

SDG14

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Import packages and set things up

Unable to display output for mime type(s): text/html

<IPython.core.display.HTML object>

Country names dict

Define general functions

SDG Official Data

SDG14 metadata can be found [here](#)

Indicator	SeriesCode	SeriesDescription
14.1.1	EN_MAR_BEALITSQ	Beach litter per square kilometer (Number)
	EN_MAR_BEALIT_BP	Beach litter originating from national land-based sources that ends in
	EN_MAR_BEALIT_BV	Beach litter originating from national land-based sources that ends in
	EN_MAR_BEALIT_EXP	Exported beach litter originating from national land-based sources (T
	EN_MAR_BEALIT_OP	Beach litter originating from national land-based sources that ends in
	EN_MAR_BEALIT_OV	Beach litter originating from national land-based sources that ends in
14.2.1	EN_MAR_CHLANM	Chlorophyll-a anomaly, remote sensing (%)
	EN_MAR_CHLDEV	Chlorophyll-a deviations, remote sensing (%)
	EN_MAR_PLASDD	Floating plastic debris density (count per km2)
14.2.1	EN_SCP_ECSYBA	Number of countries using ecosystem-based approaches to managing
14.3.1	ER_OAW_MNACD	Average marine acidity (pH) measured at agreed suite of representati

Indicator	SeriesCode	SeriesDescription
14.4.1	ER_H2O_FWTL	Proportion of fish stocks within biologically sustainable levels (not ov
14.5.1	ER_MRN_MPA	Average proportion of Marine Key Biodiversity Areas (KBAs) covered
14.6.1	ER_REG_UNFCIM	Progress by countries in the degree of implementation of internationa
14.7.1	EN_SCP_FSHGDP	Sustainable fisheries as a proportion of GDP
14.a.1	ER_RDE_OSEX	National ocean science expenditure as a share of total research and d
14.b.1	ER_REG_SSFRAR	Degree of application of a legal/regulatory/policy/institutional frame
14.c.1	ER_UNCLOS_IMPL	Score for the implementation of UNCLOS and its two implementing a
	ER_UNCLOS_RATACC	Score for the ratification of and accession to UNCLOS and its two im

Check official data by indicator

TimePeriod	2019	2020	2021
GeoAreaName			
Belgium	7.794000	8.139600	7.8710
Estonia	7.783000	7.916000	7.7255
Finland	8.223464	NaN	NaN
France	8.023000	NaN	NaN
Netherlands	7.904056	NaN	NaN
Spain	8.036000	NaN	NaN
Sweden	8.082261	8.117167	NaN
United Kingdom	7.988000	NaN	NaN

Missing countries:

Germany
Denmark
Ireland
Lithuania
Latvia
Poland
Portugal

14.1

(a) Index of coastal eutrophication

We use Gross Nitrogen Balance: Max-Min transformation where the max-value is the maximum value in the period 2012-2021 and the min-value is zero.

Gross nutrient balance (Nitrogen kg/ha), Eurostat

[Source](#)

Negative values in dataset replaced with 0

No missing countries

TIME_PERIOD	2012	2016	2019
geo			
Belgium	6.568833	7.121212	7.121212
Denmark	11.270983	11.750000	11.750000
Estonia	33.571429	33.571429	33.571429
Finland	19.789474	19.831224	21.510297
France	40.000000	19.789474	24.736842
Germany	12.516644	13.613324	17.602996
Ireland	26.780627	17.375231	15.088283
Latvia	39.166667	37.007874	75.806452
Lithuania	32.191781	37.600000	23.039216
Netherlands	5.529412	4.832905	5.669481
Poland	19.542620	21.315193	19.831224
Portugal	21.412301	20.128480	20.796460
Spain	27.976190	24.102564	19.066937
Sweden	30.128205	25.613079	36.015326
United Kingdom	10.742857	10.867052	10.917538

