

Managing marine activities in transboundary ecosystems: Carlingford Lough case study

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AFBI



SIMAtlantic Final Conference Session 2A

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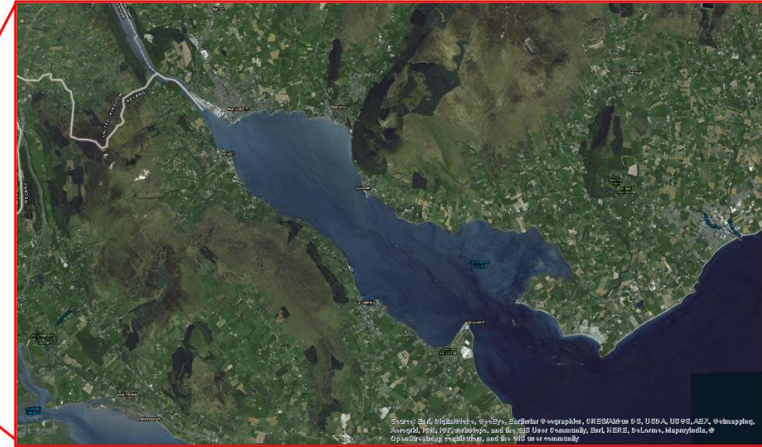
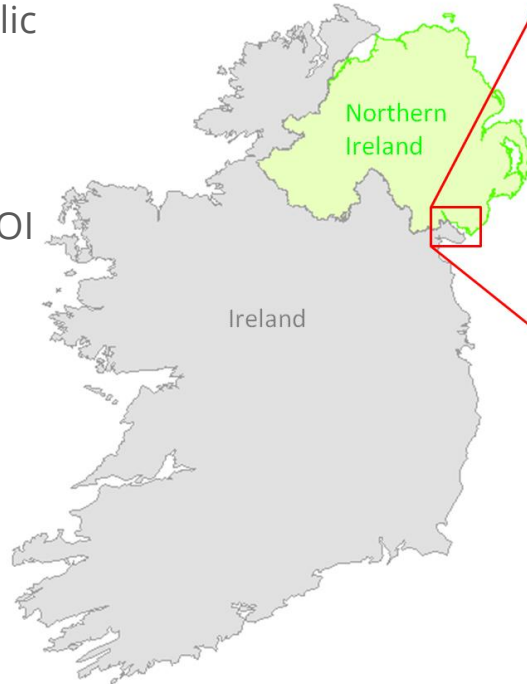
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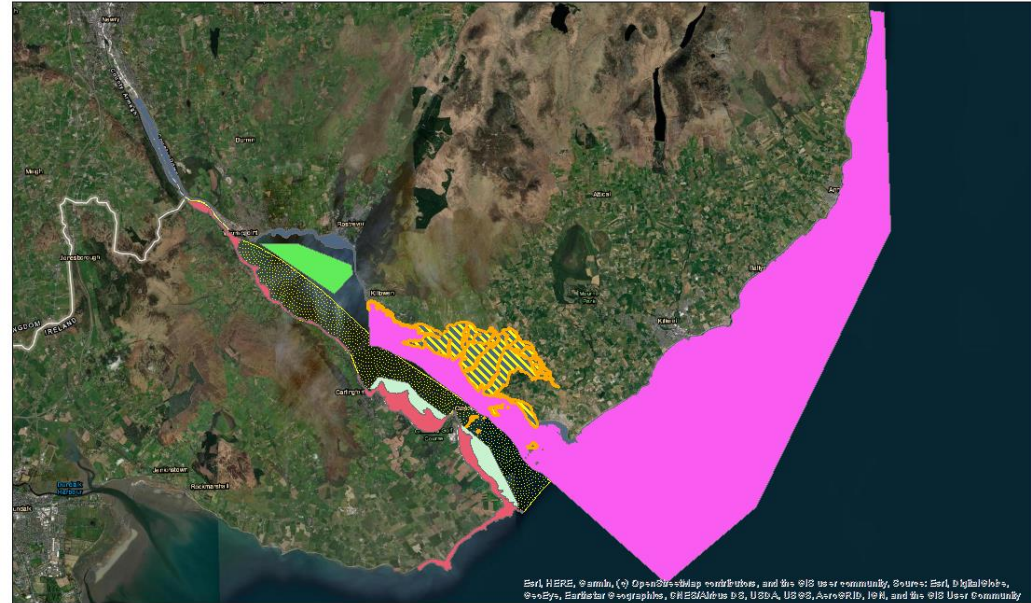
Carlingford Lough case study: Overview

