The Ocean Economy at a Glance



The Ocean Economy at a Glance



This work is issued under the responsibility of the Secretary-General of the OECD, and does not necessarily reflect the official views of OECD Member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Note by the Republic of Türkiye
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Türkiye recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Türkiye shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Kosovo*: This designation is without prejudice to positions on status, and is in line with United Nations Security Council Resolution 1244/99 and the Advisory Opinion of the International Court of Justice on Kosovo's declaration of independence.

Please cite this publication as:
OECD (2026), *The Ocean Economy at a Glance*, OECD Publishing, Paris, https://doi.org/10.1787/da6da926-en.

ISBN 978-92-64-37547-5 (print)
ISBN 978-92-64-91380-6 (PDF)
ISBN 978-92-64-50824-8 (HTML)

Photo credits: Cover © GreenOak/Shutterstock.com.

Corrigenda to OECD publications may be found at: https://www.oecd.org/en/publications/support/corrigenda.html.

© OECD 2026

Attribution 4.0 International (CC BY 4.0)
This work is made available under the Creative Commons Attribution 4.0 International licence. By using this work, you accept to be bound by the terms of this licence (https://creativecommons.org/licenses/by/4.0/).
Attribution – you must cite the work.
Translations – you must cite the original work, identify changes to the original and add the following text: *In the event of any discrepancy between the original work and the translation, only the text of the original work should be considered valid.*
Adaptations – you must cite the original work and add the following text: *This is an adaptation of an original work by the OECD. The opinions expressed and arguments employed in this adaptation should not be reported as representing the official views of the OECD or of its Member countries.*
Third-party material – the licence does not apply to third-party material in the work. If using such material, you are responsible for obtaining permission from the third party and for any claims of infringement.
You must not use the OECD logo, visual identity or cover image without express permission or suggest the OECD endorses your use of the work.
Any dispute arising under this licence shall be settled by arbitration in accordance with the Permanent Court of Arbitration (PCA) Arbitration Rules 2012. The seat of arbitration shall be Paris (France). The number of arbitrators shall be one.

Foreword

Ever since the publication of *The Ocean Economy to 2030* in 2016, the Organisation for Economic Co-operation and Development (OECD) has worked to improve understanding of the ocean's contribution to human wellbeing and prosperity and the effects that society's use of the ocean has on the marine environment. This book, the inaugural in a series of biennial publications called *The Ocean Economy at a Glance*, represents the next step in the OECD's mission to provide evidence to improve ocean policies for better lives.

Fishing and aquaculture harvest food from the sea. Offshore platforms extract oil, gas and minerals. Offshore wind farms and desalination plants produce electricity and fresh water. Shipyards and their suppliers build and equip the maritime fleet. Ships and ports carry goods and passengers across the globe, while coastal destinations receive visitors for leisure and recreation. Wholesalers and retailers distribute ocean goods. Teaching and research build knowledge of the ocean. These economic activities make up the ocean economy and all impact upon ocean and coastal environments in the process.

Most ocean economic activities are not separately identified in official statistics, making it difficult to assess their size, growth and productivity or compare them across countries and over time. The same challenge applies to measuring the science and knowledge that underpin these activities and inform ocean policy.

The OECD Directorate for Science, Technology and Innovation works to address these measurement gaps and strengthen the evidence base for informed ocean management and governance in close collaboration with OECD Members and partner economies.

This publication presents the latest round of the OECD's experimental ocean economy statistics and new ocean science and policy indicators. The statistics cover every corner of the world for each year 1995 to 2025 and measure gross value added in current prices and in real terms, employment in full-time equivalents and labour productivity. Additional sources include bibliographic databases as well as ocean science, technology and innovation policies from the EC-OECD STIP Compass.

This publication attempts to provide the best evidence available to policymakers for comparing the development of ocean economic activities across economies and over time on one consistent basis. It also lays the foundation for a new generation of innovative OECD indicators, helping countries to improve ocean management and governance and to build the robust, internationally comparable evidence needed to guide the ocean economy towards a productive, sustainable and resilient future.

Acknowledgements

The *Ocean Economy at a Glance* is an output of the OECD ocean economy programme in the Science and Technology Policy (STP) Division of the OECD Directorate for Science, Technology and Innovation. The report was written by James Jolliffe under the guidance of Claire Jolly who leads the Innovation Policies for Space and the Ocean (IPSO) unit and wrote the OECD's future measurement agenda at the end of Chapter 1. James Jolliffe also built the database of experimental ocean economy statistics that provides the data presented in the report.

The programme of work on ocean economy measurement and this report would not exist without the support, expertise and advice provided by the Steering Board of the OECD Ocean Economy Group, composed of the following organisations: Department of Fisheries and Oceans (DFO), Canada; Marine Institute, Ireland; Korea Maritime Institute (KMI), Korea; Research Council of Norway (RCN), Norway; the Directorate General for Maritime Affairs, Fisheries and Aquaculture (DGAMPA), France; the Directorate-General for Maritime Policy (DGPM) and Foundation for Science and Technology (FCT), Portugal. Thanks go to Niall McDonough and Jenny O'Leary (Marine Institute, Ireland); Alejandro DeMaio-Sukic (DFO, Canada); Jeong-In Chang (KMI, Korea); Christina Abildgaard and Mette Mila (RCN, Norway); Pierre Plichon and Alix Degenne (DGAMPA, France); and André Vargas Ribeiro and Pedro Gonçalves (DGPM, Portugal).

The report benefitted from the contributions and advice of many OECD colleagues and external experts, including through expert workshops where selected findings and analysis were presented and discussed. The Secretariat gratefully acknowledges the contributions of these experts from national statistical offices, ocean scientists and economists in public administrations, research institutes, universities, and industry representatives including particularly Martin Grimstad, Paul Sletten and Tor K. Ånestad (Statistics Norway, Norway), Cristina Ramos, Maria Angela Lobo and Cristina Neves (Statistics Portugal, Portugal), Connor Franks and Edward Morgan (Bureau of Economic Analysis, United States), Monica Grasso and Jennifer Zhuang (NOAA, United States), Stephen Hynes (National University of Ireland, Ireland), Byeong-Ho Lim, SungEun Kim and Soobin Jeong (Korea Maritime Institute), Vidar Helgesen, Julian Barbiere, and Alison Clausen (Intergovernmental Oceanographic Commission of UNESCO).

In the OECD, the team is grateful to Alessandra Colecchia (Head of Division), Kévin Magron (Deputy Director), Jerry Sheehan (Director), Colin Webb, Norihiko Yamano, Fernando Galindo-Ruenda, Alice Holt, Laurent Daniel, and Brigitte Van Beuzekom all from the Directorate for Science, Technology and Innovation, and to Will Symes and Claire Delpeuch from the fisheries and aquaculture team in the Trade and Agriculture Directorate, for their inputs and careful reviews. The team also thanks Sylvain Fraccola and Sebastian Ordelheide for communications and publication support.

Table of contents

Foreword 3

Acknowledgements 4

Reader's guide 8

Executive summary 13

1 The scale, structure and performance of the global ocean economy 15

2 Trends in ocean research and policies for ocean science, technology and innovation 28

3 Food from the ocean: Marine fishing, aquaculture and fish processing 40

4 Energy, minerals and fresh water from the ocean: Offshore energy and marine non-living resources 50

5 Moving goods and people across the ocean: Maritime transport, ports, shipbuilding and equipment manufacturing 61

6 The ocean for recreation and leisure: Marine and coastal tourism 72

Tables

Table 1.Ocean economic activity classification used in OECD estimates 9
Table 2. United Nations regional groupings split by OECD Membership 11

Figures

Figure 1.1. The ocean economy's share of world gross value added peaked in 2012 and was higher outside the OECD area in every year 17
Figure 1.2. The ocean economy outgrew the overall economy between 1995 and 2025 18
Figure 1.3. Non-OECD Asia became the largest regional producer of ocean economy gross value added in 2010 and the OECD area's share fell in every component of the ocean economy 19
Figure 1.4. Marine and coastal tourism and offshore energy and marine non-living resources took turns as the largest component of the ocean economy by gross value added 20

Figure 1.5. Maritime industries grew fastest of the five components and led ocean economy growth in more years than any other area, while most of the fall during the COVID-19 pandemic can be attributed to marine and coastal tourism 21
Figure 1.6. The top ten ocean economies in 2025 are geographically broader than they were in 1995 22
Figure 1.7. Marine and coastal tourism replaced marine fishing, aquaculture and processing as the largest employer in the ocean economy in 2005 23
Figure 1.8. Labour productivity in the ocean economy rose faster than in the overall economy 24
Figure 1.9. Dependence on the ocean economy for national gross value added converged across economies between 1995 and 2025 25
Figure 2.1. Ocean scientific publications grew a little faster than science as a whole between 1996 and 2024 30
Figure 2.2. Non-OECD Asia became the largest region producing ocean-related scientific publications in 2017 31
Figure 2.3. China has produced the largest number of ocean scientific publications of any economy every year since 2018 32
Figure 2.4. Offshore wind, wave and tidal energy and desalination and water-treatment technologies grew fastest of all themes of ocean science between 1996 and 2024 33
Figure 2.5. Different regions specialise in different themes of ocean science with engineering dominating non-OECD Asia and marine life dominating OECD Americas and OECD Oceania 34
Figure 2.6. Ocean STI policies address net zero transitions far more often than STI policies in general 36
Figure 2.7. Dedicated ocean STI policies favour collaborative infrastructures while broader ones favour governance instruments 37
Figure 2.8. Specialisation in ocean science is loosely associated with a country's dependence on the ocean economy 38
Figure 3.1. Marine fishing, aquaculture and processing grew more slowly than the ocean economy and its share of ocean economy gross value added decreased 42
Figure 3.2. The bulk of marine fishing, aquaculture and processing activity moved from OECD Asia to non-OECD Asia over the period 43
Figure 3.3. Marine aquaculture grew fastest and contributed most to the real growth of marine fishing, aquaculture and processing after 2008 44
Figure 3.4. Marine capture fishing generated the largest share of gross value added in every year between 1995 and 2025, although its share fell over the period as marine aquaculture's increased 45
Figure 3.5. China became the largest generator of marine fishing, aquaculture and processing gross value added in 2006 46
Figure 3.6. Employment in marine fishing, aquaculture and processing fell by a third between 1995 and 2025, mostly in Chinese capture fisheries 47
Figure 3.7. Labour productivity in marine fishing, aquaculture and processing more than tripled in real terms, four times the rise in the overall economy 48
Figure 3.8. Dependence on marine fishing, aquaculture and processing narrowed across economies between 1995 and 2025 49
Figure 4.1. Offshore energy and marine non-living resources grew in real gross value added terms between 1995 and 2025 but did so at a slower rate than any other component of the ocean economy 52
Figure 4.2. Offshore energy and marine non-living resources grew and contracted in different years than the ocean economy as a whole 53
Figure 4.3. Offshore wind and marine renewables grew fastest while offshore oil and gas extraction contributed most to the real growth of offshore energy and marine non-living resources 54
Figure 4.4. Offshore oil and gas extraction generated more than nine-tenths of the gross value added of offshore energy and marine non-living resources in every year between 1995 and 2025 55
Figure 4.5. Non-OECD Asia is the largest regional generator of gross value added in offshore energy and marine non-living resources and gained most of its share between 2008 and 2019 56
Figure 4.6. Many economies where offshore energy and marine non-living resources represented a large share of their overall economies became less dependent on it over time 57
Figure 4.7. Employment in offshore energy and marine non-living resources increased by almost 50 per cent between 1995 and 2025 58
Figure 4.8. Labour productivity in offshore energy and marine non-living resources rose in real terms between 1995 and 2025 but by less than in the overall economy 59
Figure 4.9. Offshore extraction and mining held their shares in their parent industries between 1995 and 2025, while offshore wind and desalination became more significant parts of utility industries overall 60
Figure 5.1. Maritime industries grew faster in real terms than the ocean economy and the overall economy to more than triple its level in 1995 by 2025 63
Figure 5.2. Maritime industries grew fastest in real terms of the five components of the ocean economy between 1995 and 2025 64

Figure 5.3. Maritime industries fell further than the ocean economy in 2009 after the global financial crisis but contracted less in 2020 during the COVID-19 pandemic 65
Figure 5.4. Sea and coastal transport and maritime ports grew fastest in real terms of the activities of maritime industries between 1995 and 2025 and contributed most to its real growth 66
Figure 5.5. Maritime ports and sea and coastal transport generated the largest shares of maritime industries' gross value added throughout the period 67
Figure 5.6. Non-OECD Asia emerged as the largest maritime industries region during the 2008 to 2019 period 68
Figure 5.7. China has generated the largest share of world gross value added from any maritime industries economy since 2012 69
Figure 5.8. Maritime ports added almost all of the jobs that maritime industries gained between 1995 and 2025 70
Figure 5.9. Labour productivity in maritime industries more than doubled in real terms while the OECD area's lead over non-OECD economies halved 71
Figure 6.1. Marine and coastal tourism was the largest area of the ocean economy in most years, but its share of the ocean economy fell from a third to a quarter over the period 74
Figure 6.2. The real gross value added of marine and coastal tourism fell almost three times as far as the ocean economy's during the COVID-19 pandemic 75
Figure 6.3. Accommodation for visitors contributed most to the real growth of marine and coastal tourism in each of the three periods while air transport grew fastest 76
Figure 6.4. Accommodation for visitors produced the largest share of the gross value added of marine and coastal tourism in every year between 1995 and 2025 77
Figure 6.5. The leading regional economy in marine and coastal tourism changed hands three times over the period with the OECD area generating more than half the gross value added every year 78
Figure 6.6. The United States has been the largest producer of marine and coastal tourism gross value added since 2004 and recovered fastest from the COVID-19 pandemic 79
Figure 6.7. Full-time equivalent employment in marine and coastal tourism nearly doubled between 1995 and 2025, mostly in food and beverage services 80
Figure 6.8. Labour productivity in marine and coastal tourism rose in both the OECD area and economies outside it but barely increased globally until after the COVID-19 pandemic 81
Figure 6.9. Dependence on marine and coastal tourism for jobs increased the most in economies where it was already highest 82

Boxes

Box 2.1. How were the statistics on ocean-related scientific publications estimated? 35

Reader's guide

The Ocean Economy at a Glance 2026 presents the OECD's most comprehensive attempt yet to provide new estimates of the global ocean economy, focussing in this edition on economic statistics and ocean science, technology and innovation indicators. The ocean economy is not readily visible in the national accounts of countries. This leaves policymakers and other stakeholders without the evidence necessary to make effective decisions concerning its development. The OECD estimates are intended to fill this knowledge gap, contribute to a better understanding of an important part of national economies, and provide the foundation for future statistics measuring environmental-economic linkages.

The work builds on over ten years of a dedicated OECD ocean economy programme undertaken alongside pioneering ocean economy measurement countries such as Portugal, the first country to produce an ocean economy thematic account, the United States, Canada, Norway, the Republic of Korea, Ireland, Italy, Belgium, and France.

How are the experimental OECD estimates constructed?

The OECD *Blueprint for Improved Measurement of the International Ocean Economy* provides a definition of ocean economic activities for the purposes of scoping statistical measurement. The OECD *Eight Lessons Learned from Comparing Ocean Economy Measurement Strategies Across Countries* uses principles from the system of national accounts to highlight commonalities and differences in approaches and provides recommendations for integrating ocean economy measurements with national statistics.

The current OECD ocean economy statistics apply the definitions from the OECD Blueprint and many of the principles of national accounting from the OECD comparison to the measurement of international statistics on ocean economic activities. At present, statistics are estimated for 49 individual ocean economic activities, across 83 individual economies and 11 remaining groups of countries, for each year between 1995 and 2025. For marine and coastal tourism, the ocean economic activities included are based on the internationally agreed guidelines for tourism satellite accounts.

Each ocean economic activity is measured as distinct from all others so that ocean economic activities can be aggregated into wider groupings (Table 1). Estimates of the *total ocean economy* refer to the aggregation of all 49 currently measured ocean economic activities within a country. Estimates of the *global ocean economy* in this report refer to the aggregation of all currently measured ocean economic activities in all countries.

The estimation procedure uses a range of internationally comparable datasets with country-level data drawn from the supply and use tables underlying the OECD Inter-Country Input-Output (ICIO) database. The supply and use tables are not detailed enough for the ocean economy to be immediately read from their structure. A series of estimation procedures are therefore implemented to break down the product rows of the tables into ocean economy and non-ocean economy portions. The aggregate statistics presented from this report are estimated from these ocean economy extended supply and use tables.

Given the tables latest year is 2024, all values for 2025 in this report are projections based on trends in the data leading up to 2025.

In keeping with the experimental nature of the OECD estimates, a methods and sources document detailing the OECD's current approach to measuring the global ocean economy will be published.

Table 1.Ocean economic activity classification used in OECD estimates

Ocean economic activity	Ocean economic activity group	Part of the ocean economy	Total
Marine fishing	Marine fishing, marine aquaculture & marine fish processing	Marine fishing, marine aquaculture & marine fish processing	Total ocean economy
Marine aquaculture			
Offshore extraction of crude petroleum	Offshore oil/gas extraction, mining & support services	Offshore energy & non-living marine resources	
Offshore extraction of condensates			
Offshore extraction of natural gas			
Offshore mining of metal ores			
Offshore other mining and quarrying			
Offshore mining support service activities			
Manufacture of marine food products	Marine fishing, marine aquaculture & marine fish processing	Marine fishing, marine aquaculture & marine fish processing	
Manufacture of marine beverages			
Manufacture of textiles (maritime equipment)	Maritime shipbuilding & maritime equipment manufacturing	Maritime industries	
Manufacture of wearing apparel (maritime equipment)			
Manufacture of leather and related products (maritime equipment)			
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (maritime equipment)			
Manufacture of paper and paper products (maritime equipment)			
Printing and reproduction of recorded media (maritime equipment)			
Manufacture of chemicals and chemical products (maritime equipment)			
Manufacture of rubber and plastics products (maritime equipment)			
Manufacture of other non-metallic mineral products (maritime equipment)			
Manufacture of basic iron and steel (maritime equipment)			
Manufacture of basic precious and other non-ferrous metals (maritime equipment)			
Manufacture of fabricated metal products, except machinery and equipment (maritime equipment)			
Manufacture of computer, electronic and optical products (maritime equipment)			
Manufacture of electrical equipment (maritime equipment)			
Manufacture of machinery and equipment n.e.c. (maritime equipment)			

Ocean economic activity	Ocean economic activity group	Part of the ocean economy	Total
Manufacture of motor vehicles, trailers and semi-trailers (maritime equipment)	Maritime shipbuilding & maritime equipment manufacturing	Maritime industries	Total ocean economy
Building of sea and coastal ships and boats			
Manufacture of other transport equipment except Building of ships and boats (maritime equipment)			
Manufacture of furniture - Other manufacturing (maritime equipment)			
Repair and installation of maritime machinery and equipment			
Offshore wind electricity generation	Offshore wind, marine renewables, & seawater desalination	Offshore energy & non-living marine resources	
Marine renewables electricity generation			
Water collection, treatment and supply (desalination)			
Civil engineering dredging of marine waterways	Maritime transport, maritime ports & marine waterway dredging	Maritime industries	
Wholesale trade of ocean goods	Ocean education, R&D & goods distribution	Ocean education, R&D & goods distribution	
Retail trade of ocean goods			
Land transport and transport via pipelines (marine and coastal tourism and recreation)	Marine & coastal tourism	Marine & coastal tourism	
Sea and coastal water transport	Maritime transport, maritime ports & marine waterway dredging	Maritime industries	
Air transport (marine and coastal tourism and recreation)	Marine & coastal tourism	Marine & coastal tourism	
Maritime ports warehousing and support activities for transportation	Maritime transport, maritime ports & marine waterway dredging	Maritime industries	
Accommodation (marine and coastal tourism and recreation)	Marine & coastal tourism	Marine & coastal tourism	
Food and beverage service activities (marine and coastal tourism and recreation)			
Imputed rents of owner-occupied dwellings (marine and coastal tourism and recreation)			
Ocean economy scientific research and development	Ocean education, R&D & goods distribution	Ocean education, R&D & goods distribution	
Rental and leasing activities (marine and coastal tourism and recreation)	Marine & coastal tourism	Marine & coastal tourism	
Travel agency, tour operator, reservation service and related activities (marine and coastal tourism and recreation)			
Ocean education	Ocean education, R&D & goods distribution	Ocean education, R&D & goods distribution	
Creative, arts and entertainment activities (marine and coastal tourism and recreation) - Libraries, archives, museums and other cultural activities (marine and coastal tourism and recreation) - Gambling and betting activities (marine and coastal tourism and recreation)	Marine & coastal tourism	Marine & coastal tourism	
Sports activities and amusement and recreation activities (marine and coastal tourism and recreation)			

Which economies are included in the OECD estimates?

The list of economies included in *The Ocean Economy at a Glance 2026* matches the OECD Inter-Country Input-Output (ICIO) table database. The 2026 version of the OECD ICIO database includes 83 individual economies. In addition to the country-level statistics, a number of indicators are included that group countries into regional categories. Detailed country-level statistics are therefore available beyond this report. The regional statistics are based on the United Nations Statistics Division's geographical regions for statistical use (the M49 standard) that have been split by OECD Membership (Table 2).

Table 2. United Nations regional groupings split by OECD Membership

Regional group	Countries and economies
Africa	Angola, Côte d'Ivoire, Cameroon, Democratic Republic of the Congo, Egypt, Morocco, Nigeria, Senegal, Sao Tome and Principe, Tunisia, South Africa
Americas - non-OECD	Argentina, Brazil, Peru
Americas - OECD	Canada, Chile, Colombia, Costa Rica, Mexico, United States
Asia - non-OECD	United Arab Emirates, Bangladesh, Brunei Darussalam, China (People's Republic of), Hong Kong (China), Indonesia, India, Jordan, Kazakhstan, Cambodia, Lao People's Democratic Republic, Myanmar, Malaysia, Pakistan, Philippines, Saudi Arabia, Singapore, Thailand, Chinese Taipei, Viet Nam
Asia - OECD	Israel, Japan, Korea, Türkiye
Europe - non-OECD	Bulgaria, Belarus, Croatia, Malta, Romania, Russian Federation, Ukraine
Europe - OECD	Austria, Belgium, Switzerland, Czechia, Germany, Denmark, Spain, Estonia, Finland, France, United Kingdom, Greece, Hungary, Ireland, Iceland, Italy, Lithuania, Luxembourg, Latvia, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Sweden
Oceania - OECD	Australia, New Zealand

How have the OECD's methods for measuring ocean economic activity advanced since previous publications?

The OECD estimates presented in this report are experimental, reflecting the OECD's efforts to advance ocean economy measurement while internationally agreed guidelines continue to be developed. The results therefore change between publications as better source data become available, previous estimates are tested against new evidence, and methods are revised in line with advances made at country-level.

Since the release of *The Ocean Economy to 2050* (OECD, 2025), for example, the number of individual ocean economic activities measured has increased from 33 to the 49 included in this report. New activities include mining of offshore metal ores and marine aggregates, seawater desalination, dredging of marine waterways, and ocean-related education. The methods for ocean-related coefficients have also improved across all activities, with more country-level source data introduced and more external validation checks added. Notable improvements in the source data for employment mean that the ocean economy employment statistics by activity are now built from a more detailed industry structure than before.

The OECD will continue to improve its estimates as data on the ocean economy and available methods improve. It also stands ready to support countries as they endeavour to create ocean economy thematic accounts and support efforts to produce a common set of standards internationally. If international guidelines are agreed and national statistical offices begin producing ocean economy statistics on a common basis, the OECD estimates for countries not producing official ocean economy statistics will be aligned accordingly.

Further reading

OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris, https://doi.org/10.1787/a9096fb1-en

Jolliffe, J. and C. Jolly (2024), “Eight Lessons Learned from Comparing Ocean Economy Measurement Strategies across Countries”, OECD Science, Technology and Industry Working Papers, No. 2024/01, OECD Publishing, Paris, https://doi.org/10.1787/1cb42a67-en

Jolliffe, J. et al. (2024), Blueprint for Improved Measurement of the International Ocean Economy, OECD Publishing, Paris, https://doi.org/10.1787/aff5375b-en

OECD (2019), Rethinking Innovation for a Sustainable Ocean Economy, OECD Publishing, Paris, https://doi.org/10.1787/9789264311053-en

OECD (2016), The Ocean Economy in 2030, OECD Publishing, Paris, https://doi.org/10.1787/9789264251724-en

OECD (2026), Inter-Country Input-Output tables, https://www.oecd.org/en/data/datasets/inter-country-input-output-tables.html

United Nations (2026), Standard country or area codes for statistical use (M49), https://unstats.un.org/unsd/methodology/m49/

OECD et al. (2017), Tourism Satellite Account: Recommended Methodological Framework 2008, OECD Publishing, Paris, https://doi.org/10.1787/9789264274105-en

Executive summary

Drawing on original OECD estimates and analysis, this publication provides policymakers with new insights into the scale, structure and evolution of the global ocean economy from 1995 to 2025.

The ocean economy is a substantial and growing pillar of global prosperity

The global ocean economy generated USD 3.5 trillion of gross value added (GVA) in 2025, up 132% in real terms from 1995. This compares favourably to the overall economy which grew by 125% in real terms from 1995. The OECD area accounted for around half of global ocean economy GVA in 2025, following a recovery from 46.6% in 2020 during the COVID-19 pandemic. Non-OECD Asia increased its share from 16.0% in 1995 to 36.0% in 2025, making it the largest regional ocean economy since 2010.

The ocean economy's contribution to the global economy fluctuated between 3% and 4% in GVA terms. The ocean economy's share of world current price GVA increased from 2.9% in 1995 to a peak of 3.7% in 2012. It then dropped to 2.7% in 2020 during the COVID-19 pandemic and subsequently recovered to 3.0% in 2025. The share was higher outside the OECD area than within it in every year. In 2025, the ocean economy accounted for 4.0% of the total GVA of non-OECD economies compared with 2.6% in the OECD area.

'Marine and coastal tourism' and 'offshore energy and marine non-living resources' took turns as the ocean economy's largest generators of GVA, while 'maritime industries' was the fastest growing. Tourism was the largest at the beginning of the period in 1995 and the end in 2025, although its share of ocean economy GVA fell from 33.5% to 28.6%. Offshore energy and marine non-living resources share rose from 17.4% to a peak of 34.6% in 2012 and then fell back to 23.7%. Maritime industries was the largest area in one year, 2020, during the COVID-19 pandemic. It held around a quarter of ocean economy GVA throughout the entire period. Maritime industries' real terms GVA reached 3.4 times its 1995 level by 2025, growing by 4.2% a year, the fastest of all components. Ocean education, research and goods distribution grew second fastest, by 3.1% a year, compared with 2.8% for the ocean economy and 2.7% for the overall economy. Marine and coastal tourism and marine fishing, aquaculture and processing each grew by 2.6% a year. Offshore energy and marine non-living resources grew slowest, by 1.8% a year, so that its GVA increased by only 71% in real terms over the period.

Ocean economy employment grew to reach 103 million full-time equivalents (FTEs) in 2025 and has undergone significant structural changes since 1995. Employment in marine fishing, aquaculture and processing fell globally with its share of ocean economy FTEs having halved from 40% to 20% over the period. Marine and coastal tourism's FTEs increased from 22.8 million to 43.4 million to replace marine fishing, aquaculture and processing as the largest employer in 2005. And ocean education, research and goods distribution superseded marine fishing, aquaculture and processing in 2023. Of the ten largest ocean economies in terms of employment, eight are non-OECD economies.

Ocean economy labour productivity gains outpaced those in the overall economy

More moderate employment growth combined with strong real-terms GVA growth lifted ocean economy labour productivity by 75% over the period compared with 58% in the overall economy. Ocean economy employment rose in full-time equivalent (FTE) terms by 33% between 1995 and 2025. This compares with a 42% increase in FTEs in the overall economy. Labour productivity, as measured by GVA per FTE, more than tripled in real terms in marine fishing, aquaculture and processing and more than doubled in maritime industries. It increased by 13% in marine and coastal tourism and fell by 16% in offshore energy and marine non-living resources. In 2025 current prices, ocean economy labour productivity was 1.22 times the overall economy's globally but 0.84 times within the OECD area and 1.65 times outside it. The ocean economy's productivity premium therefore lies outside the OECD area.

Ocean science and policy increasingly focus on the major transformations shaping the ocean economy

Ocean-related scientific publications grew in step with scientific publications as a whole and turned towards engineering and technology. The number of ocean publications increased 4.6 times from 1996 to reach 65 641 in 2024. The balance of subjects moved from marine life and the physical ocean towards ocean engineering and technology themes. 'Underwater acoustics, sensing, communications and robotics', technologies that are related to the digitalisation of the ocean economy, became the largest of 24 detected themes in 2024 with 6.7% of ocean publications (up from 3.2% in 1996). Topics related to 'offshore wind, wave and tidal energy' and 'desalination and water-treatment technologies' grew fastest, by 16.0% and 13.5% a year compared with 6.3% for all detected themes.

The share of ocean science, technology and innovation (STI) policy initiatives addressing the net-zero transition is three-times that of all initiatives reported in the EC-OECD STIP Compass. Net zero transitions are addressed by 47.8% of the ocean-related policies, often as part of broader climate policies, compared with 15.7% of all initiatives. Ocean policies have a stronger focus on building capacity for research and coordination across organisations than the general population of initiatives. Dedicated ocean policies target collaborative infrastructures 10.7 percentage points more than all initiatives do. However, targeted support to innovative enterprises is less common in ocean-related policies than in other policies recorded in the STIP Compass (27.4% of all initiatives compared with 16.1% of dedicated ocean initiatives).

Improving the evidence base is essential for effective ocean management and governance

As the ocean economy grows in scale, technological sophistication and strategic importance, better measurement will become ever more essential for effective ocean management and governance. As countries seek to develop ocean economy thematic accounts tailored to their national priorities, the OECD will support these efforts by advancing internationally consistent measurement and expand its analysis of the economic, social, environmental, financial, scientific and innovation dimensions of the ocean economy. This broader agenda could notably include marine ecosystems assets and services, providing ultimately the evidence needed to inform ocean governance, strengthen management and support the sustainable use, conservation and restoration of marine ecosystems.

1 The scale, structure and performance of the global ocean economy

The ocean economy supplies energy, food, transport, recreation and knowledge to societies across the world. This chapter uses the OECD's estimates of ocean economic activity to give an overview of the ocean economy across five components: marine fishing, aquaculture and processing; offshore energy and marine non-living resources; maritime industries; marine and coastal tourism; and ocean education, research and goods distribution.

In Brief

The ocean economy produced around 3% to 4% of world gross value added since 1995 and outgrew the overall economy. It generated USD 3.5 trillion in real terms in 2025, up 132% from 1995 compared with 125% for the overall economy.

Ocean economic activity shifted from the OECD area towards non-OECD Asia, the largest regional ocean economy since 2010. The OECD area's share of world ocean economy gross value added fell from 73% to about half, and in every area of the ocean economy, most in marine fishing, aquaculture and processing.

Marine and coastal tourism and offshore energy and marine non-living resources took turns as the largest component of the ocean economy and maritime industries grew fastest. Maritime industries grew by 4.2% a year in real terms and led growth in more years than any other, while tourism made 82% of the 11.3% fall during the pandemic.

Ocean economy employment grew more slowly than the overall economy's while its productivity premium lies outside the OECD area. Full-time equivalents increased by 33% and real gross value added per full-time equivalent by 75%, compared with 42% and 58% in the overall economy. Its gross value added per full-time equivalent was below the overall economy's in the OECD area and 1.65 times it outside.

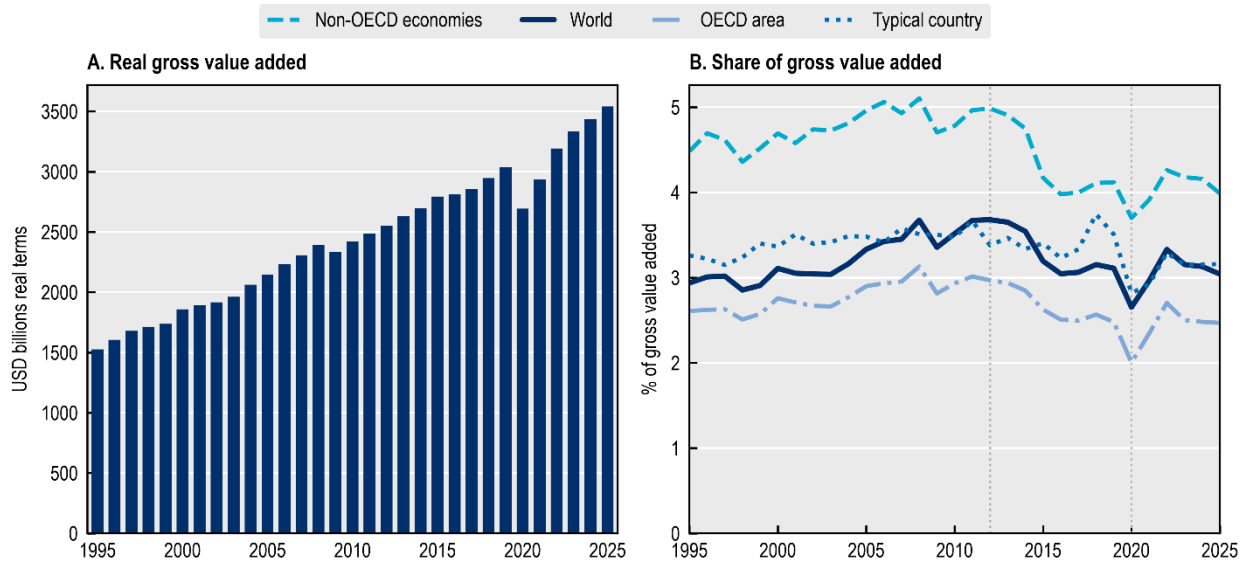
Differences in the relative importance of the ocean economy across national economies narrowed. Overall, the ocean economy's share of national gross value added declined in 44 of the 81 economies with the largest decreases generally occurring where initial dependence on the ocean economy was highest.

The OECD plans to develop future indicators that capture new dimensions of the ocean economy and its interdependencies with marine ecosystems. Working with key stakeholders, the expanded measurement agenda could cover public administration and defence activities, ocean innovation, marine ecosystem assets and services, and illegal activities at sea.

The ocean economy generated gross value added (GVA) of USD 3.5 trillion in real terms in 2025, around 3.0% of world GVA in current prices, and its share of GVA was higher outside the OECD area than within it in every year between 1995 and 2025 (Figure 1.1). The ocean economy's share of world GVA increased from 2.9% in 1995 to a peak of 3.7% in 2012. It dropped to 2.7% during the pandemic in 2020 before recovering to 3.0% in 2025. In 2025, the ocean economy accounted for 4.0% of the GVA of non-OECD economies, compared with 2.5% in the OECD area. In the typical country its share was 3.2%, which is close to the world share.

