

SME GUIDE

—
For international
collaboration with
Germany on blue growth
activities in the North Sea
region



*Are you working in the marine or maritime sector, the domain of renewable energies or any other field related to **blue growth**, and thinking of starting a project in the **North Sea area**? Then you might want to start a **collaboration** with another region, that has the necessary testing facilities or the specific skills to make the project a success. This guide will give you an overview of the tools for blue growth collaboration that **Germany** has to offer.*

QUICK GUIDE



WHAT DOES GERMANY HAVE TO OFFER?

One of the most important areas of the German economy is the maritime industry. Annual turnover is estimated at up to EUR 50 billion and up to 400,000 workers depending directly or indirectly on the maritime industry. The sector is not limited to the key locations on the coasts of the North Sea and the Baltic Sea. Maritime production is carried out throughout Germany: supply companies are based in all regions of Germany, especially in Baden-Württemberg, Bavaria and North Rhine-Westphalia. Federal Ministry for Economic Affairs and Energy. (2017).

Germany is one of the largest seafaring nations in the world. More than 380 shipping companies based in Germany operate around 3000 sea-going ships (German ship register). The total German fleet occupies fourth place in the world merchant fleet (after Greece, Japan and China). The merchant fleet in Germany provides a wide spectrum. The main activity is container transportation, followed by bulk carriers and oil tankers. The merchant fleet also includes cargo vessels with high capacity and special vessels such as reefer vessels, ro-ro vessels, and gas and chemical tankers. German shipping companies are also active and very successful in rendering services for offshore wind farms. The industry is characterised by its modern, high-tech shipbuilding and shipbuilding supply industries – many of which are well-positioned in the global markets –, its globally leading shipping companies – particularly container shipping companies –, its high-performance port and logistics industries, its innovative marine engineering industry, and its renowned maritime research and training facilities. Federal Ministry for Economic Affairs and Energy. (2017); Bundesministerium für Verkehr und digitale Infrastruktur. (2015); Federal Ministry for Economic Affairs and Energy. (n.d.).

The German seaport industry comprises well over 200 port companies in more than 21 locations along the German coast. German seaport operators serve more than 120,000 ships per year and handle around two-thirds of German external seaport trade including around 300 million tonnes of raw materials, agricultural goods, vehicles and commodities in containers and lorries/trailers. Annually approximately 30 million passengers are transported via German seaports. The German ports sector is also a service provider for the on and offshore wind power sector. The Hamburg Metropolitan Region is home to Germany's largest seaport; it is the maritime industry's key location and 145 million tonnes of goods are handled here annually. Pflugfelder, F. (n.d.).

Another part of the maritime sector is the offshore wind energy. This part of the maritime sector is important for its role in the energy transition but is also an important factor for the economy. In 2014 the sum of investments into the construction of offshore wind farms was around EUR 5.4 billion. In the same year gross employment in the offshore wind energy sector amounted to 18700 people. In 2015 the export ratio was around 50 percent, this is equivalent to approximately EUR 2 billion. (Renewable Energy Sources in Figures, BMWi 2015) In future the sector may manage to reach export ratios of up to 75 percent. Federal Ministry for Economic Affairs and Energy. (2017).

Marine technology is another maritime activity that takes place in Germany. Sustainable use of the oceans will continue to make a significant contribution to an environmentally sound and stable supply of energy and raw materials, thereby playing a strategic role for Germany as an industrial location. Marine technology in Germany covers a wide spectrum and is used in the areas of offshore oil and gas, maritime safety and security, marine mineral resources, marine energy and marine autonomous technology systems.

In 2011 the Government presented a strategy for an integrated maritime policy in the "Maritime Development Plan". This was based on the concept of a holistic, sustainable development of all maritime related policy areas. With the Federal Government's Maritime Agenda 2025 another central building block for this area of industry has been laid. The Agenda includes a comprehensive stock-take and a coherent programme aimed at strengthening the competitiveness of the maritime industry whilst giving equal consideration to the goals of economic growth, high employment potential and stringent environmental and nature conservation requirements.