- One of two transboundary sea Loughs bordering the Republic of Ireland and Northern Ireland
- East Coast of Ireland, bordering County Louth in ROI and Counties Down and Armagh in NI
- Complex maritime border issues



Carlingford Lough case study: Overview

- Conservation designations under the EU Habitats and Birds Directives
- Wide variety of conflicting users
- Complex maritime border issues
- Further opportunities for enhancement of cross-border cooperation



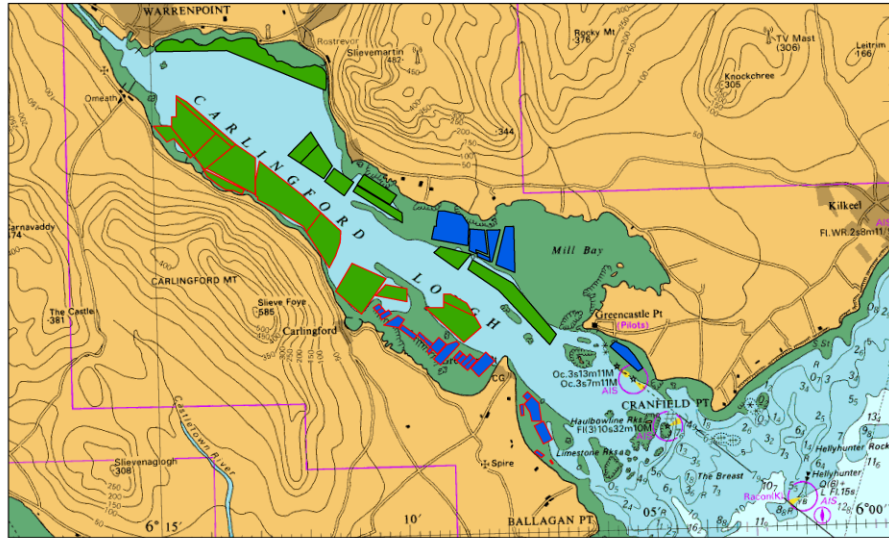
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Carlingford Lough case study: Guidance Document

- A non-statutory practical guidance document to assist developers, regulators and those working in or with a shared interest in the coastal region.
- Practical information on responsibilities for planning and management of current activities within the Lough
- Review of marine activities with a focus on aquaculture activities to include;
 - Maritime uses and selected activities
 - Marine Protected Areas
 - Identification of pressures and impacts
 - Spatial interactions
 - Operational guidance for users of Carlingford Lough
- Hoped to be used as a template to produce similar supporting work in other transboundary areas



Carlingford Lough case study: Guidance Document



Aquaculture
Carlingford_Aqua
Species, Ref

Green	Mussels, NI
Blue	Oyster, NI
Light Green	Mussels, ROI
Light Blue	Oyster, ROI

