

Leannan / Clady / Owencarrow / Glaskeelan WMU

Leannan / Clady / Owencarrow / Glaskeelan Water Management Unit Action Plan



Legend

- Towns and Villages
- Wastewater Treatment Plants
- EPA Licensed Facility (IPPC)
- Local Authority Licensed Discharge
- Water Treatment Plants
- NI Boundary

River Status

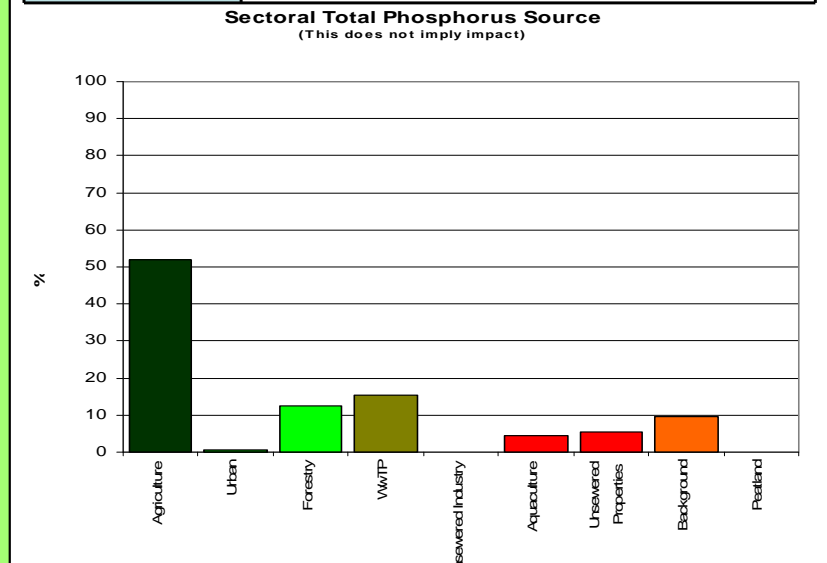
- High
- Good
- Moderate
- Poor
- Bad

Lake Status

- High
- Good
- Moderate
- Poor
- Bad



Name	Leannan/Clady/Owencarrow/Glaskeelan Water Management Unit (WMU)
Area	504 km ²
River Basin District	North Western IRBD
Main Counties	Donegal
Protected Areas	8 SAC (Cloghernagore Bog & Glenveagh National Park, Fawnboy Bog/Lough Nacung, Lough Akibbon & Gartan Lough, Muckish Mountain, Ballyarr Wood, Leannan, Glashagh, Lurgy, Maggy's Burn); 4 FPM (Leannan, Clady, Owencarrow, Glaskeelan); 2 SPA (Glenveagh National Park, Lough Fern); 6 surface drinking waters (Glen Lough, Gartan Lough, Lough Salt, Lough Reelin, Lough Veagh (Upper)/Owencarrow, Lough Columbille)

