3rd Cycle Draft
Laune Maine Dingle Bay
Catchment Report (HA 22)

Catchment Science & Management Unit

Environmental Protection Agency

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Preface

This document provides a summary of the water quality assessment outcomes for the Laune Maine Dingle Bay Catchment, which have been compiled and assessed by the EPA, with the assistance of the Local Authority Waters Programme (LAWPRO), local authorities and RPS consultants to inform the draft 3rd Cycle River Basin Management Plan. The information presented includes status and risk categories of all waterbodies, details on protected areas, significant issues, significant pressures, source load apportionment modelling and load reduction assessments for nutrients where applicable, an overview of the 2nd Cycle Areas for Action and a list of proposed 3rd Cycle Areas for Action. These characterisation assessments are largely based on information available to the end of 2018, including the WFD Status Assessment for 2013-2018. Protected Area assessments are based on water quality information up to 2018 for Natura 2000 and Salmonid Waters; 2019 for Drinking Water; and 2020 for Nutrient Sensitive Areas and Bathing Waters.

The purpose of this draft report is to provide an overview of the situation in the catchment, draw comparison between Cycle 2 and Cycle 3, and help support the draft River Basin Management Plan 2022-2027 consultation process. Once the consultation process is completed the report will be finalised to reflect any changes and comments made as a result of the consultation process.

Water Framework Directive – key dates and terminology	
Cycle 2 – EPA Characterisation and Assessment	Characterisation and assessment to inform the Cycle 2 RBMP was largely based on 2010-2015 WFD monitoring data.
Cycle 2 Catchment Assessments	Catchment Assessments based on the Cycle 2 characterisation and assessment were published in September 2018.
2nd Cycle River Basin Management Plan (RBMP) 2018-2021	This plan was for WFD Cycle 2 which runs from 2016-2021. This RBMP was published late, with this plan covering 2018-2021.
2nd Cycle Areas for Action	These 189 Areas for Action were selected under the RBMP 2018-2021
Cycle 3 -EPA Characterisation and Assessment	Cycle 3 runs from 2022-2027. Assessments to inform the Cycle 3 RBMP is largely based on 2013-2018 WFD monitoring data. This is the latest WFD monitoring assessment period for which all data are available.
Cycle 3 Catchment Assessments	Catchment Assessments based on the Cycle 3 characterisation and assessment were published in August 2021.
3rd Cycle River Basin Management Plan 2022-2027	This draft RBMP is for WFD Cycle 3 which runs from 2022-2027. Public consultation on this plan by the DHLGH and LAWPRO is taking place in late 2021 and early 2022.
3rd Cycle Recommended Areas for Action – Protection/ Restoration/Projects	These recommended Areas for Action have been identified in the draft RBMP 2022-2027 and feedback can be given in the public consultation on this plan. They fall into 3 categories – Areas for Protection, Areas for Restoration and Catchment Projects.

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1 Introduction

This report aims to provide an overview of the water quality status, risk, key issues and significant pressures for all waterbodies in the catchment based on the Characterisation Assessment undertaken for the 3rd Cycle River Basin Management Plan. In addition, a comparative overview of the water quality in the Laune Maine Dingle Bay catchment between Cycle 2 and Cycle 3 characterisation is provided along with a summary of the progress made in the 2nd Cycle Areas for Action. The recommended list for the 3rd Cycle Areas for Action is also provided.

To provide context, the Laune Maine Dingle Bay catchment includes the area drained by the Laune and Maine and all streams entering tidal water between Glanearagh Head and Clogher Head, Co. Kerry, draining a total area of 2,036km² (Figure 1). The largest urban centre in the catchment is Killarney. The other main urban centres in this catchment are Cahersiveen, Kilorglin, Castleisland and Dingle. The total population of the catchment is approximately 62,006 with a population density of 30 people per km².

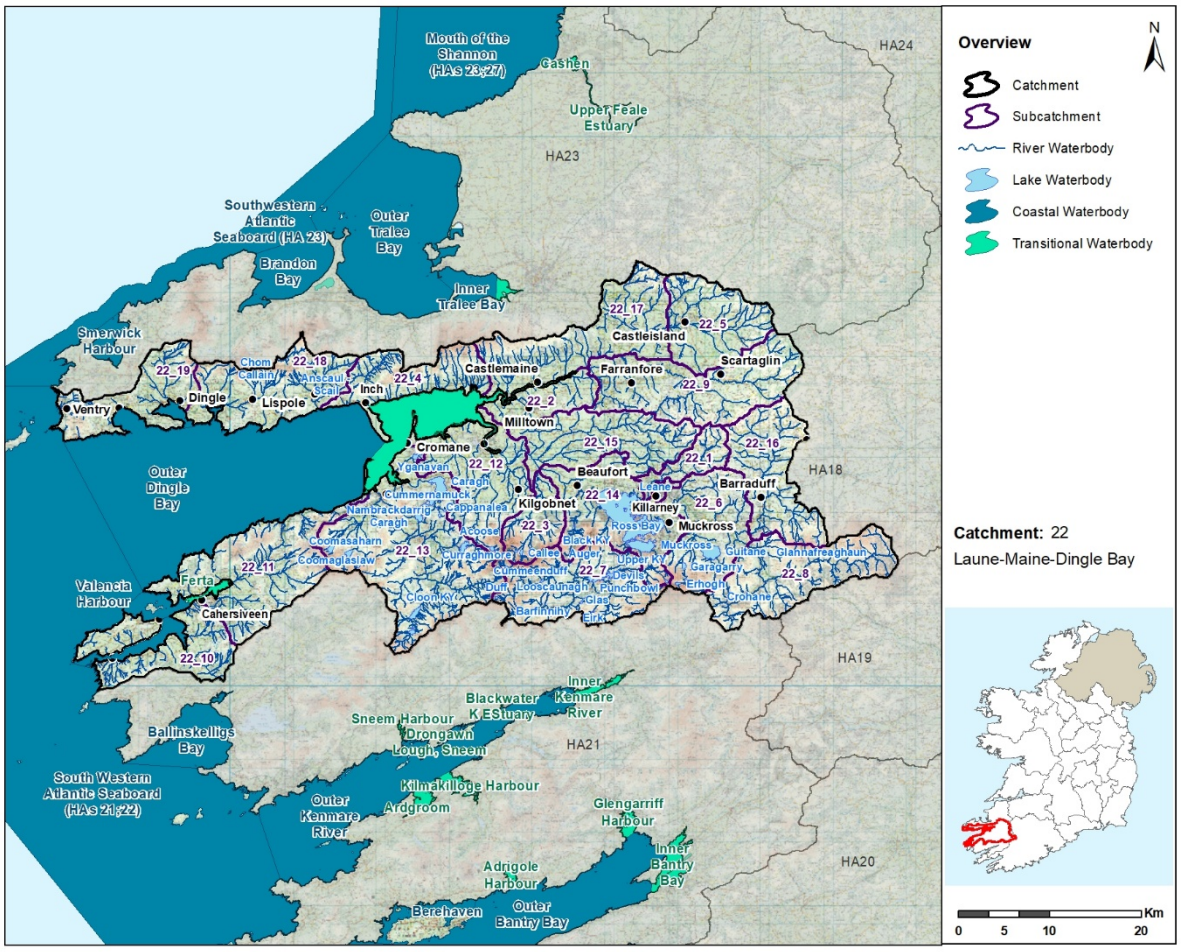


Figure 1: Overview of subcatchments in the Laune Maine Dingle Bay catchment

The Laune Maine Dingle Bay catchment is divided into 19 subcatchments (Figure 1) with 93 river waterbodies, 44 lakes, two transitional waterbodies (Ferta & Castlemaine Harbour), six coastal waterbodies and 16 groundwater bodies (Figure 2).

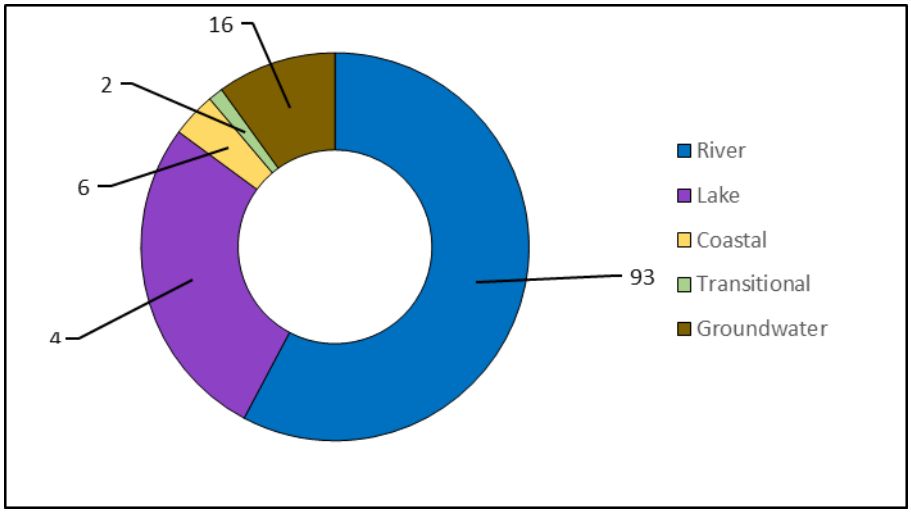


Figure 2: Waterbody types and numbers in the Laune Maine Dingle Bay Catchment.

2 Waterbody Overview

2.1 Waterbody Status

- This assessment to inform the 3rd Cycle RBMP is largely based on WFD monitoring data for the period 2013-2018, which is the latest WFD monitoring assessment period for which all data are available.

- For this assessment to inform Cycle 3, there are nine waterbodies achieving High Status, 65 achieving Good Status, 12 achieving Moderate Status and 10 at Poor Status. There are 65 waterbodies that do not have status assigned for Cycle 3. All waterbodies must achieve at least Good Ecological status.

- There are 30 river waterbodies, two lake waterbodies (Muckross & Caragh), two coastal waterbodies (Portmagee & Valencia Harbour) and one transitional waterbody (Ferta) that must achieve High Ecological Status (HES) in this catchment. These waterbodies are listed in Appendix 1. Of the 35 HES Environmental Objective waterbodies, seven are achieving High Status while 23 are at Good Status, three (Caragh_040, Little Maine_010 & Loe_010) are at Moderate Status and two (Caragh_010 & Caragh_030) are at Poor Status.

- The overall number of waterbodies achieving High Status has decreased by 14, from 23 to nine, between Cycle 2 and Cycle 3 (Figure 3 & Table 1). This significant decrease is reflected in increases in the numbers of waterbodies at Good Status (from 56 to 65), Moderate Status (from eight to 12) and Poor Status (from eight to 10). The difference is explained by Ross Bay lake, which was unassigned in Cycle 2 but at Moderate Status in Cycle 3.

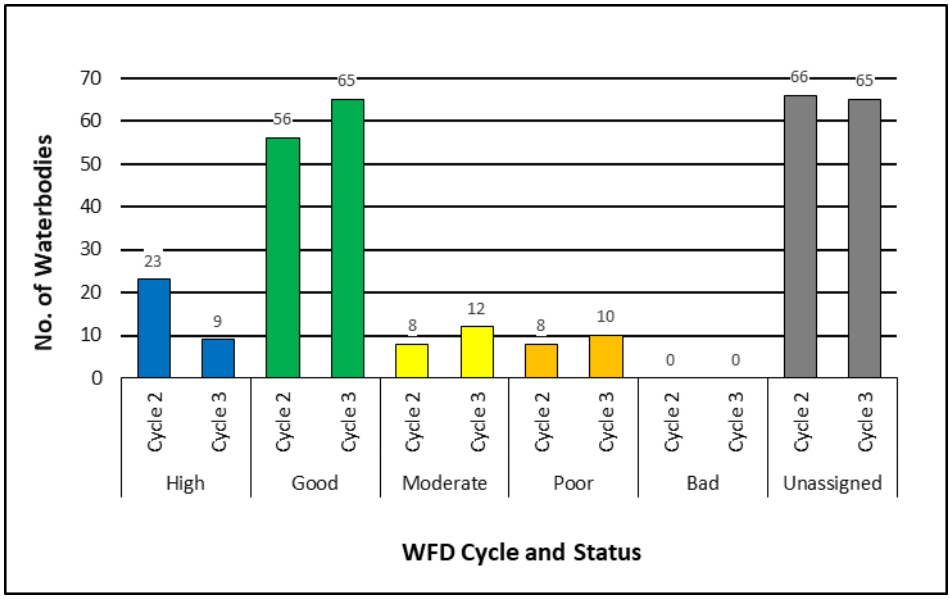


Figure 3: Waterbody Status Breakdown (All waterbodies)

Table 1: Waterbody Status Breakdown Table (All Waterbodies)

2013-2018 Status	River		Lake		Transitional		Coastal		Groundwater		Total	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	**Cycle 2**	**Cycle 3**
High	21	7	2	2	0	0	0	0	0	0	**23**	**9**
Good	34	42	3	4	2	2	2	2	15	15	**56**	**65**
Moderate	6	10	2	2	0	0	0	0	0	0	**8**	**12**
Poor	7	9	0	0	0	0	0	0	1	1	**8**	**10**
Bad	0	0	0	0	0	0	0	0	0	0	**0**	**0**
Un-assigned	25	25	37	36	0	0	4	4	0	0	**66**	**65**
Total	93	93	44	44	2	2	6	6	16	16	**161**	**161**

- Figure 4 illustrates the change in status between Cycle 2 (assessment based largely on 2010-2015 WFD Monitoring data) and Cycle 3 (assessment largely based on 2013-2018 WFD monitoring data.
- Over this period four (4%) waterbodies have improved in status, 72 (76%) waterbodies have remained unchanged and 19 (20%) waterbodies have declined in status.[1]
- There is an overall deterioration in status of 15 waterbodies across the catchment since the Cycle 2 assessment.

[1] Unassigned waterbodies have not been considered in this Status class change assessment and therefore are not represented in Figure 5. Percentage displayed in Figure 4 are in relation to the total number of waterbodies with status assigned in both cycles, as opposed to total number of all waterbodies.

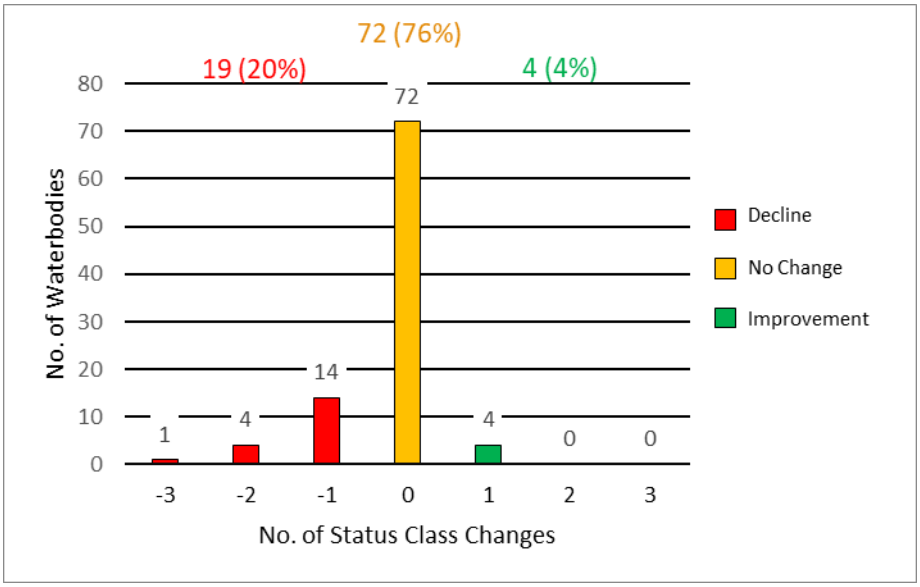


Figure 4: Status Class Changes between Cycle 2 and Cycle 3

2.2 Protected Areas

2.2.1 Drinking Water

- There are 20 surface waterbodies in the catchment identified as Drinking Water Protected Areas (DWPA) based on water abstraction data on the abstraction register and from other sources in 2018. All groundwater bodies nationally are identified as DWPA. DWPA layers can be viewed at https://gis.epa.ie/EPAMaps/Water - see *Protected Areas - Drinking Water*.

- All waterbodies in the catchment met the DWPA objective in 2019.

- For more detailed information please see the EPA reports on drinking water quality in 2019 for Public Supplies[2] and Private Supplies[3].

2.2.2 Bathing Waters

- There are six bathing waters in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008.

- Five of the six bathing waters had an excellent classification in 2020, the remaining bathing water (Cúas Crom) had a Poor classification.

- For more detailed information please see the EPA report on bathing water quality in 2020[4].

2.2.3 Shellfish Areas

- There are two designated shellfish areas in the catchment.

[2] https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/drinking-water-quality-in-public-supplies-2019.php

[3] https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/focus-on-private-water-supplies-2019.php

[4] https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/bathing-water-quality-in-ireland-2020-.php

- The Marine Institute assessed the average dissolved concentrations for metals in shellfish waters for the period 2016-2019 and the microbial quality in shellfish flesh for 2018. This assessment was used to determine if the WFD protected area objective for shellfish areas was met.

- Details on the shellfish area and its associated waterbody is summarised in Table 2.

Table 2: Designated shellfish areas in the catchment

Shellfish area		Water body intersection		Objective met?	
Name	Code	Name	Code	Yes	No
Cromane	IEPA2_0007	Castlemaine Harbour	IE_SW_230_0200	✓	
		Outer Dingle Bay	IE_SW_230_0000		
Valentia Harbour	IEPA2_0019	Ferta	IE_SW_220_0100		✓
		Valencia Harbour	IE_SW_220_0000		
		Portmagee Channel	IE_SW_210_0000		

The locations of Protected Areas associated with Public Health (Drinking Water, Bathing Water and Shellfish Areas, where applicable) are illustrated in Figure 5 below.