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Tourism and Recreation

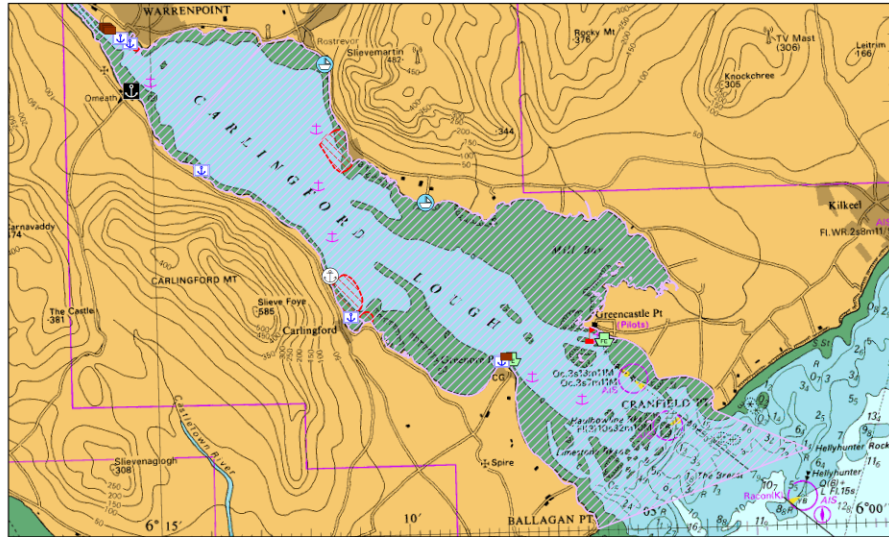
Tourism and Recreational Hubs

Blue square with white triangle	Bathing Area	Blue square with white triangle	Picnic and Amenity Site	Blue line	Loughs Agency River Fisheries
Blue square with white triangle	Camping, Caravanning and Motorhomes	Purple square with white triangle	Recreational hub	Green line	Brown Trout
Blue square with white triangle	Golf Club	Purple square with white triangle	Sea Angling Mark	Blue line	Brown/Sea Trout
Blue square with white triangle	Loughs Agency	Red dashed line	South_East_Canoe_Trail		

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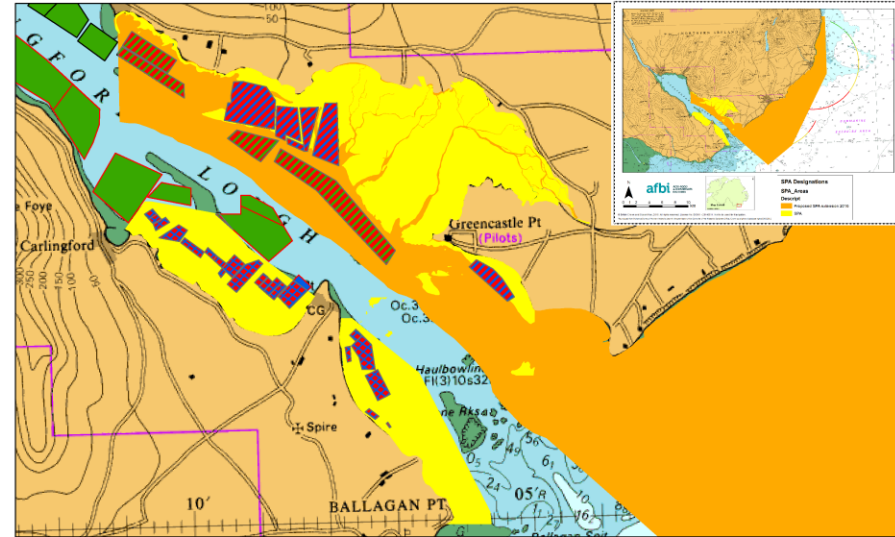


Carlingford Lough case study: Guidance Document



Ports and Harbour Facilities

	Harbour		Ferry Terminal		Anchorage area
	Marina		Mooring buoy		Harbour area (administrative)
	Pier		Dolphin		
	Private Harbour		Anchorage		

