Maritime transport (freight, ports and shipping)

Scottish Government
Riaghaltas na h-Alba
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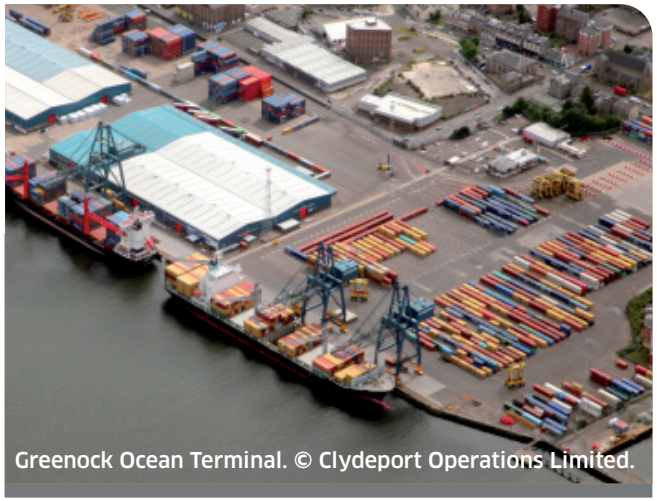
14 LIFE BELOW WATER

Key message

There were 65 million tonnes of freight handled by all Scottish ports in 2018: down 9% since 2014. There are over 200 ports that provide the infrastructure for the national, regional and local economies in which they operate. In 2017 freight water transport generated £45 million Gross Value Added (GVA).



Greenock Ocean Terminal. © Clydeport Operations Limited.

What, why and where?

This section covers the movement of freight through ports, shipping and its associated infrastructure.

The Scottish economy is increasingly dependent on the efficient and cost effective movement of freight, by water, air, road and rail, connecting products to markets nationally and internationally. The mode of freight transport used depends on the nature and destination of the freight, with water generally used for non-time sensitive, bulky and heavy international freight. In 2018, one third of Scotland's total freight tonnage, including exports, was carried by water: 65 million tonnes (Transport Scotland, 2020). In 2018, the eleven major ports accounted for 95% of the total traffic through Scottish ports. There has been a steady decline in freight through Scotland's eleven major ports: 8% down overall from 2014 to 62 million tonnes in 2018 (Figure 1), driven by a 45% reduction in dry bulk over the same period.

Scotland benefits from a diverse and successful ports sector that contributes significantly to the national, regional and local economies in which they operate. There are over 200 ports, comprising privately owned, local authority and trust ports, plus ports run by Ministry of Defence and Caledonian Maritime Assets Ltd (CMAL) (Table 1). They vary in size from major commercial operations for international exports,

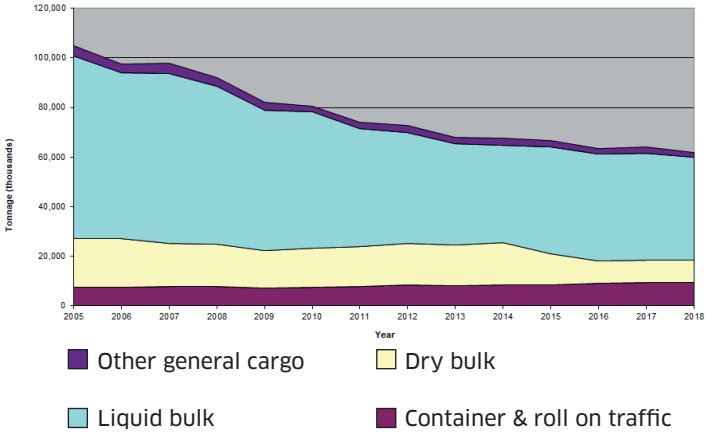


Figure 1:
Freight tonnage through Scotland's 11 major ports by category, 2005-2018. Source: Transport Scotland.

Dry bulk: dry, unpacked produce and raw materials, like grains, coal and sugar that are dropped or poured into the hold of a bulk carrier. Liquid bulk: free-flowing liquid cargoes, like fruit juice, crude oil, liquefied natural gas and chemicals that are poured into the hold of a tanker.

For further information on this topic go to: https://marine.gov.scot/sma/assessment/maritime-transport-freight-ports-and-shipping

Table 1: Types and examples of Scottish ports.