Marine waters affected by eutrophication

[Source](#)

TIME_PERIOD	2012	2016	2022
geo			
Belgium	100.000000	100.000000	100.000000
Denmark	100.000000	50.000000	0.409836
Estonia	3.703704	5.555556	100.000000
Finland	3.703704	2.702703	0.781250
France	100.000000	33.333333	2.631579
Germany	100.000000	100.000000	50.000000
Ireland	100.000000	100.000000	16.666667
Latvia	11.111111	7.692308	100.000000
Lithuania	50.000000	5.000000	100.000000

TIME_PERIOD	2012	2016	2022
geo			
Netherlands	100.000000	100.000000	5.555556
Poland	25.000000	10.000000	100.000000
Portugal	1.923077	3.571429	0.523560
Spain	5.882353	5.555556	1.666667
Sweden	14.285714	4.545455	0.149925
United Kingdom	67.409984	43.100992	56.113573

No missing countries

(b) Floating Plastic Debris Density

We use two indicators:

1. Plastic Waste kg/ha: Max-Min Transformation where the max-value and min-values are the maximum and minimum in the period 2012-2021.
2. Recovery Rate of Plastic Packaging: Without further transformation as score is provided dimensionless.

1. Plastic Waste kg/ha, Eurostat

[Source](#)

TIME_PERIOD	2012	2016	2020
geo			
Belgium	13.559322	12.698413	9.302326
Denmark	42.105263	40.000000	33.333333
Estonia	47.058824	24.242424	25.000000
Finland	47.058824	50.000000	33.333333
France	32.000000	27.586207	22.222222
Germany	25.806452	24.242424	21.621622
Ireland	30.769231	25.806452	20.000000
Latvia	72.727273	25.000000	13.559322
Lithuania	47.058824	25.806452	20.000000
Netherlands	23.529412	25.806452	21.621622
Poland	32.000000	23.529412	13.559322
Portugal	47.058824	26.666667	18.604651
Spain	33.333333	50.000000	42.105263
Sweden	44.444444	25.000000	24.242424

TIME_PERIOD	2012	2016	2020
geo			
United Kingdom	21.621622	17.777778	18.181818

No missing countries

2. Recovery rates for packaging waste, Plastic Packaging

[Source](#)

TIME_PERIOD	2012	2016	2020
geo			
Belgium	92.885772	99.699399	99.599198
Denmark	99.599198	98.296593	73.246493
Estonia	44.088176	85.971944	87.575150
Finland	51.102204	97.394790	99.599198
France	64.128257	64.629259	71.943888
Germany	99.899800	100.000000	100.000000
Ireland	74.448898	79.859719	100.000000
Latvia	38.777555	41.883768	47.995992
Lithuania	38.977956	74.549098	63.527054
Netherlands	98.296593	95.991984	95.090180
Poland	26.252505	54.909820	45.090180
Portugal	39.478958	50.000000	57.014028
Spain	53.306613	61.923848	55.611222
Sweden	58.216433	61.823647	50.801603
United Kingdom	38.176353	58.617234	56.312625

No missing countries

14.2

Proportion of national exclusive economic zones managed using ecosystem-based approaches

We use two indicators:

1. Progress of implementation of Maritime Spatial Planning. Categorical data
2. OHI Habitat: measures the status of marine habitats that support large numbers of marine species.