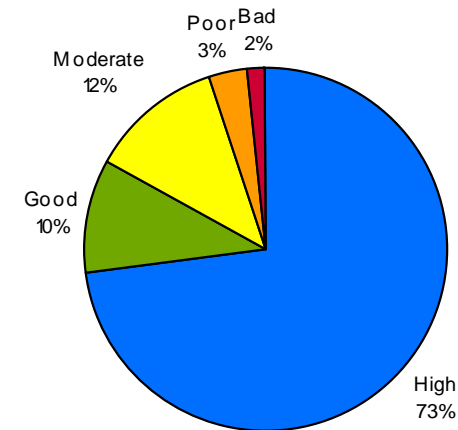


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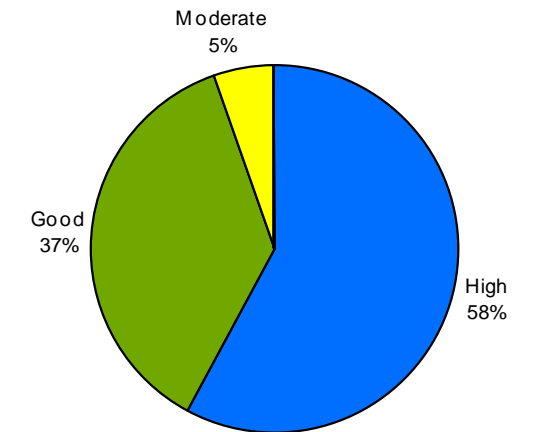
STATUS/IMPACTS	
Overall status	59 River waterbodies - 43 High, 6 Good, 7 Moderate, 2 Poor and 1 bad. Majority of Rivers at High/Good status in WMU with a small number of water bodies at moderate to poor status in 2009. All Lakes within the WMU are at good or high status with the exception of Lough Nacung Upper which is at moderate status and Lough Reelan which is unassigned status (20 lakes within WMU).
Status elements	For the most part the Q score (macroinvertebrates) dictates status, however where there are freshwater pearl mussel populations in the WMU, the condition of these populations dictates status. General physio-chemical status is generally good where monitored.
Possible Impacts - EPA Water Quality Reports	<p>CLADY – (NW_38_4124, Status 2009 – Moderate) Ecological conditions remain satisfactory at the lower reaches (0300) of the Clady river in 2009, however the macroinvertebrate fauna indicated a decline in ecological conditions at Bryan's Br (0150). The Clady is influenced by Lough Nacung and Dunlewy Lough which are impounded water bodies providing water and hydroelectricity. Located within Fawnbog/Lough Nacung SAC.</p> <p>GLASKEELAN – (NW_39_322, status 09 – Moderate) The catchment is impacted by forestry activities.</p> <p>LEANNAN – (NW_39_2205, Status 2009 – Poor) The upper sections of the Leannan were satisfactory. Dromore Br (0300) was once again polluted as in 2004.</p> <p>GLASHAGH (Lower) - (NW_39_477, Status 2009 – High) Has suffered major pollution event in the past. Source identified successful prosecution. River has since recovered.</p> <p>LURGY – (NW_39_2205, Status 2009 - Poor) - Impacted by Kilmacrennan WWTP</p> <p>MAGGIE'S BURN –(NW_39_1600, Status 2009 – Bad) Impacted by Milford WWTP</p>

PRESSURES/RISKS											
Nutrient sources	Approx 85% of total phosphorus load is diffuse (agriculture, forestry, septic tanks plus natural background). The majority of phosphorus load from points sources (15%) originates from WWTPs .										
Point pressures	4 WWTP (Ramelton, Kilmacrennan, Milford, Gweedore), 6 Local Authority licenced (Section 4) discharges (Cement plant, salmon hatchery, fish farm, ESB, quarry, Limestone quarry). No main sewer for Churchill or Fintown. There are 4 WTP within WMU: <table border="0"> <tr> <td><u>Water Treatment Plant (WTP)</u></td> <td><u>Source</u></td> </tr> <tr> <td>-Letterkenny</td> <td>Lough Salt abstraction to below level of natural outlet</td> </tr> <tr> <td>-Letterkenny</td> <td>Lough Reelan</td> </tr> <tr> <td>-Churchill</td> <td>Lough Gartan</td> </tr> <tr> <td>-Milford</td> <td>Lough Columbkille (abstraction to below level of natural outlet)</td> </tr> </table>	<u>Water Treatment Plant (WTP)</u>	<u>Source</u>	-Letterkenny	Lough Salt abstraction to below level of natural outlet	-Letterkenny	Lough Reelan	-Churchill	Lough Gartan	-Milford	Lough Columbkille (abstraction to below level of natural outlet)
<u>Water Treatment Plant (WTP)</u>	<u>Source</u>										
-Letterkenny	Lough Salt abstraction to below level of natural outlet										
-Letterkenny	Lough Reelan										
-Churchill	Lough Gartan										
-Milford	Lough Columbkille (abstraction to below level of natural outlet)										
Wastewater Treatment Plants (WWTP) and Industrial Discharges	Ramelton WWTP - potential risk with insufficient future WWTP capacity . Kilmacrennan WWTP - risks associated with this plant include insufficient capacity for WWTP, insufficient assimilative capacity in receiving water and historical deterioration in Q value within 3km of outfall. Milford WWTP - risks associated with this WWTP include insufficient future WWTP capacity, insufficient assimilative capacity in the receiving waters, and unsatisfactory water quality (Q value <4) within 3km of outfall. Salmon hatchery - risks associated with this discharge include inadequate assimilative capacity in the receiving waters. Fish farm - risks associated with this discharge include inadequate assimilative capacity in the receiving waters.										
Quarries, Mines & Landfills	Quarry discharge responsible for pollution event in NW_39_692. Drumaboden and Muckish – restored landfills										
Agriculture	4 water bodies at risk from agriculture in the WMU (NW_39_984, NW_39_1600, NW_39_477, NW_39_885)										
On-site systems	There are 4332 septic tanks in this WMU, 1477 septic tanks in 7 river water bodies are posing a risk to water quality due to their density, location and unsuitable hydrogeological conditions. (NW_39_1591, NW_39_1600, NW_39_2205, NW_39_2315, NW_39_884, NW_39_477, NW_39_885)										
Forestry	32 water bodies at risk from both suspended solids and eutrophication (NW_39_884, NW_39_1600, NW_39_1425, NW_39_2047, NW_39_388, NW_39_405, NW_39_1591, NW_39_2205, NW_39_2315, NW_38_291, NW_38_3038, NW_38_3042, NW_38_3376, NW_38_4056, NW_38_4124, NW_38_661, NW_38_800, NW_39_1136, NW_39_1623, NW_39_1877, NW_39_1889, NW_39_1967, NW_39_2059, NW_39_2070, NW_39_2304, NW_39_2463, NW_39_315, NW_39_322, NW_39_479, NW_39_499, NW_39_681, NW_39_692)										
Dangerous substances	No water bodies at risk										
Morphology	1 water body identified to be at risk from channelisation, inspection proposed (NW_38_4124)										
Abstractions	3 water bodies at risk (NW_39_1600, NW_38_940, NW_38_4136)										
Other	Fly tipping is still a major problem within WMU.										