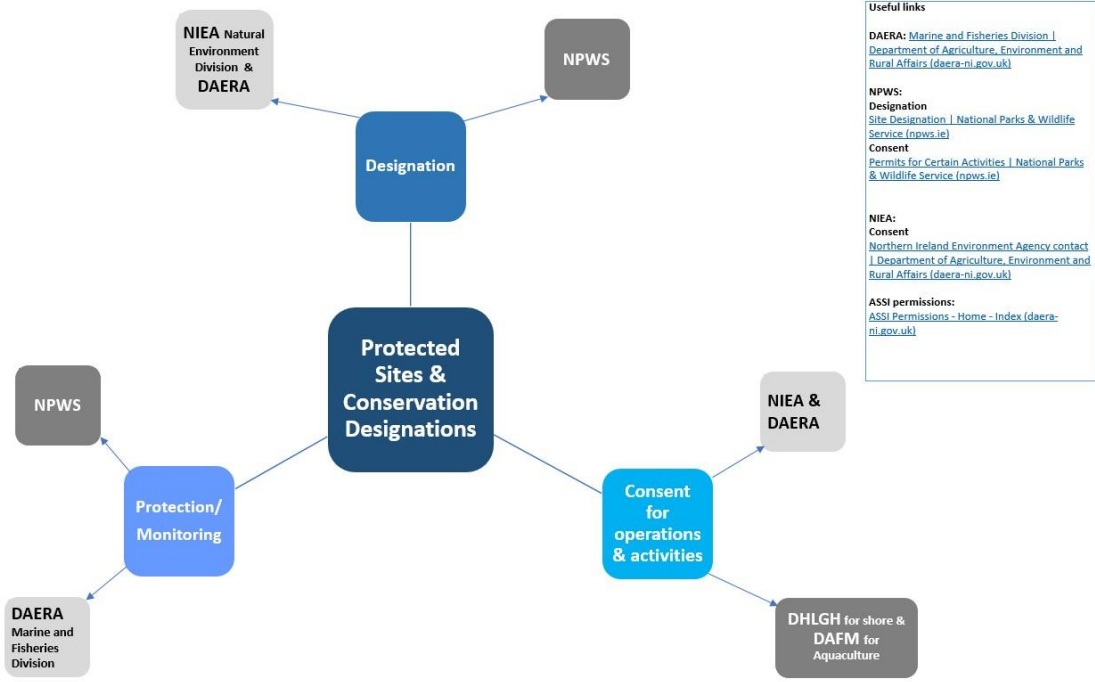


SPA_Areas Descript	SPA Overlap Species, Ref	Carlingford_Aqua Species, Ref
Proposed SPA extension 2016	Mussels, NI	Mussels, NI
SPA	Oyster, NI	Oyster, NI
	Mussels, ROI	Mussels, ROI
	Oyster, ROI	Oyster, ROI

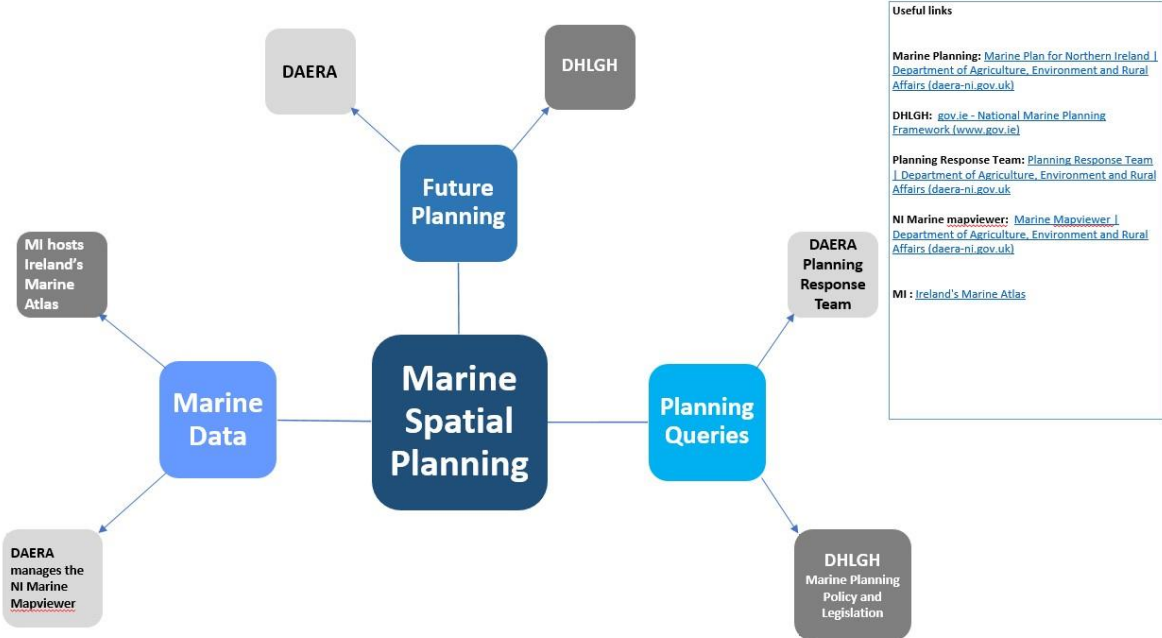
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Carlingford Lough case study: Guidance Document



Carlingford Lough case study: Guidance Document



Carlingford Lough case study: Fact sheet

- Fact sheet has been produced for local stakeholders
- Represents a summary of the review of marine activities occurring within the shared waters of Carlingford Lough contained within the guidance document.
- Will be available both online and in hard copy to be distributed to local stakeholders.



Carlingford Lough case study: Fact sheet

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Carlingford Lough

BACKGROUND

Carlingford Lough is a sea lough at the mouth of the Newry (or Clanny) River on the east coast of Ireland, bordering both the Republic of Ireland (County Louth) and Northern Ireland (Counties Down and Armagh). There is no formal, agreed international maritime boundary in the Lough, necessitating the development of a common approach to management of its shared marine resources where possible.