1. Progress of implementation of Maritime Spatial Planning

[Source](#)

	2012	2016	2022
Country			
Belgium	50.0	100.0	100.0
Germany	100.0	100.0	100.0
Denmark	25.0	25.0	100.0
Estonia	25.0	50.0	100.0
Spain	25.0	25.0	75.0
Finland	25.0	25.0	100.0
France	25.0	25.0	100.0
Ireland	25.0	25.0	100.0
Lithuania	50.0	75.0	100.0
Latvia	50.0	50.0	100.0
Netherlands	100.0	100.0	100.0
Poland	25.0	50.0	100.0
Portugal	25.0	50.0	100.0
Sweden	25.0	50.0	100.0
United Kingdom	25.0	50.0	100.0

No missing countries

2. OHI Biodiversity

[Source](#)

scenario	2012	2018	2022
region_name			
Belgium	75.28	71.91	71.84
Denmark	74.24	72.71	72.39
Estonia	82.49	76.08	76.10
Finland	81.00	74.08	73.82
France	72.60	72.86	74.12
Germany	75.06	71.70	71.52
Ireland	69.19	66.90	66.23
Latvia	78.47	71.93	72.59
Lithuania	77.68	71.12	71.80
Netherlands	68.51	67.19	67.97
Poland	69.42	67.01	66.59

scenario	2012	2018	2022
region_name			
Portugal	75.57	72.75	71.87
Spain	72.16	69.23	68.17
Sweden	76.72	73.50	72.54
United Kingdom	69.87	72.81	72.11

No missing countries

14.3

Average marine acidity (pH) measured at agreed suite of representative sampling stations

We use two indicators:

1. Greenhouse gas emissions under the Effort Sharing Decision (ESD): Max-Min transformation where the max- and min-values are the maximum and minimum in the assessment period (2012-2021)
2. Carbon Emissions per capita: Max-Min Transformation where the max-value and min-values are the maximum and minimum in the period 2012-2021.

Reconstructed estimates of sea surface pH assessed with GLODAPv2.2021

[Source Copernicus](#)

	2012	2016	2021
Belgium	98.416817	98.372463	98.339183
Germany	98.233476	98.223317	98.103500
Denmark	98.363012	98.343317	98.238829
Estonia	97.613476	98.026768	97.609902
Spain	98.562378	98.445439	98.370024
Finland	97.765500	97.981232	97.717159
France	98.629780	98.511951	98.424024
Ireland	98.740963	98.616902	98.506000
Lithuania	96.980007	97.417059	97.082190
Latvia	97.096866	97.692573	97.198626
Netherlands	98.596902	98.471293	98.394500
Poland	96.469329	97.056435	96.550528
Portugal	98.583268	98.497232	98.378049
Sweden	97.437732	97.776390	97.489500

	2012	2016	2021
United Kingdom	98.674927	98.567567	98.460122

No missing countries

8.091915

AttributeError: 'DataFrame' object has no attribute 'geo'

2. Carbon emissions per capita

Several sources (see code)

TIME_PERIOD	2012	2016	2021
geo			
Belgium	37.734121	39.459259	41.833681
Denmark	47.376240	51.718478	68.103705
Estonia	26.783744	27.085479	45.744259
Finland	36.906728	40.406167	51.708163
France	61.806654	66.847742	75.572829
Germany	34.783657	35.997628	43.288290
Ireland	41.662118	39.922992	46.737265
Latvia	93.965364	93.972191	91.681403
Lithuania	76.334698	77.951383	72.164336
Netherlands	34.459622	34.839212	42.925952
Poland	42.102450	42.241700	41.185795
Portugal	72.420665	69.650043	88.751684
Spain	58.295610	61.088196	72.095049
Sweden	70.390420	77.794760	95.307931
United Kingdom	47.256895	59.384996	74.533451

No missing countries

14.4

Proportion of fish stocks within biologically sustainable levels

We use two indicators:

1. FMSY/F: catch-weighted average
2. B/BMSY: catch-weighted average

1. FMSY/F

Data compiled partially manually

Source of FMSY and F is [/stockAssesmentYEAR](#)

Source of country catches is [/OfficialNominalCatches](#) and [stockAssessment\[“year”\]](#) PDFs.

