2009). It is also the sector that saw the highest increase in terms of GVA (+36% compared to 2009).

Finland Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	4.8	5.0	5.0	4.7	5.0	5.2	4.9	5.0	4.9	4.7	4.4
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	8.4	8.4	8.4	8.4	8.5	10.2	7.6	7.6	6.2	6.2	6.0
Shipbuilding and repair	11.3	10.4	10.0	10.0	8.5	8.7	8.3	8.0	8.3	8.0	8.7
Maritime transport	11.2	11.0	11.0	10.9	10.8	11.2	10.7	10.4	10.0	10.1	10.9
Coastal tourism	18.4	24.9	25.1	25.9	24.2	23.0	22.1	23.4	22.8	23.6	24.0
Blue economy jobs	54.0	59.7	59.5	59.8	57.0	58.3	53.5	54.5	52.2	52.6	54.0
National employment	2,394	2,375	2,394	2,399	2,375	2,359	2,334	2,350	2,372	2,433	2,455
Blue economy (% of national jobs)	2.3%	2.5%	2.5%	2.5%	2.4%	2.5%	2.3%	2.3%	2.2%	2.2%	2.2%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	202	215	218	204	209	210	181	214	241	243	220
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	537	582	579	580	588	672	546	569	554	569	545
Shipbuilding and repair	545	466	547	514	362	416	424	456	434	450	271
Maritime transport	648	719	688	675	714	775	834	786	747	709	768
Coastal tourism	646	920	966	1,000	884	826	851	964	975	1,009	1,010
Blue economy GVA	2,578	2,903	2,997	2,973	2,758	2,900	2,837	2,991	2,952	2,981	2,814
National GVA	159,066	164,663	171,583	173,661	175,985	178,410	182,599	187,394	195,242	202,334	207,867
Blue economy (% of national GVA)	1.6%	1.8%	1.7%	1.7%	1.6%	1.6%	1.6%	1.6%	1.5%	1.5%	1.4%

The Swedish established Blue Economy sectors employ around 120660 people and generates around €6.1 billion in GVA.

Both Blue Economy GVA and national GVA have substantially increased in Sweden, by 45 % and 53 % compared to 2009, respectively. The share of Blue Economy GVA to national GVA decreased by 5.6 % compared to 2009. In terms of employment, national jobs increased by 13 % compared to 2009, while Blue Economy jobs decreased by 1.8 %; resulting in a 13 % decrease in the share of Blue Economy jobs to the overall national employment in Sweden.

The Blue Economy is dominated by Coastal tourism, which contributed 69 % to Blue Economy jobs and 56 % to GVA in 2019. Maritime transport is also an important contributor, providing almost 15 % of the Blue Economy jobs and 23 % of the GVA. Marine living resources comes in third with 7 % of the Blue Economy jobs and 7 % of the GVA; while Shipbuilding represents 6 % of the Blue Economy jobs and 8 % of the GVA.

Sweden Evolution of the Blue Economy established sectors

Persons employed (thousand)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	8.0	8.1	8.1	8.2	8.1	8.3	8.0	8.3	8.2	8.0	8.1
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	4.0	4.1	4.0	3.8	3.7	3.7	3.7	3.9	3.9	4.1	3.9
Shipbuilding and repair	7.0	6.5	6.8	7.1	7.0	7.0	7.0	6.8	7.2	7.6	7.7
Maritime transport	21.6	20.7	19.8	19.3	18.1	17.2	17.3	17.0	17.2	18.0	18.0
Coastal tourism	82.3	95.3	91.2	54.6	51.2	57.4	59.8	68.7	73.7	81.3	82.9
Blue economy jobs	122.9	134.7	129.9	93.0	88.1	93.7	95.8	104.7	110.2	119.0	120.7
National employment	4,342	4,354	4,449	4,460	4,505	4,548	4,609	4,685	4,781	4,857	4,885
Blue economy (% of national jobs)	2.8%	3.1%	2.9%	2.1%	2.0%	2.1%	2.1%	2.2%	2.3%	2.4%	2.5%

GVA (€ million)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Living resources	318	360	381	420	405	437	405	440	416	435	416
Non-living resources	-	-	-	-	-	-	-	-	-	-	-
Ocean energy	-	-	-	-	-	-	-	-	-	-	-
Port activities	241	296	307	303	300	337	333	353	332	363	329
Shipbuilding and repair	287	346	384	443	452	433	471	434	469	514	505
Maritime transport	825	1,050	958	1,019	926	947	1,165	1,020	1,020	1,293	1,403
Coastal tourism	2,543	3,284	3,361	2,188	2,036	2,234	2,420	2,843	2,958	3,418	3,436
Blue economy GVA	4,214	5,335	5,391	4,374	4,119	4,388	4,793	5,089	5,194	6,023	6,089
National GVA	276,539	330,236	364,847	380,288	390,462	388,879	403,707	413,117	425,157	417,621	423,119
Blue economy (% of national GVA)	1.5%	1.6%	1.5%	1.2%	1.1%	1.1%	1.2%	1.2%	1.2%	1.4%	1.4%



ANNEX 2
SUMMARY TABLES

Table A1 Persons employed by Member State and sector, 2019

Persons Employed	Marine living resources		Marine non-living resources		Marine renewable energy		Port activities		Shipbuilding and repair		Maritime transport		Coastal tourism	
	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09
AT	2,925	30%	0		0		1,582	30%	1,316	17%	686	-2%	0	
BE	7,703	40%	52	132%	874	10914%	14,272	44%	1,444	-51%	4,105	-35%	8,675	50%
BG	8,823	14%	60	-22%	-		3,929	-45%	5,283	-24%	1,820	-12%	76,997	-71%
CY	2,347	41%	-		-		1,179	12%	1,632	1127%	1,002	-77%	33,799	15%
CZ	2,261	3%	-		-		7,477	63%	2,481	51%	731	2%	-	
DE	58,140	30%	323	-8%	8,133		92,522	24%	47,532	20%	138,227	26%	197,286	9%
DK	8,260	-4%	2,765	6%	1,004	307%	5,574	62%	3,350	-26%	27,629	2%	78,884	79%
EE	3,258	-24%	-		-		3,677	2%	3,407	47%	2,546	19%	28,412	-40%
EL	36,869	-15%	118	60%	-		14,700	115%	8,504	-10%	23,427	-1%	492,251	0%
ES	115,716	-14%	101	14%	-		41,746	-19%	26,493	-7%	14,443	11%	720,998	9%
FI	4,742	-1%	-		-		6,249	-25%	8,016	-29%	10,071	-10%	23,667	29%
FR	59,736	-16%	163	-63%	-		38,301	-35%	39,127	27%	33,779	3%	200,388	-3%
HR	11,541	24%	1,207	-84%	-		4,740	-13%	10,424	-41%	7,283	5%	123,962	-7%
HU	5,684	53%	-		-		8,784	43%	4,899	462%	994	-18%	-	
IE	9,584	-13%	38	-6%	-		2,779	9%	810	3%	1,086	-8%	52,506	122%
IT	74,477	1%	2,250	-80%	-		35,234	-9%	40,111	-12%	68,992	52%	307,284	-23%
LT	8,234	21%	0	-69%	-		3,612	-6%	6,168	3%	1,682	-20%	5,529	-10%
LU	11	-15%	-		-		58	-49%	-		338	21%	-	
LV	5,199	-33%	-		-		6,087	35%	2,483	-19%	1,495	16%	25,257	53%
MT	1,948	5%	-		-		542	7%	373	28%	268	5%	22,253	71%
NL	21,111	22%	2,003	-15%	555	333%	34,491	29%	17,323	-2%	29,888	-8%	68,437	86%
PL	38,669	16%	211	-50%	-		28,554	2%	24,823	-15%	3,755	-16%	50,187	79%
PT	35,820	-13%	122	0%	-		4,519	0%	4,323	-28%	1,694	-1%	210,814	85%
RO	6,179	-12%	1,582	-83%	-		10,781	-46%	22,265	-29%	2,818	-24%	22,554	88%
SE	7,915	-1%	-		-		4,140	3%	7,553	7%	17,998	-17%	82,058	0%
SI	783	-19%	120	48%	-		2,475	-7%	662	-19%	296	-20%	3,835	14%
SK	1,968	-15%	-		-		6,038	302%	1,240	49%	503	-32%	-	
EU-27	539,905	-3%	11,114	-68%	10,565	2662%	384,039	1%	292,043	-5%	397,557	11%	2,836,031	1%

Table A2 Turnover by Member State and sector, € million, 2019

Turnover	Marine living resources		Marine non-living resources		Marine renewable energy		Port activities		Shipbuilding and repair		Maritime transport		Coastal tourism	
	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09
AT	1,157	2%	0	0	0	0	448	73%	292	64%	189	-3%	0	0
BE	4,209	61%	25	135%	820	4200%	5,699	68%	317	-65%	4,330	9%	1,228	78%
BG	580	53%	17	347%	-	-	222	-40%	202	19%	102	-24%	2,433	-51%
CY	156	69%	-	-	-	-	186	51%	121	923%	221	-55%	2,492	23%
CZ	144	25%	-	-	-	-	1,664	5%	247	111%	63	6%	-	-
DE	21,402	33%	95	-33%	10,441	-	14,751	68%	12,408	36%	58,631	59%	14,629	34%
DK	5,263	46%	3,505	-45%	1,862	1008%	1,382	50%	979	-23%	35,792	29%	8,734	82%
EE	303	32%	-	-	-	-	454	17%	343	117%	1,190	47%	2,073	4%
EL	2,882	-8%	16	23%	-	-	1,163	82%	374	-47%	2,690	6%	21,107	-35%
ES	22,488	22%	24	19%	-	-	7,570	-11%	3,863	-29%	3,244	20%	62,047	29%
FI	1,476	44%	-	-	-	-	1,237	5%	2,235	-12%	2,486	-14%	3,120	47%
FR	13,640	5%	35	-70%	-	-	8,280	-16%	9,069	32%	18,534	27%	30,034	28%
HR	479	91%	149	-35%	-	-	266	-16%	508	-48%	619	3%	7,834	33%
HU	653	40%	-	-	-	-	593	-17%	1,069	2346%	109	17%	-	-
IE	2,513	5%	16	-73%	-	-	424	-28%	148	18%	1,280	52%	4,974	106%
IT	17,704	18%	3,364	-92%	-	-	4,858	-14%	9,493	11%	15,332	11%	31,435	-1%
LT	1,248	162%	0	-50%	-	-	360	73%	360	29%	293	41%	256	22%
LU	2	21%	-	-	-	-	11	-6%	-	-	201	102%	-	-
LV	401	16%	-	-	-	-	522	41%	81	-8%	128	38%	1,130	114%
MT	416	114%	-	-	-	-	82	18%	27	36%	68	268%	1,977	188%
NL	8,117	61%	6,022	-59%	-	-	9,514	35%	5,010	6%	9,129	36%	6,007	144%
PL	4,941	62%	22	-49%	-	-	2,251	18%	2,121	10%	546	-11%	3,507	223%
PT	4,254	11%	4	0%	-	-	870	40%	452	-1%	506	26%	14,003	109%
RO	495	4%	243	-73%	-	-	639	-26%	847	-28%	235	8%	1,004	182%
SE	2,208	33%	-	-	-	-	785	54%	1,620	51%	3,980	-23%	9,731	19%
SI	159	87%	14	1%	-	-	348	46%	59	-19%	46	-32%	353	23%
SK	403	161%	-	-	-	-	507	373%	79	104%	88	19%	-	-
EU-27	117,694	26%	13,552	-80%	13,123	6913%	65,085	18%	52,325	11%	160,030	31%	230,107	20%

Table A3 Value added at factor costs (GVA) by Member State and sector, € million, 2019

GVA	Marine living resources		Marine non-living resources		Marine renewable energy		Port activities		Shipbuilding and repair		Maritime transport		Coastal tourism	
	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09
AT	171	21%	0		0		146	53%	84	73%	50	8%	0	
BE	507	47%	7	117%	115	3797%	1,780	16%	130	-41%	1,237	90%	427	71%
BG	88	103%	14	358%	-		78	-35%	96	51%	34	-10%	659	-48%
CY	30	67%	-		-		77	-10%	78	1392%	46	-73%	882	17%
CZ	39	47%	-		-		257	15%	68	108%	15	45%	-	
DE	3,035	56%	36	-39%	1,130		5,570	41%	3,338	48%	11,206	-10%	5,677	31%
DK	758	17%	1,649	-68%	599	1489%	669	72%	284	-3%	3,954	38%	3,067	83%
EE	49	14%	-		-		225	4%	110	139%	129	107%	496	17%
EL	510	115%	5	22%	-		746	126%	165	-63%	1,248	11%	5,312	-52%
ES	4,204	36%	10	5%	-		3,518	-2%	1,043	-17%	930	19%	23,655	29%
FI	248	23%	-		-		569	6%	450	-17%	709	9%	1,016	57%
FR	2,834	12%	10	-72%	-		3,275	-29%	3,030	107%	1,435	2%	11,168	33%
HR	156	193%	52	-48%	-		110	-25%	89	-68%	213	-2%	2,854	43%
HU	110	123%	-		-		228	-6%	313	2127%	19	59%	-	
IE	614	30%	4	-29%	-		212	-6%	67	37%	348	100%	1,773	146%
IT	2,672	12%	819	-61%	-		2,229	29%	2,785	47%	4,772	50%	10,522	4%
LT	211	151%	0.01	-58%	-		174	54%	140	81%	82	33%	78	90%
LU	0.4	33%	-		-		5	-11%	-		27	70%	-	
LV	75	23%	-		-		214	67%	25	-30%	28	2%	309	131%
MT	36	-5430%	-		-		50	34%	9	-28%	37	434%	580	188%
NL	1,049	28%	1,596	-57%	-		4,297	30%	724	-8%	1,917	12%	2,215	159%
PL	712	41%	9	-52%	-		796	41%	592	-17%	151	-19%	915	209%
PT	774	21%	2	0%	-		368	19%	124	-14%	77	4%	4,452	104%
RO	85	20%	26	-64%	-		251	-20%	356	21%	61	-10%	282	256%
SE	422	31%	-		-		363	51%	514	79%	1,293	57%	3,449	36%
SI	21	8%	4	68%	-		153	40%	19	34%	16	14%	99	36%
SK	14	-41%	-		-		120	-1095%	22	270%	16	3%	-	
EU-27	19,426	32%	4,243	-62%	1,843	4439%	26,481	15%	14,654	30%	30,047	12%	79,886	20%

Table A4 Gross operating surplus (gross profit) in tangible assets by Member State and sector, € million, 2019

Gross profit	Marine living resources		Marine non-living resources		Marine renewable energy		Port activities		Shipbuilding and repair		Maritime transport		Coastal tourism	
	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09
AT	49	-6%	0		0		84	57%	13	670%	26	26%	0	
BE	198	47%	3	44%	37	1688%	680	-14%	69	19%	1,005	214%	169	96%
BG	45	114%	6	261%	-		38	-42%	34	52%	16	19%	277	-49%
CY	13	149%	-		-		38	-13%	21	696%	17	-78%	376	75%
CZ	12	25%	-		-		119	-18%	31	118%	4	87%	-	
DE	1,114	46%	14	-54%	628		1,886	41%	438	208%	5,964	-31%	1,946	32%
DK	277	29%	1,311	-73%	527	2457%	287	52%	75	763%	2,306	98%	805	107%
EE	16	7%	-		-		130	-15%	38	132%	64	182%	129	158%
EL	129	-156%	0	-47%	-		69	-54%	30	-86%	319	-29%	1,706	-60%
ES	1,724	86%	5	-17%	-		1,720	11%	15	-109%	479	22%	8,564	74%
FI	107	30%	-		-		262	43%	82	-13%	250	67%	308	100%
FR	784	16%	4	-75%	-		927	-50%	773	-943%	302	94%	2,577	45%
HR	68	-1634%	20	-56%	-		32	-49%	66	-274%	108	4%	1,310	90%
HU	56	158%	-		-		117	-34%	235	4186%	9	-7609%	-	
IE	316	40%	2	-46%	-		82	2%	38	77%	298	232%	569	-2076%
IT	1,305	22%	629	-46%	-		850	67%	1,077	234%	2,365	90%	4,268	42%
LT	105	196%	0	-47%	-		107	65%	44	563%	46	60%	30	378%
LU	-		-		-		3	136%	-		8	146%	-	
LV	27	-2%	-		-		117	56%	1	-91%	13	6%	96	164%
MT	12	-135%	-		-		35	26%	4	-54%	34	847%	311	328%
NL	411	16%	1,365	-61%	-		2,106	29%	15	-94%	982	-8%	930	238%
PL	311	10%	4	-59%	-		368	39%	218	-40%	89	-29%	436	214%
PT	340	34%	0	0%	-		199	26%	24	-48%	38	33%	1,874	175%
RO	41	-3%	8	-82%	-		116	-23%	70	33%	30	-23%	124	286%
SE	155	18%	-		-		117	110%	151	1291%	435	1353%	917	72%
SI	6	-26%	1	450%	-		75	66%	8	-871%	7	80%	39	86%
SK	-	-183%	-		-		16	-148%	8	-491%	6	10%	-	
EU-27	7,610	50%	3,371	-65%	1,192	5153%	10,580	8%	3,415	93%	14,617	5%	27,762	44%

Table A5 Gross investments in tangible assets by Member State and sector, € million, 2019

Gross investment	Marine living resources		Marine non-living resources		Marine renewable energy		Port activities		Shipbuilding and repair		Maritime transport		Coastal tourism	
	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09	2019	Δ 2019-09
AT	10	-10%	-	-	-	-	14	-57%	14	156%	5	-68%	-	-
BE	84	-22%	3	221%	51	3750%	728	19%	27	15%	2,319	167%	-	-
BG	14	50%	7	9%	-	-	28	-28%	4	-83%	5	-72%	-	-
CY	2	-19%	-	-	-	-	19	51%	11	980%	2	-73%	-	-
CZ	2	-17%	-	-	-	-	38	-54%	14	58%	3	-5%	-	-
DE	312	151%	8	-74%	255	-	982	26%	572	185%	2,739	25%	-	-
DK	78	-19%	739	29%	267	385%	358	153%	33	75%	4,358	28%	-	-
EE	11	59%	-	-	-	-	60	-58%	9	27%	64	335%	-	-
EL	11	-65%	1	48%	-	-	32	-39%	3	-89%	105	8%	-	-
ES	323	22%	5	-40%	-	-	729	-10%	134	-6%	310	124%	-	-
FI	15	-32%	-	-	-	-	173	-12%	92	151%	201	7%	-	-
FR	246	76%	3	-75%	-	-	952	-18%	384	-34%	942	-74%	-	-
HR	13	26%	10	2%	-	-	23	8%	13	-58%	58	15%	-	-
HU	12	93%	-	-	-	-	46	-51%	39	2855%	8	120%	-	-
IE	14	-94%	-	-100%	-	-	129	-9%	9	361%	161	105%	-	-
IT	237	27%	457	-58%	-	-	128	-82%	317	-18%	1,257	-75%	-	-
LT	35	150%	0	-97%	-	-	69	30%	10	84%	9	-11%	-	-
LU	-	-	-	-	-	-	1	-56%	-	-	1	-43%	-	-
LV	10	-1%	-	-	-	-	70	252%	2	-80%	12	20%	-	-
MT	1	-13%	-	-	-	-	3	-46%	20	-	2	-3%	-	-
NL	115	68%	133	-74%	78	209%	884	13%	76	-3%	568	-44%	-	-
PL	115	97%	3	-48%	-	-	161	45%	74	4%	23	10%	-	-
PT	104	8%	0.2	0%	-	-	92	-59%	17	-6%	35	7%	-	-
RO	17	-67%	13	-45%	-	-	139	-6%	46	-56%	32	151%	-	-
SE	25	-40%	-	-	-	-	227	155%	60	51%	442	2%	-	-
SI	2	124%	0.1	-91%	-	-	26	-52%	3	-28%	2	-98%	-	-
SK	6	40%	-	-	-	-	11	69%	4	396%	6	24%	-	-
EU-27	1,813	13%	1,383	-39%	651	697%	6,124	-6%	1,989	9%	13,669	-22%	-	-

Table A6 EU-27: Overview of the Blue Economy by sub-sector and activity

EU-27		Activity	Persons employed		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)		Δ 2019-09		
Sector	Sub-sector		2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	
Living resources	Primary production	Capture fisheries (SSCF)	58,271	62,650	8%	1,034.4	1,024.6	-1%	578.7	678.6	17%	826%	1224%	48%	-	14.8	215.3	1559%	579%	413%	171%	130.2	140.8	8%					
		Capture fisheries (LSF)	64,879	60,425	-7%	4,488.2	4,354.8	-3%	2,213.6	2,385.4	8%	682%	1168%	71%	596.9	947.2	59%	-134%	535%	500%	500%	483.1	635.5	32%					
		Capture fisheries (DWF)	7,251	6,512	-10%	790.7	953.2	21%	198.9	300.9	51%	156%	160%	2%	27.5	85.9	213%	73%	51%	-30%	110.8	177.7	60%						
		Marine aquaculture	7,702	8,769	14%	1,293.2	2,166.0	67%	81.9	344.0	320%	144%	206%	43%	-	247.3	89.1	136%	-250%	-40%	84%	517.3	357.5	-31%					
		Freshwater aquaculture	20,543	23,903	16%	1,127.0	1,127.7	0%	343.8	431.1	25%	713%	885%	24%	100.1	114.6	14%	196%	132%	-33%	292.9	472.0	61%						
	Processing of fish products	Shellfish aquaculture	52,874	36,351	-31%	1,183.0	1,330.2	12%	632.4	780.2	23%	1049%	1026%	-2%	272.7	245.8	-10%	420%	274%	-35%	173.0	266.3	54%						
		Processing and preserving of fish, crustaceans and molluscs	101,870	109,386	7%	18,945.8	29,646.5	56%	3,319.8	4,586.8	38%	475%	426%	-10%	1,209.3	1,562.8	29%	180%	134%	-26%	469.7	618.1	32%						
		Manufacture of oils and fats	149	175	17%	118.6	181.6	53%	15.7	16.3	4%	94%	67%	-29%	8.0	8.9	11%	41%	25%	-38%	284.8	337.5	18%						
		Prepared meals and dishes	17,319	20,113	16%	2,913.9	3,399.4	17%	689.7	786.9	14%	562%	587%	4%	238.1	262.3	10%	146%	175%	20%	455.8	512.0	12%						
		Other food products	812	713	-12%	206.2	208.0	1%	48.7	48.3	-1%	397%	181%	-54%	23.7	24.7	4%	165%	80%	-52%	447.7	263.1	-41%						
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	128,741	144,717	12%	56,280.1	71,022.8	26%	5,619.4	7,823.3	39%	291%	300%	3%	2,343.5	3,191.4	36%	132%	134%	1%	594.8	717.0	21%						
		Retail sale of fish, crustaceans and molluscs in specialised stores	68,510	64,999	-5%	5,231.8	5,670.4	8%	1,070.0	1,149.9	7%	487%	403%	-17%	558.6	464.3	-17%	180%	101%	-44%	247.5	314.5	27%						
		Extraction of crude petroleum	7,958	1,040	-87%	14,717.8	3,120.5	-79%	6,879.5	1,394.4	-80%	337%	293%	-13%	6,731.6	1,232.8	-82%	248%	173%	-30%	757.3	706.5	-7%						
		Extraction of natural gas	17,030	2,829	-83%	49,925.6	7,338.7	-85%	3,285.2	1,673.7	-49%	378%	274%	-27%	2,411.7	1,419.7	-41%	242%	140%	-42%	296.4	589.2	99%						
		Operation of gravel and sand pits; mining of clays and kaolin	988	741	-25%	399.4	312.1	-22%	130.4	105.9	-19%	177%	204%	15%	79.2	59.2	-25%	91%	105%	15%	261.2	358.3	37%						
	Minings support activities	Extraction of salt	678	634	-6%	102.1	138.1	35%	29.2	51.7	77%	247%	316%	28%	9.9	21.7	119%	89%	144%	61%	219.1	477.8	118%						
		Support activities for other mining and quarrying	5	10	114%	1.1	2.3	98%	0.2	1.0	289%	77%	324%	323%	0.0	0.3	603%	-1%	128%	8934%	126.5	600.4	375%						
		Support activities for petroleum and natural gas extraction	7,727	4,809	-38%	1,893.1	2,216.8	17%	865.1	1,444.7	67%	456%	1080%	137%	419.8	1,014.0	142%	192%	671%	250%	480.3	561.6	17%						
		Production of electricity	278	9,572	3348%	151.6	10,822.3	7038%	27.7	1,665.6	5922%	33%	67%	103%	12.4	1,199.0	9583%	18%	51%	185%	174.5	218.3	25%						
		Transmission of electricity	106	991	835%	36.6	2,339.3	6298%	13.1	259.1	1875%	75%	99%	33%	10.4	71.8	589%	57%	66%	16%	197.6	200.9	2%						
Port activities	Cargo and warehousing	Cargo handling	64,395	55,790	-13%	7,192.7	8,255.2	15%	3,218.7	3,639.8	13%	1211%	1264%	4%	936.2	1,231.0	31%	381%	514%	35%	830.9	889.9	7%						
		Warehousing and storage	130,064	148,972	15%	18,815.3	24,090.0	28%	6,693.0	8,583.9	28%	928%	926%	0%	2,645.7	3,497.9	32%	414%	401%	-3%	662.8	770.0	16%						
		Construction of water projects	94,024	65,742	-30%	14,687.4	15,720.5	7%	5,039.7	4,185.3	-17%	766%	590%	-23%	2,122.8	1,234.7	-42%	286%	133%	-53%	738.1	882.7	20%						
		Service activities incidental to water transportation	93,087	112,120	20%	14,694.5	20,437.5	39%	8,232.4	11,528.2	40%	1438%	1380%	-4%	4,130.1	5,826.6	41%	769%	743%	-3%	892.7	1,048.0	17%						
		Building of ships and floating structures	137,295	115,176	-16%	23,867.0	27,781.8	16%	4,888.0	7,057.7	44%	663%	673%	2%	388.1	1,485.2	283%	108%	101%	-6%	653.0	774.7	19%						
	Shipbuilding and repair	Building of pleasure and sporting boats	42,674	48,304	13%	8,251.4	12,319.3	49%	1,687.0	2,616.3	55%	689%	699%	1%	232.5	422.7	82%	119%	151%	27%	566.6	661.3	17%						
		Repair and maintenance of ships and boats	86,269	92,150	7%	6,749.5	8,875.5	31%	2,541.9	3,373.6	33%	959%	973%	1%	692.4	997.5	44%	336%	347%	3%	540.2	647.3	20%						
		Manufacture of engines and turbines, except aircraft	19,111	13,743	-28%	5,495.1	4,904.7	-11%	1,253.7	1,214.9	-3%	656%	419%	-36%	249.3	27.1	-89%	174%	100%	-43%	763.1	829.1	9%						
		Manufacture of instruments for measuring, testing and navigation	6,567	8,860	35%	1,160.4	1,578.0	36%	431.4	609.2	41%	837%	696%	-17%	81.0	168.6	108%	316%	282%	-11%	693.4	791.7	14%						
		Manufacture of other fabricated metal products n.e.c.	6,755	3,258	-52%	702.6	445.5	-37%	234.8	157.6	-33%	612%	567%	-7%	63.0	46.9	-25%	196%	186%	-5%	389.9	445.4	18%						
Maritime transport	Passenger transport	Manufacture of sport goods	2,467	2,589	5%	327.7	369.9	13%	88.0	112.9	28%	650%	635%	-2%	23.0	37.0	60%	209%	214%	2%	416.1	465.2	12%						
		Manufacture of cordage, rope, twine and netting	1,869	2,153	15%	157.8	243.9	55%	46.3	73.4	58%	702%	470%	-33%	14.6	22.9	57%	231%	136%	-41%	427.4	430.4	1%						
		Manufacture of textiles other than apparel	3,779	12,851	240%	338.9	1,351.5	299%	91.9	431.5	369%	663%	693%	5%	24.5	126.4	417%	162%	209%	29%	370.9	467.6	26%						
		Sea and coastal passenger water transport	71,138	98,102	38%	14,531.3	20,938.0	44%	4,683.5	7,636.2	63%	599%	621%	4%	2,016.6	4,109.6	104%	186%	140%	-25%	610.6	571.9	-6%						
		Inland passenger water transport	16,922	22,241	31%	1,334.7	1,990.6	49%	516.6	796.8	54%	842%	996%	18%	183.8	344.9	88%	364%	419%	15%	374.7	425.6	14%						
	Freight transport	Sea and coastal freight water transport	97,821	74,944	-23%	70,230.6	93,727.6	33%	12,084.0	13,948.7	15%	557%	687%	23%	7,242.2	9,396.3	30%	183%	412%	125%	904.1	1,063.7	18%						
		Inland freight water transport	23,058	22,333	-3%	2,739.8	2,828.2	3%	931.2	848.6	-9%	550%	624%	14%	654.7	434.7	-34%	230%	220%	-5%	389.0	475.7	22%						
		Renting and leasing of water transport equipment	13,617	14,128	4%	3,285.2	1,919.4	-42%	1,827.4	754.1	-59%	1158%	994%	-14%	1,689.5	592.3	-65%	864%	787%	-9%	381.8	361.2	-5%						
		Other transportation support activities	134,907	171,301	27%	30,127.7	41,956.1	39%	6,887.3	10,324.1	50%	508%	499%	-2%	2,136.0	3,279.3	54%	180%	171%	5%	736.6	907.8	23%						
		Transport	447,498	427,750	-4%	54,394.0	65,989.5	21%	14,190.0	18,193.9	28%	505%	505%	0%	3,062.7	5,889.9	92%	127%	175%	38%	530.9	610.9	15%						
Coastal tourism	Other expenditure	1,074,216	1,281,249	19%	68,806.7	86,547.7	26%	18,469.2	24,956.7	35%	537%	604%	12%	5,856.6	9,913.2	18%	157%	183%	17%	263.2	326.2	24%							
	Accommodation	1,296,491	1,095,610	-15%	69,242.8	77,570.2	12%	33,733.9	36,958.8	10%	982%	1035%	5%	10,431.0	14,619.5	40%	297%	430%	45%	353.5	414.0	17%							
EU-27		4,427,712	4,448,705	0%	577,973	667,216	15%	153,813	183,930	20%	27%	28%	4%	59,667	72,934	22%	10%	11%	6%	93,468	110,058	18%							