The population of the catchment is approximately 61,000. The main settlements are Newry City with a population of 26,993, and Warrenpoint, Burten and Rossvor with a population of 11,509, all of which are in Northern Ireland (NISRA, 2011).

Carlingford Lough conservation designation (credit: AFBI)

This factsheet has been produced as part of SIMAtlantic, a two-year project (2019-21) co-funded by the European Union to support the establishment and implementation of maritime spatial planning in five European Atlantic countries: France, Ireland, Portugal, Spain and the United Kingdom. For more information, see www.simatlantic.eu.

SIMAtlantic



On the southern side of the Lough, Carlingford has a population of 1,445 and Omeara has a population of 603 (CSO, 2016).

The areas of Carlingford Lough on the Southern side of the dredged channel host the following designated features:

- Special Area of Conservation (SAC) for the Annex I habitats
- Annual vegetation of drift lines and Perennial vegetation of stony banks
- SPA for overwinter (non-breeding) Light bellied Brent Geese and wetland
- Proposed Natural Heritage Area

The areas of Carlingford Lough on the Northern side of the dredged channel host the following designated features:

- Special Protection Area (SPA) for breeding Sandwich and Common Terns and overwintering (non-breeding) Light Bellied Brent Geese
- Area of Special Scientific Interest (ASSI)
- Area of Outstanding Natural Beauty (AONB)
- Ramsar site (as designated under the Convention on Wetlands of International Importance (also known as the Ramsar Convention))
- Marine Conservation Zone (MCZ) to support the habitat for *Philine aperta* (white lobe shell) and *Virgulina mirabilis* (sea-pen) in soft stable infralittoral mud

The Loughs Agency was set up as a cross-border body under the 1998 Agreement between the Government of the United Kingdom of Great Britain



Pacific Oyster (*Magallano gigas*)

and Northern Ireland and the Government of Ireland. The Agency has a number of strategic and operational functions which contribute to promoting and managing marine activities within Carlingford Lough.

AQUACULTURE ACTIVITIES

Blue mussels (*Mytilus edulis*) and the Pacific Oyster (*Magallano gigas*) are the dominant shellfish species cultivated in Carlingford Lough.

- Intertidal aquaculture occurs predominantly in the form of off-bottom (trestle) culture of the Pacific oyster *M. gigas*
- Subtidal aquaculture involves the bottom culture of the blue mussel. *M. edulis* seeds is dredged from naturally settled wild seed mussel beds (outside Carlingford Lough) then re-laid onto licensed aquaculture beds within the Lough for on growing to harvestable size.

Carlingford Lough case study: Fact sheet



View across the Lough to Carlingford Castle

The shellfish aquaculture sector in Northern Ireland was valued at €4.8 million in 2018 (DAERA)

Production value of the shellfish aquaculture in County Louth was €9.3 million in 2019 (BIM)

- Licensed aquaculture sites occupy approximately 23.9% of the total area of the Lough. Actual area under culture will be significantly less than this.

In the Northern side of Carlingford Lough the Department of Agriculture, Environment and Rural Affairs (DAERA) Marine and Fisheries Division is responsible for the granting of fish culture licences, shellfish fishery licences and marine fish fishery licences under the Fisheries Act (Northern Ireland) 1966.



Intertidal off bottom (bedrock) culture of the Pacific Oyster (Magilligan Farm)

In the Southern side of Carlingford Lough the Aquaculture and Foreshore Management Division of the Department of Agriculture, Food and the Marine (DAFM) is responsible for aquaculture licensing under the Fisheries (Amendment) Act, 1997 and Foreshore Acts, 1935-2011.

A programme of monitoring has been established for all new licensed intertidal aquaculture sites on the northern shore of Carlingford Lough granted since 2014. This is to ensure any changes in benthic sediments and communities from bioaccumulation remain small and localised.

For coastal communities, aquaculture can:

- Provide jobs and contribute to diversification
- Contribute economically through associated activities such as processing facilities, etc.
- Provide quality local seafood to retailers and restaurants, enhancing local tourism
- Relieve pressure on wild stocks

Shellfish flesh is routinely monitored for levels of Escherichia coli and classified for human consumption. Levels are measured per 100g of flesh. The standards that must be achieved and the level of treatment required for each classification is set out in EU Law.