Figure 1.1. The ocean economy's share of world gross value added peaked in 2012 and was higher outside the OECD area in every year

Ocean economy gross value added, USD billions in real terms, plus the ocean economy's share of gross value added, %, current prices, 1995-2025



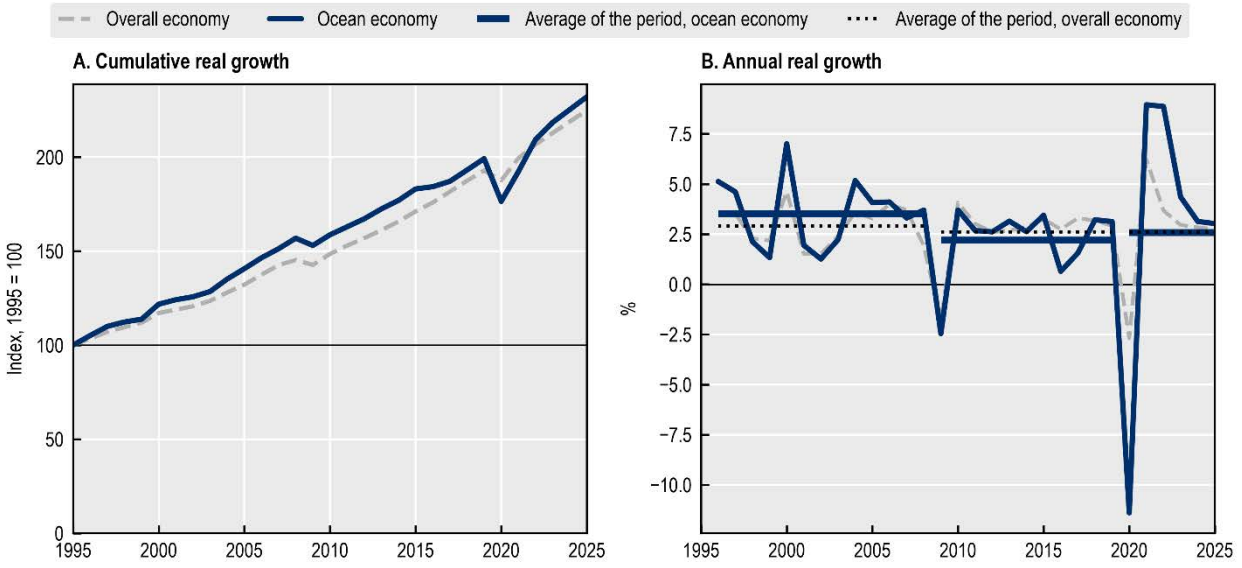
Note: Panel A shows ocean economy gross value added in real terms. Panel B shows the ocean economy's share of the gross value added of the world, the OECD area and the non-OECD economies, plus its share in the typical country, all in current prices. The dotted lines in panel B mark 2012 and 2020 when the world share was highest and lowest. World combines both OECD and non-OECD economies. Gross value added is given at basic prices in current prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The typical country is the median economy. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Ocean economy GVA grew by 132% in real terms between 1995 and 2025, faster than the overall economy's 125% (Figure 1.2). The ocean economy outgrew the overall economy in the 1995-2008 period (3.5% a year compared with 2.9%), grew more slowly in the 2008-2019 period (2.2% compared with 2.6%) and at the same pace in the 2019-2025 period. Its lead over the overall economy peaked at 12 index points in 2015, was lost during the COVID-19 pandemic, and then stood at 7 points in 2025. Its annual growth fluctuated about twice as widely as the overall economy's, falling by 2.5% in 2009 after the global financial crisis and by 11.4% in 2020 during the COVID-19 pandemic. It then rose by 9.0% and 8.9% in 2021 and 2022 during the recovery. The lead over the overall economy came mainly from the strong growth of the largest non-OECD economies, which accounted for 86% of the gains relative to the world trend (above all the People's Republic of China (hereafter "China"), Indonesia and Singapore). Maritime industries and ocean education, research and goods distribution were the fastest growing components, growing by 4.2% and 3.1% a year against 2.7% for the overall economy. Outside the OECD area, ocean economy GVA

grew by 255% in real terms, compared with 68% within it. The ocean economy's advantage over the overall economy was therefore built mainly before 2008 and rests on its largest non-OECD producers.

Figure 1.2. The ocean economy outgrew the overall economy between 1995 and 2025

Gross value added, real terms index 1995 = 100, 1995-2025, plus annual real growth, %, 1996-2025

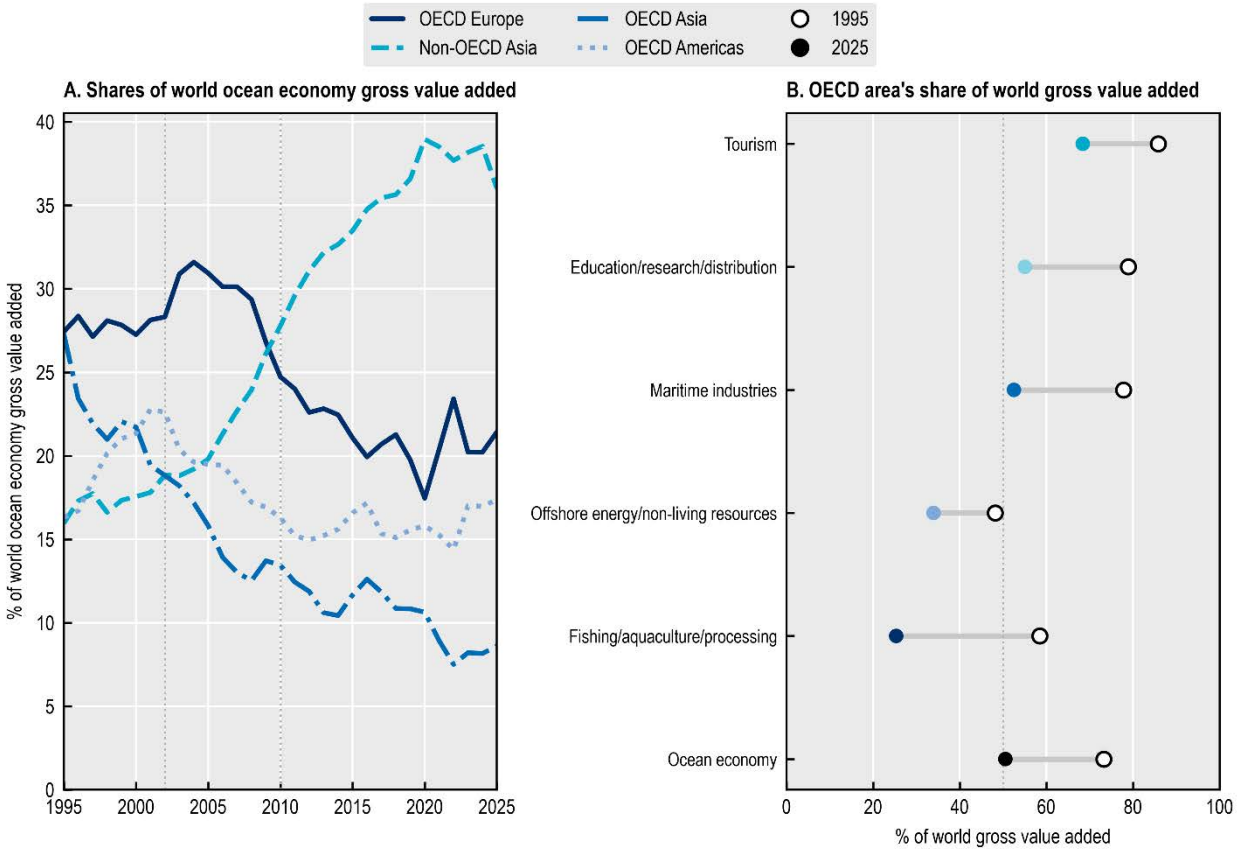


Note: Panel A shows the real gross value added of the world ocean economy and of the world overall economy as indices with 1995 equal to 100. Panel B shows their annual real growth, with the horizontal segments marking the average annual real growth of each in each of the three periods. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Non-OECD Asia became the largest regional producer of ocean economy GVA in 2010, having passed OECD Asia in 2002 and OECD Europe in 2010, and the OECD area's share of world ocean economy GVA decreased from 73.2% in 1995 to less than half between 2019 and 2024 (Figure 1.3). Non-OECD Asia's share of world ocean economy GVA in current prices rose from 16.0% in 1995 to a peak of 39.0% in 2020 and was 36.0% in 2025. OECD Asia's share fell the most of the nine regional groups, from 27.3% to 8.6%. OECD Europe's decreased from 27.4% to 21.4%. The OECD area's share reached a low of 46.6% during the COVID-19 pandemic in 2020 but had returned to 50.5% by 2025. The shift away from the OECD area took place in every component of the ocean economy, but by 2025 the OECD area still produced more than half of world GVA in maritime industries, marine and coastal tourism and ocean education, research and goods distribution. This compares with 34.0% in offshore energy and marine non-living resources and 25.3% in marine fishing, aquaculture and processing.

Figure 1.3. Non-OECD Asia became the largest regional producer of ocean economy gross value added in 2010 and the OECD area's share fell in every component of the ocean economy

Shares of world ocean economy gross value added, %, current prices, 1995-2025, plus the OECD area's share of world gross value added, %, current prices, 1995 and 2025

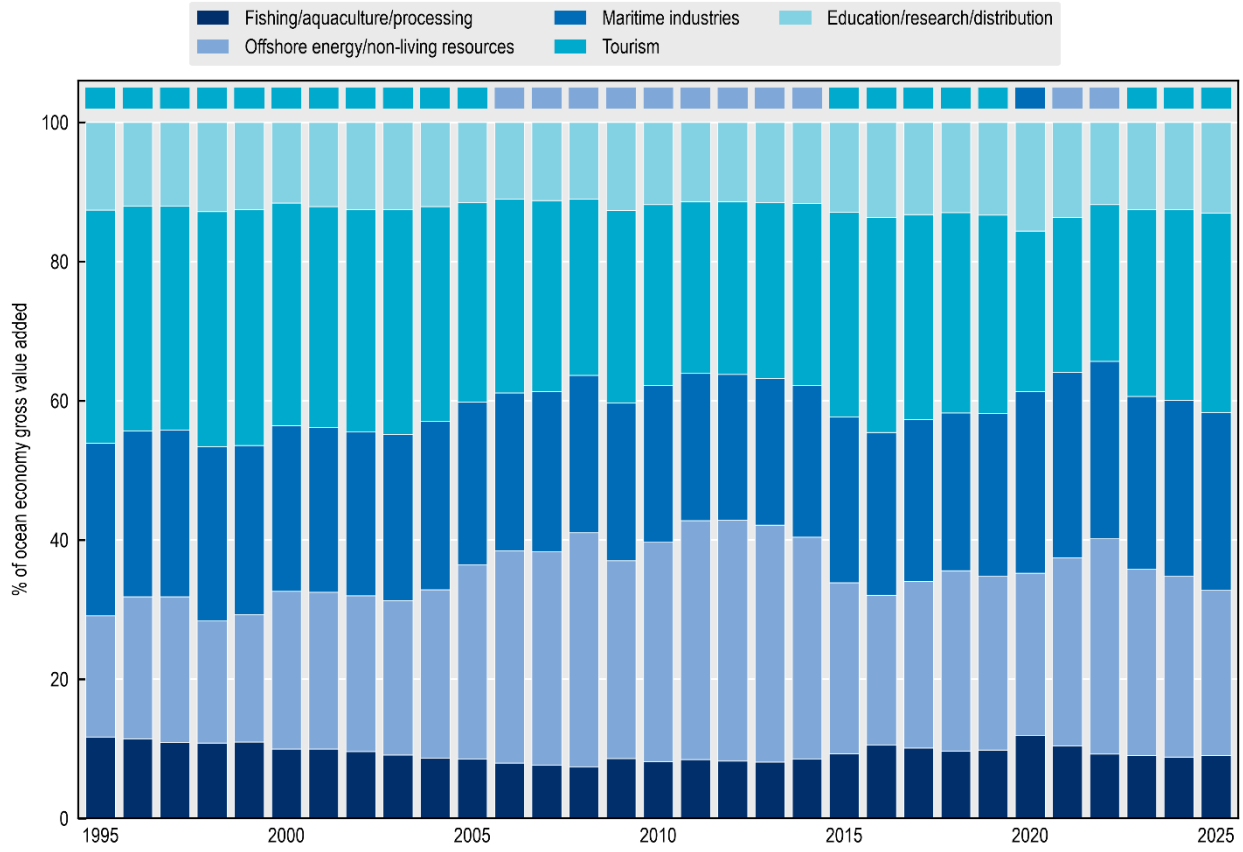


Note: Regional groups are the UN M49 regions split by OECD membership. Panel A shows the shares of the four regional groups with the largest shares, with the dotted lines marking 2002 when non-OECD Asia passed OECD Asia and 2010 when non-OECD Asia passed OECD Europe. Panel B shows the OECD area's share of world gross value added in the ocean economy and in each component. The unfilled circle marks 1995 and the filled circle marks 2025. Gross value added is given at basic prices in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Marine and coastal tourism was the largest area of the ocean economy by GVA in 19 of the 31 years between 1995 and 2025, offshore energy and marine non-living resources was the largest in 11, and maritime industries was the largest in 2020 during the COVID-19 pandemic (Figure 1.4). Offshore energy and marine non-living resources' share of ocean economy GVA in current prices increased from 17.4% in 1995 to a peak of 34.6% in 2012 and fell back to 23.7% in 2025. Marine and coastal tourism's share decreased from 33.5% to 28.6%, the largest fall of the five components, with a low of 22.3% in 2021. It regained the lead in 2015 and again in 2023. Maritime industries held around a quarter of ocean economy GVA throughout (24.8% in 1995 and 25.6% in 2025). And ocean education, research and goods distribution held around an eighth (12.6% and 13.0%). Marine fishing, aquaculture and processing's share decreased from 11.7% to 9.0%. The composition of the ocean economy therefore moved back and forth between its two largest components, while the shares of the other three areas changed by less than 3 p.p. over the period.

Figure 1.4. Marine and coastal tourism and offshore energy and marine non-living resources took turns as the largest component of the ocean economy by gross value added

Shares of ocean economy gross value added, %, current prices, 1995-2025

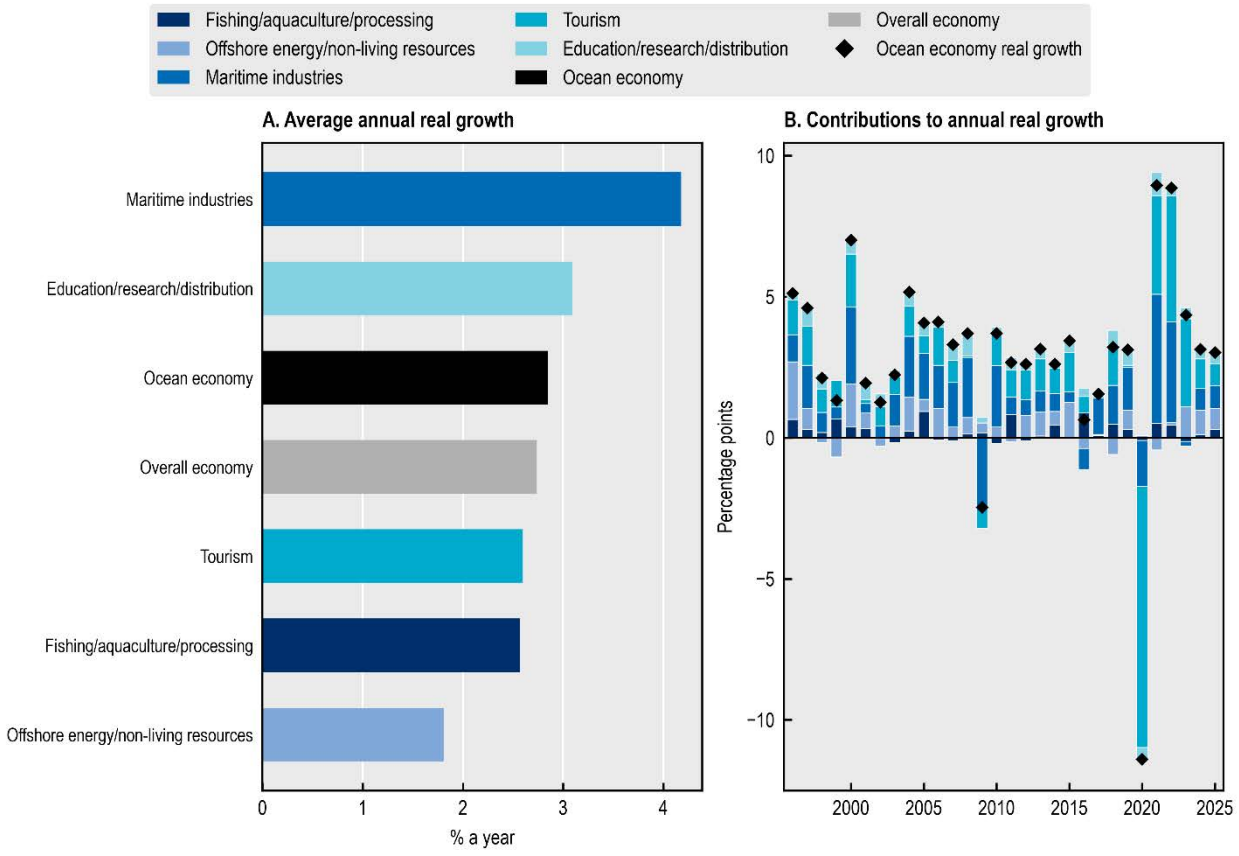


Note: The five components add up to the total ocean economy. The strip above the columns is coloured by the area that was the largest in each year. Gross value added is given at basic prices in current prices. Regional and world totals include economies that are not identified separately in the experimental ocean economy supply and use tables. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Maritime industries grew fastest, by 4.2% a year in real terms between 1995 and 2025 and contributed most to the ocean economy's real growth over the period (Figure 1.5). Marine and coastal tourism topped growth in 11 years and accounted for 81% of the ocean economy's 11.4% fall during the COVID-19 pandemic. Ocean education, research and goods distribution grew second fastest, by 3.1% a year, faster than the ocean economy's 2.8% and the overall economy's 2.7%. Marine and coastal tourism grew by 2.6% a year, marine fishing, aquaculture and processing by 2.6% and offshore energy and marine non-living resources the slowest at 1.8%. In 2020, tourism alone removed 9.3 p.p. from the ocean economy's growth while offshore energy and marine non-living resources actually grew during the COVID-19 pandemic. In 2009, the only other year beyond 2020 in which the ocean economy contracted, maritime industries contributed most of the 2.5% decrease. Maritime industries and tourism together made up 90% of the rebound in 2021 and 2022. The ocean economy's swings therefore come from maritime industries and tourism, the two components whose contributions fluctuated most, while offshore energy and marine non-living resources grew slowly and helped counterbalance them.

Figure 1.5. Maritime industries grew fastest of the five components and led ocean economy growth in more years than any other area, while most of the fall during the COVID-19 pandemic can be attributed to marine and coastal tourism

Average annual real growth of gross value added, %, 1995-2025, plus the contribution of each area to the annual real growth of ocean economy gross value added, percentage points, 1996-2025

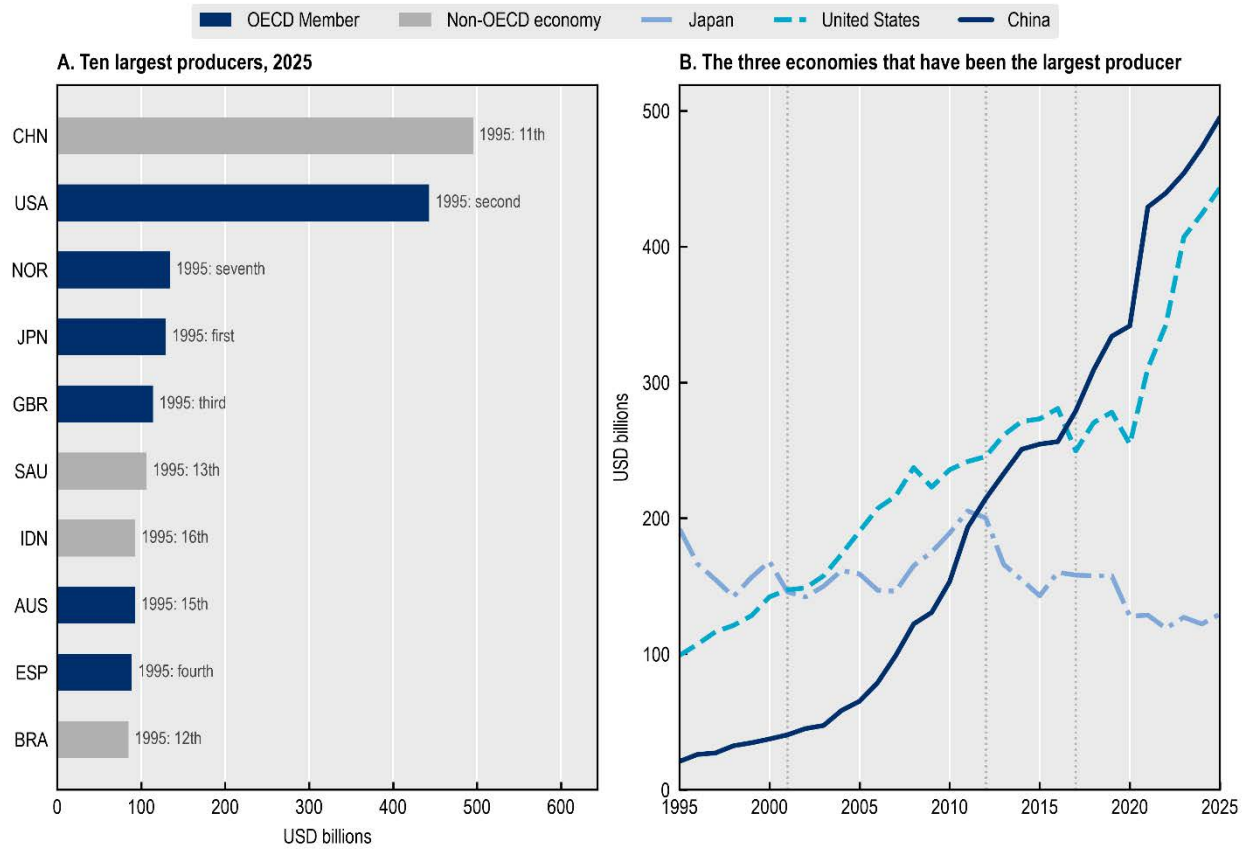


Note: Panel A shows the average annual real growth of gross value added between 1995 and 2025. Panel B shows each area's contribution to the ocean economy's annual real growth. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

A broader range of economies contributed significantly to global ocean economy GVA in 2025 than in 1995 (Figure 1.6). In current prices, China and the United States generated USD 500 billion and USD 443 billion respectively in 2025 together representing 28.4% of the world total. Over the same period, the composition of the ten largest ocean economies evolved, with Norway, Saudi Arabia, Indonesia, Australia and Brazil increasing their relative contribution. Six of the ten largest ocean economies are OECD Members. Overall, the results point to a broader geographical range in the top ten ocean economies of 2025 than at the beginning of the period when the OECD area dominated.

Figure 1.6. The top ten ocean economies in 2025 are geographically broader than they were in 1995

Ocean economy gross value added in the ten largest ocean economies in 2025, USD billions, current prices, plus the ocean economy gross value added of three large ocean economies, USD billions, current prices, 1995-2025

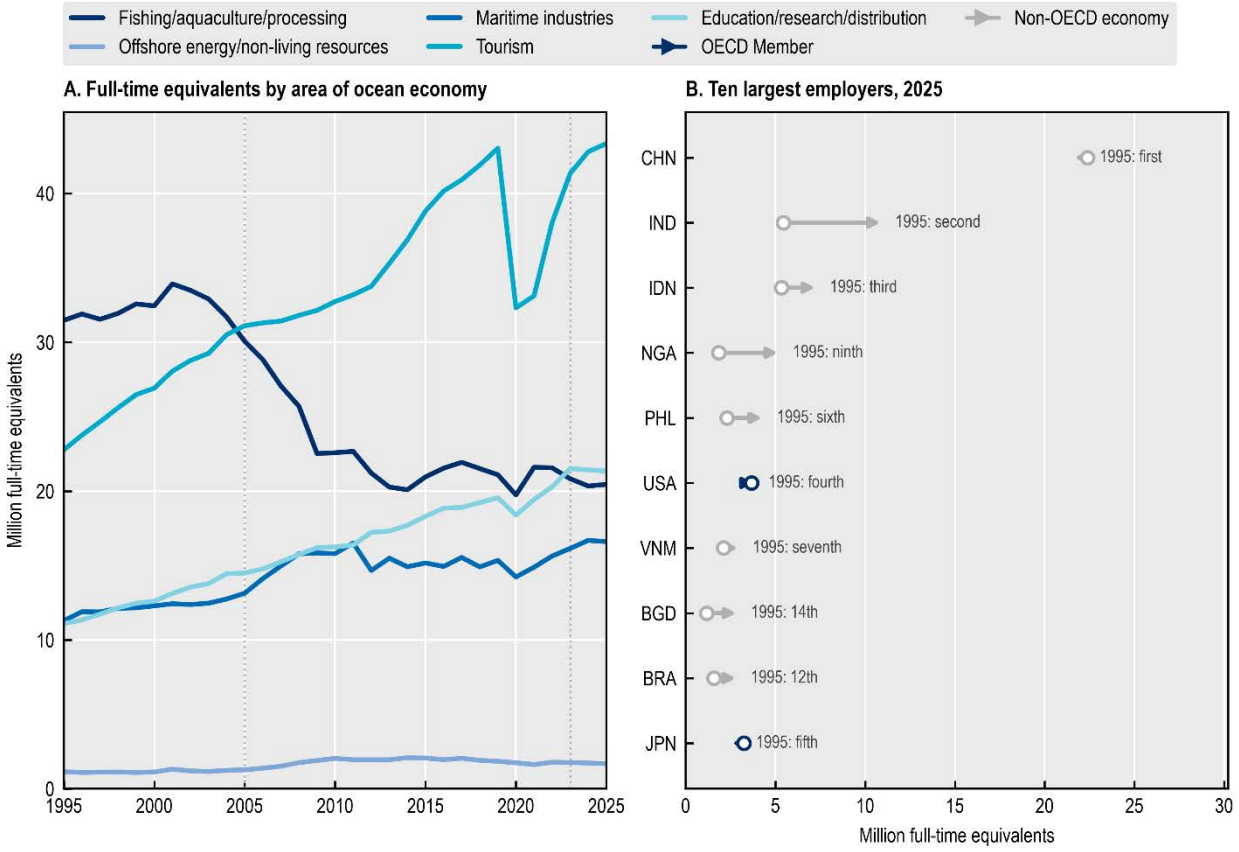


Note: Panel A ranks economies by their ocean economy gross value added in 2025 with their 1995 rank shown beside each bar. Panel B shows the ocean economy gross value added of the three economies that have been the largest ocean economies, with the dotted lines marking the years in which they passed each other. Gross value added is given at basic prices in current prices. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark bars indicate OECD Members. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Ocean economy employment increased by 33% between 1995 and 2025 to 103 million full-time equivalents (FTEs), more slowly than the overall economy's 42%, and marine and coastal tourism replaced marine fishing, aquaculture and processing as the largest employer in 2005 (Figure 1.7). Marine fishing, aquaculture and processing's FTEs fell from 31.5 million to 20.5 million (from 40% to 20% of ocean economy FTEs) while marine and coastal tourism's increased from 22.8 million to 43.4 million (from 29% to 42%). Ocean education, research and goods distribution's FTEs rose from 11.1 million to 21.3 million and passed those of marine fishing, aquaculture and processing in 2023. Maritime industries' rose from 11.3 million to 16.6 million and offshore energy and marine non-living resources' from 1.1 million to 1.7 million. Ocean economy FTEs fell by 14% during the pandemic in 2020. China remained the largest employer with 21.5 million FTEs in 2025, slightly fewer than its 22.4 million in 1995. India's FTEs doubled from 5.4 million to 11.0 million. Nigeria rose from the ninth placed employer to the fourth. Bangladesh from 14th to eighth. Japan, like China, employed fewer FTEs at the end of the period than in 1995. Of the ten largest employers, eight are non-OECD economies. Ocean economy jobs are therefore concentrated outside the OECD area.

Figure 1.7. Marine and coastal tourism replaced marine fishing, aquaculture and processing as the largest employer in the ocean economy in 2005

Full-time equivalents, millions, 1995-2025, plus full-time equivalents of the ten largest employers in 2025, millions

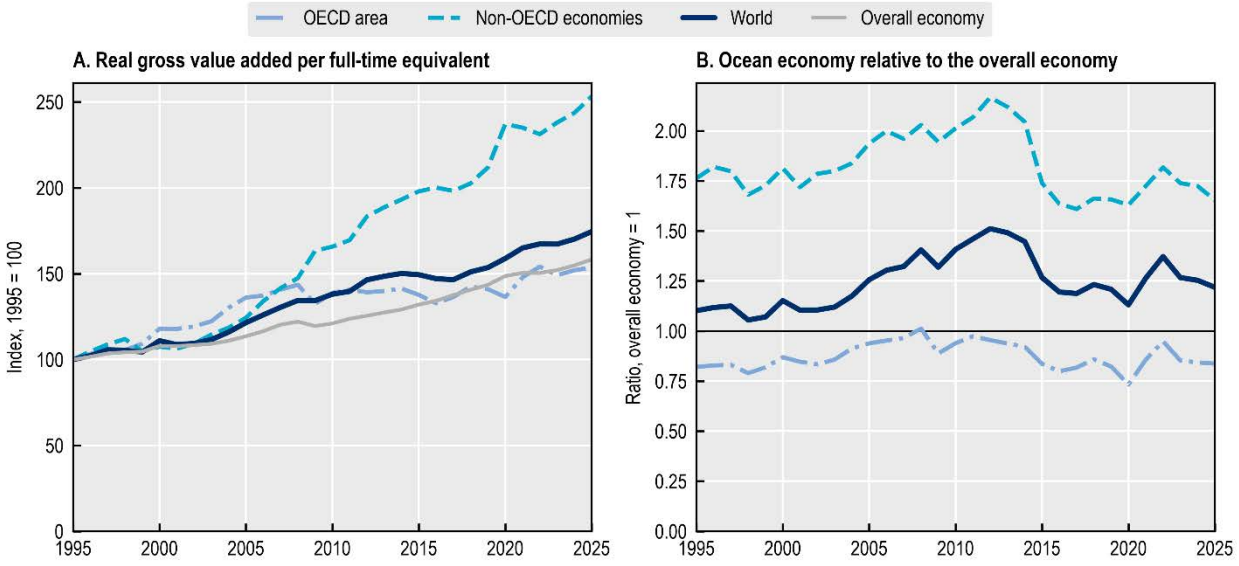


Note: Panel A shows the full-time equivalents of each component of the ocean economy. Panel B ranks economies by their ocean economy full-time equivalents in 2025 with each arrow running from 1995 values to 2025 values. Each economy's 1995 rank is given beside it. Dark arrows indicate OECD Members. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Ocean economy labour productivity rose by 75% in real terms between 1995 and 2025, faster than the overall economy's 58%, with a rise of 153% outside the OECD area and 54% within it (Figure 1.8). Labour productivity as measured by real terms GVA per FTE rose faster in the ocean economy than in the overall economy because ocean economy FTEs grew more slowly than in the overall economy. In current prices, ocean economy GVA per FTE was 1.22 times the overall economy's globally in 2025. This compares with 1.10 times in 1995 and a peak of 1.51 times in 2012. Within the OECD area it was 0.84 times the overall economy's level in 2025 and never more than 1.01 times throughout the period. Outside the OECD area it was 1.65 times the overall economy's level in 2025 and never less than 1.61 times throughout the period. Relative to the overall economies in which they operate, ocean economic activities are therefore high GVA activities in non-OECD economies and roughly average ones in OECD economies. The world labour productivity premium therefore reflects the weight of non-OECD economies in ocean economy employment.

Figure 1.8. Labour productivity in the ocean economy rose faster than in the overall economy

Gross value added per full-time equivalent, real terms index 1995 = 100, plus ratios of ocean economy gross value added per full-time equivalent to the overall economy's, current prices, 1995-2025

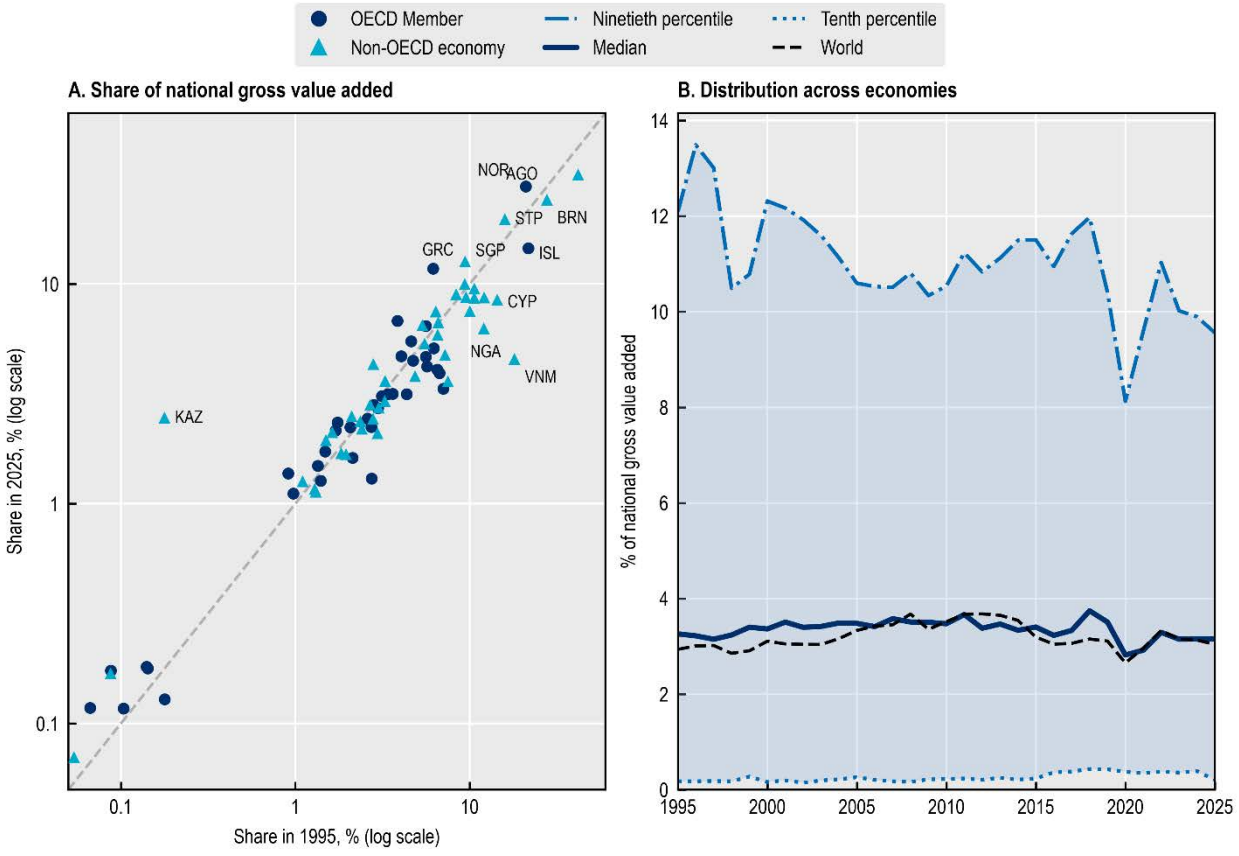


Note: Panel A shows gross value added per full-time equivalent in the ocean economy in real terms as an index with 1995 equal to 100 and the same index for the overall economy. Panel B shows the ratio of the ocean economy's gross value added per full-time equivalent to the overall economy's in the same aggregate, in current prices. World combines both OECD and non-OECD economies. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Dependence on the ocean economy in terms of its contribution to national GVA converged across economies between 1995 and 2025 (Figure 1.9). The two largest increases in dependence occurred in Norway where the ocean economy's share increased from 21.0% to 27.8% and Greece where its share increased from 6.2% to 11.7%. The largest decreased in dependence was in Viet Nam's where the ocean economy's share of national GVA decreased from 18.0% to 4.6%. Angola's also fell from a high of 41.8% but only to 31.6%, ensuring it remained the most dependent on the ocean economy in both 1995 and 2025. Overall, an economy in which the ocean economy's share was 10 p.p. higher in 1995 saw, on average, a fall 2.1 p.p. larger by 2025. The ninetieth percentile of the share across economies fell from 12.1% to 9.6% while the median moved from 3.3% to 3.2%. On average, the most dependent economies therefore reduced their dependency on the ocean economy as its share of national GVA drew closer to that in the typical country.