Table A7 Belgium: Overview of the Blue Economy by sub-sector and activity

Belgium		Sub-sector	Activity	Persons employed		Δ 2019-09	Turnover (M€)		Δ 2019-09	Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Δ 2019-09	Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Δ 2019-09	Personnel costs per employee (k€)		Δ 2019-09
Sector				2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019	
Living resources	Primary production	Capture fisheries (ISCF)		421	328	-22%	76.6	77.8	1%	29.9	36.7	22%	39%	47%	21%	1.9	9.8	402%	3%	13%	395%	66.5	81.9	23%
		Capture fisheries (LSF)																						
		Capture fisheries (DWF)																						
		Marine aquaculture																						
		Shellfish aquaculture	18	13	-27%	2.3	1.0	-58%	0.7	0.4	-47%	30%	38%	26%	0.2	0.1	-52%	9%	10%	15%	20.5	17.0	-17%	
	Processing of fish products	Freshwater aquaculture	56			0.7			0.4			53%					0.2			23%		3.2		
		Processing and preserving of fish, crustaceans and molluscs	1,040	1,297	25%	443.0	674.3	52%	75.7	107.8	42%	17%	16%	-6%	31.9	36.7	15%	7%	5%	-24%	42.0	54.9	31%	
		Manufacture of oils and fats																						
		Prepared meals and dishes	744	1,179	58%	239.7	301.4	26%	54.6	75.5	38%	23%	25%	10%	22.3	23.3	4%	9%	8%	-17%	43.4	44.3	3%	
		Other food products	5	5	-10%	2.4	1.8	-24%	0.5	0.5	9%	19%	28%	45%	0.1	0.2	83%	5%	13%	142%	62.5	56.8	-9%	
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	2,253	3,579	59%	1,693.0	3,477.3	105%	149.8	286.5	91%	9%	8%	-7%	53.5	134.9	152%	3%	4%	23%	42.8	42.4	-1%	
		Retail sale of fish, crustaceans and molluscs in specialised stores	951	735	-23%	153.3	149.6	-2%	32.7	34.9	7%	21%	23%	9%	24.9	22.3	-10%	16%	15%	-8%	8.3	17.1	106%	
		Support activities for other mining and quarrying	1	1	-44%	0.5	0.4	-25%	0.1	0.0	-67%	23%	10%	-55%	0.1	0.0	-58%	12%	7%	-44%	40.4	16.7	-59%	
		Support activities for petroleum and natural gas extraction																						
		Operation of gravel and sand pits; mining of clays and kaolin	21	51	144%	10.1	24.8	145%	3.3	7.4	124%	33%	30%	-9%	2.0	3.0	48%	20%	12%	-40%	62.6	87.4	40%	
	Other mining and quarrying	Extraction of salt																						
		Extraction of crude petroleum																						
		Extraction of natural gas																						
		Production of electricity	7	422	5644%	18.9	601.7	3076%	2.7	87.6	3175%	14%	15%	3%	1.9	43.7	2211%	10%	7%	-27%	107.6	104.0	-3%	
		Transmission of electricity	1	73	7365%	1.1	77.5	7280%	0.4	30.6	7407%	39%	39%	2%	0.3	22.8	7557%	28%	29%	4%	112.2	106.7	-5%	
Port activities	Cargo and warehousing	Cargo handling	1,472	1,481	1%	665.4	527.9	-21%	309.1	167.2	-46%	46%	32%	-32%	98.5	82.9	-16%	15%	16%	6%	143.1	56.9	-60%	
		Warehousing and storage	1,025	1,846	80%	237.2	526.5	122%	95.3	186.7	96%	40%	35%	-12%	45.8	87.2	90%	19%	17%	-14%	48.3	53.9	12%	
		Construction of water projects	2,536	7,427	193%	1,350.9	4,321.0	220%	274.6	823.7	200%	20%	19%	-6%	107.7	130.6	21%	8%	3%	-62%	65.8	93.3	42%	
		Service activities incidental to water transportation	4,906	4,296	-12%	1,130.6	1,231.4	9%	852.2	629.4	-26%	75%	51%	-32%	540.6	261.2	-52%	48%	21%	-56%	63.5	85.7	35%	
		Building of ships and floating structures	111	107	-4%	20.8	22.8	10%	6.6	5.2	-21%	32%	23%	-28%	1.4	1.3	-7%	7%	6%	-15%	46.8	36.4	-22%	
	Shipbuilding and repair	Building of pleasure and sporting boats	26	16	-38%	2.9	0.9	-69%	0.8	0.1	-88%	28%	11%	-60%	0.3	0.2	-167%	10%	-22%	-315%	19.2	18.8	-3%	
		Repair and maintenance of ships and boats	1,708	994	-42%	226.3	196.0	-13%	94.5	65.3	-31%	42%	33%	-20%	13.3	25.6	92%	6%	13%	122%	47.5	39.9	-16%	
		Manufacture of engines and turbines, except aircraft	1,073	104	-90%	647.3	70.3	-89%	115.8	40.3	-65%	18%	57%	221%	42.9	32.8	-23%	7%	47%	606%	68.0	72.4	6%	
		Manufacture of instruments for measuring, testing and navigation	16	48	203%	4.8	14.4	199%	1.1	5.8	422%	23%	40%	74%	0.2	2.5	1126%	4%	17%	310%	57.1	68.6	20%	
		Manufacture of other fabricated metal products n.e.c.	1			0.3			0.1			26%			0.0			11%			38.5			
Shipbuilding and repair	Equipment and machinery	Manufacture of sport goods	5			0.6		0.2			28%			0.1			13%				19.4			
		Manufacture of cordage, rope, twine and netting	0	18	6274%	0.1	4.4	6218%	0.0	1.1	6311%	25%	26%	1%	0.0	0.3	4981%	9%	8%	-20%	38.1	43.1	13%	
		Manufacture of textiles other than apparel	4	93	2485%	0.5	18.3	3338%	0.1	5.5	3762%	27%	30%	12%	0.0	2.4	7390%	6%	13%	118%	30.9	33.8	10%	
		Sea and coastal passenger water transport	269	142	-47%	547.9	60.9	-89%	57.4	37.5	-35%	10%	62%	488%	26.1	29.7	14%	5%	49%	924%	116.0	54.2	-53%	
		Inland passenger water transport	185	172	-7%	78.1	30.6	-61%	17.7	9.8	-45%	23%	32%	41%	12.6	6.1	-52%	16%	20%	24%	27.6	21.5	-22%	
	Maritime transport	Sea and coastal freight water transport	238	838	252%	823.3	2,763.7	236%	148.3	1,089.5	635%	18%	39%	119%	137.1	1,009.1	636%	17%	37%	119%	47.1	95.9	104%	
		Inland freight water transport	385	545	42%	153.3	214.2	40%	40.5	93.3	130%	26%	44%	65%	30.5	84.1	176%	20%	39%	97%	26.0	16.9	-35%	
		Renting and leasing of water transport equipment	78	100	28%	135.6	70.3	-48%	23.9	22.2	-7%	18%	32%	79%	19.0	20.5	8%	14%	29%	108%	62.8	17.0	-73%	
		Other transportation support activities	5,149	2,163	-58%	2,241.7	950.3	-58%	363.4	186.7	-49%	16%	20%	21%	95.3	61.7	-35%	4%	6%	53%	52.1	57.8	11%	
		Transport	1,429	1,866	31%	206.4	390.5	89%	82.6	132.4	60%	40%	34%	-15%	20.4	39.2	93%	10%	10%	23%	43.5	50.0	15%	
Coastal tourism	Other expenditure	1,629	2,734	68%	232.2	441.9	90%	51.9	105.9	104%	22%	24%	7%	25.1	41.0	63%	11%	9%	-14%	16.4	23.7	44%		
	Accommodation	2,714	3,176	17%	252.4	396.1	57%	115.0	189.5	65%	46%	48%	5%	40.7	86.9	114%	16%	22%	36%	27.4	32.3	18%		
	Blue economy (established sectors)	30,478	35,848	18%	11,600	17,640	52%	3,002	4,465	49%	26%	25%	2%	1,397	2,302	65%	12%	13%	8%	1,605	2,163	35%		
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Table A8 Bulgaria: Overview of the Blue Economy by sub-sector and activity

Bulgaria		Activity		Persons employed		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)		Δ 2019-09			
Sector	Sub-sector	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019		
Living resources	Primary production	Capture fisheries (SSCF)	961	1,366	42%	2.9	2.7	-4%	2.1	2.2	6%	72%	80%	10%	0.5	1.8	285%	16%	65%	301%	3.5	2.5	-28%	1.7	0.3	-82%	
		Capture fisheries (LSF)	234	253	8%	3.9	3.7	-5%	2.1	2.3	9%	55%	63%	15%	1.3	1.7	28%	34%	46%	35%	3.5	2.5	-28%	1.7	0.3	-82%	
		Capture fisheries (DWF)																									
		Marine aquaculture		64		0.0	8.9	#####	0.0	5.6	#####	8%	63%	739%	-	0.0	4.9	539278%	-23%	55%	342%			4.3			
		Freshwater aquaculture	369	973	164%	8.0	21.8	172%	2.7	6.8	151%	34%	31%	-8%	0.8	1.9	148%	10%	9%	-9%	3.9	3.2	-18%	3.9	3.2	-18%	
	Processing of fish products	Shellfish aquaculture	24	45	84%	0.3	1.2	390%	0.1	1.2	730%	57%	96%	69%	0.1	0.8	1258%	24%	68%	177%	2.8	3.5	24%	2.8	3.5	24%	
		Processing and preserving of fish, crustaceans and molluscs	1,475	1,697	15%	29.9	65.2	118%	6.9	19.8	187%	23%	30%	32%	3.5	10.2	191%	12%	16%	34%	2.3	5.7	145%	2.3	5.7	145%	
		Manufacture of oils and fats																									
		Prepared meals and dishes	406	76	-81%	7.7	2.6	-67%	1.6	0.6	-65%	21%	22%	4%	0.4	0.1	-74%	6%	4%	-24%	2.9	5.9	102%	2.9	5.9	102%	
		Other food products		12			0.9			0.2			26%			0.1			14%					8.6		8.6	
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	3,474	3,516	1%	315.6	482.3	53%	26.2	55.6	112%	8%	12%	39%	14.0	28.7	105%	4%	6%	34%	3.5	7.7	119%	3.5	7.7	119%	
		Retail sale of fish, crustaceans and molluscs in specialised stores	793	816	3%	11.1	33.0	197%	1.6	3.0	88%	14%	9%	-37%	0.6	0.9	50%	5%	3%	-50%	1.3	2.6	104%	1.3	2.6	104%	
		Support activities for other mining and quarrying																									
	Mining support activities	Support activities for petroleum and natural gas extraction	8	15	94%	1.5	0.2	-87%	0.2	2.9	1978%	-11%	1550%	14825%	-	0.2	2.7	1857%	-11%	1450%	13875%			18.8			
		Operation of gravel and sand pits; mining of clays and kaolin																									
		Extraction of salt	37	32	-16%	1.1	1.9	65%	0.5	0.7	40%	44%	38%	-15%	0.2	0.4	83%	18%	20%	11%	8.5	10.1	19%	8.5	10.1	19%	
	Extraction of oil and gas	Extraction of crude petroleum																									
		Extraction of natural gas	32	16	-49%	1.1	14.4	1216%	2.7	13.0	381%	246%	90%	-63%	1.5	5.3	245%	139%	37%	-74%	38.3	114.7	200%	38.3	114.7	200%	
		Production of electricity																									
	Ocean energy	Offshore wind energy	Transmission of electricity																								
Cargo handling			645	538	-17%	9.1	24.4	167%	5.5	16.6	203%	60%	68%	14%	0.9	9.9	1031%	10%	41%	324%	7.1	12.3	73%	7.1	12.3	73%	
Warehousing and storage			214	306	43%	7.1	20.5	188%	3.0	5.8	95%	42%	28%	-32%	1.7	2.8	68%	24%	14%	-42%	6.2	9.8	58%	6.2	9.8	58%	
Port activities		Construction of water projects	4,873	1,695	-65%	280.6	79.5	-72%	71.0	9.0	-87%	25%	11%	-55%	41.2	-	7.9	-119%	15%	-10%	-168%	6.1	10.0	63%	6.1	10.0	63%
		Service activities incidental to water transportation	1,430	1,011	-29%	74.7	76.1	2%	40.5	30.8	-24%	54%	40%	-25%	22.0	16.1	-27%	29%	21%	-28%	9.1	14.5	60%	9.1	14.5	60%	
		Building of ships and floating structures	2,527	625	-75%	79.4	29.8	-62%	14.6	19.9	36%	18%	67%	263%	0.1	5.9	5800%	0%	20%	15620%	5.7	22.4	290%	5.7	22.4	290%	
Shipbuilding and repair		Building of pleasure and sporting boats	58	38	-34%	1.0	1.0	0%		0.3		30%		-	0.2	0.1	150%	-20%	10%	150%	3.4	5.3	53%	3.4	5.3	53%	
		Repair and maintenance of ships and boats	4,182	4,309	3%	84.6	173.0	104%	47.6	94.0	97%	56%	54%	-3%	21.8	35.8	64%	26%	21%	-20%	6.2	13.5	119%	6.2	13.5	119%	
		Manufacture of engines and turbines, except aircraft	47	17	-65%	1.3	0.5	-63%	0.3	0.2	-28%	26%	50%	95%	0.1	0.1	-65%	12%	11%	-6%	3.7	7.6	103%	3.7	7.6	103%	
Shipbuilding and repair		Equipment and machinery	Manufacture of instruments for measuring, testing and navigation	3	8	227%	0.1	0.4	663%	0.0	0.2	716%	34%	36%	7%	0.0	0.1	708%	22%	23%	6%	4.1	7.0	73%	4.1	7.0	73%
	Manufacture of other fabricated metal products n.e.c.		0	71	91794%	0.0	3.0	#####	0.0	0.9	#####	31%	32%	1%	0.0	0.4	172542%	16%	15%	-9%	3.0	7.0	132%	3.0	7.0	132%	
	Manufacture of sport goods		87	153	75%	2.7	7.5	173%	0.7	2.7	270%	26%	36%	35%	0.3	1.2	324%	11%	17%	55%	4.8	9.3	95%	4.8	9.3	95%	
	Passenger transport	Manufacture of cordage, rope, twine and netting	19	3	-85%	0.2	0.1	-55%	0.1	0.0	-55%	38%	38%	0%	0.0	0.0	-1%	13%	28%	120%	2.2	3.2	47%	2.2	3.2	47%	
		Manufacture of textiles other than apparel	6	19	242%	0.1	0.7	601%	0.0	0.2	581%	28%	27%	-3%	0.0	0.1	475%	13%	11%	-18%	2.6	5.9	129%	2.6	5.9	129%	
		Sea and coastal passenger water transport	80	169	111%	1.0	2.5	150%	0.2	2.8	1300%	20%	112%	460%	-	0.5	1.3	360%	-50%	52%	204%	5.0	8.3	66%	5.0	8.3	66%
	Freight transport	Inland passenger water transport		329		16.6			6.0			36%				4.3		26%					5.2		5.2		
		Sea and coastal freight water transport	569	449	-21%	55.3	30.3	-45%	19.6	13.8	-30%	35%	46%	29%	4.1	6.1	49%	7%	20%	172%	14.8	16.9	15%	14.8	16.9	15%	
		Inland freight water transport	1,095	534	-51%	51.5	28.6	-44%	13.3	9.3	-30%	26%	33%	26%	7.4	4.7	-36%	14%	16%	14%	5.4	8.6	60%	5.4	8.6	60%	
	Maritime transport	Services for transport	Renting and leasing of water transport equipment	27	117	333%	1.2	5.5	358%	0.8	2.3	188%	67%	42%	-37%	0.7	1.4	100%	58%	25%	-56%	3.7	7.7	108%	3.7	7.7	108%
Other transportation support activities			288	147	-49%	24.7	25.8	4%	3.4	4.0	18%	14%	15%	13%	1.7	2.2	30%	7%	9%	25%	5.8	12.0	108%	5.8	12.0	108%	
Transport			30,790	10,448	-66%	1,455.7	758.3	-48%	198.1	126.9	-36%	14%	17%	23%	70.3	53.4	-24%	5%	7%	46%	4.2	7.0	69%	4.2	7.0	69%	
Other expenditure		Other expenditure	113,024	30,922	-73%	1,734.5	871.5	-50%	317.0	193.2	-39%	18%	22%	21%	110.0	73.9	-33%	6%	8%	34%	1.8	3.9	111%	1.8	3.9	111%	
		Accommodation	121,698	32,542	-73%	1,791.4	802.8	-55%	743.0	375.9	-49%	17%	47%	13%	359.6	167.2	-53%	20%	21%	4%	3.1	6.4	104%	3.1	6.4	104%	
		Blue economy (established sectors)	289,476	93,331	-68%	6,039	3,597	-41%	1,525	1,029	-33%	25%	29%	13%	664	439	-34%	11%	12%	11%	847	582	-31%	847	582	-31%	
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Table A10 Denmark: Overview of the Blue Economy by sub-sector and activity

Denmark		Activity	Persons employed		Δ 2019-09		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)		Δ 2019-09		
Sector	Sub-sector		2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	
Living resources	Primary production	Capture fisheries (ISCF)	378	264	-30%	-27%	25.1	22.3	12.3	10.5	-15%	-15%	49%	47%	-4%	-4%	75.9	162.5	74%	71%	-20%	-6%	71%	45.8	44.8	-2%	41%	45.8	44.8	-2%	41%
		Capture fisheries (LSF)	1,317	964	-30%	-27%	292.7	401.7	175.1	264.7	37%	37%	60%	66%	10%	10%	75.9	162.5	114%	56%	40%	56%	75.3	106.0	41%		75.3	106.0	41%		
		Capture fisheries (DWF)																													
		Marine aquaculture	90	142	58%		42.7	74.9	3.8	19.7	75%		9%	26%	199%	-	0.6	11.9	2047%	-1%	16%	1210%	36.1	43.6	21%		36.1	43.6	21%		
	Freshwater aquaculture	375	404	8%		95.7	140.0	23.7	34.3	46%		25%	25%	-1%	-1%	0.5	2.6	633%	-1%	2%	465%	47.3	59.5	26%		47.3	59.5	26%			
	Shellfish aquaculture	25	22	-12%		1.8	2.5	0.6	1.5	42%		34%	61%	81%	-	0.9	0.5	156%	-51%	20%	139%	44.7	38.9	-13%		44.7	38.9	-13%			
Processing of fish products		Processing and preserving of fish, crustaceans and molluscs	4,175	3,366	-19%		1,668.0	2,509.1	279.7	254.9	-9%	-9%	17%	10%	-39%	-39%	86.3	64.4	-25%	5%	3%	-50%	46.3	56.6	22%		46.3	56.6	22%		
		Manufacture of oils and fats	77	43	-44%		64.2	76.6	11.3	8.3	19%	-27%	18%	11%	-39%	-39%	5.7	4.9	-13%	9%	6%	-27%	73.0	77.5	6%		73.0	77.5	6%		
		Prepared meals and dishes	20	1	-94%		5.7	0.2	0.2	0.0	-97%	-97%	22%	27%	21%	0.3	0.0	-99%	6%	2%	-59%	45.5	31.0	-32%		45.5	31.0	-32%			
		Other food products	1	0	-89%		0.3	0.0	0.1	0.0	-88%	-88%	34%	33%	-1%	0.0	0.0	-88%	12%	4%	12%	4%	61.5	65.6	7%		61.5	65.6	7%		
		Wholesale of other food, including fish, crustaceans and molluscs	1,384	1,948	41%		1,319.5	1,872.8	113.9	186.0	42%	63%	9%	10%	15%	45.5	67.8	49%	3%	4%	5%	49.4	60.7	23%		49.4	60.7	23%			
		Retail sale of fish, crustaceans and molluscs in specialised stores	773	785	2%		81.7	92.9	23.4	24.9	14%	6%	29%	27%	-6%	8.8	4.4	-50%	11%	5%	-56%	18.9	26.1	38%		18.9	26.1	38%			
Non-living resources	Minings support activities	Support activities for other mining and quarrying	1	1	-1%		0.4	0.3	0.1	0.1	-22%	24%	30%	47%	58%	0.0	0.1	458%	3%	24%	611%	70.0	62.5	-11%		70.0	62.5	-11%			
		Support activities for petroleum and natural gas extraction	1,935	1,967	2%		405.4	1,239.1	258.2	972.4	206%	277%	64%	78%	23%	87.7	731.5	734%	22%	59%	173%	88.1	122.4	39%		88.1	122.4	39%			
	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin	149	78	-48%		37.8	35.5	15.2	12.3	-6%	-19%	40%	35%	-14%	7.3	6.8	-8%	19%	19%	-2%	52.5	71.7	36%		52.5	71.7	36%			
		Extraction of salt																													
	Extraction of oil and gas	Extraction of crude petroleum	514	672	31%		5,910.2	2,896.5	4,818.2	1,310.0	-51%	-73%	82%	45%	-45%	4,753.7	1,175.9	-75%	80%	41%	-50%	125.4	199.4	59%		125.4	199.4	59%			
		Extraction of natural gas																													
Ocean energy	Offshore wind energy	Production of electricity	217	831	284%		132.7	1,279.5	25.0	515.9	864%	19%	40%	114%	10.5	457.8	4261%	8%	36%	352%	66.9	69.9	5%		66.9	69.9	5%				
		Transmission of electricity	30	216	613%		35.5	133.1	12.7	69.3	275%	445%	36%	52%	45%	10.1	49.0	384%	29%	37%	29%	85.4	94.2	10%		85.4	94.2	10%			
Port activities	Cargo and warehousing	Cargo handling	145	157	9%		19.2	26.0	9.5	15.6	35%	65%	49%	60%	22%	1.2	3.6	207%	6%	14%	127%	57.1	76.3	34%		57.1	76.3	34%			
		Warehousing and storage	1,284	1,720	34%		305.9	347.7	134.2	158.7	14%	18%	44%	46%	4%	67.9	49.7	-27%	22%	14%	-36%	51.7	63.3	23%		51.7	63.3	23%			
Port activities	Port and water projects	Construction of water projects	634	759	20%		310.0	419.5	52.1	80.4	35%	54%	17%	19%	14%	14.2	21.0	48%	5%	5%	9%	59.8	78.3	31%		59.8	78.3	31%			
		Service activities incidental to water transportation	1,376	2,932	113%		287.9	628.6	193.9	435.5	118%	125%	67%	69%	3%	105.1	238.3	127%	37%	38%	4%	64.6	67.2	4%		64.6	67.2	4%			
Shipbuilding and repair	Shipbuilding	Building of ships and floating structures	2,300	1,019	-56%		617.1	414.1	123.8	98.3	-33%	20%	24%	18%	-35.6	27.3	177%	-6%	7%	214%	69.3	69.6	0%		69.3	69.6	0%				
		Building of pleasure and sporting boats	225	267	19%		59.2	56.2	16.1	16.2	-5%	1%	27%	29%	6%	1.7	1.2	-29%	3%	2%	-26%	64.0	56.2	-12%		64.0	56.2	-12%			
		Repair and maintenance of ships and boats	1,333	1,903	43%		299.6	478.7	92.1	159.5	73%	31%	33%	8%	22.9	37.3	63%	8%	8%	2%	51.9	64.2	24%		51.9	64.2	24%				
		Manufacture of engines and turbines, except aircraft	402	32	-92%		248.4	29.7	45.2	6.3	-88%	-86%	18%	21%	17%	17.5	3.6	-80%	7%	12%	70%	68.8	86.3	25%		68.8	86.3	25%			
	Equipment and machinery	Manufacture of instruments for measuring, testing and navigation	23	63	176%		4.1	17.0	314%	1.9	8.2	333%	46%	48%	5%	0.3	3.3	837%	8%	19%	126%	67.1	77.4	15%		67.1	77.4	15%			
		Manufacture of other fabricated metal products n.e.c.	114	11	-90%		18.1	2.0	6.9	0.8	-89%	-88%	38%	42%	10%	1.1	0.2	-79%	6%	11%	87%	51.5	55.3	7%		51.5	55.3	7%			
Maritime transport		Manufacture of sport goods																													
		Manufacture of cordage, rope, twine and netting	56	80	44%		10.1	19.4	2.6	7.0	92%	166%	26%	36%	38%	0.3	2.0	517%	3%	10%	221%	41.4	62.6	51%		41.4	62.6	51%			
		Manufacture of textiles other than apparel	88	96	9%		14.0	22.3	4.6	7.2	60%	57%	33%	32%	-2%	0.5	2.5	440%	3%	11%	237%	46.8	48.8	4%		46.8	48.8	4%			
		Sea and coastal passenger water transport	4,420	5,384	22%		1,174.1	2,262.5	413.6	994.2	93%	140%	35%	44%	25%	178.6	645.8	262%	15%	29%	88%	53.2	64.7	22%		53.2	64.7	22%			
		Inland passenger water transport	155	249	61%		81.9	33.4	3.3	15.5	-59%	370%	4%	46%	1052%	-4.6	4.4	196%	-6%	13%	335%	51.0	44.2	-13%		51.0	44.2	-13%			
		Sea and coastal freight water transport	14,285	11,180	-22%		22,904.9	30,172.4	1,776.4	4,307.0	32%	142%	8%	14%	84%	817.7	3,594.9	340%	4%	12%	234%	67.1	63.7	-5%		67.1	63.7	-5%			
Maritime transport		Inland freight water transport	28	18	-35%		5.5	3.1	2.7	1.1	-44%	49%	35%	-28%	1.4	0.1	-93%	25%	3%	-87%	47.3	50.0	6%		47.3	50.0	6%				
		Renting and leasing of water transport equipment	47	127	170%		47.2	153.5	25.5	42.2	225%	65%	54%	27%	-49%	24.4	37.2	52%	24%	24%	-43%	23.4	39.4	68%		23.4	39.4	68%			
		Other transportation support activities	8,212	10,294	25%		3,435.1	5,962.7	633.8	970.2	74%	53%	18%	16%	-12%	147.2	286.7	95%	4%	5%	12%	59.2	66.4	12%		59.2	66.4	12%			
		Transport	8,158	11,279	38%		1,455.4	2,519.3	464.0	802.2	73%	73%	32%	32%	0%	102.6	244.8	139%	7%	10%	38%	44.3	49.4	12%		44.3	49.4	12%			
Coastal tourism	Other expenditure	Transport	15,706	36,272	131%		1,571.6	3,322.6	111%	460.4	1,062.9	131%	29%	32%	9%	112.8	221.2	96%	7%	7%	7%	22.1	23.2	5%		22.1	23.2	5%			
		Accommodation	20,154	27,132	35%		1,777.0	2,892.5	752.4	1,165.2	63%	55%	42%	40%	-5%	173.9	297.6	71%	10%	10%	5%	28.7	32.0	11%		28.7	32.0	11%			
EU-27		Blue economy (established sectors)	90,606	122,680	35%		44,766	60,560	10,989	14,039	28%	25%	23%	28%	6,836	8,461	24%	15%	14%	14%	4146	5,568	34%		4146	5,568	34%				