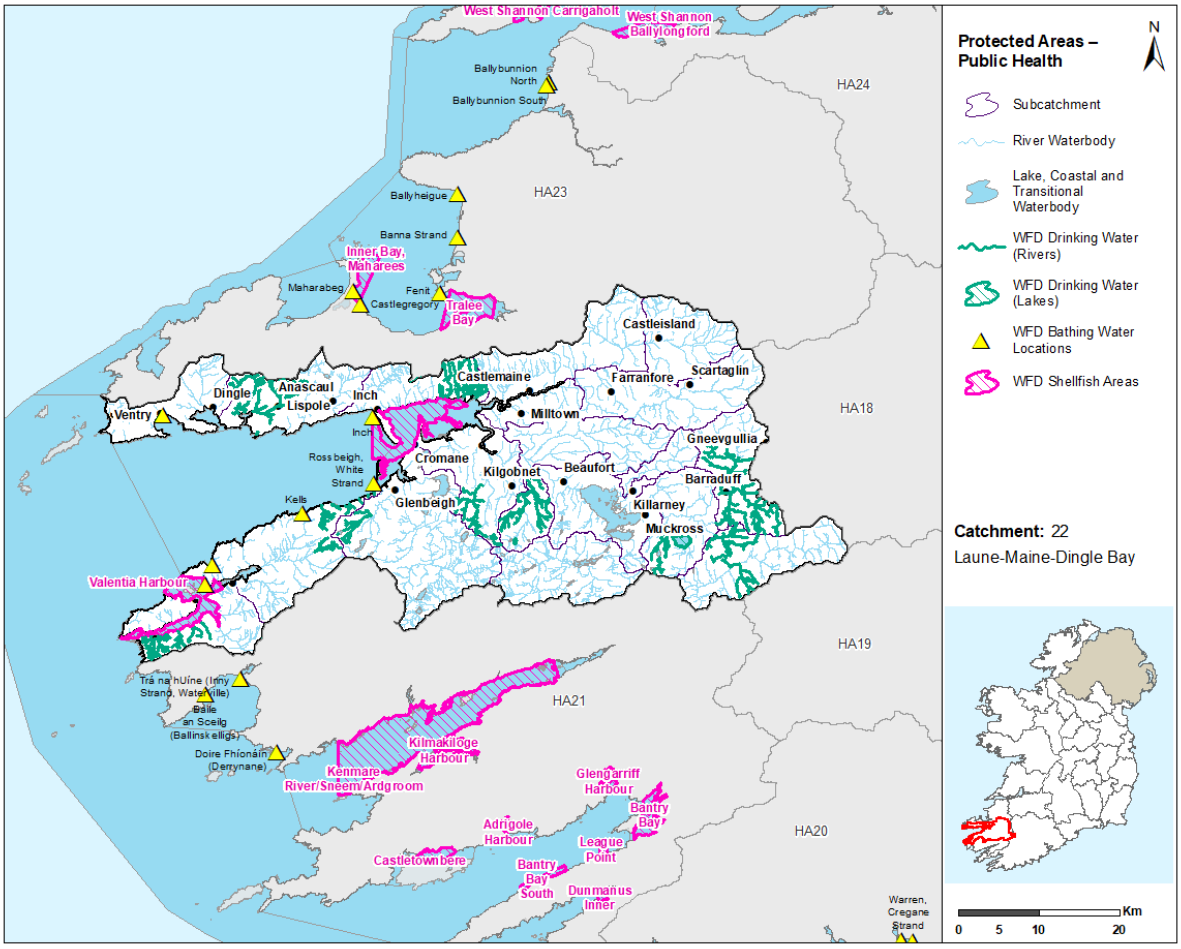


Figure 5: Protected Areas – Public Health

2.2.4 Natura 2000 Sites and Salmonid Waters

- Many of the habitats and species listed for protection in the Birds and Habitats Directives are water dependent. The Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) with water dependent habitats or species in this catchment are presented in Figure 6, along with waterbodies designated as salmonid waters (S.I. No. 293 of 1988) and waterbodies with Fresh Water Pearl Mussel habitat, where identified.

- There are 10 SACs in this catchment, nine of which have water dependent habitats or species. The waterbodies within these SACs were assessed for associated water dependent habitats and species and if they met the supporting requirements for habitats and species using their 2013-2018 WFD status. For the purposes of the assessment, it was assumed that Good ecological status is adequate to meet the supporting conditions of all habitats and species with the exception of the Freshwater Pearl Mussel, which has additional requirements for supporting conditions set out in the Freshwater Pearl Mussel Regulations (S.I. No 296 of 2009) for macroinvertebrates, filamentous algae, phytobenthos, macrophytes and siltation.

- Specific water supporting conditions have not been identified for the dependent bird species in the SPAs and so waterbodies associated with SPAs are not included in this assessment.

Results of the overall assessment for this catchment are outlined in

Table 3 below, information at a waterbody level can be viewed at Catchments.ie.[5]

Table 3: Natura 2000 Network Assessment Summary

Water Body Type	Total No.	Meeting the Requirements	Did not meet the Requirements	Unknown*
Rivers	64	37	13	14
Lakes	40	37	2	1
Transitional & Coastal	2	2	0	0

**As the waterbody status was unassigned.*

- There are six river waterbodies with FWPM habitats, two of which had achieved the required macroinvertebrate standard as set out in the FWPM Regulations.

- There are no groundwater bodies delineated and assessed as Groundwater Dependent Terrestrial Ecosystems for this catchment.

- Water dependent SACs/ SPAs (including FWPM SAC sub-catchments) and salmonid waters in the catchment are illustrated in Figure 6.

[5] https://www.catchments.ie/download/catchments-assessments-protected-areas-supporting-documents/

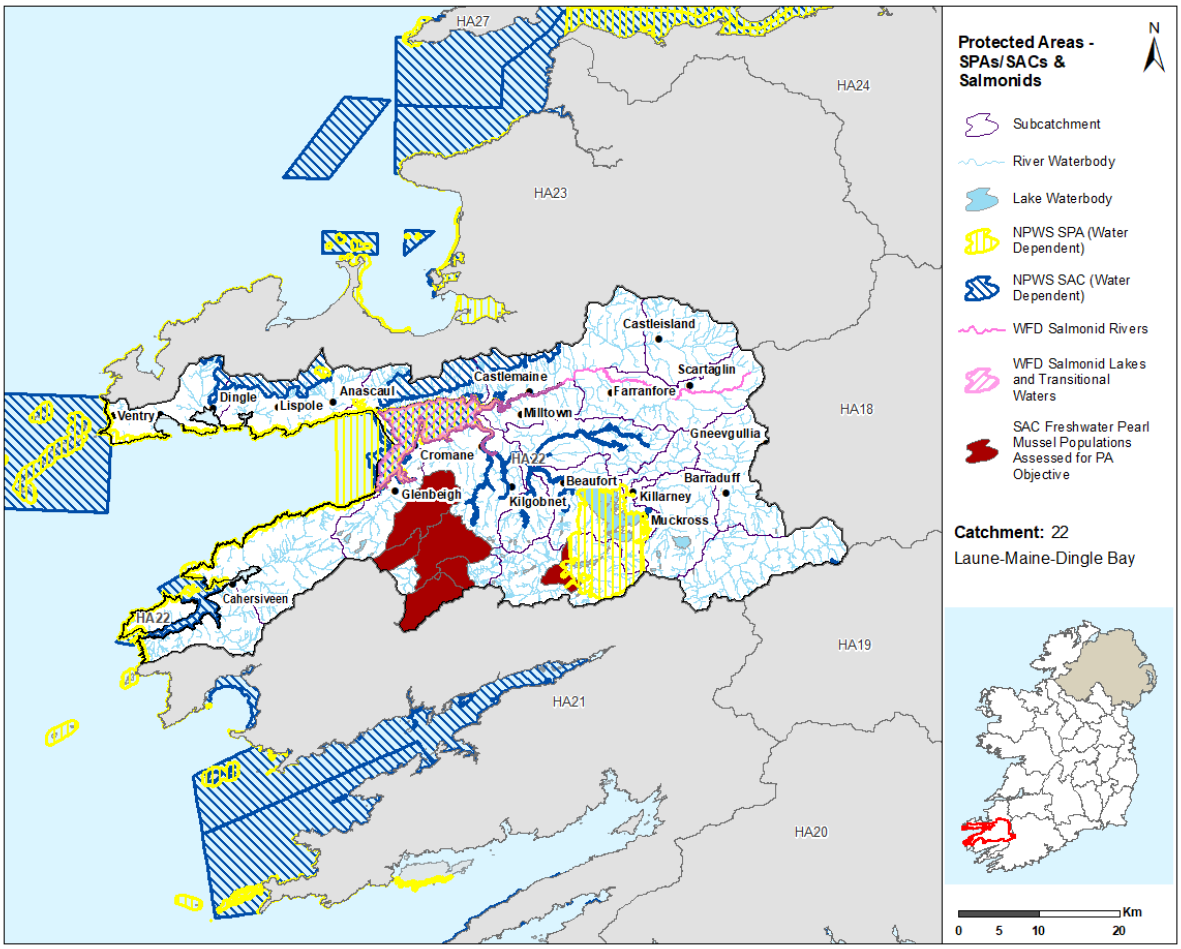


Figure 6: Water Dependent SPAs / SACs and Salmonid Waters

2.2.5 Nutrient Sensitive Areas

- The EPA carried out a review of Nutrient Sensitive Areas (NSAs) downstream of large urban waste water discharges in 2020. Once the regulations are in place, and nutrient sensitive areas have been identified, additional nutrient removal must be applied (if not already applied) to waste water treatment plants discharging to the sensitive area. If this treatment was in place the objective was deemed to have been met.

- There are two NSAs in the catchment and these are downstream of Killarney urban wastewater agglomeration. The list of NSAs, associated agglomerations and intersecting water bodies are provided in Table 4.

- NSA objectives are being met in both of NSAs in the catchment.

Table 4: Nutrient sensitive areas in the catchment

Nutrient Sensitive Area	Agglomeration		Water body		Objective met?		Comment
	Name	Code	Name	Code	Yes	No	
Lough Leane	Killarney	D0037-01	Leane	IE_SW_22_210	✓		Tertiary Treatment in place
Ross Bay	Killarney	D0037-01	Ross Bay	IE_SW_22_209	✓		Tertiary Treatment in place

2.3 Heavily Modified Waterbodies

- Based on the 1st and 2nd RBMPs there are currently no designated heavily modified water bodies (HMWB) in the catchment. There will be a consultation period on HMWBs for the 3rd Cycle RBMP and this will be completed for inclusion in the 3rd Cycle Final RBMP.

2.4 Artificial Waterbodies

- There are no artificial waterbodies (AWBs) present in the Laune Maine Dingle Bay Catchment.

3 Waterbody Risk

3.1 Overview of Risk

- A waterbody that is *At Risk* means that either the waterbody is currently not achieving its Water Framework Directive (WFD) environmental objective of Good or High Ecological Status or that there is an upward trend in nutrients or ammonia and if this trend continues the waterbody Status will decline by the end of Cycle 3 and will fail to meet its environmental objective.

- A waterbody can be considered as *Review* for the following three reasons:
    - The waterbody does not have status assigned to it yet, it is referred to as an unassigned waterbody, and therefore there is not enough evidence to determine if it is *At Risk* or *Not At Risk*.
    - The waterbody has shown some slight evidence or improvement, but more evidence is needed before it can be considered as *Not At Risk.*
    - Measures are planned or have already been implemented for the waterbody and no further measures should be applied until there is enough time to assess if these measures are working.

- A waterbody is *Not At Risk* when it is achieving its environmental objective of either High or Good Status and that there is no evidence indicating that there is a trend towards status decline.

- In total there are 161 waterbodies in the Laune Maine Dingle Bay Catchment and 41 (25%) of these are currently *At Risk*, 23 (14%) in *Review* and 97 (60%) are *Not At Risk*.

3.2 Surface Waters

- For the 93 river waterbodies, 35 (38%) are *At Risk*, 16 (17%) are in *Review* and 42 (45%) are *Not At Risk*.

- Of the 44 lake waterbodies, three (7%) are *At Risk*, four (9%) are in *Review* and 37 (84%) are *Not At Risk*. Upper Ky, Caragh and Ross Bay Lake are the *At Risk* Lakes in Cycle 3.

- Both transitional waterbodies (Ferta & Castlemaine Harbour) are *Not At Risk.*

- Of the six coastal waterbodies in the catchment, two (33%) are in *Review* and four (67%) are *Not At Risk*.

- The largest proportion of *At Risk* waterbodies are found in rivers, accounting for 35 (85%) of 41 *At Risk* waterbodies. Figure 7 gives an overview of the breakdown of risk across waterbody types for both Cycle 2 and Cycle 3.

- Overall, there is an increase in 15 *At Risk* waterbodies and a decrease of 13 *Not At Risk* waterbodies and two *Review* waterbodies between Cycle 2 and Cycle 3.

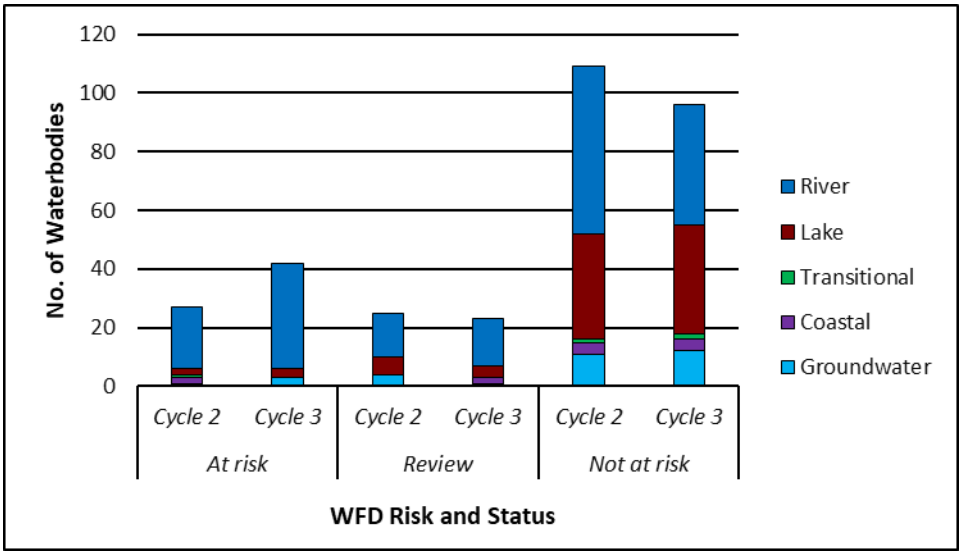


Figure 7: Number of waterbodies in each risk category

- The location of the *At Risk, Review and Not At Risk* surface waterbodies for Cycle 3 are shown in Figure 8 while the surface waterbodies that have experienced a change in risk between Cycle 2 and Cycle 3 are shown in Figure 9.