Figure 1.9. Dependence on the ocean economy for national gross value added converged across economies between 1995 and 2025

Ocean economy share of national gross value added, %, current prices, 1995 and 2025, plus shares across the distribution, %, current prices, 1995-2025



Note: Panel A plots ocean economy shares of national gross value added in 2025 against its shares in 1995. The dashed line marks no change. Points below the dashed line therefore had a lower share in 2025 than in 1995. Panel B shows the tenth percentile, the median and the ninetieth percentile of the share across economies. World combines both OECD and non-OECD economies. Gross value added is given at basic prices in current prices. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. A least-squares regression of the change in the share on its 1995 level has a slope of -0.21 and an R-squared of 0.26. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

How could the OECD expand its ocean economy measurement agenda?

The indicators of ocean economic performance outlined above provide a comprehensive and internationally comparable evidence base for national and international policy processes based on economic statistics. However, the OECD aims to expand its ocean economy measurement agenda to include other equally important dimensions of the ocean economy with new indicators to be included in future reports. Particular attention to measuring the two-way interdependencies between ocean economic activities and the marine ecosystem assets and services on which they depend is needed for good ocean stewardship as recommended in the OECD publication *The Ocean Economy to 2050* (OECD, 2025). An expanded measurement agenda could cover five important items in close coordination with ocean stakeholders: marine ecosystem assets and services, public administration and defence activities; ocean innovation; monitoring ocean infrastructure; and illegal activities at sea.

Marine ecosystem assets and services: Marine ecosystems provide essential services to society including coastal protection, carbon sequestration and storage, fish nursery and habitat provision, water purification, nutrient regulation, and cultural and amenity services. Although the System of Environmental-Economic Accounting – Ecosystem Accounting (SEEA EA) has led to improved measurement of some of these services in certain parts of some countries, estimates are not yet available on a consistent and internationally comparable basis at the global level. The OECD could lend support to national and international efforts to advance the measurement of environmental-economic linkages by developing indicators that combine economic statistics with environmental information and using economic modelling to understand the long-term effects of marine management measures such as marine spatial plans and protected areas on both ocean economic activities and the ecosystems upon which they rely.

Relevant marine ecosystems include mangroves, salt marshes, seagrass meadows, coral and oyster reefs, kelp forests, estuaries, tidal flats and coastal wetlands, while related species and population groups include commercial fish, sharks and rays, marine mammals, seabirds, turtles, reef-building species and habitat-forming vegetation. As an illustration, the World Register of Marine Species (WoRMS) currently documents approximately 250 000 accepted marine species, with potentially up to 2 million more to describe and/or still to discover (WoRMS, 2026). More than 2 500 formally described species are added to the database each year, while research vessels from national fleets, commercial surveyors or philanthropic organisations discover around 2 000 additional species annually that await formal description. At depths greater than 500 metres, the World Register of Deep-Sea Species lists for now more than 30 800 described species. However, these important registers primarily document the identification and classification of marine species and do not provide information on species abundance or allow survey effort to be compared across countries. Further scientific research, surveys and sustained ocean observation will therefore be needed to develop internationally comparable indicators of ecological representativeness, connectivity, management effectiveness and observed biodiversity outcomes, as called for under the Global Biodiversity Framework. Working with relevant scientific and international organisations, the OECD could help identify biodiversity and ecosystem-condition indicators suitable for international comparison and link them with original data on economic activities, pressures, and policy responses.

Public administration and defence: Public administration and defence provide many of the legal, regulatory, and operational safety foundations of the ocean economy, yet they remain only partially captured in current international estimates. Relevant activities include maritime policy and regulation, safety and security, hydrographic and navigation services, coastguard operations, customs and border control, marine environmental monitoring and enforcement, and ocean-related defence activities. Measuring the goods and services these activities provide is challenging because they’re typically accounted for within broader government institutions, expenditure programmes and employment categories. Several countries already include parts of public administration and defence in their ocean economy thematic accounts. However, differences in definitions and institutional arrangements limit international comparability. The OECD is working to address these gaps by clarifying the types of goods and services that should fall within the measurement boundary and exploring methods for allocating government expenditure and employment to their ocean-related components. It organised a technical workshop with practitioners in 2026 as an initial step towards developing common approaches and improving the consistency of cross-country estimates.

Ocean innovation: The new indicators of trends in scientific publications and science, technology and innovation policies presented in this report focus primarily on basic research and related policies. However, basic research represents one stage of a broader ocean innovation process through which knowledge is translated into new technologies, products, services and business models. Building on unique datasets, the next stage of OECD work could develop internationally comparable indicators covering ocean-related patenting, commercialisation, investment and the scaling of innovative firms. Building on its initial analysis of marine innovation networks, the uses of public marine data in ocean economic activity, and its expertise

in patent and firm-level data, the OECD could also examine the ecosystems, skills, financing and policy conditions that enable ocean innovation to support ocean economy transitions.

Monitoring ocean infrastructure. Growth in ocean infrastructure, particularly on the seabed, calls for better measurement. The OECD could support the development of comparable measures of uses, capacity development, and economic resilience across key ocean-related infrastructure. For example, nearly 1.6 million kilometres of deep-sea fibre-optic telecommunications cables have been added since 1995, alongside substantial developments in offshore energy infrastructure, particularly wind turbines, and offshore oil and gas platforms. Sustained ocean observing systems are as well becoming key infrastructure supporting public and private objectives. New comparable OECD indicators, developed with key stakeholders, could help economies monitor capacity and coverage, and identify strategic dependencies for a number of key ocean infrastructures.

Illegal activities at sea: A final measurement challenge concerns the "dark ocean economy". Illegal activities have long occurred at sea, but their scale, complexity and economic implications may be increasing as the ocean economy expands and maritime activities become more interconnected (e.g. illegal, unreported and unregulated fishing; piracy and armed robbery at sea; drug, weapons and fuel smuggling). A range of international organisations, national authorities and specialised initiatives already collect information on particular illegal activities at sea for operational, regulatory, monitoring or enforcement purposes. However, these data are not intended to provide an integrated or internationally comparable measure of the economic scale and consequences of the dark ocean economy. The OECD could complement existing initiatives by analysing the economic and policy dimensions of illegal activities at sea and explore methods for assessing their direct economic value as well as their wider impacts on legitimate businesses, public revenues, labour conditions, and marine ecosystems.

Further reading

OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris, https://doi.org/10.1787/a9096fb1-en

OECD (2025), Environmental Outlook on the Triple Planetary Crisis: Stakes, Evolution and Policy Linkages, OECD Environmental Outlook, OECD Publishing, Paris, https://doi.org/10.1787/257ffbb6-en

OECD (2025), Promoting Sustainable Ocean Economies: Guidance for Development Co-operation, Best Practices in Development Co-operation, OECD Publishing, Paris, https://doi.org/10.1787/72055d7f-en

OECD (2025), "The ocean economy and climate change nexus: The case of Portugal", OECD Net Zero+ Policy Papers, No. 16, OECD Publishing, Paris, https://doi.org/10.1787/3d4949c2-en

Jolliffe, J., C. Jolly and B. Stevens (2021), "Blueprint for improved measurement of the international ocean economy: An exploration of satellite accounting for ocean economic activity", OECD Science, Technology and Industry Working Papers, No. 2021/04, OECD Publishing, Paris, https://doi.org/10.1787/aff5375b-en.

OECD (2019), Rethinking Innovation for a Sustainable Ocean Economy, OECD Publishing, Paris, https://doi.org/10.1787/9789264311053-en.

WoRMS (2026), World Register of Marine Species, Website: https://www.marinespecies.org/.

2 Trends in ocean research and policies for ocean science, technology and innovation

Ocean economic activities rely on scientific knowledge and on the policies that foster its creation, diffusion and application. This chapter examines the ocean science, technology and innovation (STI) systems that underpin all parts of the ocean economy discussed in later chapters from two separate angles. The first is ocean-related scientific publications identified in a large international bibliographic database. The second is STI policies related to the ocean economy recorded in the EC-OECD STIP Compass.

In Brief

The volume of ocean-related scientific publications kept pace with all scientific publications between 1996 and 2024, but its growth slowed after 2019. The number of ocean-related publications reached 65 641 in 2024, 4.6 times the 1996 number, and remained around 1.5% of all publications throughout the period.

Most ocean scientific publications are now produced outside the OECD area, with the People's Republic of China taking the lead. Non-OECD economies have published more ocean science than the OECD area in every year since 2021.

The topics of ocean science shifted from marine life and the physical ocean towards engineering and technology. Underwater acoustics, sensing, communications and robotics became the largest theme in 2024. Offshore wind, wave and tidal energy and 'desalination and water-treatment technologies grew fastest. Non-OECD Asia specialises in these engineering themes.

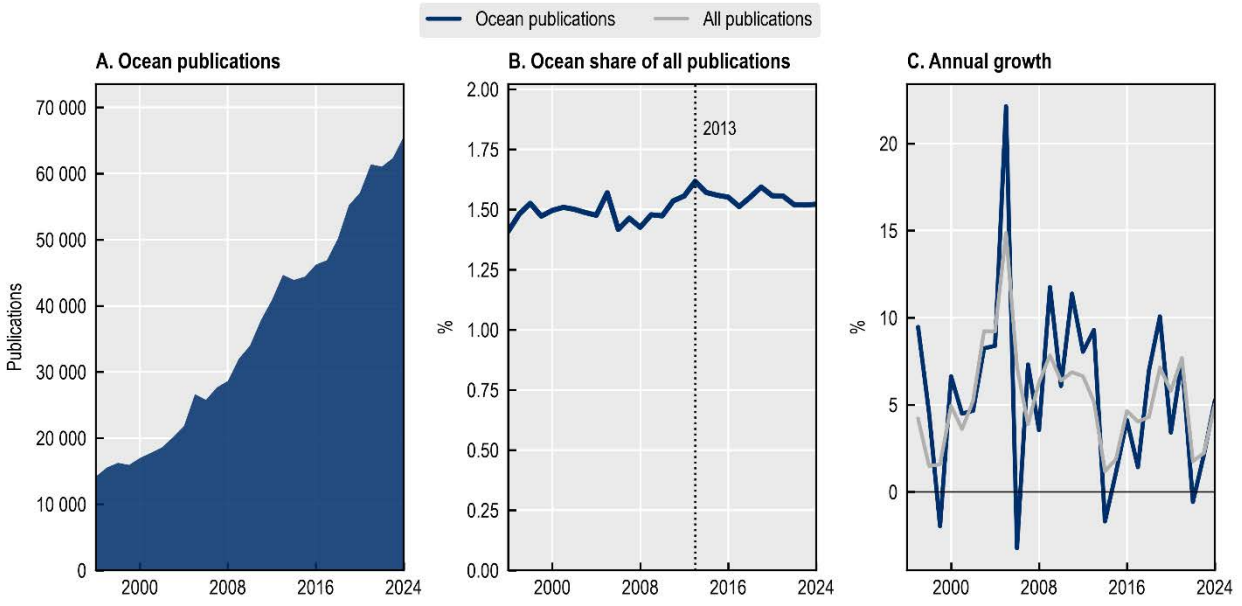
Science, technology and innovation (STI) policies for the ocean economy are a small part of STI policy recorded in the EC-OECD STIP Compass and they address net zero transitions far more often than STI policies in general. They make up 4.4% of the initiatives that the countries and the EU report to the EC-OECD STIP Compass, 87 dedicated to the ocean and 300 broader policies containing ocean-related components. 47.8% of them address net zero transitions, compared with 15.7% of all initiatives.

Specialisation in ocean scientific publications and in the ocean STI policies recorded in the EC-OECD STIP Compass are both associated with a country's dependence on the ocean economy. Norway is highest on both measures, with 28.9% of its gross value added from the ocean economy and 16.4% of its STI policy initiatives on the ocean.

Ocean-related publications increased 4.6 times between 1996 and 2024, a little faster than scientific publications as a whole (Figure 2.1). They remained around 1.5% of all publications throughout the period. Globally, 14 221 ocean publications were published in 1996 and 65 641 in 2024. The ocean share of all publications moved from 1.41% to a peak of 1.62% in 2013 and 1.52% in 2024. Ocean publications grew by 6.0% a year in the 1996-2008 period and by 6.1% a year in the 2008-2019 period, faster than all publications, but by 3.5% a year in the 2019-2024 period compared with 4.5% for all publications. Most of the growth in ocean science therefore reflects the growth of research in general, and the slowdown after 2019 coincides with the fall in the OECD area's output (see Figure 2.2).

Figure 2.1. Ocean scientific publications grew a little faster than science as a whole between 1996 and 2024

Ocean publications, plus their share of all publications, %, plus the annual growth of ocean publications and of all publications, %, 1996-2024

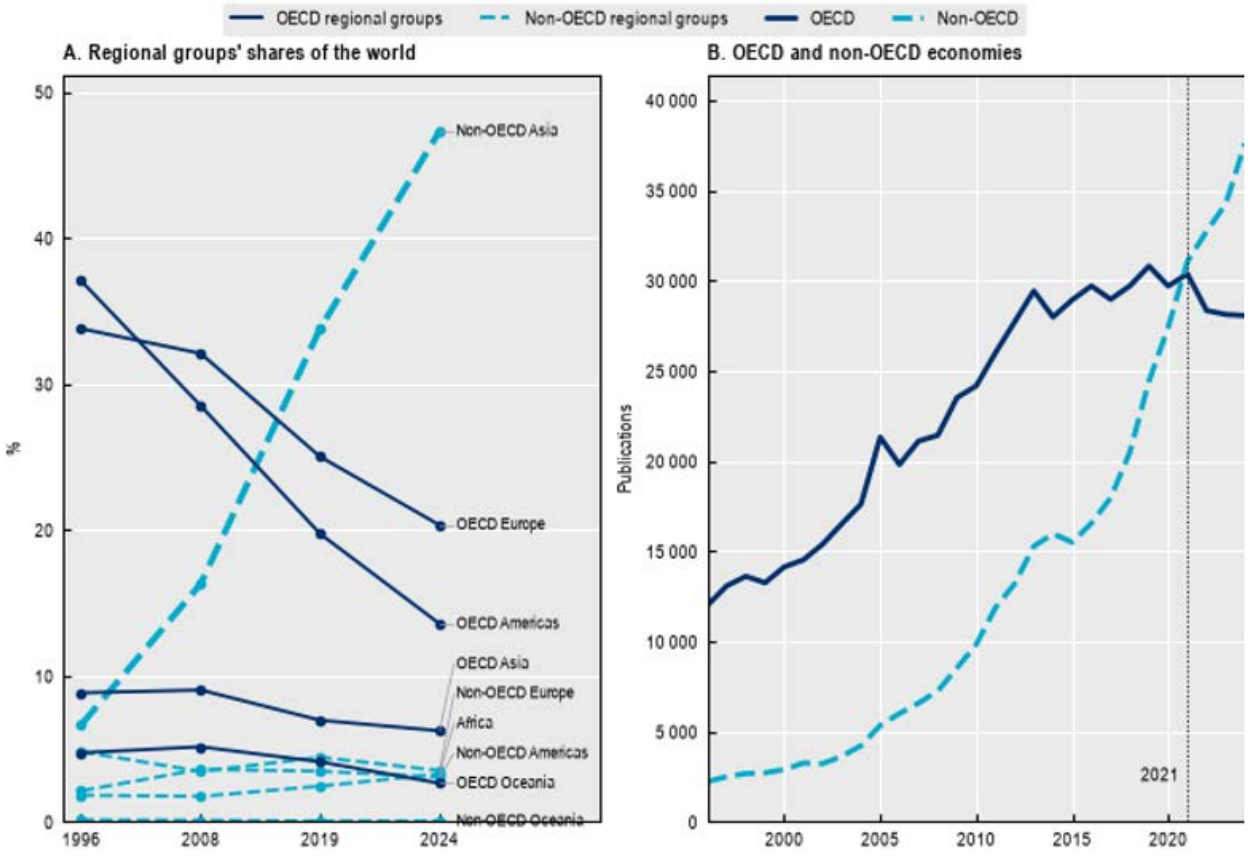


Note: Panel A shows the number of ocean publications. Panel B shows ocean publications as a share of all publications with the dotted line marking the year of the highest share in 2013. Panel C shows the annual growth of ocean publications and of all publications. Ocean publications are delimited by a keyword search on titles, abstracts and author keywords in English-language records only with one set of search terms for each ocean economic activity group and one for marine science in general.
Source: OECD calculations based on Scopus Custom Data, Elsevier, Version 1.2026, April 2026.

Non-OECD Asia's share of world ocean publications increased from 6.6% in 1996 to 47.3% in 2024, making it the largest producing region since 2017 (Figure 2.2). It passed the OECD Americas in 2013 and OECD Europe in 2017. The OECD area's ocean publications peaked in 2019 and non-OECD economies together have published more ocean science than the OECD area in every year since 2021. The OECD area's share of world ocean publications fell from 84.4% to 42.7% between 1996 and 2024, the OECD Americas' from 37.0% to 13.6%, and OECD Europe's from 33.8% to 20.3%. Non-OECD Asia gained the most share during the 2008-2019 period with 17.5 percentage points (p.p.) and then a further 13.5 p.p. in the 2019-2024 period. The production of ocean science has therefore moved mainly to Asia outside the OECD area.

Figure 2.2. Non-OECD Asia became the largest region producing ocean-related scientific publications in 2017

Regional groups' shares of world ocean publications, %, 1996, 2008, 2019 and 2024, plus ocean publications of OECD and non-OECD economies, fractional counts, 1996-2024

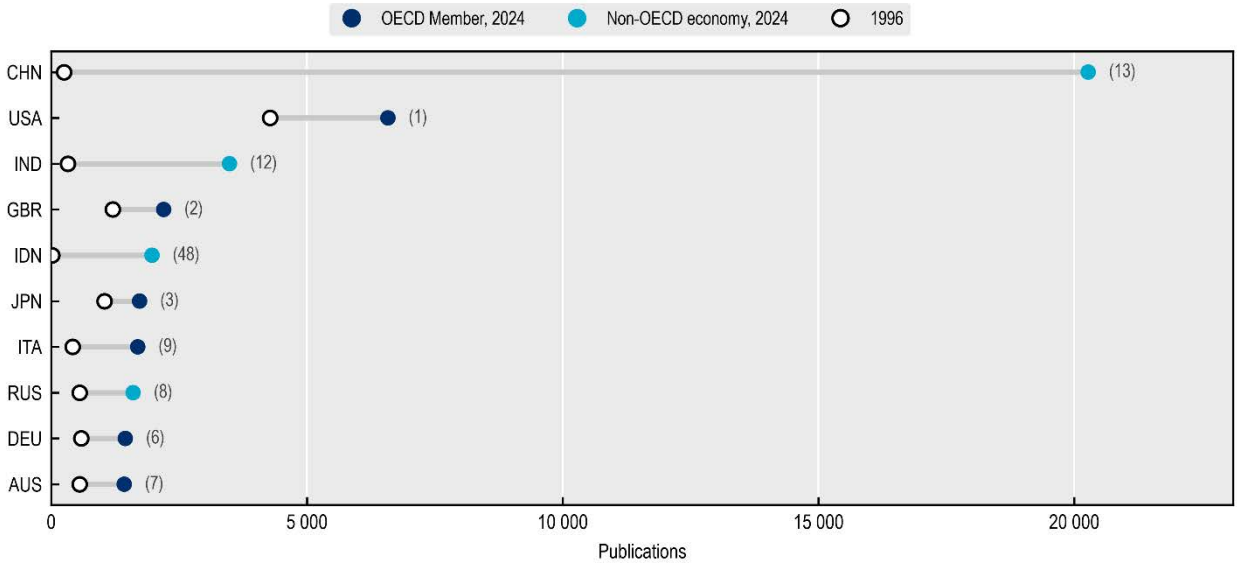


Note: Regional groups are the UN M49 regions split by OECD membership. Panel A shows each group's share of world ocean publications at the start and end of each of the three periods. Panel B shows the ocean publications of the OECD area and of non-OECD economies, with the dotted line marking the first year in which non-OECD economies published more than the OECD area in 2021. Fractional counts divide each publication among the institutional affiliations of its authors.
Source: OECD calculations based on Scopus Custom Data, Elsevier, Version 1.2026, April 2026.

The People's Republic of China (hereafter "China") became the largest producer of ocean scientific publications in 2018 (Figure 2.3). It produced 30.9% of world ocean publications in 2024, up from 1.7% in 1996 when it was 13th among economies. India, 12th among economies in 1996, was third in 2024 after passing the United Kingdom in 2020, Indonesia rose from 48th to fifth. Japan, Italy, the Russian Federation, Germany and Australia complete the ten largest producers, six of which are OECD Members. The economies that rose furthest in the ranking are in Asia.

Figure 2.3. China has produced the largest number of ocean scientific publications of any economy every year since 2018

Ten largest producers of ocean publications in 2024, fractional counts, 1996 and 2024

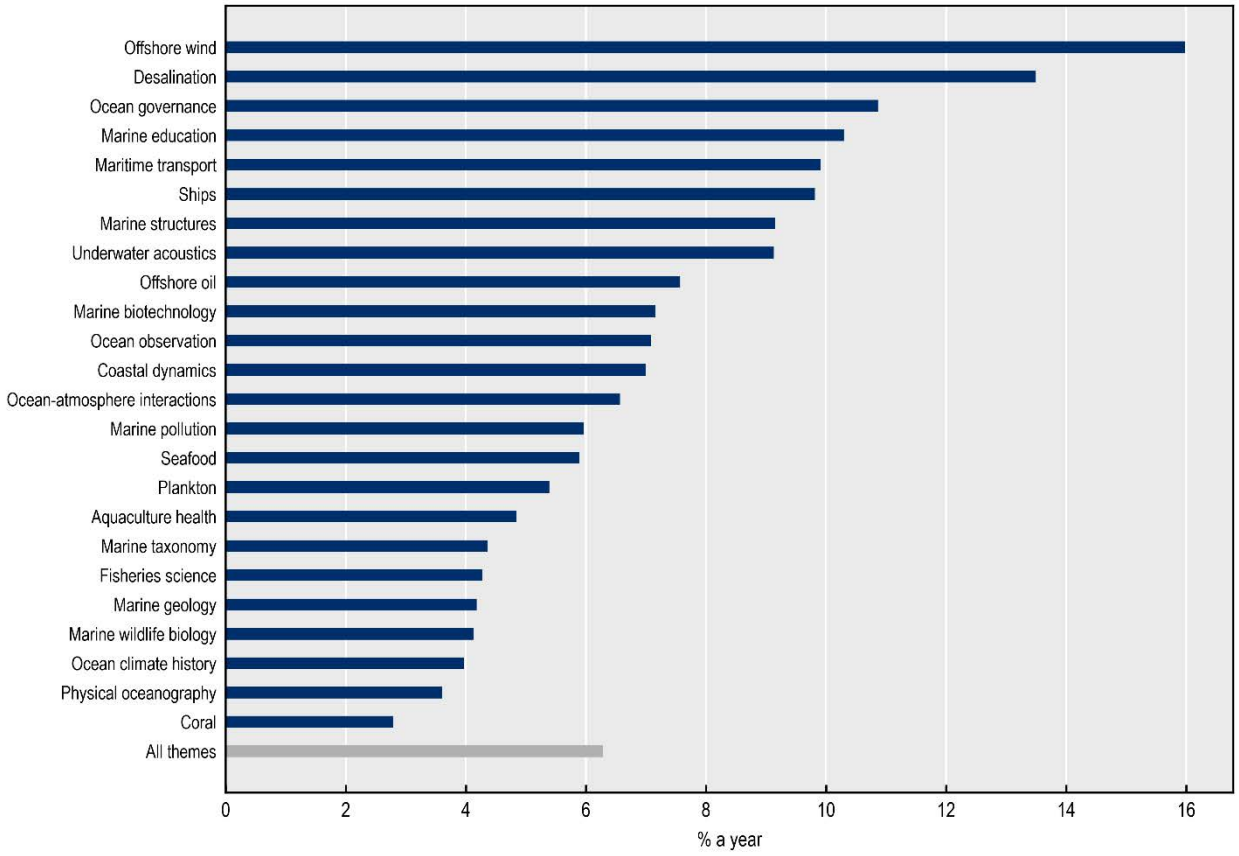


Note: The chart ranks economies by their ocean publications in 2024 given by the filled circle, with their 1996 ocean publications as the unfilled circle and their 1996 rank among economies in brackets. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark markers indicate OECD Members. Fractional counts divide each publication among the institutional affiliations of its authors.
Source: OECD calculations based on Scopus Custom Data, Elsevier, Version 1.2026, April 2026.

Offshore wind, wave and tidal energy and desalination and water-treatment technologies grew fastest of all themes detected in ocean science between 1996 and 2024 (Figure 2.4). Publications on offshore wind, wave and tidal energy grew by 16.0% a year and those on desalination and water-treatment technologies by 13.5% a year, compared with 6.3% for all themes. Five themes related to marine life published less in 2024 than in 2020. In the 2020-2024 period, coral, benthic and organismal ecology decreased by 2.5% a year, after growing by 3.2% a year in the 2015-2019 period. Underwater acoustics, sensing, communications and robotics grew fastest between 2020 and 2024 period by 16.3% a year. Growth after 2020 was therefore concentrated even more in themes concerning ocean engineering and technology.

Figure 2.4. Offshore wind, wave and tidal energy and desalination and water-treatment technologies grew fastest of all themes of ocean science between 1996 and 2024

Average annual growth of publications in each theme, %, fractional counts, 1996-2024

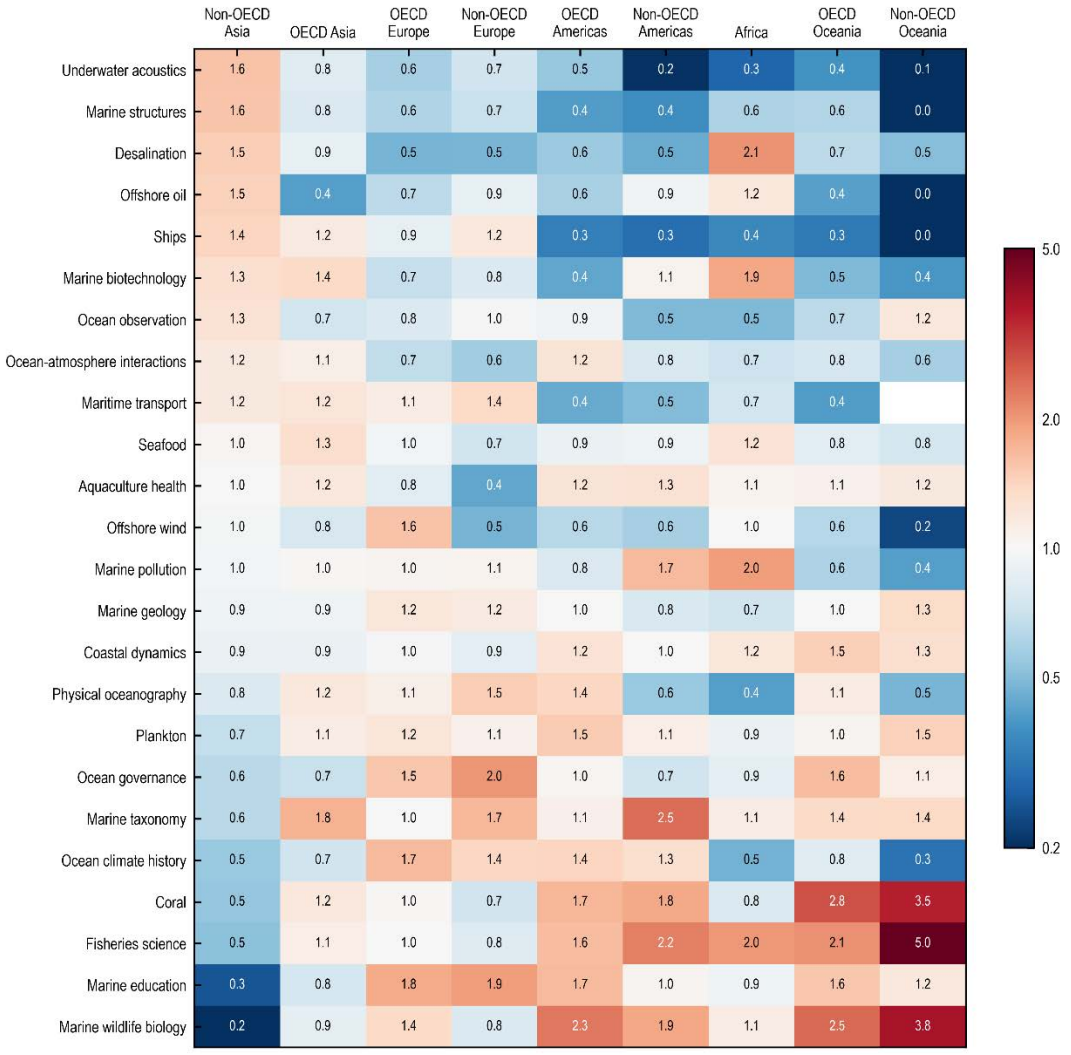


Note: The chart shows average annual growth between 1996 and 2024. The grey bar refers to all publications assigned to a theme. The themes originate in a model which groups ocean scientific publications into topics by the content of their titles and abstracts. The 304 topics detected by the model were then grouped into 24 themes. Fractional counts divide each publication among the institutional affiliations of its authors.
Source: OECD calculations based on Scopus Custom Data, Elsevier, Version 1.2026, April 2026.

Non-OECD Asia specialises in the engineering themes of ocean science while the OECD Oceania and OECD Americas specialise in marine life (Figure 2.5). Between 2020 and 2024, underwater acoustics, sensing, communications and robotics took 1.6 times as large a share of non-OECD Asia's ocean publications as of the world's. Marine structures, materials and geotechnical engineering was 1.6 times higher and desalination and water-treatment technologies 1.5 times higher. Non-OECD Asia produced 43% of world ocean publications in the period, more than any other region, but its specialisation index in marine wildlife biology and conservation was only 0.19. OECD Oceania's index was 2.8 in coral, benthic and organismal ecology and the OECD Americas' 2.3 in marine wildlife biology and conservation.

Figure 2.5. Different regions specialise in different themes of ocean science with engineering dominating non-OECD Asia and marine life dominating OECD Americas and OECD Oceania

Specialisation index of each region in each theme, fractional counts, 2020-2024



Note: Each cell gives the theme's share of the region's ocean publications divided by its share of world ocean publications. A specialisation index above 1 means that the theme takes a larger share of the region's ocean publications than of the world's. Blue cells are below 1 and red cells above 1. An empty cell means that the region has no publication in the theme. The themes originate in a model which groups ocean scientific publications into topics by the content of their titles and abstracts. The 304 topics detected by the model were then grouped into 24 themes. Regional groups are the UN M49 regions split by OECD membership. Shares are calculated of the publications assigned to a theme. Fractional counts divide each publication among the institutional affiliations of its authors.
Source: OECD calculations based on Scopus Custom Data, Elsevier, Version 1.2026, April 2026

Box 2.1. How were the statistics on ocean-related scientific publications estimated?

The bibliometrics presented in this chapter are derived from OECD calculations based on Scopus Custom Data, Elsevier, Version 1.2026, April 2026. The final ocean-related subset contains over two million unique documents in total across the time period for an average of roughly 70 000 records per year. They cover the years 1996 to 2024 and are limited to unique documents in the Scopus Custom Data with a title or abstract in English.

The ocean-related subset of documents was delimited using a structured query based on separate blocks of keyword terms for each ocean economic activity group plus marine science in general. Keyword terms were matched as whole words in titles, abstracts and author-provided keywords. Documents containing unambiguously ocean-related terms such as “marine sediments”, “offshore wind”, and “seafood” were considered in scope of ocean-related literature if these terms were present in any field of their record. Ambiguous terms such as “ship” only indicated a document is in-scope if they appear in an abstract alongside ocean-related anchor words such as “ocean”, “maritime”, or “Arctic”. The query was revised after manual inspection of a random sample of the matched documents. Certain terms such as “bulk carrier” (which describes a type of large vessel in maritime transport but is also found in a large number of engineering publications concerning semiconductors) were excluded after this process to reduce false positives.

