

River Basin Management Plans

Water Framework Directive Reporting Guidance – Marine Surface Waters

Technical Supporting Document

Operational Guidance Note on Alignment of Water Framework Directive
Classification and Objectives in Natura 2000 Protected Areas

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1. Introduction

The Birds Directive (2009/147/EC) (European Parliament and Council, 2009) and Habitats Directive (92/43/EEC) (European Council, 1992) together form the backbone of the EU's biodiversity policy. The protected areas designated under these directives form the Natura 2000 (N2K) network. These Directives aim to bring and maintain key species and habitats at Favourable conservation status. The goal of the Water Framework Directive (2000/60/EEC) (WFD) (European Parliament and Council, 2000) is to establish a framework for the protection of all surface waters and groundwater with the aim to reach good status in all waters as a rule by 2015. Both the N2K network and the WFD aim at ensuring healthy and diverse aquatic ecosystems, while at the same time ensuring a balance between water/nature protection and the sustainable use of natural resources. Indeed there are many synergies between these Directives as the implementation of measures under the WFD will generally benefit the objectives of the N2K network.

The UK WFD Technical Advisory Group (UKTAG) makes recommendations on standards for a wide range of ecological parameters required under the WFD to define the conditions of ecological quality from 'high' to 'bad' status. These standards are transposed into Northern Ireland legislation. Objectives are set for each water body through the river basin management planning process. For N2K protected areas, conservation status is assessed according to Common Standards Monitoring (CSM) guidance developed by the Joint Nature Conservation Committee (JNCC). In the CSM protocol, there are specified attribute targets for each feature (habitat or species); these targets correspond to 'Favourable' conservation status. The attribute targets also form part of the conservation objectives for each N2K site.

The UK WFD Technical Advisory Group (UKTAG) recommended that government agencies should investigate potential alignment of WFD and N2K standards and objectives. The use of a common set of standards would simplify management, reduce regulatory complexity and assist communication.

2. Aims

The aim of this paper is to:

- establish if any potential alignment exists between WFD quality elements and N2K conservation features,
- establish any alignment between WFD surface water status and N2K conservation status,
- outline a procedure to synchronize WFD and N2K objectives under Article 4 of the WFD

3. Register of protected areas

Article 6.1 of the WFD stipulates the establishment of a register of protected areas *"which have been designated as requiring special protection under specific Community legislation for the protection of their surface water and groundwater or for the conservation of habitats and species directly depending on water"*. The register must contain *"areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant Natura 2000 sites ..."*

Any N2K site with water-dependent (ground- and/or surface water) Annex I habitat types or Annex II species under the Habitats Directive, or with water-dependent bird species of Annex I or migratory bird species of the Birds Directive (where the presence of these species or habitats has been the reason for the designation of that protected area) has to be considered for the register of protected areas under WFD. Table 1 lists WFD transitional and coastal water bodies in Northern Ireland, and associated N2K Protected Areas. Special Protection Areas (SPA's) are N2K sites designated under the Birds Directive while Special Areas of Conservation (SAC's) are sites designated under the Habitats Directive. Twenty-two WFD water bodies are associated with N2K sites; 15 have SPA's while 12 have SACs (Table 1).

Table 1. WFD transitional and coastal water bodies and associated SPAs and SACs (HMWB = heavily modified water body).

WFD Water Body	Relevant SPA(s)	Relevant SAC(s)
Upper Foyle	-	River Foyle and Tributaries
Foyle Harbour and Faughan (HMWB)	Lough Foyle	-
Lough Foyle		Magilligan
Portstewart Bay	-	Skerries and Causeway
North Coast	Sheep Island	
Bann Estuary (HMWB)	-	Bann Estuary
Rathlin	Rathlin Island	Rathlin Island
North Channel	-	Red Bay
Maiden Islands	-	The Maidens
Larne Lough North (HMWB)	Larne Lough	-
Larne Lough South		-
Larne Lough Mid		Swan Island
Lagan Estuary (HMWB)	-	-
Belfast Harbour (HMWB)	Belfast Lough	-
Belfast Lough Inner		-
Belfast Lough Outer	Belfast Lough Open Water	-
Ards Peninsula	Outer Ards	-
Strangford Lough South	Strangford Lough	Strangford Lough
Strangford Lough North		
Quoile Pondage (HMWB)	-	-
Dundrum Bay Outer	Killough Harbour	Murlough
Dundrum Bay Inner	-	
Mourne Coast	Carlingford Lough	-
Carlingford Lough		-
Newry Estuary (HMWB)	-	-

4. Birds Directive (SPAs)

Special Protection Areas (SPAs) are strictly protected sites designated in accordance with Article 4 of the EC Birds Directive. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species. There are 16 classified SPAs in Northern Ireland and of these, 12 are coastal. Table 2 shows the selection features of each coastal SPA and their condition as of 2014. Condition assessment is based on each feature rather than the SPA as a whole and were obtained from NIEA. Marine-associated species were also identified according to JNCC guidance 'Defining SACs with marine components and SPAs with marine components' (JNCC, 2007). Apart from Belfast Lough, the remaining 11 coastal SPAs all had marine-associated bird species. Six sites had all feature(s) in Favourable condition; five sites had one or more feature in Unfavourable condition (Table 2). When only marine-associated species are

considered, nine sites had all features in Favourable condition and three had one or more feature in Unfavourable condition (Table 2).