Table A11 Germany: Overview of the Blue Economy by sub-sector and activity

Germany		Activity	Persons employed		Δ 2019-09		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)		Δ 2019-09
Sector	Sub-sector		2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019			
Gross operating surplus (M€)			Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)												
Living resources	Primary production	Capture fisheries (SSCF)	559	843	51%	-32%	127.4	119.1	6.2	-32%	2.5	1.5	-40%	27%	24%	-12%	-	0.0	-	-18%	-	59.5	-	3.8	-41%
		Capture fisheries (LSF)	970	663	-32%						62.6	60.0	-4%	3%	49%	50%	3%	17.7	19.6	11%	14%	16%	46.3	61.0	32%
		Capture fisheries (DWF)																							
		Marine aquaculture	0				0.0				0.0				6%										
	Ling resources	Freshwater aquaculture	1,832	1,707	-7%		100.4	104.7	4%		30.4	62.2	105%	30%	59%	96%	1%	8.8	-6.9	-178%	9%	-7%	8.8	37.4	325%
		Shellfish aquaculture	58	117	102%		5.3	32.5	510%		2.8	17.5	516%	53%	54%	1%	1.2	10.4	746%	23%	32%	23.3	46.4	99%	
		Processing and preserving of fish, crustaceans and molluscs	8,389	7,511	-10%		2,179.5	2,771.7	27%		342.0	489.4	43%	16%	18%	13%	77.5	210.6	172%	4%	8%	31.5	37.1	18%	
		Manufacture of oils and fats	12	25	121%		16.0	24.9	56%		1.0	2.4	137%	6%	9%	52%	2%	0.4	1.7	326%	2%	7%	52.3	69.5	33%
		Prepared meals and dishes	1,186	1,845	56%		280.9	362.6	29%		63.6	90.4	42%	23%	25%	10%	25.6	24.3	-5%	9%	7%	32.0	35.8	12%	
		Other food products	101	1	-99%		25.6	0.3	-99%		6.8	0.1	-99%	27%	24%	-11%	24%	2.3	0.0	-99%	9%	9%	44.3	54.3	23%
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	23,992	36,922	54%		12,923.6	18,322.6	42%		1,303.6	2,292.0	76%	10%	13%	24%	575.7	894.2	55%	4%	5%	30.3	37.9	25%	
		Retail sale of fish, crustaceans and molluscs in specialised stores	7,613	5,589	-27%		411.2	414.9	1%		125.1	132.6	6%	30%	32%	5%	32%	5%	52.6	62.1	18%	13%	15%	9.5	12.6
	Mining support activities	Support activities for other mining and quarrying	1	2	124%		0.1	0.3	163%		0.0	0.2	343%	31%	51%	68%									
		Support activities for petroleum and natural gas extraction	64	14	-78%		14.5	3.3	-77%		4.9	1.2	-75%	34%	37%	10%									
	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin	140	276	98%		20.8	58.0			8.6	25.0	191%	41%	43%	5%	3.1	12.2	298%	15%	21%	43%	39.4	46.2	17%
		Extraction of salt																							
	Extraction of oil and gas	Extraction of crude petroleum																							
		Extraction of natural gas	145	35	-76%		106.3	26.8	-75%		45.0	10.0	-78%	42%	37%	-12%	28.7	2.2	-92%	27%	8%	-69%	112.8	119.6	6%
	Ocean energy	Offshore wind energy	8,205				8,941.1				1,062.1			12%			697.5			8%				44.4	
		Transmission of electricity	257				2,128.8				159.2			7%											
Shipbuilding and repair	Cargo and warehousing	Cargo handling	2,031	2,103	4%		284.2	486.5	71%		125.2	193.7	55%	44%	40%	-10%	50.6	86.6	71%	18%	18%	0%	36.7	50.9	39%
		Warehousing and storage	51,626	59,049	14%		5,626.5	8,734.7	55%		2,143.1	3,288.6	53%	38%	38%	-1%	641.6	1,191.2	86%	11%	14%	20%	29.1	35.5	22%
	Port and water projects	Construction of water projects	2,648	2,860	8%		302.9	787.9	160%		117.1	270.0	131%	39%	34%	-11%	-2.6	107.1	421%	-1%	14%	1684%	45.2	57.0	26%
		Service activities incidental to water transportation	18,074	25,182	39%		2,581.9	4,386.5	70%		1,555.0	2,515.7	62%	60%	57%	-5%	651.8	1,251.3	92%	25%	29%	13%	50.0	50.2	0%
	Shipbuilding	Building of ships and floating structures	15,288	18,558	21%		3,880.3	6,038.6	56%		783.1	1,552.6	98%	20%	26%	27%	-89.6	292.3	426%	-2%	5%	310%	57.1	67.9	19%
		Building of pleasure and sporting boats	3,747	7,877	110%		983.0	3,071.5	212%		256.8	571.5	123%	26%	19%	-29%	91.2	-46.1	-151%	9%	-2%	-116%	44.2	47.6	8%
	Equipment and machinery	Repair and maintenance of ships and boats	6,871	7,797	13%		1,252.0	1,410.7	13%		423.6	511.1	21%	34%	36%	7%	128.2	174.4	36%	10%	12%	21%	43.0	43.2	0%
		Manufacture of engines and turbines, except aircraft	9,571	10,360	8%		2,357.6	3,697.1	57%		569.0	918.4	61%	24%	25%	3%	-33.3	-53.2	-60%	-1%	-1%	-2%	62.9	93.8	49%
		Manufacture of instruments for measuring, testing and navigation	1,433	1,623	13%		218.6	341.1	56%		82.4	144.4	75%	38%	42%	12%	7.8	33.0	325%	4%	10%	172%	52.1	68.7	32%
		Manufacture of other fabricated metal products n.e.c.	2,607	447	-83%		398.5	74.5	-81%		131.1	29.1	-78%	33%	39%	19%	37.0	7.9	-79%	9%	11%	14%	36.1	47.3	31%
Maritime transport	Passenger transport	Manufacture of sport goods	84	43	-49%		10.5	5.9	-44%		3.5	2.3	-34%	34%	39%	18%	0.8	0.3	-63%	7%	5%	-35%	32.5	32.7	1%
		Manufacture of cordage, rope, twine and netting																							
		Manufacture of textiles other than apparel	4	3,150	78259%		0.5	427.0	93293%		0.1	146.5	#####	32%	34%			0.0	39.5	95891%	9%	3%	25.7	33.9	32%
		Sea and coastal passenger water transport	1,604	4,076	154%		369.6	4,132.8	1018%		218.4	1,776.2	713%	59%	43%	-27%	153.2	1,272.7	731%	41%	31%	-26%	40.7	48.1	18%
	Freight transport	Inland passenger water transport	4,446	6,687	50%		412.6	496.7	20%		185.7	241.6	30%	45%	49%	8%	87.3	125.8	44%	21%	25%	20%	22.2	23.2	5%
		Sea and coastal freight water transport	26,803	15,987	-40%		20,963.1	31,727.3	51%		6,924.4	3,663.0	-47%	33%	12%	-65%	5,586.5	2,701.9	-52%	27%	9%	-68%	49.9	60.1	20%
	Services for transport	Inland freight water transport	4,082	4,981	22%		1,647.9	1,715.4	4%		650.5	452.7	-30%	39%	26%	-33%	516.8	226.3	-56%	31%	13%	-58%	32.8	45.5	39%
		Renting and leasing of water transport equipment	2,070	2,439	18%		1,449.4	190.6	-87%		871.8	92.5	-89%	60%	49%	-19%	856.6	70.2	-92%	59%	37%	-38%	7.3	9.1	25%
		Other transportation support activities	70,364	101,268	44%		12,125.8	19,137.7	58%		3,638.9	5,993.9	65%	30%	31%	4%	1,441.3	2,200.4	53%	12%	11%	-3%	31.2	37.5	20%
		Transport	33,842	32,990	-3%		3,750.7	4,106.8	9%		1,215.7	1,157.7	-5%	32%	28%	-13%	304.6	106.0	-65%	8%	3%	-68%	26.9	31.9	18%
Other expenditure	Other expenditure	48,248	66,573	38%		3,130.1	5,220.7	67%		949.6	1,585.9	67%	30%	30%	0%	331.8	536.6	62%	11%	10%	-3%	12.8	15.8	23%	
	Accommodation	98,391	89,277	-9%		4,058.2	5,301.5	31%		2,164.1	2,668.0	23%	53%	50%	-6%	838.8	979.9	17%	21%	18%	-11%	13.5	18.9	40%	
EU-27		Blue economy (established sectors)	448,894	527,342	17%		82,025	134,809	64%		25,008	32,181	29%	30%	24%	-12%	12,393	13,230	7%	15%	10%	13%	12,605	18,270	45%

Table A12 Estonia: Overview of the Blue Economy by sub-sector and activity

Sector	Estonia Sub-sector	Activity	Persons employed		Δ 2019-09	Turnover (M€)		Δ 2019-09	Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Δ 2019-09	Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Δ 2019-09	Personnel costs per employee (k€)	
			2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019
Living resources	Primary production	Capture fisheries (SSCF)	1,646	1,042	-37%	4.2	5.1	22%	2.5	1.9	-24%	60%	37%	-38%	1.2	-0.6	-152%	30%	-13%	-142%	0.8	2.4
		Capture fisheries (LSF)	253	126	-50%	12.9	9.2	92%	8.1	6.2	-23%	63%	68%	7%	3.7	3.5	-6%	29%	38%	31%	17.2	21.6
		Capture fisheries (DWF)																				25%
		Marine aquaculture																				
		Freshwater aquaculture	20	40	101%	1.4	2.3	61%	0.4	0.9	108%	30%	38%	29%	0.2	0.2	20%	14%	10%	-26%	5.8	
	Processing of fish products	Shellfish aquaculture	3	1	-69%	0.0	0.0	-47%	0.0	0.0	-42%	54%	58%	9%	0.0	0.0	-57%	23%	18%	-20%	3.0	6.8
		Processing and preserving of fish, crustaceans and molluscs	1,831	1,218	-33%	110.2	136.3	24%	22.9	25.9	13%	21%	19%	-9%	7.1	7.4	4%	6%	5%	-16%	8.6	15.4
		Manufacture of oils and fats	0			0.4			0.0			7%			0.0			5%				18.9
		Prepared meals and dishes	113	200	77%	7.2	13.5	88%	1.7	4.4	164%	23%	33%	41%	0.6	1.4	120%	9%	10%	17%	9.2	15.0
		Other food products	1			0.1			0.0			20%			0.0			7%				11.7
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	393	430	9%	91.4	140.9	54%	6.8	10.2	50%	7%	7%	-2%	2.3	4.9	111%	3%	3%	37%	11.3	12.5
		Retail sale of fish, crustaceans and molluscs in specialised stores	43	43	0%	1.6	1.6	0%	0.1	0.1	0%	6%	6%	0%							2.3	2.3
	Minings support activities	Support activities for other mining and quarrying																				
		Support activities for petroleum and natural gas extraction																				
	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin																				
		Extraction of salt																				
	Extraction of oil and gas	Extraction of crude petroleum																				
		Extraction of natural gas																				
	Offshore wind energy	Production of electricity																				
		Transmission of electricity																				
Port activities	Cargo and warehousing	Cargo handling	880	738	-16%	129.3	82.7	-36%	64.5	37.5	-42%	50%	45%	-9%	47.2	16.9	-64%	36%	20%	-44%	19.7	28.0
		Warehousing and storage	1,353	1,535	13%	120.9	170.2	41%	59.4	62.9	6%	49%	37%	-25%	38.1	28.2	-26%	31%	17%	-47%	15.8	22.6
		Construction of water projects	124	98	-21%	7.9	12.7	61%	2.5	4.6	84%	32%	36%	14%	1.1	2.0	82%	14%	16%	13%	11.3	26.5
		Service activities incidental to water transportation	1,238	1,240	0%	128.6	194.4	51%	90.3	129.0	43%	70%	66%	-5%	67.8	90.9	34%	53%	47%	-11%	18.3	30.7
		Building of ships and floating structures	308	508	65%	30.5	75.2	147%	7.8	16.4	110%	26%	22%	-15%	3.5	3.6	3%	11%	5%	-58%	14.0	25.2
	Shipbuilding	Building of pleasure and sporting boats	303	297	-2%	13.4	22.7	69%	5.6	8.8	57%	42%	39%	-7%	2.5	3.1	24%	19%	14%	-27%	10.2	19.2
		Repair and maintenance of ships and boats	1,199	2,147	79%	90.6	215.7	138%	24.0	75.5	215%	26%	35%	32%	6.4	29.0	357%	7%	13%	92%	14.7	21.7
		Manufacture of engines and turbines, except aircraft																				
		Manufacture of instruments for measuring, testing and navigation	0	11	2237%	0.0	1.6	7193%	0.0	0.4	4070%	38%	22%	-43%	0.0	0.1	3998%	15%	8%	-44%	11.5	20.6
		Manufacture of other fabricated metal products n.e.c.	19	3	-83%	1.0	0.3	-71%	0.3	0.1	-71%	30%	30%	0%	0.1	0.0	-75%	8%	7%	-13%	11.5	20.7
Shipbuilding and repair	Equipment and machinery	Manufacture of sport goods	238	243	2%	9.4	13.9	47%	4.4	5.7	29%	47%	41%	-12%	2.4	1.8	-25%	25%	13%	-49%	8.6	15.7
		Manufacture of cordage, rope, twine and netting	80	31	-61%	3.4	1.3	-60%	1.6	0.4	-74%	48%	31%	-35%	0.9	0.0	-95%	25%	3%	-86%	9.4	11.9
		Manufacture of textiles other than apparel	167	187	12%	9.5	15.4	62%	2.5	4.0	60%	26%	26%	-1%	0.9	1.1	22%	10%	7%	-24%	9.4	15.3
		Sea and coastal passenger water transport	844	766	-9%	406.6	530.0	30%	14.8	22.1	49%	4%	4%	15%	-1.3	-1.2	8%	0%	0%	29%	19.1	30.3
		Inland passenger water transport																				
	Passenger transport	Sea and coastal freight water transport	138	130	-6%	27.5	43.2	57%	12.7	16.2	28%	46%	38%	-19%	7.2	10.4	44%	26%	24%	-8%	39.9	44.6
		Inland freight water transport																				
		Renting and leasing of water transport equipment	40	57	43%	14.8	21.1	43%	11.5	18.6	62%	78%	88%	13%	11.4	18.3	61%	77%	87%	13%	2.5	5.3
		Other transportation support activities	1,110	1,585	43%	360.4	611.3	70%	23.2	75.5	225%	6%	12%	92%	5.4	39.7	637%	1%	6%	335%	16.0	22.6
		Transport	4,562	2,199	-52%	467.8	508.1	9%	74.2	56.7	-24%	16%	11%	-30%	24.9	25.0	0%	5%	5%	-8%	10.8	14.6
Coastal tourism	Other expenditure	Transport	17,207	1,231.1	-71%	1,154.8	278.1	-7%	259.2	278.1	7%	21%	24%	14%	21.4	54.9	157%	2%	5%	173%	7.4	13.0
		Accommodation	10,469	8,459	-19%	286.3	409.7	43%	91.2	190.4	109%	32%	26%	32%	3.5	72.6	1987%	1%	18%	1358%	8.4	13.9
	EU-27	Blue economy (established sectors)	59,552	40,540	-33%	3,568	4,393	23%	792	1,052	33%	22%	24%	8%	258	413	60%	7%	9%	30%	534	639

Table A13 Ireland: Overview of the Blue Economy by sub-sector and activity

Ireland		Sub-sector	Activity	Persons employed		Δ 2019-09	Turnover (M€)		Δ 2019-09	Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Δ 2019-09	Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Δ 2019-09	Personnel costs per employee (k€)					
Sector	2009			2019	2009		2019	2009		2019	2009		2019	2009		2019	2009		2019	2009		2019	2009	2019	2009	2019	2009
Living resources	Primary production	Capture fisheries (SSCF)	2,705	1,065	-61%	15.4	40.7	164%	8.9	27.3	206%	67%	58%	67%	16%	5.5	13.6	146%	36%	33%	-7%	0.0	12.8	#####			
		Capture fisheries (LSF)	2,184	1,879	-14%	160.3	262.1	64%	54.9	118.7	116%	45%	34%	45%	32%	10.7	36.1	238%	7%	14%	112%	21.1	44.8	112%			
		Capture fisheries (DWF)																									
		Marine aquaculture	169	225	33%	65.4	120.0	84%	17.0	26.2	54%	26%	22%	26%	-16%	-	14.0	13.8	199%	-21%	12%	154%	79.4	38.6	-51%		
		Freshwater aquaculture	75	20	-73%	6.8	1.6	-77%	2.6	0.3	-89%	38%	18%	38%	-53%	0.7	0.1	0.7	0.1	-92%	10%	3%	-68%	23.9	7.3	-69%	
		Shellfish aquaculture	1,708	1,707	0%	36.0	59.6	66%	13.6	34.4	153%	58%	38%	38%	53%	-	2.2	5.9	364%	-6%	10%	260%	7.1	13.4	88%		
Living resources	Processing of fish products	Processing and preserving of fish, crustaceans and molluscs	1,907	2,733	43%	472.1	507.1	7%	106.6	125.3	18%	23%	25%	9%	37.2	21.1	-43%	8%	4%	-47%	36.4	38.1	5%	36.4	38.1	5%	
		Manufacture of oils and fats																									
		Prepared meals and dishes	837	289	-65%	116.1	37.7	-67%	31.3	11.8	-62%	27%	31%	16%	4.0	2.2	-46%	3%	6%	65%	32.5	33.4					
		Other food products																									
		Distribution of fish products	861	857	0%	1,418.9	1,052.8	-26%	218.8	155.6	-29%	15%	15%	15%	-4%	176.4	116.5	-34%	12%	11%	-11%	49.3	45.7	-7%	-7%		
		Minings support activities	623	656	5%	96.0	76.5	-20%	20.2	19.3	-4%	21%	25%	20%	7.9	6.0	-24%	8%	8%	-5%	19.6	20.3	4%	4%			
Non-living resources	Other mining and quarrying	Support activities for other mining and quarrying																									
		Support activities for petroleum and natural gas extraction	41	112	177%	61.6	22.4	-64%	5.0	7.4	49%	8%	33%	311%	3.0	-	0.8	-127%	5%	-4%	-175%	48.1	73.2	52%	52%		
		Operation of gravel and sand pits; mining of clays and kaolin																									
		Extraction of salt																									
		Extraction of crude petroleum																									
		Extraction of oil and gas																									
Ocean energy	Offshore wind energy	Production of electricity																									
		Transmission of electricity																									
Port activities	Cargo and warehousing	Cargo handling	358	406	13%	77.1	38.6	-50%	22.2	19.6	-12%	29%	51%	76%	3.6	5.1	41%	5%	13%	181%	52.0	35.8	-31%	-31%			
		Warehousing and storage	1,007	1,202	19%	251.5	233.9	-7%	79.0	51.7	-35%	31%	22%	-30%	15.4	8.9	-42%	6%	4%	-38%	48.5	35.6	-27%	-27%			
Port activities	Port and water projects	Construction of water projects	73	136	86%	12.8	31.1	143%	4.7	16.2	245%	37%	52%	42%	1.1	6.1	455%	9%	20%	128%	47.9	74.3	55%	55%			
		Service activities incidental to water transportation	1,122	941	-16%	246.2	225.6	-8%	119.4	107.5	-10%	48%	48%	-2%	60.2	54.4	-10%	24%	24%	-1%	52.7	56.4	7%	7%			
Shipbuilding and repair	Shipbuilding	Building of ships and floating structures	111	65	-41%	17.4	8.1	-53%	5.2	2.9	-44%	30%	36%	20%	1.1	0.4	-64%	6%	5%	-22%	36.9	38.5	4%	4%			
		Building of pleasure and sporting boats	51	54	6%	5.9	4.5	-24%	2.5	1.8	-28%	42%	40%	-6%	0.9	0.4	-56%	15%	9%	-42%	31.4	27.8	-11%	-11%			
		Repair and maintenance of ships and boats	228	275	21%	31.8	43.9	38%	11.1	19.8	78%	35%	45%	29%	3.8	9.6	153%	12%	22%	83%	32.0	37.1	16%	16%			
		Manufacture of engines and turbines, except aircraft	64	10	-84%	6.4	1.4	-78%	3.0	0.4	-87%	47%	28%	-41%	-	0.4	-	-7%			-7%	54.4	38.5	-29%	-29%		
		Manufacture of instruments for measuring, testing and navigation	79	107	37%	34.2	48.7	42%	17.3	25.2	45%	51%	52%	2%	13.5	19.6	45%	40%	2%	2%	48.3	52.2	8%	8%			
		Manufacture of other fabricated metal products n.e.c.																									
Maritime transport	Shipbuilding and repair	Manufacture of sport goods	4			0.5			0.2			33%			0.1		14%					21.7					
		Manufacture of cordage, rope, twine and netting	115	127	11%	16.7	15.8	-5%	5.1	5.0	-1%	30%	32%	5%	1.0	0.9	-14%	6%	5%	-9%	34.5	32.6	-6%	-6%			
		Manufacture of textiles other than apparel	131	175	34%	12.3	14.8	21%	4.5	5.6	25%	36%	38%	4%	1.2	0.9	-31%	10%	6%	-43%	24.7	27.1	10%	10%			
		Sea and coastal passenger water transport	537	321	-40%	408.4	519.0	27%	102.3	151.1	48%	25%	29%	16%	63.4	135.8	114%	16%	26%	69%	49.3	48.0	-3%	-3%			
		Inland passenger water transport	60	120	100%	26.3	21.5	-18%	6.9	5.6	-19%	26%	26%	-1%	3.9	2.4	-38%	15%	11%	-25%	35.0	26.7	-24%	-24%			
		Sea and coastal freight water transport	301	339	13%	281.4	377.8	34%	20.9	122.3	485%	7%	32%	336%	-	11.8	106.3	1001%	-4%	28%	771%	54.2	47.2	-13%	-13%		
Maritime transport	Services for transport	Inland freight water transport																									
		Renting and leasing of water transport equipment	75	76	1%	55.6	210.0	278%	29.0	92.9	220%	52%	44%	-15%	27.3	91.3	234%	49%	43%	-11%	22.7	22.4	-1%	-1%			
		Other transportation support activities	205	248	21%	71.6	103.8	45%	15.2	23.6	55%	21%	23%	7%	6.8	11.7	71%	10%	11%	18%	44.7	47.8	7%	7%			
		Transport	3,011	5,201	73%	1,191.3	96%	184.0	271.7	48%	30%	23%	23%	-25%	29.4	97.3	231%	5%	8%	69%	48.4	32.2	-34%	-34%			
Coastal tourism	Other expenditure	Transport	7,875	24,839	215%	959.5	2,151.2	124%	235.9	678.6	188%	25%	32%	28%	26.1	182.3	598%	3%	8%	211%	21.9	20.0	-9%	-9%			
		Accommodation	12,761	25,650	101%	846.2	1,632.0	93%	302.0	700.8	132%	36%	43%	20%	84.4	195.8	332%	-10%	12%	220%	20.8	19.7	-6%	-6%			
EU-27			39,278	69,838	78%	6,419	9,054	41%	1,649	2,828	72%	26%	31%	22%	392	1,144	192%	6%	13%	107%	1,024	1,670	63%	63%			

Table A14 Greece: Overview of the Blue Economy by sub-sector and activity

Greece		Sub-sector		Activity		Persons employed		Δ 2019-09		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (€)		Δ 2019-09			
Sector						2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019		
Living resources	Primary production	Capture fisheries (SSCF)		14,332		37.6	210.2	459%		84.1	128.9	253%		61%	127%	-	212.8	22.0	110%	-566%	10%	102%			7.5						
		Capture fisheries (LSF)		4,651		28.2	214.8	661%		76.2	137.5	281%		64%	124%	-	123.6	99.1	180%	-438%	46%	111%			8.3						
		Capture fisheries (DWF)																													
		Marine aquaculture		3,160	3,064	-3%	563.9	784.9	39%		35.7	53.0	48%		6%	7%	-	101.7	-	24.6	76%	-18%	-3%	83%	30.4	17.1	-44%				
		Freshwater aquaculture		257	195	-24%	12.8	14.9	17%		3.9	3.0	-22%		30%	20%	-33%	1.1	-	2.4	-315%	9%	-16%	-285%	8.0	21.4	169%				
	Processing of fish products	Shellfish aquaculture		617	325	-47%	11.6	6.5	-44%		6.2	5.8	-6%		53%	90%	69%	2.7	0.8	23%	12%	-70%	23%	12%	-46%	4.8	15.4	222%			
		Processing and preserving of fish, crustaceans and molluscs		1,193	1,496	25%	158.4	181.4	15%		43.2	36.6	-15%		27%	20%	-26%	20.8	10.8	13%	6%	-55%	18%	17.2	-8%						
		Manufacture of oils and fats																													
		Prepared meals and dishes		6	283	4486%	0.6	19.5	3190%		0.1	4.5	3655%		20%	23%	14%	0.0	0.6	1201%	8%	3%	-60%	11.5	13.6	18%					
		Other food products		13			1.5				0.4				28%			0.2		12%				17.9							
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs		5,750	4,628	-20%	2,000.8	1,103.3	-45%		230.8	117.4	-49%		12%	11%	-8%	121.6	51.5	6%	5%	-23%	19.0	14.2	-25%						
		Retail sale of fish, crustaceans and molluscs in specialised stores		4,594	4,323	-6%	326.7	206.5	-37%		76.8	12.6	-84%		24%	6%	-74%	64.1	-	5.2	-108%	20%	-3%	-113%	2.8	4.1	45%				
		Support activities for other mining and quarrying																													
	Mining support activities	Support activities for petroleum and natural gas extraction		42	24	-43%	4.6	5.8	27%		2.4	-	3.0	-227%	52%	-52%	-201%	0.2	-	3.3	-1535%	5%	-57%	-1232%	50.8	13.0	-74%				
		Operation of gravel and sand pits; mining of clays and kaolin																													
		Extraction of salt		19	18	-2%	3.1	2.5	-18%		0.8	1.7	100%		27%	65%	144%	0.3	1.2	317%	9%	45%	408%	29.3	27.5	-6%					
	Extraction of oil and gas	Extraction of crude petroleum		13	18	46%	5.0	7.4	46%		0.9	1.3	46%		17%	17%	0%	0.3	0.4	46%	5%	5%	0%	48.7	48.7	0%					
		Extraction of natural gas																													
		Production of electricity																													
	Offshore wind energy																														
Port activities	Cargo and warehousing	Transmission of electricity																													
		Cargo handling		508	1,197	136%	40.7	141.1	247%		15.9	69.0	335%		39%	49%	25%	3.9	34.5	793%	9%	24%	157%	23.6	28.8	22%					
		Warehousing and storage		633	463	-27%	53.8	41.5	-23%		18.5	10.5	-43%		34%	25%	-26%	3.9	2.4	-39%	7%	6%	-21%	22.9	17.5	-24%					
	Port and water projects	Construction of water projects		2,723	1,113	-59%	277.6	117.4	-58%		94.9	15.2	-84%		34%	13%	-62%	47.1	0.4	0.4	-99%	17%	0%	-98%	17.6	13.3	-24%				
		Service activities incidental to water transportation		2,965	11,785	297%	265.5	846.1	219%		201.6	656.0	225%		76%	78%	2%	94.9	44.7	36%	5%	-53%	36%	5%	-85%	36.0	51.9	44%			
		Building of ships and floating structures		4,103	2,018	-51%	425.2	69.2	-84%		273.2	32.5	-88%		64%	47%	-27%	136.9	-	8.0	-106%	32%	-12%	-136%	33.1	20.1	-39%				
	Shipbuilding	Building of pleasure and sporting boats		207	334	61%	10.8	23.1	114%		3.6	5.7	58%		33%	25%	-26%	-	1.0	1.1	210%	-9%	5%	151%	22.2	13.8	-38%				
		Repair and maintenance of ships and boats		4,846	6,932	43%	235.2	318.9	36%		153.2	157.7	3%		65%	49%	-24%	69.4	54.0	-22%	30%	17%	-43%	17.9	15.0	-16%					
		Manufacture of engines and turbines, except aircraft		5	10	104%	0.3	1.7	410%		0.2	0.3	4%		76%	15%	-80%	0.1	0.1	-40%	29%	3%	-88%	31.4	19.3	-39%					
	Equipment and machinery	Manufacture of instruments for measuring, testing and navigation		1	0	-78%	0.1	0.1	-34%		0.0	0.0	-55%		32%	22%	-31%	0.0	0.0	-36%	12%	12%	-3%	20.7	32.3	56%					
Manufacture of other fabricated metal products n.e.c.			1	1	-4%	0.1	0.1	3%		0.0	0.0	-31%		48%	32%	-33%	0.0	0.0	-49%	23%	12%	-50%	17.8	15.2	-15%						
Manufacture of sport goods			226	27	-88%	18.7	1.3	-93%		6.6	0.5	-93%		36%	36%	2%	3.4	0.1	-96%	18%	11%	-36%	14.8	12.0	-19%						
Shipbuilding and repair	Manufacture of cordage, rope, twine and netting	Manufacture of cordage, rope, twine and netting		100	32	-67%	10.9	4.9	-55%		4.3	1.7	-61%		40%	34%	-15%	2.0	1.0	-47%	18%	21%	16%	23.7	19.1	-19%					
		Manufacture of textiles other than apparel																													
		Sea and coastal passenger water transport		11,769	11,494	-2%	1,660.1	1,429.5	-14%		734.4	604.8	-18%		44%	42%	-4%	294.4	266.9	-9%	18%	19%	5%	37.4	29.4	-21%					
	Passenger transport	Inland passenger water transport		197			11.9				5.7			48%				1.7			14%			20.3							
		Sea and coastal freight water transport		5,023	8,307	65%	447.5	875.8	96%		246.8	584.7	137%		55%	67%	21%	90.8	81.4	-10%	20%	9%	-54%	31.1	60.6	95%					
		Inland freight water transport		80			3.9				0.4				10%			-	1.6		-41%				25.0						
	Services for transport	Renting and leasing of water transport equipment		2,823	2,981	6%	49.1	168.7	244%		34.2	67.9	99%		70%	40%	-42%	24.1	51.5	114%	49%	31%	-38%	3.5	5.5	55%					
		Other transportation support activities		3,998	2,654	-34%	391.0	439.3	12%		107.5	111.0	3%		27%	25%	-8%	41.3	28.0	-32%	11%	6%	-40%	16.6	31.3	89%					
		Transport		82,554	66,860	-15%	9,962.8	6,765.5	-32%		1,652.4	966.5	-42%		17%	14%	-14%	573.5	363.3	-37%	6%	5%	-7%	13.1	9.0	-31%					
	Coastal tourism	Other expenditure		172,852	245,520	42%	10,489.2	7,385.8	-30%		2,182.3	1,109.9	-49%		21%	15%	-28%	725.7	-	83.1	-	-111%	7%	-1%	-116%	8.4	4.9	-42%			
Accommodation			237,894	174,654	-27%	12,219.9	6,955.5	-43%		7,171.0	3,413.5	-52%		59%	49%	-16%	2,966.6	1,447.9	-51%	24%	21%	12%	17.7	11.3	-36%						
Blue economy (established sectors)			548,895	570,017	4%	39,713	28,359	-13%		13,142	8,313	-37%		33%	29%	-11%	4,850	2,437	-50%	12%	9%	-23%	8,076	5,849	-23%						
EU-27																															