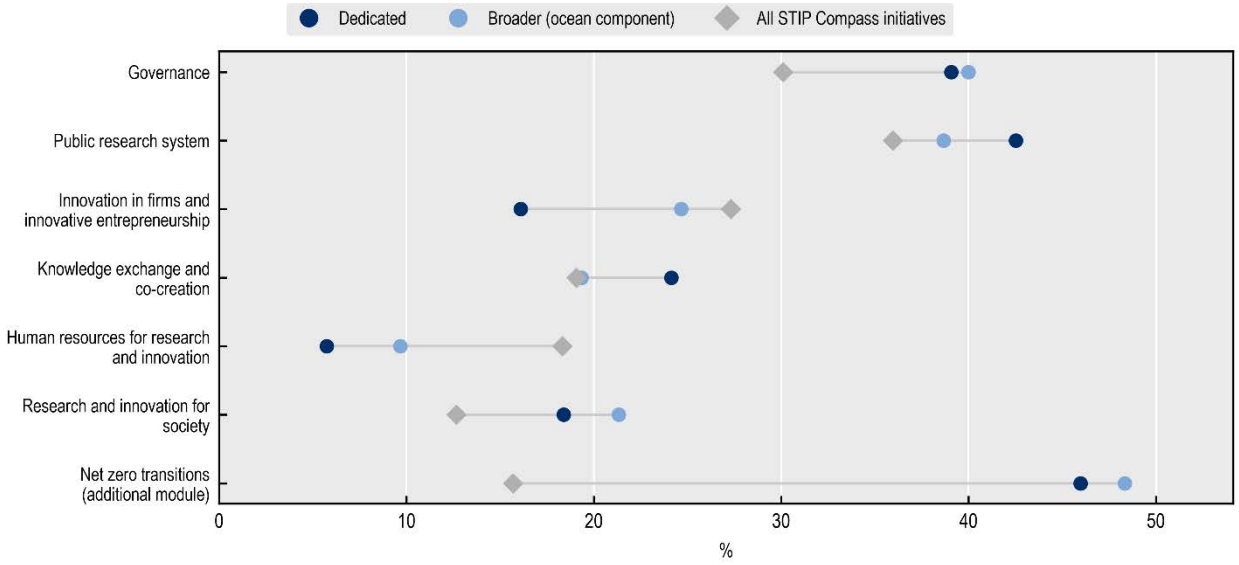
Each document considered to be in-scope of ocean-related literature based on the keyword search was then attributed to economies using authors' affiliation records. The coverage was aligned with that of the OECD estimates of ocean economic activities. Documents are attributed to individual economies fractionally. A document is shared across the economies present in its author affiliations so that the total count associated with a document always equals one. Fractional counts were aggregated by economy, region, and other groupings. The ocean-related aggregates were then compared with the same calculations carried out on the full set of English-language documents in Scopus Custom Data to get shares of the total output of scientific literature.

A statistical technique called topic modelling was then used to compare the contents of ocean-related documents to each other in order to estimate the indicators ocean-related research themes. Topic models help to classify documents on similar subjects as related to each other even when they use different wording. Each topic is described by the words that most distinguish it from others. One topic, for example, included the terms “eDNA”, “metabarcoding”, “environmental DNA”, “species”, and “fish”. All resulting topics were reviewed manually using their top terms, closest neighbouring topics, and document titles. Each topic was given a descriptive name on this basis. The topic containing the terms in the example above was given the label “Environmental DNA and eDNA metabarcoding”. All the topics were then grouped manually into broader themes covering related topics based on their similarity to each other. The “Environmental DNA and eDNA metabarcoding” topic, for instance, was grouped with several others to create the theme labelled “Marine taxonomy, genetics and biodiversity methods”. The indicators based on topic themes were then aggregated following the same fractional counting rules outlined above.

Science, technology and innovation (STI) policies for the ocean economy address net zero transitions three times more than STI policies in general (Figure 2.6). Across the 63 countries and the EU that report to the EC-OECD STIP Compass, 387 of the 8 819 policy initiatives are either dedicated to the ocean or are a broader policy with an explicit ocean component. This represents 4.4% of the total initiatives in the database. Net zero transitions are addressed by 47.8% of the ocean-related policies (46.0% among dedicated ocean STI policies and 48.3% among broader ones), compared with 15.7% of all STIP Compass initiatives, often as part of broader climate policies. Among the survey's STI policy themes, four of the five that are represented more strongly in ocean initiatives than rest concern net zero transitions. The share of net zero transitions in food and agriculture in ocean-related policies is 4.8 times the share among all STIP Compass initiatives. Targeted support to small and medium-sized enterprises and young innovative enterprises is among the least common themes in both dedicated and broader ocean-related policies. The ocean STI policies in the EC-OECD STIP Compass are therefore framed more often as part of the transition to net zero than as support for the research workforce or for young firms.

Figure 2.6. Ocean STI policies address net zero transitions far more often than STI policies in general

Initiatives that address each policy area, % of initiatives, dedicated and broader ocean-related STI policies and all STIP Compass initiatives



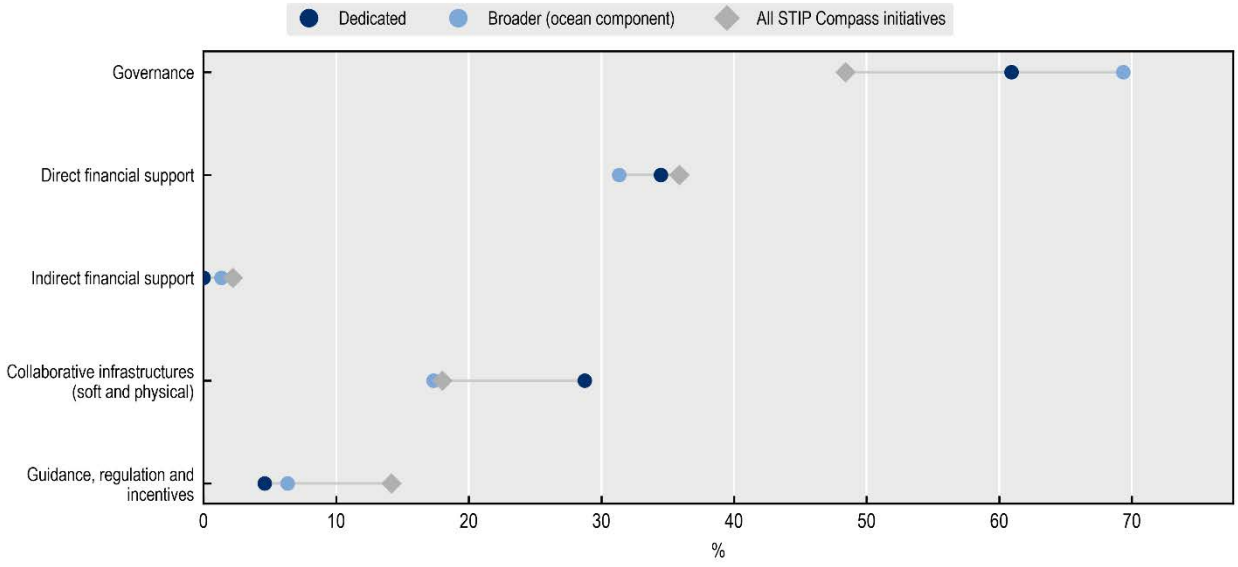
Note: The chart shows the share of initiatives that address each of the survey's seven policy areas. Dedicated ocean STI policies have the ocean as their principal purpose. Broader STI policies have one explicit ocean objective, instrument, facility, workstream or targeted sector among others. The shares cover all the countries and the EU that report to the STIP Compass. An initiative can address several policy areas, so the shares sum to more than 100%.
Source: EC-OECD (2025), STIP Compass: International Database on Science, Technology and Innovation Policy (STIP), edition October 2026, https://stip.oecd.org.

Dedicated ocean STI policies favour collaborative infrastructures, while broader STI policies with an explicit ocean component rely more on governance instruments (Figure 2.7). Both combine more instruments per initiative than STI policies in general. Collaborative infrastructures, which include research infrastructures, networks and data services, are used by 28.7% of dedicated ocean STI policy initiatives, compared with 18.0% of all STIP Compass initiatives and 17.3% of broader ones. Governance instruments are used by 69.3% of broader initiatives, compared with 48.4% of all initiatives. The ocean STI policies in the EC-OECD STIP Compass therefore appear to have a particularly strong focus on building capacity for

research (e.g. such as large-scale scientific equipment, specialised databases, supercomputing facilities, and demonstration plants) as well coordination across organisations than the general population of initiatives.

Figure 2.7. Dedicated ocean STI policies favour collaborative infrastructures while broader ones favour governance instruments

Initiatives that use each instrument family, % of initiatives, dedicated and broader ocean STI policies and all STIP Compass initiatives

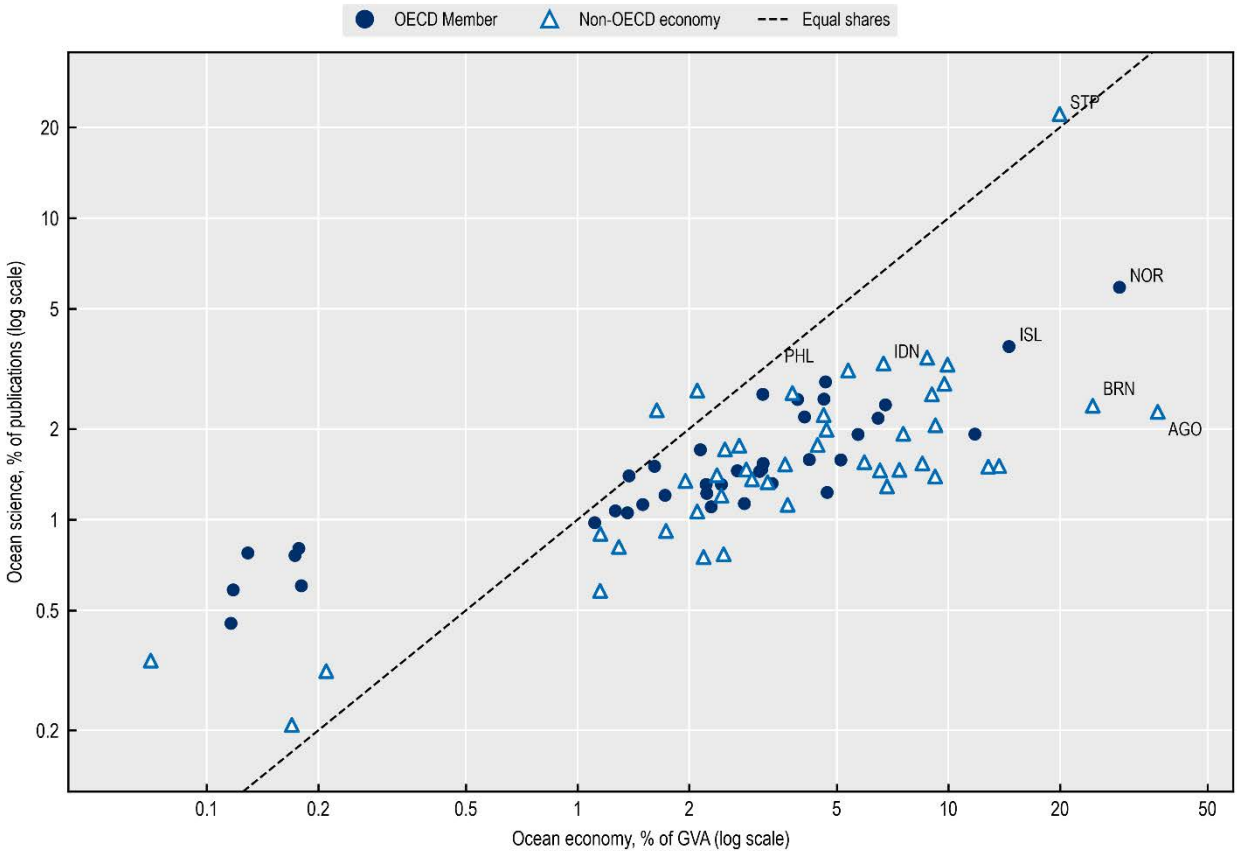


Note: The chart shows the share of initiatives that use at least one instrument of each of the survey's five instrument families. An initiative can use several instrument families so the shares sum to more than 100%. Initiatives are counted once each, whatever the number of instruments they use.
Source: EC-OECD (2025), STIP Compass: International Database on Science, Technology and Innovation Policy (STIP), edition October 2026, https://stip.oecd.org.

Economies whose ocean economy accounts for a larger share of gross value added (GVA) tend to specialise more in ocean science and to have entered more ocean-related STI policy initiatives to the EC-OECD STIP Compass (Figure 2.8). In 2024, ocean science was a smaller share of publications than the ocean economy was of overall economy GVA in 70 economies. It was a larger share in 13. The gap was widest where the ocean economy is largest, with the ocean economy at 28.9% of GVA and ocean science at 5.9% of publications in Norway. Among the countries that report to the STIP Compass, a country with an ocean economy share 10 p.p. higher tended to have a 4.2 p.p. higher share of its STI policy initiatives related to the ocean. Norway is highest on both measures, with 16.4% of its STI policy initiatives either dedicated to the ocean or containing an explicit ocean component.

Figure 2.8. Specialisation in ocean science is loosely associated with a country's dependence on the ocean economy

Ocean share of each economy's publications, fractional counts, %, against the ocean economy's share of its gross value added, current prices, %, 2024



Note: The chart shows each economy identified separately in the experimental ocean economy supply and use tables with the dashed line marking equal shares. Gross value added is given at basic prices in current prices. The two sources are joined for 2024, the latest year present in the both the publications database and the supply and use tables. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark markers indicate OECD Members. Fractional counts divide each publication among the institutional affiliations of its authors.
Source: OECD calculations based on Scopus Custom Data, Elsevier, Version 1.2026, April 2026, and OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Further reading

IOC-UNESCO (2026), Global Ocean Science Report 2026: Investing in Sustainable Ocean Solutions, Executive Summary, IOC Policy Series 2026-2. https://doi.org/10.71245/MSEK9116

Lévy, M. et al. (2026), "The 2026 Starfish Barometer", State of the Planet, Vol. 7-osr10, Copernicus Publications, https://doi.org/10.5194/sp-7-osr10-1-2026.

Global Ocean Observing System (GOOS) (2026), Global Ocean Observing System - Status Report 2025, https://www.ocean-ops.org/goosreport/#home.

OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris. https://doi.org/10.1787/a9096fb1-en

Jolly, C., Jolliffe, J. and Abdallah, C. (2025), "From Ocean Observation to Socio-Economic Benefits: Mapping the Value Chains of Open Marine Data", One Ocean Science Congress 2025. https://doi.org/10.5194/oos2025-363

Jolliffe, J. and K. Aben Athar (2024), “Understanding the contribution of Flanders’ public marine data to society”, OECD Science, Technology and Industry Working Papers, No. 2024/04, OECD Publishing, Paris, https://doi.org/10.1787/da9d7b66-en

Stevens, B., C. Jolly and J. Jolliffe (2021), “A new era of digitalisation for ocean sustainability?: Prospects, benefits, challenges”, OECD Science, Technology and Industry Policy Papers, No. 111, OECD Publishing, Paris, https://doi.org/10.1787/a4734a65-en

OECD (2019), Rethinking Innovation for a Sustainable Ocean Economy, OECD Publishing, Paris. https://doi.org/10.1787/9789264311053-en.

3 Food from the ocean: Marine fishing, aquaculture and fish processing

Fish caught at sea, fish and shellfish farmed in marine waters, and the processing of these products by the food manufacturing industry all supply communities with food and nutrition from the ocean. This chapter examines marine fishing, aquaculture and processing using the OECD's estimates of ocean economic activity.

In Brief

Marine fishing, aquaculture and processing grew more slowly than the ocean economy between 1995 and 2025 and lost share within it. It generated USD 305 billion of gross value added in real terms in 2025, up 114% from 1995, compared with 132% for the ocean economy. Its share of ocean economy gross value added fell from 11.7% to 9.0%.

Marine aquaculture drove its growth and became its second-largest sub-activity. Aquaculture rose from 13.4% to 31.6% of its gross value added between 1995 and 2025 and contributed more to its real growth after 2008 than any other sub-activity.

The bulk of marine fishing, aquaculture and processing activity moved from OECD Asia to non-OECD Asia over the period. Non-OECD Asia's share of its world gross value added rose from 27.8% to 57.4%. The People's Republic of China (hereafter "China") became the largest generator of gross value added in 2006 and produced 27.7% of the world total in 2025. Non-OECD Asia now generates more than half of world gross value added.

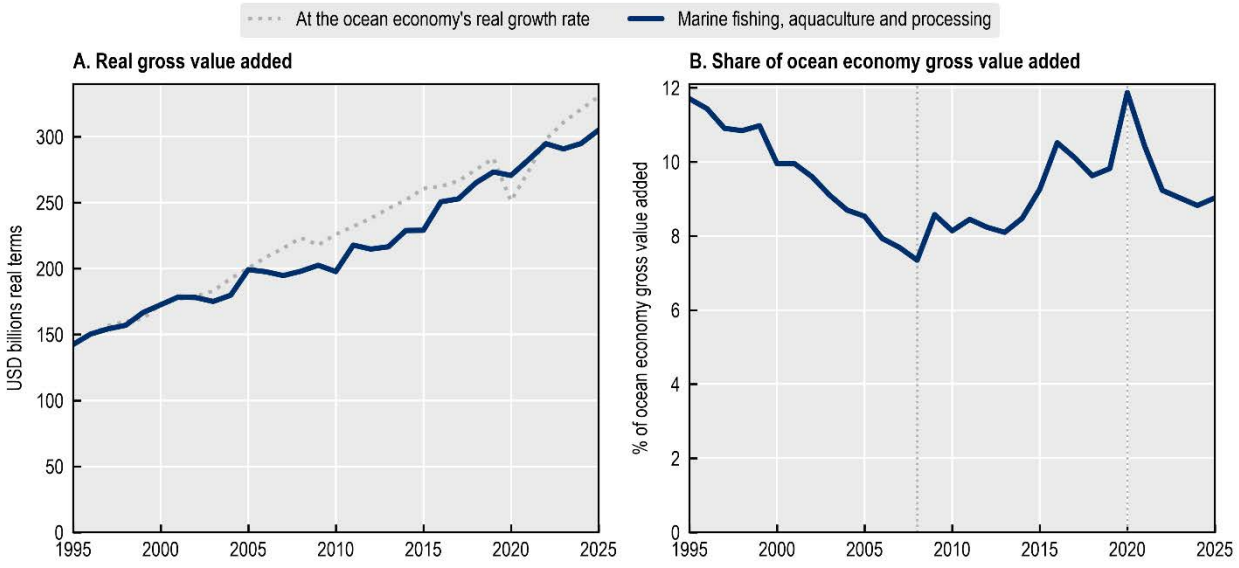
Its employment fell by a third between 1995 and 2025 while its labour productivity more than tripled. Full-time equivalents decreased from 31.5 million in 1995 to 20.5 million in 2025, with China accounting for 72% of the fall. Real gross value added per full-time equivalent job increased by 230%, four times the rise in the overall economy.

Economies converged in their dependence on marine fishing, aquaculture and processing. Its share of national gross value added fell in two-thirds of economies between 1995 and 2025 and by most where it had been highest. In current prices, gross value added per full-time equivalent job in the OECD area fell from 11 times the level outside the OECD area at the start of the period to just 3 times its level at the end of the period.

Marine fishing, aquaculture and processing generated gross value added (GVA) of USD 305 billion in real terms in 2025, 114% more than in 1995, but grew more slowly than the ocean economy (Figure 3.1). Its share of ocean economy GVA fell from 11.7% to 9.0% in current prices over the period. The ocean economy grew by 133% in real terms over the period. Had marine fishing, aquaculture and processing grown at the ocean economy's rate, its GVA would have reached USD 330 billion in real terms in 2025. Its share of ocean economy GVA was lowest in 2008 at 7.3% and highest in 2020 at 11.9%. Fishing, aquaculture and processing does not appear to have been affected as much as the ocean economy overall during the COVID-19 pandemic.

Figure 3.1. Marine fishing, aquaculture and processing grew more slowly than the ocean economy and its share of ocean economy gross value added decreased

Gross value added, USD billions in real terms, plus as a share of ocean economy gross value added, %, current prices, 1995-2025

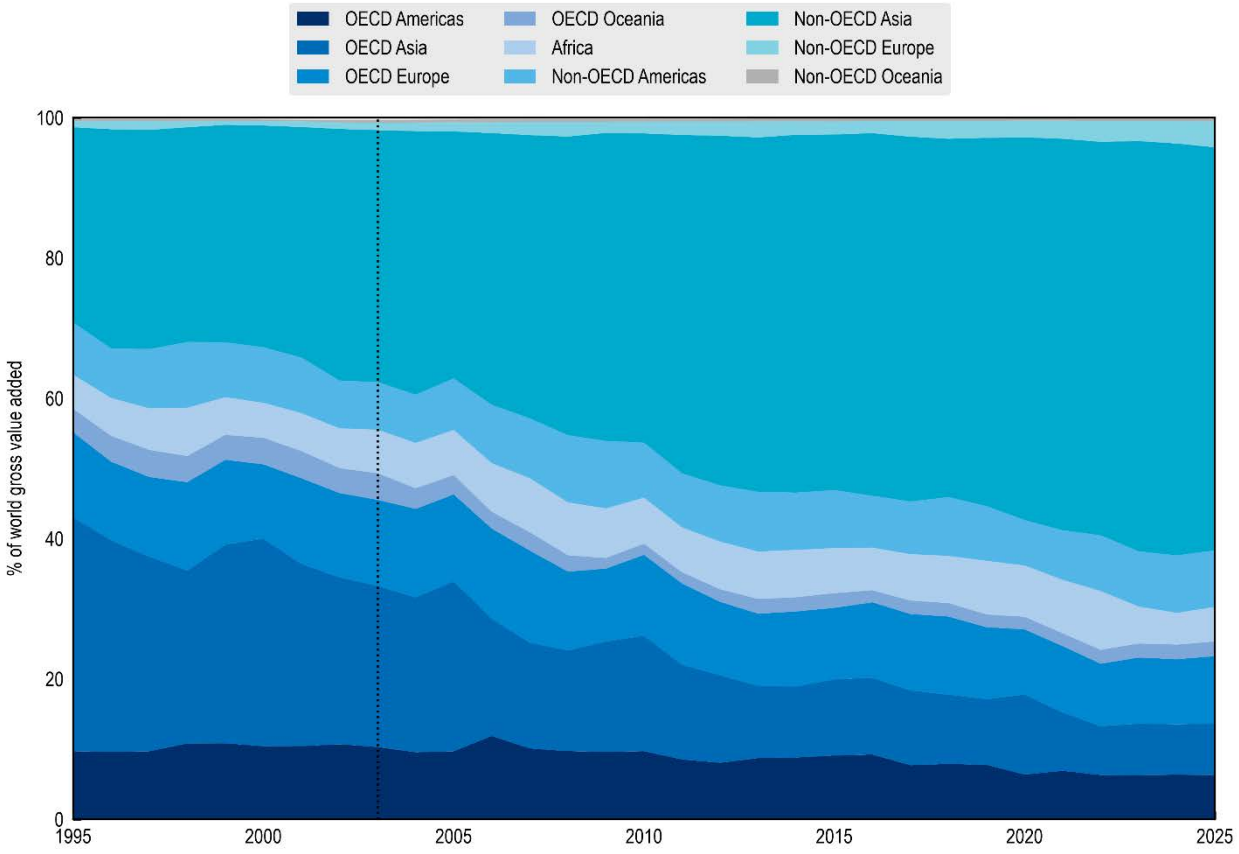


Note: Panel A shows the gross value added of marine fishing, aquaculture and processing in real terms. The dotted line gives the level it would have reached had it grown at the real growth rate of the ocean economy since 1995. Panel B shows its share of ocean economy gross value added in current prices. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The dotted vertical lines in panel B mark 2008 and 2020, the years of the lowest and the highest share. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

The bulk of marine fishing, aquaculture and processing activity moved from OECD Asia to non-OECD Asia between 1995 and 2025 (Figure 3.2). Non-OECD Asia's share of its world GVA rose from 27.8% to 57.4%. OECD Asia's fell from 33.3% to 7.3%. OECD Asia's share decreased to half its 1995 level by 2007 and to a quarter by 2021. Non-OECD Asia has been the largest producing region since 1996. Non-OECD economies as a whole have produced more than the OECD area since 2003. The OECD area's share decreased from 58.5% to 25.3% over the period, with far smaller falls in OECD Europe and OECD Americas than in OECD Asia. OECD Asia therefore accounts for 78% of the decline in the OECD area's share of marine fishing, aquaculture and processing.

Figure 3.2. The bulk of marine fishing, aquaculture and processing activity moved from OECD Asia to non-OECD Asia over the period

Share of each regional group in world gross value added of marine fishing, aquaculture and processing, %, current prices, 1995-2025

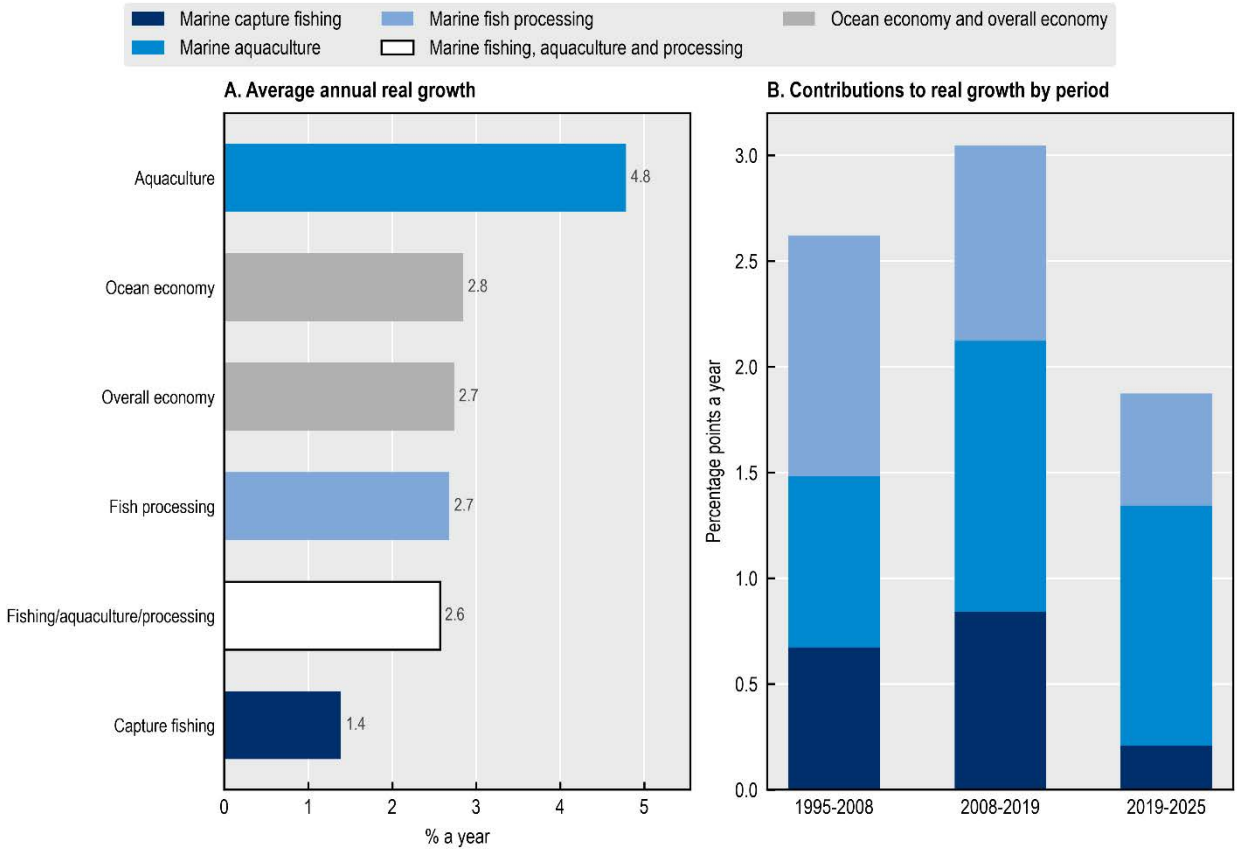


Note: Regional groups are the UN M49 regions split by OECD membership, stacked with the OECD groups below the non-OECD groups, so that the black line is the OECD area's share. Gross value added is given at basic prices in current prices. Regional and world totals include economies that are not identified separately in the experimental ocean economy supply and use tables. The dotted line marks 2003, the first year in which non-OECD economies produced more than the OECD area. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Marine aquaculture grew fastest in real terms of the sub-activities of marine fishing, aquaculture and processing between 1995 and 2025 and contributed most to its real growth in the 2008-2019 and 2019-2025 periods (Figure 3.3). Its GVA grew by 4.8% a year, compared with 2.6% for marine fishing, aquaculture and processing as a whole and 2.8% for the ocean economy. This is more than three times the rate of marine capture fishing, the largest sub-activity by GVA. Marine fish processing grew by 2.7% a year and contributed most to the real growth of marine fishing, aquaculture and processing in the 1995-2008 period. In the 2019-2025 period aquaculture contributed 1.1 p.p. a year, more than capture fishing and processing together. Aquaculture therefore accounted for 61% of the real growth of marine fishing, aquaculture and processing since 2019.

Figure 3.3. Marine aquaculture grew fastest and contributed most to the real growth of marine fishing, aquaculture and processing after 2008

Average annual real growth of gross value added, %, 1995-2025, plus average annual contributions to the real growth of the component, percentage points

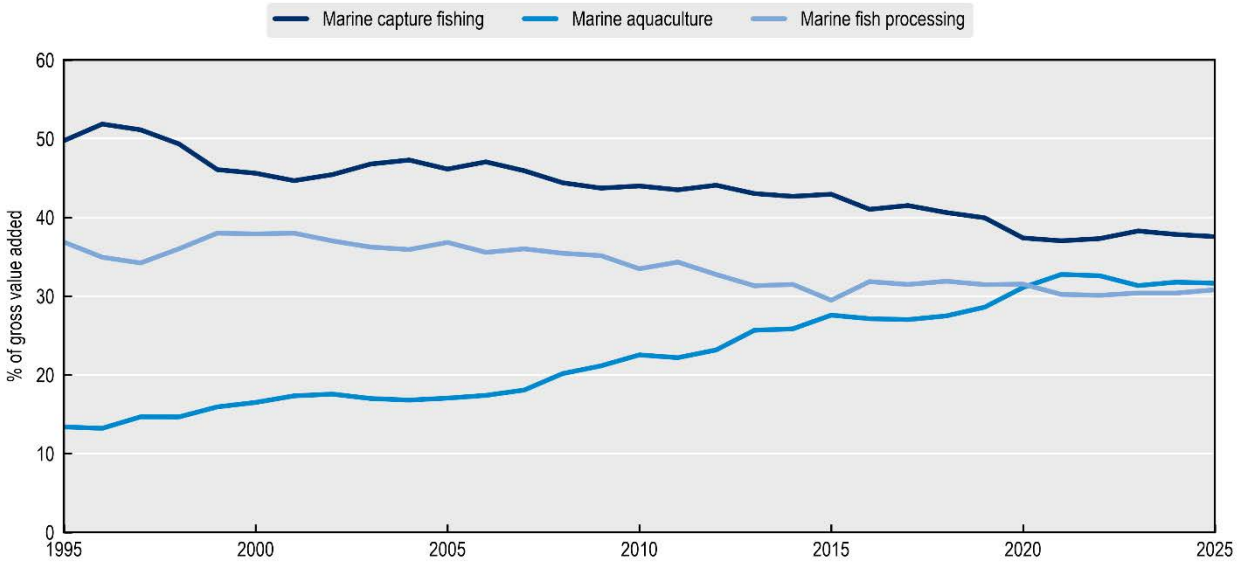


Note: Panel A shows average annual real growth of gross value added between 1995 and 2025. Panel B shows annual average contributions to the annual real growth of marine fishing, aquaculture and processing. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Marine capture fishing generated the largest share of the GVA of marine fishing, aquaculture and processing in every year between 1995 and 2025, although its share fell over the period (Figure 3.4). Its share fell from 49.7% in 1995 to 37.6% in 2025. Marine aquaculture's share rose from 13.4% to 31.6%, the largest gain, most of it during the 2008-2019 period (8.4 p.p.). It passed marine fish processing in 2021 to become the second largest activity by GVA and has stayed ahead since. Marine fish processing's share fell from 36.9% to 30.8%, most of the fall during the 2008-2019 period.

Figure 3.4. Marine capture fishing generated the largest share of gross value added in every year between 1995 and 2025, although its share fell over the period as marine aquaculture's increased

Share of each activity in the gross value added of marine fishing, aquaculture and processing, %, current prices, 1995-2025

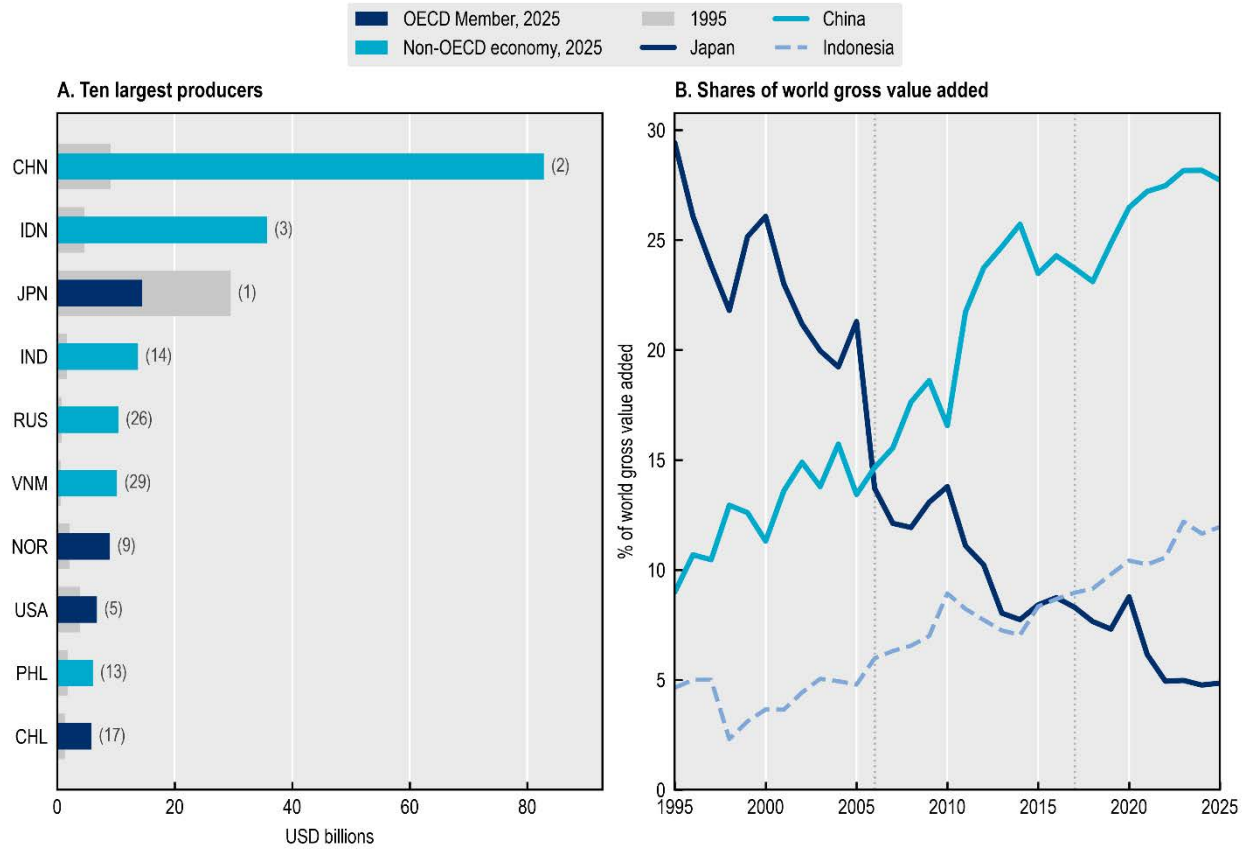


Note: Gross value added is given at basic prices in current prices. Shares are calculated of the sum of the four activities' gross value added in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

The People's Republic of China (hereafter "China") became the largest generator of marine fishing, aquaculture and processing GVA in 2006 (Figure 3.5). It represents 27.7% of the world total in 2025. In current prices China's GVA in marine fishing, aquaculture and processing was USD 82.8 billion in 2025 and Indonesia's USD 35.7 billion, compared with USD 14.5 billion for Japan. Viet Nam rose from 29th among economies in 1995 to sixth in 2025. Four of the ten largest marine fishing, aquaculture and processing economies are OECD Members: Japan, Norway, the United States, and Chile. The economies that rose furthest in the ranking are outside the OECD area.