Port type	Number	Examples of ports (MAJOR 11, *additional 5*)(*)
Private or commercial company	63	**CAIRNRYAN**, **LOCH RYAN**, ***Ayr***, **CLYDE** (Ardrossan, Glasgow, Greenock, Hunterston), **GLENSANDA**, **DUNDEE**, **FORTH** (Burntisland, Grangemouth, Granton, Inverkeithing, Leith, Methil, Rosyth)
Local authority owned	122	**ORKNEY** (Scapa Flow, Kirkwall, Stromness), **SULLOM VOE**, ***Perth***
Trust port	32	***Lerwick***, **CROMARTY FIRTH** (Invergordon), ***Inverness***, **PETERHEAD**, **ABERDEEN**, ***Montrose***
Ministry of Defence	2	HMNB Clyde, Coulport
Caledonian Maritime Assets Ltd and British Waterways	25	Terminals such as Oban, Brodick, Port Ellen, Kennacraig, Ardrishaig.

Source: Transport Scotland. * top 16 ports in Scottish Transport Statistics; top 11 (major ports) are defined as regularly handling over 1 Million tonnes per year. Stranraer closed in November 2011.

ferry ports, ports serving the oil and gas industry in the North Sea and west of Shetland, a new maintenance hub at Wick for offshore renewables, to small leisure and fishing harbours.

Ports develop to cater for changes in demand. For example, a new port area at Aberdeen south is expected to be completed in 2021 (Figure 3) to improve the infrastructure.

Figure 3:
Work in progress for new Aberdeen harbour development. © Aberdeen Harbour Board.

