# Improving water quality and co-benefits for the environment and society

Fran Igoe, 07/02/24













## EU Water Framework Directive & Ireland's River Basin Management Plan

"Water is not a commercial product like any other but, rather, a heritage which must be protected defended and treated as such."... the opening line of the EU Water Framework Directive.

Guiding principle for LAWPRO



#### LAWPRO (Local Authority Waters Programme)

- in support the River Basin Management in Ireland

#### Work

Work with Local Authorities in coordinating water quality activities across the regions

#### Encourage

Encourage public bodies, sectoral interests, NGO's and local communities, to share knowledge and work together to protect and manage our natural waters

#### Support

Support community engagement in helping to manage their local waters



#### Key focus areas

- Community engagement
- Catchment science
- Coordination/Support to WFD governance structures



## Key pressures impacting waters

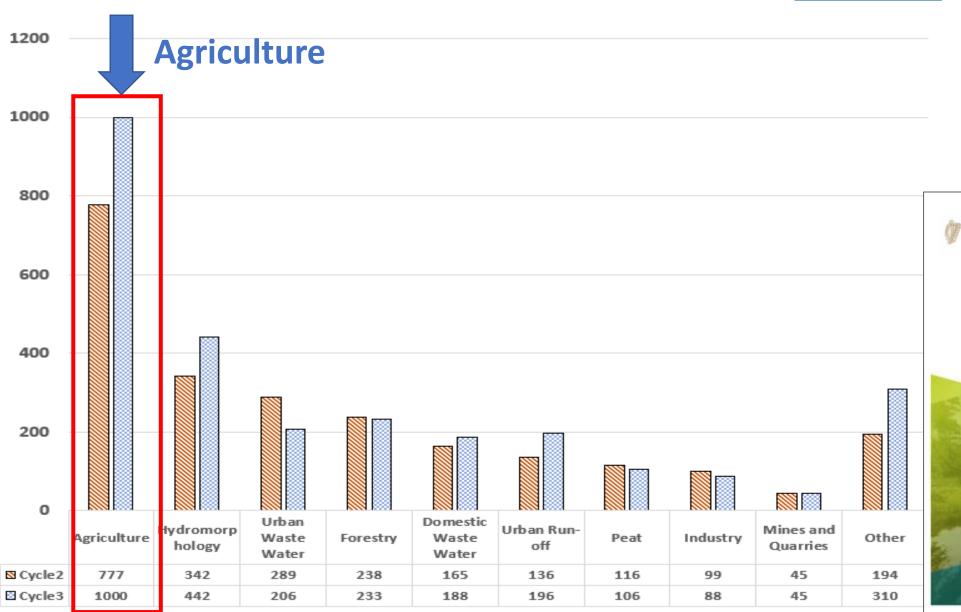


**Draft River Basin Management** 

Prepared by the Department of Likusing Local Coverament and Liestons

Plan for Ireland

2022 2027



### Regional Operational Committees

- 5 Regional Operational Committees
- Report to Regional Management Committees
- Meet Quarterly
- All Local Authorities and relevant implementing bodies
- Attendance range from 60 to 25+
- Networking, problem solving, raising issues





#### Water quality regulation representation

- Several agencies with responsibility to regulate or "control" specific activities potentially impacting on water quality.
- Represent the public good from a range of perspectives (drinking water quality, economic development, public health, fisheries and tourism and biodiversity).



## Representation in support of sectors potentially impacting on water quality

 Represent sectors or stakeholders carrying out activities that have the potential to impact on water quality.

 Supporting activities, plans or programmes that serve economic or public good but may impact on water quality (e.g., flood risk management, forestry and agriculture, aquaculture, navigation and water sports recreation, hydropower generation etc)



## Representation of sectors substantially reliant on the availability of clean water

 Represent sectors that require clean water to function.

 Advocates highlighting the importance of clean water as a public good.

 Public good ranges from the availability of sufficient clean raw drinking water, biodiversity, fisheries, tourism, aquaculture and inshore fisheries, bathing waters and local economic activities.