River Data



Lake Data



SELECTED ACTION PROGRAMME	
<i>NB All relevant basic measures, general supplementary measures and SEA mitigation measures apply</i>	
Point Sources	WWTP measures are summarised in the Table overleaf. Ramelton and Milford licensing applications complete. Pollution from Quarry in water body 39_692 noted in 2009 Freshwater Pearl Mussel fieldwork. Quarry responsible for serious pollution event according to NPWS (Note Water body has been extrapolated to high status in EPA 2009 status classification, needs to be addressed). Examine the terms of discharge authorisations to determine whether they require review for the purpose of compliance with water body objectives including protected area objectives and environmental quality standards.
Diffuse Sources	Good Agricultural Practice regulations inspections/enforcement will apply, particularly in at risk areas. Septic tanks - The 1477 at risk septic tanks are to be prioritised for inspections. Subsequent upgrade or connection to municipal systems depends on inspection and economics tests. (Proliferation in recent years of sewage package plants for multiple housing schemes and septic tanks.) Forestry - Ensure compliance with Forestry guidance and codes of practice to address the problems associated with suspended solids and eutrophication.
Other	Protection of drinking waters and future abstraction licencing control will also be important measures required to ensure good water quality. The Bathing Waters Directive also applies in this WMU as a key measure. Freshwater Pearl Mussel Sub-basin Plans - measures to protect FPM will apply in this WMU.
Future Developments	Throughout the river basin management cycle future pressures and developments will need to be managed to ensure compliance with the objectives of the Water Framework Directive and the Programme of Measures will need to be developed to ensure issues associated with these new pressures are addressed.

OBJECTIVES	
Good status 2015	There are 49 river water bodies and 18 lake water bodies at satisfactory condition and should be retained at high or good status. 6 river water bodies and 1 lake water body have an objective to achieve good status by 2015.
Alternative Objectives	<p>Heavily Modified/Artificial water bodies - 3 Heavily modified water bodies (Lough Nacung, Lough Salt and Lough Dunlewy); 1 Artificial water body (Clady Headrace).</p> <p>New Modifications - none</p> <p>Extended Timelines – there are extended timescales to 2021 for the achievement of good status proposed for 4 river water bodies within the WMU.</p>