Figure 3.5. China became the largest generator of marine fishing, aquaculture and processing gross value added in 2006

Gross value added of the ten largest economies in 2025, USD billions, current prices, plus shares of the three largest economies in world gross value added, %, current prices, 1995-2025

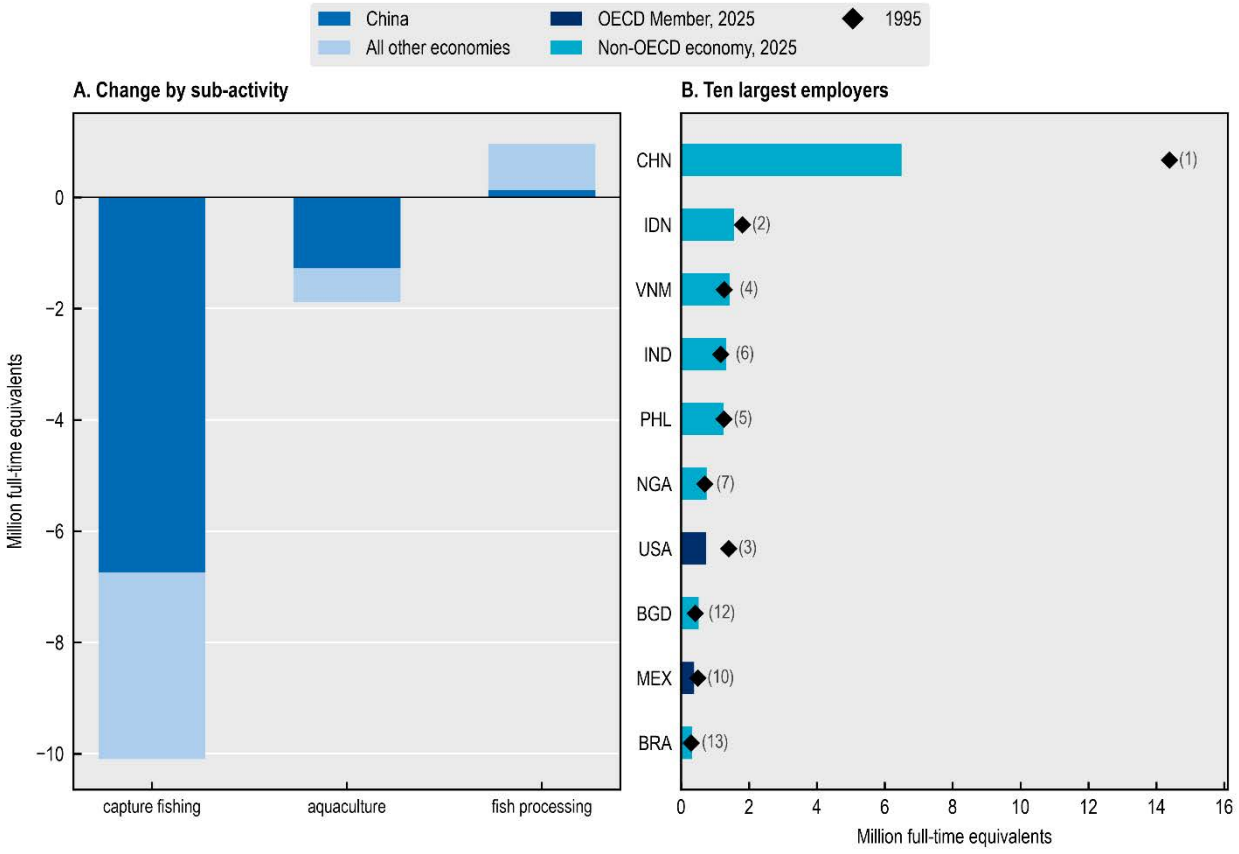


Note: Panel A ranks economies by their gross value added in marine fishing, aquaculture and processing in 2025, with their 1995 values as pale bars and their 1995 rank in brackets. Panel B shows the shares of world gross value added of the three economies that have been the largest. Gross value added is given at basic prices in current prices. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark bars indicate OECD Members. The dotted lines in panel B mark 2006 and 2017, the first years in which China and then Indonesia produced more than Japan. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Marine fishing, aquaculture and processing employed 20.5 million full-time equivalents (FTEs) in 2025, 35% fewer than in 1995, with marine capture fisheries in China accounting for most of the fall (Figure 3.6). Marine capture fishing lost 10.1 million FTEs between 1995 and 2025, two-thirds of them in China. Marine aquaculture FTEs decreased by 1.9 million. Marine fish processing was the only sub-activity in which FTEs increased and gained 961 000 almost all outside China. China still employed 6.5 million FTEs in 2025, more than the next four largest employers, Indonesia, Viet Nam, India and the Philippines, combined. The United States, which was third among economies in 1995, was seventh in 2025. Nigeria, Bangladesh, Mexico and Brazil complete the ten largest employers. Although processing FTEs increased over the period, marine fishing, aquaculture and processing now employs fewer FTEs overall and the fall mostly occurred in capture fishing in China.

Figure 3.6. Employment in marine fishing, aquaculture and processing fell by a third between 1995 and 2025, mostly in Chinese capture fisheries

Change in full-time equivalents between 1995 and 2025, millions, plus full-time equivalents of the ten largest employers in 1995 and 2025, millions

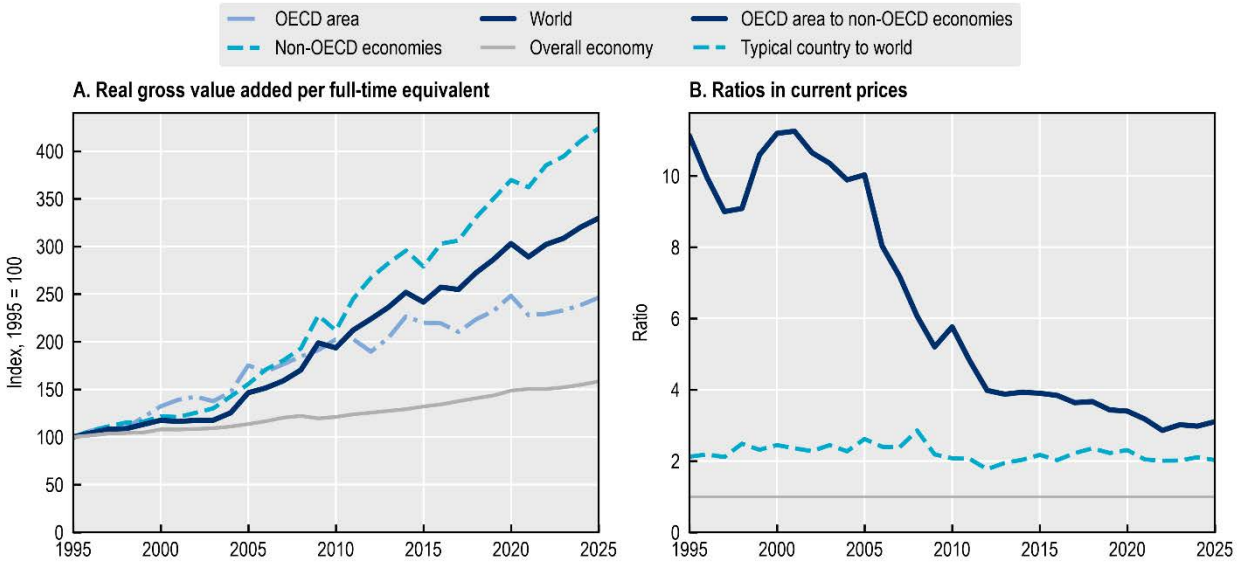


Note: Panel A shows the change in full-time equivalents between 1995 and 2025 by sub-activity, split between China and all other economies. Panel B ranks economies by their full-time equivalents in marine fishing, aquaculture and processing in 2025, with markers showing their 1995 full-time equivalents and their 1995 rank among economies in brackets. Dark bars indicate OECD Members. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Labour productivity in marine fishing, aquaculture and processing more than tripled in real terms between 1995 and 2025, four times the rise in the overall economy (Figure 3.7). The economies outside the OECD area closed most of their gap with the OECD area. Labour productivity as measured by real terms GVA per FTE rose by 230% over the period, compared with 58% in the overall economy. Outside the OECD area it rose by 324% and within it by 146%. In current prices, GVA per FTE in the OECD area was 11.1 times the level outside it in 1995 and 3.1 times in 2025. The typical country's GVA per FTE was double the world level in 2025. The world level is low because the economies outside the OECD area, where each FTE produced less GVA, employ most of the FTEs in marine fishing, aquaculture and processing.

Figure 3.7. Labour productivity in marine fishing, aquaculture and processing more than tripled in real terms, four times the rise in the overall economy

Gross value added per full-time equivalent, real terms index 1995 = 100, plus ratios of the OECD area's level to the non-OECD level and of the typical country's level to the world level, current prices, 1995-2025

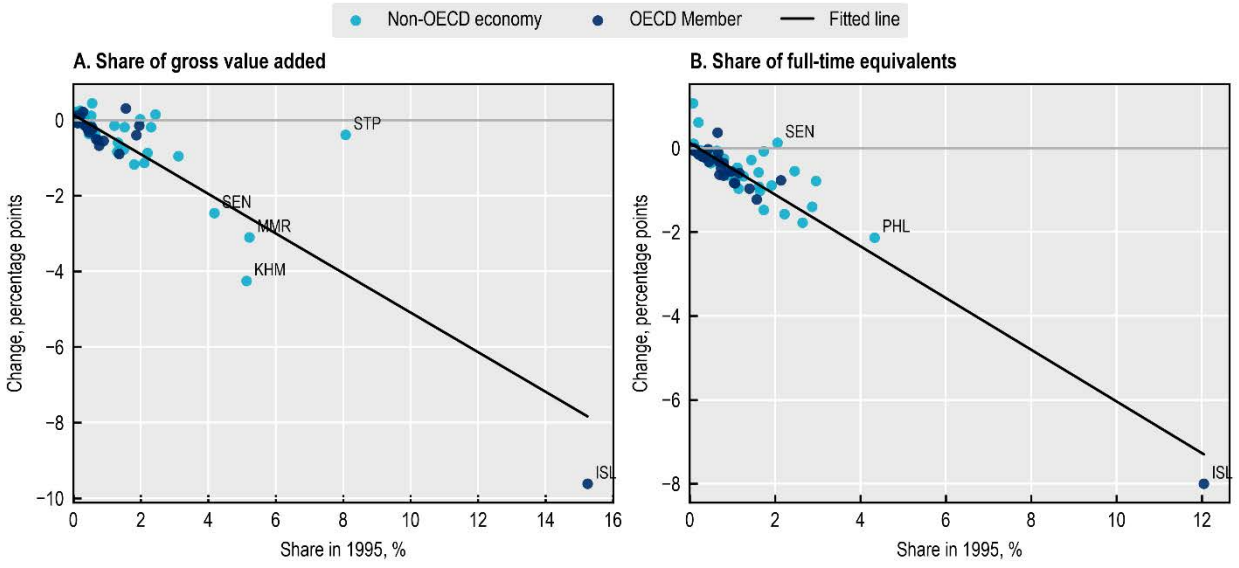


Note: Panel A shows gross value added per full-time equivalent in real terms as an index with 1995 equal to 100 and the same for the overall economy. Panel B shows the ratio of gross value added per full-time equivalent in the OECD area to that in non-OECD economies and the ratio of the typical country's level to the world level in current prices. World combines both OECD and non-OECD economies. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The typical country is the median economy. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Dependence on marine fishing, aquaculture and processing narrowed across economies between 1995 and 2025 (Figure 3.8). Its share of national GVA fell in two-thirds of economies. Its share of national FTEs fell in 83%. In Iceland, where marine fishing, aquaculture and processing accounted for the highest share of any national economy in 1995 at 15.2%, it represented 5.6% of national GVA in 2025. Its share of Iceland's FTEs also decreased, from 12.0% to 4.0%. An economy in which the share of GVA was 10 percentage points higher in 1995 saw, on average, a fall 5.2 p.p. larger by 2025. For the share of FTEs, the fall was 6.2 p.p. larger. Dependence on marine fishing, aquaculture and processing for GVA and for jobs has therefore narrowed across economies.

Figure 3.8. Dependence on marine fishing, aquaculture and processing narrowed across economies between 1995 and 2025

Change in shares of each economy's national gross value added and in its full-time equivalents between 1995 and 2025, percentage points, plotted against shares in 1995, %, current prices



Note: Panel A plots the change between 1995 and 2025 in the share of marine fishing, aquaculture and processing in each economy's gross value added against its share in 1995. Panel B does the same for its share of full-time equivalents. Gross value added is given at basic prices in current prices. Dark markers indicate OECD Members. The lines are least-squares regressions of the change on the 1995 share, with a slope of -0.52 and an R-squared of 0.77 in panel A and a slope of -0.62 and an R-squared of 0.89 in panel B. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Further reading

OECD (2025), OECD Review of Fisheries 2025, OECD Publishing, Paris, https://doi.org/10.1787/560cd8fc-en

OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris, https://doi.org/10.1787/a9096fb1-en

OECD (2025), "How can government spending better support productive and resilient fisheries?", OECD Policy Briefs, No. 19, OECD Publishing, Paris, https://doi.org/10.1787/f9617075-en

OECD and FAO (2025), OECD-FAO Agricultural Outlook 2025-2034, OECD Publishing, Paris, https://doi.org/10.1787/f1f71f35-en

4 Energy, minerals and fresh water from the ocean: Offshore energy and marine non-living resources

Oil and gas extracted from beneath the seabed, metals and minerals mined from it, electricity generated by offshore wind and other marine renewables, and the desalination of seawater all supply energy, minerals and fresh water from the ocean. This chapter examines offshore energy and marine non-living resources using the OECD's estimates of ocean economic activity.

In Brief

Offshore energy and marine non-living resources grew slower than the ocean economy as a whole between 1995 and 2025 but was its largest area in 12 of those years. It generated USD 1.1 trillion of gross value added in real terms in 2025, up 73% from 1995, compared with 133% for the ocean economy.

Offshore oil and gas extraction generated the majority of its gross value added, which shifted from crude oil towards natural gas and, after 2019, offshore wind. Offshore oil and gas extraction produced 85.0% of the output of offshore energy and marine non-living resources in 2025, down from 92.6% in 1995. Crude oil's share of that output fell from 66.1% to 44.6% while offshore wind's rose from nothing to 7.5%.

Non-OECD Asia gained the largest share of offshore energy and marine non-living resources between 2008 and 2019 while the largest reduction in share was in OECD Europe. Non-OECD Asia's share of world gross value added rose from 32.1% in 1995 to 45.5% in 2025, while OECD Europe's fell from 30.8% to 19.9%.

Its real growth slowed sharply after 2008. It grew in 2009 and 2020, when the ocean economy contracted, but fell in seven years in which the ocean economy grew. Its growth slowed from 2.7% a year before 2008 to 1.0% a year between 2008 and 2019.

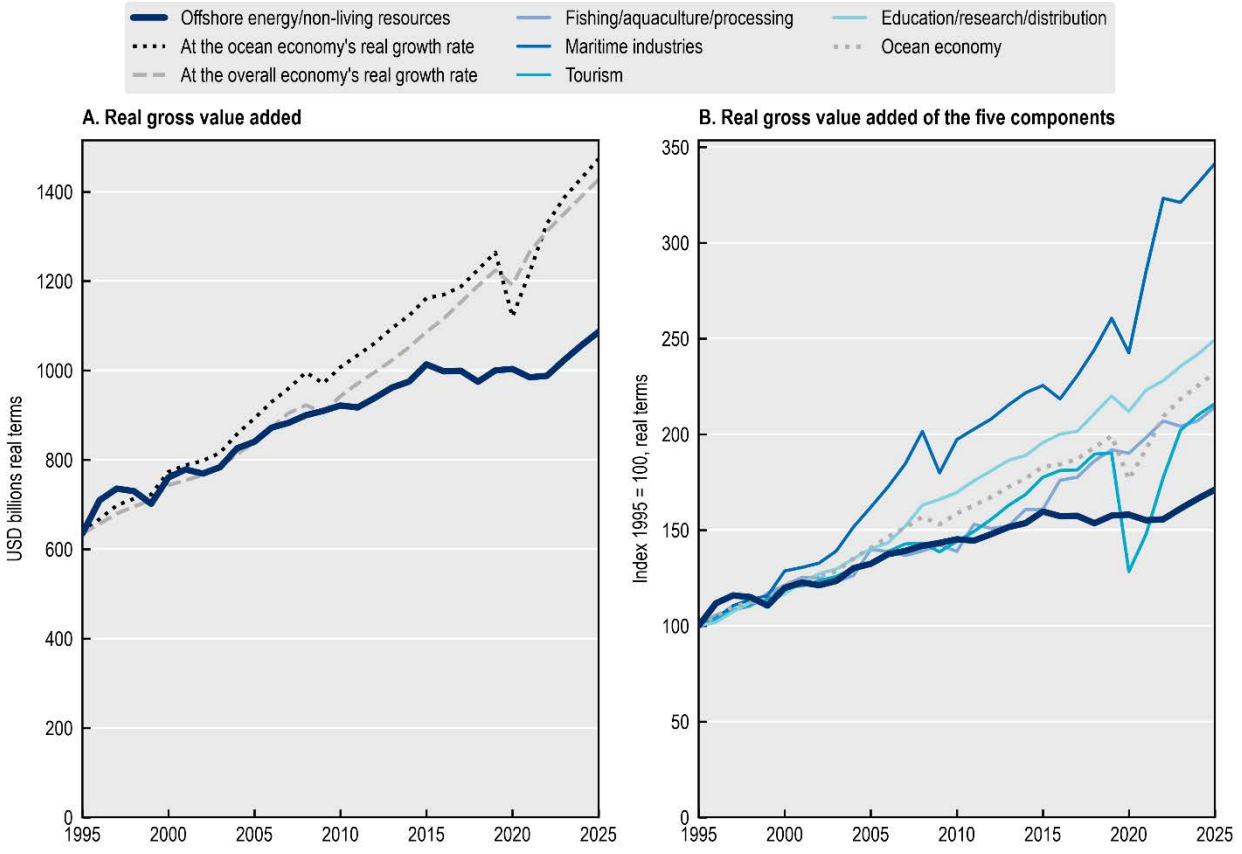
The global landscape shifted as new producers gained prominence. Its fastest growth came from economies that were small producers in 1995. Norway generated 12.5% of world gross value added in 2025 and the United Kingdom 5.4% (compared to 13.4% previously). The People's Republic of China increased its share substantially, becoming the fourth-largest economy and growing by 13.5% a year.

Its employment grew by almost half while its labour productivity grew less than the overall economy's. Full-time equivalents rose from 1.1 million to 1.7 million, most of the increase coming from offshore oil and gas extraction. Real gross value added per full-time equivalent job rose by 16%, compared with 58% in the overall economy.

Offshore energy and marine non-living resources generated gross value added (GVA) of USD 1.1 trillion in real terms in 2025 but it grew slower than the rest of the ocean economy between 1995 and 2025 (Figure 4.1). Its GVA reached 1.7 times its 1995 level, compared with 2.1 times for marine fishing, aquaculture and processing, 2.2 times for marine and coastal tourism, 2.5 times for ocean education, research and goods distribution and 3.4 times for maritime industries. Had energy and non-living resources grown at the ocean economy's rate, its GVA would have reached USD 1.5 trillion in real terms in 2025 (36% more than it actually did). It grew fourth fastest of the five components in the 1995-2008 period, at 2.7% a year, and slowest in the 2008-2019 and 2019-2025 periods, at 1.0% and 1.4% a year. It grew more than marine fishing, aquaculture and processing for the last time in 2010. But it grew more than marine and coastal tourism in 2020 and 2021, when tourism contracted during the COVID-19 pandemic. Its gap with the trajectory of the ocean economy therefore widened in each of the three periods.

Figure 4.1. Offshore energy and marine non-living resources grew in real gross value added terms between 1995 and 2025 but did so at a slower rate than any other component of the ocean economy

Gross value added of offshore energy and marine non-living resources, USD billions in real terms, plus the gross value added of the five components of the ocean economy, real terms index 1995 = 100, 1995-2025

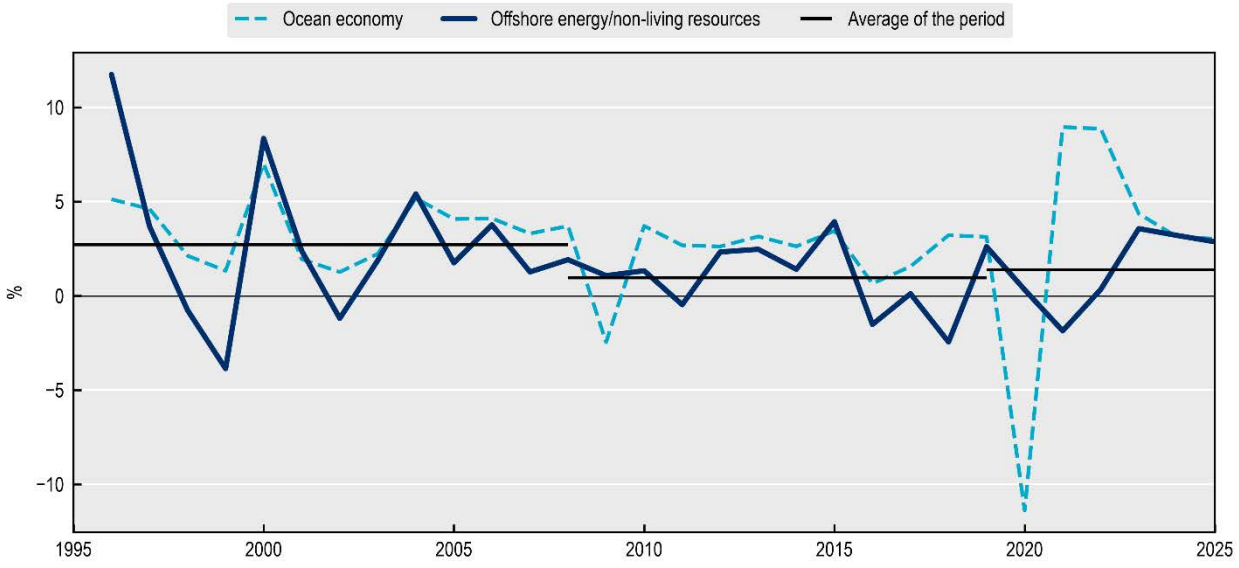


Note: Panel A shows the gross value added of offshore energy and marine non-living resources in real terms. The dotted and dashed lines give the levels it would have reached had it grown from its 1995 level at the real growth rates of the ocean economy and of the overall economy. Panel B shows the gross value added of each of the five components of the ocean economy in real terms as an index. Each area's index is set to 100 in 1995. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity

The real GVA of offshore energy and marine non-living resources grew during the only two years when the ocean economy as a whole contracted in 2009 and in 2020 (Figure 4.2). It fell in seven years in which the ocean economy grew. Its growth slowed from 2.7% per year between 1995 and 2008 to 1.0% per year between 2008 and 2019. In 2009 its GVA grew by 1.1% in real terms while the ocean economy's fell by 2.5%. In 2020, during the COVID-19 pandemic, it grew by 0.3% while the ocean economy's fell by 11.4%. Between 2019 and 2025 it grew by 1.4% a year compared with 2.6% for the ocean economy, so it grew more slowly on average than the ocean economy in each of the three periods. Offshore energy and marine non-living resources therefore followed a different cycle to the ocean economy.

Figure 4.2. Offshore energy and marine non-living resources grew and contracted in different years than the ocean economy as a whole

Annual real growth of gross value added of offshore energy and marine non-living resources and of the ocean economy, %, 1996-2025

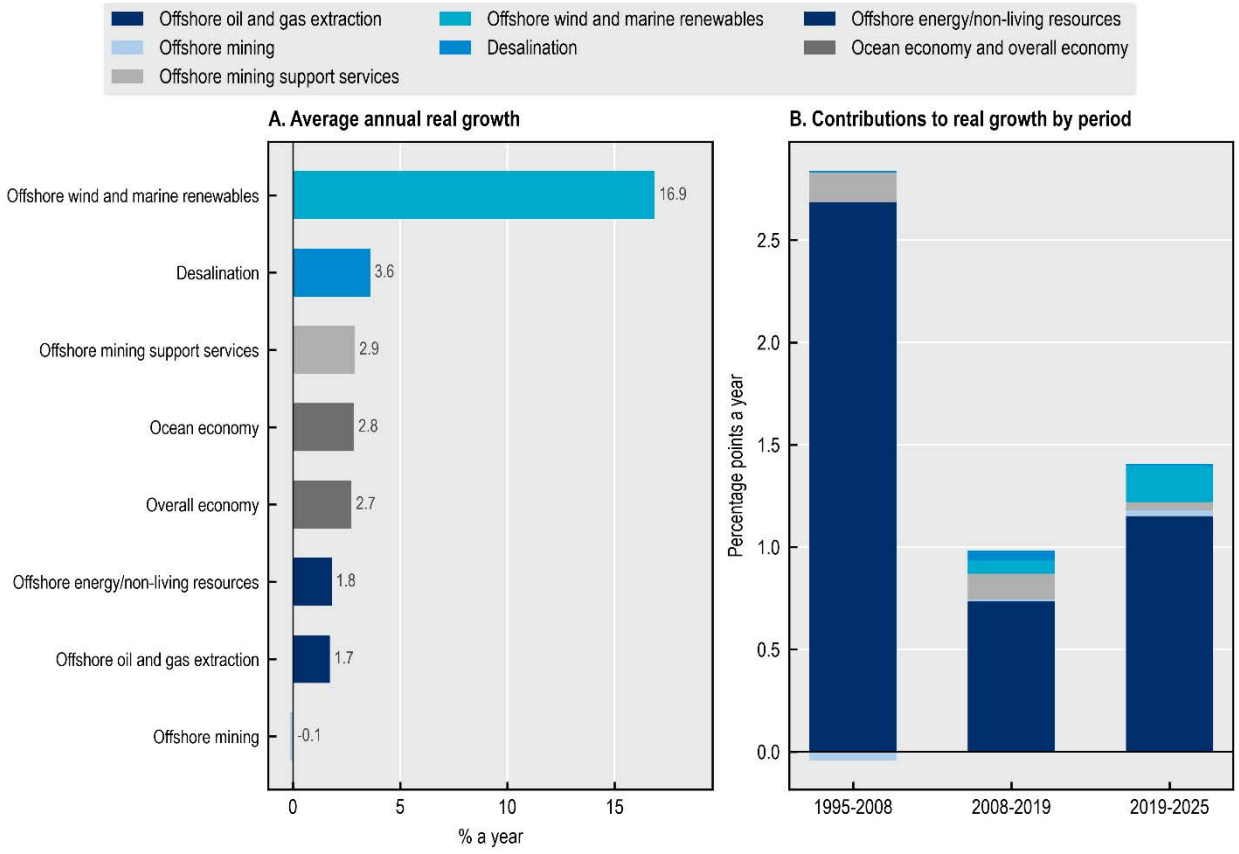


Note: The horizontal segments mark the average annual real growth of offshore energy and marine non-living resources in each of the three periods. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Offshore wind and marine renewables grew fastest in real terms between 1995 and 2025, while offshore oil and gas extraction contributed most to its real growth in each of the three periods (Figure 4.3). Offshore wind and marine renewables' real terms GVA grew by 16.9% a year, compared with 1.7% for offshore oil and gas extraction and 1.8% for offshore energy and marine non-living resources as a whole. Offshore oil and gas extraction contributed 2.7 p.p. a year to real growth in the 1995-2008 period, 0.7 p.p. in the 2008-2019 period and 1.2 p.p. in the 2019-2025 period. Natural gas contributed 1.5 p.p. a year to the real growth of offshore oil and gas extraction in the 2019-2025 period while crude oil subtracted 0.3 p.p. a year. Offshore wind and marine renewables was the second-largest contributor in that period, at 0.2 p.p. a year. Desalination grew by 3.6% a year and offshore mining support services by 2.9%, both faster than offshore oil and gas extraction. Offshore mining contracted by 0.1% a year. The growth of offshore energy and marine non-living resources therefore reduced as offshore oil and gas extraction, the largest activity by GVA, slowed down.

Figure 4.3. Offshore wind and marine renewables grew fastest while offshore oil and gas extraction contributed most to the real growth of offshore energy and marine non-living resources

Average annual real terms gross value added growth, %, 1995-2025, plus average annual contributions to real growth of offshore energy and marine non-living resources, percentage points, 1995-2008/2008-2019/2019-2025

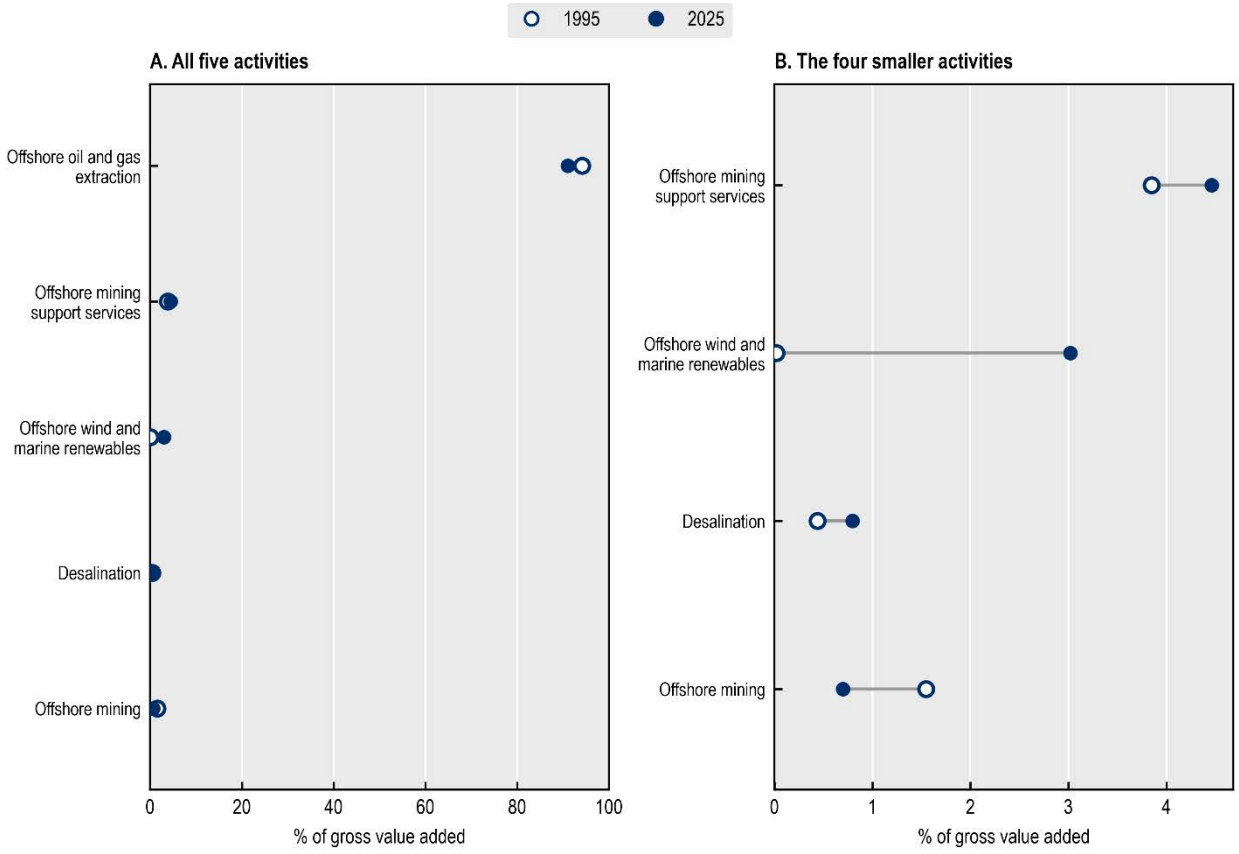


Note: Panel A shows the average annual real growth of gross value added between 1995 and 2025. Panel B shows the average over the years of each period of the contribution of each activity to the annual real growth of offshore energy and marine non-living resources, so that the columns add up to the average of its annual real growth rates in the period. Offshore crude oil, offshore natural gas and offshore condensates are shown together as offshore oil and gas extraction. Offshore metal ores and offshore other mining are shown together as offshore mining. Offshore wind and marine renewables are shown together. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Offshore oil and gas extraction generated over 90% of the GVA of offshore energy and marine non-living resources in every year between 1995 and 2025 (Figure 4.4). Its share increased to 95.0% in 2008 before decreasing by 2.2 p.p. between 2008 and 2019 and by a further 1.8 p.p. between 2019 and 2025. Offshore crude oil extraction's contribution in isolation fell from 68.7% in 1995 to 47.9% in 2025 while offshore natural gas extraction's rose from 24.0% to 39.2%. The largest part of both changes came in the 2019-2025 period, when crude oil lost 9.6 p.p. of the total and natural gas gained 8.6 p.p. of it. Offshore mining support services was the second-largest activity by GVA at 4.5% in 2025. Offshore wind and marine renewables' share increased from nothing in 1995 to 3.0% of GVA in 2025, 2.2 p.p. of its increase occurring in the 2019-2025 period. It has produced more GVA than desalination in every year since 2022. Desalination's share rose from 0.4% in 1995 to 0.8% in 2025.

