



COUNTRY FICHE SCOTLAND

SMART SPECIALIZATION

The maritime economy makes a substantial contribution to the Scottish and UK economies. It is estimated that the maritime sector in Scotland provides £9.3 billion in turnover, £3.6 billion in GVA and 39,300 jobs in Scotland in 2015 (CEBR (2017)). The largest constituent industry is the offshore oil & gas sector, which directly contributed £2.9 bn in GVA and 30,900 jobs in 2015.

The main Blue Growth focus in Scotland is on offshore renewable energy, and Scotland is the joint-leader in Smart Specialisation in the area of Marine Renewable Energy, along with the Basque Country.

By leveraging its world-leading expertise and infrastructure in offshore energy extraction, Scotland aims to lead the world in offshore renewable energy. Scotland's natural assets and long-run public-private investment in wave and tidal have given it a lead technology development and testing in this still pre-commercial field (notably via EMEC and the cluster of related companies in Orkney). The commercial deployment of wave energy is supported via the Wave Energy Scotland initiative.

This is supported by Scottish energy policy, which sets a target of 50% of Scotland's overall energy consumption from renewable sources, and near 100% decarbonisation of the energy system by 2050.

Food and drink is a second key priority area of the Scottish Government and fishing and fishing products are an economic cluster in which Scotland has a strong specialisation. Aquaculture is a key priority (notably in the Highlands & Islands area) and the Scottish Aquaculture Innovation Centre has been funded to support the sector. Blue biotechnology related activities are also emerging and fall under the broader life science priority.

The Scottish Marine Institute has a specific centre focused on blue biotech (SAMS, n.d.) and the European Centre for Marine Biotechnology has been developed including business incubation facilities for blue biotech firms (European Centre for Marine Biotechnology, n.d.).

Blue biotechnology is one element of a drive to enhance Scottish industrial biotechnology potential (with marine biomass one focus area) that is being developed. Scottish partners are active in EU FP projects in this field, for example Sea Biotech ("SeaBioTech", n.d.)

Innovation Priorities

Marine renewables

Scotland is a joint leader in the Interregional partnership for Smart Specialisation on Marine Renewable Energy. The innovation priorities in this area have been identified as:

- manufacturing of large components;
- power transfer and conversion;
- corrosion in water;
- sensing, instrumentation and monitoring;
- O&M optimisation;
- testing and demonstration in real environments.

Aquaculture

Aquaculture is an increasingly important industry for Scotland, helping to sustain economic growth in the rural and coastal communities of the north and west. Involving the farming or culturing of fish, molluscs, crustaceans and seaweed, aquaculture produces our most valuable food export. The Scottish aquaculture industry is led by Atlantic salmon farming, but also produces significant quantities of Rainbow trout and mussels.

The Scottish Government supports the Aquaculture Industry Leadership Group as it seeks to deliver the industry's growth strategy by 2030. The strategy aims to:

- double the economic contribution of the sector from £1.8 billion in 2016, to £3.6 billion by 2030
- double the number of jobs to 18,000 by 2030

INTELLECTUAL PROPERTY RIGHTS (IPR), REGULATIONS AND STANDARD SUPPORT

IPR

LOCAL IPR AMBASSADOR	WEBSITE	TELEPHONE NUMBER	EMAIL
Intellectual Property Office	https://www.gov.uk/government/organisations/intellectual-property-office	0300 300 2000 Or +44 (0)1633 814000 (outside UK)	information@ipo.gov.uk

MARINE SPATIAL PLANNING

Policy Document	https://www2.gov.scot/topics/marine/marineenergy/wave/rlg/pentlandorkney/mspfinal
Website	http://marine.gov.scot/