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WWTP Measures

Point Source Discharge	County	Priority	Measure (Capital Works)	Date	WMU
Gweedore WWTP	Donegal	1	Provide secondary treatment.	2015+	Leannan/Clady/Owencarrow/Glaskeelan
Kilmacrennan WWTP	Donegal	1	Increase capacity of treatment plant.	2015	Leannan/Clady/Owencarrow/Glaskeelan
Kilmacrennan WWTP	Donegal	1	Provide tertiary treatment or relocate outfall.	2015	Leannan/Clady/Owencarrow/Glaskeelan
Milford, Donegal	Donegal	1	Increase capacity of treatment plant.	2015+	Leannan/Clady/Owencarrow/Glaskeelan
Milford, Donegal	Donegal	1	Provide tertiary treatment or relocate outfall.	2015+	Leannan/Clady/Owencarrow/Glaskeelan
Milford, Donegal	Donegal	1	Provide nutrient removal or relocate outfall.	2015+	Leannan/Clady/Owencarrow/Glaskeelan
Ramelton WWTP	Donegal	1	Increase capacity of treatment plant.	2015+	Leannan/Clady/Owencarrow/Glaskeelan
Point Source Discharge	County	Priority	Measure (Plants requiring the Implementation of Recommendations of Pollution Reduction Plans for Shellfish waters (PRP))	Date	WMU
Kilmacrennan WWTP	Donegal	1	Implementation of PRP for Shellfish Waters	2010	Leannan/Clady/Owencarrow/Glaskeelan
Milford, Donegal	Donegal	1	Implementation of PRP for Shellfish Waters	2010	Leannan/Clady/Owencarrow/Glaskeelan
Ramelton WWTP	Donegal	1	Implementation of PRP for Shellfish Waters	2010	Leannan/Clady/Owencarrow/Glaskeelan

Lake Data

IE_NW_Leannan/Clady/Owencarrow/Glaskeelan																	
Member State Code	Name	Monitored Y (Extrapolated N)	Biological Elements			Supporting Elements			Ecological Status	Chemical Status	Protected Areas					Objective	Date objective to be achieved
			Macrophytes	Chlorophyll	Fish	Morphology	Nutrient Enrichment	Physio-Chemical			Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Bathing Water	Drinking Water		
NW_38_18	Atirrive (Lough)	N							H		Y					HES	2009
NW_38_22	Glen Lough	Y		H				H	H		Y				Y	HES	2009
NW_38_26	Nacung Upper (Lough)	Y	H		M			H	M		Y					GEP	2015
NW_38_33	Aluirg (Lough)	N							H		Y					HES	2009
NW_38_546	Glentornan Lough	N							H		Y					HES	2009
NW_38_565	Agannive (Lough)	N							H		Y					HES	2009
NW_38_649	Salt (Lough)	Y	P	H		G		H	H						Y	GEP	2009
NW_38_661	Croloughan Lough	N							H		Y	Y				HES	2009
NW_38_665	Agannive (Lough)	Y		H				G	G		Y					GES	2009
NW_38_683	Dunlewy Lough	Y	G						M		Y					GEP	2009
NW_38_80a	Veagh Lower (Lough)	Y		H				G	G		Y	Y				GES	2009
NW_38_80b	Veagh Upper (Lough)	Y	H	G				H	H		Y	Y			Y	HES	2009
NW_39_10	Inshagh (Lough)	N							H		Y	Y				HES	2009
NW_39_11	Akibbon (Lough)	Y	M	H				G	G		Y					GES	2009
NW_39_12	Gartan Lough	Y	G	H				G	G		Y				Y	GES	2009
NW_39_13	Fern (Lough)	Y		H		M		M	M		Y	Y				GES	2009
NW_39_47	Nambraddan (Lough)	N							H		Y	Y				HES	2009
NW_39_51	Claggan Lough	N							H		Y					HES	2009
NW_39_68	Nacally (Lough)	N							H		Y					HES	2009
NW_38_514	Lough Reelan	Y							NA						Y	NA	NA