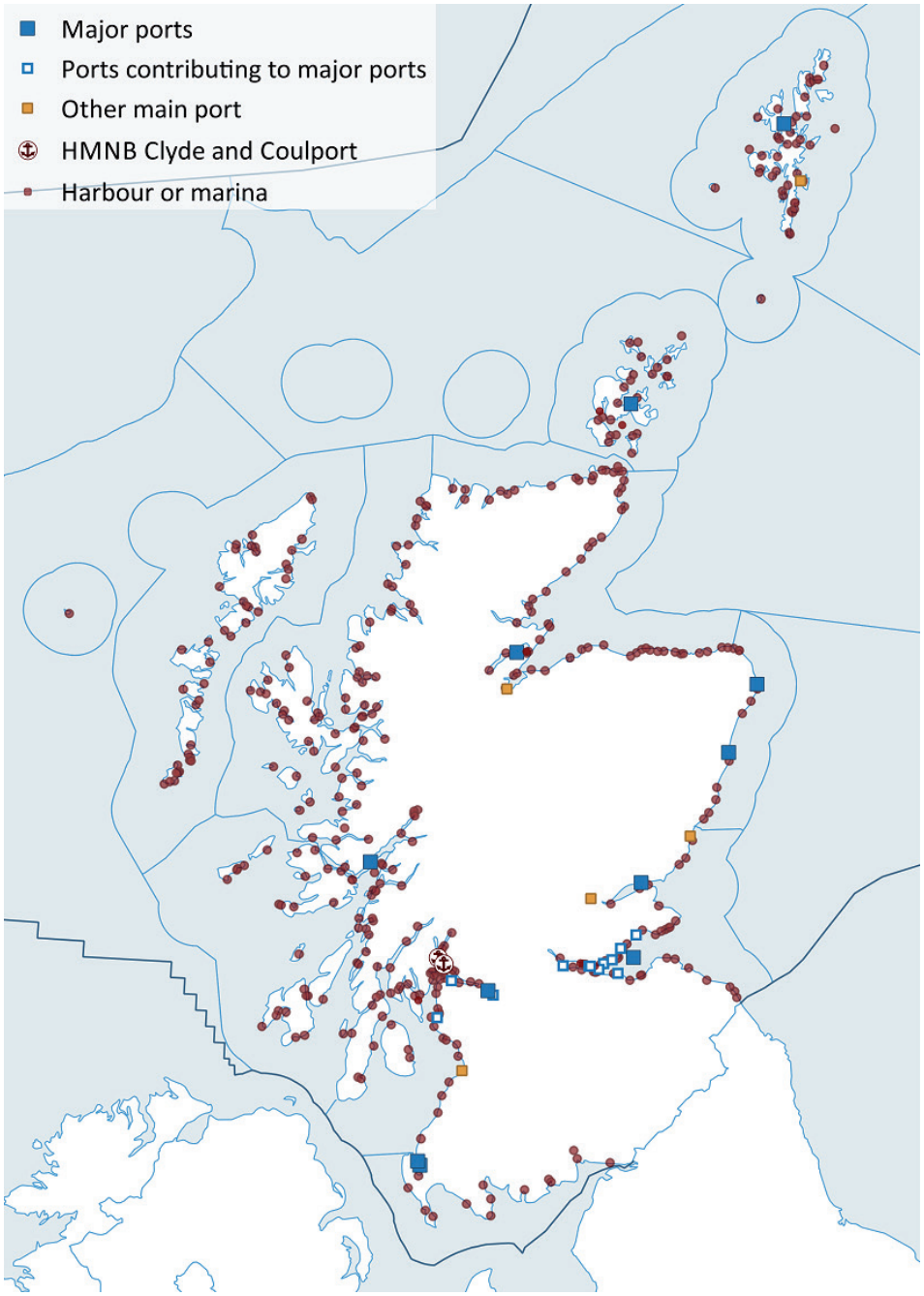


Figure 2:
Scotland's 11 major ports and other ports. Source: Transport Scotland.

Contribution to the economy

The economic contribution of maritime freight, ports and shipping is measured in two different industry groups; 'freight water transport' and 'construction of water projects and water transport service activities'. Freight water transport includes transport of freight overseas and coastal waters. Construction of water projects and water transport service activities includes:

- Construction and operation of waterways, harbours, pleasure ports (marinas), locks, etc.
- dredging of waterways
- activities related to water transport of passengers, animals or freight
- navigation, pilotage and berthing activities
- lighterage (the transference of cargo by means of a lighter), salvage activities
- lighthouse activities

Freight water transport

In 2017 freight water transport generated £45 million Gross Value Added (GVA) and provided employment for around 500 people (headcount).

Between 2013 and 2017 the GVA from freight water transport (adjusted to 2017 prices) fell by 42%, while the longer term trend from 2008 to 2017 showed that freight water transport GVA fell by 70%. GVA reached a peak of £192 million in 2011, falling to £45 million in 2017. From 2008 to 2017, employment fell by 29%, from a high of 900 people in 2014 to 500 in 2017.

