

Island Demonstration Catchment

Water Quality and Assessment Cormac Mc Conigley

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Presentation Contents



- Introduction to Catchments
- The Island Catchment
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- Water Quality in Island Catchment
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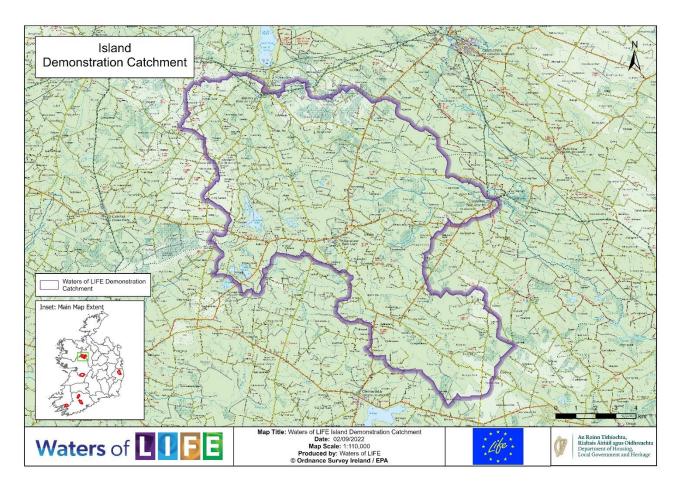
© Island River, Ballymoe Bridge - (Francis Deery, LAWPRO)





Catchments





A catchment is a specific area of the landscape that collects rainfall and allows it to flow through rivers, lakes and groundwater to reach the sea.

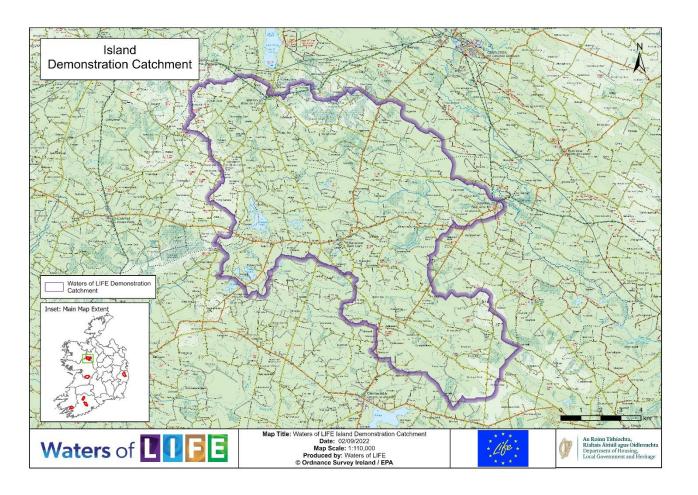
The health of water within a catchment reflects both the natural attributes and the human activities occurring within that specific area.





Island Demonstration Catchment





- Island sub-catchment is 136km².
- It consists of six river waterbodies:
 - Island_010
 - Island_020
 - Springfield_010
 - Springfield_020
 - Island_030
 - Pollynoon_010





Desk Study

Waters of

- Background
- Receptor information water quality data/ assessments -> conclusions on the issue affecting water quality
- Pressure EPA information, other assessments
- Pathways how pollutants move from land to the river



Island Catchment

Desktop Assessment

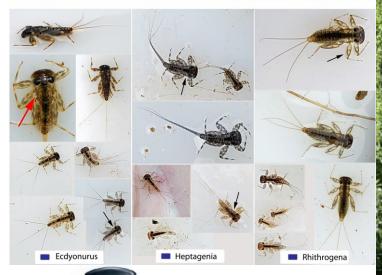






Measuring Water Quality

The Biological Indicators (INV)









Aquatic insects can be Indicators of Clean Rivers

Clean River



Mayfly nymphs have elongated bodies, large heads, well developed mouthparts and stout legs and three tails. Paired gills on the abdomen are the most characteristic feature to distinguish mayfly nymphs from other insects.



Stoneflies nymphs are strictly aquatic and occur under stones in every kind of unpolluted stream with an abundance of oxygen. They have six legs with hooked tips, antennae and two tails.



Caddisfly larvae have elongated bodies resembling caterpillars. They have hardened heads, a soft abdomen. Caddisfly larvae can be divided into two groups: cased caddisflies (the portable case-building type) and caseless caddisflies (the type that construct non-portable shelters). Cases come in large variety of shapes and structures. They are made of silk and wide range of materials (such as



Baetis is a genus of Mayfly and the most common and most abundant genus of invertebrate found in riffled streams in Ireland.

sand, bits of leaves and twigs and even the shells of small aquatic snails.



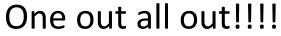
Blackfly larvae have elongated, wormlike bodies, with eyes and legs absent. The bodies are soft, naked, or covered with bristles or scales.



Aquatic snails some shade of brown and rarely with any distinctive markings. Freshwater snails are mostly herbivorous, feeding on water plants or more commonly on the film of algae, which covers most submerged objects.



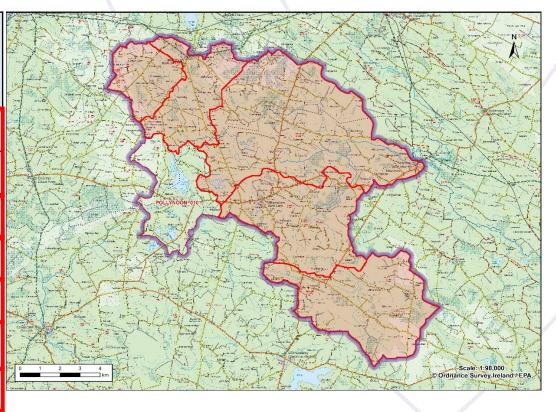
The large red Chironomus or bloodworm are a useful indicator of a stream that is at serious risk.



Water Quality in Island



WB name	High status obj.	Ecological Status				Duossiivo sotosomi
		2009	2012	2015	2018	Pressure category
Island_010	No	G	G	M	M	нүмо
						Agriculture
Island_020	No	G	G	G	G	N/A
Springfield_010	No	G	G	G	G	N/A
Springfield_020	No	G	Н	G	G	Agriculture
Island_030	Yes	н	Н	G	G	Urban Wastewater
Pollynoon_010	No	UN	UN	UN	UN	Agriculture







Immediate Next Steps

Waters of LIFE

- You will see us in the catchment
- Assessment of the catchment
 - Commence October 2022
 - Identify all issue that may affect water quality
- Plan further detailed assessment
 - Catchment walks









Thank you for listening