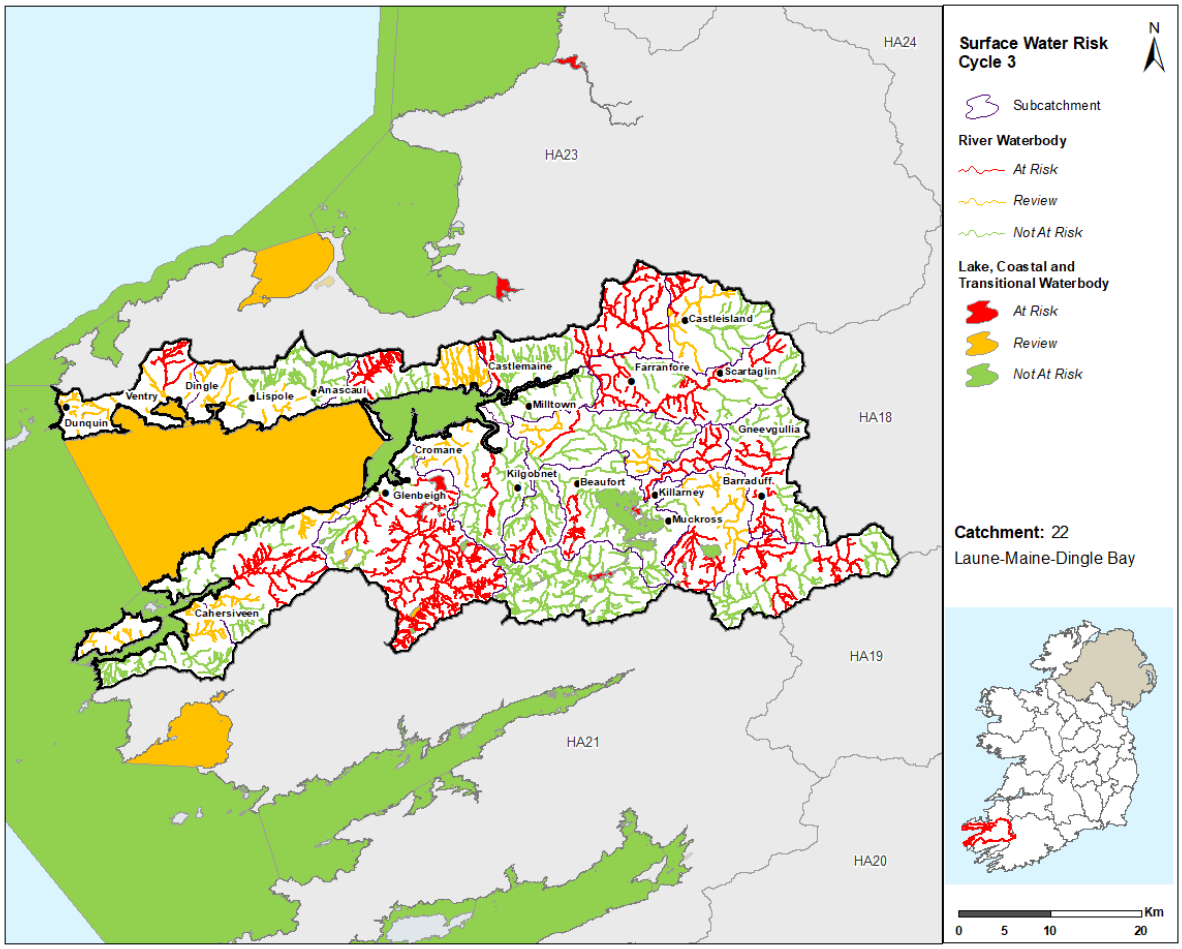


Figure 8: Surface Water Risk Cycle 3

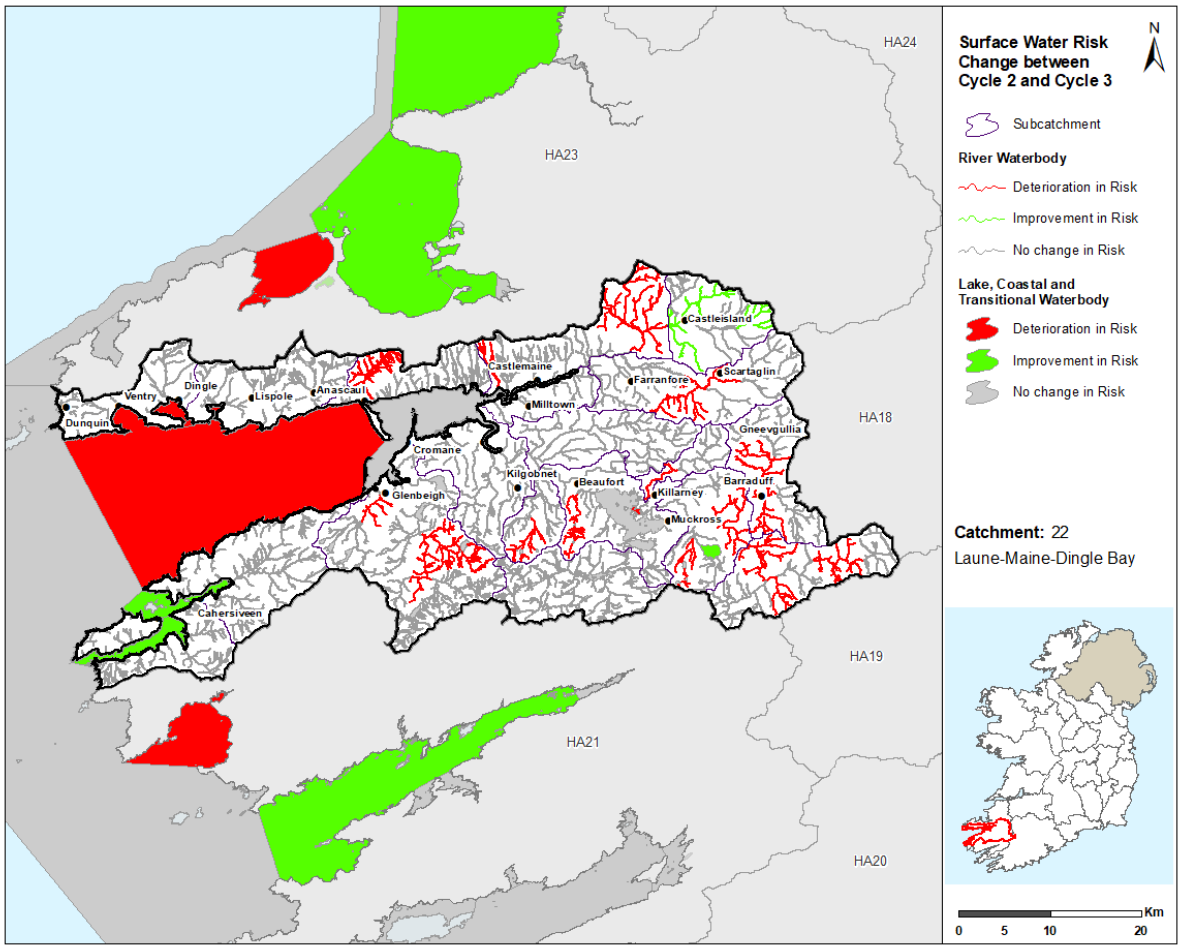


Figure 9: Surface Water Risk Change between Cycle 2 and Cycle 3

3.3 Groundwater

- For the 16 groundwater bodies, three (19%) are *At Risk*, one (6%) is in *Review* and 12 (75%) are *Not At Risk.* Glenville, Laune Muckrossa and Industrial Facility (P0018-01) are the *At Risk* groundwater bodies in Cycle 3.

- In Cycle 2, there was one groundwater body (Industrial Facility (P0018-01)) *At Risk* in this catchment, four in *Review* and 11 *Not At Risk*.

- The location of the *At Risk, Review and Not At Risk* groundwater bodies for Cycle 3 are shown in Figure 10 while the groundwater bodies that have experienced a change in risk between Cycle 2 and 3 are shown in Figure 11.

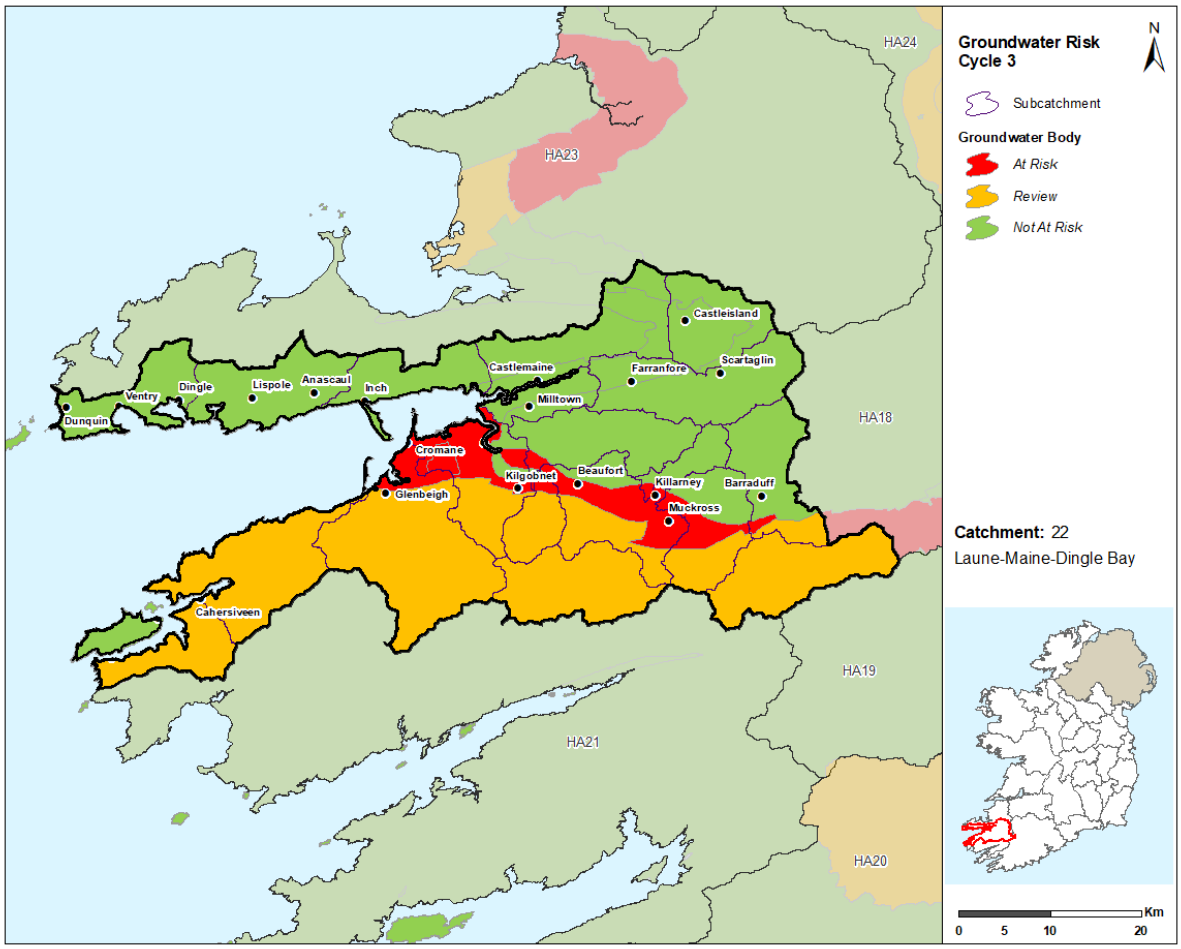


Figure 10: Cycle 3 Groundwater Body Risk

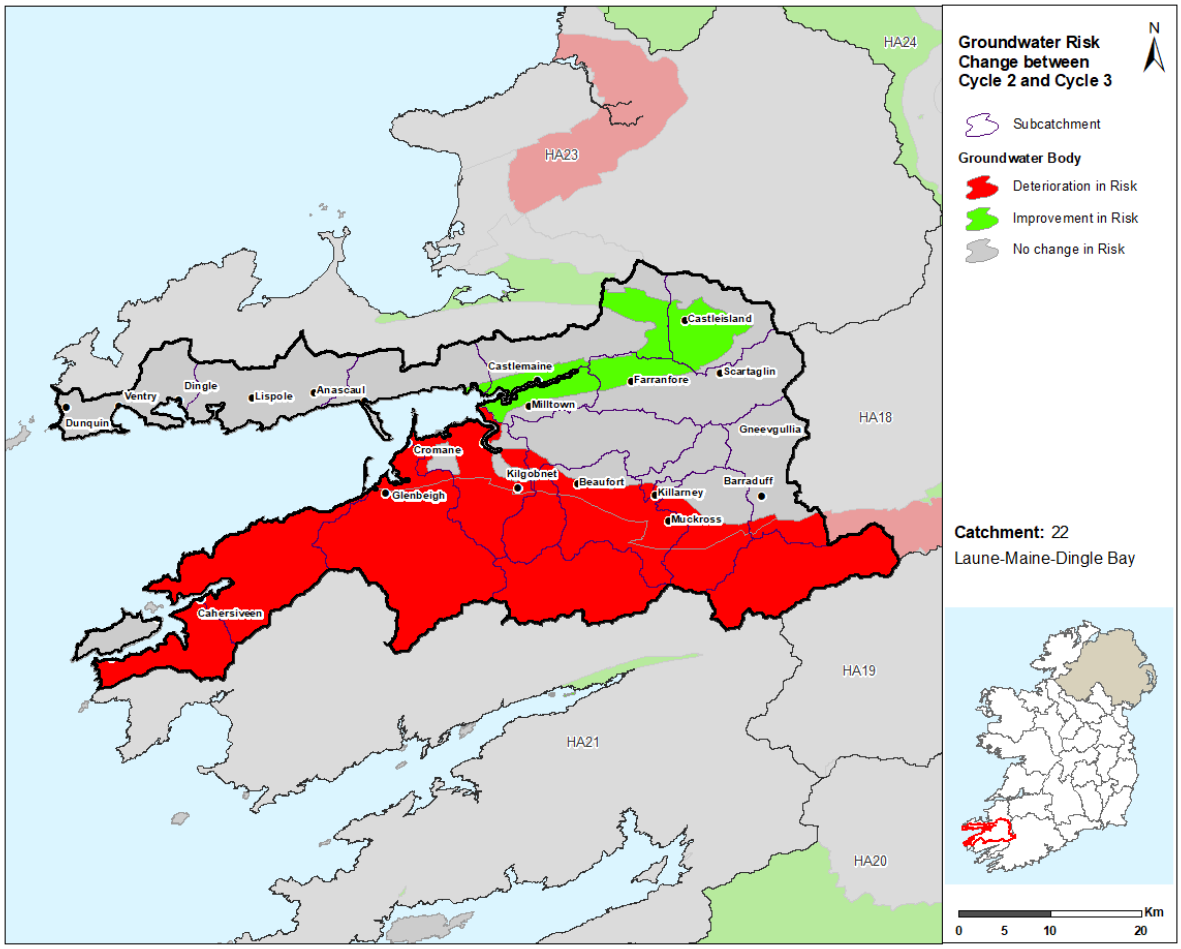


Figure 11: Groundwater Body Risk Change between Cycle 2 & Cycle 3

3.4 Heavily Modified Waterbodies

- There are no designated heavily modified water bodies (HMWB) in the catchment. There may be changes to HMWB designation once the Cycle 3 HMWB assessment has been completed and consulted on for the 3rd Cycle Final RBMP.

3.5 Artificial Waterbodies

- There are no artificial waterbodies (AWBs) present in the Laune Maine Dingle Bay Catchment.

4 Significant Issues in *At Risk* Waterbodies

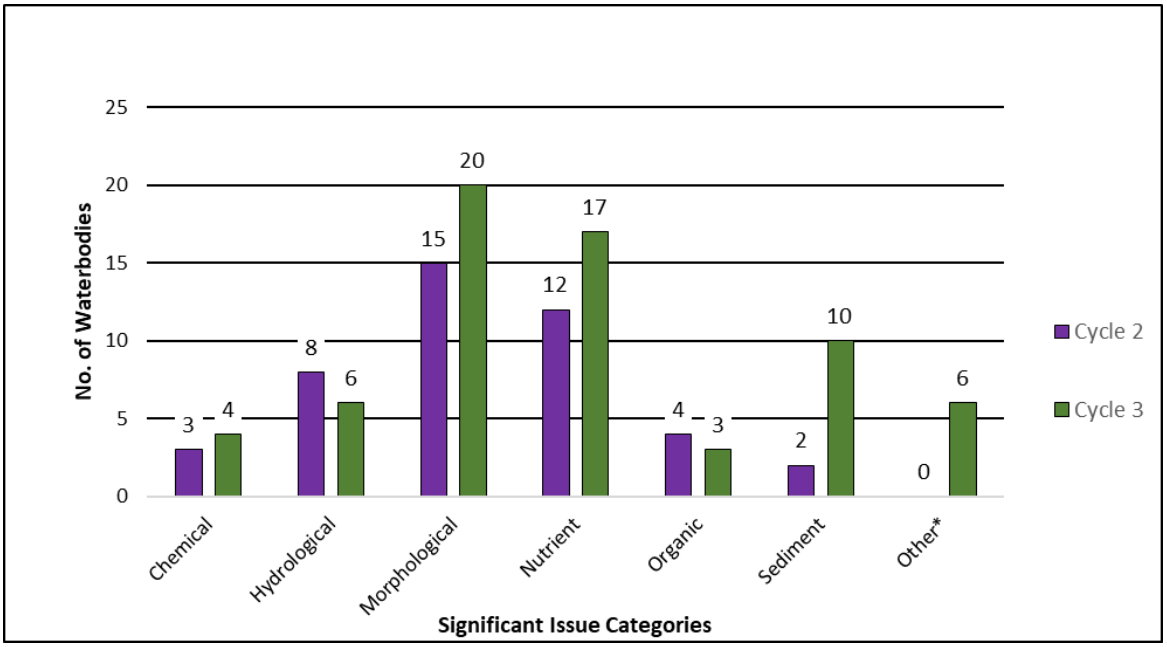
4.1 All Waterbodies

- Morphological issues remain the most prevalent issue in the Laune Maine Dingle Bay Catchment (Figure 12) impacting 20 waterbodies in Cycle 3, an increase from 15 in Cycle 2. Nutrient pollution is impacting 17 waterbodies, sediment issues are impacting 10, hydrological issues are impacting six, chemical pollution is affecting four waterbodies and organic pollution is impacting three waterbodies. There are also six *At Risk* waterbodies where the impact type is falls under the other

category, mainly unknown impact types and diminution of quality of associated surface waters for chemical reasons.

- For rivers, the main significant issues are morphological issues (20), nutrient pollution (15), sediment (9), hydrological issues (5), chemical pollution (2), organic pollution (2) and unknown impacts (4).
- There are three *At Risk* lake waterbodies in the catchment, hydrological issues are impacting Upper KY, sediment is impacting Caragh and both nutrient and organic are impacting Ross.
- There are three *At Risk* groundwater bodies in the catchment. Industrial Facility (P0018-01) and Glenville groundwater bodies are impacted by chemical pollution. Nutrients are impacting Laune Muckross groundwater body. Additionally, diminution of quality of associated surface waters for chemical reasons was identified in Laune Muckross and Industrial Facility (P0018-01) groundwater bodies.

- Between Cycle 2 and Cycle 3 the biggest change is the increase in the number of waterbodies impacted by sediment, which increased by eight, from two to 10. The number of waterbodies impacted by morphological issues and nutrient pollution have increased from 15 to 20 and from 12 to 17 respectively. The number of waterbodies with other impact types also increased significantly from zero in Cycle 2 to six in Cycle 3.