REGULATION AND STANDARD SUPPORT

AGENCIES

Name agency	Marine Scotland
Concerning	<ul style="list-style-type: none"> • marine renewable, fishing vessel, freshwater fisheries and seal licensing • ensuring compliance with fisheries regulations • promoting sustainable, profitable and well-managed fisheries and aquaculture industries • ensuring a sound scientific evidence base exists to inform our marine policies • the sustainable management of freshwater fish and fisheries resources • promoting sustainable economic growth from the marine renewables industry
Link to website	http://marine.gov.scot/
telephone number	00 44 300 244 4000
Name agency	Crown Estate Scotland
Concerning	Leasing and managing seabed and coastal zones
Link to website	http://www.crownestatescotland.com/
telephone number	00 44 131 260 6070
Name agency	Scottish Development International
Concerning	Investment and Trade
Link to website	https://www.sdi.co.uk/
telephone number	+44 300 013 2734

Name agency	Scottish Enterprise
Concerning	Support for companies in Scotland
Link to website	https://www.scottish-enterprise.com/
telephone number	0044 300 013 3385

PERMITS AND EXEMPTIONS

NAME PERMIT	MARINE LICENSE
Issuing authority	Marine Scotland Licensing Operations Team
Applies to	Activities in sea areas
Link to website	https://www2.gov.scot/topics/marine/fish-shellfish/18716/marlicence
Name permit	onshore planning permission
Issuing authority	local planning authority
Applies to	onshore works and constructions
Link to website	https://www2.gov.scot/publications/2009/08/11133705/1
Name permit	Seabed Lease
Issuing authority	Crown Estate Scotland
Applies to	FOreshore and seabed out to 12 nautical miles
Link to website	http://www.crownstatescotland.com/

CROSS BORDER FINANCIAL INSTRUMENTS

TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	Regional Selective Assistance (RSA) grants
DESCRIPTION	<p>Regional Selective Assistance (RSA) grants are available to help projects that will create or protect jobs in Scotland.</p> <p>To qualify, your project must meet ALL the following criteria:</p> <ul style="list-style-type: none"> • Take place within an assisted area in Scotland • Directly create or safeguard jobs within your business • Should not be offset by job losses elsewhere • Involve an element of capital investment • Be mainly funded from the private sector, including the company's own cash resources • Be financially viable, make commercial sense and contribute to Scotland's economy
TRANSNATIONAL DIMENSION	Open to none scottish companies. However the project must be based in Scotland
TYPE OF FINANCIAL INSTRUMENT	Grants
NAME FINANCIAL INSTRUMENT	Horizon 2020
DESCRIPTION	Horizon 2020 is the largest ever European Union (EU) research and innovation programme. It's open to everyone and has an emphasis on excellent science, industrial leadership and tackling societal challenges.
TRANSNATIONAL DIMENSION	Open to EU Member states, EEA members, and third countries in some instances

TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	Interreg Europe
DESCRIPTION	A series of grant funding programmes which aim to generate cohesion across regions in Europe, and generate regional development.
TRANSNATIONAL DIMENSION	Must include other regions in Europe
TYPE OF FINANCIAL INSTRUMENT	Debt/equity
NAME FINANCIAL INSTRUMENT	Energy Investment Fund (EIF)
DESCRIPTION	EIF funds are awarded where an evident gap in the funding of a project has emerged that would prevent it from reaching completion.
TRANSNATIONAL DIMENSION	Open to non-scottish companies, but must be for projects in Scotland
TYPE OF FINANCIAL INSTRUMENT	Grant
NAME FINANCIAL INSTRUMENT	European Maritime and Fisheries Fund
DESCRIPTION	Supports activities in the blue economy. Almost half of this fund is used to support SMEs. A €71m grant funding programme called Blue Economy is funded through the EMFF
TRANSNATIONAL DIMENSION	Open to countries across Europe
TYPE OF FINANCIAL INSTRUMENT	Debt
NAME FINANCIAL INSTRUMENT	Innovfin EDP
DESCRIPTION	EIB debt product used to fund energy demonstration projects.
TRANSNATIONAL DIMENSION	Open to all constituent countries of the EIB

