

Lough Foyle

Site data



Click on one of the following links to launch the data archive application. (Note: the application opens in a new browser window.)

Lough Foyle North

[Chl a concentration](#)

[Salinity](#)

[Temperature](#)

Lough Foyle South

[Chl a concentration](#)

[Salinity](#)

[Temperature](#)

Site information

Lough Foyle is a shallow coastal embayment at the mouth of the River Foyle on the north coast of Ireland. The lough borders both the Irish Republic and Northern Ireland and has one of the largest catchments of all Irish sea-loughs at 3,700 km². Lough Foyle is approximately 179 km² in size with an average depth of 5m - intertidal mudflats cover 20 % of its area. The Lough is defined as starting seaward of Culmore point with a series of mudflats, deeper channels and poorly sorted sands and gravels. Areas of the lough have been designated as protected (RAMSAR, ASI, ASSI, SPA, NNR), is of international importance to wintering wildfowl, and contains several Red Data Book plants. Two moored instrument packages are located within the lough – one close to the mouth of the estuary, and the other at the seaward entrance to the lough.

Activity

Industry is light, but a substantial commercial port with freight traffic in addition to commercial fisheries and a booming leisure industry all put pressure on, and make demands of the water quality. Fisheries within the lough include a traditional salmon fishery and an expanding mussel dredging

industry. The Salmon industry in 1995 contributed approximately £4 m to the economy with fish caught from both inside and outside of the Foyle catchment. The largest mussel (*Mytilus edulis*) beds in Ireland exist within the lough, which are dredged for seed mussel to supply other beds. The sheltered waters of the Lough are used extensively by the public - both sporting and nature enthusiasts use the area for a variety of watersports, fishing and bird/nature watching activities.

Waters

Lough Foyle is home to an extensive established Salmon fishery, and a more modern and expanding shell-fishery, both of which demand good water quality. Considerable freshwater inputs from the rivers Foyle, Faughan and Roe can in combination with tidal effects affect salinity throughout the lough. Water quality within the Foyle catchment is generally good and compliant with E.C. Directives, with only one or two sections of rivers being identified as potentially eutrophic. Land use within the catchment is predominantly pasture. Surveys in the 1990's suggested that the river Foyle is a substantial source of TON to the lough, with winter concentrations (>100 micromoles) exceeding those found in Belfast Lough. The major sewage treatment works for the city of Londonderry discharge to the deep channel outside of Culmore point, as do effluents from Du Pont's chemical complex. These inputs have contributed to the presence of faecal contaminants within the estuary, and have potentially contributed to algal blooms (including the toxic dinoflagellate, *Gonyaulax*) in the lough.

Lough foyle is the most northern of the five sea loughs around the coastline of Ireland. It is a cross-border water body, which straddles the international border between Northern Ireland (N.I.) and Republic of Ireland. The main freshwater sources are Foyle, Faughan and Roe rivers.

Characteristics

Volume (millions m3)	Total area (km2)	Maximum depth (m)	Catchment area (km2)	Temperature range (°C)	Mean salinity	River flow (m3 s-1)
752	186	15	3 700 (75% in N.I.)	2-20	20	Foyle: 90 Faughan:7 Roe: 8

Nutrients

Mean nutrient concentration ($\mu\text{mol l}^{-1}$)

Ammonium	Nitrate	Phosphorus	Silicate
5	51	1	20

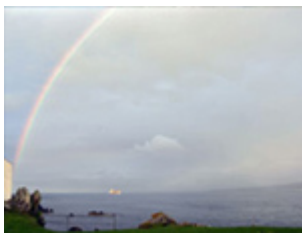
Nutrient load (ton year-1)

Nitrogen	Phosphorus
5 872	292

Aquaculture

Licensed sites	Total aquaculture area (km2)	Species
No licensing	Aquaculture sites cover about 50% of the seabed	Mussels and oysters

Conservation



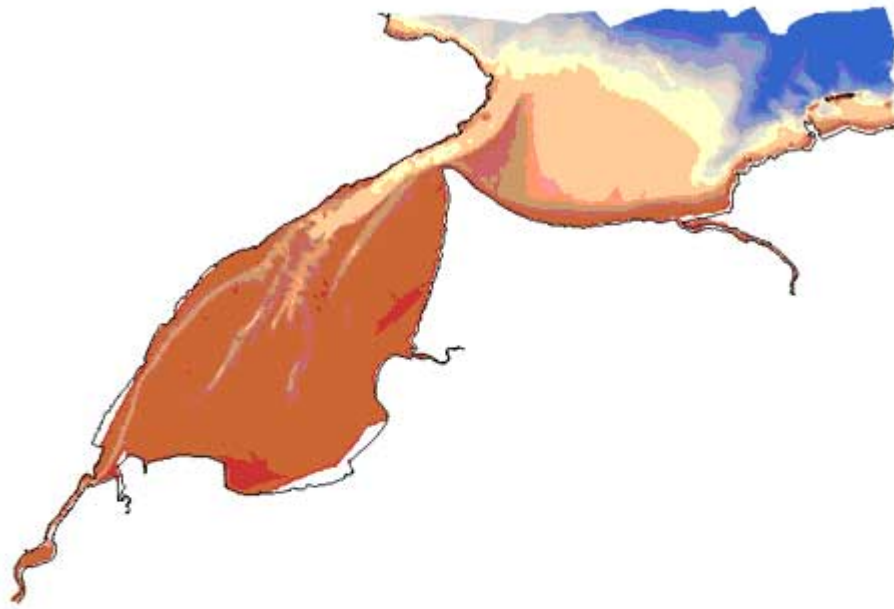
Lough Foyle

ASSI - Area of Special Scientific Interest

RAMSAR site

SPA - Special Protection Area

SAC – Special Area of Conservation



Foyle Lough

— Coastline

Depth (in meters)