Figure 4.4. Offshore oil and gas extraction generated more than nine-tenths of the gross value added of offshore energy and marine non-living resources in every year between 1995 and 2025

Share of each activity in the gross value added of offshore energy and marine non-living resources, %, current prices, 1995 and 2025

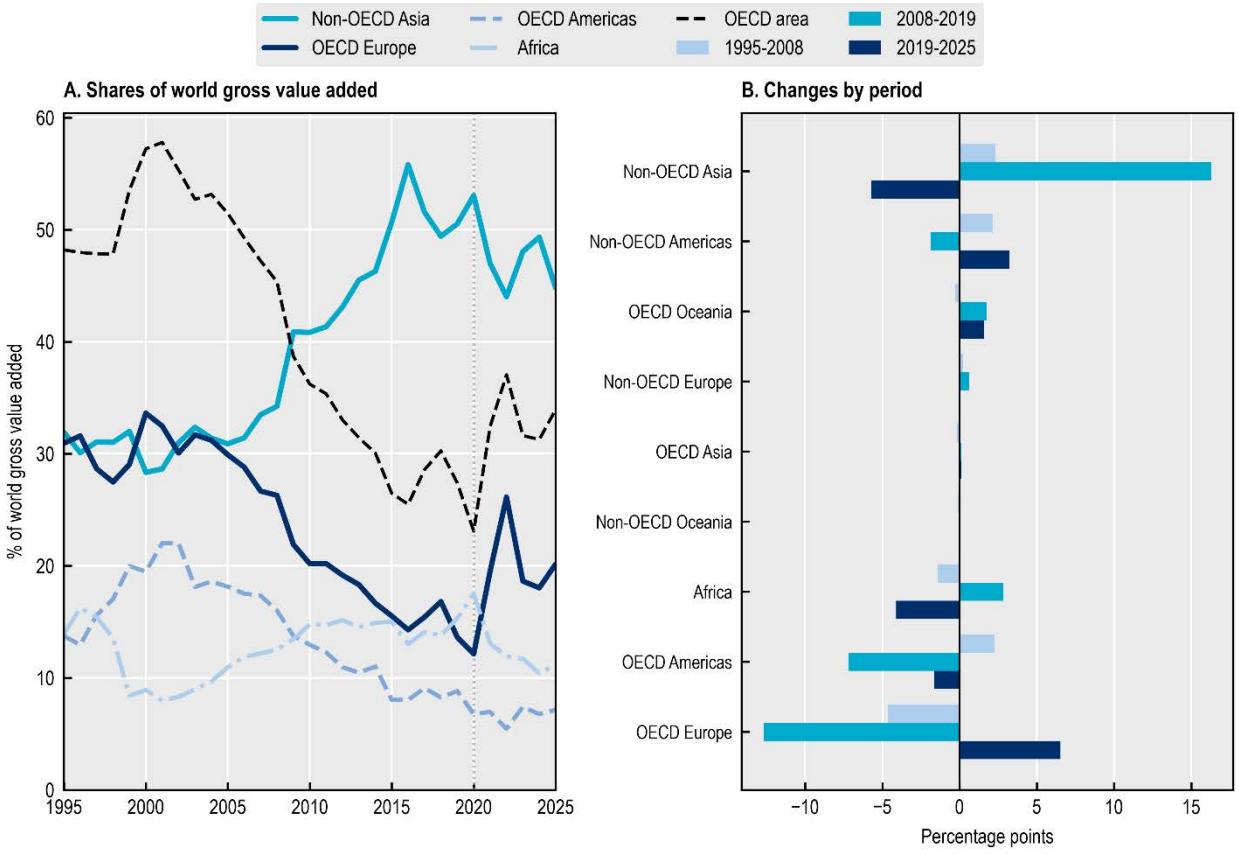


Note: Panel A shows the share of each activity in the gross value added of offshore energy and marine non-living resources. Panel B shows the four activities other than offshore oil and gas extraction with the axis enlarged. Gross value added is given at basic prices in current prices. Shares are calculated of the sum of the nine activities' gross value added in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: experimental international statistics on ocean economic activities.

Non-OECD Asia's share of world GVA in offshore energy and marine non-living resources increased from 31.9% in 1995 to 44.8% in 2025 while OECD Europe's fell from 30.9% to 20.2% (Figure 4.5). The largest part of both these changes came between 2008 and 2019. During the 2008-2019 period, non-OECD Asia gained 16.3 p.p. of the world total while OECD Europe lost 12.7 p.p. and the OECD Americas 7.2 p.p. Non-OECD Asia's share peaked at 55.8% in 2016. The OECD area's share was at its lowest in 2020 at 23.1%. Between 2019 and 2025 the shift partly reversed, with OECD Europe regaining 6.5 p.p. of the world total and non-OECD Asia losing 5.7 p.p. of it. Over the whole period the OECD area's share of energy and non-living resources decreased from 48.2% to 34.0%, so that two-thirds of its world GVA is now produced outside the OECD area.

Figure 4.5. Non-OECD Asia is the largest regional generator of gross value added in offshore energy and marine non-living resources and gained most of its share between 2008 and 2019

Share of each regional group in world gross value added, %, current prices, 1995-2025, plus the change in each regional group's share in three periods, percentage points

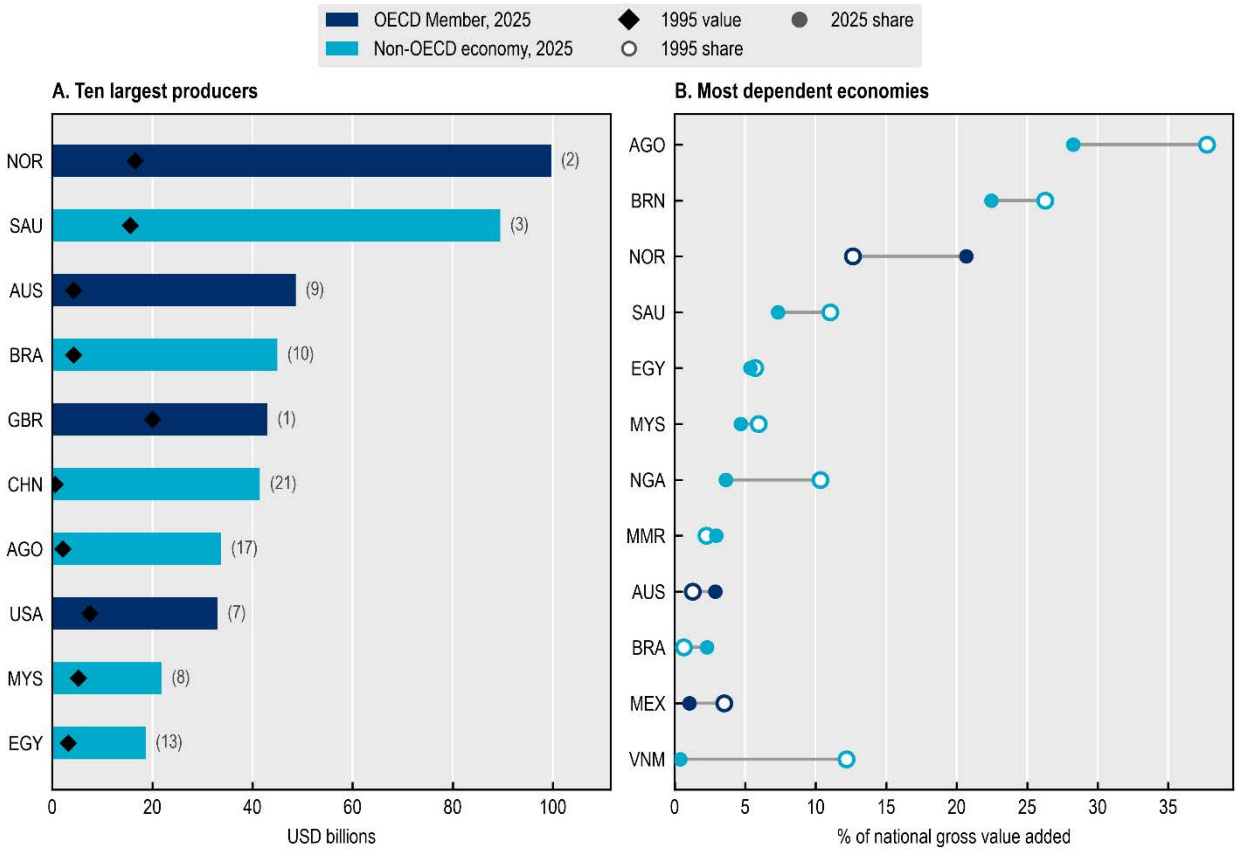


Note: Regional groups are the UN M49 regions split by OECD membership. Panel A shows the shares of the four regional groups with the largest shares and of the OECD area. Panel B shows the change in each regional group's share over each of the three periods and ordered by the change over the whole period. Gross value added is given at basic prices in current prices. Regional and world totals include economies that are not identified separately in the experimental ocean economy supply and use tables. The dotted line in panel A marks 2020, the year of the OECD area's lowest share. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Many of the economies that depended most on offshore energy and marine non-living resources in 1995 were less dependent on it by 2025 (Figure 4.6). Of the ten most dependent economies of 1995, only Norway and Myanmar were more dependent in 2025 with Norway's share having risen by 8.0 p.p. to 20.7%. Angola remained the most dependent economy, although energy and non-living resources decreased from 37.8% of its GVA in 1995 to 28.3% in 2025. Viet Nam's dependence fell from 12.2% to 0.4%. Norway and Saudi Arabia were the largest producers in 2025, with 12.7% and 11.4% of world GVA, after the United Kingdom, which produced 13.4% in 1995. Norway first produced more than the United Kingdom in 1997 and then Saudi Arabia in 2009. The United Kingdom's share of world GVA fell to 5.5% by 2025, when it was fifth among economies. The People's Republic of China (hereafter "China") rose from 21st in 1995 to sixth by 2025. The current largest producer of offshore energy and marine non-living resources is therefore also the economy whose dependence on it has grown the most.

Figure 4.6. Many economies where offshore energy and marine non-living resources represented a large share of their overall economies became less dependent on it over time

Ten largest economies in gross value added of offshore energy and marine non-living resources, USD billions, current prices, 2025 and 1995, plus the share of offshore energy and marine non-living resources in national gross value added in the most dependent economies, %, current prices, 1995 and 2025



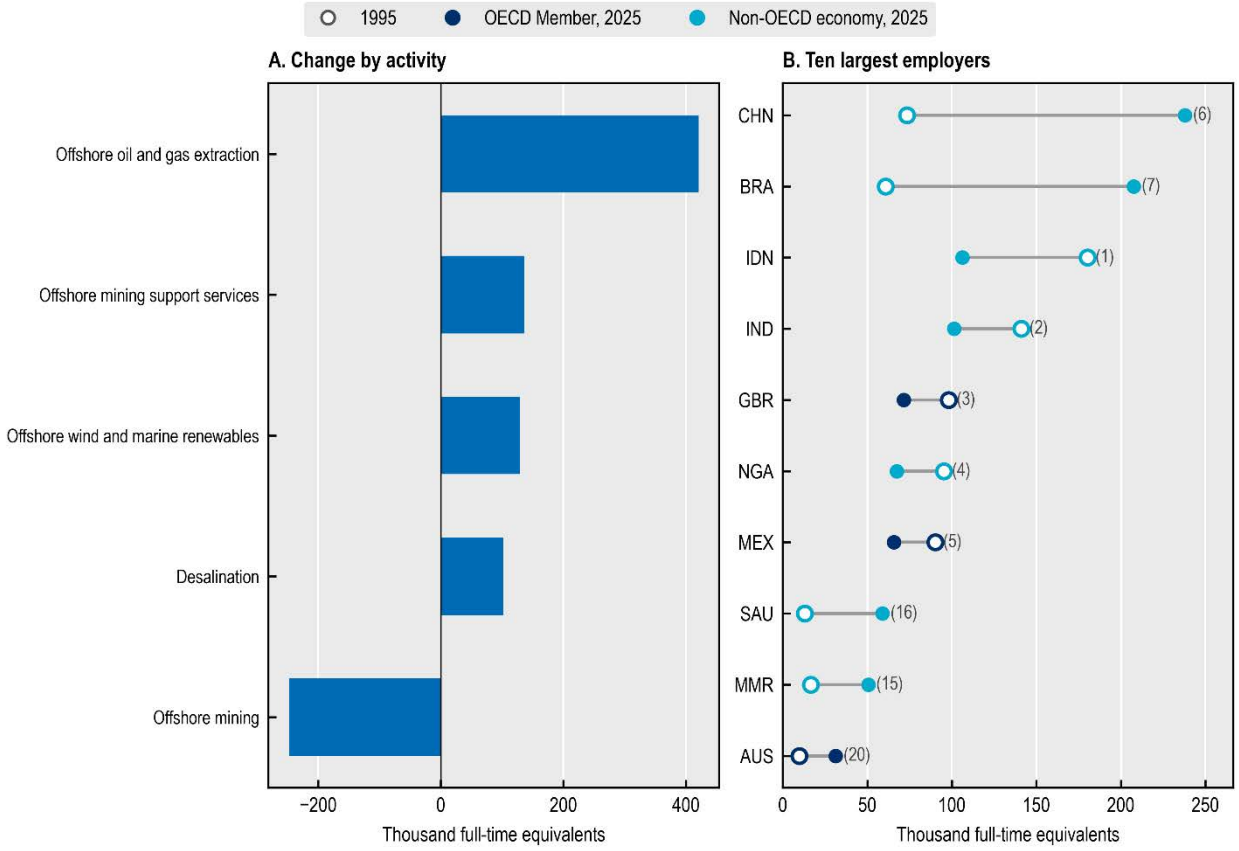
Note: Panel A ranks economies by their gross value added in offshore energy and marine non-living resources in 2025, with markers showing their 1995 gross value added and their 1995 rank among economies given in brackets. Panel B shows the share of offshore energy and marine non-living resources in each economy's gross value added in 1995 marked by the unfilled circle and in 2025 marked by the filled circle. Only the economies that were among the ten most dependent in either year are shown and ordered by their 2025 share. Gross value added is given at basic prices in current prices. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark bars and dark markers indicate OECD Members. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Offshore energy and marine non-living resources employed 1.7 million full-time equivalents (FTEs) in 2025, 47% more than in 1995 (Figure 4.7). Offshore oil and gas extraction accounted for most of the increase. Ocean economy FTEs rose by a third over the same period. Energy and non-living resources employed only 1.6% of ocean economy FTEs in 2025 even though it generated 23.7% of ocean economy GVA. Offshore oil and gas extraction added 421 000 FTEs over the period. Desalination added 102 000 FTEs. In 2025 it employed 8.4% of the FTEs of energy and non-living resources while producing 0.8% of its GVA. Offshore wind and marine renewables added 129 000 FTEs, almost all of them after 2008, and employed 7.7% of the FTEs of energy and non-living resources in 2025 while producing 3.0% of its GVA. China employed 238 000 FTEs in 2025, 14.1% of the world total. Brazil rose from seventh in 1995 to second and Indonesia, the largest employer in 1995, was third in 2025. The United Kingdom fell from third to fifth. Only five of the ten largest employers are among the ten largest producers in GVA terms. The

economies that employ the largest number of FTEs in energy and non-living resources are not necessarily those that produce the most GVA.

Figure 4.7. Employment in offshore energy and marine non-living resources increased by almost 50 per cent between 1995 and 2025

Change in full-time equivalents between 1995 and 2025, thousands, plus full-time equivalents of the ten largest employers, thousands, 2025 and 1995

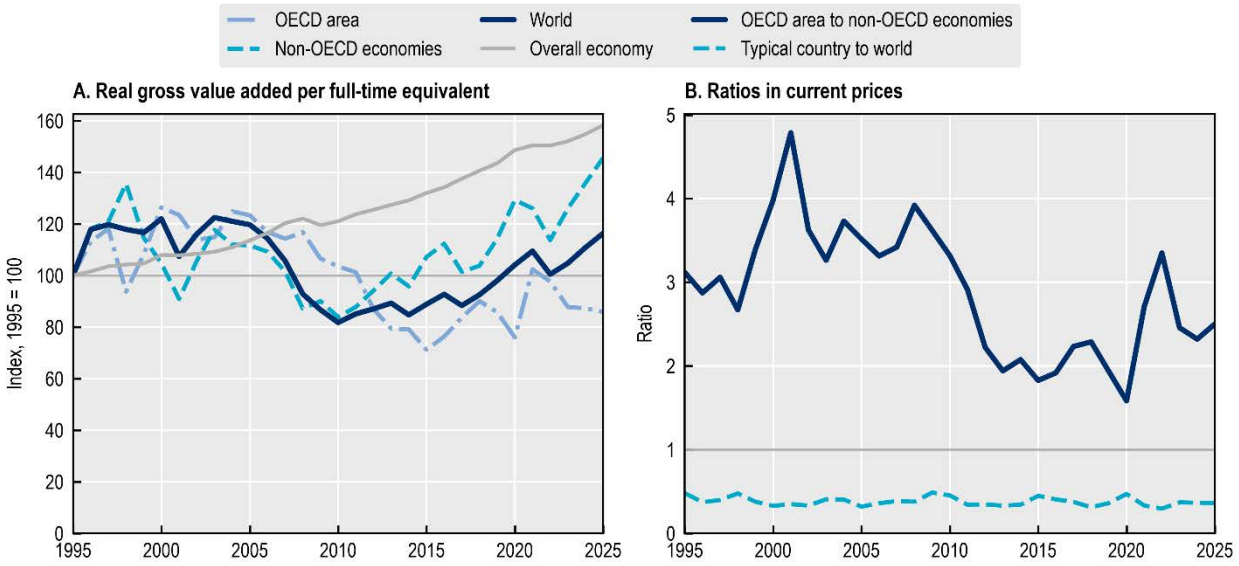


Note: Panel A shows the change in full-time equivalents between 1995 and 2025. Panel B ranks economies by their full-time equivalents in 2025 (filled circles) and 1995 (unfilled circles). Their rank in 1995 is in brackets. Dark markers indicate OECD Members. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity

Labour productivity in offshore energy and marine non-living resources rose by 16% in real terms between 1995 and 2025, compared with 58% in the overall economy (Figure 4.8). It decreased 14% in the OECD area and increased 46% outside it. Labour productivity as measured by real terms GVA per FTE rose because GVA grew by 71% while FTEs rose by 47%. GVA per FTE in energy and non-living resources was USD 464 300 in current prices in 2025, 17.7 times the level in the overall economy, reflecting the capital intensity of offshore extraction and mining. In the OECD area it was USD 925 000 in 2025, 2.5 times the level outside it, and smaller than the 3.1 times gap in 1995. The gap was widest in 2001 at 4.8 times and narrowest in 2020 at 1.6 times. The typical country's GVA per FTE was USD 168 400 in 2025, less than half the world level. The economies outside the OECD area, where each FTE produces less GVA, employ 83% of its FTEs.

Figure 4.8. Labour productivity in offshore energy and marine non-living resources rose in real terms between 1995 and 2025 but by less than in the overall economy

Gross value added per full-time equivalent in offshore energy and marine non-living resources, index 1995 = 100 in real terms, OECD area, non-OECD economies and world, with the overall economy, plus the ratio of the OECD area's level to the non-OECD level and of the typical country's level to the world level, current prices, 1995-2025

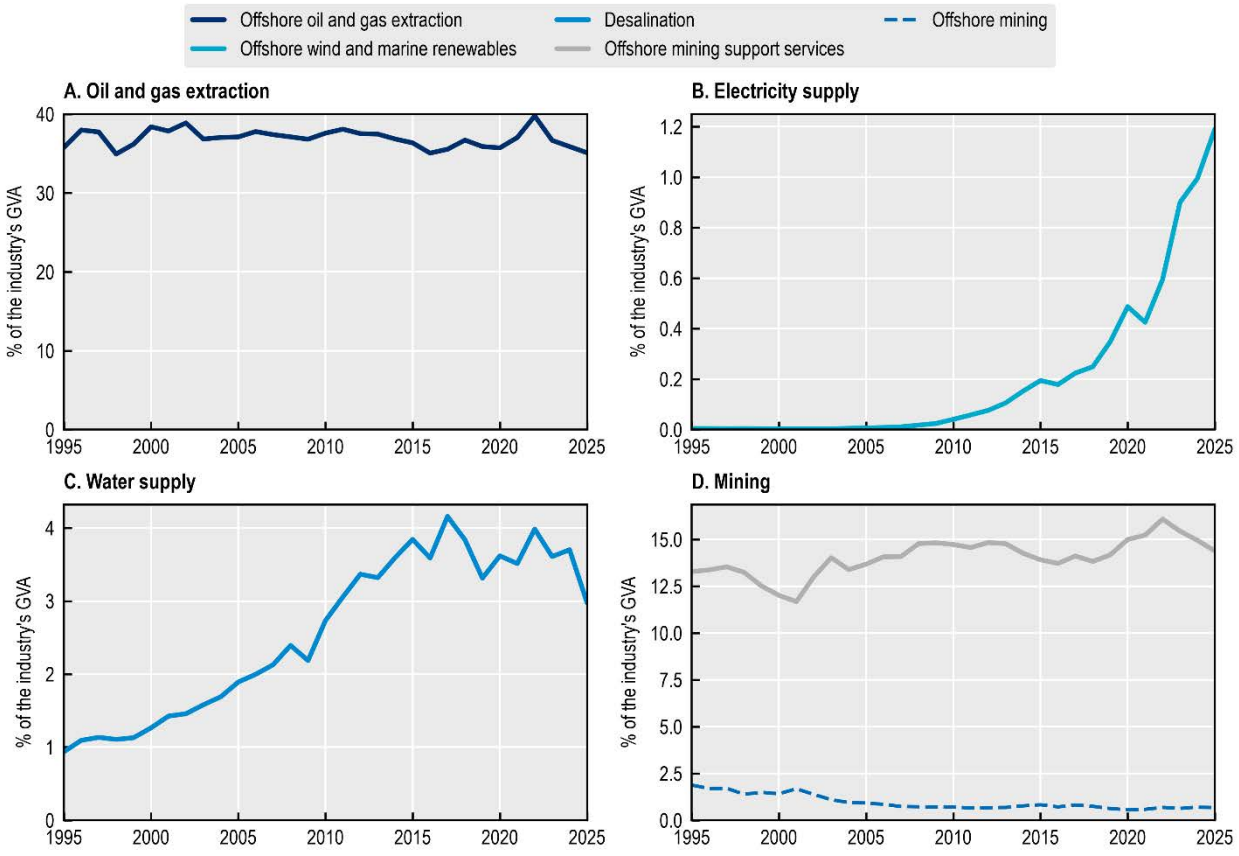


Note: Panel A shows gross value added per full-time equivalent in offshore energy and marine non-living resources in real terms as an index with 1995 equal to 100, with the same index for the overall economy. Panel B shows the ratio of gross value added per full-time equivalent in the OECD area to that in non-OECD economies, and the ratio of the typical country's level to the world level, both in current prices. World combines both OECD and non-OECD economies. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The typical country is the median of the economies with offshore energy and marine non-living resources. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Offshore oil and gas extraction produced 35.1% of the GVA of the overall oil and gas extraction industry in 2025, almost the same share as in 1995 (Figure 4.9). Desalination rose from 0.9% to 3.0% of water supply. Offshore wind and marine renewables rose from nothing to 1.2% of electricity supply. Within the oil and gas extraction industry, offshore crude oil's share of GVA decreased from 26.1% to 18.5% while offshore natural gas's increased from 9.1% to 15.1%. The offshore part of the industry therefore held its share while its composition shifted from crude oil to natural gas. The offshore part was largest as a share of the total in 2022 at 39.8%. Desalination's share of water supply peaked at 4.2% in 2017. The offshore parts of mining stayed small, offshore mining support services at 14.4% of their industry in 2025 and offshore mining at 0.7%. The offshore and marine parts of these industries therefore grew most in the production of fresh water and generation of electricity from the ocean.

Figure 4.9. Offshore extraction and mining held their shares in their parent industries between 1995 and 2025, while offshore wind and desalination became more significant parts of utility industries overall

Share of each activity of offshore energy and marine non-living resources in the gross value added of its parent industry, %, current prices, 1995-2025



Note: Each panel shows the share of the gross value added of a parent industry produced by its offshore or marine part. Panel A shows offshore oil and gas extraction as a part of the extraction of crude petroleum and natural gas. Panel B shows offshore wind and marine renewables as a part of electricity, gas, steam and air conditioning supply. Panel C shows desalination as a part of water collection, treatment and supply. Panel D shows offshore mining support services as a part of mining support service activities and offshore mining as a part of other mining and quarrying and the mining of metal ores together. Gross value added is given at basic prices in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity

Further reading

IEA (2026), Global Energy Review 2026, IEA, Paris https://www.iea.org/reports/global-energy-review-2026

Ocean Energy Systems (OES) (2026), IEA-OES Annual Report: An Overview of Ocean Energy Activities in 2025, Report by OES for the International Energy Agency (IEA), OES | Annual Report 2025.

OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris, https://doi.org/10.1787/a9096fb1-en

5 Moving goods and people across the ocean: Maritime transport, ports, shipbuilding and equipment manufacturing

Maritime ships carry goods and passengers across the sea, ports load and unload them, dredgers keep shipping channels open, and shipyards and their suppliers build, equip and repair the maritime fleet. This chapter examines maritime industries using the OECD's estimates of ocean economic activity.

In Brief

Maritime industries grew faster than any other area of the ocean economy between 1995 and 2025 and was its largest area in the year 2020. Its gross value added reached USD 860 billion in real terms in 2025, 3.4 times its 1995 level compared with a change of 2.3 times in the ocean economy overall. It produced around a quarter of ocean economy gross value added in both the first and last year of the period.

Maritime transport, ports and dredging increased from 70% to 80% of its GVA, and maritime ports became its main employer. Sea and coastal transport increased from 31% to 41% of the total. Maritime ports' share of its full-time equivalents almost doubled, from 22% to 43%.

The OECD area generated over half its GVA in 2025 but non-OECD Asia became the largest regional economy during the time period. Non-OECD Asia's share of world gross value added increased from 14% to 37% while OECD Asia's decreased from 34% to 11%.

Its real growth swung more widely than the ocean economy's and sea and coastal transport and maritime ports grew fastest among its activities. It fell by 11% in 2009, more than four times the ocean economy's fall, and grew by 18% in 2021. Sea and coastal transport grew by 4.8% a year over the period and maritime ports by 4.4%, compared with 2.9% for shipbuilding.

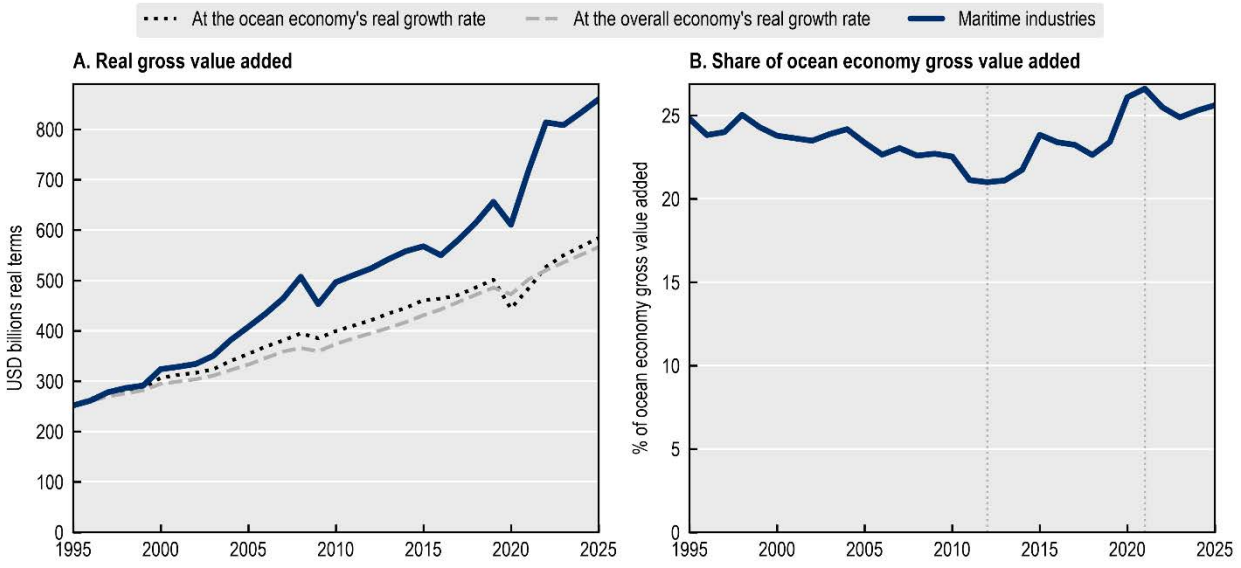
The People's Republic of China became the largest generator of its gross value added in 2012. It produced 21% of world gross value added in 2025, up from 3% in 1995.

Its labour productivity more than doubled in real terms while the OECD area's lead over other economies halved. Real gross value added per full-time equivalent job rose by 132%, compared with 58% in the overall economy. The OECD level was 6.5 times the non-OECD level in 1995 and 3.0 times in 2025.

Maritime industries generated gross value added (GVA) of USD 860 billion in real terms in 2025, 3.4 times its 1995 level (Figure 5.1). It grew by 5.5% a year between 1995 and 2008, 2.4% a year between 2008 and 2019 and 4.6% a year between 2019 and 2025, compared with 3.5%, 2.2% and 2.6% for the ocean economy. Had maritime industries grown at the ocean economy's rate, its GVA would have only reached USD 584 billion in real terms in 2025. At the overall economy's rate, it would not have risen above USD 566 billion. Its GVA was therefore 47% higher in 2025 than it would have been had it grown at the ocean economy's rate. In current prices, its share of ocean economy GVA was 24.8% in 1995 and 25.6% in 2025. It fell to a low of 21.0% in 2012 and reached a high of 26.6% in 2021.

Figure 5.1. Maritime industries grew faster in real terms than the ocean economy and the overall economy to more than triple its level in 1995 by 2025

Gross value added of maritime industries, USD billions in real terms, plus its share of ocean economy gross value added, %, current prices, 1995-2025

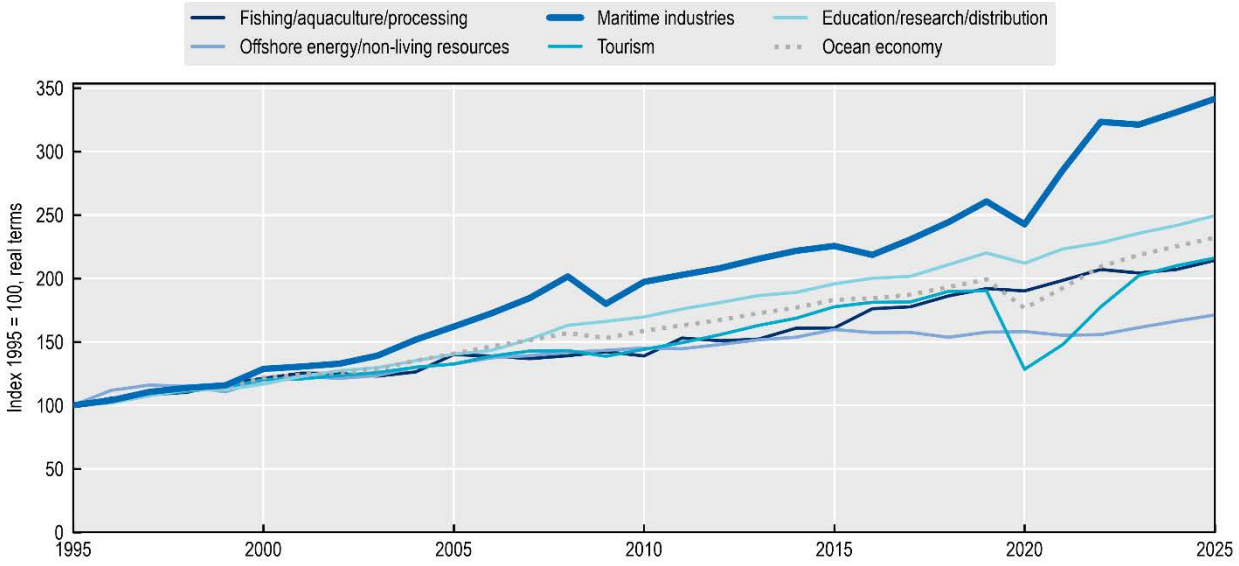


Note: Panel A shows the gross value added of maritime industries in real terms. The dotted and dashed lines give the levels it would have reached had it grown from its 1995 level at the real growth rates of the ocean economy and of the overall economy. Panel B shows its share of ocean economy gross value added in current prices. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The dotted vertical lines in panel B mark 2012 and 2021, the years of the lowest and the highest share. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Maritime industries grew fastest in real terms of the five components of the ocean economy between 1995 and 2025 (Figure 5.2). Its growth of 3.4 times its 1995 level compares with 2.5 times for ocean education, research and goods distribution, 2.2 times for marine and coastal tourism, 2.1 times for marine fishing, aquaculture and processing and 1.7 times for offshore energy and marine non-living resources. The ocean economy as a whole reached 2.3 times its 1995 level. Maritime industries grew fastest of the five components in the 1995-2008 and 2019-2025 periods, at 5.5% and 4.6% a year, but only fourth fastest in the 2008-2019 period, at 2.4%. Its growth since 1995 has exceeded every other component in every year from 2000. Its lead over the ocean economy widened in each of the three periods.

Figure 5.2. Maritime industries grew fastest in real terms of the five components of the ocean economy between 1995 and 2025

Gross value added, real terms index 1995 = 100, 1995-2025

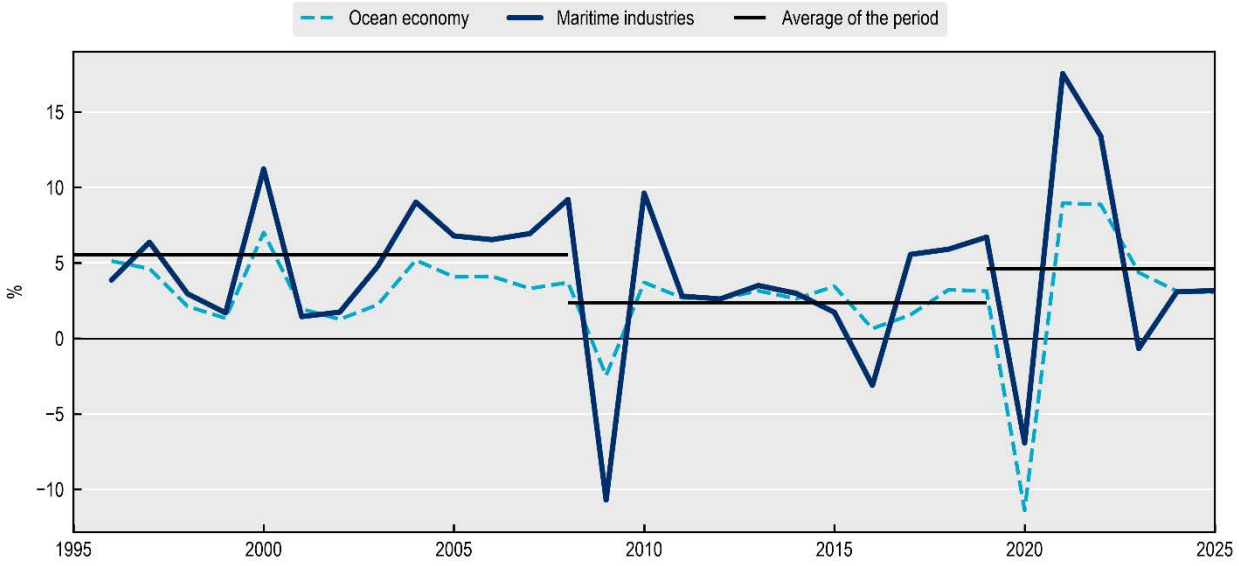


Note: Each component's index is set to 100 in 1995. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The dotted line is the ocean economy. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Maritime industries' real GVA contracted by more than four times the ocean economy's fall of 2.5% in 2009, but by less than the ocean economy's contraction during the COVID-19 pandemic (Figure 5.3). In 2020 its GVA fell by 6.9% in real terms while the ocean economy's fell by 11.4%. It then grew by 17.5% and 13.4% in 2021 and 2022, its two largest annual increases over the period. Its growth slowed from 5.5% per year between 1995 and 2008 to 2.4% per year between 2008 and 2019 and then recovered to 4.6% per year between 2019 and 2025.