Table 2. Features of each coastal SPA in Northern Ireland, and their condition assessment (marine-associated species are highlighted in bold).

SPA	Feature	Condition
Belfast Lough	Redshank (wintering)	Unfavourable
Belfast Lough Open Water	Great Crested Grebe (wintering)	Favourable
Carlingford Lough	Light-bellied Brent Goose (wintering)	Favourable
	Common Tern (breeding)	Unfavourable
	Sandwich Tern (breeding)	Unfavourable
Copeland Islands	Manx Shearwater (breeding)	Favourable
	Arctic Tern (breeding)	Favourable
Killough Harbour	Light-bellied Brent Goose (wintering)	Favourable
Larne Lough	Light-bellied Brent Goose (wintering)	Favourable
	Common Tern (breeding)	Favourable
	Roseate Tern (breeding)	Favourable
	Sandwich Tern (breeding)	Favourable
Lough Foyle	Bewick's Swan (wintering)	Unfavourable
	Whooper Swan (wintering)	Favourable
	Light-bellied Brent Goose (wintering)	Favourable
	Golden Plover (wintering)	Favourable
	Bar-tailed Godwit (wintering)	Favourable
	Waterbird assemblage (wintering)	Favourable
Outer Ards	Light-bellied Brent Goose (wintering)	Favourable
	Golden Plover (wintering)	Unfavourable
	Ringed Plover (wintering)	Unfavourable
	Ruddy Turnstone (wintering)	Favourable
	Arctic Tern (breeding)	Favourable
Rathlin Island	Peregrine (breeding)	Unfavourable
	Razorbill (breeding)	Favourable
	Common Guillemot (breeding)	Favourable
	Seabird assemblage (breeding)	Favourable
Sheep Island	Great Cormorant (breeding)	Unfavourable
Strangford Lough	Light-bellied Brent Goose (wintering)	Favourable
	Shell duck (wintering)	Favourable
	Knot (wintering)	Favourable
	Bar-tailed Godwit (wintering)	Favourable
	Redshank (wintering)	Favourable
	Waterbird assemblage (wintering)	Favourable
	Golden Plover (wintering)	Favourable
Swan Island	Common Tern (breeding)	Favourable
	Roseate Tern (breeding)	Favourable
	Sandwich Tern (breeding)	Favourable
	Light-bellied Brent Goose (wintering)	Favourable

As birds are not a monitoring quality element within the WFD, no potential alignment exists between Birds Directive and WFD monitoring and assessment. There is, however, the potential for the condition of WFD quality elements to affect the conservation status of a SPA indirectly, for example, the effect of seagrass condition (angiosperms) on grazing birds. Article 4.1 of the Birds Directive requires that "special conservation measures" are taken to conserve the habitat of species listed

in Annex I of the Directive, to ensure their survival and reproduction in their area of distribution, in particular the classification of SPAs. The JNCC has defined 'SPAs with a marine component' as those SPAs with qualifying species that are dependent on the marine environment for all or part of their lifecycle, where these species are found in association with intertidal or sub-tidal habitats; these marine habitats include: marine areas and sea inlets, tidal rivers, estuaries, mud flats, sand flats and lagoons, and salt marshes, salt pastures and salt steppes (JNCC, 2007).

5. Habitats Directive (SACs)

Special Areas of Conservation (SACs) are strictly protected sites designated under the EC Habitats Directive. Sites of Community Importance (SCIs) are sites that have been adopted by the European Commission, but not yet formally designated by the UK government. Article 3 of the Habitats Directive, requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). UKTAG (2003) guidance on the identification of Natura Protected Areas has categorised N2K habitats and species into those that are water dependent. Water dependent species include those that live in surface water, species with an aquatic life stage or which depend on water for feeding or breeding, and species that rely on habitats that are not aquatic, but which are water dependent. Water dependent habitats include those that consist of surface water or occur entirely within surface water, habitats that depend on frequent inundation or saturation by surface waters, and non-aquatic habitats that depend on the direct influence of surface water (Table 3).

Table 3. UKTAG ecological criteria for identifying Natura habitats and species that are dependent on water.

Natura 2000 species	Natura 2000 habitats
1A. Aquatic species living in surface waters (e.g. bottle-nose dolphin <i>Tursiops truncatus</i>).	2A. Habitats that consist of surface water or occur entirely within surface water (e.g. estuaries).
1B. Species with an aquatic life stage or which depend on water for feeding or breeding (e.g. otter <i>Lutra lutra</i>).	2B. Habitats that depend on frequent inundation or saturation by surface waters (e.g. intertidal mudflats and sandflats).
1C. Species that rely on non-aquatic habitats, but which are water dependent (habitats 2B and 2C).	2C. Non-aquatic habitats that depend on the direct influence of surface water (e.g. coastal dunes depend on aquatic processes for sediment supply).