SME ORIENTED INCUBATOR SUPPORT



National Oceanography Centre

NATURAL ENVIRONMENT RESEARCH COUNCIL

NAME:	Marine Robotics Innovation Centre Hub
MAIN TOPICS	Specialist engineering and test facilities to nurture collaborative engagements between companies developing technology for marine autonomous systems and leading academics.
ADDRESS	National Oceanography Centre, European Way Southampton SO14 3HZ
WEBSITE	http://noc.ac.uk/innovationcentre



European Marine Science Park

NAME	European Marine Science Park
MAIN TOPICS	The rich marine resources of the Highlands of Islands of Scotland underpin a vibrant and growing economic cluster based on marine science. This includes innovative enterprises, world-class research, excellent locations and facilities, a skilled talent

pool, strong government support for business and close links between policy makers, industry and academia.

ADDRESS Highlands and Islands Enterprise, European Marine Science Park, Malin House Dunbeg, Oban, PA37 1SZ

WEBSITE www.europeanmarinesciencepark.co.uk



NAME EDF Blue Lab

MAIN TOPICS Blue Lab is EDF Energy's innovation accelerator – created to play an instrumental role to improve the lives of consumers by harnessing the latest technologies, developing energy services and testing the new business models of tomorrow.

ADDRESS 329 Portland Rd, Hove BN3 5SU

WEBSITE <https://www.edfenergy.com/bluelab/blue-lab-challenge>

PROTOTYPING AND LABORATORY/TESTING INFRASTRUCTURES AND CO-WORKING SPACES



NAME European Marine Energy Centre

TYPE OF TECHNOLOGY WAVE, TIDAL, OFFSHORE WIND, ENERGY STORAGE, ENERGY MANAGEMENT

FACILITIES GRID CONNECTED OPEN SEA TEST SITES, ONSHORE SUB-STATIONS, HYDROGEN PRODUCTION AND STORAGE, ENVIRONMENTAL MONITORING, PTO TEST RIG, MICRO-GRID

TRL LEVEL 5-8

WEBSITE EMEC.ORG.UK



NAME Scottish Association of Marine Science

TYPE OF TECHNOLOGY ROBOTICS, AQUACULTURE, ALGAE, SEAWEED,

FACILITIES RESEARCH VESSELS, ROBOTICS TEST FACILITIES, LAB FACILITIES, SWAWEED HATCHERY, ARTIFICIAL REEFS

TRL LEVEL 2-8

WEBSITE [HTTPS://WWW.SAMS.AC.UK/](https://www.sams.ac.uk/)



NAME	FLOWAVE
TYPE OF TECHNOLOGY	OFFSHORE RENEWABLES (WIND, WAVE, TIDAL), ROBOTICS, AUVS
FACILITIES	TEST TANK
TRL LEVEL	2-5
WEBSITE	HTTPS://WWW.FLOWAVETT.CO.UK/



NAME	ORE CATAPULT
TYPE OF TECHNOLOGY	OFFSHORE WIND, WAVE ENERGY, TIDAL ENERGY
FACILITIES	Robotics and Autonomous Systems, Powertrains, Wind turbine rotor blade, electrical infrastructure, subsea foundations and substructures
TRL LEVEL	2-8
WEBSITE	HTTPS://ORE.CATAPULT.ORG.UK/

LITERATURE LIST

- CEBR. (2017). The economic contribution of the Maritime sector in Scotland. Retrieved from [downloads/Cebr_Maritime_UK_Scotland_finalised.pdf](#)
- SAMS. (n.d.). [Biotechnology; The Scottish Association for Marine Science]. Retrieved December 19, 2018, from <https://www.sams.ac.uk/science/blue-economy/biotechnology/>
- European centre for Marine Biotechnology]. (n.d.). Retrieved December 19, 2018, from <http://www.ecmb.org/index.htm>
- (SeaBioTech). (n.d.). Retrieved December 19, 2018, from <http://spider.science.strath.ac.uk/seabiotech/index.php>