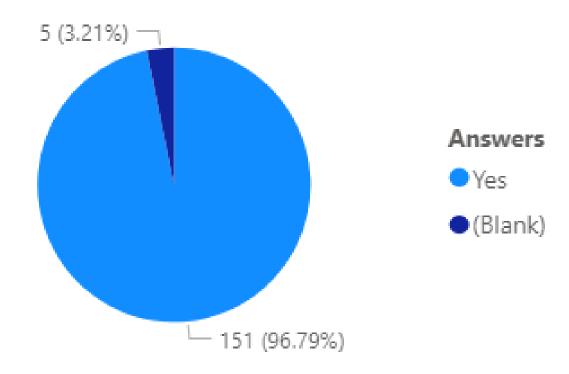


## Some of the issues raised by implementing bodies & to what WFD governance mechanism

- **Norovirus** → National Technical Implementation Group
- Marine issues → National Technical Implementation Group
- Land restructuring National Technical Implementation Group
- Sheep dip → National Technical Implementation Group
- **Movement of manures** → National Technical Implementation Group
- Ag issues impacts → Water Policy and Advisory Committee
- **SUDS/Nature-based** → DHLGH
- Greenway development→ Outdoor Recreation Infrastructure Scheme & DRCD
- Small private supplies data sharing between implementing bodies → Drinking Water Expert Group

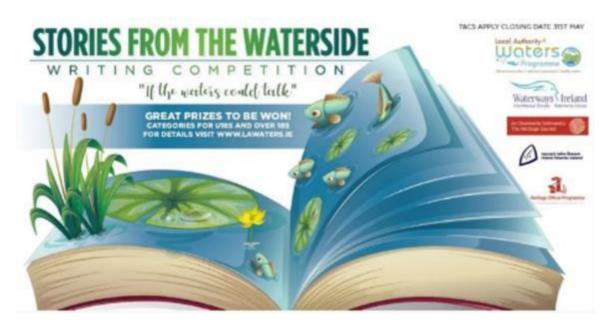
## The why?

#### Is water quality important to you?



#### Nobody selected "NO"

Results from an online poll of participants who took part in the Stories from the Stories from the Waterside competition in May 2020. A competition to engage local communities during the COVID-19 Lockdown.



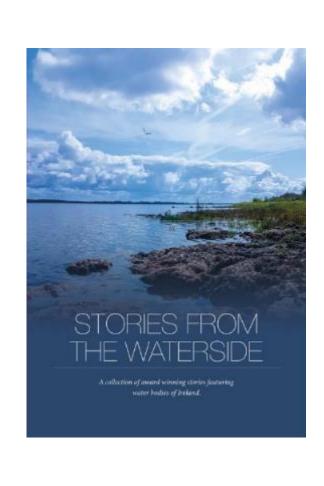






### Analysis of thematic areas within the stories (n=470)

<u>Water</u> typology	Activities or uses	Connections with water
River	Angling	Personal connections with water, place and nature
Lake	Commercial fishing	Emotional connection (e.g., feelings, do they emphasise its importance to them?)
Beach	Navigation, boating	A desire to improve water quality and/or protect nature
Coast or beach	Tradition (e.g. craft) Drinking	Mentions of biodiversity/ wildlife (name them)
Estuary	water	Folklore
Wetland	Light house	Local (not folklore) story about the waterbody References to personal feelings during Covid-19
	Health	Lockdown



### Joe Duffy unveils Inch River project

#### WexfordLocal.com



# Water dependent sectors

# Water dependent sectors

Marine Tourism

#### **Marine Tourism**

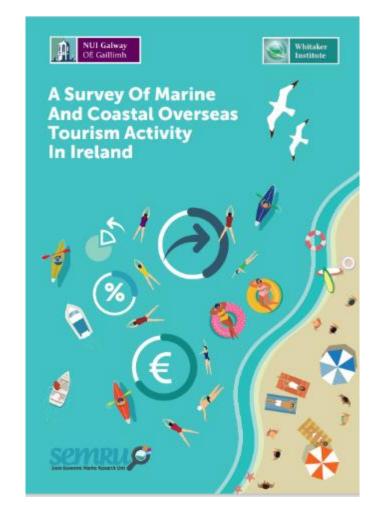
- 76% of overseas visitors to Ireland in 2018 were estimated to have visited a coastal area (6.06 million persons)
- 61% of them were estimated to have participated in a marine related activity (4.87 million persons).