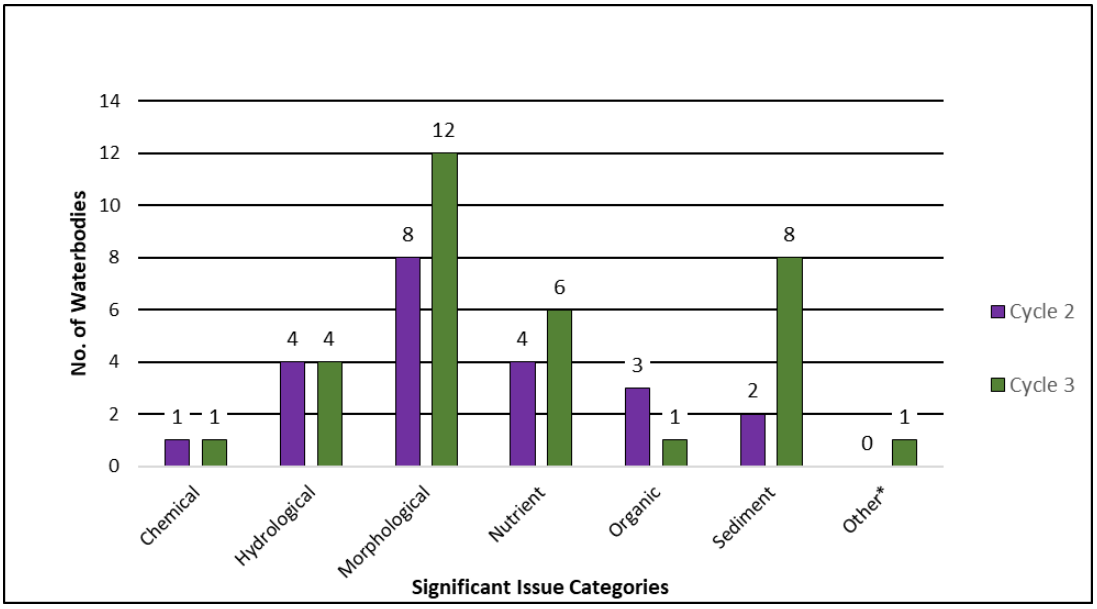
*Other - Acidification, saline intrusion, elevated temperature, litter, microbiological pollution and unknown impacts have all been grouped into the "Other" issues category for the purpose of this report

Figure 12: Significant Issues across all *At Risk* WBs between Cycle 2 and Cycle 3

4.2 High Status Objective Waterbodies

- In Cycle 3 for High Status Objective waterbodies morphological issues are impacting 12 of the 23 High Status Objective waterbodies currently *At Risk* (Figure 13). Sediment is impacting eight waterbodies, nutrient pollution is impacting six waterbodies, hydrological issues are impacting four waterbodies (Caragh_010, Caragh_020, Caragh_040 & Owenroe (Caragh)_010), chemical pollution is impacting one waterbody (Finow_010) and organic pollution is impacting one HES waterbody (Emlagh_010).

- Between Cycle 2 and Cycle 3 the number of waterbodies with sediment issues have increased by six, from two to eight and morphological issues have increased by four, from eight to 12. Nutrient pollution has increased by two, from four to six. The number of waterbodies impacted by chemical pollution has remained at one, while hydrological issues remain an issue in four waterbodies. The number of waterbodies impacted by organic pollution decreased from three to one since Cycle 2.



*Other - Acidification, saline intrusion, elevated temperature, litter, microbiological pollution and unknown impacts have all been grouped into the "Other" issues category for the purpose of this report

Figure 13: Significant Issues in *At Risk* High Status Objective Waterbodies

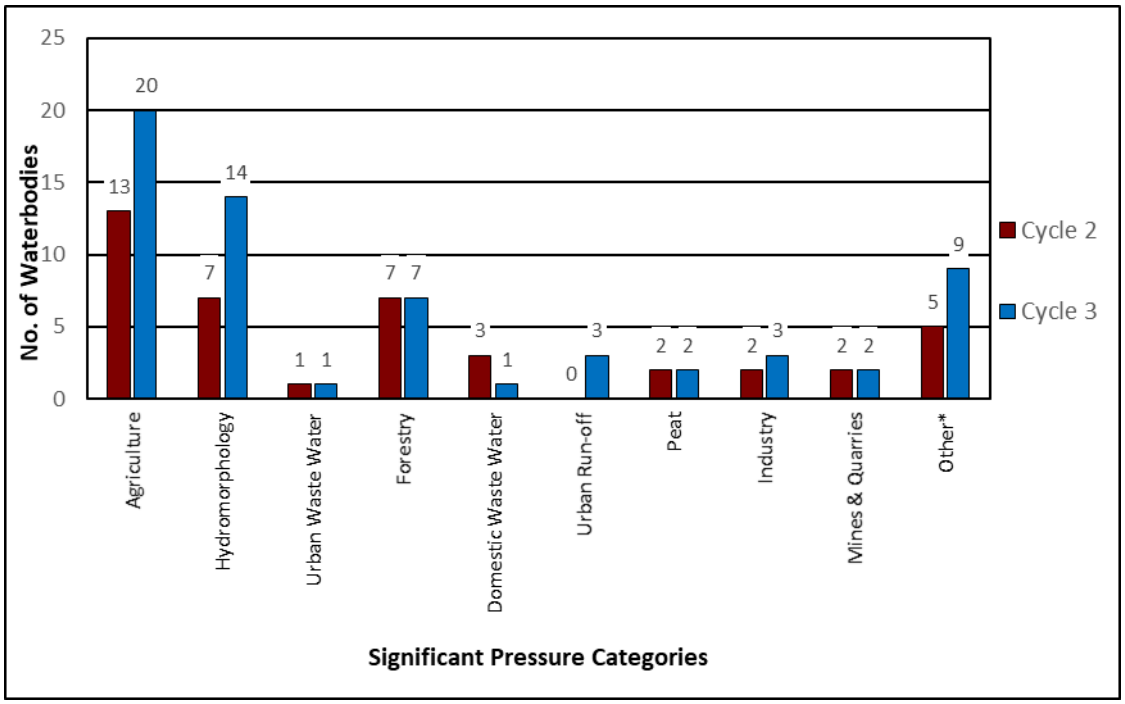
5 Significant pressures in *At Risk* Waterbodies

5.1 All Waterbodies

- Where waterbodies have been classed as *At Risk*, significant pressures have been identified.
- Figure 14 shows a breakdown of the number of *At Risk* waterbodies in each significant pressure category.
- The significant pressure affecting the greatest number of waterbodies is agriculture, followed by hydromorphology, forestry, urban run-off, industry, peat, mines & quarries, urban waste water and domestic waste water. There are also 12 waterbodies impacted by issues that fall under the other category as illustrated in Figure 13, eight of which are unknown pressure types and pressures from abstractions, windfarms, tourism and a golf course are each impacting one waterbody.
- When comparing Cycle 2 and Cycle 3 the biggest changes are increase of seven waterbodies where hydromorphological pressures are significant and seven waterbodies where agricultural pressures are significant.

- The increase in hydromorphology significant pressures is likely to be associated with more detailed assessment by the EPA based on the recently developed Morphological Quality Index tool and associated increasing awareness of hydromorphology rather than new significant hydromorphology pressures since Cycle 2.

- Additional agricultural pressures as well as new hydromorphological data (downgrading status from High to Good) are the main reasons for the overall decline in status across the catchment.



*Other – abstractions, aquaculture, atmospheric, anthropogenic pressures, historically polluted sites, waste, water treatment and invasive species have all been grouped into the "Other" pressure category for the purpose of this report

Figure 14: Significant Pressure (All *At Risk* Waterbodies)

5.1.1 Pressure Type

5.1.1.1 Agriculture

- Agriculture is a significant pressure in 18 river waterbodies and two groundwater bodies (Laune Muckross & Glenville) in Cycle 3. The issues related to farming in this catchment are diffuse phosphorus and ammonia loss to surface waters from, for example, direct discharges; or runoff from yards, roadways or other compacted surfaces, or runoff from poorly draining soils. Sediment can also be a problem from land drainage works, bank erosion from animal access or stream crossings.
- Sheep dipping was also identified as a potential significant pressure within the catchment for one waterbody (Finow_010).

5.1.1.2 Hydromorphology

- Hydromorphology is a significant pressure in 14 river waterbodies. Land drainage is the dominant hydromorphology subcategory in the catchment with seven river waterbodies impacting habitat due to morphological and hydrological changes. Overgrazing has been identified in Brown Flesk_020, Caragh_030, Flesk (Kerry)_020 & Flesk (Kerry)_040 causing morphological impacts. River bank erosion has been identified in three river waterbodies as a potential source of sediment in Owenreagh_020 and Owneykeagh_010 and causing impact to habitat due to morphological changes in Maine_030. A highly impassable weir was identified in Owgarriff (Finow)_010 which is

impacting habitat due to dry-out downstream. Maine_040 river waterbody is subject to extensive modification due to drainage schemes with channelisation identified as the pressure sub category.

5.1.1.3 Forestry

- Forestry remains a significant pressure in seven waterbodies (six rivers and one lake) in Cycle 3. The issues are a range of forestry activities taking place that include clearfelling and drainage, which have resulted in mainly morphological issues and to a lesser extent, excess nutrients in surface water bodies. Elevated concentrations of phosphates and ammonia are the significant issues.

5.1.1.4 Urban Run-off

- Diffuse urban pressures, caused by misconnections, leaking sewers and runoff from paved and unpaved areas, have been identified as a significant pressure in Loe_010 and Milltown (Kerry)_010 river waterbodies as well as Ross Bay lake waterbody.

5.1.1.5 Industry

- Industry remains a significant pressure in two river waterbodies and one groundwater body in Cycle 3. These point source discharges, causing nutrient and organic issues, arise from industrial discharges (Table 5).

Table 5: Breakdown of Cycle 3 Industry Significant Pressures in the Laune Maine Dingle Bay Catchment

Waterbody Code	Waterbody Name	Waterbody Type	Emission Type	Name	Impact
IE_SW_22E010400	EMLAGH_010	River	Section 4	N/A*	Organic & Sediment
IE_SW_22G061200	GWEESTIN_040	River	Section 4	N/A*	Nutrient
IE_SW_G_049	Industrial Facility (P0018-01)	Groundwater	IPC	Astellas Ireland Company Limited (Killorglin)	Chemical Pollution & Diminution of quality of associated surface waters for chemical reasons

*Name of facility not provided during characterisation

5.1.1.6 Mines & Quarries

- A quarry (Qy027) remains the significant pressure Cottoner's (Laune)_020. A quarry was also identified as a pressure in Ferta_010. There is a quarry located adjacent to the monitoring point. Further investigation is required to determine the impacts from this quarry.

5.1.1.7 Peat

- Peat extraction has been identified as a significant pressure in Teermoyle Stream_010 and Deenagh_010. Morphological changes in relation to sedimentation is the significant issue.

5.1.1.8 Urban waste water

- Urban waste water remains a significant pressure in one *At Risk* river waterbody since Cycle 2 (Table 6).

Table 6: Waste Water Treatment Agglomerations identified as significant pressures in *At Risk* waterbodies in Cycle 3

Facility name	Facility Type	Waterbody	2013-18 Ecological Status	Irish Water's Expected CIP Completion Date[6]
Killarney D0037	Agglomeration PE > 10,000	Ross Bay	Moderate	N/A

5.1.1.9 Domestic waste water

- Domestic waste water has been identified as a significant pressure in one river waterbody (Loe_010). This is due to a concentration of domestic waste water treatment systems in close proximity to the water bodies. The significant issue is excess nutrients entering the surface water. Inspections carried out by Kerry County Council identified a number of failures.

5.1.1.10 Other significant pressures

- *Abstractions*
  Abstraction for public water supply (Lough Guitane) remains an issue in Finow_020. The abstraction identified in Caherlehillan Stream_010 during Cycle 2 characterisation is not considered a significant issue in Cycle 3.

- *Unknown Anthropogenic*
  There are six *At Risk* waterbodies (five rivers and Cara Lake) that have unknown anthropogenic pressures.

- *Golf courses*
  Fahaduff_010 river waterbody is *At Risk* and a golf course is a significant pressure and the waterbody appears to be impacted by a pesticide/ herbicide.

- *Tourism*
  Kerry County Council have indicated tourism-related activity in relation to waste water treatment upstream of the monitoring point in Gaddagh_010 may be a potential source of nutrient pollution that requires further assessment.

- *Windfarm*
  Kerry County Council have stated that construction of Glanageenty Wind Farm coincides with the period of decline in Little Maine_010 and is a likely a source of sediment in the river waterbody.

Figure 15 – Figure 17 illustrates the locations of waterbodies for the three most common pressures in order of prevalence (agriculture, hydromorphology & forestry) within the catchment in Cycle 3.

[6] Based on Irish Water's Capital Investment Programme (2020-2024) as of February 2021 and may be subject to change.

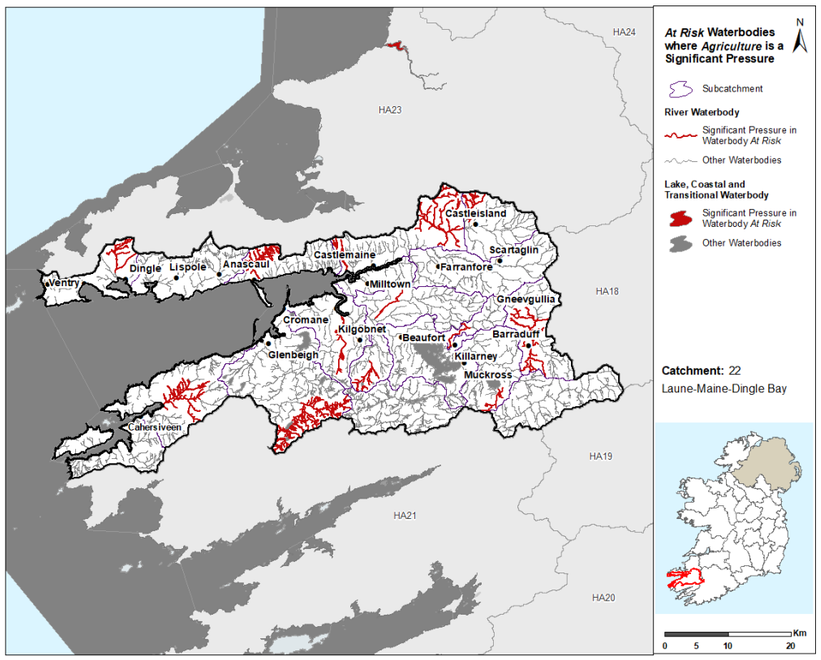


Figure 15: Locations of Waterbodies where Agriculture is a Significant Pressure

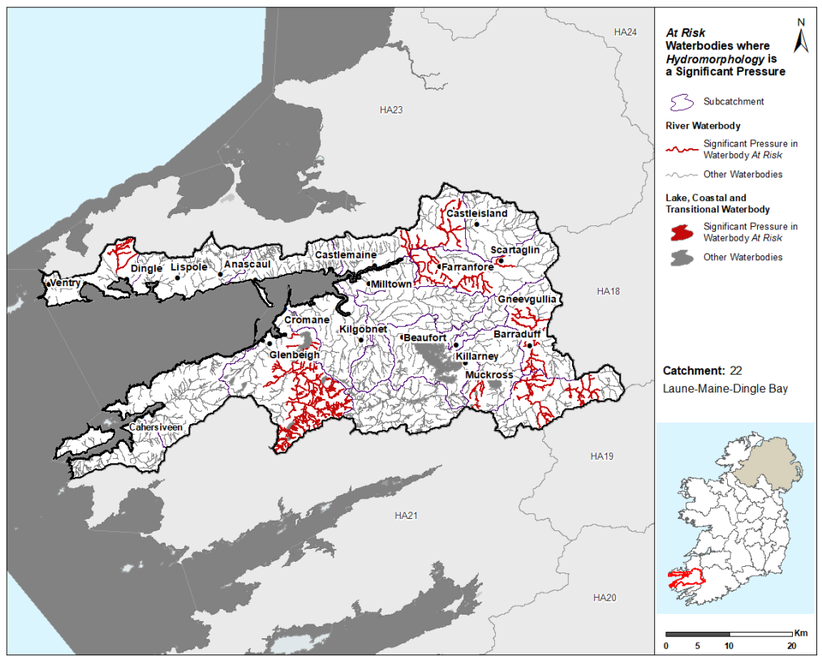


Figure 16: Locations of Waterbodies where Hydromorphology is a Significant Pressure

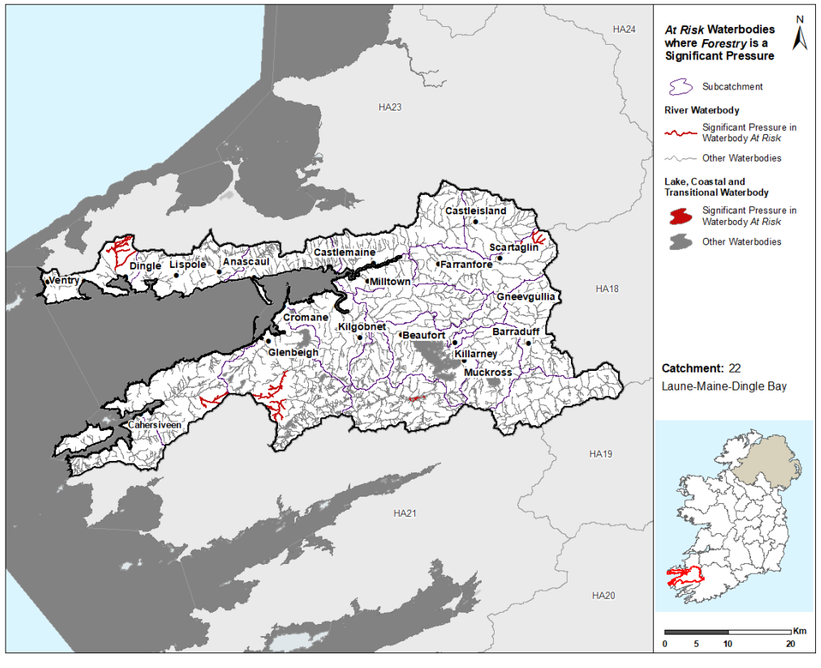
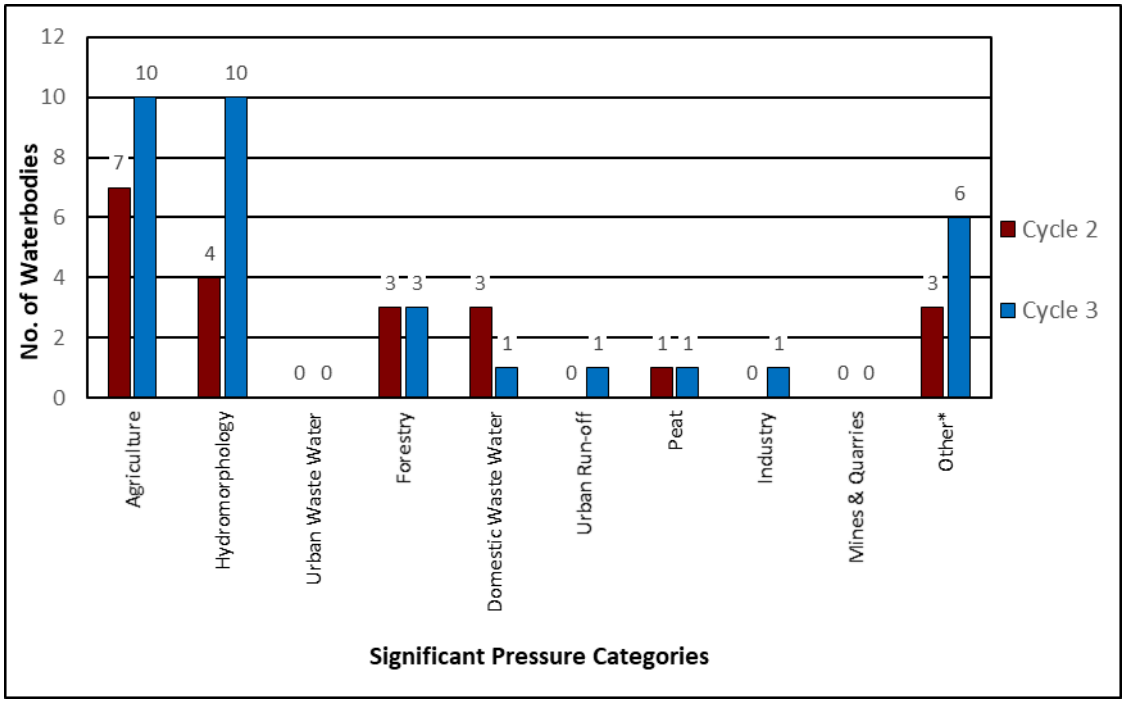


Figure 17: Locations of Waterbodies where Forestry is a Significant Pressure

5.2 High Status Objective Waterbodies

- Agriculture and hydromorphological pressures are the dominant significant pressures in High Status Objective waterbodies, with both pressures identified as significant in 10 *At Risk* High Status Objective waterbodies.



