



Clonmany Priority Area for Action – Desk Study Summary

This is a summary of the desk study for the Clonmany Priority Area for Action (PAA) Co. Donegal. Desk studies are reports that are prepared by the catchment scientist using available information and data. To write these reports, we use information available for all waters that we plan to assess in the PAA. We get our information from:

- The Environmental Protection Agency
- Local Authorities
- Inland Fisheries Ireland
- Irish Water
- The Department of Agriculture Food and the Marine
- Other public agencies.

The desk study also includes information learned from the public at a community information meeting which was held on the 11th of November 2019 in the Clonmany Youth and Community Resource Centre, Clonmany.

In our desk studies, we examine a number of things:

- **quality** – how the water quality has changed since 2007.
- **importance** –for example, if its water is used for drinking water, and if there are any rare plants or animals in it that we need to protect.
- **impacts from human activity** – here we focus on impacts that damage water quality such as discharges from wastewater, agriculture, forestry practices, physical changes to the water etc.

We complete desk studies before starting our field-based assessments or local catchment assessments (LCAs).

1. Background and Location

LAWPRO catchment scientists work in specific catchment areas called Priority Areas for Action (PAAs). The Clonmany PAA is located to the northwest of Co. Donegal in the Inishowen Peninsula. The Clonmany River rises from the back of the Bulbin Mountains flowing northwest through the village of Clonmany before entering the sea in Tullagh Bay.

The PAA comprises of the main river channel the Clonmany River and two tributaries the Clontagh River draining the east of the catchment which joins the Clonmany River at Gortoran Bridge on the R238, and the Ballyhallan River which joins the Clonmany River at the rear of the Riverside Park estate in the village of Clonmany. The Glenvin Waterfall, a popular tourist attraction, is located along the Ballyhallan River. In addition, to these river waterbodies is the Fad Meendoran Lake waterbody, within

the Clonmany PAA. This lake has not been included as part of the PAA, as at the lake is currently meeting its high status objective. Fad Meendoran Lake is used as an abstraction point for the Inishowen West Water Supply Zone and is designated as a Protected Area for Drinking Water.

The Clonmany PAA was selected for a number of reasons:

- Water quality within the PAA has deteriorated, with all four monitored waterbodies currently at poor ecological status.
- Prior to 2018 four of the waterbodies within the Clonmany PAA have reported unsatisfactory water quality, despite these four sites previously reporting good or high biological status prior to 2018.
- The coastal area receiving the water from the Clonmany River is part of the North Inishowen Coast, Special Area of Conservation (SAC), which means that it is an important habitat for many protected aquatic plants and animals, and therefore, must be protected.
- Improvements have recently been completed in the Clonmany wastewater treatment plant (WWTP).
- Finally, within the region there are a number of waterbodies which are not part of the Clonmany PAA which have similar pressures and issues. The approach which is being applied to the Clonmany PAA may help to streamline the approach taken these other waterbodies outside the PAA, in order to try and improve them also.