Overseas
Tourism
participation in
marine related
activities

4,874,000 visitors

€650m



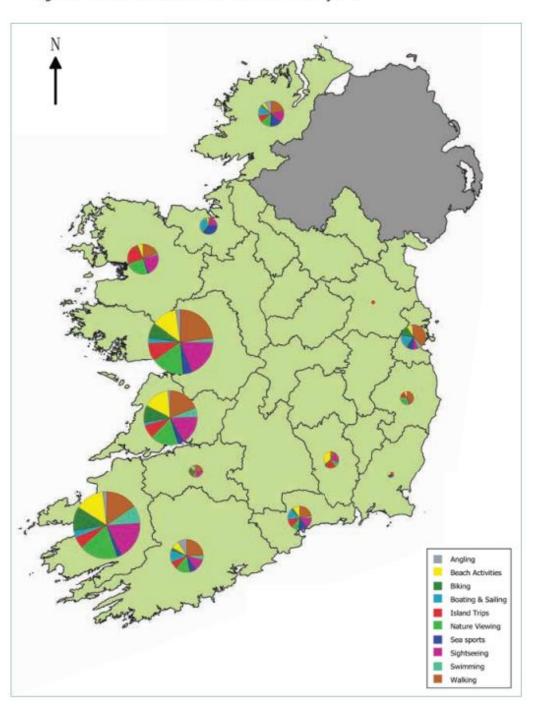
Survey by the Socio-Economic Marine Research Unit (SEMRU) within the Whitaker Institute of NUI Galway in 2018

Table 3. Coastal and marine tourism activity classification

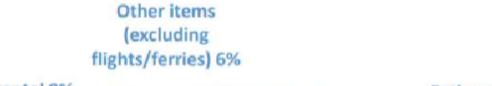
Marine Related Activity	Grouping 1	Grouping 2
Sea angling/fishing from boat	Sea Angling	Water Based Activity
Sea angling/fishing from shore		
Boating, cruising in the sea in power-boats, rigid inflatable boats or boats with in-board engine	Boating/Sailing	
Boating in the sea in rowing boats, kayaks, canoes, etc.		
Sailing in the sea		
Swimming in the sea	Swimming	
Surfing/sail boarding/kite surfing/paddle boarding/ surf kayaking	Sea sports	
Scuba diving/snorkelling		
Water skiing/jet skiing		
Other sea sports		
Whale/dolphin watching	Nature Viewing	
Bird and wildlife watching in coastal areas		Coastal Leisure Activity
Visiting nature reserves etc. in coastal areas		
Other trips to the islands	Island Trips	
Cycling along the coast	Biking	
Beach games/classes (e.g. yoga, boot camp)	Beach/Shore Activities	
Climbing, bouldering and coasteering at the coast		
Other trips to the beach or seaside		
Walking/running along the coast/beach/cliffs/etc.	Walking	
Any other sightseeing trip where the proximity to the sea was a necessity	Sightseeing	

The most popular water based activities were sea swimming, sea angling and recreational boating of different types.