*Other – abstractions, aquaculture, atmospheric, anthropogenic pressures, historically polluted sites, waste, water treatment and invasive species have all been grouped into the "Other" pressure category for the purpose of this report

Figure 18: Significant Pressure in *At Risk* High Status Objective Waterbodies

6 Source Load Apportionment Modelling (SLAM)

- The EPA has developed Source Load Apportionment Models (SLAM) for both P and N which estimate the proportion of the phosphorus and nitrogen inputs, respectively, to waters in each catchment that comes from each sector.

- The main data inputs for the model for agriculture are the 2018 land parcel (LPIS) and animal (AIMs) data from the Department of Agriculture Food and the Marine. The Urban Waste Water (UWW) data comes from Irish Water's discharge monitoring data. The model also calculates the inputs from a range of other sectors, including for example, forestry, septic tanks, peat, urban runoff and atmospheric deposition.

- In the catchment pasture land is responsible for 82% of the nitrogen load respectively while land in pasture, peat, discharges from urban waste water and forestry contribute 38%, 23%, 16% and 14% of the phosphorus loadings for the catchment respectively (Figure 17).

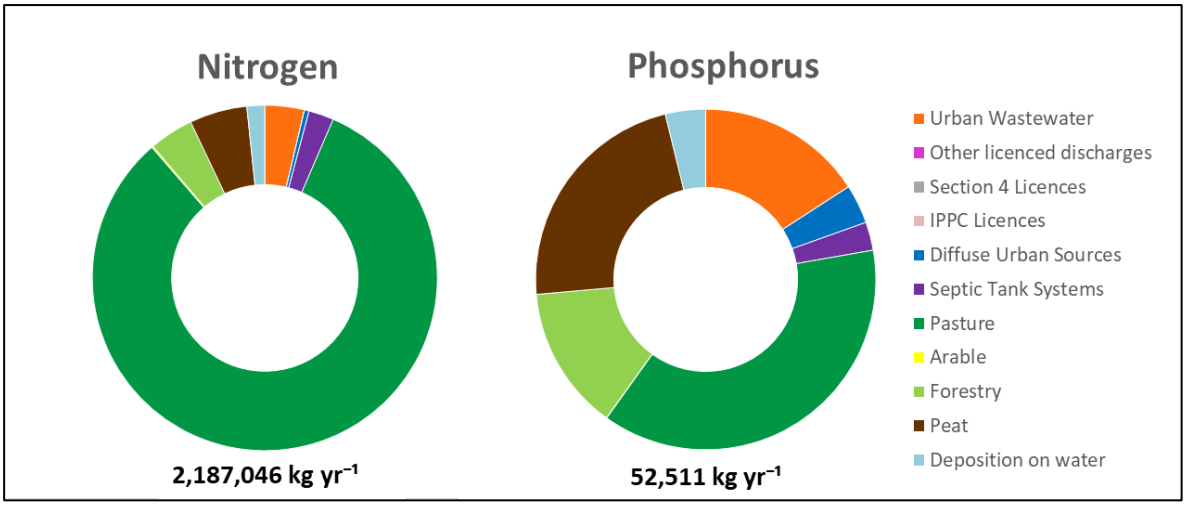


Figure 19: Estimated Proportions of N & P from Each Sector in the Laune Maine Dingle Bay Catchment

7 Load Reduction Assessment

7.1 Nitrogen Load Reduction

- An assessment was undertaken to determine if nitrogen reductions in rivers, streams and lakes are required for Transitional and Coastal (TRACs) waterbodies to achieve their WFD environmental objective. The outcome of the assessment indicated that 10 of the 46 catchments require N reductions in our inland waters to restore some TRAC waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Laune Maine Dingle Bay Catchment.

7.2 Phosphorous / Sediment Load Reduction

- Further modelling work is required to determine if and what P load reductions are required.

Figure 20 highlights areas where agricultural measures for sediment and phosphorus should be targeted. Waterbodies with blue fill are areas where sediment or phosphorus should be targeted. Pollution Impact Potential mapping for both phosphorus and nitrogen in the catchment are provided in Appendix 2.

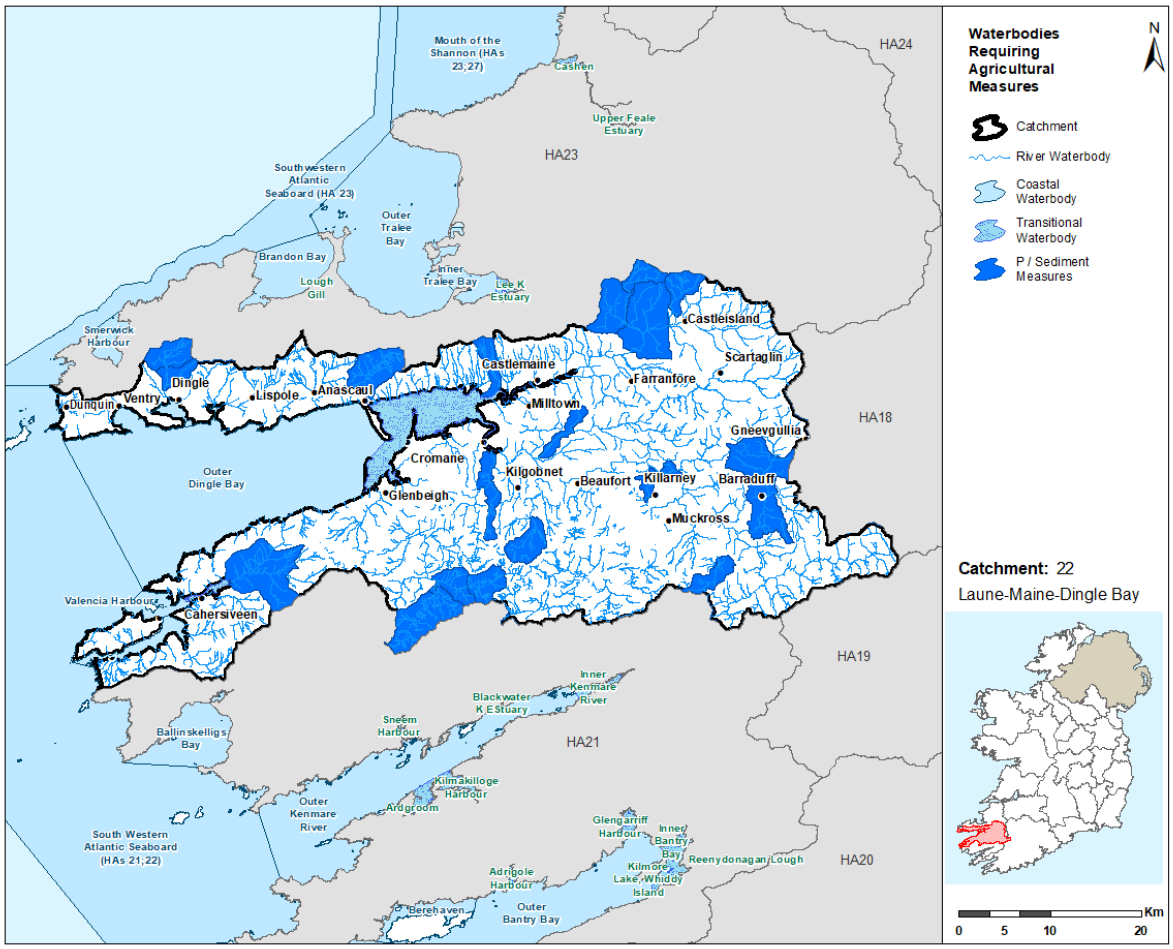


Figure 20: Waterbodies where Agricultural Measures should be Targeted

8 2nd Cycle Areas for Action

8.1 Area for Action Overview

- There were five Areas for Action, comprising of 10 waterbodies, selected for further characterisation and action in the catchment for the 2nd Cycle River Basin Management Plan. The Areas for Action in the catchment are listed in Table 7 and shown in Figure 21. LAWPRO, in conjunction with local authorities and stakeholders from the South-western Regional Operational Committee, have been working in these areas since 2018.

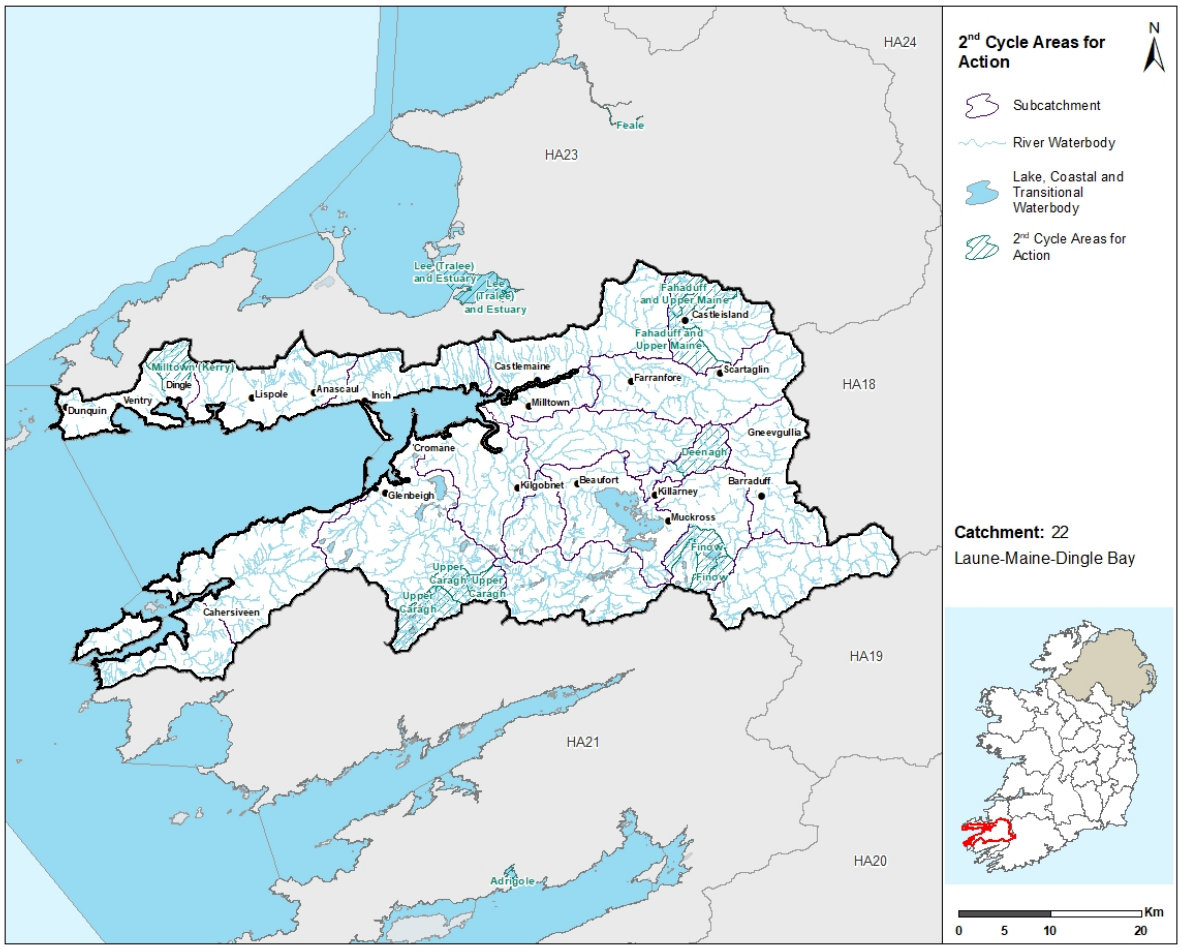


Figure 21: 2nd Cycle Areas for Action Locations

Table 7: 2nd Cycle Areas for Action

2nd Cycle Area for Action	Number of Waterbodies	Sub-catchment	Local Authority	Reason for Selection
Upper Caragh	3	22_13	Kerry	Failing to meet protected area objectives for Priority 8 Freshwater Pearl Mussels. • Opportunity to work with KerryLIFE. • Important fishery - Arctic char are unusual genetically here. • High scenic value. • Headwaters to river Caragh. • Three *At Risk* High Ecological Status objective water bodies. • One potential 'quick win'.
Milltown (Kerry)	2	22_19	Kerry	• Headwaters discharging into Dingle Harbour. • Important for tourism. • Small area - easy to manage. • Two potential 'quick wins'. • One deteriorated waterbody.
Fahaduff and Upper Maine	2	22_5	Kerry	• Build on proposed improvements at Castleisland WWTP. • Inland Fisheries Ireland reported two fish kills between 2013 - 2015. • Active community group

2nd Cycle Area for Action	Number of Waterbodies	Sub-catchment	Local Authority	Reason for Selection
				• Ultimately discharges into Tralee shellfish area. • Maine is an important salmonid river.
Deenagh	1	22_1	Kerry	• Of Interest from a planning perspective. • Build on work completed for the Lough Leane project. • Headwaters to Lough Leane. • One deteriorated waterbody. • One waterbody (Deenagh_010) is failing to meet its protected area objectives for salmon.
Finow	2	22_6	Kerry	• Project to examine impact from abstraction. • One deteriorated High Ecological Status objective waterbody. • Two water bodies failing to meet protected area objectives for salmon. • One potential 'quick win'. • Headwaters to Lough Leane. • High interest from Kerry County Council.

8.2 Status Change in 2nd Cycle Areas for Action

- For Cycle 3, of the 10 waterbodies in the 2nd Cycle Areas for Action, there are three waterbodies (Caragh_020, Finow_010 & Owenroe (Caragh)_010) at Good Status, three waterbodies (Finow_020, Maine_020 & Milltown (Kerry)_010) at Moderate Status and four waterbodies at Poor Status (Caragh_010, Deenagh_010, Fahaduff_010 & Milltown (Kerry)_020).

- Of the 10 waterbodies within the 2nd Cycle Areas for Action which had status assigned, seven experienced no change in status between Cycle 2 and Cycle 3, one waterbody (Milltown (Kerry)_010) experienced an improvement and two waterbodies (Finow_010 & Fahaduff_010) experienced decline in status, which equates to an over decline in status of one waterbody. (Figure 22). The waterbody that experienced improvement was in the Milltown (Kerry) Area for Action and the waterbodies which experienced decline in status were in the Finow Area for Action and Fahaduff Upper Maine Area for Action.

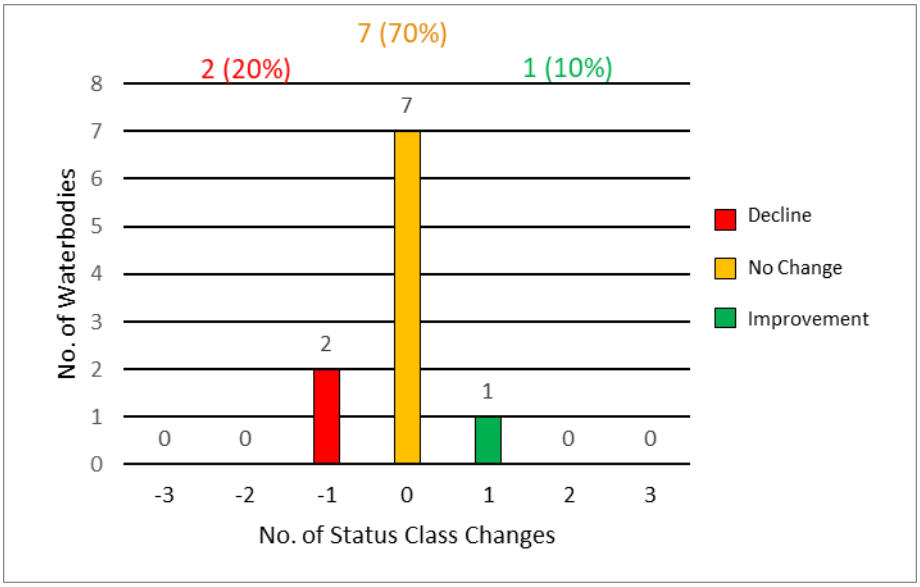


Figure 22: 2nd Cycle Area for Action Waterbody Status Class Changes between Cycle 2 and Cycle 3

8.3 Waterbody Risk in 2nd Cycle Areas for Action

- For the 10 waterbodies in the 2nd Cycle Areas for Action, nine (90%) of these are currently *At Risk* and one (10%) is in *Review*.