According to the Maritime Agenda 2025, there are several policy objectives for the German maritime industry to focus on:

1. Consolidate and expand technological leadership
2. Strengthen international competitiveness
3. Consolidate competitiveness of German ports, expand infrastructure and secure Germany's leading position as a logistics hub
4. Shape maritime transport sustainability – strengthen climate and environmental protection and nature conservation
5. Contribute to the energy transition using maritime technologies
6. Maritime 4.0 – use the opportunities of digitalisation
7. Strengthen Germany's maritime expertise
8. Develop industrial capabilities in naval and coastguard shipbuilding
9. Play an active role in shaping the EU's Blue Growth Strategy

When we look at the smart specialization strategies of the German Regions located at the North Sea, the following relevant items are mentioned:

REGION	DESCRIPTION	ECONOMIC DOMAINS	SOURCE
Schleswig-Holstein	Maritime economy Maritime technologies, specialised ship co...	C - Manufacturing C.21 - Basic pharmaceutical products and pharmaceutical preparations C.27 - Electrical equipment ...	Final RIS3 Document
Schleswig-Holstein	Renewable energies Services and logistics, biomass, energy ef...	C - Manufacturing C.27 - Electrical equipment C.28 - Machinery and equipment n.e.c. ...	Final RIS3 Document
Hamburg	Logistics	H - Transportation and storage H.49 - Land transport and transport via pipelines H.50 - Water transport H.52 - Warehousing and support activities for transportation	Final RIS3 Document
Hamburg	Renewable energy	D - Electricity, gas, steam and air conditioning supply D.35 - Electricity, gas, steam and air conditioning supply	Final RIS3 Document
Lower Saxony	Maritime economy Green shipping and offshore	C - Manufacturing C.30 - Other transport equipment H - Transportation and storage H.50 - Water transport	Final RIS3 Document
Lower Saxony	New materials and manufacturing Lightweight construction, automatisation a...	C - Manufacturing C.27 - Electrical equipment C.28 - Machinery and equipment n.e.c. ...	Final RIS3 Document
Lower Saxony	Energy industry Renewable energy, wind energy, fuel cells,...	D - Electricity, gas, steam and air conditioning supply D.35 - Electricity, gas, steam and air conditioning supply J - Information and communication technologies J.62 - Computer programming, consultancy and related activities	Final RIS3 Document
Weser-Ems	Energy Bioenergy, Wind energy, Gas, Storage techn...	D - Electricity, gas, steam and air conditioning supply D.35 - Electricity, gas, steam and air conditioning supply	Peer Review
Weser-Ems	Bioeconomy Plant production, Animal production, Fodde...	M - Professional, scientific and technical activities M.74 - Other professional, scientific and technical activities	Peer Review
Weser-Ems	Maritime sector Shipbuilding, seafaring, Port industry / I...	C - Manufacturing C.29 - Motor vehicles, trailers and semi-trailers C.30 - Other transport equipment	Peer Review

(European Commission, N.D.)

INTELLECTUAL PROPERTY RIGHTS (IPR), REGULATIONS AND STANDARD SUPPORT

IPR

NATIONAL IPR AMBASSADOR	WEBSITE	TELEPHONE NUMBER	EMAIL
German Patent and Trade Mark Office	https://www.dpma.de	+49 89 2195-1000	info@dpma.de

MARINE SPATIAL PLANNING

Policy Document	Raumordnungspläne für die deutsche ausschließliche Wirtschaftszone
Website	https://www.bsh.de/DE/THEMEN/Offshore/Meeresraumplanung/meeresraumplanung_node.html

REGULATIONS AND STANDARD SUPPORT

AGENCIES TO CONTACT CONCERNING FEDERAL MINISTRY OF TRANSPORT AND DIGITAL INFRASTRUCTURE

Name agency	Federal bureau for maritime casualty investigation
Concerning	German agency for investigating maritime accidents and incidents
Link to website	http://www.bsu-bund.de/DE/Home/home_node.html
telephone number	+49(0)40 31 90 83 11
Name agency	Federal Maritime and Hydrographic Agency
Concerning	Maritime safety, hydrographic survey, maritime pollution monitoring, and approvals of offshore installations
Link to website	https://www.bsh.de/EN/Home/home_node.html
telephone number	+49 40 3190-0

AGENCIES TO CONTACT CONCERNING FEDERAL MINISTRY FOR THE ENVIRONMENT, NATURE CONSERVATION AND NUCLEAR SAFETY

Name agency	Federal Environment Agency
Concerning	Immission control and soil conservation, waste management, water resources management and health-related environmental issues
Link to website	https://www.umweltbundesamt.de
telephone number	+ 49 30 / 8903 -5060

PERMITS AND EXEMPTIONS	
Name permit	Permit for the german exclusive economic zone
Issuing authority	Federal Maritime and Hydrographic Agency (BSH)
Applies to	Construction and operation in the German Exclusive Economic Zone
Link to website	https://www.bsh.de
Name permit	Permit for German territorial waters
Issuing authority	Stralsund Mining Authority
Applies to	Construction and operation in territorial waters
Link to website	http://www.bergamt-mv.de/