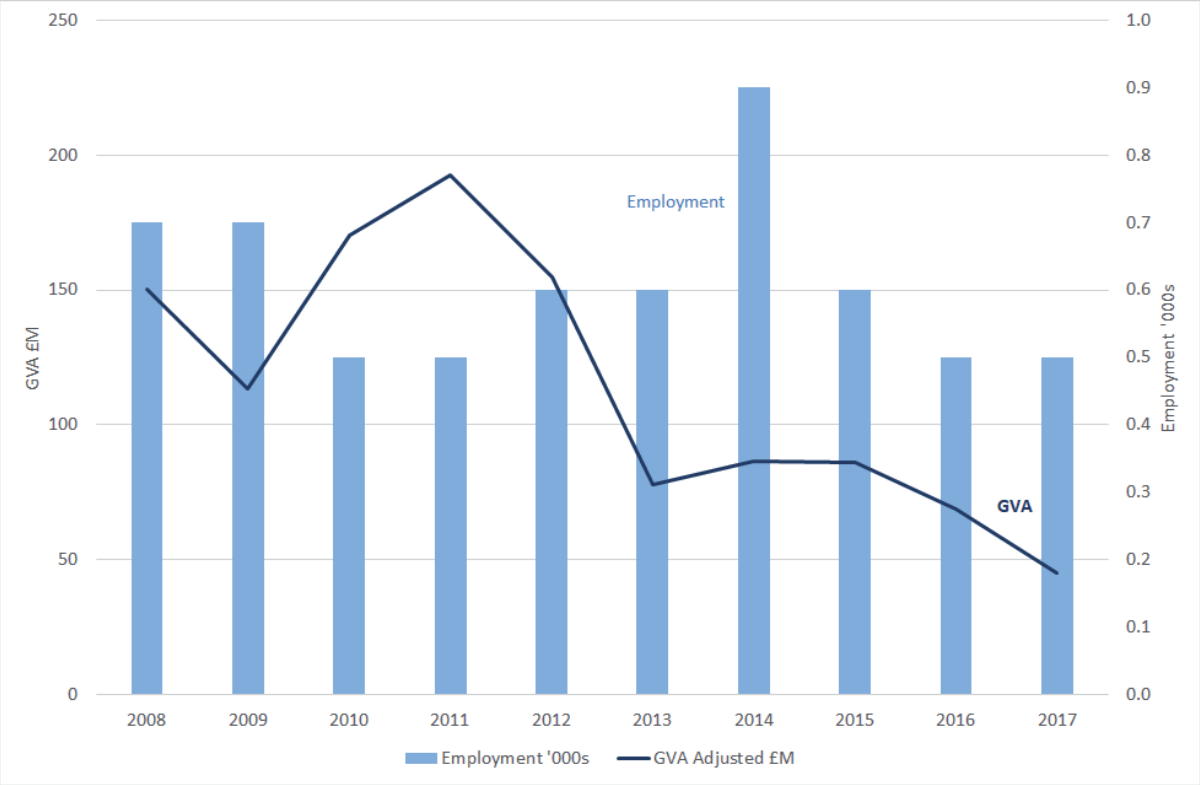


Figure 4:

Freight water transport – GVA and employment, Scotland, 2008 to 2017 (2017 prices). Source: Scotland's Marine Economic Statistics, Scottish Government (2019).

Construction of water projects and water transport service activities

Scotland's Marine Economic Statistics (SMES) (Scottish Government, 2019) report on the industry categories of 'Construction of water projects' and 'Service activities incidental to water transportation'. In 2017, construction and water transport services contributed £591 million in GVA and provided employment for 4,300 workers. Between 2013 and 2017, GVA increased by 8%, while employment rose by 10%. The longer term trends have been variable, but generally increasing. Between 2008 and 2017 construction and water transport services GVA increased by 83% and employment increased by 65%.

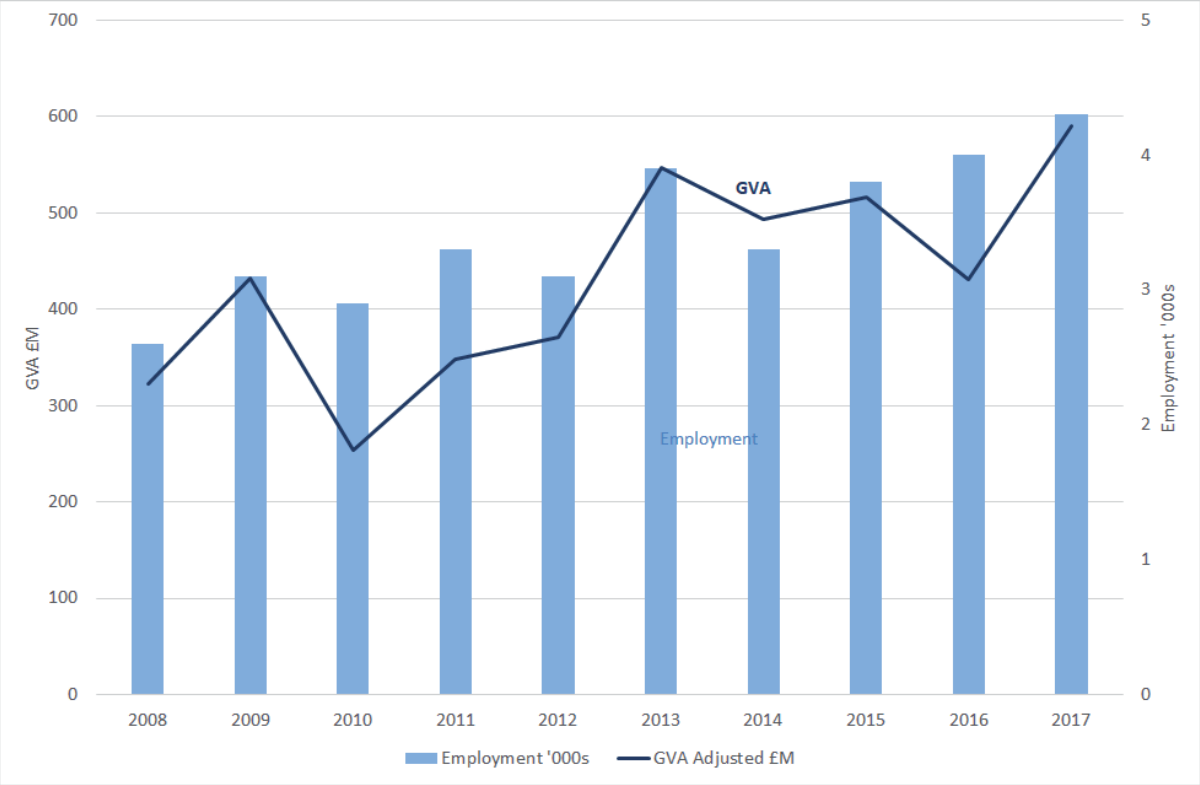


Figure 5:
Construction of water projects and water transport service activities – GVA and employment, Scotland, 2008 to 2017 (2017 prices). Source: Scotland's Marine Economic Statistics, Scottish Government (2019).