Figure 6. Marine and coastal tourism activities at county level

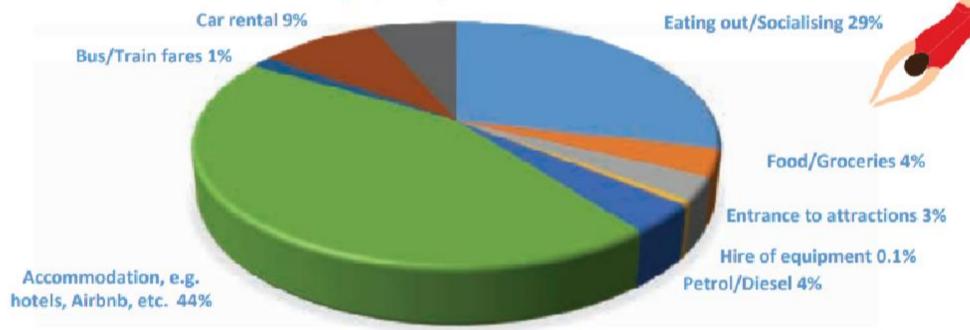


## Figure 8. Expenditure distribution by category of overseas tourists in Ireland



Michigan officer and

A Survey Of Marine And Coastal Overseas Tourism Activity In Ireland

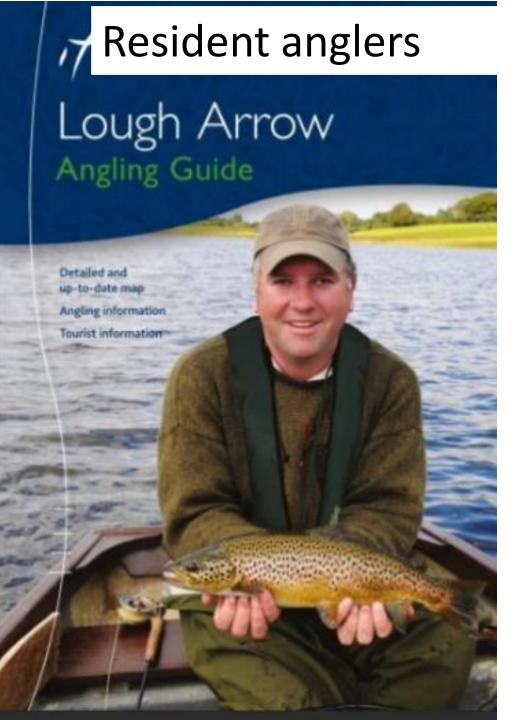






# Water dependent sectors

Angling



Socio-economic Study of Recreational Angling in Ireland

Economic and Social Research Institute (ESRI) and their 'Angler Panel' project, suggests that over 327,000 adults resident in Ireland like to fish and that Irish anglers alone spent an average of €630m a year on their fishing between the years 2018-2020.

### Tourist anglers



## Socio-economic Study of Recreational Angling in Ireland

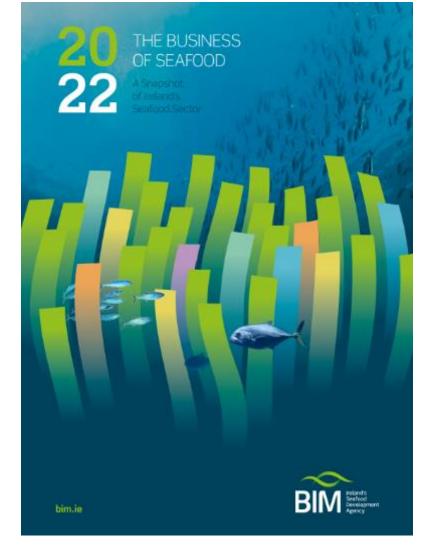
- Failte Ireland figures estimate that an average of 150,000 overseas visitors fished in Ireland each year from 2014 to 2018, contributing over €200m to the economy annually. Given the levels of domestic and overseas participation in angling in Ireland, the total economic contribution could be in excess of €1 billion supporting up to 13,000 Irish jobs.
- Angling tourism brings revenues to accommodation providers, service providers and other small Irish businesses in rural and peripheral regions of the island, where few other employment opportunities exist, and these impacts can be felt well outside of the peak tourism seasons.
- The importance of sustainable tourism to local and regional economies cannot be overstated. In many rural areas, it is the only employer of note outside of agriculture. Research has shown that angling tourists stay for longer, spend more money and repeat visit more often than the average tourist, often returning multiple times in the same year.

# Water dependent sectors

Irish seafood industry

### Inshore fisheries and aquaculture

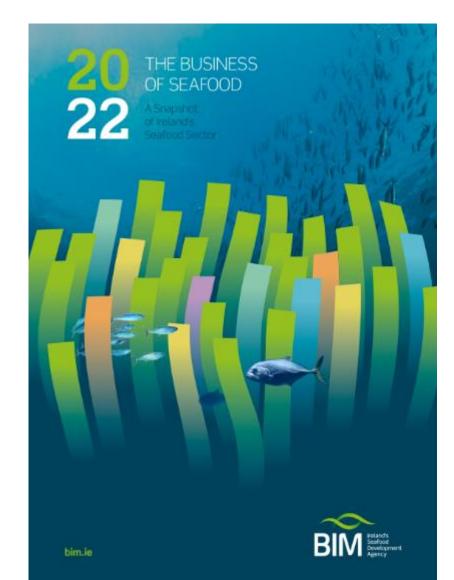
- Nationally For 2022
- Total estimated GDP value of Irish seafood industry €1.3 billion
- Value of Irish seafood was €703 million of which €196 million was from aquaculture and €507 million of wild caught fish landed into Irish ports, of which €336 was by Irish registered fishing vessels (the balance by non Irish vessels)



## Inshore fisheries and aquaculture

#### Nationally For 2022

- Seafood employment contributes on average nationally 6% of employment in coastal regions but can be as high as 14% in the most dependant region
- There are 1993 fishing vessels on the Irish register
  - 296 Aquaculture sites
  - 101 Seafood processors
- 15,375 total direct and indirect employment of which 8,218 were directly employed in the seafood sector, of which 2,774 were employed in fisheries and 2,019 employed in aquaculture
- Regarding inshore fishing over 80% of the Irish register are inshore boats



#### Feedback from BIM

The key parameter relating to Agri discharges is E.coli for the shellfish sector and the threat of downgrading of a shellfish classified production area. Classification is based on E.coli levels within shellfish samples.