CROSS BORDER FINANCIAL INSTRUMENTS FOR BLUE GROWTH

TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	Interreg North West Europe
DESCRIPTION	<ul style="list-style-type: none"> The purpose of Interreg NWE is to reduce disparities between the various regions in North-West Europe. In the current programming period there will be a focus on three thematic priorities, identified as key to achieve the ambition and to tackle the most pressing challenges of North-West Europe: Innovation, Low carbon and Resource and materials efficiency.
WEBSITE	http://www.nweurope.eu/
TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	Interreg Germany Netherlands
DESCRIPTION	<p>Interreg Germany Netherlands supports projects that have a cross-border character and are sustainable.</p> <p>Every project should contribute to one of two priorities. These priorities are innovation and sociocultural and territorial cohesion.</p>
WEBSITE	https://www.deutschland-nederland.eu/nl/
TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	Interreg Euregio Maas-Rijn
DESCRIPTION	<p>The Interreg V Euregio Maas-Rijn program (from 2014 to 2020) eliminates bottlenecks and practical barriers to strengthen the potential of (and in) the Meuse-Rhine Euroregion.</p> <p>The four priorities are:</p> <ul style="list-style-type: none"> - Innovation - Economy - Social inclusion and training - Territorial development
WEBSITE	https://www.interregemr.eu/
TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	DFG German Research Foundation
DESCRIPTION	<p>The DFG supports research in science, engineering, and the humanities through a variety of grant programmes, prizes and by funding infrastructure.</p> <p>Proposals are submitted in a particular field of curiosity-driven basic research that they themselves select. Interdisciplinary proposals are also considered.</p> <p>The DFG supports projects from all areas of science and especially promotes interdisciplinary cooperation among researchers.</p>
WEBSITE	https://www.dfg.de/en/
TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	Renewable Resources
DESCRIPTION	<p>The "Renewable Resources" funding program sets the framework conditions for the promotion of research, development and demonstration projects on renewable raw materials by the Federal Ministry of Food and Agriculture (BMEL).</p>
WEBSITE	https://www.fnr.de/

SME ORIENTED INCUBATOR SUPPORT



NAME	STARTUPBOOTCAMP
MAIN TOPICS	Smart transportation and energy
ADDRESS	Charlottenstraße 2, 10969 BERLIN
WEBSITE	https://www.startupbootcamp.org/accelerator/smart-transportation-energy/

RAINMAKING

NAME	TRADE AND TRANSPORT IMPACT PROGRAM
MAIN TOPICS	Specialized in maritime, logistics and transport. Focus areas include safety, security and crew welfare, optimisation of port and vessel operations, autonomous future.
ADDRESS	Hamburg
WEBSITE	https://tradewithimpact.com/



NAME	CLIMATE-KIC
MAIN TOPICS	Climate change, supporting innovative solutions that drive more influence in the climate change field and effectively combats climate change.
ADDRESS	Euref campus 13, 10829 berlin
WEBSITE	https://dach.climate-kic.org/en/germany/



XPRENEURS

NAME	XPRENEURS
MAIN TOPICS	Software and hardware, artificial intelligence (ai), internet of things (iot), additive manufacturing (3d printing), robotics and augmented and virtual reality (ar/vr)
ADDRESS	ROSENLEIMER straÙe 143C, 81671 MÜNCHEN
WEBSITE	https://xpreneurs.io/



NAME	MARITIME STARTUPS
MAIN TOPICS	Maritime
ADDRESS	Locations in bremen, cologne, hamburg, karlsruhe, leer and rostock
WEBSITE	https://www.maritimestartups.de/



NAME	SEAD
MAIN TOPICS	Maritime
ADRESS	Domstrasse 17, d-20095 hamburg
WEBSITE	Https://sead.ac



NAME	NLA
MAIN TOPICS	Logistics accelerator
ADRESS	Am sandtorkai 27/28, vii boden, 20457 hamburg
WEBSITE	Https://www.nla.vc/

TESTING FACILITIES AND CO-WORKING SPACES



NAME ORGANISATION	FRAUNHOFER INSTITUTE FOR WIND ENERGY AND ENERGY SYSTEM
FOCUS	Energy
TYPE OF TECHNOLOGY	Flumes and test labs for ocean engineering. Testing of sensors, corrosion protection, anti-fouling systems and mic-inhibitors.
FACILITIES	Test lab at the river weser mouth
WEBSITE	https://www.iwes.fraunhofer.de/



NAME	ALFRED WEGENER INSTITUTE FOR POLAR AND MARINE RESEARCH
FOCUS	Polar research and the exploration of the sea
EQUIPMENT AND FACILITIES	5 research vessels 6 research locations in remote areas 2 research aircrafts 2 under water observatories Meteorological observatory (antarctica) Geophysical observatory (antarctica) 4 laboratories (proxy, nmr, ice core and c-14)
WEBSITE	https://www.awi.de