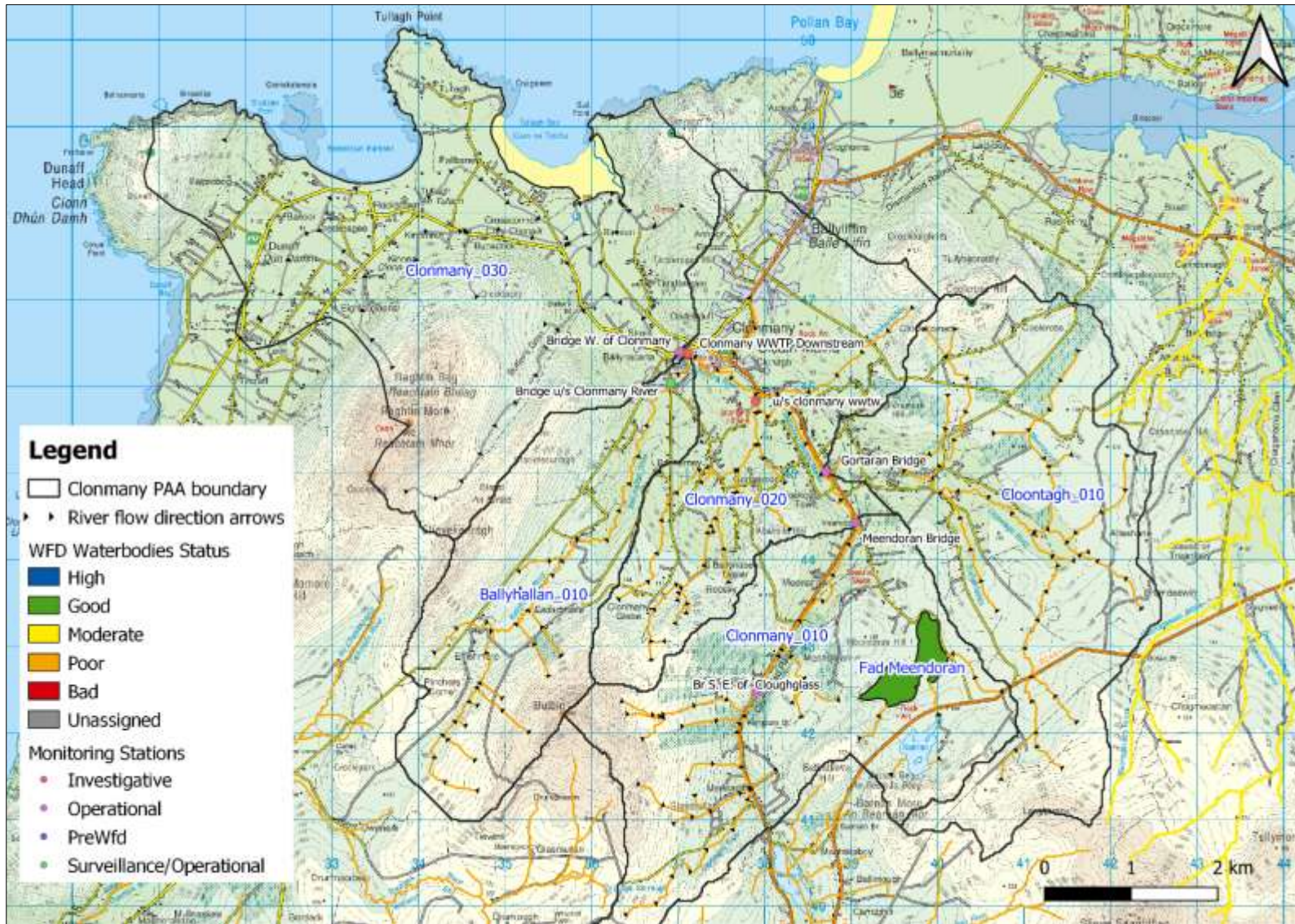


Figure 1: Clonmany PAA and ecological status

2. Catchment Description

The landscape is mainly hilly to mountainous, with the highest elevations located in the western part of the PAA (highest peak 502 m, Raghtin More). The PAA becomes more flat lying as the Clonmany River enters the Atlantic Ocean. Land cover throughout the PAA is predominantly pasture with a large area of peat in the upper reaches. The soil type in the PAA is mainly poorly draining to the north of the PAA with dry soils scattered throughout. In addition, to an area of dry soils, beach sand and gravel is noted in the north-western tip of the PAA. The majority of the PAA is overlain by shallow subsoil i.e. depth to bedrock of less than 3m.