Figure 5.3. Maritime industries fell further than the ocean economy in 2009 after the global financial crisis but contracted less in 2020 during the COVID-19 pandemic

Annual real growth of gross value added of maritime industries and of the ocean economy, %, 1996-2025

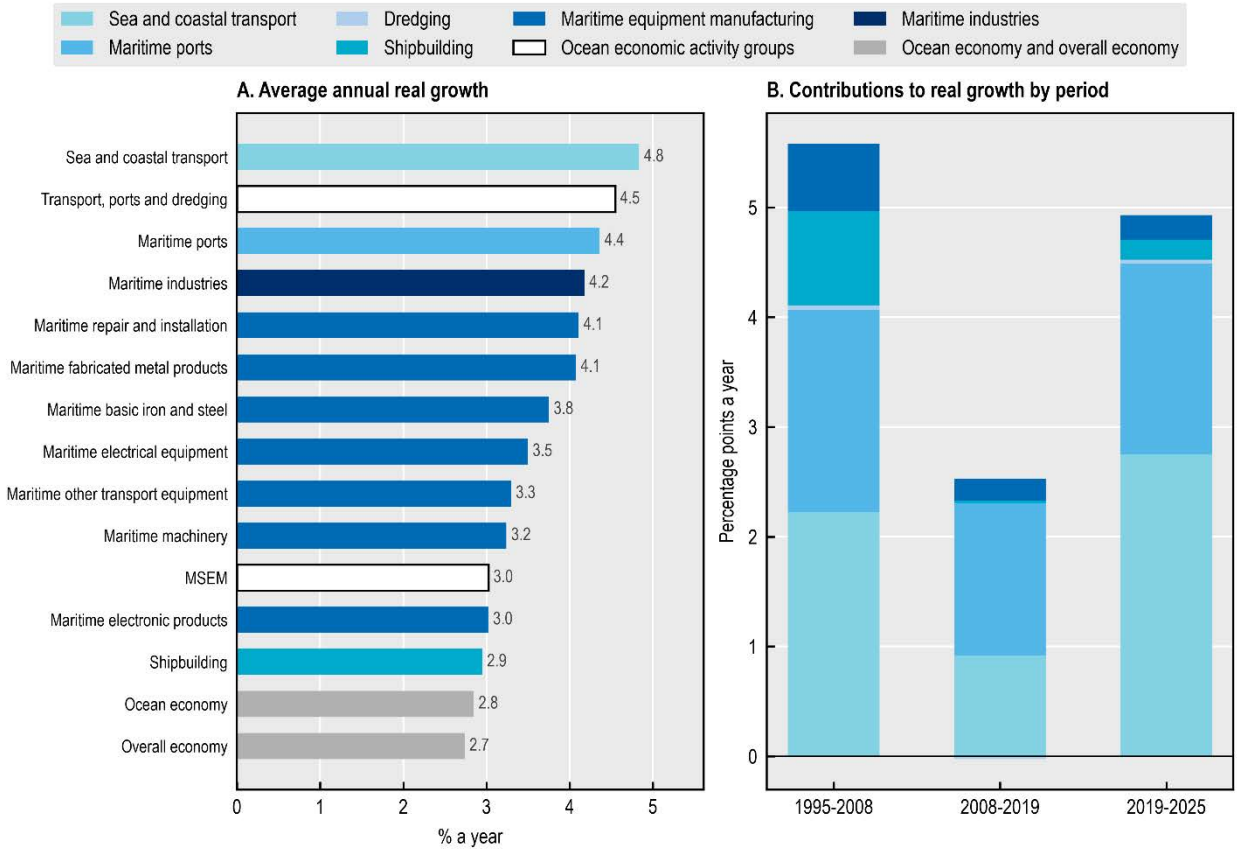


Note: The horizontal segments mark the average annual real growth of maritime industries in each of the three periods. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Sea and coastal transport and maritime ports grew fastest in real terms of the activities of maritime industries between 1995 and 2025 (Figure 5.4). In the 1995-2008 and 2019-2025 periods, sea and coastal transport contributed most to the real growth of maritime industries (2.2 p.p. and 2.8 p.p. per year). Maritime ports contributed most in the 2008-2019 period at 1.4 p.p. a year. Shipbuilding's contribution fell from 0.9 p.p. a year in the 1995-2008 period to almost zero. Sea and coastal transport grew fastest of the maritime industries by 4.8% a year over the period. Maritime ports grew second fastest at 4.4%. Then shipbuilding at 2.9% per year. Maritime transport, ports and dredging as a whole grew by 4.5% a year compared with 3.0% for maritime shipbuilding and equipment manufacturing, so the growth of maritime industries as a whole was derived mainly from the growth of shipping and ports.

Figure 5.4. Sea and coastal transport and maritime ports grew fastest in real terms of the activities of maritime industries between 1995 and 2025 and contributed most to its real growth

Average annual real growth of gross value added, %, 1995-2025, plus average annual contributions to the real growth of maritime industries, percentage points

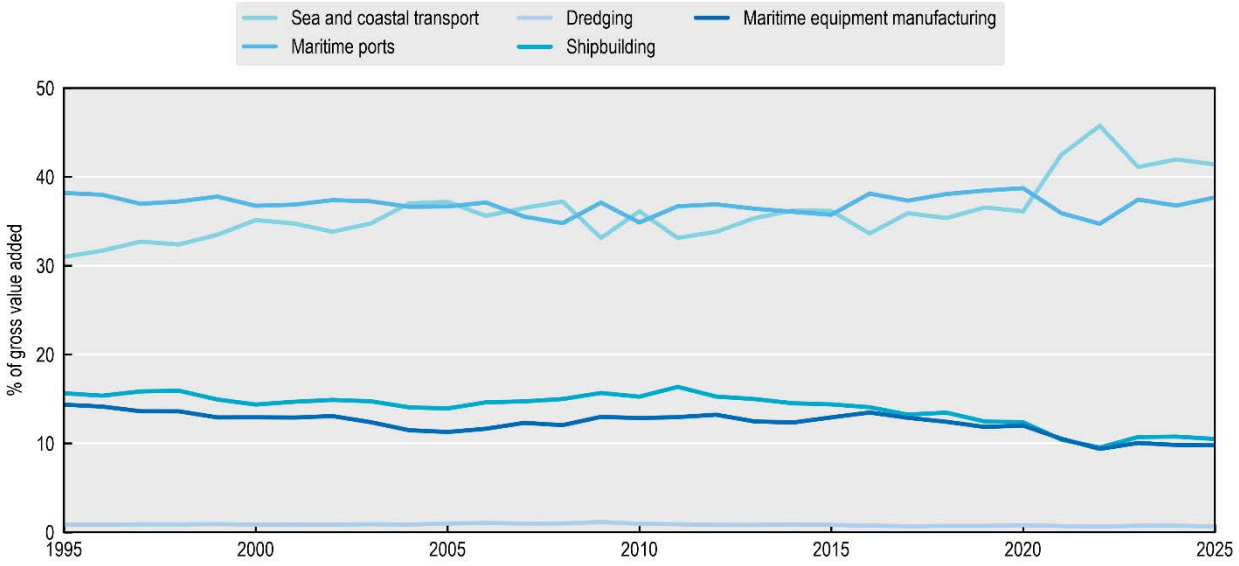


Note: MSEM is maritime shipbuilding and equipment manufacturing. Panel A shows the average annual real growth of gross value added between 1995 and 2025 of the ten ocean economic activities with the largest gross value added in 2025. Panel B shows the period annual average contributions to the annual real growth of maritime industries. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Maritime ports generated the largest share of maritime industries' GVA in all years until 2003 and sea and coastal transport accounted for the largest share in every year since 2021 (Figure 5.5). Between 2004 and 2020 the two alternated in the lead, maritime ports holding it in ten of those 17 years. Maritime ports' share of the GVA of maritime industries moved little, from 38.2% in 1995 to 37.7% in 2025. Sea and coastal transport's increased from 31.0% to 41.4%, gaining 6.2 p.p. in the 1995-2008 period and 4.8 p.p. in the 2019-2025 period. Its share peaked at 45.7% in 2022. Shipbuilding's share fell from 15.6% to 10.5% and maritime equipment manufacturing's from 14.4% to 9.8%. Dredging's stayed between 0.6% and 1.1%.

Figure 5.5. Maritime ports and sea and coastal transport generated the largest shares of maritime industries' gross value added throughout the period

Shares in world gross value added of maritime industries, %, current prices, 1995-2025

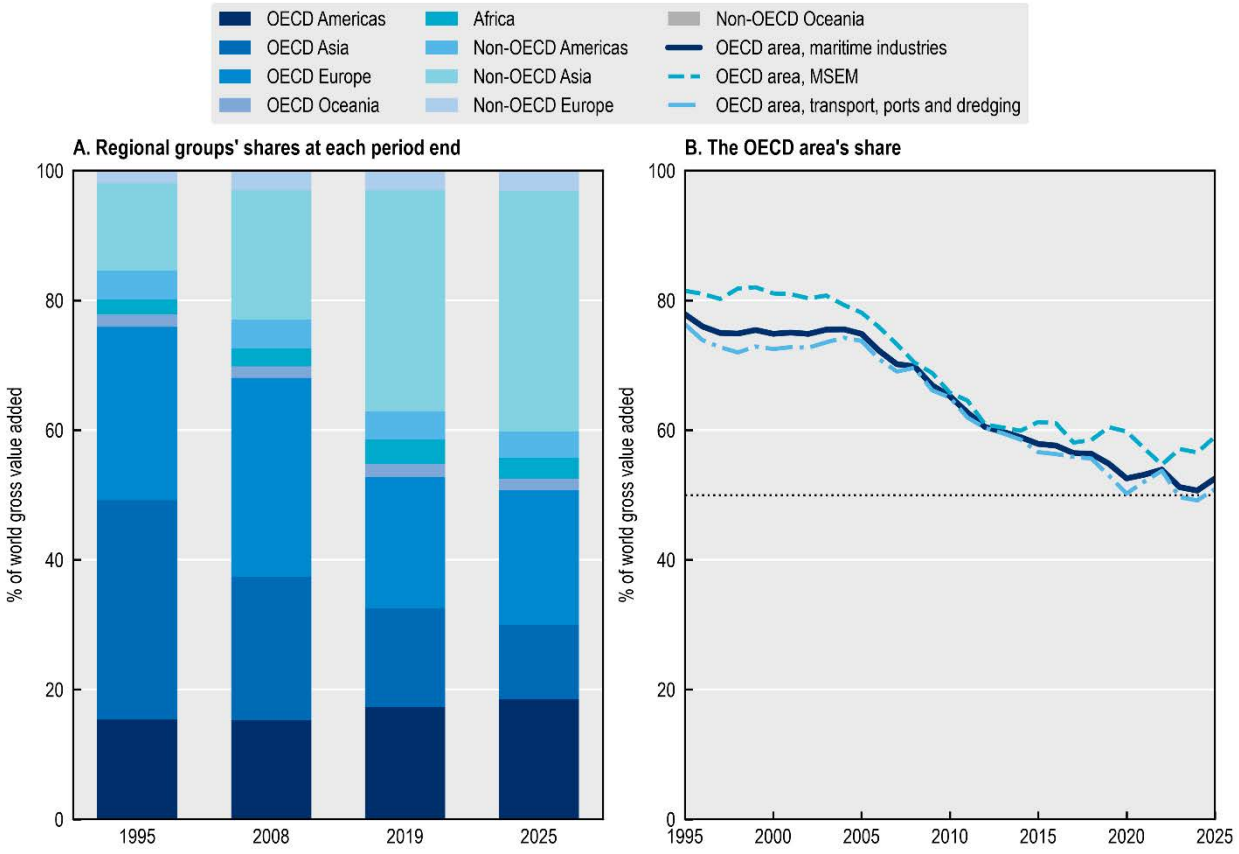


Note: Gross value added is given at basic prices in current prices. Shares are calculated of the sum of the 23 activities' gross value added in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

The OECD area's share of world GVA in maritime industries fell from 78% in 1995 to 53% in 2025, with non-OECD Asia taking share mainly from OECD Asia (Figure 5.6). The shift was more pronounced in maritime transport, ports and dredging, in which non-OECD economies produced more than the OECD area in 2023 and 2024, than in maritime shipbuilding and equipment manufacturing. Non-OECD Asia's share of world GVA in maritime industries increased from 13.5% to 37.1% in current prices, 14.2 percentage points (p.p.) of it between 2008 and 2019, while OECD Asia's fell from 33.8% to 11.5% mainly before 2008. OECD Europe's share decreased from 26.7% to 20.8% and OECD Americas' increased from 15.4% to 18.5% over the period. In maritime transport, ports and dredging the OECD area's share fell from 76.3% to 50.9%, reaching a low of 49.2% in 2024. In maritime shipbuilding and equipment manufacturing it fell from 81.5% to 59.0%. The regional shift in maritime industries was therefore a shift within Asia from its OECD Members to the rest of the region.

Figure 5.6. Non-OECD Asia emerged as the largest maritime industries region during the 2008 to 2019 period

Share of each regional group in world gross value added, %, current prices, plus the OECD area's share of world gross value added, %, current prices, 1995-2025

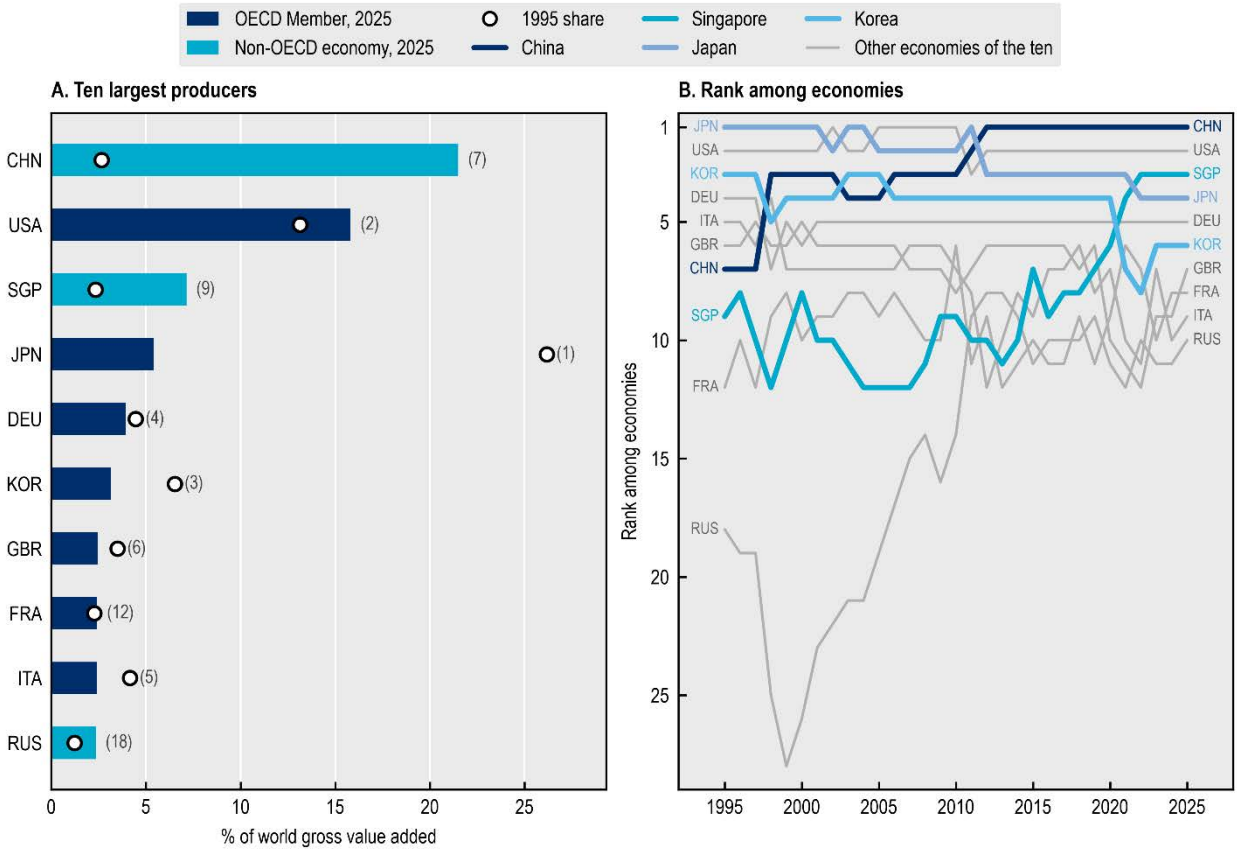


Note: MSEM is maritime shipbuilding and equipment manufacturing. Regional groups are the UN M49 regions split by OECD membership. Panel A stacks the regional groups' shares of world gross value added of maritime industries at the first and last years of each period. Panel B shows the OECD area's share of world gross value added of each activity group with the dotted line marking 50%. Gross value added is given at basic prices in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

The People's Republic of China (hereafter "China") generated 21.5% of world GVA in maritime industries in 2025 (Figure 5.7). China was the seventh-largest producer in 1995, with 2.7% of world GVA, and has been the largest since 2012. The United States, the second-largest maritime industries economy in both 1995 and 2025, produced 15.8% of world GVA in maritime industries in 2025 in current prices. Singapore gained most share after China, rising from ninth to third place with 7.1% of world GVA in 2025. Seven of the ten largest producers of 2025 are OECD Members.

Figure 5.7. China has generated the largest share of world gross value added from any maritime industries economy since 2012

Share of each economy in world gross value added, %, current prices, plus the ten largest economies in 2025 rank by gross value added, 1995-2025

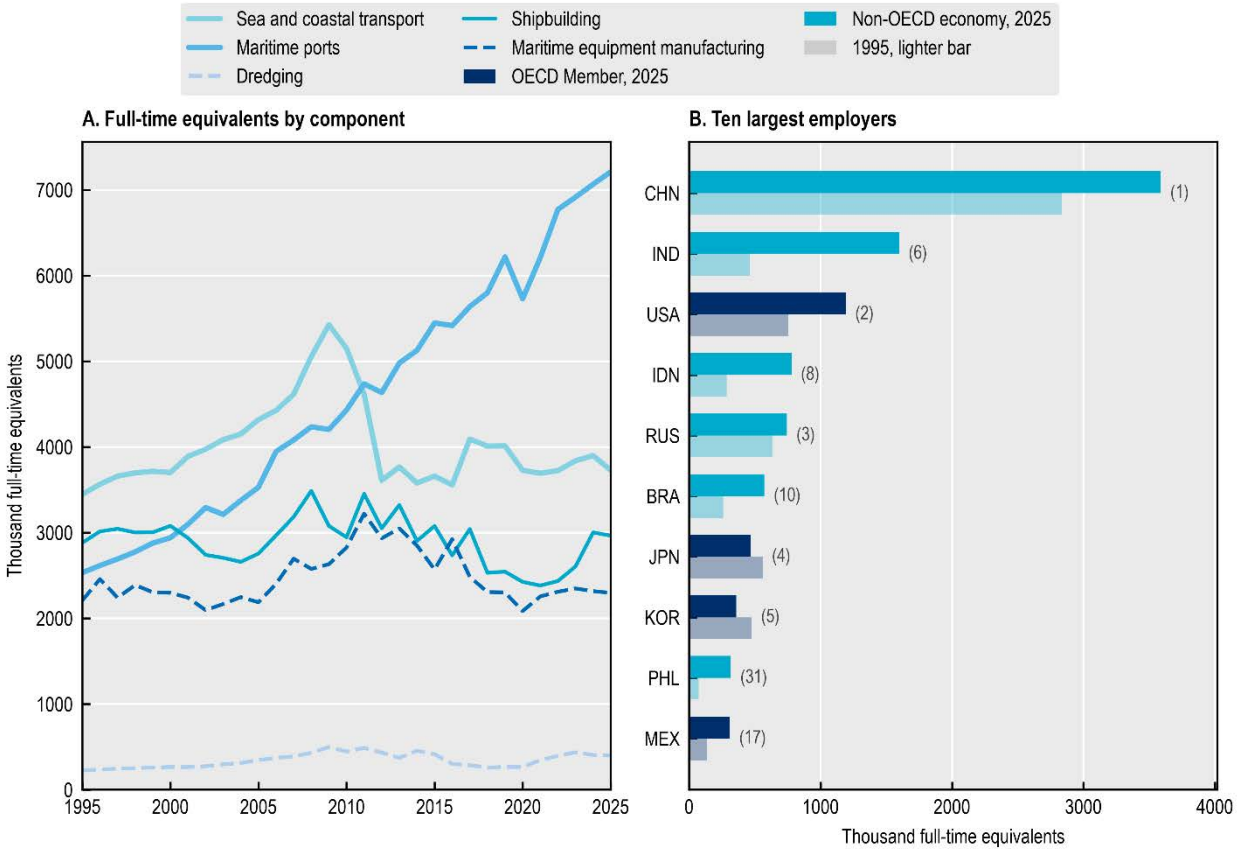


Note: Panel A ranks economies by their gross value added in maritime industries in 2025 by their share of the world total. Unfilled circles show their 1995 share and their 1995 rank is in brackets. Panel B shows the same ten economies' rank in each year with the first ranked position at the top. Gross value added is given at basic prices in current prices. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark bars indicate OECD Members. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Maritime industries employed 16.6 million full-time equivalents (FTEs) in 2025, 47% more than in 1995, and maritime ports accounted for 88% of the increase (Figure 5.8). Maritime ports' FTEs increased from 2.5 million to 7.2 million. Sea and coastal transport employed 5.4 million FTEs in 2009 and 3.7 million in 2025. Shipbuilding employed 3.0 million FTEs in 2025 and maritime equipment manufacturing 2.3 million which is about as many as both did in 1995. China employed 3.6 million FTEs in 2025, 21.6% of the world total, and was the largest employer in both years. India rose from sixth to second place, Indonesia from eighth to fourth and the Philippines from 31st to ninth. The jobs that maritime industries added were therefore port jobs. Two of the ten largest employers, Japan and Korea, employed fewer FTEs in 2025 than they did in 1995.

Figure 5.8. Maritime ports added almost all of the jobs that maritime industries gained between 1995 and 2025

Full-time equivalents in each component, thousands, 1995-2025, plus full-time equivalents of the ten largest employers in 1995 and 2025, thousands

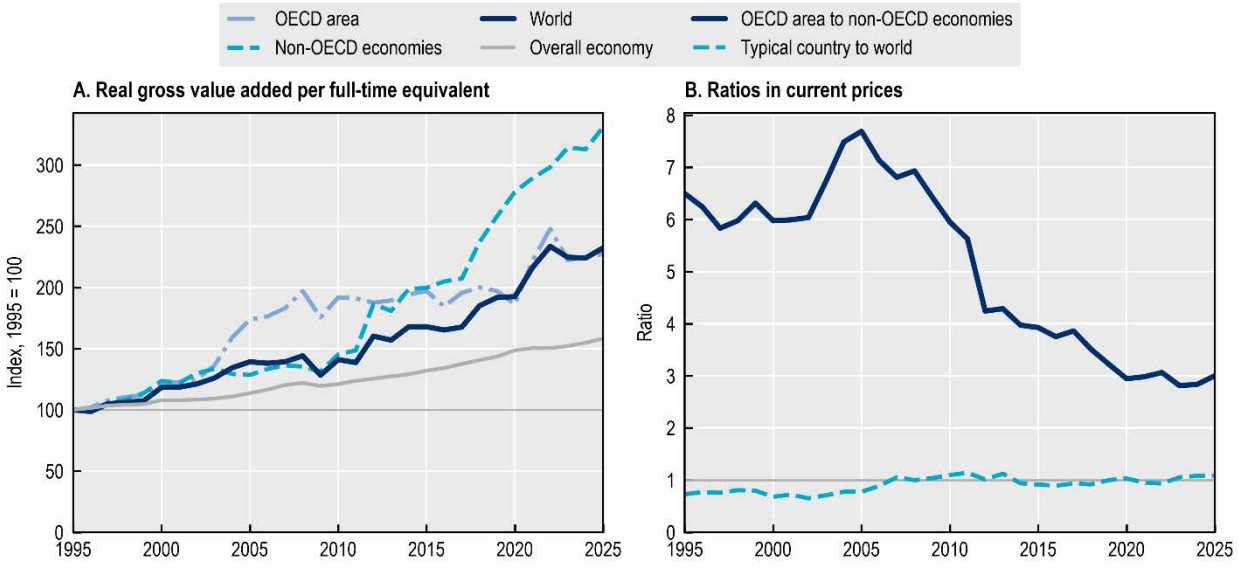


Note: Panel A shows the full-time equivalents of each sub-activity. Panel B ranks economies by their full-time equivalents in maritime industries in 2025 given by the darker bar and their 1995 full-time equivalents given by the lighter bar. The brackets give their position in 1995. Dark blue bars indicate OECD Members. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Labour productivity in maritime industries increased by 132% in real terms between 1995 and 2025 and it rose faster outside the OECD area than within it (Figure 5.9). Labour productivity as measured by real terms GVA per FTE rose by 231% in non-OECD economies and by 127% in the OECD area, narrowing the OECD area's lead from 6.5 times the non-OECD level in 1995 to 3.0 times in 2025. GVA per FTE in maritime industries was USD 51 100 in current prices in 2025, 1.9 times the level in the overall economy. In the OECD area it was USD 99 600, compared with USD 33 200 outside it, where 73% of its FTEs are employed. The gap between the two was widest in 2005 and narrowest in 2023. The typical country's GVA per FTE was 27% below the world level in 1995 and 9% above it in 2025, so the typical country now generates more GVA per FTE than the world total.

Figure 5.9. Labour productivity in maritime industries more than doubled in real terms while the OECD area's lead over non-OECD economies halved

Gross value added per full-time equivalent, real terms index 1995 = 100, plus ratios of the OECD area's level to the non-OECD level and the typical country's level to the world level, current prices, 1995-2025



Note: Panel A shows gross value added per full-time equivalent in maritime industries in real terms as an index with 1995 equal to 100 and the same index for the overall economy. Panel B shows the ratio of gross value added per full-time equivalent in the OECD area to that in non-OECD economies and the ratio of the typical country's level to the world level, both in current prices. World combines both OECD and non-OECD economies. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The typical country is the median of the economies with maritime industries. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Further reading

OECD (2026), "Why data matters for shipbuilding industrial policy", OECD Policy Briefs, No. 51, OECD Publishing, Paris, https://doi.org/10.1787/9ab37ecb-en

OECD (2026), Peer Review of the Japanese Shipbuilding Industry 2026, Reviews of Shipbuilding Economies, OECD Publishing, Paris, https://doi.org/10.1787/717ba40f-en

OECD (2026), Peer Review of the Korean Shipbuilding Industry 2026, Reviews of Shipbuilding Economies, OECD Publishing, Paris, https://doi.org/10.1787/c19e0105-en

OECD (2026), Peer Review of the United Kingdom Shipbuilding Industry, Reviews of Shipbuilding Economies, OECD Publishing, Paris, https://doi.org/10.1787/c5f4407d-en

OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris, https://doi.org/10.1787/a9096fb1-en

OECD (2025), "Industrial policy for the future: Insights from the shipbuilding industry", OECD Policy Briefs, No. 44, OECD Publishing, Paris, https://doi.org/10.1787/273954e9-en

OECD (2025), The Role of Shipbuilding in Maritime Decarbonisation: Impacts of Technology Developments and Policy Measures, OECD Publishing, Paris, https://doi.org/10.1787/0c8362c0-en

6 The ocean for recreation and leisure: Marine and coastal tourism

Coastal hotels and restaurants, travel agencies, the sports, entertainment and recreation that draw visitors to the coast, and the flights and trains that transport them there, together make up the largest area of the ocean economy in most years. This chapter examines marine and coastal tourism using the OECD's estimates of ocean economic activity.

In Brief

Marine and coastal tourism was the largest area of the ocean economy in most years since 1995, but the pandemic left it growing more slowly than the ocean economy. Its gross value added reached USD 875 billion in real terms in 2025, an increase of 116% over 1995 which compares with 133% for the ocean economy. It fell by a third during the pandemic and regained its 2019 level only in 2023.

Accommodation for visitors remained the largest marine and coastal tourism activity by gross value added over the period. Accommodation for visitors rose from 33.7% to 39.7% of its total gross value added while air transport was its fastest growing activity at 4.2% per year on average.

The largest marine and coastal tourism regional economy shifted over time, moving from OECD Asia to OECD Europe, then temporarily to non-OECD Asia during the pandemic, and then to the OECD Americas during the recovery. OECD Asia's share of its world gross value added decreased from 35.0% to 13.2%. The United States emerged as the largest marine and coastal tourism economy in 2004 and produced 21.2% of the total in 2025.

Its employment nearly doubled, mostly in food and beverage services, and recovered more slowly than gross value added after the pandemic. Full-time equivalents rose from 22.8 million to 43.4 million, 59% of the increase in food and beverage services, and regained their 2019 level only in 2025 (as opposed to 2023 for gross value added).

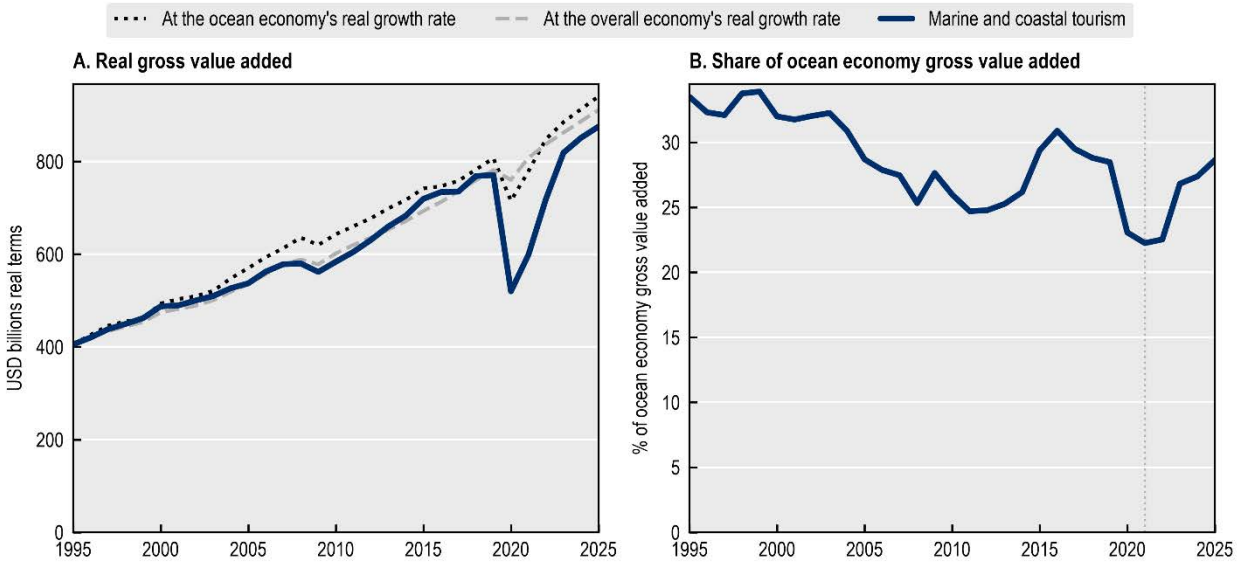
Its labour productivity barely rose in real terms, because jobs grew fastest where gross value added per full-time equivalent job is lowest. Real labour productivity rose by 13%, compared with 58% in the overall economy. In current prices, the OECD area's level fell from 11.8 to 7.6 times the level outside it over the period.

The pandemic reordered growth across regions and dependence on marine and coastal tourism for jobs widened. Non-OECD Asia's gross value added grew by 5.9% a year in real terms and OECD Asia's by 1.0%, compared with 2.6% for the world. Its share of national full-time equivalents rose in 50 economies and fell in 17, mostly where dependence on it for jobs was already highest.

Marine and coastal tourism generated gross value added (GVA) of USD 875 billion in real terms in 2025 and was the largest component of the ocean economy 18 of the years between 1995 and 2025 (Figure 6.1). Its real GVA fell by a third in 2020 during the pandemic and only regained its 2019 level in 2023. Marine and coastal tourism had grown by 90% over its 1995 level by 2019 compared with 99% for the ocean economy. Between 1995 and 2025 it grew by 116%, compared with 132% for the ocean economy and 125% for the overall economy. Its share of ocean economy GVA decreased from 33.5% to 28.6% in current prices over the period, reaching a low of 22.3% in 2021. Marine and coastal tourism therefore grew about as fast as the overall economy until 2019 and fell behind both the ocean economy and the overall economy after the COVID-19 pandemic.

Figure 6.1. Marine and coastal tourism was the largest area of the ocean economy in most years, but its share of the ocean economy fell from a third to a quarter over the period

Gross value added of marine and coastal tourism, USD billions in real terms, plus its share of ocean economy gross value added, %, current prices, 1995-2025

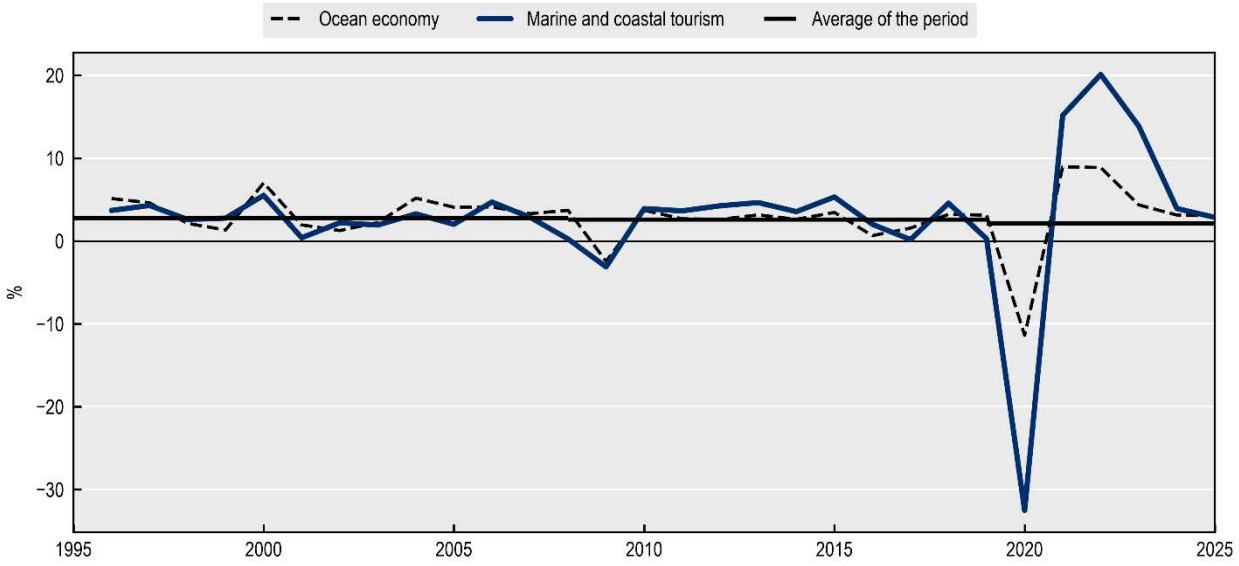


Note: Panel A shows the gross value added of marine and coastal tourism in real terms. The dotted and dashed lines give the levels it would have reached had it grown from its 1995 level at the real growth rates of the ocean economy and of the overall economy. Panel B shows its share of ocean economy gross value added in current prices. The dotted vertical line in panel B marks 2021, the year of the lowest share. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

The real GVA of marine and coastal tourism fell by 32.5% during the COVID-19 pandemic in 2020, almost three times the fall of the ocean economy (Figure 6.2). Its annual growth moved in the same direction as the ocean economy's in every year between 1995 and 2025 but fluctuated more than twice as widely. It also fell in 2009, the only other year in which the ocean economy contracted. In 2009 marine and coastal tourism fell by 3.1% compared with 2.5% for the ocean economy. The three largest increases in marine and coastal tourism GVA of between 13.9% and 20.1% per year occurred during the three years after the COVID-19 pandemic. Over the period as a whole marine and coastal tourism grew by 2.6% a year in real terms, compared with 2.8% for the ocean economy and 2.7% for the overall economy. It grew faster than the ocean economy only between 2008 and 2019 at 2.6% per year compared with 2.2%.