Shipbuilding

In 2017, the GVA contribution from the Scottish shipbuilding sector was around £0.6 billion, whilst turnover stood at £1.6 billion. Shipbuilding provided employment for 7,700 people (headcount) (Scottish Government, 2019). Scottish shipbuilding accounted for a fairly significant proportion of total UK output of the industry (around 29% for turnover and 24% for GVA in 2017). See ship building case study.

Maritime sector

A 2019 Centre for Economics and Business Research (Cebr) report for Scottish Maritime Cluster (Cebr, 2019) showed that in 2017 the Scottish Maritime sector, encompassing Shipping, Ports, Marine and Maritime Business Services was reported to have contributed business turnover of £9.9 billion, GVA of £3.7 billion and provided employment of over 41,000 jobs.

Examples of socio-economic effects

- Sea transport of goods remains environmentally beneficial.
- Sector is a significant economic contributor.
- Societal benefits enable the movement of people, goods and services to and from island and remote communities, improving connectivity.
- Provides infrastructure and support for offshore industries.
- Ports might have to compete with other land users which may limit their development and economic contribution.

Pressures on the environment

An OSPAR agreed list of marine pressures is used to help assessments of human activities in the marine environment. The marine pressure list has been adapted for use in Scotland via work on the Feature Activity Sensitivity Tool (FeAST). Maritime transport (freight, ports & shipping) activities can be associated with 27 marine pressures – please read the pressure descriptions and benchmarks for further detail.

Forward look

The Scottish Government has developed a strategy to create a positive environment for Scottish maritime businesses and institutions to grow and prosper within a competitive international market.

The ports operate as commercial businesses, and continue to adapt and develop to meet the demand of the maritime industry. They are identifying the need for new development to support the various sectors using them. Some examples are:

- the largest trust port investment in the UK will see the Aberdeen South Harbour completed and open for business in 2021.
- a new fish market is being built in Lerwick with boats expected to start landing into the new facility in 2020.
- development of an ultra-deep water port at Dales Voe in Lerwick is aimed at bringing the largest decommissioning projects to Scotland.
- Stornoway is in the process of developing a new multifunctional deep water berth which will accommodate the largest cruise vessels as well as general cargo, renewables industry, oil & gas and ferry infrastructure. It is scheduled to open in 2021.

Scottish Government recognises the impact the maritime sector has on the environment, and is working with shipbuilding industries at the forefront of devising technology advances to increase ship efficiency and create cleaner solutions.

Economic trend assessment

Trends for Scotland are based on Freight Port tonnages for all ports in Scotland, 2014-2018.

Although information on Gross Value Added (GVA) for freight transport is available, this is only at a Scotland level and does not include 2018 data. Therefore a decision was made to focus on tonnage for all of the trends. This does not affect the direction of the trend as the GVA for freight water transport decreased by 48% between 2014 and 2017.

Trends for Scottish Marine Regions are based on Freight Port tonnages (2014-2018) for Scotland's 11 major ports.

Confidence is three stars as based on published national statistics.

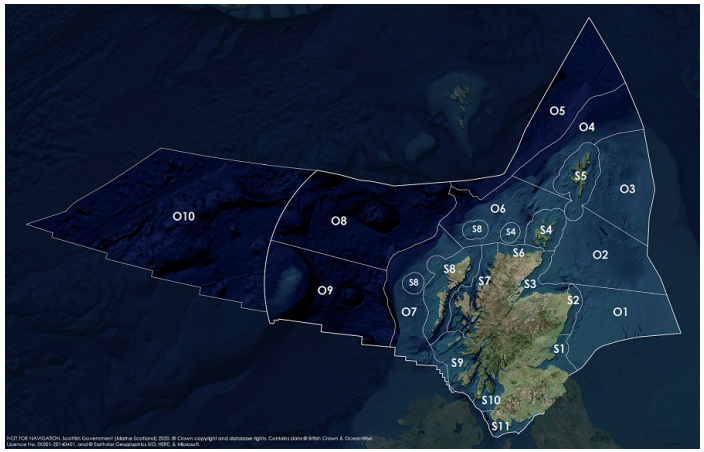
Scottish Marine Region	
Argyll	
Clyde	
Forth and Tay	
Moray Firth	
North East	
Orkney Islands	
Shetland Isles	
Solway	
Scotland	