3. Blue Dot Catchments Programme

Fad Meendoran Lake is part of the Blue Dot Catchments Programme which is a collaborative programme being delivered by a range of agencies as a means of focusing attention and resources towards the protection and restoration of our high status objective waters. The Environmental Protection Agency (EPA) have identified the waters in Ireland that should have a high status objective, and these are more commonly known as Blue Dot waters or Blue Dots. Ireland has seen a long-term declining trend in our high status waters. Blue Dot waters are our best quality waters. They have the highest ecological quality of all our waters and often a greater diversity of species that are sensitive to pollution. Blue Dot waters have a natural physical form that has not been changed much by human activities. Further information on this Programme can be found here - [Blue Dot Programme - Local Authority Water Programme \(lawaters.ie\)](http://lawaters.ie).

4. Water Quality History in the Clonmany PAA

Rivers and lakes are classified into five quality classes (status), with high status being unpolluted and bad status the most polluted.



The EPA assign status at (approximately) 3-yearly intervals based on the standards set out in the Water Framework Directive. Status is based on many different elements that altogether indicate the overall health of the river, for example, the ecology recorded in river habitats, the physico-chemical condition of the river (oxygen levels, nutrient concentrations, indicators of organic and chemical pollution etc.) and the physical condition of the riverbed and bank or lake shore.

We need to make sure that the waterbodies in the Clonmany PAA achieve their good or high status objectives. We have reviewed water quality data available for each of the waterbodies (**Table 1**) and we have found that:

- **Clonmany_010:** This waterbody is the upper reach of the Clonmany River, it is currently at poor status. This waterbody was last at good status in the mid-1990s and has since declined in water quality. The cause of the decline is believed to be from excess nutrients and toxicity (possibly from sheep dip).
- **Clonmany_020:** This waterbody is currently at poor status. Good status for this waterbody was previously noted in 2001 and has since been classified as poor status. The reason for the deterioration is believed to be from excess nutrients and toxicity, possibly from sheep dip.

- **Clonmany_030:** There is currently no monitoring points within the Clonmany_030 waterbody, largely due to the brackish and tidal influences from Tullagh Bay downstream of Clonmany Village, which would impact the freshwater monitoring results.
- **Cloontagh_010:** is currently at poor status. The last time this waterbody achieved good status was 2004 and has been classified as poor since then. The reason for the deterioration is believed to be from excess nutrients and because of a toxic impact likely to be from sheep dip practices.
- **Ballyhallen_010:** This waterbody is currently at poor status. It previously recorded good status in 2001 and has since been classified as poor status. The reason for the deterioration is believed to be from excess nutrients and because of a toxic impact (sheep dip).

Table 1: Ecological status, pressures and significance in the Clonamy PAA (high status objective waterbodies highlighted in blue in column 1).

Water body Name	WB Type	Risk	Ecological Status				EPA Characterisation Significant Pressure Category (Sub-category) (2013-2015)	EPA Characterisation Significant Issue (2013-2015)	Desk Study Review Potential additional pressures (2019)	Desk study Review Potential Significant Issue (2019)
			2007 - 2009	2010 - 2012	2010 - 2015	2013-2018				
Clonmany_010	River	At Risk	Poor	Poor	Poor	Poor	Agriculture (Pasture)	Nutrient pollution	No additional pressures identified at desk study stage.	No additional issues identified at desk study stage.
								Chemical pollution		
							Domestic wastewater (single house discharges)	Nutrient pollution		
						Water treatment discharge	Aluminium pollution			
Clonmany_020	River	At Risk	Poor	Poor	Poor	Poor	Urban Waste Water (P.E. 500-1000)	Not suspected as a significant issue	No additional pressures identified at desk study stage.	No additional pressures identified at desk study stage.
							Agriculture (Pasture)	Chemical Pollution		
								Nutrient pollution		
						Domestic wastewater (single house discharges)	Nutrient pollution			
Clonmany_030	River	Review	Unassigned	Unassigned	Unassigned	Unassigned	Agriculture (Pasture)	Nutrient pollution	No additional pressures identified at desk study stage.	No additional pressures identified at desk study stage.
							Industry (Section 4)			
Ballyhallen_010	River	At Risk	Poor	Poor	Poor	Poor	Agriculture (Pasture)	Nutrient and chemical pollution	No additional pressures identified at desk study stage.	No additional issues identified at desk study stage.
							Domestic wastewater (single house discharges)	Nutrient pollution		
Cloontagh_010:	River	At Risk	Poor	Poor	Poor	Poor	Agriculture (Pasture)	Nutrient pollution	No additional pressures identified at desk study stage.	No additional pressures identified at desk study stage.
								Chemical pollution		
								Organic pollution		