- All nine *At Risk* waterbodies are river waterbodies. Figure 23 gives an overview of the breakdown of risk across waterbody types for both Cycle 2 and Cycle 3 in 2nd Cycle Areas for Action.

- Overall there is a decrease from 10 to nine *At Risk* waterbodies in 2nd Cycle Areas for Action between Cycle 2 and Cycle 3. Maine_020 was *At Risk* in Cycle 2 but is currently in *Review*.

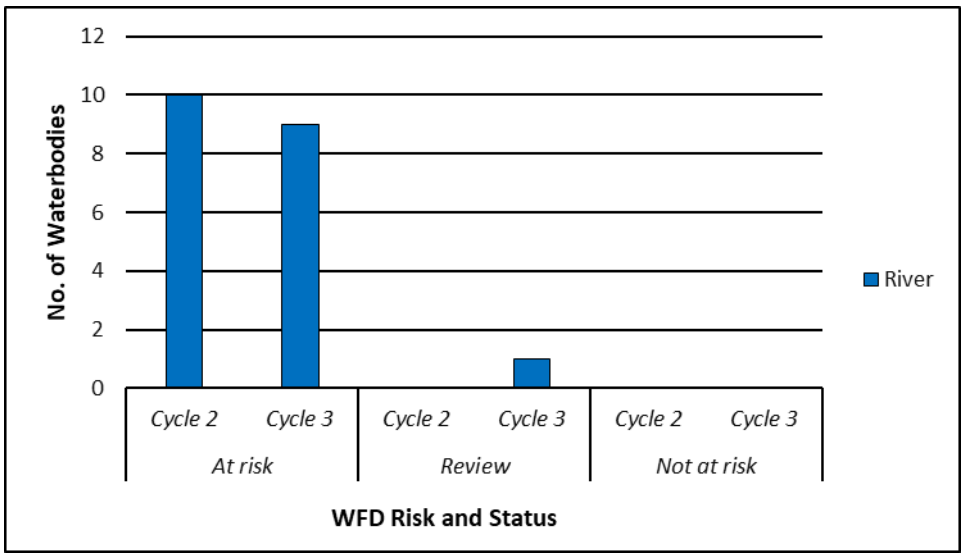


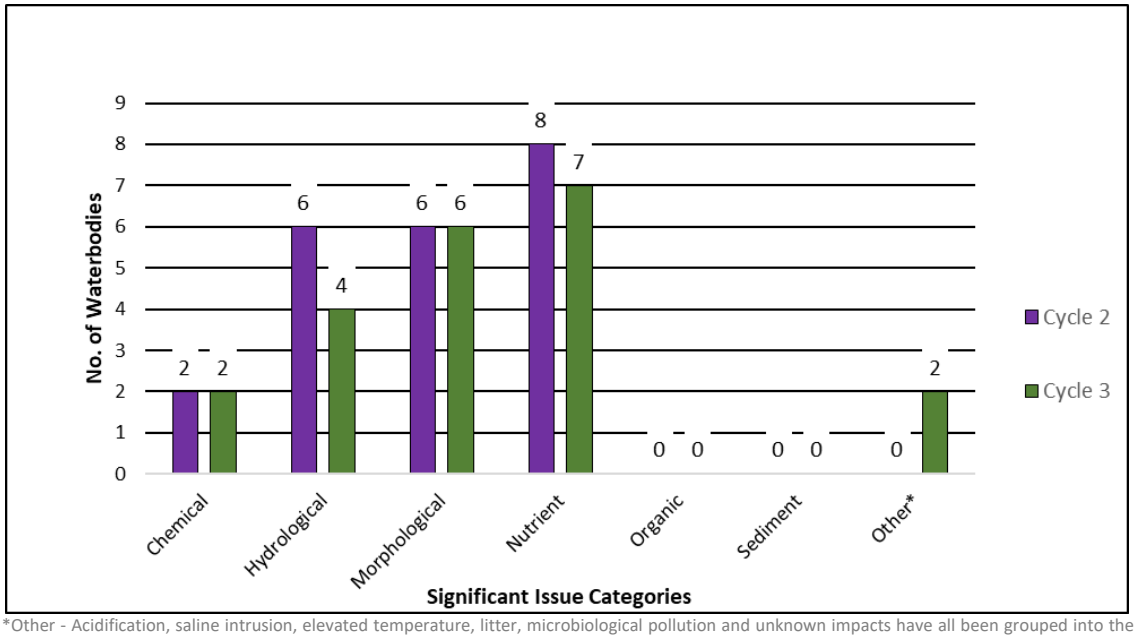
Figure 23: Number of waterbodies in each risk category in 2nd Cycle Areas for Action

8.4 Significant Issues in 2nd Cycle Areas for Action

- Based on the EPA assessment for Cycle 3, the significant issue in the 2nd Cycle Areas for Action is nutrient pollution, impacting seven waterbodies (Figure 24). This is followed by morphological issues which are impacting six waterbodies, hydrological issues impacting four waterbodies (Caragh_010, Caragh_020, Finow_020 & Owenroe (Caragh)_010), chemical

pollution is impacting two waterbodies (Finow_010 & Fahaduff_010). There are also two waterbodies impacted by issues that fall under the other category as illustrated in Figure 24. There have been pressures identified in Finow_020 and Milltown (Kerry)_010 in Cycle 3 for which the impact types are unknown.

- The number of 2nd Cycle Areas for Action waterbodies associated with morphological issues and chemical pollution have remained the same between Cycle 2 and Cycle 3. The number of waterbodies impacted by nutrient pollution and hydrological issues have reduced in the same period, from eight to and from six to four respectively. The only increases where in waterbodies impacted by unknown issues.



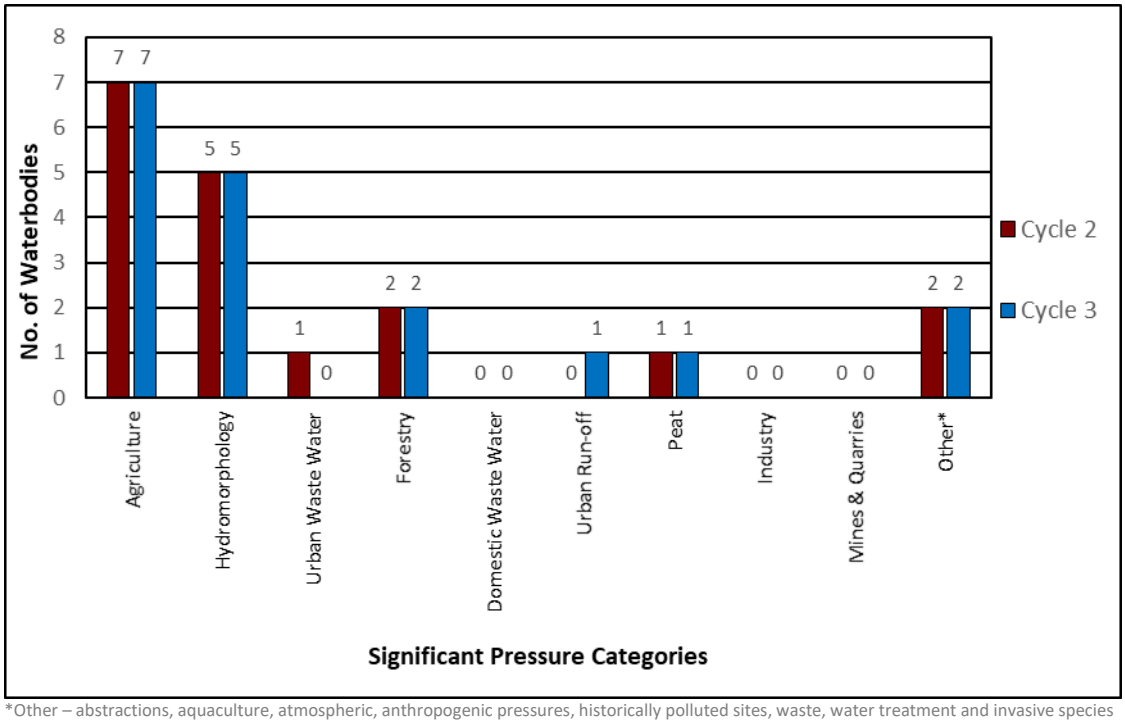
*Other - Acidification, saline intrusion, elevated temperature, litter, microbiological pollution and unknown impacts have all been grouped into the "Other" issues category for the purpose of this report

Figure 24: Significant Issues across all 2nd Cycle Areas for Action Waterbodies

8.5 Significant Pressure in 2nd Cycle Areas for Action

- For Cycle 3, in 2nd Cycle Areas for Action waterbodies in the catchment the dominant significant pressures are:
  - Agriculture - seven waterbodies remain impacted in Cycle 3.
  - Hydromorphology – five waterbodies remain impacted in Cycle 3.
  - Forestry – two waterbodies (Milltown (Kerry)_010 & Milltown (Kerry)_020) remain impacted in Cycle 3.
  - Other – There are two waterbodies impacted by pressures that fall under the other category as illustrated in Figure 25. Finow_020 remains affected by abstraction for supply in Cycle 3 and Fahaduff_010 remains impacted by a Golf Course.
  - Urban Run-off – one waterbody (Milltown (Kerry)_010) is impacted in Cycle 3. Urban run-off was not identified as a pressure during Cycle 2 characterisation.
  - Peat – Deenagh_010 remains impacted by peat extraction in Cycle 3.

- When comparing the significant pressures in the 2nd Cycle Areas for Action between Cycle 2 and 3 there has been no change in the number of waterbodies affected by agriculture, hydromorphology, forestry, peat and other pressures. The number of waterbodies impacted by urban run-off increased by one, from zero to one and urban waste water pressures have each decreased by one, from one to zero.



*Other – abstractions, aquaculture, atmospheric, anthropogenic pressures, historically polluted sites, waste, water treatment and invasive species have all been grouped into the "Other" pressure category for the purpose of this report

Figure 25: Significant Pressures in 2nd Cycle Area for Action Waterbodies

9 3rd Cycle Recommended Areas for Action

9.1 Recommended Areas for Action Overview

- For the 3rd Cycle Draft River Basin Management Plan Areas for Action have been extended out to not only include Prioritised Areas for Action undertaken by LAWPRO which focussed on restoring waterbodies, but to also include restoration work undertaken by all agencies under Areas for Restoration. In addition, protection work is included under Areas for Protection and research, pilot schemes and community initiatives are included under Catchment Projects. The aim of the 3rd Cycle Plan is to capture all activity that is working to restore, improve and/or protect waterbodies.

- The Recommended 3rd Cycle Areas for Action list will be included in the Draft River Basin Management Plan and will be finalised after the consultation period.

- There are 11 Areas for Action, comprising of 45 waterbodies, recommended for further characterisation and action in the catchment for the 3rd Cycle River Basin Management Plan. 23 of the 45 waterbodies in the 3rd Cycle Recommended Areas for Action are *At Risk*, seven are in *Review* and 15 are *Not At Risk.* The 11 Recommended Areas for Action consist of nine Areas for Restoration and two Areas for Catchment Projects. LAWPRO are the proposed lead organisation in eight Recommended Areas for Action, NFGWS are the proposed lead in Lougher Recommended Area for Action, The Pearl Mussel Project are the proposed lead in The Pearl mussel Project Recommended Area for Action and Queens University Belfast is the proposed lead in The Arctic Char Project Recommended Area for Action. The Recommended Areas for Action in the catchment are listed in Table 8 and shown in Figure 26. The reason for selecting each waterbody in a Recommended Area for Action is provided in Appendix 3.

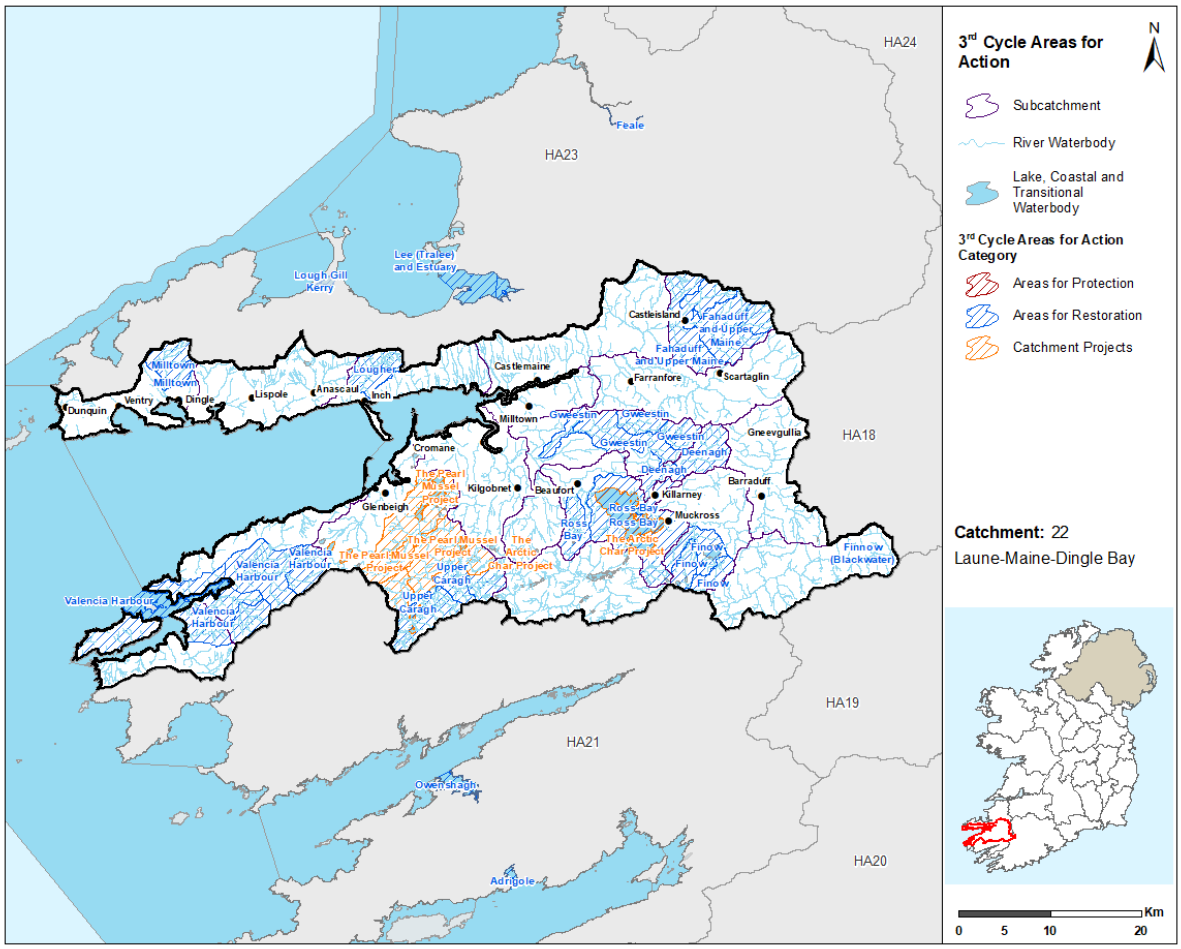


Figure 26: 3rd Cycle Recommended Areas for Action Locations

Table 8: 3rd Cycle Recommended Areas for Action Breakdown

3rd Cycle Recommended Areas for Action	Number of Waterbodies	Recommended Areas for Action Category	Recommended Areas for Action Sub-category	Lead Organisation
Valencia Harbour	10	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Upper Caragh	3	Restoration	Blue Dot Areas for Action LAWPRO and Others	LAWPRO
The Pearl Mussel Project	4	Catchment Projects	EIP	The Pearl Mussel Project
Deenagh	2	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Lougher	1	Restoration	Public Health Areas for Restoration NFGWS, IW, HSE, LAs, SFPA	NFGWS
Finow	3	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Fahaduff and Upper Maine	4	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Gweestin	4	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
Ross Bay	3	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO

3rd Cycle Recommended Areas for Action	Number of Waterbodies	Recommended Areas for Action Category	Recommended Areas for Action Sub-category	Lead Organisation
Milltown	2	Restoration	Prioritised Areas for Action LAWPRO	LAWPRO
The Arctic Char Project	9	Catchment Projects	Public Body Research	Queens University Belfast