Table A16 France: Overview of the Blue Economy by sub-sector and activity

France		Activity	Persons employed		Δ 2019-09	Turnover (M€)		Δ 2019-09	Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Δ 2019-09	Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Δ 2019-09	Personnel costs per employee (k€)			
Sector	Sub-sector		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019	2009	2019
Living resources	Primary production	Capture fisheries (SSCF)	7,907	6,524	-18%	261.4	264.9	1%	173.9	169.2	-3%	67%	64%	-4%	51.9	47.3	-9%	20%	18%	-10%	15.4	18.7		
		Capture fisheries (LSF)	7,355	6,062	-18%	757.9	813.3	7%	363.4	377.2	4%	48%	46%	-3%	78.8	91.9	17%	10%	11%	9%	38.7	47.1		
		Capture fisheries (DWF)	543	534	-2%	90.4	145.1	60%	1.4	45.9	3085%	2%	32%	1885%	-	28.1	-	5.0	82%	-31%	89%	54.4	95.3	
		Marine aquaculture	132	167	26%	45.9	42.1	-8%	2.9	6.7	130%	6%	16%	151%	-	8.3	1.7	121%	-18%	4%	123%	59.3	21.6	
		Freshwater aquaculture	1,346	1,539	14%	144.2	153.7	7%	43.6	54.3	25%	30%	35%	17%	12.7	25.4	100%	9%	17%	87%	17.2	15.7		
	Processing of fish products	Shellfish aquaculture	17,705	13,710	-23%	752.1	751.9	0%	402.0	403.3	0%	53%	54%	0%	173.3	111.2	-36%	23%	15%	-36%	10.8	16.3		
		Processing and preserving of fish, crustaceans and molluscs	12,814	12,958	1%	3,028.5	4,823.4	59%	560.0	777.8	39%	18%	16%	-13%	149.6	176.1	18%	5%	4%	-26%	32.0	46.4		
		Manufacture of oils and fats	4	7	64%	3.2	14.9	366%	0.3	0.6	101%	9%	4%	-57%	0.2	0.2	12%	5%	1%	-76%	33.2	62.1		
		Prepared meals and dishes	4,716	3,255	-31%	1,063.8	869.9	-18%	227.9	181.5	-20%	21%	21%	-3%	50.4	54.9	9%	5%	6%	33%	37.6	38.9		
		Other food products	89			46.5			7.6			16%			2.5		5%				57.1			
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	13,911	10,159	-27%	6,140.8	5,381.0	-12%	607.1	651.1	7%	10%	12%	22%	170.3	195.9	15%	3%	4%	31%	31.4	44.8		
		Retail sale of fish, crustaceans and molluscs in specialised stores	4,688	4,695	0%	609.1	916.1	50%	133.9	235.4	76%	22%	26%	17%	24.4	79.7	227%	4%	9%	117%	23.4	33.2		
	Minings support activities	Support activities for other mining and quarrying	1	4	224%	0.2	0.7	305%	-	0.0	0.3	232.8%	-7%	41%	650%	-	0.0	0.0	25.8%	-17%	7%	139%	16.0	63.8
		Support activities for petroleum and natural gas extraction																						
	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin	313	108	-65%	86.3	33.7	-61%	28.0	9.9	-65%	32%	29%	-10%	13.5	4.0	-71%	16%	12%	-25%	46.3	54.3		
		Extraction of salt	124	54	-56%	32.5	71.9	121%	9.3	29.3	215%	29%	41%	42%	2.0	12.4	51.9%	6%	17%	180%	59.0	309.6		
	Extraction of oil and gas	Extraction of crude petroleum																						
		Extraction of natural gas																						
	Ocean energy	Offshore wind energy	Production of electricity																					
			Transmission of electricity																					
Port activities	Cargo and warehousing	Cargo handling	12,756	7,377	-42%	1,862.6	1,538.1	-17%	681.6	573.5	-16%	37%	37%	2%	55.1	61.8	12%	3%	4%	36%	49.1	69.4		
		Warehousing and storage	32,348	18,486	-43%	5,216.6	3,324.3	-36%	1,941.3	1,196.4	-38%	37%	36%	-3%	764.1	356.9	-53%	15%	11%	-27%	36.4	45.4		
	Port and water projects	Construction of water projects	4,980	3,626	-27%	1,640.6	1,953.9	19%	1,242.8	558.1	-55%	76%	29%	-62%	831.3	246.0	-70%	51%	13%	-75%	82.6	86.1		
		Service activities incidental to water transportation	8,833	6,981	-21%	1,170.4	1,497.9	28%	728.6	1,030.4	41%	62%	69%	11%	209.6	376.0	79%	18%	25%	40%	58.8	93.7		
	Shipbuilding	Building of ships and floating structures	12,569	20,488	63%	3,988.5	6,497.1	63%	605.8	2,064.0	241%	15%	32%	109%	-	131.5	613.6	567%	-3%	9%	386%	58.7	70.8	
		Building of pleasure and sporting boats	7,510	8,861	18%	1,040.1	1,876.5	80%	258.2	571.6	121%	25%	30%	23%	-	43.0	183.9	52.8%	-4%	10%	337%	40.1	43.8	
	Equipment and machinery	Repair and maintenance of ships and boats	6,552	6,679	2%	903.1	1,142.5	27%	291.8	319.5	9%	32%	28%	-13%	39.1	45.5	16%	4%	4%	-8%	38.6	41.0		
		Manufacture of engines and turbines, except aircraft	281	572	104%	126.6	252.0	99%	28.2	38.2	36%	22%	15%	-32%	10.9	-	-277%	9%	-8%	-189%	61.6	100.6		
	Shipbuilding and repair	Equipment and machinery	Manufacture of instruments for measuring, testing and navigation	3,037	2,531	-17%	655.5	568.4	-13%	233.1	224.8	-4%	36%	40%	11%	28.2	35.6	26%	4%	6%	46%	67.5	74.8	
			Manufacture of other fabricated metal products n.e.c.	40	50	26%	6.5	8.9	37%	2.2	2.9	30%	34%	33%	-5%	0.5	0.4	-1.3%	8%	5%	-3.6%	43.2	48.8	
Shipbuilding and repair		Manufacture of sport goods	369	574	56%	102.7	147.1	43%	23.1	43.0	86%	22%	29%	30%	2.0	11.0	46.4%	2%	7%	294%	57.4	55.7		
		Manufacture of cordage, rope, twine and netting	149	178	19%	22.0	29.9	36%	6.0	9.9	66%	27%	33%	22%	0.8	2.8	27.6%	3%	10%	177%	34.9	39.5		
Maritime transport		Manufacture of textiles other than apparel	332	1,196	260%	41.1	159.1	287%	12.2	49.5	304%	30%	31%	4%	1.4	10.6	647%	3%	7%	93%	32.6	32.6		
		Sea and coastal passenger water transport	5,508	5,396	-2%	882.1	1,841.9	109%	238.9	306.4	28%	27%	17%	-39%	-	11.9	23.0	293%	-1%	1%	193%	45.5	52.5	
Freight transport		Inland passenger water transport	2,032	2,363	16%	307.5	353.3	15%	109.6	137.0	25%	36%	39%	9%	28.0	32.0	14%	9%	9%	0%	40.8	44.5		
		Sea and coastal freight water transport	8,836	8,746	-1%	9,040.0	11,675.0	29%	-	185.6	-	-2%	-1%	41%	-	728.3	-	9%	-8%	-30%	61.4	59.4		
Coastal tourism		Services for transport	Inland freight water transport	1,677	1,941	16%	371.3	397.3	7%	98.5	161.4	64%	27%	41%	53%	41.6	72.8	75%	11%	18%	64%	33.9	45.6	
			Renting and leasing of water transport equipment	66	264	300%	610.9	154.9	-75%	456.4	77.3	-83%	75%	50%	-33%	454.7	64.7	-86%	74%	42%	-44%	25.8	47.7	
EU-27	Tourism	Other transportation support activities	14,590	14,944	2%	3,405.7	4,268.8	25%	690.0	924.6	34%	20%	22%	7%	60.4	152.4	152%	2%	4%	101%	43.2	51.7		
		Transport	50,559	34,513	-32%	6,362.5	7,621.3	20%	2,578.6	3,518.0	36%	41%	46%	14%	319.5	761.7	138%	5%	10%	99%	44.7	79.9		
		Other expenditure	88,575	93,810	6%	10,320.6	13,024.8	26%	3,038.3	4,096.1	35%	29%	31%	7%	742.2	914.5	23%	7%	7%	-2%	25.9	33.9		
		Accommodation	67,610	75,101	11%	6,851.1	9,388.2	37%	2,774.0	3,732.2	35%	40%	40%	-2%	709.8	1,045.9	47%	10%	11%	8%	30.5	35.8		
Blue economy (established sectors)		400,858	374,459	-6%	67,991	82,004	21%	18,415	22,436	22%	27%	27%	1%	4,078	5,127	26%	6%	6%	4%	14,290	17,234			

Table A18 Italy: Overview of the Blue Economy by sub-sector and activity

Italy		Activity	Persons employed		Turnover (M€)		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Personnel costs per employee (k€)				
Sector	Sub-sector		2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019			
Living resources	Primary production	Capture fisheries (SSCF)	13,698	10,248	-25%	338.5	154.4	-54%	242.6	113.9	-53%	72%	74%	3%	133.2	62.3	-53%	39%	40%	2%	8.0	5.0	-37%
		Capture fisheries (LSF)	15,269	13,886	-9%	965.7	721.1	-25%	584.0	429.5	-26%	60%	60%	-2%	298.8	231.9	-22%	31%	32%	4%	18.7	14.2	-24%
		Capture fisheries (DWF)	255	84	-67%	25.3	5.5	-78%	16.1	2.1	-87%	63%	38%	-40%	14.7	0.8	-95%	58%	15%	-75%	5.3	15.2	187%
		Marine aquaculture	306	375	23%	133.2	96.8	-27%	25.5	51.9	103%	19%	54%	180%	-6.2	36.1	679%	-5%	37%	896%	69.5	32.5	-53%
		Freshwater aquaculture	1,374	683	-50%	337.4	129.7	-62%	108.2	56.7	-48%	32%	44%	36%	49.3	35.0	-29%	15%	27%	84%	32.6	24.9	-24%
		Shellfish aquaculture	4,204	3,703	-12%	156.1	160.1	3%	75.2	108.1	44%	48%	68%	40%	40.0	57.3	91%	19%	36%	87%	9.7	12.3	26%
	Processing of fish products	Processing and preserving of fish, crustaceans and molluscs	5,343	6,063	13%	2,211.2	2,721.7	23%	295.8	457.3	55%	13%	17%	26%	137.5	226.7	65%	6%	8%	34%	29.6	38.0	28%
		Manufacture of oils and fats																					
		Prepared meals and dishes	4,496	3,937	-12%	696.8	621.3	-11%	195.0	156.4	-20%	28%	25%	-10%	82.8	54.5	-34%	12%	9%	-26%	25.0	25.9	4%
		Other food products	437	643	47%	112.6	196.2	74%	28.6	45.3	59%	25%	23%	-9%	16.2	23.5	45%	14%	12%	-17%	28.3	33.9	20%
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	16,904	21,313	26%	9,007.2	11,758.3	31%	635.6	1,144.3	80%	7%	10%	38%	200.3	539.1	169%	2%	5%	106%	25.8	28.4	10%
		Retail sale of fish, crustaceans and molluscs in specialised stores	11,258	13,272	18%	956.8	1,193.1	25%	173.3	195.6	13%	18%	16%	-9%	110.7	77.5	-30%	12%	6%	-44%	5.6	8.9	60%
		Support activities for other mining and quarrying																					
	Minings support activities	Support activities for petroleum and natural gas extraction	1,244	805	-35%	374.2	215.4	-42%	148.5	67.3	-55%	40%	31%	-21%	53.4	-2.9	-105%	14%	-1%	-109%	76.5	87.2	14%
		Operation of gravel and sand pits; mining of clays and kaolin																					
		Extraction of salt	100	83	-17%	21.7	20.7	-4%	5.5	6.2	14%	25%	30%	19%	1.5	2.6	77%	7%	12%	85%	40.3	44.2	10%
	Other mining and quarrying	Extraction of crude petroleum	23	11	-54%	117.3	47.9	-59%	87.5	19.5	-78%	75%	41%	-45%	85.2	18.3	-79%	73%	38%	-47%	99.1	115.6	17%
		Extraction of natural gas	9,799	1,320	-87%	44,091.6	2,668.4	-94%	1,832.0	648.9	-65%	4%	24%	485%	1,029.6	523.7	-49%	2%	20%	740%	81.9	94.8	16%
		Production of electricity																					
	Ocean energy	Offshore wind energy	Transmission of electricity																				
Cargo handling			13,533	11,590	-14%	561.5	649.2	16%	314.4	372.5	18%	56%	57%	2%	8.1	23.2	185%	1%	4%	146%	22.6	30.1	33%
Warehousing and storage			2,832	2,848	1%	477.1	487.9	2%	137.8	206.7	50%	29%	42%	47%	50.7	109.9	117%	11%	23%	112%	30.7	34.0	11%
Port activities		Construction of water projects	9,558	6,705	-30%	2,753.6	1,065.6	-61%	500.1	386.2	-23%	18%	36%	100%	171.6	98.2	-43%	6%	9%	48%	34.4	43.0	25%
		Service activities incidental to water transportation	12,953	14,953	15%	1,867.3	2,835.9	52%	780.1	1,384.8	78%	42%	49%	17%	279.7	687.7	146%	15%	24%	62%	38.6	46.6	21%
		Building of ships and floating structures	19,431	18,293	-6%	3,842.5	4,932.2	28%	874.4	1,758.4	101%	23%	36%	57%	130.3	760.0	483%	3%	15%	354%	38.3	54.6	43%
Shipbuilding and repair		Building of pleasure and sporting boats	12,630	9,883	-22%	2,811.1	2,706.5	-4%	457.4	586.9	28%	16%	22%	33%	25.5	171.8	574%	1%	6%	600%	34.2	42.0	23%
		Repair and maintenance of ships and boats	10,302	10,589	3%	1,036.9	1,141.2	10%	337.4	451.1	34%	33%	40%	21%	79.1	148.9	88%	8%	13%	71%	25.1	28.5	14%
		Manufacture of engines and turbines, except aircraft	1,440	495	-66%	548.9	238.2	-57%	139.6	56.0	-60%	25%	23%	33%	60.9	24.6	-60%	11%	10%	-7%	54.6	63.4	16%
Maritime transport		Passenger transport	Manufacture of instruments for measuring, testing and navigation	535	299	-44%	89.0	65.1	-27%	32.7	25.6	-22%	37%	39%	7%	8.0	9.7	22%	9%	15%	67%	46.2	53.1
	Manufacture of other fabricated metal products n.e.c.		138	662	379%	19.3	106.8	453%	5.0	35.9	616%	26%	34%	30%	1.3	14.1	1018%	7%	13%	102%	27.1	33.0	21%
	Manufacture of sports goods		390	251	-36%	77.5	76.7	-1%	19.7	22.9	16%	25%	30%	18%	7.2	11.9	65%	9%	16%	67%	31.9	43.8	37%
	Freight transport	Manufacture of cordage, rope, twine and netting	75	109	45%	10.5	19.6	86%	2.4	4.9	109%	22%	25%	12%	0.7	2.1	184%	7%	10%	53%	21.9	26.6	21%
		Manufacture of textiles other than apparel	812	1,509	86%	126.4	202.8	60%	26.0	55.2	113%	21%	27%	33%	9.7	20.4	111%	8%	10%	32%	20.1	23.0	15%
		Sea and coastal passenger water transport	16,837	42,338	151%	5,512.5	6,660.9	21%	1,838.7	2,516.4	37%	33%	38%	13%	1,037.1	1,425.3	37%	19%	21%	14%	47.6	25.8	-46%
	Services for transport	Inland passenger water transport	2,531	2,672	6%	137.8	435.6	216%	91.3	142.1	56%	66%	33%	-51%	23.6	75.9	222%	17%	17%	2%	26.8	24.7	-8%
		Sea and coastal freight water transport	11,870	9,191	-23%	5,178.0	5,091.8	-2%	735.2	1,350.9	84%	14%	27%	87%	88.1	715.8	712%	2%	14%	726%	54.5	69.1	27%
		Inland freight water transport	558	748	34%	38.4	54.9	43%	16.8	33.8	101%	44%	62%	41%	4.6	12.2	165%	12%	22%	86%	21.9	28.9	32%
	Tourism	Other expenditure	Renting and leasing of water transport equipment	2,701	803	-70%	289.6	199.0	-31%	44.3	85.9	94%	15%	43%	182%	-0.8	62.1	7863%	0%	31%	11397%	16.7	29.6
Other transportation support activities			10,811	17,259	60%	2,691.4	3,433.4	28%	449.1	788.7	76%	17%	23%	38%	89.4	149.4	67%	3%	4%	31%	33.3	37.0	11%
Transport			51,417	37,201	-28%	8,516.4	8,410.2	-1%	1,794.4	2,231.2	24%	21%	27%	26%	112.5	922.7	720%	1%	11%	731%	32.7	35.2	8%
Other expenditure			134,399	132,543	-1%	9,949.6	10,998.8	11%	2,471.1	3,033.5	23%	25%	28%	11%	904.1	1,110.2	23%	9%	10%	11%	11.7	14.5	24%
Coastal	Accommodation	Accommodation	210,753	134,381	-36%	13,289.6	12,026.1	-10%	5,892.3	5,413.6	-8%	44%	45%	2%	1,995.0	2,338.9	17%	15%	19%	30%	18.5	22.9	24%
		EU-27	Blue economy (established sectors)	611,215	531,745	-13%	119,371	82,549	-30%	21,413	24,446	14%	18%	30%	65%	7,323	10,781	47%	6%	13%	113%	14,061	13,651

Table A19 Cyprus: Overview of the Blue Economy by sub-sector and activity

Cyprus	Sub-sector	Activity	Persons employed		Turnover (M€)		Value added at factor cost (M€)		GVA to turnover (%)		Gross operating surplus (M€)		Gross profit margin (%)		Personnel costs per employee (k€)										
Sector			2009	Δ 2019-09	2009	2019	2009	2019	2009	Δ 2019-09	2009	2019	2009	Δ 2019-09	2009	2019									
Living resources	Primary production	Capture fisheries (SSCF)	761	1,076	41%	6.8	3.3	-51%	0.1	1.8	1421%	-2%	54%	2793%	-	0.5	1.5	425%	-7%	46%	763%	0.4	0.2	-46%	
		Capture fisheries (LSF)	148	165	11%	2.9	3.5	19%	-	0.5	1.1	303%	-18%	31%	270%	-	1.4	0.1	107%	-48%	3%	106%	6.0	6.0	-1%
		Capture fisheries (DWF)																							
		Marine aquaculture	230	404	76%	17.8	52.8	197%	5.5	8.4	52%	31%	16%	-49%	2.8	2.2	-22%	16%	4%	-74%	11.7	11.2	-4%		
		Freshwater aquaculture	42	34	-19%	0.6	0.4	-26%	0.2	0.2	-16%	34%	38%	14%	0.1	0.0	-24%	10%	10%	4%	2.4	2.8	19%		
		Shellfish aquaculture	21	15	-27%	0.1	0.4	295%	0.1	0.2	162%	88%	59%	-34%	0.1	0.1	19%	61%	18%	-70%	1.2	8.1	558%		
Non-living resources	Processing of fish products	Processing and preserving of fish, crustaceans and molluscs																							
		Manufacture of oils and fats																							
		Prepared meals and dishes																							
		Other food products																							
		Wholesale of other food, including fish, crustaceans and molluscs	170	304	79%	26.3	49.2	87%	3.9	8.7	126%	15%	18%	21%	0.2	3.4	2133%	1%	7%	1093%	21.8	17.6	-19%		
		Retail sale of fish, crustaceans and molluscs in specialised stores	298	356	19%	37.9	48.4	28%	9.2	11.1	21%	24%	23%	-6%	4.0	4.4	10%	11%	9%	-14%	17.4	18.8	8%		
Ocean energy	Port activities	Support activities for other mining and quarrying																							
		Support activities for petroleum and natural gas extraction																							
		Operation of gravel and sand pits; mining of clays and kaolin																							
		Extraction of salt																							
		Extraction of crude petroleum																							
		Extraction of natural gas																							
Shipbuilding and repair	Equipment and machinery	Production of electricity																							
		Transmission of electricity																							
		Cargo handling	370	255	-31%	23.6	14.6	-38%	17.3	8.8	-49%	73%	60%	-18%	6.0	2.3	-62%	25%	16%	-39%	30.7	25.6	-17%		
		Warehousing and storage	130	215	66%	9.7	19.8	105%	4.8	11.7	143%	50%	59%	18%	1.8	6.2	248%	18%	31%	70%	24.0	25.7	7%		
		Construction of water projects	140	166	19%	28.9	29.4	2%	10.0	8.2	-18%	35%	28%	-19%	5.1	3.7	-27%	18%	13%	-29%	35.0	27.7	-21%		
		Service activities incidental to water transportation	415	570	37%	60.9	137.8	126%	52.7	54.2	3%	87%	39%	-55%	30.3	30.3	0%	50%	22%	-56%	54.0	42.1	-22%		
Maritime transport	Shipbuilding and repair	Building of ships and floating structures																							
		Building of pleasure and sporting boats	29	26	-10%	2.1	1.7	-19%	0.5	0.8	60%	24%	47%	98%	0.2	0.4	100%	10%	24%	147%	13.8	15.4	12%		
		Repair and maintenance of ships and boats	104	1,563	1403%	9.7	146.8	1413%	4.7	89.0	1794%	48%	61%	25%	2.4	31.8	1225%	25%	22%	-12%	22.1	36.6	65%		
		Manufacture of engines and turbines, except aircraft																							
		Manufacture of instruments for measuring, testing and navigation																							
		Manufacture of other fabricated metal products n.e.c.																							
Coastal tourism	Freight transport	Manufacture of sport goods																							
		Manufacture of cordage, rope, twine and netting																							
		Manufacture of textiles other than apparel																							
		Sea and coastal passenger water transport	2,708	278	-90%	214.5	18.7	-91%	101.7	6.7	-93%	47%	36%	-24%	55.6	2.3	-96%	26%	12%	-53%	17.0	16.2	-5%		
		Inland passenger water transport																							
		Sea and coastal freight water transport	67	51	-24%	12.8	25.2	97%	-	5.7	11.2	296%	-45%	44%	200%	-	9.0	191%	-77%	36%	64.2	41.2	-36%		
Tourism	Accommodation	Inland freight water transport																							
		Renting and leasing of water transport equipment																							
		Other transportation support activities	1,515	733	-52%	262.3	202.9	-23%	76.5	33.9	-56%	29%	17%	-43%	33.7	9.2	-73%	13%	5%	-65%	28.2	33.8	20%		
		Transport	4,529	4,573	1%	716.2	765.8	7%	94.3	85.4	-9%	13%	11%	-15%	16.7	10.2	161%	-2%	1%	157%	24.5	16.4	-33%		
		Other expenditure	6,522	11,579	78%	401.1	728.4	82%	138.2	238.8	73%	34%	33%	-5%	48.6	84.4	73%	12%	12%	-4%	13.7	13.3	-3%		
		Accommodation	18,467	18,028	-2%	912.4	997.5	9%	522.8	576.1	10%	57%	58%	1%	182.7	271.8	49%	20%	27%	36%	18.4	16.9	-8%		
EU-27																									
		Blue economy (established sectors)	36,666	40,392	10%	2,746	3,247	18%	1,036	1,156	12%	38%	36%	-4%	345	473	37%	13%	15%	16%	691	682	-1%		

Table A20 Latvia: Overview of the Blue Economy by sub-sector and activity

Latvia		Activity	Persons employed		Δ 2019-09	Turnover (M€)		Δ 2019-09	Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Δ 2019-09	Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Δ 2019-09	Personnel costs per employee (k€)	
Sector	Sub-sector		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019
Living resources	Primary production	Capture fisheries (SSCF)	1,110	298	-73%	0.9	1.1	26%	0.7	0.3	-63%	87%	25%	-71%	0.6	-0.3	-143%	68%	-24%	-135%	0.1	1.8
		Capture fisheries (LSF)	556	314	-44%	20.9	16.9	-19%	11.3	7.4	-35%	54%	44%	-19%	7.9	3.4	-56%	38%	20%	-46%	6.0	12.5
		Capture fisheries (DWF)																				
		Marine aquaculture	134	235	75%	1.2	4.5	261%	0.4	1.4	259%	30%	30%	0%	0.1	-1.5	-1431%	9%	-33%	-469%	1.5	10.8
		Shellfish aquaculture	1			0.0		0.0				52%			0.0			24%			0.9	
	Processing of fish products	Processing and preserving of fish, crustaceans and molluscs	4,728	2,921	-38%	151.2	209.4	37%	29.5	44.4	51%	19%	21%	10%	7.5	15.7	109%	5%	7%	53%	4.7	9.8
		Manufacture of oils and fats	3	10	240%	0.3	2.1	715%	-0.0	-0.2	-715%	-9%	-9%	0%	-0.0	-0.4	-715%	-19%	-19%	0%	8.1	19.3
		Prepared meals and dishes	299	262	-12%	16.7	12.5	-25%	2.6	3.6	38%	15%	28%	84%	1.3	1.5	12%	8%	12%	50%	4.2	8.1
Non-living resources	Distribution of fish products	Other food products																				
		Wholesale of other food, including fish, crustaceans and molluscs	837	701	-16%	150.7	168.2	12%	16.4	21.5	31%	11%	13%	18%	10.1	11.2	10%	7%	7%	-1%	7.5	14.8
		Retail sale of fish, crustaceans and molluscs in specialised stores	86	52	-40%	1.8	1.0	-44%	0.2	0.2	0%	11%	20%	80%	-0.1			-6%		3.5	3.8	
	Mining support activities	Support activities for other mining and quarrying																				
		Support activities for petroleum and natural gas extraction																				
		Operation of gravel and sand pits; mining of clays and kaolin																				
	Other mining and quarrying	Extraction of salt																				
		Extraction of crude petroleum																				
		Extraction of oil and gas																				
	Ocean energy	Offshore wind energy	Extraction of natural gas																			
Production of electricity																						
Port activities	Cargo and warehousing	Transmission of electricity																				
		Cargo handling	2,294	1,990	-13%	204.0	199.9	-2%	83.9	74.6	-11%	41%	37%	-9%	53.4	38.5	-28%	26%	19%	-26%	13.3	18.2
Port activities	Port and water projects	Warehousing and storage	1,167	2,207	89%	57.0	114.6	101%	19.5	45.1	131%	34%	39%	15%	18.4	9.5	93%	17%	16%	-4%	8.5	12.1
		Construction of water projects	902	764	-15%	103.5	62.8	-39%	20.1	12.4	-38%	19%	20%	2%	9.9	0.1	-99%	10%	0%	-98%	11.3	16.1
Shipbuilding and repair	Shipbuilding	Service activities incidental to water transportation	158	1,299	722%	6.1	120.5	1875%	4.3	85.9	1898%	70%	71%	1%	1.8	54.9	2950%	30%	46%	54%	15.2	23.9
		Building of ships and floating structures	842	283	-66%	27.8	9.5	-66%	10.1	3.2	-68%	36%	34%	-7%	2.9	-0.6	-121%	10%	-6%	-161%	8.4	13.4
Shipbuilding and repair	Shipbuilding	Building of pleasure and sporting boats	121	277	129%	3.4	16.2	376%	1.8	6.3	250%	53%	39%	-27%	1.0	1.6	60%	29%	10%	-66%	7.4	17.0
		Repair and maintenance of ships and boats	1,668	1,450	-13%	42.6	51.1	20%	18.5	18.9	2%	43%	37%	-15%	9.5	5.6	-41%	22%	11%	-51%	5.4	9.2
	Equipment and machinery	Manufacture of engines and turbines, except aircraft	1	0	-47%	0.0	0.0	41%							0.0	-0.0	29%	-50%	-25%	50%	12.5	16.7
		Manufacture of instruments for measuring, testing and navigation	26	32	24%	1.4	2.6	87%	0.6	1.0	51%	47%	38%	-19%	0.4	0.5	37%	28%	21%	-27%	10.2	14.2
	Equipment and machinery	Manufacture of other fabricated metal products n.e.c.	399	16	-96%	12.6	1.0	-92%	3.7	0.3	-93%	29%	28%	-4%	1.1	0.1	-92%	9%	9%	3%	6.6	11.3
		Manufacture of sport goods	3	13	358%	0.1	0.4	338%	0.0	0.1	392%	29%	32%	13%	0.0	0.0	155%	14%	8%	-42%	2.5	8.0
	Shipbuilding and repair	Manufacture of cordage, rope, twine and netting	2			0.1				0.0			26%		0.0			9%			5.2	
		Manufacture of textiles other than apparel	17	211	1173%	0.3	7.6	2364%	0.1	2.6	2342%	34%	34%	-1%	0.0	0.7	2552%	9%	9%	8%	4.7	8.7
	Maritime transport	Passenger transport	Sea and coastal passenger water transport	514	649	26%																
			Inland passenger water transport	10	30	200%	0.4	0.4	0%	0.3	0.2	-33%	75%	50%	-33%	0.2			50%			6.7
Freight transport		Sea and coastal freight water transport	455	236	-48%	42.2	64.4	53%	18.3	17.9	-2%	43%	28%	-36%	6.8	9.3	37%	16%	14%	-10%	25.5	36.4
		Inland freight water transport	22	178	709%	0.4	7.8	1850%	0.2	5.6	2700%	50%	72%	44%	0.1	1.9	1800%	25%	24%	-3%	9.1	20.8
		Renting and leasing of water transport equipment	25	53	112%	5.5	6.0	9%	2.3	2.7	17%	42%	45%	8%	1.0	1.3	30%	18%	22%	19%	52.0	24.5
Coastal tourism	Services for transport	Other transportation support activities	267	280	5%	44.2	56.0	27%	6.6	6.8	3%	15%	12%	-19%	4.0	2.9	-27%	9%	5%	-42%	9.9	14.0
	Transport	Transport	2,316	3,260	41%	188.4	361.5	92%	40.6	65.2	61%	22%	18%	-16%	16.5	23.3	42%	9%	6%	-26%	10.4	12.8
	Other expenditure	9,053	13,674	51%	243.8	546.0	124%	49.8	149.6	200%	20%	27%	34%	6.2	34.6	459%	3%	6%	150%	4.8	8.4	
	Accommodation	5,129	6,540	28%	95.1	222.8	134%	42.9	96.8	125%	45%	43%	-4%	13.6	31.2	129%	14%	14%	-2%	5.7	10.0	
EU-27		Blue economy (established sectors)	33,144	38,235	15%	1,425	2,267	75%	385	674	75%	27%	30%	10%	165	254	54%	12%	11%	-3%	219	419