Year	2012	2016	2022
Belgium	84.278853	89.253671	97.182818
Estonia	95.038299	82.573446	77.562646
Finland	99.177365	91.229736	82.840916
France	91.013767	93.548510	93.938257
Germany	81.283936	87.261924	90.831432
Ireland	71.053790	62.685203	86.770330
Latvia	94.318542	89.406109	81.381134
Lithuania	91.787307	83.126001	82.901621
Netherlands	85.883804	88.278969	93.834910
Poland	89.263580	89.580011	74.853470
Portugal	78.732711	84.161276	94.842807
Spain	92.064992	88.531210	91.937691
Sweden	91.475417	78.225767	74.962550
United Kingdom	98.135098	95.872798	90.761277
Denmark	95.419499	85.849679	88.529445

No missing countries

2. B/BMSY

Data collected partially manually

Source of BMSY and B is [/stockAssesmentYEAR](#)

Source of country catches is [/OfficialNominalCatches](#) and [stockAssessment\[“year”\]](#) PDFs.

Year	2012	2016	2022
Belgium	91.982255	94.662804	91.871386
Estonia	99.839423	99.933347	95.679809
Finland	99.843072	99.941251	95.909145
France	97.115681	96.936702	96.369335
Germany	90.088417	93.281519	93.439957
Ireland	92.130861	85.437192	89.825424
Latvia	97.564685	99.565412	97.360783

Year	2012	2016	2022
Lithuania	92.382483	99.191985	96.254817
Netherlands	92.736442	89.856357	96.706294
Poland	96.568884	98.135256	92.284320
Portugal	98.746282	97.786405	98.794184
Spain	99.443829	96.930800	96.504370
Sweden	96.430034	97.171833	91.413094
United Kingdom	96.715727	95.636901	97.260299
Denmark	96.031151	95.816545	95.730634

No missing countries

14.5

Coverage of protected areas in relation to marine area

We consider two indicators:

1. Coverage of protected areas in relation to marine areas: Distance to Reference transformation where the max-value is set to 30% and the min-value is 0%
2. OHI 'Biodiversity' Index : No further transformation

1. Marine protected areas (% of territorial waters)

[Source](#)

Country	Area_km2
Belgium	3495
Denmark	105021
Estonia	36451
Finland	81553
France	345240
Germany	56763
Ireland	427039
Latvia	28353
Lithuania	6832
Netherlands	64328
Poland	29982
Portugal	1728718
Spain	1007673

	Area_km2
Country	
Sweden	155347
United Kingdom	731309

year	2012	2016	2021
Country			
Belgium	100.000000	100.000000	100.000000
Denmark	60.473620	60.473620	60.473620
Estonia	61.763280	61.763280	61.763280
Finland	29.183476	29.183476	33.278972
France	40.225157	40.247364	100.000000
Germany	100.000000	100.000000	100.000000
Ireland	5.360166	8.007856	8.005514
Latvia	20.315311	51.575965	51.587721
Lithuania	32.933255	76.258782	76.258782
Netherlands	61.139784	78.156738	85.271318
Poland	80.459387	80.448269	80.559447
Portugal	0.507891	6.148101	8.182171
Spain	3.515029	27.920433	28.009086
Sweden	20.023989	43.406052	43.485444
United Kingdom	33.704859	57.729359	60.225340

No missing countries

Average proportion of Marine Key Biodiversity Areas (KBAs) covered by protected areas (%)

Source: official SDG 14 data

TimePeriod	2012	2016	2022
GeoAreaName			
Belgium	96.49980	96.84682	96.85317
Denmark	86.66340	86.74673	86.74673
Estonia	97.60969	97.60982	97.62768
Finland	59.78557	60.80889	60.85425
France	62.51162	76.43594	81.88238
Germany	74.06325	74.51850	80.79027
Ireland	75.92082	75.97923	83.16451

TimePeriod	2012	2016	2022
GeoAreaName			
Latvia	96.16348	96.16360	96.16360
Lithuania	65.53137	83.51997	83.51997
Netherlands	93.31337	96.64630	96.64630
Poland	87.25113	87.25113	87.31556
Portugal	68.28585	70.43105	70.76779
Spain	62.51987	85.84322	85.86279
Sweden	56.67376	59.73273	60.46026
United Kingdom	80.23372	80.43096	81.23336