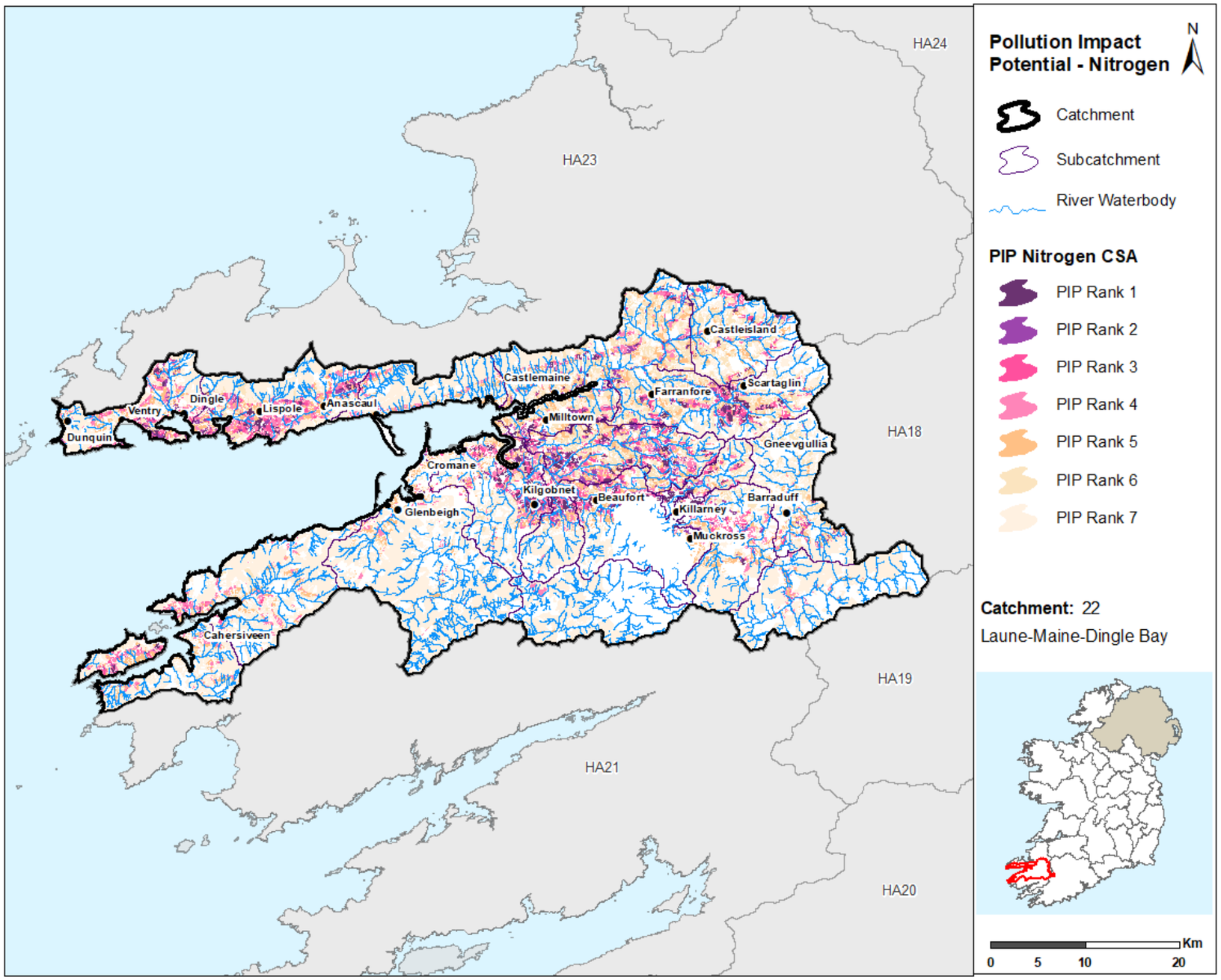
10 Catchment Summary

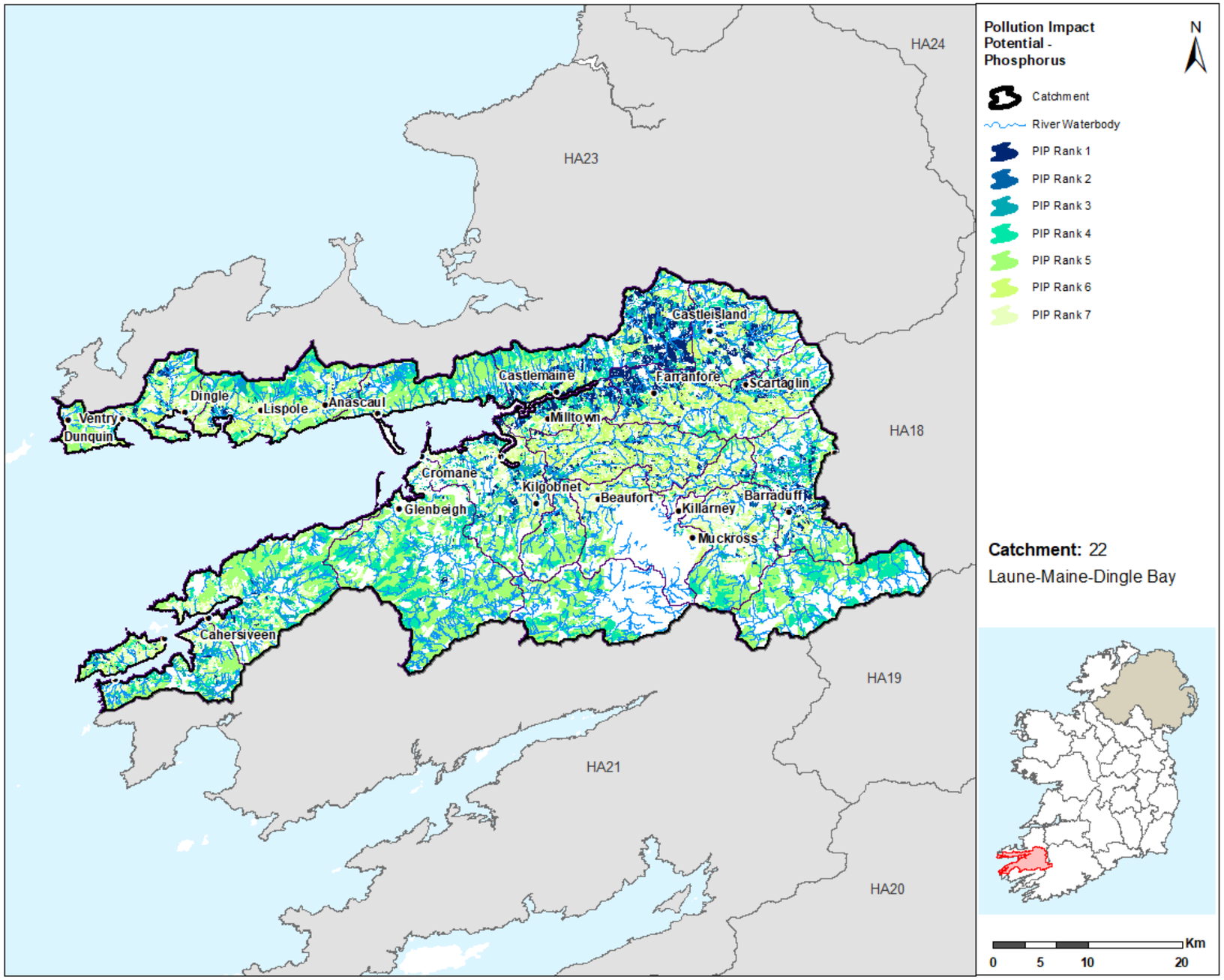
- Of the 93 river waterbodies, 35 are *At Risk* of not meeting their WFD objectives.
- Three (Upper KY, Caragh & Ross Bay) out of 44 Lake waterbodies are *At Risk* of not meeting their objectives.
- Three out of 16 groundwater bodies are *At Risk* (Glenville, Laune Muckross & Industrial Facility (P0018-01).
- There has been an overall deterioration across the catchment with 41 waterbodies *At Risk* in Cycle 3 compared to 27 waterbodies *At Risk* in Cycle 2.
- The main significant issues are impacts from morphological issues followed by nutrient pollution, sediment, hydrological impacts, chemical pollution and organic pollution.
- The main significant pressures are agricultural pressures followed by hydromorphological and forestry pressures.
- The main impacts and pressures driving the change in risk between Cycle 2 and Cycle 3 are increases in waterbodies impacted by sediment, nutrient pollution and morphological impacts from agriculture or hydromorphological pressures.
- In the 2nd Cycle Areas for Action, 10 waterbodies were *At Risk* in Cycle 2 and nine waterbodies are *At Risk* in Cycle 3. Maine_020, where an urban waste water pressure was considered significant in Cycle 2, but is no longer a significant pressure in Cycle 3, changed from *At Risk* to *Review*
- There are 11 3rd Cycle Recommended Areas for Action for Cycle 3. They comprise of 45 waterbodies with 23 waterbodies *At Risk*, seven in *Review* and 15 *Not At Risk*.

Appendix 1
High ecological status objective waterbodies

Waterbody Name	Waterbody Type	Waterbody Code	Status 2013-2018
BEHY (KERRY)_020	River	IE_SW_22B021000	Good
BROWN FLESK_020	River	IE_SW_22B030250	Good
CAHERLEHILLAN STREAM_010	River	IE_SW_22C200100	Good
Caragh	Lake	IE_SW_22_207	Good
CARAGH_010	River	IE_SW_22C020200	Poor
CARAGH_020	River	IE_SW_22C020400	Good
CARAGH_030	River	IE_SW_22C020600	Poor
CARAGH_040	River	IE_SW_22C020680	Moderate
COOMNACARRIG_010	River	IE_SW_22C060300	Good
CRINNAGH_010	River	IE_SW_22C070200	High
DEENAGH_020	River	IE_SW_22D010500	Good
EMLAGH_010	River	IE_SW_22E010400	Good
Ferta	Transitional	IE_SW_220_0100	Good
FINOW_010	River	IE_SW_22F040100	Good
FLESK (KERRY)_020	River	IE_SW_22F020040	Good
FLESK (KERRY)_030	River	IE_SW_22F020060	High
FLESK (KERRY)_040	River	IE_SW_22F020100	Good
FLESK (KERRY)_050	River	IE_SW_22F020250	Good
GADDAGH_010	River	IE_SW_22G010300	Good
GEARHAMEEN_010	River	IE_SW_22G030100	High
GEARHAMEEN_020	River	IE_SW_22G030300	High
GROIN_010	River	IE_SW_22G080300	Good
LITTLE MAINE_010	River	IE_SW_22L020500	Moderate
LOE_010	River	IE_SW_22L030400	Moderate
MEELAGH_010	River	IE_SW_22M020100	Good
Muckross	Lake	IE_SW_22_184	High
OWENASCAUL_010	River	IE_SW_22O021000	High
OWENREAGH_010	River	IE_SW_22O030200	High
OWENROE (CARAGH)_010	River	IE_SW_22O040200	Good
OWGARRIFF (FINOW)_010	River	IE_SW_22O060100	Good
OWNEYKEAGH_010	River	IE_SW_22O050400	Good
Portmagee Channel	Coastal	IE_SW_210_0000	Good
TEERMOYLE STREAM_010	River	IE_SW_22T040500	Good
Valencia Harbour	Coastal	IE_SW_220_0000	Good

Appendix 2
Pollution Impact Potential Mapping





Pollution Impact Potential - Phosphorus

N

- Catchment
- River Waterbody
- PIP Rank 1
- PIP Rank 2
- PIP Rank 3
- PIP Rank 4
- PIP Rank 5
- PIP Rank 6
- PIP Rank 7

Catchment: 22
Laune-Maine-Dingle Bay

Km
0 5 10 20

Appendix 3
Summary information on all waterbodies in the Laune Maine Dingle Bay Catchment