Table A21 Lithuania: Overview of the Blue Economy by sub-sector and activity

Lithuania		Activity	Persons employed		Δ 2019-09	Turnover (M€)		Δ 2019-09	Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Δ 2019-09	Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Personnel costs per employee (k€)		Δ 2019-09	
Sector	Sub-sector		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019	2009	2019		2009
Living resources	Primary production	Capture fisheries (SSCF)	160	126	-21%	0.9	0.6	-38%	0.5	0.3	-43%	57%	52%	-9%	0.4	0.0	-94%	41%	4%	-90%	0.9	2.1	136%
		Capture fisheries (LSF)	192	92	-52%	7.6	4.8	-37%	2.5	1.6	-35%	32%	33%	3%	1.3	0.5	-62%	17%	10%	-39%	6.0	11.9	97%
		Capture fisheries (DWF)	310	255	-18%	52.8	72.4	37%	11.7	15.8	34%	22%	22%	-2%	7.1	10.1	41%	14%	14%	3%	14.9	22.3	50%
		Marine aquaculture																					
		Freshwater aquaculture	364	408	12%	7.4	14.1	91%	2.2	5.4	142%	30%	38%	26%	0.6	1.4	121%	9%	10%	15%	3.2	8.0	147%
	Shellfish aquaculture																						
	Processing and preserving of fish, crustaceans and molluscs	4,244	5,860	38%	232.6	709.0	205%	49.9	129.2	159%	21%	18%	-15%	19.4	46.9	142%	8%	7%	-21%	7.2	14.0	95%	
	Manufacture of oils and fats																						
	Prepared meals and dishes	392	574	46%	8.9	34.3	283%	3.5	9.3	164%	39%	27%	-31%	1.5	3.5	130%	17%	10%	-40%	5.2	10.2	98%	
	Other food products	3			0.1			0.0			17%			0.0			8%				4.3		
	Distribution of fish products	1,135	969	-15%	165.9	456.3	175%	13.9	38.9	181%	8%	9%	2%	4.9	23.6	381%	3%	5%	75%	7.9	15.7	100%	
	Wholesale of other food, including fish, crustaceans and molluscs																						
	Retail sale of fish, crustaceans and molluscs in specialised stores	13	63	385%	0.1	4.6	4500%		0.6		13%				0.2		4%				6.3		
	Support activities for other mining and quarrying																						
	Support activities for petroleum and natural gas extraction																						
Non-living resources	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin																					
		Extraction of salt																					
		Extraction of crude petroleum	0	0	-70%	0.0	0.0	-56%	0.0	0.0	-79%	55%	26%	-53%	0.0	0.0	-80%	35%	16%	-55%	31.6	24.1	-24%
		Extraction of natural gas																					
		Production of electricity																					
Ocean energy	Offshore wind energy	Transmission of electricity																					
		Cargo handling	1,015	994	-2%	59.6	131.6	121%	32.5	81.1	149%	55%	62%	13%	17.6	56.2	219%	30%	43%	44%	14.7	25.1	70%
Port activities	Cargo and warehousing	Warehousing and storage	1,068	1,305	22%	46.9	82.4	76%	20.0	32.4	62%	43%	39%	-8%	9.9	11.6	17%	21%	14%	-33%	9.5	15.9	68%
		Construction of water projects	1,116	678	-39%	45.5	64.1	41%	15.7	9.8	-38%	35%	15%	-56%	3.6	-1.0	-128%	8%	-2%	-120%	10.8	15.8	46%
	Port and water projects	Service activities incidental to water transportation	654	392	-40%	55.7	85.0	53%	44.5	67.9	53%	80%	80%	0%	33.6	56.0	67%	60%	66%	9%	16.7	30.4	82%
		Building of ships and floating structures	1,708	2,544	49%	54.7	163.4	199%	33.4	78.1	134%	61%	48%	-22%	6.2	21.7	250%	11%	13%	17%	15.9	22.2	39%
Shipbuilding and repair	Shipbuilding	Building of pleasure and -sporting boats	166	390	135%	5.8	29.7	412%	1.1	12.9	1073%	19%	43%	129%	-0.5	5.1	1120%	-9%	17%	299%	9.6	20.0	108%
		Repair and maintenance of ships and boats	3,464	4,222	22%	195.6	240.4	23%	35.5	98.3	177%	18%	41%	125%	-1.9	15.9	937%	-1%	7%	781%	10.8	19.5	81%
	Manufacture of engines and turbines, except aircraft	27			0.4			0.3			62%			0.1			12%				8.3		
	Manufacture of instruments for measuring, testing and navigation	24	90	276%	1.1	8.3	631%	0.5	3.5	566%	46%	42%	-9%	0.3	1.1	338%	23%	14%	-40%	11.2	26.5	136%	
	Equipment and machinery	Manufacture of other fabricated metal products n.e.c.	1			0.0			0.0			34%			0.0			11%				6.6	
	Passenger transport	Manufacture of sport goods	14	13	-4%	0.5	0.8	54%	0.1	0.2	102%	20%	27%	32%	0.0	0.1	162%	8%	14%	71%	4.7	8.0	69%
		Manufacture of cordage, rope, twine and netting	423	457	8%	17.9	25.9	45%	5.3	10.0	91%	29%	39%	32%	2.1	3.7	77%	12%	14%	22%	7.5	13.8	84%
		Manufacture of textiles other than apparel	152	108	-29%	4.1	5.6	37%	1.2	1.7	33%	30%	30%	-2%	0.4	0.5	21%	9%	8%	-11%	5.7	11.2	96%
		Sea and coastal passenger water transport		8			0.1			0.1		100%											
		Inland passenger water transport	143	152	6%	4.4	5.9	34%	3.4	4.1	21%	77%	69%	-10%	1.8	1.9	6%	41%	32%	-21%	10.5	15.1	44%
Maritime transport	Freight transport	Sea and coastal freight water transport	1,602	1,014	-37%	147.2	153.6	4%	52.7	63.6	21%	36%	41%	16%	25.1	37.2	48%	17%	24%	42%	17.2	26.1	52%
		Inland freight water transport																					
		Renting and leasing of water transport equipment	32	14	-56%	2.2	10.5	377%	0.5	0.7	40%	23%	7%	-71%	0.4	0.3	0.3	18%	3%	-84%	3.1	28.6	814%
Coastal tourism	Services for transport	Other transportation support activities	334	340	2%	53.5	70.7	32%	5.1	9.8	92%	9%	14%	45%	1.7	4.6	162%	3%	6%	98%	10.0	15.3	53%
		Transport	1,409	728	-48%	100.9	84.4	-16%	12.1	11.5	-5%	12%	14%	14%	2.0	4.6	126%	2%	5%	170%	7.1	9.5	33%
		Other expenditure	2,509	2,050	-18%	66.6	92.1	38%	11.4	25.1	120%	17%	27%	59%	-0.4	7.1	1675%	-1%	8%	1238%	4.7	8.8	86%
		Accommodation	2,246	2,665	19%	41.4	79.2	91%	17.5	41.7	138%	42%	53%	25%	4.6	18.2	293%	11%	23%	105%	5.7	8.8	54%
		Blue economy (established sectors)	24,918	26,508	6%	1,380	2,650	91%	377	753	100%	27%	29%	5%	142	331	133%	10%	13%	22%	235	422	80%

Table A22 Luxembourg: Overview of the Blue Economy by sub-sector and activity

Luxembourg		Activity	Persons employed		Turnover (M€)		Value added at factor cost (M€)		GVA to turnover (%)		Gross operating surplus (M€)		Gross profit margin (%)		Personnel costs per employee (k€)	
Sector	Sub-sector		2009	Δ 2019-09	2009	Δ 2019-09	2009	Δ 2019-09	2009	Δ 2019-09	2009	Δ 2019-09	2009	Δ 2019-09	2009	Δ 2019-09
Living resources	Primary production	Capture fisheries (SSCF)														
		Capture fisheries (LSF)														
		Capture fisheries (DMF)														
		Marine aquaculture														
		Freshwater aquaculture														
	Processing of fish products	Shellfish aquaculture														
		Processing and preserving of fish, crustaceans and molluscs														
		Manufacture of oils and fats														
		Prepared meals and dishes														
		Other food products														
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs														
		Retail sale of fish, crustaceans and molluscs in specialised stores	13	-15%	1.9	2.3	0.3	0.4	33%	16%	17%	10%		23.1	36.4	58%
	Minings support activities	Support activities for other mining and quarrying														
		Support activities for petroleum and natural gas extraction														
	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin														
		Extraction of salt														
	Extraction of oil and gas	Extraction of crude petroleum														
		Extraction of natural gas														
	Offshore wind energy	Production of electricity														
		Transmission of electricity														
Port activities	Cargo and warehousing	Cargo handling	114	-49%	11.5	10.8	6.2	5.5	-11%	53%	50%	-6%	24%	44.5	49.6	11%
		Warehousing and storage														
	Port and water projects	Construction of water projects														
		Service activities incidental to water transportation														
	Shipbuilding	Building of ships and floating structures														
		Building of pleasure and sporting boats														
	Equipment and machinery	Repair and maintenance of ships and boats														
		Manufacture of engines and turbines, except aircraft														
		Manufacture of instruments for measuring, testing and navigation														
		Manufacture of other fabricated metal products n.e.c.														
Shipbuilding and repair		Manufacture of sport goods														
		Manufacture of cordage, rope, twine and netting														
	Passenger transport	Manufacture of textiles other than apparel														
		Sea and coastal passenger water transport														
	Freight transport	Inland passenger water transport														
		Sea and coastal freight water transport														
	Services for transport	Inland freight water transport														
		Renting and leasing of water transport equipment														
	Transport	Other transportation support activities	279	355	99.2	202.7	16.0	27.3	71%	16%	13%	-16%	3%	6.8	45.1	28%
		Transport														
Coastal tourism	Other expenditure	Other expenditure														
		Accommodation														
	EU-27	Blue economy (established sectors)	405	423	113	216	22	33	48%	20%	15%	-13%	4%	9	18	33%

Table A24 Malta: Overview of the Blue Economy by sub-sector and activity

Malta		Activity		Persons employed		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)		Δ 2019-09		
Sector	Sub-sector	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	
Living resources	Primary production	Capture fisheries (SSCF)		863	762	-12%	2.2	4.0	81%	-	0.9	1.5	274%	-	40%	38%	196%	-	8.5	-	0.5	94%	-383%	-12%	97%	8.9	2.6	-70%
		Capture fisheries (LSF)		309	277	-10%	7.8	9.4	20%		3.5	6.1	73%		45%	65%	44%	-	0.7	3.9	651%	-9%	42%	559%	13.7	7.7	-44%	
		Capture fisheries (DWF)																										
		Marine aquaculture		173	320	85%	48.1	242.7	404%	-	20.0	13.0	165%	-	41%	5%	113%	-	34.6	2.8	108%	-72%	1%	102%	21.1	20.5	-3%	
		Freshwater aquaculture																										
	Processing of fish products	Shellfish aquaculture																										
		Processing and preserving of fish, crustaceans and molluscs																										
		Manufacture of oils and fats																										
		Prepared meals and dishes																										
		Other food products																										
	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs		429	502	17%	115.4	137.2	19%		12.1	16.5	36%		10%	12%	14%		6.5	5.7	-13%	6%	4%	-27%	13.1	14.7	12%	
		Retail sale of fish, crustaceans and molluscs in specialised stores		77	149	94%	16.2	38.1	135%		1.5	4.4	193%		9%	12%	25%		0.9	2.7	200%	6%	7%	28%	6.5	3.4	-48%	
		Support activities for other mining and quarrying																										
		Support activities for petroleum and natural gas extraction																										
		Operation of gravel and sandpits; mining of clays and kaolin																										
Non-living resources	Other mining and quarrying	Extraction of salt																										
		Extraction of crude petroleum																										
		Extraction of natural gas																										
		Production of electricity																										
		Transmission of electricity																										
Ocean energy	Offshore wind and gas	Cargo handling		1,006	1,006	0%	134.3	134.3	0%		58.1	58.1	0%		43%	43%	0%		27.3	27.3	0%	20%	20%	0%				
		Warehousing and storage		245	271	11%	29.8	49.7	67%		14.9	26.6	78%		50%	54%	7%		11.5	16.7	45%	39%	34%	-13%	13.9	36.6	163%	
		Port and water projects		19	19	0%	4.0	4.0	0%		0.2	0.2	0%		5%	5%	0%	-	0.3	-	0.3	-8%	-8%	0%				
		Service activities incidental to water transportation		262	387	48%	40.1	82.7	106%		22.1	37.3	69%		55%	45%	-18%		16.3	23.8	46%	41%	29%	-29%	21.8	16.5	-24%	
		Building of ships and floating structures					0.8	0.5	-38%		0.3	0.3			38%			0.2	0.2	0.2	0%							
	Shipbuilding	Building of pleasure and sporting boats		20	15	-25%					0.3	0.3	0%						0.2	0.2	0%							
		Repair and maintenance of ships and boats		271	549	103%	19.3	74.2	284%		12.0	35.6	197%		62%	48%	-23%		8.0	23.3	191%	41%	31%	-24%	14.8	9.1	-38%	
		Manufacture of engines and turbines, except aircraft																										
		Manufacture of instruments for measuring, testing and navigation																										
		Manufacture of other fabricated metal products n.e.c.																										
Shipbuilding and repair	Equipment and machinery	Manufacture of sport goods																										
		Manufacture of cordage, rope, twine and netting																										
		Manufacture of textiles other than apparel																										
		Sea and coastal passenger water transport		497	497	0%	75.5	75.5	0%		18.7	18.7	0%		25%	25%	0%		3.8	3.8	0%	5%	5%	0%	22.5	22.5	0%	
		Inland passenger water transport		3																								
Maritime transport	Freight transport	Sea and coastal freight water transport		86	84	-2%	89.6	89.6	0%		31.7	31.7	0%		35%	35%	0%		28.9	28.9	0%	32%	32%	0%	17.4	28.6	64%	
		Inland freight water transport																										
		Renting and leasing of water transport equipment		69	73	6%	4.7	140.8	2896%		1.7	31.8	1771%		36%	23%	-38%		0.1	30.3	30200%	2%	22%	911%				
		Other transportation support activities		97	126	30%	13.7	24.4	79%		5.2	7.0	35%		38%	29%	-24%		3.4	3.6	5%	25%	15%	-41%	17.7	26.7	51%	
		Transport		2,579	10,989	326%	185.1	655.1	254%		18.5	82.3	346%		10%	13%	26%		14.8	88.9	502%	8%	14%	70%	2.5	2.7	5%	
Coastal tourism	Other expenditure	Transport		3,953	8,454	114%	181.9	560.9	208%		41.6	150.3	261%		23%	27%	17%		16.5	54.7	231%	9%	10%	7%	6.5	9.5	45%	
		Other expenditure		7,155	9,578	34%	318.4	761.1	139%		141.2	338.1	139%		44%	44%	0%		49.2	164.1	234%	15%	22%	40%	12.9	18.2	41%	
		Accommodation		18,114	34,058	88%	1,287	3,084	140%		363	859	137%		28%	28%	1%		144	480	234%	11%	16%	40%	173	340	96%	
		Blue economy (established sectors)																										
		EU-27																										

Table A25 Netherlands: Overview of the Blue Economy by sub-sector and activity

Netherlands		Activity		Persons employed		Δ 2019-09		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)		Δ 2019-09			
Sector	Sub-sector	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019		
Living resources	Primary production	Capture fisheries (SSCF)		302	349	16%	-9%	5.6	4.1	-28%	-8%	148.5	144.5	2.4	-35%	67%	59%	-11%	-12%	2.3	1.7	-27%	-13%	41%	41%	1%	4.8	2.1	-56%	12%			
		Capture fisheries (LSF)		1,785	1,620	-9%		366.5	335.5			148.5	144.5	4.1%	43%	6%					48.2	42.3			13%	13%		56.1	63.1				
		Capture fisheries (DWF)																															
		Marine aquaculture		5	3	-35%		1.4	1.6	19%		0.1	0.3	198%	6%	16%	151%	-	0.2	0.1	127%	-18%	4%	123%	47.4	43.1	-9%						
	Processing of fish products	Freshwater aquaculture		131	73	-44%		33.5	35.1	5%		3.6	13.4	271%	11%	38%	254%	-	0.7	3.6	612%	-2%	10%	589%	6.8	11.9	1551%						
		Shellfish aquaculture		236	231	-2%		65.0	70.9	9%		35.8	29.9	-16%	55%	42%	-23%	18.4	11.8	-36%	28%	17%	-41%	31.7	62.0	96%							
		Processing and preserving of fish, crustaceans and molluscs		3,335	3,068	-8%		677.4	1,039.2	53%		138.5	148.7	7%	20%	14%	-30%	55.9	47.6	-15%	8%	5%	-44%	24.8	33.0	33%							
		Manufacture of oils and fats		0	0	49%																											
	Prepared meals and dishes		420	936	123%																												
	Other food products		3	2	-56%																												
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs		7,159	10,146	42%	-56%	3,896.8	6,702.0	72%		489.1	747.1	53%	13%	11%	-11%	229.3	322.2	41%	6%	5%	-18%	36.3	41.9	15%							
		Retail sale of fish, crustaceans and molluscs in specialised stores		3,910	4,711	20%																											
		Support activities for other mining and quarrying		0	0			0.6						0.3	51%					0.1				22%									
		Support activities for petroleum and natural gas extraction		922	902	-2%		726.2	620.9	-14%		270.5	353.8	31%	37%	57%	53%	183.4	267.0	46%	25%	43%	70%	94.5	96.2	2%							
	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin		366	208	-43%		244.4	158.3	-35%		75.4	50.7	-33%	31%	32%	4%	53.3	33.0	-38%	22%	21%	-5%	60.3	85.0	41%							
		Extraction of salt																															
		Extraction of crude petroleum		227	130	-43%		7,938.0	86.1	-99%		1,971.2	59.9	-97%	25%	70%	180%	1,898.2	42.5	-98%	24%	49%	106%	321.3	133.4	-58%							
		Extraction of natural gas		854	770	-10%		5,602.2	4,474.5	-20%		1,391.2	990.3	-29%	25%	22%	-11%	1,339.6	878.5	-34%	24%	20%	-18%	60.3	145.1	141%							
	Offshore wind energy	Production of electricity		54	115	113%																											
		Transmission of electricity		75	444	495%																											
Port activities	Cargo and warehousing	Cargo handling		8,242	8,999	9%		1,740.8	2,503.7	44%		804.8	1,096.3	36%	46%	44%	5%	349.0	454.6	30%	20%	18%	-9%	55.3	71.3	29%							
		Warehousing and storage		8,365	13,179	58%		2,508.8	4,519.1	80%		940.3	1,700.2	81%	37%	38%	0%	430.6	952.8	121%	17%	21%	23%	60.9	56.7	-7%							
		Construction of water projects		6,249	8,652	38%		1,671.3	3,223.3	93%		820.9	886.2	8%	49%	27%	8%	44%	371.6	325.6	-12%	22%	10%	-55%	71.9	64.8	-10%						
		Service activities incidental to water transportation		3,862	5,023	30%		1,147.0	1,704.5	49%		741.5	1,100.0	48%	65%	65%	0%	483.3	832.3	72%	42%	49%	16%	66.9	53.3	-20%							
	Shipbuilding	Building of ships and floating structures		6,488	6,540	1%		2,355.7	2,968.6	26%		393.5	378.8	-4%	17%	13%	-24%	118.4	-	24.7	-121%	5%	-1%	42.4	61.7	45%							
		Building of pleasure and sporting boats		5,437	5,860	8%		2,355.7	2,968.6	26%		393.5	378.8	-4%	17%	13%	-24%	118.4	-	24.7	-121%	5%	-1%	50.6	68.8	36%							
		Repair and maintenance of ships and boats		4,837	5,170	7%																											
		Manufacture of engines and turbines, except aircraft		347	81	-77%																											
	Equipment and machinery	Manufacture of instruments for measuring, testing and navigation		73	51	-31%																											
		Manufacture of other fabricated metal products n.e.c.		107	105	-2%																											
Shipbuilding and repair	Passenger transport	Manufacture of transport goods		64	56	-12%																											
		Manufacture of cordage, rope, twine and netting		66	24	-64%																											
		Manufacture of textiles other than apparel		193	158	-19%																											
		Sea and coastal passenger water transport		1,711	1,689	-1%																											
	Freight transport	Inland passenger water transport		3,155	3,478	10%																											
		Sea and coastal freight water transport		9,908	6,084	-39%		4,635.5	5,606.4	21%		1,299.7	1,371.8	6%	28%	24%	-13%	959.1	856.9	-11%	21%	15%	-26%	34.4	84.6	146%							
		Inland freight water transport		10,556	9,976	-5%																											
		Renting and leasing of water transport equipment		182	362	99%																											
	Services for transport	Other transportation support activities		7,026	8,590	22%		2,082.1	3,442.5	65%		419.1	643.9	54%	20%	19%	-7%	110.9	195.2	76%	5%	6%	6%	43.9	52.2	19%							
		Transport		2,285	3,621	58%		648.2	1,454.7	124%		185.7	429.7	131%	29%	30%	3%	45.0	144.2	221%	7%	10%	43%	61.6	78.8	28%							
Coastal tourism	Other expenditure	Other expenditure		11,991	32,004	167%		819.5	2,339.5	185%		228.5	749.5	228%	28%	32%	15%	87.4	296.6	239%	11%	13%	19%	11.8	14.2	20%							
		Accommodation		22,512	32,626	45%		990.8	2,213.1	123%		441.8	1,004.9	127%	45%	45%	2%	143.3	450.3	214%	14%	20%	41%	13.3	17.0	28%							
EU-27	Blue economy (established sectors)		139,439	176,035	32%		40,512	46,473	15%		11,197	12,281	10%	28%	28%	-4%	7,045	6,109	-13%	17%	13%	-14%	4,139	6,167	49%								

Notes: The total value of the Dutch Blue Economy is underestimated because the data for sea and coastal passenger water transport were not available.

Table A26 Austria: Overview of the Blue Economy by sub-sector and activity

Austria		Sub-sector	Activity	Persons employed		Δ 2019-09		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (€)		Δ 2019-09	
Sector				2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019
Living resources	Primary production	Capture fisheries (SSCF)																											
		Capture fisheries (LSF)																											
		Capture fisheries (DWF)																											
		Marine aquaculture																											
		Freshwater aquaculture																											
	Processing of fish products	Shellfish aquaculture	121	408	238%		15.4	29.8	93%		4.7	11.4	144%		30%	38%	26%	1.4	3.0	123%	9%	10%	15%	20.5	17.0	-17%	-17%		
		Processing and preserving of fish, crustaceans and molluscs	130	158	22%		34.4	44.9	31%		9.8	10.1	3%		28%	22%	-21%	5.6	3.6	-36%	16%	8%	-51%	31.5	41.1	30%	30%		
		Manufacture of oils and fats																											
		Prepared meals and dishes	94	565	503%		17.4	170.6	880%		4.8	32.6	574%		28%	19%	-31%	1.4	6.5	355%	8%	4%	-54%	36.4	46.2	27%	27%		
		Other food products																											
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	1,694	1,537	-9%		1,049.7	920.0	-12%		119.5	110.2	-8%		11%	12%	5%	44.0	30.1	-32%	4%	3%	-22%	44.6	52.2	17%	17%		
		Retail sale of fish, crustaceans and molluscs in specialised stores	214	225	5%		17.4	21.7	25%		2.8	3.3	18%		16%	15%	-5%	0.6		-3%			15.9	14.7	-8%	-8%			
		Support activities for other mining and quarrying																											
		Support activities for petroleum and natural gas extraction																											
		Operation of gravel and sand pits; mining of clays and kaolin																											
	Other mining and quarrying	Extraction of salt																											
		Extraction of crude petroleum																											
		Extraction of natural gas																											
		Production of electricity																											
		Transmission of electricity																											
Ocean energy																													
Port activities	Cargo and warehousing	Cargo handling	12	19	58%		1.5	1.7	17%		0.2	0.6	500%		-10%	35%	441%	0.3	0.4	217%	21%	21%	200%	12.5	13.2	5%	5%		
		Warehousing and storage	712	1,283	80%		175.0	340.6	95%		77.9	140.0	80%		44%	41%	-8%	48.2	82.0	70%	28%	24%	-13%	41.6	45.2	9%	9%		
		Construction of water projects	418	338	-19%		68.9	75.2	9%		9.8	7.3	-26%		14%	10%	-32%	0.4	1.6	300%	1%	2%	266%	22.2	16.9	-24%	-24%		
		Service activities incidental to water transportation	72	96	33%		13.7	28.0	104%		8.3	16.8	102%		61%	60%	-1%	5.2	11.3	117%	38%	40%	6%	41.7	57.3	38%	38%		
		Building of ships and floating structures																											
	Shipbuilding	Building of pleasure and sporting boats	220	281	28%		27.8	45.1	62%		6.8	14.2	109%		24%	31%	29%	0.5	2.7	640%	-2%	6%	433%	33.2	40.9	23%	23%		
		Repair and maintenance of ships and boats	177	208	18%		22.2	33.8	52%		9.2	13.7	49%		41%	41%	-2%	2.0	2.4	20%	9%	7%	-21%	40.7	54.3	34%	34%		
		Manufacture of engines and turbines, except aircraft	287	527	84%		55.1	125.8	128%		13.2	42.7	224%		24%	34%	42%	3.4	8.4	350%	-6%	7%	209%	57.5	65.1	13%	13%		
		Manufacture of instruments for measuring, testing and navigation	29	0	-100%		4.3	0.0	-100%		2.0	0.0	-100%		47%	46%	-1%	0.6	0.0	-100%	14%	16%	14%	48.1	63.4	32%	32%		
		Manufacture of other fabricated metal products n.e.c.																											
Shipbuilding and repair	Equipment and machinery	Manufacture of sport goods	184	35	-81%		38.2	10.9	-71%		8.4	2.8	-66%		22%	26%	18%	0.3	0.8	125%	1%	7%	685%	43.8	59.1	35%	35%		
		Manufacture of cordage, rope, twine and netting	7	15	126%		0.6	2.9	428%		0.2	1.4	487%		42%	47%	11%	0.1	0.5	466%	16%	18%	7%	23.1	57.3	148%	148%		
		Manufacture of textiles other than apparel	222	205	-8%		29.5	31.9	8%		9.0	10.0	11%		31%	31%	2%	2.5	2.1	-16%	8%	7%	-22%	29.5	38.7	31%	31%		
		Sea and coastal passenger water transport																											
		Inland passenger water transport	371	451	22%		43.3	60.8	40%		14.9	29.2	96%		34%	48%	40%	5.0	16.7	234%	12%	27%	138%	26.7	27.9	5%	5%		
	Freight transport	Sea and coastal freight water transport																											
		Inland freight water transport	163	81	-50%		78.5	47.6	-39%		9.6	2.3	-124%		12%	-5%	-140%	0.9	6.1	-778%	1%	-13%	-1218%	53.4	46.9	-12%	-12%		
		Renting and leasing of water transport equipment	20	29	45%		16.3	20.7	27%		12.9	13.1	2%		79%	63%	-20%	12.6	12.4	-2%	77%	60%	-23%	15.0	20.7	38%	38%		
		Other transportation support activities	145	129	-11%		56.8	61.4	8%		8.6	10.0	17%		15%	16%	8%	2.0	2.7	39%	3%	4%	28%	45.5	56.3	24%	24%		
		Transport																											
Coastal tourism	Other expenditure																												
	Accommodation																												
EU-27		Blue economy (established sectors)	5,290	6,589	25%		1,766	2,073	17%		332	467	41%		19%	23%	20%	127	181	42%	7%	9%	21%	204	285	40%	40%		