WATER QUALITY

The European Water Framework Directive (Directive 2000/60/EC) addresses issues of water use, water quality, river morphology and the ecological value of waterbodies and their surrounding areas (NIEA, 2015a). It has been transposed into Northern Ireland regulations through the Water Environment Regulations 2017. The Northern Ireland Environment Agency is the competent authority tasked with implementation of the regulations. In the Republic of Ireland, The European Communities (Water Policy) Regulations 2003 (SI 722 of 2003) implements the objectives of the Water Framework Directive.

AFBI delivers remotely deployed automated in-situ instruments capable of monitoring a range of physico-chemical and environmental variables. These received instruments in Carlingford Lough routinely monitor:

- Temperature
- Salinity
- Chlorophyll concentrations
- Dissolved oxygen
- Turbidity
- Surface seawater fluorescence

Working both within in-house teams and with other organisations, the Department of Agriculture, Environment and Rural Affairs (DAERA) Marine and Fisheries Division survey, monitor and assess the marine and coastal environment of Northern Ireland, including bathing water quality.

In the Republic of Ireland, a National Marine Monitoring programme is coordinated by the Environmental Protection Agency (EPA). Sites are monitored for biological and chemical parameters within both jurisdictions.

Shellfish are filter feeders, filtering phytoplankton from the seawater. Some phytoplankton species can be harmful to humans if eaten, therefore routine monitoring is carried out through the Food Standards Agency to determine if toxic phytoplankton is present in the water within the shellfish production areas.

The Urban Waste Water Treatment Directive is transposed in Northern Ireland by the Urban Waste Water Treatment Regulations (Northern Ireland) 2007 (DAERA, 2013).

In the Republic of Ireland, it is transposed by the Water Services Act, 2007 and the Urban Waste Water Treatment (Amnd.) Regulations, 2010. Compliance

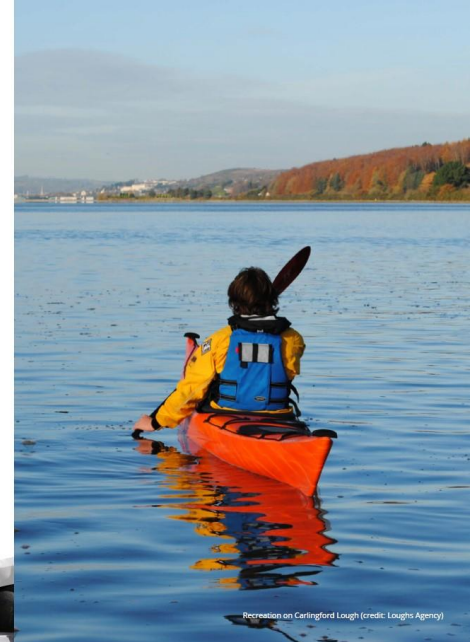
with the requirements of the directive is monitored by the EPA.

There are a total of 17 wastewater treatment works (WWTWs in-service) registered within the Carlingford Catchment.

TOURISM AND RECREATION

The Carlingford Catchment hosts a population of approximately 61,000 and attracts tourists year round.

- Boating activity is widespread in the lough with multiple sailing and yacht clubs, slipways, private moorings and jetties. Boating activity includes dinghy and yacht racing and cruising, sail and powerboat training.
- The Albert Basin is the main water-based recreation resource in Newry. Managed by Newry and Mourne District Council it provides tie-up mooring facilities, with an overall Quay length of approximately 186 metres.
- Carlingford Lough hosts 10 designated access points to the "South East Coast Canoe Trail" which stretches more than 50 nautical miles along the south east coast of Northern Ireland into County Louth in the Republic.
- The Newry, Mourne and Down District Council manages several fish angling stands, marinas and tie-up moorings within its jurisdiction.
- Crainfield Beach is an identified bathing water with public facilities (managed by Newry, Mourne and Down District Council)
- Local companies offer daily day-trip sailings between Warrenpoint and the small village of Omagh from June to September.
- Carlingford Marina boasts a 300 berth marina and boyard. The Omagh to Carlingford Peninsula Greenway is utilised by sail boats and has floating moorings outside the Carlingford harbour.



Recreation on Carlingford Lough (credit: Loughs Agency)





Thank you

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