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
22_16	IE_SW_22B010600	BEHEENAGH_010	River	Not at risk	Not at risk	Good	Good	No			
22_13	IE_SW_22B020800	BEHY (KERRY)_010	River	Not at risk	Not at risk	Good	Good	No			
22_13	IE_SW_22B021000	BEHY (KERRY)_020	River	At risk	At risk	Good	Good	Yes	Other		
22_13	IE_SW_22B021300	BEHY (KERRY)_030	River	Not at risk	At risk	Good	Moderate	No	Other		
22_9	IE_SW_22B030100	BROWN FLESK_010	River	Not at risk	Not at risk	Good	Good	No			
22_9	IE_SW_22B030250	BROWN FLESK_020	River	Not at risk	At risk	High	Good	Yes	Hymo		
22_9	IE_SW_22B030500	BROWN FLESK_030	River	Not at risk	Not at risk	Good	Good	No			
22_10	IE_SW_22B390780	BOOLA_010	River	Review	Review	Unassigned	Unassigned	No		Valencia Harbour	Review waterbody. Include as inputting waterbody to Valencia Harbour
22_19	IE_SW_22B410750	BALLINLEAGUE_010	River	Review	Review	Unassigned	Unassigned	No			
22_13	IE_SW_22C020200	CARAGH_010	River	At risk	At risk	Poor	Poor	Yes	Ag, Hymo	Upper Caragh	Existing PAA. ASSAP work programme may not be complete
22_13	IE_SW_22C020400	CARAGH_020	River	At risk	At risk	Good	Good	Yes	Ag, Hymo	Upper Caragh	Existing PAA. ASSAP work programme may not be complete
22_13	IE_SW_22C020600	CARAGH_030	River	Not at risk	At risk	High	Poor	Yes	Hymo, Other	The Pearl Mussel Project	Part of the Pearl Mussel Project
22_13	IE_SW_22C020680	CARAGH_040	River	At risk	At risk	Moderate	Moderate	Yes	Hymo	The Pearl Mussel Project	NPWS priority habitat/species groundwater abstraction sources proposed for inclusion as an Area for Action Part of FPM EIP Not meeting its HES objective
22_13	IE_SW_22C020700	CARAGH_050	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_11	IE_SW_22C030200	CARHAN_010	River	Not at risk	Not at risk	Good	Good	No		Valencia Harbour	Inputting waterbody to Valencia Harbour
22_11	IE_SW_22C030300	CARHAN_020	River	Review	Review	Unassigned	Unassigned	No		Valencia Harbour	Review waterbody. Include as inputting waterbody to Valencia Harbour
22_12	IE_SW_22C050400	COTTONER'S (LAUNE)_010	River	Not at risk	Not at risk	Good	Good	No			
22_12	IE_SW_22C050600	COTTONER'S (LAUNE)_020	River	At risk	At risk	Poor	Moderate	No	Ag, M+Q		
22_13	IE_SW_22C060300	COOMNACARRIG_010	River	At risk	At risk	Good	Good	Yes	For	The Pearl Mussel Project	NPWS priority habitat/species Part of FPM EIP Blue dot area for restoration
22_7	IE_SW_22C070200	CRINNAGH_010	River	Not at risk	Not at risk	High	High	Yes			
22_13	IE_SW_22C180300	COOMNACRONIA LOUGH STREAM_010	River	Not at risk	Not at risk	Good	Good	No			
22_11	IE_SW_22C200100	CAHERLEHILLAN STREAM_010	River	At risk	At risk	Good	Good	Yes	Other	Valencia Harbour	At Risk HSO waterbody, inputting to Ferta. Include in Valenca AFA
22_4	IE_SW_22C910960	CAHERPIERCE_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
22_1	IE_SW_22D010100	DEENAGH_010	River	At risk	At risk	Poor	Poor	No	Peat	Deenagh	Existing PAA waterbody. FC not commenced so ASSAP work programme will not be complete
22_1	IE_SW_22D010500	DEENAGH_020	River	Not at risk	At risk	High	Good	Yes	Ag	Deenagh	Expand Deenagh PAA to include downstream waterbody failing to meet its HES objective NPWS priority habitat/species Catchment project
22_10	IE_SW_22D020100	DERREEN (KERRY)_010	River	Not at risk	Not at risk	Good	Good	No			
22_9	IE_SW_22D030400	DOGUE_010	River	Not at risk	Not at risk	Good	Good	No			
22_12	IE_SW_22D250950	DOUGLAS_010	River	Review	Review	Unassigned	Unassigned	No			
22_4	IE_SW_22E010400	EMLAGH_010	River	Not at risk	At risk	High	Good	Yes	Ag, Ind	Lougher	Proposed by NFGWS: Emlagh Stream catchment is used for water abstraction by Lougher GWS. The stream is currently classified as being of 'Good' water quality status, while the downstream waterbody (Emlagh_010) is also classified as being of 'Good' status and worthy of protection. In addition, the waterbody flows into the Castlemaine Harbour SPA Deteriorated HEs objective waterbody
22_11	IE_SW_22F011000	FERTA_010	River	At risk	At risk	Moderate	Moderate	No	Ag, M+Q	Valencia Harbour	AT risk waterbody, inputting to Valencia Harbour AFA
22_8	IE_SW_22F020010	FLESK (KERRY)_010	River	Not at risk	Not at risk	Good	Good	No			
22_8	IE_SW_22F020040	FLESK (KERRY)_020	River	Not at risk	At risk	High	Good	Yes	Hymo		
22_8	IE_SW_22F020060	FLESK (KERRY)_030	River	Not at risk	Not at risk	High	High	Yes			
22_8	IE_SW_22F020100	FLESK (KERRY)_040	River	Not at risk	At risk	High	Good	Yes	Hymo		
22_6	IE_SW_22F020250	FLESK (KERRY)_050	River	Not at risk	Review	High	Good	Yes			
22_6	IE_SW_22F020310	FLESK (KERRY)_060	River	Not at risk	Not at risk	Good	Good	No			
22_12	IE_SW_22F030700	FINGLAS (LAUNE)_010	River	Not at risk	Not at risk	Good	Good	No			
22_6	IE_SW_22F040100	FINOW_010	River	At risk	At risk	High	Good	Yes	Ag	Finow	Existing PAA waterbody. FC not commenced so ASSAP work will not be complete
22_6	IE_SW_22F040300	FINOW_020	River	At risk	At risk	Moderate	Moderate	No	Other	Finow	Existing PAA waterbody. FC not commenced so ASSAP work will not be complete
22_11	IE_SW_22F050700	FOUGHILL_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No		Valencia Harbour	Inputting waterbody to Valencia Harbour
22_5	IE_SW_22F090400	FAHADUFF_010	River	At risk	At risk	Moderate	Poor	No	Ag, Other	Fahaduff and Upper Maine	Existing PAA waterbody. ASSAP work may not be complete
22_10	IE_SW_22F240620	FEAGHMAAN_WEST_010	River	Review	Review	Unassigned	Unassigned	No		Valencia Harbour	Review waterbody. Include as inputting waterbody to Valencia Harbour
22_11	IE_SW_22F270920	FAHA (Kerry)_010	River	Review	Review	Unassigned	Unassigned	No			
22_3	IE_SW_22G010300	GADDAGH_010	River	Not at risk	At risk	High	Good	Yes	Ag, Other		
22_3	IE_SW_22G010500	GADDAGH_020	River	Not at risk	Not at risk	Good	High	No			
22_7	IE_SW_22G030100	GEARHAMEEN_010	River	Not at risk	Not at risk	High	High	Yes			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
22_7	IE_SW_22G030300	GEARHAMEEN_020	River	Not at risk	Not at risk	High	High	Yes			
22_15	IE_SW_22G040110	Glanooragh_010	River	Review	Review	Unassigned	Unassigned	No			
22_15	IE_SW_22G060300	GWEESTIN_010	River	Not at risk	Not at risk	Good	Good	No		Gweestin	NPWS priority habitat/species include as headwaters to Gweestin 40
22_15	IE_SW_22G060600	GWEESTIN_020	River	Not at risk	Not at risk	High	Good	No		Gweestin	NPWS priority habitat/species Include as upstream waterbody to Gweestin 40
22_15	IE_SW_22G060900	GWEESTIN_030	River	Not at risk	Not at risk	Good	Good	No		Gweestin	NPWS priority habitat/species Include as upstream waterbody to Gweestin 40
22_15	IE_SW_22G061200	GWEESTIN_040	River	At risk	At risk	Poor	Poor	No	Ag, Ind	Gweestin	NPWS priority habitat/species AR Waterbody
22_9	IE_SW_22G070200	GLANTANE_010	River	At risk	At risk	Poor	Poor	No	For		
22_17	IE_SW_22G080300	GROIN_010	River	Not at risk	At risk	High	Good	Yes	Ag		
22_4	IE_SW_22G130680	GORTNANOORAN_EAST_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_19	IE_SW_22G700680	GLANLICK_010	River	Review	Review	Unassigned	Unassigned	No			
22_15	IE_SW_22K040500	KEALBROGEEN STREAM (LAUNE)_010	River	Review	Review	Unassigned	Unassigned	No			
22_10	IE_SW_22K480900	KNOCKEENAWADDRA_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_11	IE_SW_22K540860	KILLURLY_WEST_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_14	IE_SW_22L010100	LAUNE_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No		Ross Bay	NPWS priority habitat/species Include under SC approach for SC 22_14
22_14	IE_SW_22L010200	LAUNE_020	River	Not at risk	Not at risk	Good	Good	No			
22_14	IE_SW_22L010300	LAUNE_030	River	Not at risk	Not at risk	Good	Good	No			
22_15	IE_SW_22L010400	LAUNE_040	River	Not at risk	Not at risk	Good	Good	No			
22_12	IE_SW_22L010510	LAUNE_050	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_17	IE_SW_22L020500	LITTLE MAINE_010	River	Not at risk	At risk	High	Moderate	Yes	Ag, Other		
22_17	IE_SW_22L021000	LITTLE MAINE_020	River	Not at risk	At risk	Good	Poor	No	Ag		
22_14	IE_SW_22L030400	LOE_010	River	Not at risk	At risk	High	Moderate	Yes	DWW, UR	Ross Bay	NPWS priority habitat/species Include under SC approach for SC 22_14 Deteriorated HES objective waterbody Catchment project Include as an AFA
22_8	IE_SW_22L040400	LOO_010	River	Not at risk	Not at risk	Good	Good	No			
22_7	IE_SW_22L080100	LONG RANGE_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_5	IE_SW_22M010300	MAINE_010	River	Not at risk	Not at risk	Good	Good	No		Fahaduff and Upper Maine	Upstream of existing PAA waterbody. Expand PAA
22_5	IE_SW_22M010400	MAINE_020	River	At risk	Review	Moderate	Moderate	No		Fahaduff and Upper Maine	Existing PAA waterbody. FC still ongoing. ASSAP work may not be complete
22_17	IE_SW_22M010500	MAINE_030	River	Not at risk	At risk	Good	Poor	No	Ag, Hymo		
22_17, 22_9	IE_SW_22M010700	MAINE_040	River	At risk	At risk	Moderate	Moderate	No	Hymo		
22_17, 22_2	IE_SW_22M010800	MAINE_050	River	Not at risk	Not at risk	Unassigned	Unassigned	No			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
22_13	IE_SW_22M020100	MEELAGH_010	River	At risk	At risk	Good	Good	Yes	For	The Pearl Mussel Project	NPWS priority habitat/species Part of FPM EIP
22_19	IE_SW_22M030200	MILLTOWN (KERRY)_010	River	At risk	At risk	Poor	Moderate	No	Ag, For, Hymo, UR	Milltown	Existing PAA waterbody and one of the Proof of Concept waterbodies. ASSAP work may not be complete
22_19	IE_SW_22M030300	MILLTOWN (KERRY)_020	River	At risk	At risk	Poor	Poor	No	Ag, For, Hymo	Milltown	Existing PAA waterbody and one of the Proof of Concept waterbodies. ASSAP work may not be complete
22_19	IE_SW_22M030400	MILLTOWN (KERRY)_030	River	Review	Review	Unassigned	Unassigned	No			
22_18	IE_SW_22M120990	MÃM AN GHARRÃIN_010	River	Review	Review	Unassigned	Unassigned	No			
22_18	IE_SW_22O010500	OWENALONDRIG_010	River	Not at risk	Not at risk	Good	Good	No			
22_18	IE_SW_22O010600	OWENALONDRIG_020	River	Review	Review	Unassigned	Unassigned	No			
22_18	IE_SW_22O021000	OWENASCAUL_010	River	Not at risk	Not at risk	High	High	Yes			
22_7	IE_SW_22O030200	OWENREAGH_010	River	Not at risk	Not at risk	High	High	Yes			
22_7	IE_SW_22O030400	OWENREAGH_020	River	Not at risk	Not at risk	Good	Good	No			
22_13	IE_SW_22O040200	OWENROE (CARAGH)_010	River	At risk	At risk	Good	Good	Yes	Ag, Hymo	Upper Caragh	Existing PAA. ASSAP work programme may not be complete
22_16	IE_SW_22O050400	OWNEYKEAGH_010	River	Not at risk	At risk	High	Good	Yes	Ag, Hymo		
22_6	IE_SW_22O060100	OWGARRIFF (FINOW)_010	River	Not at risk	At risk	High	Good	Yes	Hymo	Finow	NPWS priority habitat/species Deteriorated HES objective waterbody Expand Finow PAA to include inputting waterbodies Catchment project
22_16	IE_SW_22Q010400	QUAGMIRE_010	River	Not at risk	Not at risk	Good	Good	No			
22_11	IE_SW_22R120790	REACASHLAGH_010	River	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_5	IE_SW_22S010020	SHANOWEN (MAINE)_010	River	Review	Not at risk	Good	Good	No		Fahaduff and Upper Maine	Expand PAA to include inputting waterbodies
22_4	IE_SW_22S130900	SHANAKEAL_010	River	Review	Review	Unassigned	Unassigned	No			
22_11	IE_SW_22T040500	TEERMOYLE STREAM_010	River	At risk	At risk	Good	Good	Yes	For, Peat	Valencia Harbour	AT risk waterbody, inputting to Valencia Harbour AFA
22_6	IE_SW_22W010300	WOODFORD (FLESK)_010	River	Review	Review	Unassigned	Unassigned	No			
22_7	IE_SW_22_145	Duff	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_14	IE_SW_22_148	Black KY	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_8	IE_SW_22_149	Crohane	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_16	IE_SW_22_152	Glannafreaghaun	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_12	IE_SW_22_153	Coomloughra	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_6	IE_SW_22_154	Managh	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_14	IE_SW_22_156	Devils Punchbowl	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_6	IE_SW_22_160	Erhogh	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_7	IE_SW_22_161	Reagh Macgillicuddy Reeks	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_14	IE_SW_22_165	Doo KY	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_7	IE_SW_22_168	Curraghmore	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_6	IE_SW_22_169	Garagarry	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
22_6	IE_SW_22_172	Guitane	Lake	Review	Not at risk	Good	Good	No			
22_14	IE_SW_22_173	Auger	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_12	IE_SW_22_174	Eagher	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_3	IE_SW_22_176	Cummeenapeasta	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_7	IE_SW_22_177	Glas	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_7	IE_SW_22_178	Looscaunagh	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_3	IE_SW_22_179	Gouragh	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_7	IE_SW_22_181	Cummeenduff	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_3	IE_SW_22_182	Callee	Lake	Review	Review	Unassigned	Unassigned	No		The Arctic Char Project	There is an important and unique population of Acrtic char present in this lake, on-going genetic research project by Queens University Belfast, funded by the EPA, will reveal more information about the population in this lake NPWS priority habitat/species
22_14	IE_SW_22_184	Muckross	Lake	Not at risk	Not at risk	High	High	Yes		The Arctic Char Project	On-going genetic research project by Queens University Belfast, funded by the EPA, will reveal more information about the arctic char population in this lake NPWS priority habitat/species
22_7	IE_SW_22_186	Upper KY	Lake	At risk	At risk	Moderate	Moderate	No	For		
22_7	IE_SW_22_187	Long Range	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_18	IE_SW_22_189	Anscaul - Scail	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_13	IE_SW_22_192	Reagh Mullaghanattin	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No		The Arctic Char Project	On-going genetic research project by Queens University Belfast, funded by the EPA, will reveal more information about the arctic char population in this lake NPWS priority habitat/species
22_13	IE_SW_22_196	Coomnacronia	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_13	IE_SW_22_197	Coomaglaslaw	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No		The Arctic Char Project	important arctic char lakes, important indicator species and for biodiversity NPWS priority habitat/species
22_13	IE_SW_22_198	Coomeeneragh	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_13	IE_SW_22_199	Cummernamuck	Lake	Not at risk	Not at risk	High	High	No			
22_13	IE_SW_22_200	Nambrackdarrig Caragh	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_13	IE_SW_22_201	Yganavan	Lake	Review	Review	Unassigned	Unassigned	No			
22_13	IE_SW_22_202	Nambrackdarrig Glenbeigh	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_13	IE_SW_22_205	Coomasaharn	Lake	Review	Review	Unassigned	Unassigned	No		The Arctic Char Project	important arctic char lakes, important indicator species and for biodiversity NPWS priority habitat/species
22_13	IE_SW_22_206	Cloon KY	Lake	Review	Review	Unassigned	Unassigned	No		The Arctic Char Project	important arctic char lakes, important indicator species and for biodiversity NPWS priority habitat/species

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
22_13	IE_SW_22_207	Caragh	Lake	At risk	At risk	Moderate	Good	Yes	Other	The Arctic Char Project	Important arctic char lake NPWS priority habitat/species
22_13	IE_SW_22_208	Acoose	Lake	Not at risk	Not at risk	Good	Good	No		The Arctic Char Project	Important arctic char lake NPWS priority habitat/species
22_14	IE_SW_22_209	Ross Bay	Lake	Review	At risk	Unassigned	Moderate	No	UR, UWW	Ross Bay	NPWS priority habitat/species Downstream of Killarney town with WWTP pressure
22_14	IE_SW_22_210	Leane	Lake	Not at risk	Not at risk	Good	Good	No		The Arctic Char Project	Unique fish populations, e.g. Arctic char and Killarney shad (only population in the country) NPWS priority habitat/species New PAA SC 22_14?
22_13	IE_SW_22_25	Cappanalea	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_13	IE_SW_22_26	Nakirka	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_13	IE_SW_22_39	BALLINTLEAVE COMMONS	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_19	IE_SW_22_58	Mount Eagle	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_18	IE_SW_22_67	Bhearna na Gaoithe	Lake	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_19, 23_11, 23_7, 23_9, 27_8	IE_SH_010_0000	Southwestern Atlantic Seaboard (HA 23)	Coastal	Not at risk	Not at risk	Unassigned	Unassigned	No			
20_3, 21_1, 21_11, 21_2, 21_3, 21_9, 22_10, 22_11, 22_19, 23_11	IE_SW_150_0000	South Western Atlantic Seaboard (HAs 21;22)	Coastal	Not at risk	Not at risk	Unassigned	Unassigned	No			
22_10	IE_SW_210_0000	Portmagee Channel	Coastal	At risk	Not at risk	Good	Good	Yes			
22_10, 22_11	IE_SW_220_0000	Valencia Harbour	Coastal	At risk	Not at risk	Good	Good	Yes		Valencia Harbour	Shellfish Designated Area; Oysters; Class B- E coli Testing; WFD-At Risk
22_11, 22_18, 22_19, 22_4	IE_SW_230_0000	Outer Dingle Bay	Coastal	Not at risk	Review	Unassigned	Unassigned	No			
22_18, 22_19	IE_SW_240_0000	Dingle Harbour	Coastal	Not at risk	Review	Unassigned	Unassigned	No			
22_10, 22_11	IE_SW_220_0100	Ferta	Transitional	At risk	Not at risk	Good	Good	Yes		Valencia Harbour	Connected to Valencia Harbour, shellfish area
22_11, 22_12, 22_13, 22_17, 22_2, 22_4	IE_SW_230_0200	Castlemaine Harbour	Transitional	Not at risk	Not at risk	Good	Good	No			
18_12, 18_18, 18_26, 18_6, 22_17, 22_5, 22_9, 23_1, 23_12, 23_13, 23_2, 23_3, 23_4, 23_5, 23_6, 23_7,	IE_SH_G_001	Abbeyfeale	Groundwater	Not at risk	Not at risk	Good	Good	No			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
23_8, 24_14, 24_7, 24_9											
22_17, 22_18, 22_19, 22_4, 23_10, 23_11, 23_8, 23_9	IE_SH_G_044	Brandon Head	Groundwater	Not at risk	Not at risk	Good	Good	No			
22_17, 23_13, 23_6, 23_7, 23_8	IE_SH_G_223	Spa	Groundwater	Not at risk	Not at risk	Good	Good	No			
22_17, 23_8, 23_9	IE_SH_G_226	Tralee	Groundwater	Review	Not at risk	Good	Good	No			
18_4, 18_7, 18_9, 19_10, 19_14, 19_18, 19_3, 19_4, 19_6, 19_7, 19_9, 20_10, 20_6, 21_19, 21_7, 22_8	IE_SW_G_005	Ballinhassig West	Groundwater	Not at risk	Not at risk	Good	Good	No			
19_10, 19_14, 20_17, 20_3, 20_6, 20_7, 21_1, 21_10, 21_11, 21_12, 21_13, 21_14, 21_15, 21_16, 21_17, 21_18, 21_19, 21_2, 21_20, 21_3, 21_4, 21_5, 21_6, 21_7, 21_8, 21_9, 22_10, 22_11, 22_13, 22_14, 22_6, 22_7, 22_8	IE_SW_G_019	Beara Sneem	Groundwater	Not at risk	Not at risk	Good	Good	No			
18_12, 18_9, 19_10, 19_4, 21_1, 21_10, 21_12, 21_13, 21_4, 21_5, 21_7, 22_10,	IE_SW_G_022	Cahersiveen	Groundwater	Not at risk	Review	Good	Good	No			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
22_11, 22_12, 22_13, 22_14, 22_16, 22_3, 22_6, 22_7, 22_8											
22_10	IE_SW_G_023	Cahersiveen Islands	Groundwater	Not at risk	Not at risk	Good	Good	No			
22_12, 22_17, 22_2, 22_4, 22_5, 22_9, 23_8	IE_SW_G_026	Castlemaine	Groundwater	Review	Not at risk	Good	Good	No			
22_17, 22_18, 22_19, 22_4, 22_9, 23_10, 23_11, 23_8, 23_9	IE_SW_G_033	Dingle	Groundwater	Not at risk	Not at risk	Good	Good	No			
17_5, 17_6, 18_10, 18_11, 18_12, 18_14, 18_15, 18_19, 18_21, 18_23, 18_25, 18_27, 18_28, 18_4, 18_5, 18_7, 18_8, 18_9, 19_11, 19_13, 19_16, 19_18, 19_4, 19_5, 19_7, 19_8, 22_16, 22_8	IE_SW_G_037	Glenville	Groundwater	Review	At risk	Good	Good	No	Ag		
22_1, 22_11, 22_12, 22_13, 22_14, 22_15, 22_16, 22_2, 22_3, 22_6	IE_SW_G_048	Laune Muckross	Groundwater	Review	At risk	Good	Good	No	Ag		
22_12, 22_13	IE_SW_G_049	Industrial Facility (P0018-01)	Groundwater	At risk	At risk	Poor	Poor	No	Ind		
18_1, 18_10, 18_12, 18_13, 18_18, 18_2, 18_20, 18_21, 18_23, 18_26, 18_3, 18_4, 18_6, 18_7,	IE_SW_G_070	Rathmore West	Groundwater	Not at risk	Not at risk	Good	Good	No			

Subcatchment Code	Waterbody Code	Waterbody Name	Waterbody Type	Risk 10-15	Risk 13-18	Status 10-15	Status 13-18	High Ecological Status Objective Waterbody	Significant Pressures	Recommended Areas for Action Name	Recommended Areas for Action (reasons for selection)
18_9, 22_16, 22_9, 23_2, 23_4, 23_5, 24_14, 24_15											
18_12, 22_1, 22_12, 22_14, 22_15, 22_16, 22_17, 22_2, 22_5, 22_6, 22_9, 23_13, 23_4, 23_8	IE_SW_G_073	Scartaglin	Groundwater	Not at risk	Not at risk	Good	Good	No			
22_12, 22_14, 22_15, 22_3	IE_SW_G_095	Killorglin-Killarney Gravels	Groundwater	Not at risk	Not at risk	Good	Good	No			

Ag: Agriculture

DWW: Domestic Waste Water

For: Forestry

Hymo: Hydromorphology

Ind: Industry

M+Q: Mines and Quarries

Peat: Peat Drainage and Extraction

UR: Urban Run-off

UWW: Urban Waste Water

Note: Significant Pressures for *Review* water bodies have not been included as they will need to be confirmed as part of an Investigative Assessment.