Table A27 Poland: Overview of the Blue Economy by sub-sector and activity

Poland	Sub-sector	Activity	Persons employed		Δ 2019-09	Turnover (M€)		Δ 2019-09	Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Δ 2019-09	Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Δ 2019-09	Personnel costs per employee (€)		Δ 2019-09		
Sector			2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019		2009	2019			
Living resources	Primary production	Capture fisheries (SSCF)	1,313	1,561	19%	10.8	11.0	1%	7.6	6.1	-19%	56%	70%	-20%	5.1	-	-132%	47%	-15%	-132%	1.9	5.0	163%		
		Capture fisheries (LSF)	1,116	919	-18%	30.9	31.3	1%	16.2	17.1	5%	52%	55%	4%	8.5	8.0	-5%	27%	26%	-6%	6.9	9.9	42%		
		Capture fisheries (DWF)	270	47	-83%																				
		Marine aquaculture																							
		Freshwater aquaculture	4,887	8,731	79%	85.2	127.0	49%	25.8	48.6	88%	30%	38%	26%	7.5	12.9	72%	9%	10%	15%	2.8	3.4	21%		
Non-living resources	Processing of fish products	Shellfish aquaculture		0			0.0			0.0		58%						19%							
		Processing and preserving of fish, crustaceans and molluscs	17,205	19,111	11%	1,421.9	3,434.4	142%	283.9	481.2	69%	20%	14%	-30%	152.3	196.4	29%	11%	6%	-47%	7.6	14.9	95%		
		Manufacture of oils and fats	11	6	-44%	4.9	3.1	-37%	0.6	0.3	-45%	12%	10%	-13%	0.4	0.2	-54%	9%	7%	-28%	12.3	19.2	57%		
		Prepared meals and dishes	1,472	2,057	40%	100.5	151.2	50%	18.5	42.4	130%	18%	28%	53%	8.7	20.1	131%	9%	13%	53%	6.7	10.9	63%		
		Other food products	66	0	-100%	6.0	0.0	-100%	2.0	0.0	-100%	33%	23%	-30%	1.2	0.0	-100%	20%	11%	-43%	11.5	17.2	50%		
		Wholesale of other food, including fish, crustaceans and molluscs	4,867	6,446	32%	1,174.9	1,526.3	30%	129.6	202.0	56%	11%	13%	20%	79.2	92.3	16%	7%	6%	-10%	10.4	17.0	64%		
		Retail sale of fish, crustaceans and molluscs in specialised stores	1,990	1,728	-13%	209.5	123.6	-41%	22.9	16.0	-30%	11%	13%	18%	18.6	9.3	-50%	9%	8%	-15%	2.2	3.9	79%		
		Support activities for other mining and quarrying	2			0.1			0.1			124%						69%				17.5			
		Mining support activities	362	155	-57%	28.0	11.4	-59%	14.2	5.6	-61%	51%	49%	-3%	6.9	1.9	-72%	25%	17%	-31%	20.3	23.7	17%		
		Other mining and quarrying	19				1.8			0.6		35%						20%				13.6			
Ocean energy	Extraction of oil and gas	Operation of gravel and sand pits; mining of clays and kaolin																							
		Extraction of salt																							
		Extraction of crude petroleum	62	37	-41%	15.7	8.8	-44%	4.3	3.5	-18%	27%	40%	46%	2.2	1.9	-13%	14%	22%	54%	33.6	43.8	30%		
		Extraction of natural gas	0	0	-29%	0.0	0.0	97%	0.0	0.0	95%	21%	21%	-1%	0.0	0.0	-48%	16%	4%	-74%	2.9	25.0	775%		
		Production of electricity																							
		Transmission of electricity																							
		Port activities	Cargo and warehousing	Cargo handling	7,804	5,248	-33%	418.3	413.4	-1%	161.2	196.5	22%	39%	48%	23%	78.1	111.9	43%	19%	27%	45%	10.7	16.1	51%
				Warehousing and storage	8,258	15,377	86%	385.1	1,137.1	195%	116.7	350.9	201%	30%	31%	2%	47.1	115.9	146%	12%	10%	-17%	8.4	15.3	81%
				Construction of water projects	9,511	5,757	-39%	893.5	417.7	-53%	206.0	134.2	-35%	23%	32%	39%	99.3	62.2	-37%	11%	15%	34%	11.2	12.5	11%
				Service activities incidental to water transportation	2,418	1,792	-26%	209.2	221.5	6%	79.3	73.8	-7%	38%	33%	-12%	41.0	42.3	3%	20%	19%	-3%	15.9	17.6	11%
Shipbuilding and repair	Shipbuilding	Building of ships and floating structures	14,268	6,129	-57%	1,225.4	909.9	-26%	438.0	132.0	-70%	36%	15%	-59%	227.7	25.2	-89%	19%	3%	-85%	14.7	17.4	18%		
		Building of pleasure and sporting boats	3,957	7,812	97%	163.7	637.5	289%	56.6	203.8	260%	35%	32%	-8%	26.4	80.4	205%	16%	13%	-22%	7.6	15.8	107%		
		Repair and maintenance of ships and boats	9,717	10,639	9%	396.1	763.7	93%	179.2	292.0	63%	45%	38%	-15%	86.6	108.3	25%	22%	14%	-35%	9.5	17.3	81%		
		Manufacture of engines and turbines, except aircraft	885			120.5			32.5			27%			20.2			17%			13.8				
Shipbuilding and repair	Equipment and machinery	Manufacture of instruments for measuring, testing and navigation	37	92	152%	1.7	9.2	454%	0.7	2.7	279%	43%	29%	-32%	0.3	1.1	217%	20%	12%	-43%	10.1	17.5	73%		
		Manufacture of other fabricated metal products n.e.c.	101	1	-99%	4.5	0.0	-99%	1.5	0.0	-99%	34%	32%	-5%	0.8	0.0	-99%	17%	14%	-18%	7.2	14.5	102%		
		Manufacture of sport goods	321	210	-35%	9.3	13.4	45%	3.8	4.4	15%	41%	33%	-21%	2.0	2.0	-1%	22%	15%	-32%	5.5	11.2	105%		
		Manufacture of cordage, rope, twine and netting	45			2.1			0.7			34%			0.4			19%			7.2				
		Manufacture of textiles other than apparel	43	1,614	3645%	1.5	98.5	6543%	0.5	26.5	5747%	31%	27%	-12%	0.2	10.6	4835%	15%	11%	-26%	5.5	9.9	78%		
Maritime transport	Passenger transport	Sea and coastal passenger water transport	374	553	48%	42.2	116.4	176%	14.4	3.7	-74%	34%	3%	-91%	11.3	-	-3%	27%	-3%	-111%	8.3	13.0	57%		
		Inland passenger water transport	699	386	-45%	84.6	19.3	-77%	27.0	5.3	-80%	32%	27%	-14%	22.0	2.6	-88%	26%	13%	-48%	7.2	7.0	-2%		
		Sea and coastal freight water transport	1,858	1,555	-16%	288.6	333.8	16%	87.8	98.8	13%	30%	30%	-3%	49.2	55.7	13%	17%	17%	-2%	20.8	27.7	33%		
		Inland freight water transport	723	593	-18%	105.7	45.5	-57%	32.3	9.4	-71%	31%	21%	-32%	26.1	4.6	-82%	25%	10%	-59%	8.6	8.1	-6%		
Maritime transport	Services for transport	Renting and leasing of water transport equipment	125	211	69%	20.4	12.5	-39%	10.4	1.6	-85%	51%	13%	-75%	9.4	1.0	-89%	46%	8%	-83%	8.0	3.3	-59%		
		Other transportation support activities	685	530	-23%	71.5	94.3	32%	14.4	15.4	7%	20%	16%	-18%	7.4	6.7	-10%	10%	7%	-32%	10.2	16.6	63%		
		Transport	6,619	11,122	68%	362.1	1,097.9	203%	85.1	247.6	191%	24%	23%	-4%	33.6	118.0	251%	9%	11%	16%	7.8	11.7	50%		
		Other expenditure	9,623	18,966	97%	424.7	1,403.1	230%	81.0	301.7	273%	19%	22%	13%	40.9	142.9	249%	10%	10%	6%	4.2	8.4	101%		
Coastal tourism	Accommodation	Accommodation	11,741	17,131	46%	297.9	1,005.7	238%	130.4	405.5	211%	44%	40%	-8%	64.6	211.9	228%	22%	21%	-3%	5.6	11.3	101%		
		Blue economy (established sectors)	123,432	146,536	19%	8,617	14,180	65%	2,285	3,329	46%	27%	23%	-13%	1,185	1,442	22%	14%	10%	-35%	1,095	1,882	72%		

Table A28 Portugal: Overview of the Blue Economy by sub-sector and activity

Portugal		Activity	Persons employed		Turnover (M€)		Value added at factor cost (M€)		GVA to turnover (%)		Gross operating surplus (M€)		Gross profit margin (%)		Personnel costs per employee (€)										
Sector	Sub-sector		2019		2019		2019		2019		2019		2019		2019										
			2009	2019	Δ 2019-09	2009	2019	Δ 2019-09	2009	2019	Δ 2019-09	2009	2019	Δ 2019-09	2009	2019									
Living resources	Primary production	Capture fisheries (SSCF)	9 321	6 825	-27%	79.2	89.6	13%	60.7	67.0	10%	77%	75%	33%	28%	37%	13%	3.7	5.0	33%					
		Capture fisheries (LSF)	8 200	6 575	-20%	258.5	267.0	3%	151.7	161.7	7%	59%	61%	3%	50.0	54.7	9%	19%	21%	6%	12.4	16.3	31%		
		Capture fisheries (DWF)	339	270	-20%	30.5	21.1	-31%	12.9	7.6	-41%	42%	36%	-15%	8.7	3.2	-63%	29%	15%	-47%	12.3	16.2	31%		
		Marine aquaculture	286	284	-1%	12.5	32.2	157%	-	4.5	7.7	271%	-36%	24%	166%	-	8.9	-	2.1	76%	-71%	91%	14.6	25.3	73%
		Freshwater aquaculture	37	31	-17%	1.2	2.2	87%	-	0.2	0.5	316%	-22%	25%	-	0.6	-	-26%	-	6.5	17.0	162%			
	Processing of fish products	Shellfish aquaculture	1 983	1 337	-33%	22.9	67.0	193%	21.1	59.5	182%	92%	89%	-4%	16.2	51.0	215%	71%	76%	8%	2.4	5.2	116%		
		Processing and preserving of fish, crustaceans and molluscs	7 097	8 508	20%	1 064.6	1 353.5	27%	157.3	222.1	41%	15%	16%	11%	58.5	86.8	48%	5%	6%	17%	13.9	15.9	14%		
		Manufacture of oils and fats	12	1	-93%	6.6	0.4	-93%	0.5	0.0	-93%	7%	7%	0%	0.3	0.0	-93%	4%	4%	0%	18.3	18.3	0%		
		Prepared meals and dishes	383	394	3%	20.7	28.1	36%	6.6	7.0	7%	32%	25%	-22%	2.0	1.6	-18%	10%	6%	-40%	12.0	13.7	14%		
		Other food products	7			1.0			0.2			22%			0.1			9%			18.7				
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	7 610	6 779	-11%	2 016.2	2 235.4	11%	190.2	195.9	3%	9%	9%	-7%	76.6	71.0	-7%	4%	3%	-16%	14.9	18.4	23%		
		Retail sale of fish, crustaceans and molluscs in specialised stores	5 928	4 226	-29%	302.1	313.4	4%	43.7	46.6	7%	14%	15%	3%	24.7	21.5	-13%	8%	7%	-16%	3.2	5.9	85%		
		Support activities for other mining and quarrying																							
	Mining support activities	Support activities for petroleum and natural gas extraction																							
		Operation of gravel and sand pits; mining of clays and kaolin																							
		Extraction of salt	122	130	6%	4.1	4.3	4%	1.6	2.0	31%	38%	47%	25%	0.4	0.7	57%	10%	15%	51%	9.4	10.6	14%		
	Extraction of oil and gas	Extraction of crude petroleum																							
		Extraction of natural gas																							
		Production of electricity																							
	Offshore wind energy	Transmission of electricity																							
Port activities	Cargo and warehousing	Cargo handling	168	182	8%	33.1	37.8	14%	11.7	13.6	16%	35%	36%	2%	5.7	7.7	34%	17%	20%	17%	35.6	32.5	-9%		
		Warehousing and storage	642	1 175	83%	72.5	354.3	389%	40.9	55.3	35%	56%	16%	-72%	26.8	28.4	6%	37%	8%	-78%	21.9	22.9	4%		
		Construction of water projects	1 372	690	-50%	240.3	158.6	-34%	76.3	44.6	-42%	32%	28%	-11%	37.6	24.0	-36%	16%	15%	-3%	28.2	29.9	6%		
		Service activities incidental to water transportation	2 321	2 683	16%	276.2	375.9	36%	181.1	253.3	40%	66%	67%	3%	88.6	133.4	51%	32%	35%	11%	39.9	44.7	12%		
		Building of ships and floating structures	2 231	941	-58%	78.2	130.2	66%	35.1	23.2	-34%	45%	18%	-60%	4.9	2.3	-53%	6%	2%	-72%	13.5	22.3	65%		
	Shipbuilding	Building of pleasure and sporting boats	410	986	140%	21.8	89.8	312%	4.0	31.4	685%	18%	35%	91%	-	2.4	7.2	400%	-11%	8%	173%	15.6	24.5	57%	
		Repair and maintenance of ships and boats	1 698	1 709	1%	202.8	172.0	-15%	68.3	45.4	-34%	34%	26%	-22%	31.1	3.4	-89%	15%	2%	-87%	22.0	24.6	12%		
		Manufacture of engines and turbines, except aircraft	127	75	-40%	60.3	18.2	-70%	5.7	3.4	-41%	9%	19%	98%	3.4	1.8	-48%	6%	10%	72%	18.2	21.6	19%		
		Manufacture of instruments for measuring, testing and navigation																							
		Manufacture of other fabricated metal products n.e.c.	1 168	496	-58%	67.5	34.9	-48%	24.0	12.6	-48%	36%	36%	1%	7.4	4.0	-46%	11%	11%	4%	14.2	17.4	22%		
Shipbuilding and repair	Equipment and machinery	Manufacture of sport goods	35	24	-31%	2.4	1.6	-34%	0.6	0.5	-17%	27%	34%	25%	0.2	0.2	19%	7%	12%	79%	13.9	14.4	3%		
		Manufacture of cordage, rope, twine and netting	240	362	51%	18.4	44.3	141%	5.4	10.2	89%	29%	23%	-21%	1.8	3.6	98%	10%	8%	-18%	14.9	18.2	22%		
		Manufacture of textiles other than apparel	109	3	-97%	5.3	0.2	-97%	1.4	0.1	-96%	27%	30%	14%	0.2	0.0	-93%	4%	7%	106%	11.3	13.9	23%		
		Sea and coastal passenger water transport	407	407	0%	12.7	12.7	0%	5.8	5.8	0%	46%	46%	0%	1.1	1.1	0%	9%	9%	0%	11.5	11.5	0%		
		Inland passenger water transport	242	242	0%	11.5	11.5	0%	5.4	5.4	0%	47%	47%	0%	0.7	0.7	0%	6%	6%	0%	19.0	19.0	0%		
	Freight transport	Sea and coastal freight water transport	616	554	-10%	299.5	519.0	73%	50.0	70.0	40%	17%	13%	-19%	23.8	51.5	116%	8%	10%	25%	42.5	33.4	-21%		
		Inland freight water transport																							
		Renting and leasing of water transport equipment	101	179	77%	5.1	9.0	76%	1.4	2.6	86%	27%	29%	5%	0.6	1.0	67%	12%	11%	-6%	7.9	8.9	13%		
		Other transportation support activities	337	353	5%	74.3	85.5	15%	10.9	14.0	29%	15%	16%	12%	2.7	3.8	44%	4%	4%	25%	24.3	28.8	18%		
		Transport	12 584	24 433	94%	1 998.4	4 227.0	112%	382.2	707.3	85%	19%	17%	-13%	121.5	205.1	69%	6%	5%	-20%	20.7	20.6	-1%		
Coastal tourism	Other expenditure	Transport	40 856	88 398	116%	2 149.4	5 108.0	138%	572.7	1 468.5	156%	27%	29%	8%	210.2	496.8	136%	10%	10%	-1%	8.9	11.0	24%		
		Other expenditure																							
		Accommodation	60 625	95 200	57%	2 555.4	4 667.6	83%	1 226.9	2 272.9	85%	48%	49%	1%	348.7	1 140.1	227%	14%	24%	79%	14.5	11.9	14%		
		Blue economy (established sectors)	167 615	254 452	52%	12 005	20 472	71%	3 351	5 818	74%	28%	28%	2%	1 169	2 437	108%	10%	12%	22%	2 183	3 376	55%		
		EU27																							

Table A30 Slovenia: Overview of the Blue Economy by sub-sector and activity

Slovenia		Activity		Persons employed		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		GVA to turnover (%)		Δ 2019-09		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (k€)		
Sector	Sub-sector	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	
Living resources	Capture fisheries (SSCF)	64	79	23%	0.7	1.8	145%	0.4	1.6	262%	59%	87%	48%	0.1	1.4	1204%	14%	76%	433%	1%	14%	76%	433%	5.1	2.6	-50%
	Capture fisheries (LSF)	53	22	-58%	2.1	0.4	-81%	1.3	0.2	-85%	59%	47%	-20%	0.4	0.0	-99%	19%	1%	-94%	16.0	8.6	-46%	16.0	8.6	-46%	
	Capture fisheries (DWF)	17	12	-29%	1.2	1.1	-9%	0.9	0.5	-161%	71%	-47%	-167%	0.4	0.0	-328%	36%	-90%	-351%	21.1	25.9	23%	21.1	25.9	23%	
	Marine aquaculture	175	158	-10%	2.6	5.9	122%	0.8	2.2	181%	30%	38%	26%	0.2	0.6	157%	9%	10%	15%	2.4	8.6	258%	2.4	8.6	258%	
	Freshwater aquaculture	18	17	-6%	1.4	1.6	18%	1.3	0.6	-51%	91%	38%	-58%	0.9	0.3	-131%	68%	-18%	-126%	15.2	13.9	-9%	15.2	13.9	-9%	
	Shellfish aquaculture	295	104	-65%	15.2	11.9	-22%	3.9	2.1	-46%	26%	18%	-31%	1.1	0.2	-82%	7%	2%	-77%	9.5	18.3	92%	9.5	18.3	92%	
	Processing and preserving of fish, crustaceans and molluscs																									
	Manufacture of oils and fats																									
	Prepared meals and dishes	10	17	71%	0.6	1.6	183%	0.1	0.4	358%	15%	25%	62%	0.0	0.1	237%	-8%	4%	149%	13.6	19.6	44%	13.6	19.6	44%	
	Other food products	1				0.1		0.0				35%			0.0			18%			19.7			19.7		
Non-living resources	Wholesale of other food, including fish, crustaceans and molluscs	237	331	39%	52.0	142.9	175%	8.9	16.9	90%	17%	12%	-31%	4.2	7.0	67%	8%	5%	-39%	19.8	30.1	52%	19.8	30.1	52%	
	Retail sale of fish, crustaceans and molluscs in specialised stores	98	82	-16%	9.1	7.7	-15%	2.0	1.5	-25%	22%	19%	-11%	0.7	0.4	-43%	8%	5%	-32%	13.3	14.6	10%	13.3	14.6	10%	
	Support activities for other mining and quarrying																									
	Support activities for petroleum and natural gas extraction																									
	Operation of gravel and sand pits; mining of clays and kaolin																									
	Extraction of salt	81	120	48%	13.5	11.2	-17%	2.2	3.5	59%	16%	31%	92%	0.2	0.9	350%	1%	8%	442%	23.5	22.5	-4%	23.5	22.5	-4%	
	Extraction of crude petroleum																									
	Extraction of natural gas																									
	Production of electricity																									
	Transmission of electricity																									
Ocean energy	Cargo handling	1,132	1,790	58%	119.5	203.7	70%	66.1	119.1	80%	55%	58%	6%	35.5	56.7	60%	30%	28%	-6%	27.1	34.8	29%	27.1	34.8	29%	
	Warehousing and storage	146	78	-47%	8.9	13.8	55%	2.4	2.9	22%	27%	21%	-21%	0.3	1.4	620%	-3%	10%	435%	18.0	19.5	8%	18.0	19.5	8%	
	Construction of water projects	1,090	522	-52%	87.5	74.1	-15%	31.5	19.3	-39%	36%	26%	-28%	7.7	5.4	-30%	9%	7%	-17%	21.8	26.6	22%	21.8	26.6	22%	
	Service activities incidental to water transportation	283	264	-7%	22.0	43.6	98%	9.2	12.0	30%	42%	28%	-34%	2.3	2.7	17%	10%	6%	-41%	24.7	35.2	42%	24.7	35.2	42%	
	Building of ships and floating structures	47	35	-26%	1.6	2.4	50%	0.7	0.8	14%	44%	33%	-24%	0.3	0.3	13%	13%	13%	13%	12.8	14.3	12%	12.8	14.3	12%	
	Building of pleasure and sporting boats	463	282	-39%	47.0	43.6	-7%	4.6	7.3	59%	10%	17%	71%	5.2	0.6	112%	-11%	1%	112%	21.2	23.8	12%	21.2	23.8	12%	
	Repair and maintenance of ships and boats	127	271	113%	5.0	19.5	290%	1.5	7.5	400%	30%	38%	28%	0.5	4.5	800%	10%	23%	131%	7.1	11.1	56%	7.1	11.1	56%	
	Manufacture of engines and turbines, except aircraft	128			15.0			6.5			43%			3.6			24%				22.2			22.2		
	Manufacture of instruments for measuring, testing and navigation	12			1.2			0.4			33%			0.1			5%				27.2			27.2		
	Shipbuilding and repair	Manufacture of other fabricated metal products n.e.c.																								
Manufacture of sport goods		4	1	-64%	0.4	0.1	-61%	0.0	0.0	68%	7%	31%	328%	0.0	0.0	132%	-11%	9%	181%	17.9	23.1	29%	17.9	23.1	29%	
Manufacture of cordage, rope, twine and netting		12			1.1			0.2			20%			0.0			2%				16.4			16.4		
Manufacture of textiles other than apparel		23	86	265%	1.1	7.6	590%	0.4	2.5	590%	33%	33%	0%	0.0	0.7	4947%	1%	9%	631%	14.9	21.3	43%	14.9	21.3	43%	
Sea and coastal passenger water transport		46	40	-13%	2.2	1.4	-36%	0.8	0.5	-38%	36%	36%	-2%	0.3	0.2	-33%	14%	14%	5%	10.9	7.5	-31%	10.9	7.5	-31%	
Inland passenger water transport		38	38	0%	1.0	2.7	170%	0.5	1.9	280%	50%	70%	41%	0.4	1.6	300%	40%	59%	48%	5.3	7.9	50%	5.3	7.9	50%	
Sea and coastal freight water transport		195	134	-31%	49.9	29.4	-41%	10.1	11.1	10%	20%	38%	87%	2.8	5.3	89%	6%	18%	221%	37.4	43.3	16%	37.4	43.3	16%	
Inland freight water transport					1.2	1.2	0%	0.3	0.3	0%	25%	25%	0%	0.3	0.3	0%	25%	25%	0%							
Renting and leasing of water transport equipment		35	51	46%	5.3	4.0	-25%	0.2	0.9	350%	4%	23%	496%	0.1	0.5	600%	-2%	13%	763%	11.4	7.8	-31%	11.4	7.8	-31%	
Other transportation support activities		58	35	-40%	8.2	8.6	5%	1.7	1.4	-20%	21%	16%	-23%	0.4	0.4	12%	5%	5%	7%	23.5	27.9	19%	23.5	27.9	19%	
Coastal tourism	Transport	250	177	-29%	95.2	92.7	-3%	8.9	9.1	3%	9%	10%	5%	3.5	4.7	35%	4%	5%	39%	21.6	25.0	16%	21.6	25.0	16%	
	Other expenditure	1,402	1,788	28%	102.1	156.9	54%	22.7	40.5	78%	22%	26%	16%	6.1	12.7	105%	6%	8%	36%	11.9	15.6	31%	11.9	15.6	31%	
	Accommodation	1,699	1,815	7%	89.9	103.1	15%	41.4	53.3	29%	46%	52%	12%	11.4	23.4	106%	13%	23%	80%	17.7	16.5	-7%	17.7	16.5	-7%	
	Blue economy (established sectors)	8,239	8,348	1%	764	995	30%	232	319	38%	30%	32%	6%	77	131	124%	10%	13%	29%	154	187	22%	154	187	22%	

Table A32 Finland: Overview of the Blue Economy by sub-sector and activity

Finland		Activity	Persons employed		Δ 2019-09		Turnover (M€)		Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09		GVA to turnover (%)		Δ 2019-09		Gross operating surplus (M€)		Δ 2019-09		Gross profit margin (%)		Δ 2019-09		Personnel costs per employee (K€)		Δ 2019-09		
Sector	Sub-sector		2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019	
Living resources	Primary production	Capture fisheries (SSCF)	1,306	1,008	-23%	13.1	9.9	-25%	41%	6.3	11.9	88%	35%	47%	33%	2.9	5.0	76%	16%	20%	25%	24.5	48.4	98%	2.6	2.0	-22%	2.0	-22%	2.0	
		Capture fisheries (LSF)	141	141	0%	17.9	25.3	41%	6.3	11.9	88%	35%	47%	33%	2.9	5.0	76%	16%	20%	25%	24.5	48.4	98%	2.6	2.0	-22%	2.0	-22%	2.0		
		Capture fisheries (DWF)	80	153	91%	16.6	48.8	194%	4.1	19.8	386%	25%	41%	65%	0.8	14.3	1736%	5%	29%	524%	30.4	26.0	-15%	30.4	26.0	-15%	30.4	26.0	-15%	30.4	
		Marine aquaculture	369	300	-19%	39.8	32.6	-18%	14.6	1.8	-88%	37%	5%	-85%	2.3	-	10.6	-549%	6%	-37%	-648%	29.4	30.7	5%	29.4	30.7	5%	29.4	30.7	5%	
	Freshwater aquaculture																														
	Shellfish aquaculture																														
	Processing of fish products	Processing and preserving of fish, crustaceans and molluscs	907	1,102	21%	195.9	402.4	105%	36.3	52.7	45%	19%	13%	-29%	10.1	18.3	81%	5%	5%	-12%	28.9	31.3	8%	28.9	31.3	8%	28.9	31.3	8%	28.9	
		Manufacture of oils and fats																													
	Non-living resources	Other mining and quarrying	Prepared meals and dishes	119	199	68%	20.8	42.1	102%	6.3	14.0	122%	30%	33%	10%	2.1	5.8	178%	10%	14%	38%	35.5	40.9	15%	35.5	40.9	15%	35.5	40.9	15%	35.5
			Other food products	4			0.6			0.2			29%							10%			31.0			31.0					
Mining support activities		Wholesale of other food, including fish, crustaceans and molluscs	1,169	1,052	-10%	610.9	691.1	13%	103.7	94.9	-8%	17%	14%	-19%	53.1	46.0	-13%	9%	7%	-23%	43.3	46.4	7%	43.3	46.4	7%	43.3	46.4	7%	43.3	
		Retail sale of fish, crustaceans and molluscs in specialised stores	700	474	-32%	107.6	97.1	-10%	22.8	19.8	-13%	21%	20%	-4%	6.0	7.5	25%	6%	8%	39%	24.0	25.9	8%	24.0	25.9	8%	24.0	25.9	8%	24.0	
Other mining and quarrying		Support activities for other mining and quarrying																													
		Support activities for petroleum and natural gas extraction																													
Extraction of oil and gas		Operation of gravel and sand pits; mining of clays and kaolin																													
		Extraction of salt																													
Offshore wind energy		Extraction of crude petroleum																													
		Extraction of natural gas																													
Port activities	Production of electricity																														
	Transmission of electricity																														
Shipbuilding and repair	Cargo and warehousing	Cargo handling	1,568	1,441	-8%	164.3	222.3	35%	80.4	99.7	24%	49%	45%	-8%	6.9	21.5	209%	4%	10%	128%	46.9	54.3	16%	46.9	54.3	16%	46.9	54.3	16%	46.9	
		Warehousing and storage	4,494	2,326	-48%	596.0	419.2	-30%	209.7	139.9	-33%	35%	33%	-5%	46.5	44.5	-4%	8%	11%	36%	36.3	41.0	13%	36.3	41.0	13%	36.3	41.0	13%	36.3	
		Construction of water projects	555	518	-7%	105.8	123.6	17%	38.4	35.4	-8%	36%	29%	-21%	15.6	8.3	-47%	15%	7%	-54%	41.1	52.3	27%	41.1	52.3	27%	41.1	52.3	27%	41.1	
		Service activities incidental to water transportation	1,759	1,741	-1%	308.3	433.2	41%	208.8	270.0	29%	68%	62%	-8%	114.8	165.7	44%	37%	38%	3%	53.4	59.9	12%	53.4	59.9	12%	53.4	59.9	12%	53.4	
	Shipbuilding	Building of ships and floating structures	5,512	4,513	-18%	1,191.5	1,804.1	51%	219.7	62.0	-72%	18%	3%	-81%	6.4	-	161.7	-2427%	-1%	-9%	-1569%	41.0	49.6	21%	41.0	49.6	21%	41.0	49.6	21%	41.0
		Building of pleasure and sporting boats	2,443	1,978	-19%	224.0	366.1	63%	63.2	100.0	58%	28%	27%	-3%	9.8	14.7	250%	-4%	4%	192%	29.9	43.1	44%	29.9	43.1	44%	29.9	43.1	44%	29.9	
	Equipment and machinery	Repair and maintenance of ships and boats	791	912	15%	84.3	168.3	100%	32.9	38.2	16%	39%	23%	-42%	9.4	5.4	-43%	11%	3%	-71%	29.6	36.0	22%	29.6	36.0	22%	29.6	36.0	22%	29.6	
		Manufacture of engines and turbines, except aircraft	1,618	366	-77%	946.5	161.7	-83%	194.4	17.3	-91%	21%	11%	-48%	93.2	-	6.0	-106%	10%	-4%	-138%	62.5	63.8	2%	62.5	63.8	2%	62.5	63.8	2%	62.5
	Maritime transport	Manufacture of instruments for measuring, testing and navigation	9	380	3991%	1.8	68.7	3717%	0.7	27.9	3803%	40%	41%	2%	0.3	5.1	1876%	14%	7%	-48%	48.8	59.7	22%	48.8	59.7	22%	48.8	59.7	22%	48.8	
		Manufacture of other fabricated metal products n.e.c.	130	19	-85%	15.7	3.3	-79%	5.9	1.1	-80%	37%	35%	-6%	1.4	0.4	-75%	9%	11%	20%	34.2	41.3	21%	34.2	41.3	21%	34.2	41.3	21%	34.2	
Coastal tourism	Freight transport	Manufacture of sport goods	276	206	-25%	39.7	37.1	-7%	11.9	10.3	-14%	30%	28%	-8%	2.8	1.4	-50%	7%	4%	-47%	33.0	43.2	31%	33.0	43.2	31%	33.0	43.2	31%	33.0	
		Manufacture of cordage, rope, twine and netting	15			1.6			0.7			42%			0.2			13%			31.7			31.7							
		Manufacture of textiles other than apparel	460	309	-33%	45.9	39.7	-13%	16.0	13.7	-14%	35%	35%	-1%	4.1	3.5	-16%	9%	9%	-3%	25.7	33.2	29%	25.7	33.2	29%	25.7	33.2	29%	25.7	
		Sea and coastal passenger water transport	5,640	6,136	9%	1,018.8	1,205.9	18%	275.3	341.9	24%	27%	28%	5%	33.6	75.1	124%	3%	6%	89%	42.9	43.5	1%	42.9	43.5	1%	42.9	43.5	1%	42.9	
	Services for transport	Inland passenger water transport	234	184	-21%	12.2	11.6	-5%	6.4	5.9	-8%	52%	51%	-3%	1.8	1.8	0%	15%	16%	5%	19.7	21.7	11%	19.7	21.7	11%	19.7	21.7	11%	19.7	
		Sea and coastal freight water transport	3,793	3,137	-17%	1,379.2	828.0	-40%	292.4	341.3	17%	21%	41%	94%	100.9	192.9	91%	7%	23%	218%	50.5	47.3	-6%	50.5	47.3	-6%	50.5	47.3	-6%	50.5	
	Transport	Inland freight water transport	38	43	13%	4.3	6.9	60%	1.7	2.0	18%	40%	29%	-27%	0.1	0.5	600%	-2%	7%	412%	47.4	34.9	-26%	47.4	34.9	-26%	47.4	34.9	-26%	47.4	
		Renting and leasing of water transport equipment	11	28	167%	1.6	6.5	306%	0.7	3.8	443%	44%	58%	34%	0.5	3.4	580%	31%	52%	67%	28.6	14.3	-50%	28.6	14.3	-50%	28.6	14.3	-50%	28.6	
	Other expenditure	Other transportation support activities	1,496	1,354	-9%	482.7	492.4	2%	71.5	72.9	2%	15%	15%	0%	13.3	13.8	4%	3%	3%	2%	38.9	43.6	12%	38.9	43.6	12%	38.9	43.6	12%	38.9	
		Transport	6,079	6,017	-1%	798.1	974.0	22%	259.7	351.9	35%	33%	36%	11%	65.8	123.6	88%	8%	13%	54%	31.9	37.9	19%	31.9	37.9	19%	31.9	37.9	19%	31.9	
Accommodation	Other expenditure	7,844	12,282	57%	868.9	1,431.6	65%	244.0	412.2	69%	28%	29%	3%	63.0	96.9	54%	7%	7%	-7%	23.1	25.7	11%	23.1	25.7	11%	23.1	25.7	11%	23.1		
	Accommodation	4,433	5,694	28%	461.0	714.4	55%	141.8	245.9	73%	31%	36%	12%	25.1	84.2	235%	5%	12%	116%	26.3	28.4	8%	26.3	28.4	8%	26.3	28.4	8%	26.3		
EU-27	Blue economy (established sectors)		53,991	54,015	0%	9,775	10,868	11%	2,578	2,814	9%	26%	26%	-2%	665	785	18%	7%	7%	6%	1,911	2,024	6%	1,911	2,024	6%	1,911	2,024	6%	1,911	