5. Sources of Pollution

Pollutants find their way to rivers by a number of paths:

- They can be piped directly to the river from large sources such as wastewater treatment plants, or small sources such as faulty septic tanks, farmyards, roadside drains etc.
- They can flow across the ground to the river when nutrients which are applied to the land as fertiliser are washed off by rainfall before the crop and soil has absorbed them. This is usually a problem where soils are wetter and poorly draining, particularly during wet weather.
- Groundwater losses occur when pollutants move down through the soil and rock into groundwater and eventually into rivers, lakes and coastal waters. This usually occurs when too much fertiliser is applied to land, or when the soil is not ready to absorb the nutrient (e.g. temperatures too cold, incorrect soil pH etc) and is common in free draining/ light soils.

Agriculture is a common source of pollution to the rivers and lakes in the Clonmany PAA. Agricultural activities are the source of contaminants such as nutrients and other chemicals (e.g. sheep dip, grassland herbicides) that enter rivers and lakes during wet weather by overland flow, direct discharges or via drains connected to the waterbodies. In this PAA which is largely poorly draining soils, are most vulnerable to losses from phosphorus, sediment and herbicide/insecticide, particularly during rainfall events. The application of slurry or chemical fertiliser, herbicides etc. at inappropriate times on waterlogged soils or during periods of heavy rainfall can cause runoff into the river network.

Other potential sources of excess nutrients which have been identified within the Clonmany PAA include the WWTP in Clonmany and the extensive amount of septic tank discharges which are not connected to the foul sewer network. In relation to septic tanks areas which are particularly vulnerable to pollution from these sources are areas which have poorly draining/ wet soils or where rock is at ground surface. The main risk from domestic wastewater arises from existing systems that are not adequately maintained under a maintenance contract or regularly de-sludged.

The LAWPRO team will be carrying out local catchment assessments to identify and refine the significant pressures for this PAA. We will then work with the relevant stakeholders and implementing bodies to agree the measures required.

6. Next Steps

Community Engagement Meeting

A community information meeting was held for this priority area for action in the Clonmany Youth & Community Resource Centre on the 11th of November 2019. The meetings were attended by members of the public and local stakeholders. The meeting involved two presentations by LAWPRO followed by a Q&A session with the attendees.

Farmers Meeting

The Agricultural Sustainability Support and Advisory Programme (ASSAP) advisors from Teagasc held an information meeting online via Zoom for farmers within the Clonmany PAA on the 7th of December 2020. During this meeting, the advisors gave details of the supports available for farmers in this catchment. The meeting was attended by farmers located within the PAA and involved presentations from the ASSAP advisors and the LAWPRO catchment scientist, which were then followed by a questions and answers session with the attendees.

7. Local Catchment Assessment

Local Catchment Assessment work for the Clonmany PAA is expected to commence during the summer of 2020 to confirm the sources of pollution affecting water quality in the deteriorated rivers and to identify any additional pollution sources. Where water quality improvements have already occurred in rivers, LAWPRO will work to identify activities that pose a risk to maintaining the current High or Good water quality within the rivers. Where agricultural activities are confirmed as impacting water quality through the introduction of sediment, nutrients and/ or pesticide, we will communicate our LCA findings to the ASSAP advisors for the area who will work closely with farmers providing them with free and confidential advice to address these activities.



Figure 2: Upper reaches of the Clonmany River (Clonmany_010 waterbody).