Status and trend assessment legend

Status assessment (for Clean and safe, Healthy and biologically diverse assessments)		**Trend assessment (for Clean and safe, Healthy and biologically diverse and Productive assessments)**	
	Many concerns		No / little change
	Some concerns		Increasing
	Few or no concerns		Decreasing
	Few or no concerns, but some local concerns		No trend discernible
	Few or no concerns, but many local concerns		All trends
	Some concerns, but many local concerns	**Confidence assessment**	
	Lack of evidence / robust assessment criteria	**Symbol**	**Confidence rating**
	Lack of regional evidence / robust assessment criteria, but no or few concerns for some local areas	☆	Low
	Lack of regional evidence / robust assessment criteria, but some concerns for some local areas	☆☆	Medium
	Lack of regional evidence / robust assessment criteria, but many concerns for some local areas	☆☆☆	High

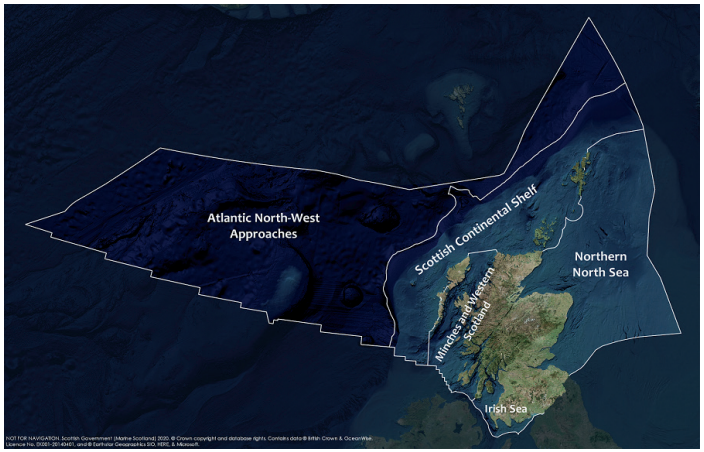
Overal confidence

Assessment regions

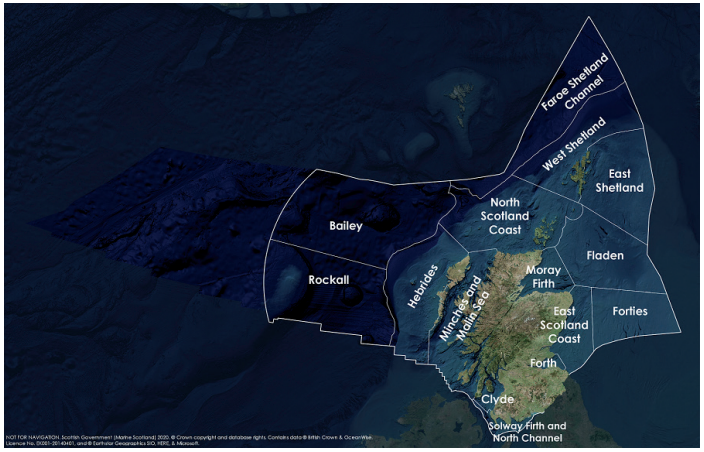


The Scottish Marine Regions (SMRs; S1 – S11) and the Scottish Offshore Marine Regions (OMRs, O1 – O10)

Key: S1, Forth and Tay; S2, North East; S3, Moray Firth; S4 Orkney Islands, S5, Shetland Isles; S6, North Coast; S7, West Highlands; S8, Outer Hebrides; S9, Argyll; S10, Clyde; S11, Solway; O1, Long Forties, O2, Fladen and Moray Firth Offshore; O3, East Shetland Shelf; O4, North and West Shetland Shelf; O5, Faroe-Shetland Channel; O6, North Scotland Shelf; O7, Hebrides Shelf; O8, Bailey; O9, Rockall; O10, Hatton.



Biogeographic, Charting Progress 2 (CP2) Regions. These have been used as the assessment areas for hazardous substances.



Scottish Sea Areas as used in Scotland's Marine Atlas 2011. These are sub divisions of the biogeographic, or Charting Progress 2 (CP2), Regions.

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NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

JNCC
Joint Nature Conservation Committee

SEPA
Scottish Environment Protection Agency

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