No missing countries

14.6

Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing

We use two indicators:

1. Fishing Subsidies relative to Landings: Max-Min Transformation where the max-value and min-value are the maximum and minimum in the assessment period (2012-2021)
2. TAC/Catch:

1. Fishing Subsidies relative to Landings

[Source](#)

Year	2012	2016	2019
Country			
Belgium	1.139037	2.272171	2.298623
Denmark	0.698986	0.715540	0.772050
Estonia	7.391742	100.000000	3.199879
France	1.033066	67.197243	1.311843
Germany	12.965808	4.147636	12.577897
Ireland	0.430904	9.167110	21.919322
Latvia	3.871829	100.000000	100.000000
Lithuania	1.498189	11.784437	1.451992
Netherlands	9.666849	3.594301	1.575328
Poland	0.441716	0.280389	0.356007
Portugal	1.130799	0.323543	0.479279

Year Country	2012	2016	2019
Spain	10.216785	3.002641	4.131087
Sweden	0.716534	0.632158	0.989415
United Kingdom	3.810226	4.267987	2.925930
Finland	10.202035	20.662909	10.199273

No missing countries

3. IUU Fishing Index

[Source](#)

Year Country	2019	2021
Belgium	100.000000	64.031078
Denmark	51.245497	65.768667
Estonia	70.952143	70.952143
Finland	53.277658	64.031078
France	54.608684	61.476344
Germany	51.245497	70.952143
Ireland	58.866791	70.952143
Latvia	90.295268	70.952143
Lithuania	51.245497	54.146791
Netherlands	46.306308	51.245497
Poland	72.707739	70.952143
Portugal	47.352555	70.194173
Spain	54.608684	48.688266
Sweden	70.952143	70.952143
United Kingdom	47.352555	41.915876

No missing countries

2. TAC/Catch

Data extracted partially manually.

Source of TAC is [stockAssessment\[“year”\]](#) PDFs.

Source of country catches is [/OfficialNominalCatches](#) and [stockAssessment\[“year”\]](#) PDFs.

Year	2012	2016	2022
Belgium	78.480130	95.507005	97.255892
Estonia	98.404500	99.435507	96.478689
Finland	98.942568	99.843818	92.122689
France	84.168757	91.279043	97.873527
Germany	97.890177	96.075084	96.254821
Ireland	95.739977	94.352001	97.971417
Latvia	99.389419	99.008097	96.696104
Lithuania	98.155150	98.005229	95.209801
Netherlands	92.986309	95.043900	97.158599
Poland	99.762408	98.797493	94.911954
Portugal	96.065583	97.542063	98.963306
Spain	81.619492	94.504539	98.517713
Sweden	96.705334	98.484897	95.600203
United Kingdom	95.734499	93.625841	98.166726
Denmark	94.385126	96.196738	96.258764

No missing countries

14.7

Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries

We use two indicators:

1. 'Livelihoods & economies' Index as per Baltic Health Index (BHI)
2. 'Tourism' Index as per BHI

1. 'Livelihoods & economies' Index

Divided into:

1. Economies: Gross Value Added (GVA) annual growth rate of marine sectors against 1.5% target
2. Livelihoods: Two subindicators: GVA/Hours Worked & FTE Employees/Coastal population

[Source Blue Economy](#)