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River Data

IE_NW_Leannan/Clady/Owencarrow/Glaskeelan																	
Member State Code	Monitored Y (Extrapolated N)	Donor Waterbody	Biological Elements				Supporting Elements			Ecological Status	Chemical Status	Protected Areas				Objective	Date objective to be achieved
			Macroinvertebrates (O)	FreshWater Pearl Mussel	Fish	Phytobenthos (Diatoms)	Morphology	Specific Pollutants	Physio-chemical			Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Drinking Water		
NW_38_1739	N	NW_38_4136								H		Y				HES	2009
NW_38_1948	N	NW_38_291								H		Y	Y			HES	2009
NW_38_2730	N	NW_38_291								H		Y				HES	2009
NW_38_291	Y		H							H		Y	Y			HES	2009
NW_38_2962	Y		H							H		Y	Y			HES	2009
NW_38_2999	Y									M		Y				GES	2015
NW_38_3003	Y		H							H		Y	Y			HES	2009
NW_38_3038	Y		H	M					H	M		Y	Y		Y	GES	2015
NW_38_3042	N	NW_38_3912								G		Y				GES	2009
NW_38_3048	N	TBC								H		Y	Y			HES	2009
NW_38_3168	N	TBC								H		Y	Y			HES	2009
NW_38_3301	N	TBC								H						HES	2009
NW_38_3374	Y		H							H		Y	Y			HES	2009
NW_38_3376	N	TBC								H		Y	Y			HES	2009
NW_38_4056	N	TBC								H		Y	Y		Y	HES	2009
NW_38_4074	N	TBC								H						HES	2009
NW_38_4124	Y		G	M		G			H	M		Y				GES	2021
NW_38_4136	Y		H							H		Y				HES	2009
NW_38_547	N	TBC								H		Y				HES	2009
NW_38_555	N	TBC								H		Y	Y			HES	2009
NW_38_661	N	TBC								H		Y				HES	2009
NW_38_800	Y		H		G		G		H	G		Y	Y			GES	2009
NW_38_939	N	NW_38_4136								H		Y				HES	2009
NW_38_940	Y		G							G		Y				GES	2009
NW_38_949	Y		H	M					H	M		Y	Y			GES	2015
NW_39_1136	Y		M	M		H		H	H	M	G	Y				GES	2015
NW_39_1425	N	TBC								H						HES	2009
NW_39_1591	Y		G						G	G		Y	Y			GES	2009
NW_39_1600	Y		B						M	B			Y			GES	2021
NW_39_1623	Y		M							M		Y				GES	2015
NW_39_1848	N	TBC								H		Y	Y			HES	2009
NW_39_1849	N	TBC								H		Y	Y			HES	2009
NW_39_1851	N	TBC								H		Y	Y			HES	2009
NW_39_1877	Y								G	G		Y				GES	2009

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IE_NW_Leannan/Clady/Owencarrow/Glaskeelan																	
Member State Code	Monitored Y (Extrapolated N)	Donor Waterbody	Biological Elements				Supporting Elements			Ecological Status	Chemical Status	Protected Areas				Objective	Date objective to be achieved
			Macroinvertebrates (O)	FreshWater Pearl Mussel	Fish	Phytobenthos (Diatoms)	Morphology	Specific Pollutants	Physio-chemical			Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Drinking Water		
NW_39_1881	N	TBC								H		Y	Y			HES	2009
NW_39_1889	N	TBC								H						HES	2009
NW_39_1959	N	TBC								H		Y	Y			HES	2009
NW_39_1967	N	TBC								H						HES	2009
NW_39_2047	N	TBC								H						HES	2009
NW_39_2048	N	TBC								H						HES	2009
NW_39_2059	Y		H							H		Y	Y			HES	2009
NW_39_2070	N	TBC								H						HES	2009
NW_39_2205	Y		P	M					G	P		Y	Y			GES	2021
NW_39_2304	N	TBC								H						HES	2009
NW_39_2315	N	TBC								H		Y	Y			HES	2009
NW_39_2463	N	TBC								H		Y				HES	2009
NW_39_2472	N	TBC								H						HES	2009
NW_39_315	N	TBC								H		Y	Y			HES	2009
NW_39_322	Y			M						M		Y	Y			GES	2015
NW_39_388	Y		P							H		Y				GES	2021
NW_39_405	N	TBC								H						HES	2009
NW_39_465	Y		G							G		Y				GES	2009
NW_39_477	N	TBC								H		Y				HES	2009
NW_39_479	N	TBC								H						HES	2009
NW_39_499	N	TBC								H						HES	2009
NW_39_681	N	TBC								H		Y				HES	2009
NW_39_692	N	TBC								H						HES	2009
NW_39_884	N	TBC								H						HES	2009
NW_39_885	N	TBC								H						HES	2009