On a broader front the discharges could be stressing the ecosystem by nutrient enrichment driving ecosystems towards eutrophication with associated spikes and troughs in oxygen (particularly in summer months).

Agricultural practices in close proximity to shellfish production area e.g., coastal streams can have a disproportionate impact on classified shellfish production areas. These coastal streams are in general not monitored as much as the main rivers.

Slurry management is an issue. Spreading before inclement weather is still an issue.

Aquaculture inspector BIM 06/02/24



# Water dependent sectors

Biodiversity

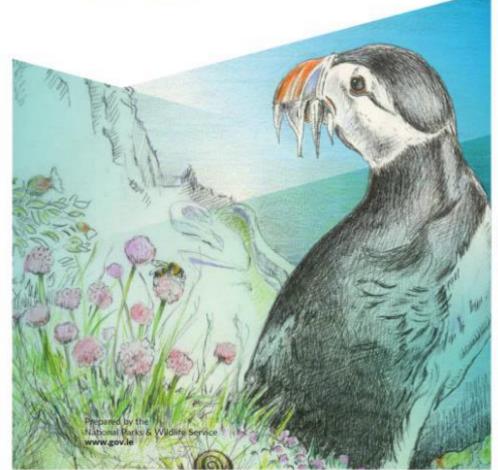


"Biodiversity underpins our everyday life, from the familiar habitats and species that we interact with day-to-day, to more intangible support such as the mental health benefits we get from being in contact with nature, or the cultural and linguistic traditions of our plants and landscapes. These direct and indirect benefits are known as ecosystem services."



2023-2030

Ireland's 4th National Biodiversity Action Plan



Ireland's 4th National Biodiversity Action Plan 2023 -

## Biodiversity



Even a small farm drain pond can support an incredible amount of biodiversity! Small pond in a drain. Co. Wexford 04/02/24

# Water dependent sectors

Drinking water



# Agriculture as a pressure on water quality

- Mandatory measures
- Compliance
- Typology (soils, prevailing weather)
- Supplementary measures
- ..need to plan for Climate Change, which is altering hydrological patterns (rainfall and pathways across landscapes)

..How do we do this being mindful of all the above when busy.



## When things go wrong they can go badly wrong!

- Manage risk
- Important that risk is understood.
- Risk is planned for
- Mitigations are put in place
- Objective to eliminate or at least manage risk
- Same goes for any other sector with potential to impact on water quality



Ballybunion, Co Kerry IMAGE: Alarmy Stock Photo

O SWIMMING

# Ballybunion beaches closed to bathers after 'elevated levels of bacteria' found in the water

The prohibition against swimming and bathing is in place at Ballybunion North and South beaches.

E 24 ~ 15.1k

Jun 28th 2023, 1:56 PM







TWO BEACHES IN Ballybunion, Co Kerry have been closed to swimmers after samples taken from the water were found to contain "elevated levels of bacteria", Kerry County Council has said.

Journal.ie

## Water Stewardship

 Understand that each waterbody and its constituent parts are important and of value to someone

 Good water stewards understand their own water use, catchment context and shared concerns in terms of water governance; water balance; water quality; important water-related areas (protected areas) and then engage in meaningful individual and collective actions that benefit people, the economy and nature.



# Each water body is important

- We need recognise that each waterbody is not just a statistic.
- They all have their own intrinsic value
- Individually and collectively (catchments)
- All agriculture related activities that may pose a risk to water quality should plan for this across the seasons, taking local characteristics and all potential weather conditions into account.



# We need to be clear why good water quality is important?













#### Conclusion

- Water quality has never had such a strong focus
- Range of industries support the local economy including agriculture
- Need to recognise that every waterbody and their constituent components are important
- It is important that we support people to plan and make the right decisions
- Water stewardship for the public good