NAME	GEOMAR HELMHOLTZ CENTRE FOR OCEAN RESEARCH KIEL
FOCUS	Marine science, investigates the chemical, physical, biological, and geological processes in the oceans, as well as their interactions with the seafloor and the atmosphere.
EQUIPMENT AND FACILITIES	Underwater vehicles and large equipment
WEBSITE	https://www.geomar.de

UNIVERSITÄT GREIFSWALD
Wissen lockt. Seit 1456



NAME	UNIVERSITY OF GREIFSWALD
FOCUS	Marine biology
EQUIPMENT AND FACILITIES	Marine biology station
WEBSITE	https://biologie.uni-greifswald.de



NAME ORGANISATION	LEIBNIZ CENTER FOR TROPICAL MARINE RESEARCH
FOCUS	Marine research
EQUIPMENT AND FACILITIES	Aquaculture research facilities, experimental laboratory
WEBSITE	https://www.leibniz-gemeinschaft.de



MAX-PLANCK-GESELLSCHAFT

NAME	MAX PLANCK SOCIETY (RESEARCH CENTRE)
FOCUS	Marine microbiology
EQUIPMENT AND FACILITIES	Marine biology station, genomic facilities
WEBSITE	https://www.mpg.de



NAME	UNIVERSITY OF BREMEN
FOCUS	Bathymetry, biogeochemistry, hydrography, physical oceanography
EQUIPMENT AND FACILITIES	Underwater vehicles and large equipment
WEBSITE	https://www.uni-bremen.de/



NAME	AIRBUS DEFENCE AND SPACE SAS / GERMAN AEROSPACE CENTER
FOCUS	Marine environment
EQUIPMENT AND FACILITIES	Satellites for sea and ocean observation
WEBSITE	https://www.dlr.de



BUNDESAMT FÜR
SEESCHIFFFAHRT
UND
HYDROGRAPHIE

NAME	FEDERAL MARITIME AND HYDROGRAPHIC AGENCY
FOCUS	Marine data provider and oceanic profilers
EQUIPMENT AND FACILITIES	Data banks and mobile ocean observatories
WEBSITE	https://www.bsh.de

HSVA

NAME	HAMBURG SHIP MODEL BASIN
FOCUS	Flumes and test labs for ocean engineering
EQUIPMENT AND FACILITIES	Ice model tank, flume tank
WEBSITE	https://www.hsva.de/



Leibniz
Universität
Hannover

NAME	LEIBNIZ UNIVERSITY HANNOVER/TECHNICAL UNIVERSITY BRAUNSCHWEIG
FOCUS	Flumes and test labs for ocean engineering
EQUIPMENT AND FACILITIES	Large wave flume
WEBSITE	https://www.fzk.uni-hannover.de



Gesellschaft
für Marine Aquakultur

NAME	GESELLSCHAFT FUER MARINE AQUAKULTUR MBH
FOCUS	Aquaculture
EQUIPMENT AND FACILITIES	8 recirculation systems with water treatment and heating/cooling facility
WEBSITE	https://www.gma-buesum.de



Kiel University
Christian-Albrechts-Universität zu Kiel

NAME	KIEL UNIVERSITY
FOCUS	Marine research
EQUIPMENT AND FACILITIES	Research vessels
WEBSITE	https://www.uni-kiel.de/en/

SENCKENBERG

world of biodiversity

NAME	SENCKENBERG NATURE RESEARCH SOCIETY
FOCUS	Local/coastal nature research
EQUIPMENT AND FACILITIES	Research vessels
WEBSITE	https://www.senckenberg.de



NAME	EUROPEAN MOLECULAR BIOLOGY LABORATORY (EMBL HEILDELBERG)
FOCUS	Marine biology
EQUIPMENT AND FACILITIES	Genomic facilities
WEBSITE	https://www.embl.de



**University of
Stuttgart**

NAME	UNIVERSITY OF STUTT GART
FOCUS	Ocean engineering
EQUIPMENT AND FACILITIES	Flumes and test labs, turbine test rigs
WEBSITE	https://www.uni-stuttgart.de

**Universität
Rostock**



NAME	UNIVERSITY OF ROSTOCK
FOCUS	Biology, marine environment
EQUIPMENT AND FACILITIES	Marine biology station
WEBSITE	https://uni-rostock.de

LITERATURE LIST

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- Federal Ministry for Economic Affairs and Energy. (n.d.). The Maritime Industry. Retrieved February 7, 2020, from <https://www.bmwi.de/Redaktion/EN/Dossier/maritime-industry.html>
- Pflugfelder, F. (n.d.). Maritime industries | Hamburg Convention Bureau. Retrieved February 7, 2020, from <https://www.hamburg-convention.com/en/project/maritimes-cluster/>

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