Figure 6.2. The real gross value added of marine and coastal tourism fell almost three times as far as the ocean economy's during the COVID-19 pandemic

Annual real terms growth of gross value added of marine and coastal tourism and of the ocean economy, %, 1996-2025

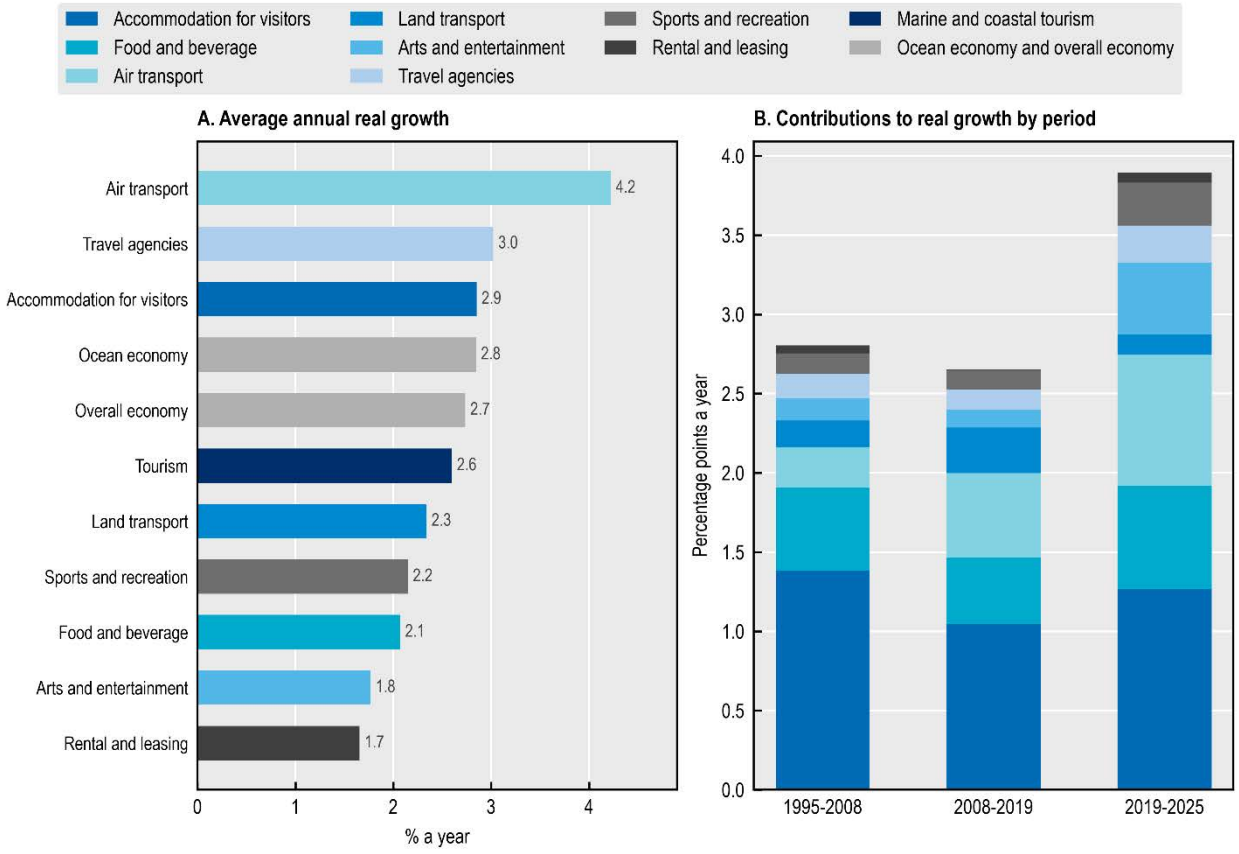


Note: The horizontal segments mark the average annual real growth of marine and coastal tourism in each of the three periods. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Accommodation for visitors contributed most to the real growth of marine and coastal tourism in each of the three periods, while air transport grew fastest of its activities (Figure 6.3). Air transport grew by 4.2% a year in real terms between 1995 and 2025 and travel agencies and tour operators, the second fastest, by 3.0%, compared with 2.6% for marine and coastal tourism as a whole. Accommodation for visitors, the largest activity by GVA, grew by 2.9% a year and contributed between 1.0 p.p. and 1.4 p.p. a year to the real growth of marine and coastal tourism in each period. Rental and leasing grew slowest at 1.7%. Air transport replaced food and beverage services as the second-largest contributor from the 2008-2019 period and added 0.8 p.p. a year in the 2019-2025 period. No activity subtracted from its growth in any of the three periods.

Figure 6.3. Accommodation for visitors contributed most to the real growth of marine and coastal tourism in each of the three periods while air transport grew fastest

Average annual real growth of gross value added, %, 1995-2025, plus the average annual contribution of each activity to the real growth of marine and coastal tourism, percentage points

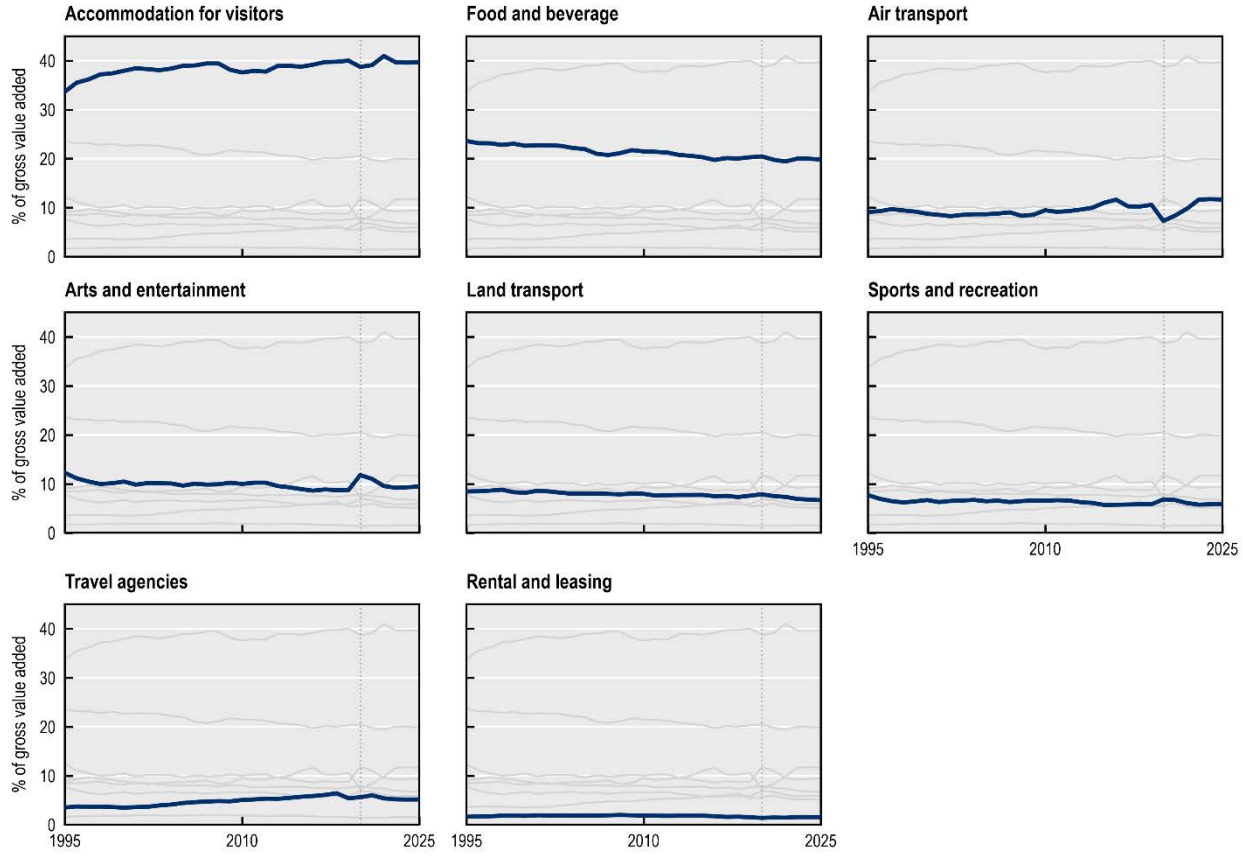


Note: Panel A shows the average annual real growth of gross value added between 1995 and 2025. Panel B shows the average over the years of each period of the contribution of each activity to the annual real growth of marine and coastal tourism, so that the columns add up to the average of its annual real growth rates in the period. Gross value added is given at basic prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Accommodation for visitors produced the largest share of the GVA of marine and coastal tourism in every year between 1995 and 2025, increasing its share from 33.7% to 39.7% (Figure 6.4). The 6.0 p.p. gain was the largest of the eight activities. Food and beverage services, the second largest activity by GVA in every year, decreased from 23.6% to 19.8%, the largest decrease in share. Air transport increased from 9.1% to 11.7%, most of it between 2008 and 2019. It passed arts, entertainment and gambling in 2013 to become the third largest activity by GVA, falling behind it again only in 2020 and 2021, during the COVID-19 pandemic.

Figure 6.4. Accommodation for visitors produced the largest share of the gross value added of marine and coastal tourism in every year between 1995 and 2025

Share of each activity in the gross value added of marine and coastal tourism, %, current prices, 1995-2025

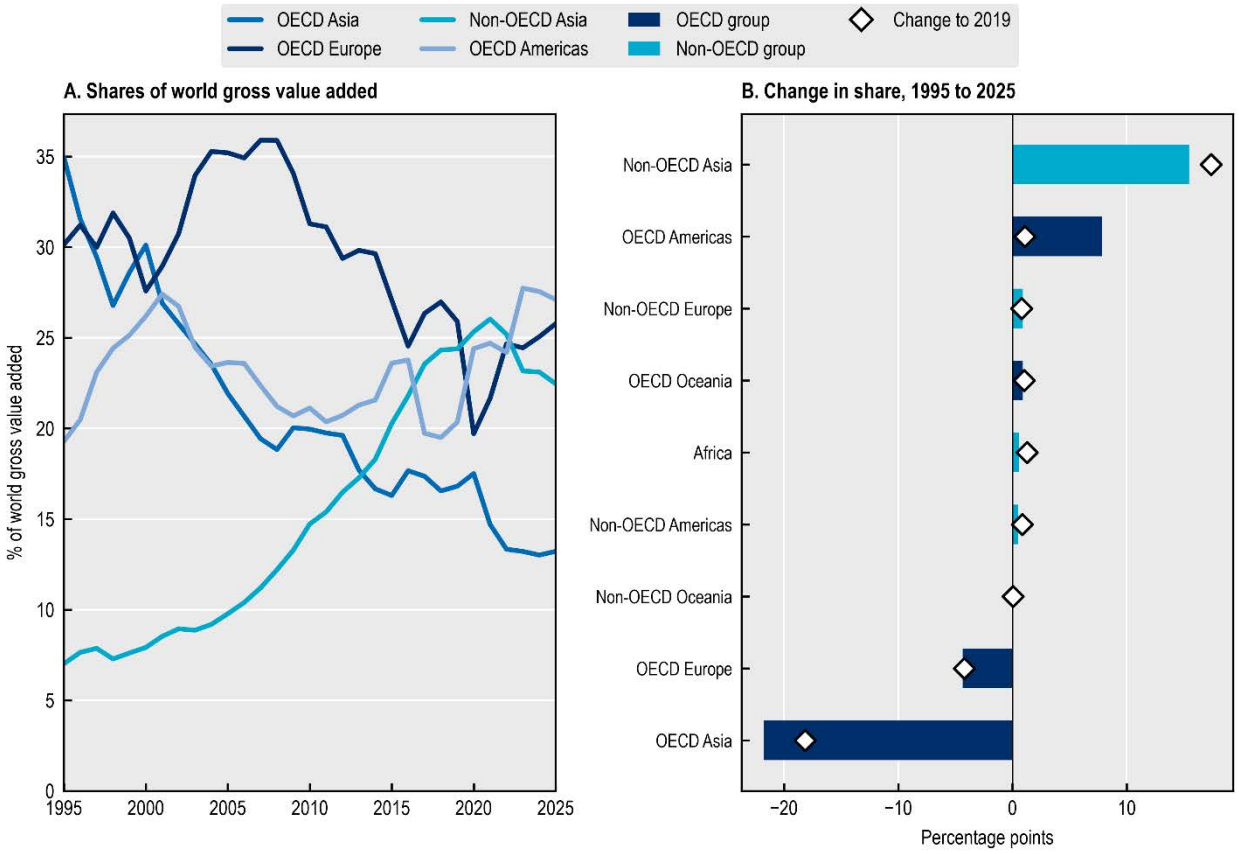


Note: The dark line is the activity named in its title and the grey lines are the other seven, on the same scale. The dotted line marks the first year of the COVID-19 pandemic in 2020. Gross value added is given at basic prices in current prices. Shares are calculated of the sum of the eight activities' gross value added in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

The leading region in marine and coastal tourism changed three times between 1995 and 2025 (Figure 6.5). OECD Europe initially passed OECD Asia, non-OECD Asia then led during the COVID-19 pandemic, and now the OECD Americas has led since 2023. OECD Asia's share of world GVA decreased from 35.0% to 13.2% in current prices, with most of the fall (16.1 p.p.) occurring before 2008. Non-OECD Asia's share increased from 7.0% to a peak of 26.0% in 2021 and was 22.5% in 2025. The OECD Americas' share was 20.3% in 2019 and 27.1% in 2025, an increase of 6.8 p.p. since the COVID-19 pandemic which is the largest change of any region during those years. The OECD area's share decreased from 85.8% to a low of 64.1% in 2021 and recovered to 68.4% in 2025. The OECD area produced more than half of world marine and coastal tourism GVA in every year. The shift of marine and coastal tourism away from the OECD area therefore stopped during the recovery from the COVID-19 pandemic mainly because the OECD Americas gained more share since 2019 than any other region.

Figure 6.5. The leading regional economy in marine and coastal tourism changed hands three times over the period with the OECD area generating more than half the gross value added every year

Share of world gross value added in marine and coastal tourism, %, current prices, 1995-2025, plus the change in the share of each regional group between 1995 and 2025, percentage points

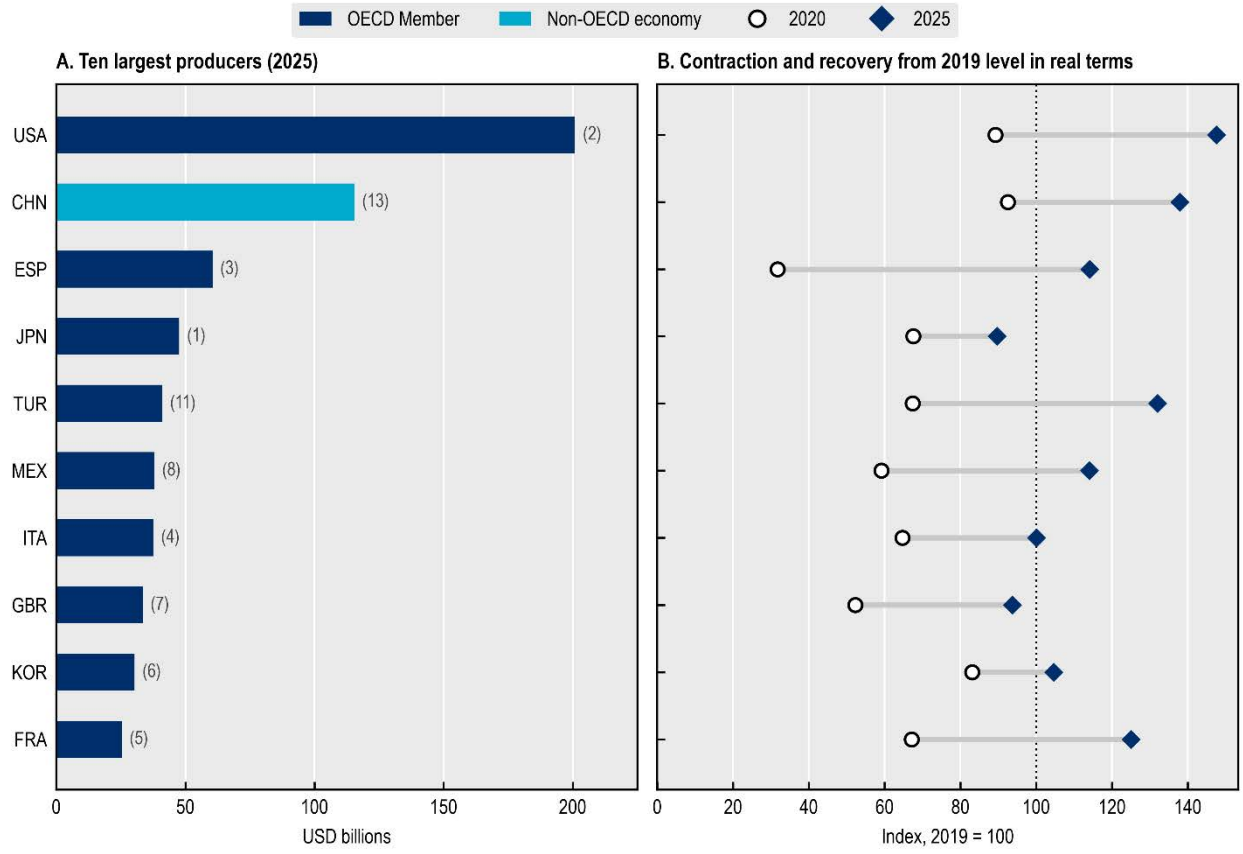


Note: Regional groups are the UN M49 regions split by OECD membership. Panel A shows the shares of the four regional groups that have been the largest producer of marine and coastal tourism. Panel B gives the change in each regional group's share between 1995 and 2025, with the white diamond showing the change between 1995 and 2019. Gross value added is given at basic prices in current prices. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity

The United States has been the largest generator of marine and coastal tourism GVA since 2004 and produced 21.2% of the world total in 2025 (Figure 6.6). The COVID-19 pandemic separated the ten largest producers. By 2025, the real GVA of the United States was 48% above its 2019 level and the People's Republic of China's (hereafter "China") was 38% above. Spain's real GVA fell by 68% in 2020, the deepest fall of the ten largest economies, but had returned to 14% above its 2019 level by 2025. Japan was still 10% below and the United Kingdom 6% below their 2019 levels. China, 13th largest among economies in 1995, was second in 2025. In current prices the GVA of marine and coastal tourism was USD 201 billion in the United States in 2025, USD 115 billion in China, USD 60 billion in Spain and USD 48 billion in Japan. Türkiye, Mexico, Italy, the United Kingdom, Korea and France complete the ten largest generators of GVA, nine of which are OECD Members. The ten held 66.5% of world marine and coastal tourism GVA in 2025, compared with 76.5% for the ten largest of 1995.

Figure 6.6. The United States has been the largest producer of marine and coastal tourism gross value added since 2004 and recovered fastest from the COVID-19 pandemic

Gross value added of marine and coastal tourism, USD billions, current prices, the ten largest economies in 2025, plus their real gross value added in 2020 and 2025, index 2019 = 100



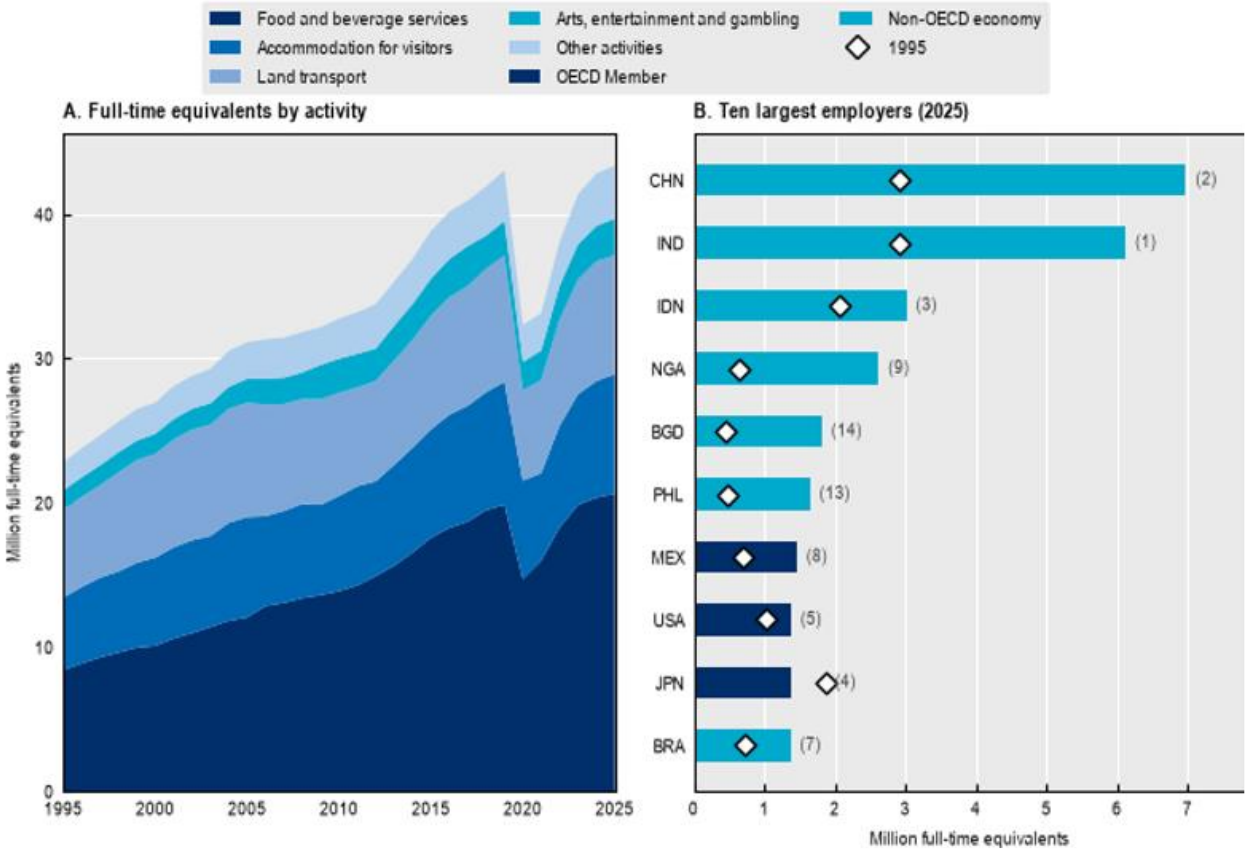
Note: Panel A ranks economies by their gross value added in marine and coastal tourism in 2025. Their rank in 1995 is given in brackets. Panel B shows, for the same ten economies, their real gross value added in marine and coastal tourism in 2020 and in 2025 as an index with 2019 equal to 100. Gross value added is given at basic prices in current prices. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark bars indicate OECD Members. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Marine and coastal tourism regained its 2019 level of employment in 2025, reaching 43.4 million full-time equivalents (FTEs), having fallen by a quarter during the COVID-19 pandemic (Figure 6.7). Its 2025 level of FTEs was 90% higher than in 1995. Food and beverage services accounted for 59% of the increase. FTEs regained their 2019 level two years after GVA did. The ocean economy's FTEs grew by 33.0% over the period and the overall economy's by 42.0%. Food and beverage services rose from 36.8% to 47.5% of the FTEs of marine and coastal tourism compared with only 19.8% of its GVA. Land transport fell from 26.9% to 19.0% of its FTEs over the period. China became the largest employer in marine and coastal tourism in 2006. It employed 7.0 million FTEs in 2025, compared with 6.1 million in India and 3.0 million in Indonesia. Nigeria rose from ninth to fourth and Bangladesh from 14th to fifth. Japan, which was the fourth largest employer in 1995, employed fewer FTEs in 2025 than it did in 1995. The Philippines, Mexico, the United States, Japan and Brazil complete the ten largest employers, of which three are OECD Members. Jobs in marine and coastal tourism are therefore concentrated in food and

beverage services and in the economies outside the OECD area. And they returned more slowly than GVA after the pandemic.

Figure 6.7. Full-time equivalent employment in marine and coastal tourism nearly doubled between 1995 and 2025, mostly in food and beverage services

Full-time equivalents in marine and coastal tourism by activity, millions, 1995-2025, plus full-time equivalents of the ten largest employers in 2025, millions, with their 1995 values



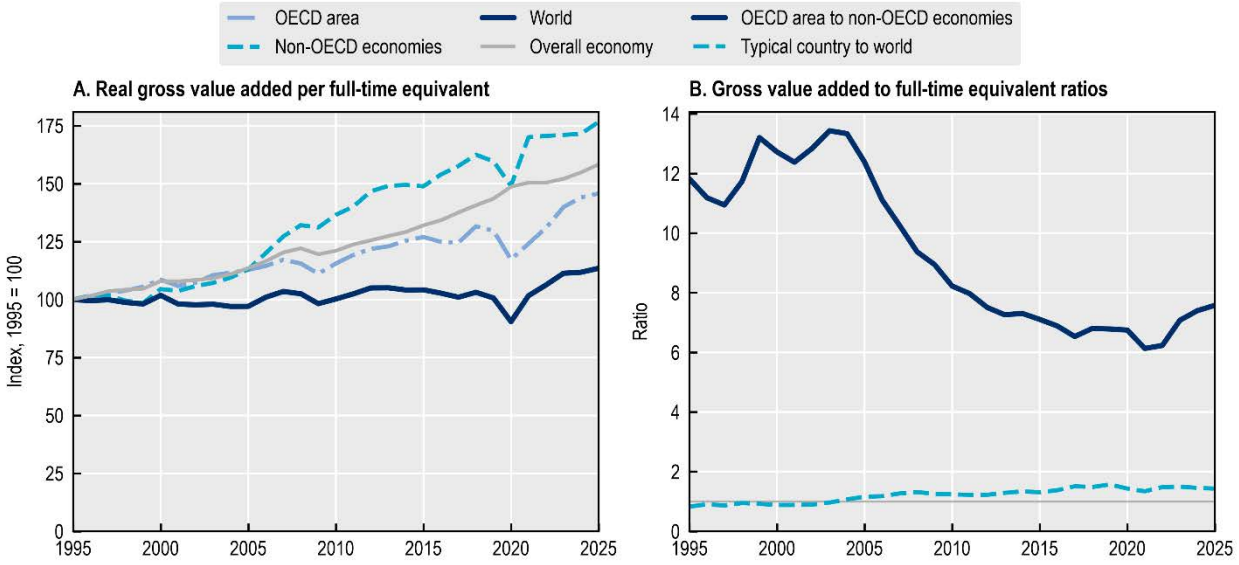
Note: Panel A shows the full-time equivalents of marine and coastal tourism stacked by activity. Panel B ranks economies by their full-time equivalents in 2025 with their 1995 full-time equivalents as a white diamond and their 1995 rank in brackets. Dark bars indicate OECD Members. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Labour productivity in marine and coastal tourism was barely higher in real terms in 2019 than in 1995 and rose by only 13% over the whole period compared with 75% in the ocean economy and 58% in the overall economy (Figure 6.8). Labour productivity as measured by real terms GVA per FTE stood at 101 in 2019 on an index with 1995 equal to 100. Almost all of its rise over the period therefore came after the COVID-19 pandemic. In current prices, GVA per FTE in the OECD area was USD 67 300 in 2025, compared with USD 8 900 outside it. However, it rose by 77% outside the OECD area and by 46% within it, because employment grew fastest where GVA per FTE was lowest. The OECD area's level was 11.8 times the level outside it in 1995, 6.1 times it in 2021, and 7.6 times it in 2025. The gap between the OECD area and its partner economies therefore narrowed for most of the period and then widened again after the pandemic. The typical country's GVA per FTE was 0.82 times the world level in 1995 and

1.43 times it in 2025. The world figure is low because the economies outside the OECD area, where each FTE produced less GVA, employ most of the FTEs in marine and coastal tourism.

Figure 6.8. Labour productivity in marine and coastal tourism rose in both the OECD area and economies outside it but barely increased globally until after the COVID-19 pandemic

Gross value added per full-time equivalent, index 1995 = 100 in real terms, plus ratios of OECD area's level to the non-OECD level and the typical country's level to the world level, current prices, 1995-2025

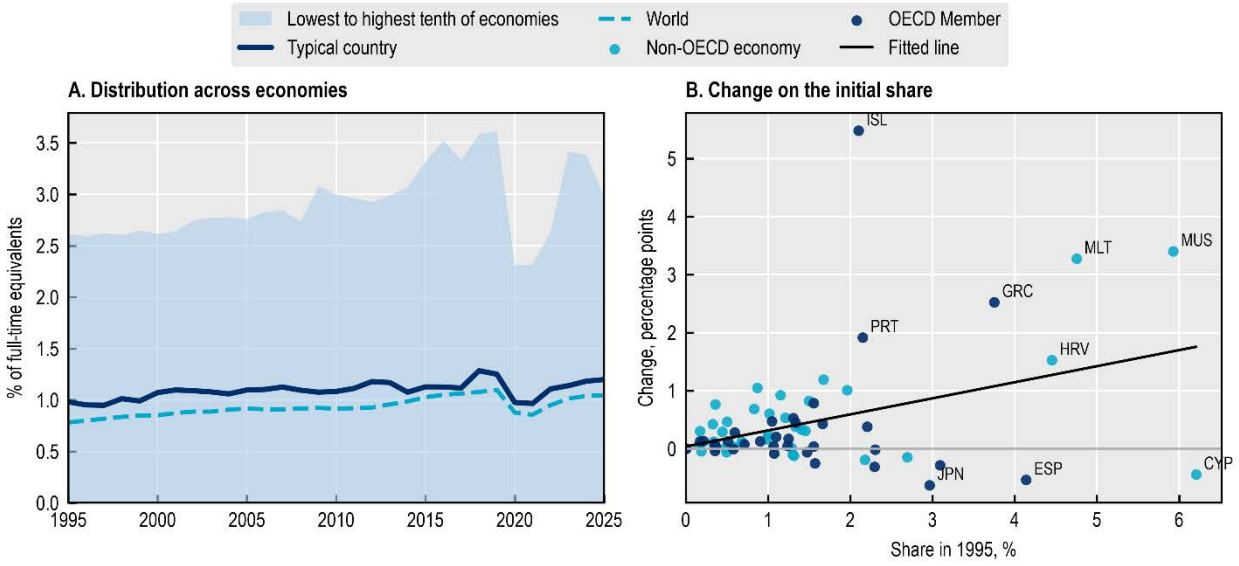


Note: Panel A shows gross value added per full-time equivalent in marine and coastal tourism in real terms as an index with 1995 equal to 100 and the same for the overall economy. Panel B shows the ratio of gross value added per full-time equivalent in the OECD area to that in non-OECD economies and the ratio of the typical country's level to the world level, both in current prices. World combines both OECD and non-OECD economies. Real terms are chain-linked volumes in previous years' prices set to a 2022 reference year. The typical country is the median economy. Data for 2025 are a projection.
Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Dependence on marine and coastal tourism for jobs widened across economies between 1995 and 2025, but dependence increased most where it had already been highest (Figure 6.9). Its share of national FTEs rose in 50 economies and fell in 17. In the typical country, marine and coastal tourism accounted for 0.98% of FTEs in 1995 and 1.20% in 2025. This is above the world share of 0.78% and 1.05% in every year. The share in the most dependent tenth of economies rose from 2.6% to 3.0%, after a peak of 3.6% in 2019. Iceland's share increased from 2.1% to 7.6% which is the largest increase over the period. Mauritius, the most dependent economy in 2025, went from 5.9% to 9.3%. Malta and Greece also gained more than 2 percentage points. Japan's share decreased from 3.0% to 2.3% and Spain's from 4.1% to 3.6% which represent the two largest falls in dependence for jobs. Dependence on marine and coastal tourism for jobs has widened on average across economies.

Figure 6.9. Dependence on marine and coastal tourism for jobs increased the most in economies where it was already highest

Share of marine and coastal tourism in each economy's full-time equivalents, %, 1995-2025, plus the change in the share between 1995 and 2025, percentage points, against the share in 1995, %



Note: Panel A shows the distribution across economies of the share of marine and coastal tourism in national full-time equivalents with the band running from the tenth percentile to the ninetieth percentile of economies. Panel B plots the change between 1995 and 2025 in that share against the share in 1995. World combines both OECD and non-OECD economies. Economies that are not identified separately in the experimental ocean economy supply and use tables are not ranked. Dark markers indicate OECD Members. The line is a least-squares regression of the change on the 1995 share with a slope of 0.28 and an R-squared of 0.16. The typical country is the median economy. Data for 2025 are a projection.

Source: OECD (2026), OCEANSTAT: OECD estimates of ocean economic activity.

Further reading

OECD (2026), OECD Tourism Trends and Policies 2026, OECD Publishing, Paris, https://doi.org/10.1787/3fd3cd75-en

OECD (2025), The Ocean Economy to 2050, OECD Publishing, Paris, https://doi.org/10.1787/a9096fb1-en

OECD (2024), The Blue Economy in Cities and Regions: A Territorial Approach, OECD Urban Studies, OECD Publishing, Paris, https://doi.org/10.1787/bd929b7d-en.

The Ocean Economy at a Glance

The ocean economy reached an unprecedented USD 3.5 trillion in 2025, underpinning prosperity, jobs and development opportunities across the world. At the same time, increasing pressures on marine ecosystems and resources are threatening ocean health and exposing the limits of current governance arrangements. Meeting these challenges will require better evidence, more integrated policies and strong international co-operation to ensure that economic development and environmental stewardship advance together. Based on original OECD indicators, *The Ocean Economy at a Glance* provides a comprehensive overview of the ocean's contribution to food systems, shipping, energy, minerals, tourism, employment, innovation and scientific discovery. The report equips policymakers with new evidence needed to foster a more productive, innovative, sustainable, resilient and effectively governed ocean economy.

PRINT ISBN 978-92-64-37547-5
PDF ISBN 978-92-64-91380-6