Economies

Year country	2012	2016	2020
Belgium	96.873934	21.658872	21.297335
Denmark	4.504192	22.266304	61.905965
Estonia	52.767271	48.123759	54.687999
Finland	35.661048	73.708100	30.287035
France	32.382788	28.159942	0.247155
Germany	38.803670	64.176248	5.469456
Ireland	87.952005	100.000000	28.923979
Latvia	97.411580	2.196562	19.610579
Lithuania	37.153807	61.513965	42.140579
Netherlands	84.178366	21.389797	40.346288
Poland	62.903198	59.160696	80.944135
Portugal	61.985137	96.467062	9.280987
Spain	3.312837	85.334154	0.000000
Sweden	43.109175	71.468051	14.636507
United Kingdom	100.000000	20.980994	0.000000

No missing countries

Livelihoods

Year Member State	2012	2016	2020
Belgium	51.802011	51.299815	51.386254
Denmark	32.749801	31.486793	33.027110
Estonia	46.656028	42.047024	36.055520
Finland	29.925018	29.812339	27.788266
France	32.757447	30.114250	31.001004
Germany	56.853249	64.799416	70.483043
Ireland	21.156178	23.834970	22.376832
Latvia	17.910066	20.625229	22.111941
Lithuania	43.769817	51.147603	60.464272
Netherlands	59.048523	54.556125	44.578926
Poland	33.954238	34.399858	39.983381
Portugal	20.076299	22.754069	22.863547
Spain	32.277416	31.543588	30.354344
Sweden	29.692513	33.018899	34.687773

Year Member State	2012	2016	2020
United Kingdom	52.884828	46.003809	52.837006

No missing countries

2. Tourism: GVA/nights spents

Year country	2012	2016	2020
Belgium	45.334240	38.058850	41.541088
Denmark	81.889205	93.267237	100.000000
Estonia	58.620529	58.491705	75.930535
Finland	65.419935	79.994586	55.925323
France	47.093545	47.012451	42.348381
Germany	70.673069	71.550445	85.368497
Ireland	59.059376	85.079465	100.000000
Latvia	38.809039	53.736533	47.795775
Lithuania	33.817135	52.212723	48.222261
Netherlands	39.665778	40.625908	31.666511
Poland	60.057201	41.072395	27.725916
Portugal	53.680933	57.461233	67.520145
Spain	53.868019	56.316363	44.842960
Sweden	62.006181	75.725888	74.427793
United Kingdom	59.320101	39.530034	39.530034

No missing countries

14.a

Proportion of total research budget allocated to research in the field of marine technology

We use two indicators:

1. Official UNSD indicator ER_RDE_OSEX: Max-Min transformation where the max-value and min-value are the maximum and minimum in the assessment period (2009-2017) of all European countries (not restricted to the countries in the analysis).
2. SAD/TAC: Catch-weighted TAC relative to Scientific Advice

Note: ER_RDE_OSEX data comes from Global Ocean Science Report (GOSR) 2020, and goes from 2013 to 2017. Data for 2009-2012 data is available in the [UNstats archive](#) (download csv for 29-Mar-19)

1. Ocean science expenditure ER_RDE_OSEX

Several sources

	2013	2016	2017
Belgium	0.01000	0.00	0.000000
Bulgaria	3.19375	14.67	8.182222
Croatia	3.19375	14.67	8.182222
Denmark	3.19375	14.67	8.182222
Estonia	3.19375	14.67	8.182222
Finland	0.57000	0.58	0.570000
France	6.30000	14.67	4.200000
Germany	0.40000	0.31	0.300000
Ireland	3.19375	14.67	47.360000
Italy	3.19375	14.67	8.182222
Latvia	3.19375	14.67	8.182222
Lithuania	3.19375	14.67	8.182222
Netherlands	0.35000	0.29	0.330000
Norway	3.19375	14.67	8.182222
Poland	0.10000	0.06	0.060000
Portugal	3.19375	95.47	8.182222
Romania	3.19375	14.67	8.182222
Spain	6.58000	11.48	10.500000
Sweden	3.19375	14.67	8.182222
United Kingdom	11.24000	9.17	10.320000

No missing countries

Conclusions about the following countries shouldn't be drawn because they are missing all data