Table A33 Sweden: Overview of the Blue Economy by sub-sector and activity

Sweden		Activity	Persons employed		Turnover (M€)	Δ 2019-09		Value added at factor cost (M€)		Δ 2019-09	GVA to turnover (%)		Gross operating surplus (M€)		Δ 2019-09	Gross profit margin (%)		Personnel costs per employee (k€)			
Sector	Sub-sector		2009	2019		2019-09	2019-09	2009	2019		2009	2019	2009	2019		2009	2019	2009	2019	2009	2019
Living resources	Primary production	Capture fisheries (SSCF)	1,000	822	-18%	15.5	13.0	-16%	8.3	6.8	-18%	53%	52%	-2%	9%	8.6	8.5	0%	8%		
		Capture fisheries (LSF)	889	569	-36%	99.8	104.7	5%	57.1	51.9	-9%	57%	50%	-13%	34.5	30.5	89%	89%			
		Capture fisheries (DWF)																			
		Marine aquaculture																			
		Freshwater aquaculture	339	375	11%	29.8	61.2	105%	8.2	37.9	364%	27%	62%	7%	23.9	46%	14.3	28.0	96%		
	Processing of fish products	Shellfish aquaculture	85	37	-56%	1.2	0.8	-30%	0.6	0.8	43%	47%	95%	104%	-0.6	0.2	68%	-48%	6.8	9.6	42%
		Processing and preserving of fish, crustaceans and molluscs	2,042	2,327	14%	467.3	751.6	61%	99.0	94.9	-4%	21%	13%	-40%	32.6	5.5	83%	7%	32.5	38.4	18%
		Manufacture of oils and fats																			
		Prepared meals and dishes	97	360	270%	15.4	85.9	456%	4.5	27.0	494%	29%	31%	7%	1.5	10.5	589%	10%	31.1	45.9	47%
		Other food products	1			0.1		0.0				21%			0.0		4%		32.1		
Non-living resources	Distribution of fish products	Wholesale of other food, including fish, crustaceans and molluscs	2,260	2,148	-5%	884.5	1,041.7	18%	108.2	144.7	34%	12%	14%	39.5	57.5	45%	4%	23%	30.4	40.6	34%
		Retail sale of fish, crustaceans and molluscs in specialised stores	1,242	1,468	18%	139.0	190.0	37%	32.3	51.7	60%	23%	27%	17%	10.0	12.9	29%	7%	18.0	26.5	48%
	Minings support activities	Support activities for other mining and quarrying																			
		Support activities for petroleum and natural gas extraction																			
	Other mining and quarrying	Operation of gravel and sand pits; mining of clays and kaolin																			
		Extraction of salt																			
	Extraction of oil and gas	Extraction of crude petroleum																			
		Extraction of natural gas																			
	Offshore wind energy	Production of electricity																			
		Transmission of electricity																			
Port activities	Cargo and warehousing	Cargo handling	834	892	7%	81.5	122.8	51%	49.0	68.1	39%	60%	55%	13.4	23.8	77%	17%	18%	42.7	49.7	16%
		Warehousing and storage	218	164	-25%	33.3	29.9	-10%	12.2	11.0	-9%	37%	37%	1%	4.8	4.2	-11%	14%	33.9	41.3	22%
	Port and water projects	Construction of water projects	521	460	-12%	82.2	152.6	86%	24.0	27.4	14%	29%	18%	-39%	5.9	5.6	-5%	7%	34.7	47.4	36%
		Service activities incidental to water transportation	2,440	2,431	0%	313.8	403.5	29%	155.6	222.7	43%	50%	55%	11%	31.7	55.7	76%	14%	50.8	68.7	35%
	Shipbuilding	Building of ships and floating structures	1,646	1,887	15%	220.7	394.5	79%	56.0	130.7	133%	25%	33%	31%	29.2	17.2	159%	-13%	51.8	60.1	16%
		Building of pleasure and sporting boats	2,135	1,362	-36%	261.9	247.9	-5%	69.5	66.2	-5%	27%	27%	1%	1.2	12.0	900%	0%	32.0	39.7	24%
	Equipment and machinery	Repair and maintenance of ships and boats	1,871	2,136	14%	288.7	416.7	44%	82.7	128.2	55%	29%	31%	7%	21.6	42.2	95%	7%	32.7	40.3	23%
		Manufacture of engines and turbines, except aircraft	724	661	-9%	207.9	253.7	22%	47.3	79.6	68%	23%	31%	38%	11.2	30.8	175%	5%	49.9	73.7	48%
		Manufacture of instruments for measuring, testing and navigation	103	113	10%	19.1	25.6	34%	7.3	10.6	46%	38%	42%	9%	1.8	3.3	86%	9%	53.5	64.5	20%
		Manufacture of other fabricated metal products n.e.c.	483	785	63%	63.5	135.4	113%	20.7	48.2	132%	33%	36%	9%	3.4	12.1	252%	5%	35.9	45.9	28%
Shipbuilding and repair		Manufacture of sport goods	45	28	-38%	7.0	5.1	-28%	2.2	1.1	-51%	32%	21%	-32%	0.6	0.1	-85%	9%	35.1	35.6	1%
		Manufacture of cordage, rope, twine and netting	0	17	6165%	0.1	2.7	5147%	0.0	1.0	4982%	40%	39%	-3%	0.0	0.2	2377%	12%	51.3	51.0	-1%
	Passenger transport	Manufacture of textiles other than apparel	32	755	2248%	3.0	108.7	3477%	1.1	39.7	3627%	35%	37%	4%	0.2	11.1	6580%	5%	28.0	37.8	35%
		Sea and coastal passenger water transport	9,671	8,212	-15%	1,186.3	913.7	-23%	315.6	441.8	40%	27%	48%	82%	36.9	53.3	44%	3%	28.8	47.3	64%
	Freight transport	Inland passenger water transport	983	2,336	138%	79.5	376.0	373%	16.4	137.1	736%	21%	36%	77%	9.8	51.6	627%	-12%	26.7	36.6	37%
		Sea and coastal freight water transport	6,719	3,375	-50%	2,331.9	1,586.1	-32%	216.0	565.5	162%	9%	36%	285%	-101.5	369.7	464%	-4%	47.3	58.0	23%
	Services for transport	Inland freight water transport	161	248	54%	12.0	24.9	108%	4.0	14.2	255%	33%	57%	71%	0.4	5.2	1200%	3%	22.4	36.3	62%
		Renting and leasing of water transport equipment	60	101	68%	81.1	18.4	-77%	70.2	14.6	-79%	87%	79%	-8%	68.6	11.8	-83%	85%	26.7	27.7	4%
	Maritime transport	Other transportation support activities	4,014	3,743	-7%	1,445.3	1,370.1	-5%	203.1	230.0	13%	14%	17%	19%	35.4	50.3	42%	2%	41.8	48.0	15%
		Transport	16,384	16,980	4%	2,473.5	2,887.1	17%	611.0	884.1	45%	25%	31%	24%	118.1	264.2	124%	5%	30.1	36.5	21%
Coastal tourism	Other expenditure	Other expenditure	33,129	34,968	6%	3,274.4	3,923.5	20%	917.1	1,220.6	33%	28%	31%	200.1	270.0	35%	6%	21.6	27.2	26%	
		Accommodation	32,739	30,905	-6%	2,450.2	2,920.6	19%	1,014.6	1,331.4	31%	41%	46%	10%	214.0	386.6	81%	9%	24.5	30.6	25%
	EU-27	Blue economy (established sectors)	122,869	120,664	-2%	16,569	18,568	12%	4,214	6,089	45%	25%	33%	29%	756	1,826	141%	5%	3,456	4,260	23%



ANNEX 3
**METHODOLOGICAL
FRAMEWORK**

ANNEX 3.1. ESTABLISHED SECTORS

A3.1.1. DATA SOURCES AND TIMEFRAME

The analysis of the established Blue Economy sectors is based on the standardised data provided by the Structural Business Statistics (SBS) compiled by Eurostat. The SBS were complemented by the EU Data Collection Framework (DCF)³⁴ for the primary sectors (capture fisheries and aquaculture). Given the time lag in the release of SBS and DCF data, the latest available year is 2019, which is used as the reference year for the current report. The turnover in 2020 shown in chapter 4's graphs are estimations based on Eurostat's preliminary data, GVA and Gross in 2020 are estimated assuming that follow a similar trend as turnover. This is represented by a difuminated bar in 2020.

Similarly, the latest fully available data for fisheries and aquaculture in the DCF are for 2020 and 2018, respectively. Data for 2020 for fisheries are 'nowcast' estimates. The baseline year is 2009.

For *Coastal tourism*, an ad hoc extraction of data was performed by Eurostat, which was complemented with information from Tourism Satellite Accounts as explained in Section A3.1.6.

For the calculation of the maritime proportions, some specific sources were used as explained in Section A3.1.3. Finally, GDP and its components as published by Eurostat as well as the employment from the Labour Force Survey (LFS) were used for the comparisons of the Blue Economy with the overall economy.

The tables extracted from the Eurostat (and from the DCF) to make the estimations of economic indicators for the established sectors of the EU Blue Economy are summarised in Table A.34.

Table A.34 Main data sources for the Established Sectors of the EU Blue Economy

Table	Source	Description
DCF_fleet_aquaculture_for_BE	JRC	Fisheries and aquaculture economic statistics
sbs_na_1a_se_r2	Eurostat	Annual detailed enterprise statistics for services (NACE Rev. 2 H-N and S95)
sbs_na_con_r2	Eurostat	Annual detailed enterprise statistics for construction (NACE Rev. 2, F)
sbs_na_dt_r2	Eurostat	Annual detailed enterprise statistics for trade (NACE Rev. G)
sbs_na_ind_r2	Eurostat	Annual detailed enterprise statistics for industry (NACE Rev. 2 B-E)
inbound_tourism_exp	Eurostat	Expenditure by inbound tourists (from other EU countries) in each Member States. Ad hoc extraction by Eurostat
TSA Table 1	Eurostat	Inbound tourism expenditure (Tourism Satellite Accounts, in Europe 2019)
TSA Table 2	Eurostat	Domestic tourism expenditure (Tourism Satellite Accounts, in Europe 2019)
tour_occ_ninatc	Eurostat	Nights spent at tourist accommodation establishments by coastal and non-coastal areas
lfsi_emp_a	Eurostat	Employment and activity by sex and age – annual data
nama_10_gdp	Eurostat	GDP and main components (output, expenditure and income)
Prodcom (DS-066341)	Eurostat	Sold production, exports and imports by PRODCOM list (NACE Rev. 2) – annual data

Source: Eurostat data. Own elaboration.

³⁴ Council Regulation (EC) No 199/2008 of 25 February 2008 concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy.

A3.1.2. SCOPE OF ACTIVITIES

SBS data are based on enterprise data grouped under the declared main activity of each enterprise, according to the *statistical classification of economic activities in the European Community* (NACE Rev.2). Out of the 615 classes of activities singled out through a four-digit NACE code, 46 classes have been identified that have a principal or significant maritime component. They have been classified into sectors and subsectors (Table A.35).

Table A.35 Established Blue Economy sectors: classification

Sector	Subsector	Activity (NACE)		Maritime proportion
		Code	Description	
Marine living resources	Primary sector	A 03.10	Capture fisheries (EU fishing fleet, data from DCF)	100%
		A 03.20	Aquaculture sector (onshore and offshore production, data from DCF)	100%
	Processing of fish products	C 10.20	Processing and preserving of fish, crustaceans and molluscs	100%
		C 10.41	Manufacture of oils and fats	PRODCOM
		C 10.85	Prepared meals and dishes	PRODCOM
		C 10.89	Other food product	PRODCOM
	Distribution of fish products	G 46.38	Wholesale of other food, including fish, crustaceans and molluscs	50%
		G 47.23	Retail sale of fish, crustaceans and molluscs in specialised stores	100%
Marine non-living resources	Oil and gas	B 06.10	Extraction of crude petroleum	Oil production
		B 06.20	Extraction of natural gas	Oil production
		B 09.10	Support activities for petroleum and natural gas extraction	Oil production
	Other minerals	B 08.12	Operation of gravel and sand pits; mining of clays and Kaolin	Aggregates extraction
		B 08.93	Extraction of salt	Salt production
		B 09.90	Support activities for other mining and quarrying	SBS proportions
Marine renewable Energy	Offshore wind energy	D 35.11	Production of electricity	
		D 35.12	Transmission of electricity	
Port activities	Cargo and warehousing	H 52.24	Cargo handling (port services)	50% (or country specific information)
		H 52.10	Warehousing and storage	50 % (or country specific information)
	Port and water projects	H 52.22	Service activities incidental to water transportation	100%
		F 42.91	Construction of water projects.	100%
Shipbuilding and repair	Shipbuilding	C 30.11	Building of ships and floating structures	100%
		C 30.12	Building of pleasure and sporting boats	100%
		C 33.15	Repair and maintenance of ships and boats	100%
	Equipment and machinery	C 13.92	Manufacture of made-up textile articles, except apparel	PRODCOM
		C 13.94	Manufacture of cordage, rope, twine and netting	PRODCOM
		C 26.51	Manufacture of instruments and appliances for measuring, testing and navigation	PRODCOM
		C 28.11	Manufacture of engines and turbines, except motor vehicle, aircraft and cycle propulsion	PRODCOM
		C 25.99	Manufacture of other fabricated metal products n.e.c.	PRODCOM
		C 32.30	Manufacture of sport goods	PRODCOM
Maritime Transport	Passenger transport	H 50.10	Sea and coastal passenger water transport (water transport)	100%
		H 50.30	Inland passenger water transport	100%
	Freight transport	H 50.20	Sea and coastal freight water transport (water transport)	100%
		H 50.40	Inland freight water transport	100%
	Services for transport	N 77.34	Renting and leasing of water transport equipment	100%
		H 52.29	Other transportation support activities	SBS proportions
Coastal tourism	Accommodation	I 55.10	Hotels and similar accommodation	Specific methodology
		I 55.20	Holidays and other short-stay accommodation	
		I 55.30	Camping grounds, recreational vehicle parks and trailer parks	
		I 55.90	Other accommodation	
	Transport	G 47.30	Retail sale of automotive fuel in specialised stores	
		H 49.10	Passenger rail transport, interurban	
		H 49.31	Urban and suburban passenger land transport	
		H 51.10	Passenger air transport	
	Other expenditures	G 47.60	Retail sale of cultural and recreation goods in specialised stores	
		G 47.70	Retail sale of other goods in specialised stores	
		I 56.00	Food and beverage service activities	

Source: Eurostat data. Own elaboration.

While certain economic activities can be clearly identified as fully marine (e.g. *Shipping and Maritime transport*), for other sectors, the NACE classification includes both land and maritime activities (e.g. cargo handling, warehousing and extraction of oil and gas). In this later case, alternatives sources are used for the estimation of the maritime proportion (see Section A3.1.3).

More than 20 NACE classes have been identified as activities having an important maritime component. However, by the time being, no reliable source is available to estimate their maritime proportion. Therefore, those activities were not included in this year's report (Table A.36).

Table A.36 Maritime activities for which further information is needed before they can be taken into account

Sector	Activity (NACE)	
	Code	Description
Marine living resources	G 47.11	Retail in non-specialised stores with food, beverages or tobacco predominating
Marine non-living resources	C 19.20	Manufacture of refined petroleum products
	H 49.50	Transport via pipeline
Shipbuilding and repair	E 38.31	Dismantling of wrecks
	G 46.14	Agents involved in the sale of machinery, industrial equipment, ships and aircraft
	C 33.11	Repair of fabricated metal products
	C 25.30	Manufacture of steam generators, except central heating hot water boilers
	C 27.40	Manufacture of electric lighting equipment
Coastal Tourism	N 79.11	Travel agency activities
	N 79.12	Tour operator activities
	N 79.90	Other reservation service and related activities
Marine renewable energy	F 42.22	Construction of utility projects for electricity and telecommunications
	F 43.21	Electrical installation
	J 61.10	Wired telecommunications activities
Water treatment	E 36.00	Water collection, treatment and supply
	E 39.00	Remediation activities and other waste management services
Insurance	K 65.12	Non-life insurance
	K 65.20	Reinsurance
Research and education	M 72.11	Research and experimental development on biotechnology
	M 72.19	Other research and experimental development on natural sciences and engineering
	M 74.90	Other professional, scientific and technical activities n.e.c.

Source: Eurostat data. Own elaboration.

Aside from their main activity, enterprises may have one or more secondary activities. Unfortunately, detailed information about the economic importance of secondary activities is unavailable. Therefore, the overall activity for each firm was assigned to its main activity.

A3.1.3. MARITIME PROPORTIONS

As indicated above, several approaches have been followed to estimate the maritime proportions for those activities which encompass a maritime with a non-maritime component.

For industrial activities (i.e. *Equipment and machinery* and some activities in *Processing of fish products*), the Eurostat *statistics on the production of manufactured goods* (PRODCOM) were used to estimate the maritime proportion in two steps: 1) specific maritime products were identified within each NACE class; 2) the production value share over the total production of the class was calculated. (Table A.37).

Given the high level of disaggregation of PRODCOM data, public available tables contain many confidential data points (e.g. when only one or two companies produce a specific item in a given Member State, those values are not published). In order to avoid the biased generated for confidential data, the proportions were calculated internally by Eurostat and transmitted to DG MARE. In a limited number of cases, the proportions could not be transmitted by Eurostat and, therefore, they were imputed based on the average for the EU.

Table A.37 PRODCOM items considered maritime within each NACE class

NACE		PRODCOM	
Class	Description	Code	Description
C 10.41	Manufacture of oils and fats		
		10.41.12.00	Fats and oils and their fractions of fish or marine mammals
C 10.85	Prepared meals and dishes		
		10.85.12.00	Prepared meals and dishes based on fish, crustaceans and molluscs
		10.85.14.10	Cooked or uncooked pasta stuffed with meat, fish, cheese or other substances in any proportion
C 10.89	Other food product		
		10.89.14.00	Extracts and juices of meat, fish, crustaceans, molluscs or other aquatic invertebrates
C 13.92	Manufacture of made-up textile articles, except apparel		
		13.92.22.50	Sails
		13.92.29.99	Life-jackets
C 13.94	Manufacture of cordage, rope, twine and netting		
		13.94.12.33	Made-up fishing nets from twine, cordage or rope of man-made fibres
		13.94.12.35	Made-up fishing nets from yarn of man-made fibres
C 25.99	Manufacture of other fabricated metal products n.e.c.		
		25.99.26.00	Ships' or boats' propellers and blades therefor
		25.99.29.11	Iron or steel anchors, grapnels and parts thereof (excluding masonry anchors)
C 26.51	Manufacture of instruments and appliances for measuring, testing and navigation		
		26.51.11.80	Manufacture of instruments and appliances for navigation (including for marine or river navigation)
		26.51.20.80	Radio remote control apparatus (including for ships)
C 28.11	Manufacture of engines and turbines, except motor vehicle, aircraft and cycle propulsion		
		28.11.11.00	Outboard motors for marine propulsion
		28.11.12.00	Spark ignition reciprocating or rotary internal combustion piston engines for marine propulsion (excluding outboard motors) and for other use (excluding aircraft engines and engines for vehicles of CN chapter 87)
		28.11.13.11	Marine propulsion compression-ignition internal combustion piston engines (diesel or semi-diesel) of a power ≤ 200 kW
		28.11.13.15	Marine propulsion compression-ignition internal combustion piston engines (diesel or semi-diesel) of a power > 200 kW but ≤ 1 000 kW
		28.11.13.19	Marine propulsion compression-ignition internal combustion piston engines (diesel or semi-diesel) of a power > 1 000 kW
		28.11.22.00	Hydraulic turbines and water wheels
C 32.30	Manufacture of sport goods		
		32.30.13.00	Water-skis, surfboards, sailboards and other water-sport equipment
		32.30.16.00	Fishing rods, other line fishing tackle; articles for hunting or fishing n.e.c.

Source: Eurostat data. Own elaboration.

For *Oil and gas*, the production onshore and offshore according to Rystad Energy UCube³⁵ was used to estimate the maritime proportions.

For *Other minerals*, the following sources were used. For marine Aggregates (B 08.12), the statistics on aggregate production published by the European Aggregates Association (www.uepg.eu). For *Extraction of salt* (B 08.93), the proportion of solar salt obtained from the European Salt Producers' Association (<https://eusalt.com>). Finally, for *Support activities for other mining and quarrying the maritime* proportion was calculated as the share of maritime B 08.12 (*Aggregates*) and maritime B 08.93 (*Extraction of salt*) over the total of mining activities (B05, B07 and B08). The estimations for *Coastal tourism* were calculated following a specific treatment (See Section A3.1.6).

A3.1.4. INDICATORS AND VARIABLES

SBS statistics provide a series of variables usually derived from the financial statements of the companies. For the analysis of the established sectors, the following selection of variables and indicators was used: employment (number of persons employed), wages and salaries, turnover, gross value added, gross operating surplus (profit or loss), gross investments and net investments. In addition, the following derived indicators were calculated: average annual wage per persons employed, GVA to turnover, profit margin (gross operating surplus to turnover – gross profit margin), labour productivity (GVA per person employed) and net investment ratio (net investment to GVA). This report focuses on the main variables, further details and breakdowns are available on the online Blue Economy Indicators tool (https://blueindicators.ec.europa.eu/access-online-dashboard_en). More details about the indicators and variables are explained in the glossary.

A3.1.5. DATA IMPUTATION AND ASSUMPTIONS

While the SBS database is quite comprehensive, a few missing points were still detected. To obtain a balance panel, a series of assumptions were made by applying the following rules:

- Imputations are based on other data from the same Member State (i.e. no estimations based on data for other Member States).
- Interpolation or the closest value over the time series of a NACE class (4-digit code) was used to impute missing values.
- When no data were available for a NACE class (4-digit code), the data for the parent NACE group (3-digit code) were evenly distributed among the classes in the group.

A3.1.6. COASTAL TOURISM

Coastal tourism is not a single economic activity but rather a set of activities undertaken by a specific type of consumer (the tourist). *Coastal tourism* happens when a visitor takes a trip to a coastal municipality³⁶. It is considered to be part of this category the expenditures in *accommodation*, *transport* and *other expenditures* by tourists (for instance, cultural and recreation good, goods in specialised stores and food and beverage services). To calculate the contribution of *Coastal tourism* to the Blue Economy, a specific methodology has been followed.

Expenditure by inbound tourism

The data for *Coastal tourism* are based on the tourism statistics³⁷ compiled by Eurostat from the collection by national authorities and, in particular, on the data on the expenditure by visitors on trips. In principle, Member States compile data on outbound trips (e.g. the data for trips from Austria to France and Italy are compiled by the Austrian authorities). Once all Member States have transmitted the micro-data on their outbound trips, Eurostat can calculate the data for inbound trips (e.g. the data for trips to Greece from all Member States). The data refer to the expenditure of those trips with a breakdown for three categories: *accommodation*, *transport* and *other expenditure* as well as a breakdown for domestic trips and cross border trips (between EU Member States).

³⁵ Source: Rystad Energy UCube, version 2018-12-10.

³⁶ Coastal municipalities are those Local Administrative Units (LAU) with a coastline or with 50 % of its territory within 10 km of the sea. The classification of regions has been established by the TERCET Regulation: Regulation (EU) 2017/2391 of the European Parliament and of the Council of 12 December 2017 amending Regulation (EC) No 1059/2003 as regards the territorial typologies. Some ad-hoc corrections on the request of the Member State exist, e.g. certain major cities are treated differently, e.g. Rome and Amsterdam.

³⁷ For further details, see: <https://ec.europa.eu/eurostat/web/tourism/methodology>

Expenditure by one-day trips

The data on inbound expenditure mentioned above includes trips with at least one overnight stay in the destination. Therefore, they do not include one-day trips (e.g. to spend one Sunday on the sea side and returning back home). The *Tourism Satellite Accounts* were used for estimating the expenditure by one-day trips, in particular Tables TSA Table 1 and TSA Table 2 on Inbound and domestic tourism expenditure, respectively³⁸. The proportion between the expenditure of one-day trips over overnight stays was used to estimate the expenditure of one-day trips for transport and other expenditure (the expenditure in accommodation is obviously zero). For the countries where information was not available, the EU average was considered.

Variables: Turnover (expenditure), employment

The value of expenditure calculated as indicated above is assimilated to the turnover for the three subsectors in *Coastal tourism* (i.e. *Accommodation*, *Transport*, *Other expenditure*).

The rest of variables (employment, GVA, employee compensation) are estimated from the proportion of each one of them to turnover for the activities indicated in Table A.2.

Coastal vs. non-coastal

Finally, the indicator is further adjusted to take into account the maritime proportion. This is achieved by using data in *tour_occ_ninatc* to calculate the fraction of coastal tourism (F_{coast}) as the number of nights spent in coastal areas (N_{coast}) over total nights (N_{tot}):

$$F_{coast} = \frac{N_{coast}}{N_{tot}}$$

$$I_{coast}^i = I^i \cdot F_{coast}$$

Coastal areas, should be understood as the municipalities with a coastline or with at least 50% of their surface area within a distance of 10 km from the coastline. The classification of regions has been established by the TERCET Regulation: Regulation (EU) 2017/2391 of the European Parliament and of the Council of 12 December 2017 amending Regulation (EC) No 1059/2003 as regards the territorial typologies.

³⁸ Eurostat. 2019. Tourism Satellite Accounts in Europe. [<https://ec.europa.eu/eurostat/web/products-statistical-reports/-/KS-FT-19-007>].

ANNEX 3.2. REGIONAL ANALYSIS

Objective

The aim of the regional analysis is to provide an estimation of the size of the Blue Economy and the seven established sectors, in terms of GVA and employment, for the various sea basin of EU waters. The goal is to provide an indication of the relative size of each sea basin and of their specialisation in terms of activities. Improvements in the methodology may be implemented in the coming edition to obtain more accurate estimates.

Background

To assess the specific size of the Blue Economy taking place in each sea basin is necessary to know how the different blue economy sectors are distributed. It is important not only to analyse the Blue Economy at the national level, but also to analyse it at different geographical levels such as coastal community, NUTS2, NUTS3 and sea basin. Each geographical level provides different information to help policy-makers. Due to the need of very detailed data and analyses, as well as to the extension of this report, specific analysis at coastal community, and island-level (NUTS2 and NUTS3) are out of the scope of this publication. Nevertheless, collecting and disaggregating data at those levels ensure a more precise analysis at sea basin level.

However, collecting and disaggregating data as well as linking them to sea basins is not always a straight forward exercise due to the nature of some Blue Economy activities. Let us not forget that we consider Blue Economy all sectoral and cross-sectoral economic activities based on or related to the oceans, seas and coasts. As such, Blue Economy activities can be classified as:

- **Marine-based activities:** include the activities undertaken in the ocean, sea, insular and coastal areas, such as capture fisheries and aquaculture in Marine living resources, extraction of oil and gas and of other minerals in Marine minerals, production of electricity in Marine renewable energy, Desalination, Maritime transport and Coastal tourism.
- **Marine-related activities:** activities which use products and/or produce products and services from the ocean or marine-based activities like seafood processing and distribution as well as biotechnology in Marine living resources, Shipbuilding and repair, Port activities, technology and equipment, digital services, etc.

Thus, while marine-based activities take place in the sea or by the sea, that is not the case for marine-related activities, which can be undertaken hundreds or even thousands of kilometres from where the marine products originated (e.g. seafood processing and distribution) or from where they are going to be used (e.g. building an engine for a vessel).

This implies that often marine-based activities are easier to allocate to precise marine or coastal locations and therefore sea basins, while this can prove more difficult for some marine-related activities. For example, it is challenging to allocate to a certain sea basin the seafood consumption taking place in inland areas, such as Paris or Madrid.

For most marine-based activities and some marine-related activities – such as aquaculture, offshore wind energy, desalination, shipbuilding and Coastal tourism – it should be possible to map where the activity takes place and so which coastal areas benefit from it. For some other activities such as Maritime transport and capture fisheries we can link the economic activity to the inbound and outbound ports, and from the port to the NUTS2 and NUTS3. Unfortunately, this is still an on-going analysis and only preliminary outcomes can be provided at this stage. Moreover, we only have complete data for the established sectors, i.e. Coastal tourism, Marine living resources, Marine non-living resources, Marine renewable energy, Maritime transport, Port activities, and Shipbuilding and repair.



A total of eight sea basins and sub-basin has been considered as indicated in Table A.38.

Table A.38 Member States participating in the different sea basins

Northern Waters			Mediterranean				Black Sea
Atlantic	North Sea	Baltic Sea	Mediterranean	West MED	East MED	Adriatic-Ionian	
Strategy	Sea basin	Strategy	Sea basin	Strategy	Sea (sub)-basin	Strategy	Sea basin
ES	BE	DE	CY	ES	CY	EL	BG
FR	DE	DK	EL	FR	EL	HR	RO
IE	NL	EE	ES	IT		IT	
PT	UK	FI	FR	MT		SI	
	DK	LT	HR	PT			
	SE	LV	IT				
	FR	PL	MT				
		SE	SI				

Source: Commission Services.

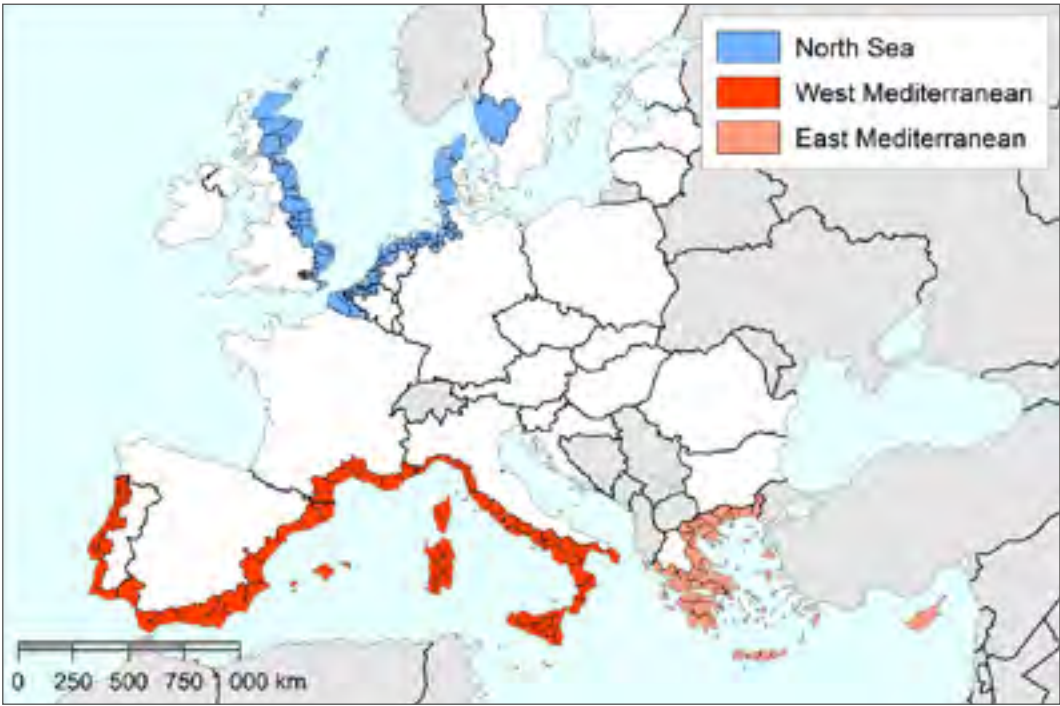
Some of the calculations are based on the GDP and employment by NUTS 2 regions. Figures A.4, A.5 and A.6 present the NUTS 2 regions of each sea basin.

Figure A.4 EU regions belonging to each sea basin



Notes: Classification based on NUTS 2016, level 3. Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat. Cartography: Eurostat – GISCO, 03/2019. The UK is included in this map as it is part of the strategy, however UK figures have not been taken into account or added to any EU totals. Source: Commission Services.

Figure A.5 EU regions belonging to each sea basin (continuation)



Notes: Classification based on NUTS 2016, level 3. Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat.
Cartography: Eurostat – GISCO, 03/2019. The UK is included in this map as it is part of the strategy, however UK figures have not been taken into account or added to any EU totals.
Source: Commission Services.

Figure A.6 EU regions belonging to each sea basin (continuation)



Notes: Classification based on NUTS 2016, level 3. Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat.
Cartography: Eurostat – GISCO, 03/2019.
Source: Commission Services.

The size of the Blue Economy (and for each sector) in each sea basin is calculated as the sum of the Blue Economy of the Member States with a façade to the given sea basin according to the following formulas [1] for GVA and [2] for employment:

$$[1] \quad Sea\ basin_i^{GVA} = \sum MS_j^{GVA} \cdot MS_j^{Share}$$

$$[2] \quad Sea\ basin_i^{Employment} = \sum MS_j^{Employment} \cdot MS_j^{Share}$$

Where:

i are the different sea basins: Atlantic, North Sea, etc.

j are the Member States (Spain, France, etc.)

$share$ are the proportions assigned to the sea basin according to equation [5].

The Blue Economy of some Members States can be assigned totally to a specific sea basin (e.g. Finland to the Baltic). In these cases, the $share$ value is 100%.

In other cases, Member States have several façades (e.g. Spain has the Atlantic façade and the Mediterranean façade). In these cases, the $share$ is calculated as the proportion of the NUTS 3 regions in the sea basin with respect to all the coastal NUTS 3 regions in terms for GDP and employment according to formulas [3] to [5].

$$[3] \quad Share_{i,j}^{GVA} = \frac{\sum NUTS\ 3_{i,j}^{GDP}}{\sum NUTS\ 3_{Coastal,j}^{GDP}}$$

$$[4] \quad Share_{i,j}^{Employment} = \frac{\sum NUTS\ 3_{i,j}^{Employment}}{\sum NUTS\ 3_{Coastal,j}^{Employment}}$$

$$[5] \quad Share_{i,j} = Average(Share_{i,j}^{GVA}, Share_{i,j}^{Employment})$$

Where:

i are the different sea basins: Atlantic, North Sea, etc.

j are the Member States (Spain, France, etc.).

Data for Employment and GDP were provided by Eurostat. Specific proportions were calculated for each year in the time series (2009-2017). For missing data, the most recent available year was used to fill in the gap. In any case, no significant variations in the proportions are observed over time.

For instance, in 2016 in Italy, total employment of the NUTS 3 regions participating in the Adriatic – Ionian strategy amounted to 7.3 million people, while all NUTS 3 coastal regions had a total employment of 13.7 million; that is 53.4% of employees. Similarly, the GDP of NUTS 3 regions in the Adriatic Ionian amounted to €450 billion while the GDP of all NUTS 3 coastal regions in Italy amounted to €860 billion; that is 51.9%. The average of both values, i.e. 52.6%, was used to estimate how much of the employment and GVA from the Italian Blue Economy is generated in the regions participating in the Adriatic – Ionian strategy.

Given the goal of obtaining the size of the Blue Economy in each sea basin, only aggregated data per sea basin are published and not data for Member States, which are considered intermediate calculations.

ANNEX 3.3. SUPPLEMENTARY MATERIAL OF SECTION 6.6 ENVIRONMENT AND ECOSYSTEM SERVICES IN SUSTAINABLE ECONOMY

Economic model

The model used for this study is very similar to those used in Tsigaris and Wood (2016); Deke *et al.* (2001); Dottori *et al.* (2018) and Shinko *et al.* (2020). In the present section a non-technical description is given, while full details of the model are provided in the Supplementary Information. A seminal contribution in this particular field is the paper by Fankhauser and Tol (2005) or Dietz and Stern (2015) but a more recent and very interesting overview of the methodological and numerical issues related to the use of log/term growth models for climate impacts analysis is provided by Piontek *et al.* (2019).

In our analysis, inundations generate three different types of direct physical impacts, which are: damages to residential buildings, foregone agricultural output and damages to firms' physical assets (the capital stock). These direct damages are the final output of the sectoral, bottom-up biophysical models described in the previous section and are used as exogenous shock in our Solow-type model.

In particular, the repairing of the damages to private properties is considered as part of the autonomous consumption³⁹ and it is expected to alter the households' consumption vs. saving decision. Consumption is calculated as a fixed fraction of GDP and represents another crucial variable for our model. Depending on the scenario, households are assumed to face the repairing costs either with or without an increase of their overall expenditure level. In the first case, households use their savings to repair and do not suffer a temporary, short-term decrease of their living standard. However, by using up their savings, households are myopic, erode their stock of financial assets and make less financial resources available for investments at national level, which in turn slows down both the renovation and reconstruction of the productive capital stock. In the alternative scenario, households adopt instead a prudent behaviour. In fact, they do not dissave to cover their basic needs, i.e. housing, but they reshuffle their consumption allocation and give up spending on more welfare-enhancing consumption categories but preserve their financial assets. Therefore, the overall welfare level is negatively affected in the short-term, because repairing the house is assumed part of the autonomous consumption⁴⁰, but the economy do not suffer any credit shortage.

Agricultural output losses are subtracted from the overall output of the economy. A lower output of the economy translates, in turn, into lower resources for investments and a slower accumulation of physical assets compared to the baseline, no-climate impacts scenario.

Damages to the firms' physical assets are modelled as a loss of the productive capital stock. A lower/damaged capital stock, reduces the productive potential of the firms, which produces a lower output. As suggested by Hallegatte and Dumas (2009), destroyed assets are assumed to have an average productivity instead of a marginal productivity. The model takes into account the frictions and inefficiency, inherent to the process of rebuilding that follows the destruction of physical assets after a climate change events (Hallegatte and Dumas 2009). We assume, in fact, that the amount of resources that can be used for the rebuilding activities are not unlimited. Instead, due to institutional rigidities and logistic difficulties, only a small fraction of the overall national investments can be diverted from the renovation and growth of the existing capital stock to the reconstruction activities.

Destructive events like inundations might be in theory beneficial for the economic system. In fact, if the destroyed productive assets are replaced with the latest and more productive technologies, the large short-term output and investments fall could be compensated by the faster growth in the medium and long-term fuelled by the higher technological level embodied in the new productive assets installed during the reconstruction. This aspect of the post-disaster economic implications has been analysed and discussed in various paper both theoretically and empirically (Skidmore and Toya 2002; Albala-Bertrand, 1993; Hallegatte and Dumas, 2009; Benson and Clay 2004), but, to our knowledge, remains unexplored in relation to specific climate scenarios and sea level rise projections for European countries. In order to account for the potential positive effects of inundations on growth, we partially reformulate the equation for the growth of technology/productivity level, such that the money spent on reconstruction upgrade the technological level of the economy and increase its productivity. We use an approach similar to the one explained by Hallegatte and Dumas in a previous paper and assume that after a disaster the assets replaced embody the technological level of the European frontier (Hallegatte and Dumas, 2009).

The model is calibrated using publicly available data and used to calculate the economic losses associated to inundations. Moreover, as pointed out in Verschuur *et al.* 2020, Walsh and Hallegatte 2020 and Feyen *et al.*, 2020, losses of welfare provide with a broader view of the impacts that better reflects how physical impacts affect people and households. Therefore, in addition to the usual measure expressed as percentage of GDP, we provide also with the welfare losses measured in terms of consumption per capita above the autonomous level.

³⁹ Autonomous consumption is the expenditure that the consumer must take even without income, including food, shelter and basic healthcare. In other words, the expenses that cannot be eliminated are defined as part of the autonomous consumption.

⁴⁰ Autonomous consumption is the expenditure that the consumer must take even without income, including food, shelter and basic healthcare. In other words, the expenses that cannot be eliminated are defined as part of the autonomous consumption.

The model considers three main categories or channels of SLR damages, similar to the damage mechanisms considered in Fankhauser and Tol (2005): agriculture output losses (*agr*), damage to capital stock (*cap*) and damage to residential buildings (*res*). Those direct damage estimates are provided by the sectoral, bottom-up biophysical models.

The dynamic adjustment of the economic system is assumed to be the following: the agriculture damages are fully absorbed during the year of the climate shock, the damages to residential buildings are all repaired by the household in the year of the climate shock by increasing minimum consumption and reducing savings and, finally, the damages to capital stock are repaired in the year of the shock up to a certain threshold, which makes these damages to accumulate and generate compounding negative effects over time.

In our modelling framework, EU countries plus Norway and the UK are represented as a collection of closed economies where firms have access to the same constant returns to scale production technology, which is based on the combination of two inputs, i.e. capital and labour, and a technology/productivity multiplier. The economy produces one single good, which is used for both consumption and investments; the latter contribute to the accumulation of the firms' stock of physical asset, while the former contributes to the households' welfare.

The production technology uses capital and labour to produce a homogenous final good.

$$\text{Eq. 1} \quad Y(t) = \eta(t) \cdot (A(t) \cdot L(t))^{1-\alpha} \cdot K(t)^\alpha$$

Equation 1 is a standard Cobb-Douglas production function where Y is the output of the economy, A is a scalar for the productivity of labour input, L is labour, K is the capital stock and η is equal to $1 - \frac{agr}{Y}$ and reflects the GDP lost as agricultural losses.

Capital, investment, capital stock losses and reconstruction The modelling of the capital stock destruction due to climate change events is in line with what proposed by Hallegatte (2007). We assume that there are two form of capital for the economy potential capital (K_0) and effective capital (K), between the two forms of capital the following relationship holds: $K = \xi \cdot K_0$, where ξ corresponds to the fraction of non destroyed capital, i.e. $\xi = 1 - \frac{cap}{K_0}$. In this way we are able to modify the production function in Equation 1 in two different ways, depending on whether we assume that the destroyed capital is the last added to the stock and therefore, according to the usual assumption of decreasing marginal return, it is the less efficient capital. Or we assume that all types of capital, with different level of productivity are destroyed. In the first case the production function in Equation 1 is modified such that the capital input term K is substituted by the term $(\xi \cdot K_0)^\alpha$ and the production function becomes: $Y = f(AL, \xi \cdot K_0)$. In the second case, the entire production is rescaled by the term ξ and the production function becomes $Y = \xi \cdot f(AL, K_0)$.

Consumption, damage to residential properties and savings Equation 2 is the equation for consumption C , where λ is the exogenous consumption propensity.

$$\text{Eq. 2} \quad C(t) = \lambda \cdot Y(t) + res(t)$$

Regarding the damage to the residential property, households are assumed to fully face the repairing costs, which are part of the obliged consumption, a minimum expenditure level that covers basic needs including housing.

In Equation 2 *res* stands for the overall damaged residential property. The damages to residential properties are assumed to increase consumption. Therefore the overall saving S of the economy (country) is calculated as the difference between total output (GDP) and consumption as shown in Equation 3.

$$\text{Eq. 3} \quad S(t) = Y(t) - C(t)$$

Being a model for closed economies the usual assumption that domestic investment equals domestic savings ($S=I$) applies.

Effective capital and reconstruction of the destroyed capital stock

Following Hallegatte, Hourcade and Dumas (2007), the overall investment of the economy I is composed of two different types of investments; i.e., investments that increase the productive capital and compensate for the natural depreciation of the assets (ln), and those that are used to reconstruct the capital assets of the firms after a climatic event has occurred, (lr).

$$\text{Eq. 4} \quad I(t) = ln(t) + lr(t)$$

As In Hallegatte *et al.* (2007), we assume that there are short-term constraints: (i) insurance companies or public institutions need time to redirect high amounts of money to reconstruction activities or (ii) limited skills or organization capacity of the reconstruction/building sector of the economy, which make impossible the immediate mobilization of all the financial resources needed for the reconstruction process, even if those investments have higher returns compared to normal investments.

Equation 4 refers to the investment used for reconstruction of the capital assets of the firms, the variable I_r . The short-term constraints are reflected in the parameter $fmax$, which is the fraction of I that can be immediately redirected or mobilized for reconstruction investments.

$$\text{Eq. 5} \quad I_r(t) = \begin{cases} \text{if } \xi(t) < 1 & \min(I(t) \cdot fmax, (1 - \xi(t)) \cdot K_0(t)) \\ \text{if } \xi(t) = 1 & 0 \end{cases}$$

According to Equation 5, the investment for reconstruction I_r are equal to 0 if the fraction of non-destroyed capital stock is equal to 1, i.e. no capital losses. On the contrary, in case some of the capital stock is damaged, i.e. $\xi < 1$, part of the overall investments are devoted to the reconstruction process. Here is when the constraints to the reconstruction activity becomes operational in the model. In fact, if the damaged capital is lower than the fraction of the total investments I that can be readily mobilized and redirected, the damaged capital is repaired in one-period time. However, the reconstruction process might take longer than one period, and this depends on whether the stock of damaged capital is larger than the amount of financial resources that can be redirected from business as usual investment activities.

Equation 6 represents the rule for the accumulation of potential capital consistent with the previous assumptions about the different types of capital and investments. The parameter δ is the depreciation rate. We use the country specific depreciation rates as reported in the Penn World Table 9.0 (Feenstra, Inklaar & Timmer, 2016), which reflects that different countries may have a different composition of their capital stock.

$$\text{Eq. 6} \quad \dot{K}_0(t) = -\delta \cdot K_0(t) + \frac{I_n(t)}{\xi(t)}$$

Equation 7 refers to the growth of the fraction of the non destroyed capital ξ , which is equal to the difference between the capital lost at time t , i.e. cap , and the investment for reconstruction. For capital losses below the threshold established, there is an accumulation of damaged capital and vice versa.

$$\text{Eq. 7} \quad \dot{\xi}(t) = \frac{I_r(t)}{K_0(t)}$$

Creative destruction scenario

In order to account for the potential benefits of the technological upgrade deriving from replacement of the destroyed assets with better ones, we partially modify the equation for the growth of the variable A that refers to total factor productivity of the economy.

In particular, we consider that the physical assets installed with the reconstruction; i.e. the variable I_r , embodies a level of technology that corresponds to the European technological frontier and therefore increases the level of overall productivity of the economy. The European technological frontier is calculated as the average of the three countries with the highest level for the variable A . Throughout the projection period these countries are Ireland, Sweden and Denmark.

$$\text{Eq. 8} \quad \dot{A} = A \cdot g + \frac{I_r}{K_0} \cdot (A_{front} - A)$$

In Eq.8 the variable A_{front} is used as a proxy for the European technological frontier and it is calculated as the average of the level for the variable A of the three best performing countries: Ireland, Sweden and Denmark.

Data and calibration of the model

Three main data sources have been used to calibrate the model: the ECFIN Ageing Report 2021 (AR), the Penn World Table 9.0 (PWT) the national accounts available at Eurostat (Eurostat, 2021). The model's parameters, i.e. the saving rate, the depreciation rate etc., have been calibrated at country level in order to reflect cross country heterogeneity as much as possible, considering the stylized nature of the model used. Country specific saving rates and depreciation rates reflect, to some extent, the different level of economic structural resilience. For instance, a country with a higher saving rate is characterized with a higher prudent attitude, which makes that country more resilient and with a better recovery capacity compared to a country with a lower saving rate, i.e. where current consumption is preferred to future one.

Furthermore, as the depreciation rate reflects the composition and type of capital assets, economies with a higher depreciation rate invest in short-lived assets (computers and software are more prone to obsolesce and physical deterioration) that require larger volume of investments, compared to an economy with a lower depreciation rate, whose functioning is more based on long-lived assets (infrastructure and building)⁴¹.

The baseline replicates the GDP projections of the AR and assumes the growth rates for labour as reported in the AR (additional information in the SI section). The basic features of the model are very similar to the one used to generate the baseline GDP projections of the Ecfina Ageing Report, which constitutes an advantage for the calibration of the parameters (DG ECFIN 2017).

SCENARIOS

We analyse two main sets of scenarios that differ mainly in the way households repair the damages to their residential properties: either via consumption reshuffling, which are referred to as the *Prudent* scenarios, or by using up savings, i.e. the *Myopic* scenarios.

In *Prudent* scenarios, all damages to building are assumed to be repaired without increasing the overall expenditure level, but with a reshuffling of the consumption categories. In other words, households reduce their spending on welfare enhancing categories to repair the damages. On the contrary, in the scenarios named *Myopic*, households repair the damages with an increase of the level of overall consumption that is financed with a decrease of their savings. While in the *Prudent* scenarios the households' living standard is affected, in the *Myopic* scenarios it is not, but there is a decrease of the economy's resources available for the renovation of the existing stock of physical assets available for the production process.

Both scenarios are further elaborated to account for the possibility that the productive assets replaced after the inundation embody a better and more productive technology and therefore boost the overall economy's productivity. In our model, the upgrade corresponds to the difference between the average productivity of the country where the disaster occurs and the technological frontier, which is assumed the average productivity of the three best performing EU countries, i.e. Sweden, Denmark and Ireland; the frontier is assumed to grow at an exogenous 2% per year. These two scenarios are named *Prudent+productivity* and *Myopic+productivity*.

Last scenarios named *Myopic+productivity+recon.* and *Prudent+productivity+recon.* analyse the trade-off between replacing and upgrading the destroyed capital stock after the disaster vis à vis the duration of the reconstruction process. In fact, unrealistically firms will be able to install and make operational a new technology in the same amount of time as if the old assets were simply repaired or replaced by assets embodying a current, more available and well-known technology. If the firms decide to install a new and more productive technology they will gain in productivity, but the reconstruction/restoration of the firm's activity will take longer, which implies larger immediate economic losses. In order to model the delay in the reconstruction process, we assume that, because of institutional rigidities or logistic difficulties the amount of investments that can be mobilised for the replacement of the damaged productive assets are equal to 0.03% of total investments. We derive this parameter from the information available for the floods occurred in Germany in 2013. Those extreme events, with an estimated return period of more than 200 years in some of the affected areas, caused damages to private buildings and infrastructure that amount to around €10 billion (Schröter *et al.*, 2015). The majority of the rebuilding was financed by the State and took around five years (Carpenter *et al.*, 2018), which means that roughly €2 billion per year could be allocated/spent for the rebuilding, i.e. 0.03% of average annual investment in Germany (around €500 billion) for the period between 2013 to 2017 (source Eurostat).

⁴¹ While for EU countries, which have relatively small structural differences among them, this type of cross-country heterogeneity could be a reasonable proxy for economic resilience, it could be a less reliable one for developing economies. In that case, a low aggregate depreciation rate would reflect that certain type of assets are more expensive and also that there is a shortage of the complementary human capital, which makes those economies even less resilient.

ACRONYMS

ABNJ	Areas Beyond National Jurisdiction	EFSA	European Food Safety Authority
AFD	French Development Agency, Agence française de développement	EFSI	European Fund for Strategic Investment
ASC	Aquaculture Stewardship Council	EGD	European Green Deal
BCR	Benefit to cost ratio	EIB	European Investment Bank
BE	Blue Economy	EIF	European Investment Fund
BEI	Blue Economy Indicators	EIT	European Institute of Innovation and Technology
BER	Blue Economy Report	EMB	The European Marine Board
Blue SOS	Blue Sustainable Ocean Strategy	EMFF	European Maritime and Fisheries Fund
BRI	Belt and Road Initiative	EMODNET	European Marine Observation and Data Network
CBD	Convention on biological diversity	EPC	Engineering, procurement and construction
CCS	Carbon Capture and Storage	ERDF	European Regional Development Fund
CEF	Connecting Europe Facility	ES	Ecosystem services
CF	Cohesion Fund	ESA	European System of National and Regional Accounts
CFP	Common Fisheries Policy	ESIF	European Structural and Investment Funds
CICES	Common International Classification of Ecosystem Services	ESLs	Extreme Sea Levels
CLC	Corine Land Cover	ESM	European Stability Mechanism
CMES	Copernicus Marine Environment Monitoring Service	ESPO	European Sea Ports Organisation
CMF	French Maritime Cluster	ETS	EU Emissions Trading System
CMO	The common organisation of the markets in fishery and aquaculture products, CMO Regulation	EU	European Union (28 Member States, including the UK)
CO₂(e)	Carbon dioxide (equivalent)	EU-27	European Union (27 Member States, without the UK)
CRII (+)	Coronavirus Response Investment Initiative (Plus)	EUSAIR	EU Strategy for the Adriatic and Ionian Region
DCF	Data Collection Framework	EUSBSR	EU Strategy for the Baltic Sea Region
DCT	Deepwater Container Terminal	FAO	Food and Agriculture Organisation of the United Nations
DG MARE	Directorate-General for Maritime Affairs and Fisheries, European Commission	FCR	Food conversion ratio
DGMP	Directorate-General for Maritime Policy of the Ministry of Sea, Portugal	FIT	Feed-in-tariffs
E/R	Engineers	FMFO	Fishmeal and fish oil
EAP	Environmental Action Program	FPV	Floating solar photovoltaic
EBRD	European Bank for Reconstruction and Development	FTE	Full-time equivalent
ECB	European Central Bank	GDP	Gross Domestic Product
ECHA	European Chemicals Agency	GES	Good Environmental Status
ED	Electrodialysis	GHG(s)	Greenhouse gas(es)
EDA	European Defence Agency	GT	Gigatonnes
EEA	European Economic Area	GVA	Gross value added (at factor cost)
EEAG	State Aid Guidelines for Environmental protection and Energy	GW	Gigawatt
EEZ	Exclusive Economic Zone	H&S	Health and safety
		HELCOM	Helsinki Commission
		ICMA	Ministerial Commission for Maritime Affairs
		ICPC	International Cable Protection Committee
		IMF	International Monetary Fund
		IMO	International Maritime Organisation

IMP	Integrated Maritime Policy
IMR	Inspection, maintenance and repair vessels
INE	National Statistical Institute of Portugal
IOC	UNESCO's Intergovernmental Oceanographic Commission
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	International Panel on Climate Change
ISA	International Seabed Authority
JPI Oceans	Joint Programming Initiative Healthy and Productive Seas and Oceans
JRC	Joint Research Centre, European Commission
KfW Group	German Development Bank
KIP INCA	The Knowledge and Innovation Project on an Integrated system for Natural Capital and ecosystem services Accounting
Km	Kilometre
KW	Kilowatt
LFS	Labour Force Survey
LFSO	Low sulphur fuel
LNG	Liquefied Natural Gas
MAES	Mapping and Assessment of Ecosystems and Services
MEA	Millennium Ecosystem Assessment
MEAs	Maritime Economic Activities
MED	Multi effect evaporation desalination
MEPC	Marine Environment Protection Committee of the IMO
MFF	Multiannual Financial Framework
MGO	Marine gas oil
MMF	Marine Modelling Framework
MoS	Motorways of the Sea
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MRE	Marine renewable energy
MRV	Monitoring, reporting and verification
MS	Member State
MSC	Marine Stewardship Council
MSF	Multistage flash desalination
MSFD	Marine Strategy Framework Directive
MSP	Maritime spatial planning
MSY	Maximum Sustainable Yield
Mt	Megatonne
MUPs	Multi-use platforms
MW	Megawatt

NA	National Accounts
NACE	Nomenclature générale des activités économiques dans la Communauté européenne
NAPs	National Allocation Plans
NCA	Natural capital accounting
NDCs	Nationally Determined Contributions (under the Paris Agreement)
NDT	Non-destructive Testing
NF	Nanofiltration
NGOs	Non-governmental organisations
NOAA	National Oceanic and Atmospheric Administration
NUTS	Nomenclature of Territorial Units for Statistics
OCTs	Overseas Countries and Territories
OCV	Offshore construction vessels
OEM	Original Equipment Manufacturer
ONCCV	Other non-cargo carrying vessels
ORs	Outermost Regions
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
OSV	Offshore support vessels
OTEC	Ocean Thermal Energy Conversion
OWC	Oscillating Water Column
PET	Plastic type: polyethylene terephthalate
POP	Persistent Organic Pollutants
PPR	Primary production rate
PRFs	Port waste reception facilities
PRODCOM	Eurostat statistics on the production of manufactured goods
R&D	Research and development
RCP	Representative Concentration Pathway
RD&I	Research, Development, and Innovation
RED	Reverse Electro Dialysis
REEs	Rare earth elements
REPs	Regional Entrepreneurial Ports
RES	Renewable energy sources
RESM	Regional Earth System Model
RO	Reverse osmosis
ROV	Remotely operated vehicle(s)
SAS	Satellite Account for the Sea
SBS	Eurostat Structural Business Statistics
SDG	Sustainable Development Goal
SEEA (EEA)	System of Environmental-Economic Accounting (Experimental Ecosystem Accounting)
SFPAs	Sustainable Fisheries Partnership Agreements

SLR	Sea Level Rise
SMEs	Small and Medium Enterprises
SNA	System of national accounts
SOx	Sulphur Oxides
SPF	Small pelagic fish
SPM	Single-point Mooring
SPMs	Spatial Protection Measures
SPV	Special Purpose Vehicle
SSNP	Sečovlje Salina Nature Park, Slovenia
SSPs	Shared Socio-economic Pathways
SURE	Support to mitigate Unemployment Risks in an Emergency
TEEB	The Economics of Ecosystems and Biodiversity
TEN-T	Trans-European Transport Network
TLP	Tension-leg platform

TNO	The Netherlands Organisation for Applied Scientific Research
TRL	Technology readiness level
TTS	Tonnage Tax System
TW	Terawatt
UN	United Nations
UNCLOS	United Nations Convention of the Law of the Sea
US	United States of America
VALMARE	Valuing Marine Ecosystems Services
VASAB	Visions and Strategies Around the Baltic Sea
VAT	Value Added Tax
WFD	Water Framework Directive
WWTF	Waste Water Treatment Plants
\$	US Dollar
€	Euro

Member State codes

BE	Belgium
BG	Bulgaria
CZ	Czechia
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
HR	Croatia
IT	Italy
CY	Cyprus
LV	Latvia

LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden

Comparative advantage. When an individual, firm or nation is able to produce a particular product at a lower opportunity cost than another individual, firm or nation. Forms the basis on which countries trade with one another.

Economic growth. An increase in the output of goods and services in a country between two periods.

Factor cost. A measure of output reflecting the costs of the factors of production used, rather than market prices, which may differ because of indirect tax and subsidies (see GDP).

Factors of production. The ingredients of economic activity/the human and natural resources needed to produce any good or service: land, labour, capital and enterprise.

Gross domestic product (GDP). The total market value of all final goods and services produced during a given time period within a country's borders. Equal to the total income of the nation's households or the total expenditures on the nation's output.

Gross operating surplus. The surplus generated by operating activities after the labour factor input has been recompensed. It can be calculated from the value added at factor cost less the personnel costs. It is the balance available to the unit, which allows it to compensate the providers of own funds and debt, to pay taxes, and eventually finance all or a part of the investment.

Gross investment in tangible goods. Investment during the reference period in all tangible goods. Included are new and existing tangible capital goods, whether bought from third parties or produced for own use (i.e. Capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. Investments in intangible and financial assets are excluded.

Number of persons employed. Total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams).

Nominal value. The value of anything expressed simply in the money of the day. Since inflation means that money can lose its value over time, figures in real value adjust the nominal figures to remove the inflationary distortions.

Personnel costs. The total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees as well as home workers) in return for work done by the latter during the reference period. Personnel costs also include taxes and employees' social security contributions retained by the unit as well as the employer's compulsory and voluntary social contributions. Personnel costs are made up of wages, salaries, and employers' social security costs.

Sustainability. The ability to endure over time. Sustainable growth requires that resources be used at a rate at which they are able to replenish and that the environment is not spoiled in during the production process.

Tangible assets. Assets one can touch: buildings, machinery, gold, works of art, etc. Contrast with intangible assets.

Turnover. The total invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties; it includes all duties and taxes on the goods or services invoiced by the unit with the exception of VAT, invoiced by the unit to its customer and other similar deductible taxes directly linked to turnover; it also includes all other charges (transport, packaging, etc.) passed on to the customer.

Value added at factor costs (GVA). The gross income from operating activities after adjusting to operating subsidies and indirect taxes. Value added at factor costs is calculated 'gross' as value adjustments (such as depreciation and impairment losses) are not subtracted. GVA can be calculated from turnover, plus capitalised production, plus other operating income (including operating subsidies), plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Alternatively, GVA can be calculated from gross operating surplus by adding personnel costs.