No missing countries

Year country	2013	2016	2017
Belgium	0.192214	0.144283	0.136875
Denmark	20.521594	93.775413	52.356158

Year country	2013	2016	2017
Estonia	20.521594	93.775413	52.356158
Finland	3.786670	3.841204	3.801324
France	40.333788	93.775413	26.927500
Germany	2.689630	2.098363	2.051878
Ireland	20.521594	93.775413	100.000000
Latvia	20.521594	93.775413	52.356158
Lithuania	20.521594	93.775413	52.356158
Netherlands	2.362859	2.010297	2.226894
Poland	0.760625	0.528163	0.509660
Portugal	20.521594	100.000000	52.356158
Spain	42.166447	73.435813	67.147209
Sweden	20.521594	93.775413	52.356158
United Kingdom	71.880520	58.640165	65.978803

2. SAD/TAC

Data extracted partially manually.

Source of TAC and SAD is [stockAssessment\[“year”\]](#) PDFs.

Source of country catches is [/OfficialNominalCatches](#) and [stockAssessment\[“year”\]](#) PDFs.

If a country fishes only on fish stocks where assignment of TAC follows scientific advice, it would score 100

Year	2012	2016	2022
Belgium	98.292746	97.071052	96.615720
Estonia	92.753209	86.254153	90.900148
Finland	99.440656	97.749144	95.619503
France	90.323954	91.459570	92.379607
Germany	90.655052	85.395915	87.737917
Ireland	98.126385	87.353687	75.753058
Latvia	91.715604	82.541315	91.324412
Lithuania	96.064711	84.378674	88.919591
Netherlands	95.566376	88.761011	89.214834
Poland	94.916995	80.769729	86.833090
Portugal	98.862330	94.596274	91.951678
Spain	91.262037	84.589603	88.343857
Sweden	90.155366	89.159207	87.337151
United Kingdom	79.451505	81.326929	82.954885
Denmark	84.660093	77.694543	84.036427

Year	2012	2016	2022
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No missing countries

14.b

Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries

We use two indicators:

1. OHI Artisanal Fishing Opportunities Index: No further transformation
2. Percentage of Fish Species Threatened: No further transformation

1. OHI 'Artisanal opportunities' Index

[Source](#)

scenario	2012	2018	2022
region_name			
Belgium	79.51	77.65	78.66
Denmark	70.50	77.24	74.63
Estonia	89.39	91.18	99.24
Finland	84.67	82.73	77.45
France	77.09	76.44	78.61
Germany	73.21	76.62	73.23
Ireland	69.90	73.46	73.52
Latvia	87.40	89.29	99.01
Lithuania	88.71	90.62	97.63
Netherlands	55.01	57.44	60.35
Poland	87.82	76.21	77.61
Portugal	77.81	65.46	66.08
Spain	73.45	70.66	73.08
Sweden	94.77	95.73	97.37
United Kingdom	81.35	82.74	79.79

No missing countries

2. Percentage of Fish Species Threatened

Source Analysis done in [iucnRedList.ipynb](#)

year name	2012	2016	2022
Belgium	77.777778	87.786260	84.967320
Denmark	83.516484	89.944134	86.138614
Estonia	80.952381	89.473684	90.243902
Finland	81.818182	89.189189	90.000000
France	88.135593	93.216080	91.332611
Germany	77.611940	87.022901	82.894737
Ireland	86.592179	93.750000	91.885965
Latvia	77.272727	87.804878	88.636364
Lithuania	77.272727	87.500000	88.372093
Netherlands	83.132530	91.489362	89.047619
Poland	76.923077	87.234043	86.274510
Portugal	89.573460	94.731065	92.578125
Spain	89.938398	94.646465	92.513863
Sweden	77.272727	87.121212	84.027778
United Kingdom	86.729858	93.827160	91.337100

No missing countries

14.c

Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea

We use two indicators:

1. Participation in agreements of the International Marine Organization (IMO Participation Rate):
2. Mining Area/EEZ (Deep Sea Mining)

1. Participation in agreements of the International Marine Organization

Source

Country	2012	2016	2021
Belgium	78.431373	76.470588	90.196078
Denmark	80.392157	86.274510	92.156863
Estonia	76.470588	78.431373	82.352941
Finland	76.470588	78.431373	90.196078
France	84.313725	84.313725	96.078431
Germany	80.392157	82.352941	88.235294
Ireland	66.666667	68.627451	68.627451
Latvia	80.392157	80.392157	82.352941
Lithuania	58.823529	62.745098	64.705882
Netherlands	84.313725	86.274510	92.156863
Poland	80.392157	84.313725	86.274510
Portugal	68.627451	76.470588	86.274510
Spain	86.274510	86.274510	88.235294
Sweden	82.352941	90.196078	94.117647
United Kingdom	78.431373	78.431373	78.431373

No missing countries

1. Mining Area/EEZ

[Source](#)

Country	2023
Belgium	0
Germany	100
Denmark	100
Estonia	100
Spain	100
Finland	100
France	100
Ireland	100
Lithuania	100
Latvia	100
Netherlands	100
Poland	97
Portugal	100
Sweden	100
United Kingdom	99

	2023
Country	

No missing countries

Monte Carlo simulation

Code source is in the [composite.py](#) file

CPU times: user 13.8 s, sys: 7.7 ms, total: 13.8 s

Wall time: 13.8 s

Plots

Unable to display output for mime type(s): application/vnd.plotly.v1+json, text/html

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Year	2012		2016		2021		2023	
Value	scoreMean	scoreStd	scoreMean	scoreStd	scoreMean	scoreStd	rankMean	rankStd
Country								
Belgium	51.97	4.94	45.70	11.89	47.11	10.90	1.00	0.74
Latvia	51.65	6.49	35.12	13.28	37.37	11.21	2.00	0.97
Estonia	48.15	6.25	48.18	7.06	49.01	9.10	3.00	0.94
Netherlands	47.96	7.10	39.85	7.95	41.91	8.32	4.00	1.07
Germany	47.18	6.26	44.05	11.00	43.94	11.05	5.00	0.94
Finland	47.05	6.92	52.22	4.86	45.42	9.20	6.00	1.04
Poland	46.31	7.93	33.88	13.69	32.64	12.76	7.00	1.19
Sweden	46.17	6.74	53.91	6.16	45.82	9.18	8.00	1.01

Year Value Country	2012 scoreMean	scoreStd	2016 scoreMean	scoreStd	2021 scoreMean	scoreStd	2012 rankMean	rankStd
Ireland	46.04	5.10	0.00	0.00	0.00	0.00	9.00	0.76
Portugal	44.90	5.74	54.46	6.84	41.00	11.05	10.00	0.86
Lithuania	43.82	7.01	46.65	8.75	44.41	9.54	11.00	1.05
France	42.33	8.15	42.27	9.57	33.66	14.65	12.00	1.22
Denmark	39.93	9.36	35.25	12.73	32.88	15.03	13.00	1.40
United Kingdom	37.50	12.06	36.29	9.96	32.67	10.42	14.00	1.81
Spain	32.65	9.39	45.59	8.21	30.44	12.02	15.00	1.41

Trash bin

2. Carbon emissions per capita

Several sources (see code)

1. Greenhouse gas emissions under the Effort Sharing Decision (ESD)

Several sources (see code)

2. Carbon emissions per capita

Several sources (see code)

Alternative (dif-ref) score for ESD (measuring this way does not make a lot of sense to me)

1. Fishing Subsidies relative to Landings

Several sources

OHI Habitat subgoal (Biodiversity)

EEZ as per eea.europa.eu

MPAs as defined by IUCN

Measures under the Marine Strategy Framework Directive (DROPPED)