JNCC (2007) has also provided a list of marine-associated Annex I and II habitats and species; these correspond to UKTAG (2003) categories 1A, 1B, 2A, and 2B. Based on UKTAG (2003) guidance, the habitats and species for which Northern Ireland marine and coastal SACs were designated include four marine water dependent species and 14 marine water dependent habitats (Table 4). It should be noted that *Salmo salar* is an Annex II species only in freshwaters throughout the EU, and therefore marine and estuarine habitats important to this species are excluded from selection.

Table 4. Habitats Directive Annex I marine water dependant habitats and Annex II marine water dependant species in Northern Ireland SACs (dependence categories follow those in Table 3).

Annex I Marine Water Dependant Habitats	Dependence	Annex II Marine Water Dependant Species	Dependence
Sandbanks which are slightly covered by seawater all the time	2A	<i>Halichoerus grypus</i> (Grey seal)	1A
Coastal lagoons	2A	<i>Phoca vitulina</i> (Harbour seal)	1A
Large shallow inlets and bays	2A	<i>Phocoena phocoena</i> (Harbour porpoise)	1A
Reefs	2A	<i>Lutra lutra</i> (Otter)	1B
Submerged or partially submerged sea caves	2A		
Mudflats and sandflats not covered by seawater at low tide	2B		
Annual vegetation of drift lines	2B		
<i>Salicornia</i> and other annuals colonising mud and sand	2B		
Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>)	2B		
Perennial vegetation of stony banks	2C		
Vegetated sea cliffs of the Atlantic and Baltic coasts	2C		
Embryonic shifting dunes	2C		
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	2C		
Fixed coastal dunes with herbaceous vegetation (grey dunes)	2C		
Atlantic decalcified fixed dunes (Calluno-Ulicetea)	2C		
Dunes with <i>Salix repens</i> ssp. <i>Argentea</i> (<i>Salicion arenariae</i>)	2C		
Humid dune slacks	2C		

6. Alignment between SAC features and WFD tools/quality elements

Condition assessment monitoring of SACs is undertaken through the establishment of conservation objectives. Marine Annex I habitats are typically complex and broadly defined features and to effectively monitor such complex habitats, these have been divided into sub-features. Each sub-feature has a number of attributes and targets against which it is assessed. Potential alignment between Habitats Directive and WFD monitoring was investigated by matching WFD monitoring tools with the appropriate marine water dependant features or sub-features and attributes (Table 5).

Table 5. Alignment between WFD monitoring tools and Annex I habitat features, sub-features, and attributes.

Feature	Sub-feature	Attribute	WFD Monitoring Tool
Sandbanks which are slightly covered by seawater all the time	Subtidal sand and gravel communities	Extent	Benthic Invertebrate Fauna: Infaunal Quality Index
		Distribution and extent Species composition	
	Subtidal fine sand and mud communities	Distribution and extent	Benthic Invertebrate Fauna: Infaunal Quality Index
		Species composition	
Reefs	Subtidal rock and boulder communities	Distribution and extent	Macroalgae: intertidal rocky shore macroalgal index
		Species composition	
	Subtidal rocky reef communities	Distribution and extent	
		Species composition	
	Intertidal rock and boulder communities	Distribution and extent	
		Species composition	
	<i>Modiolus</i> beds	Distribution	
		Extent	
		Structure	
Species index			
Mudflats and sandflats not covered by seawater at low tide	Intertidal sand and gravel communities	Extent	Macroalgae: opportunistic macroalgal blooming tool
		Distribution and extent	
		Species composition	
	Intertidal fine sand and mud communities	Distribution and extent	Angiosperms: intertidal seagrass tool
		Species composition	
	<i>Zostera</i> beds	Distribution	
		Extent	
		Biomass	
		Density	

Three WFD monitoring tools have potential alignment with three habitat features, sub-features, or attributes (Table 5). No WFD tools were found to correspond with Annex II marine water dependent species. Alignment between WFD monitoring tools and marine water-dependant habitats was investigated by comparing the conservation status of each sub-feature with the appropriate WFD tool (Table 6). Conservation feature statuses were obtained from NIEA and the JNCC 3rd UK Habitats Directive Reporting 2013 (<http://jncc.defra.gov.uk/page-6387>). WFD quality element classifications were based on 2014 assessments.

Table 6. Alignment of conservation status of HD features and WFD quality elements (IQI: Infaunal Quality Index, MBT: macroalgal blooming tool, RSL: rocky shore macroalgal index).

Feature	SAC	Conservation status	WFD water body	WFD Tool Classification
Sandbanks which are slightly covered by seawater all the time	Rathlin Island	Unfavourable	Rathlin	High (IQI)
	Skerries & Causeway	Unfavourable	North Coast	Good (IQI)
			Portstewart Bay	Good (IQI)
	Red Bay	Favourable	North Channel	Good (IQI)
	The Maidens	Favourable	Maidens	-
	Murlough	Favourable	Dundrum Bay Inner	-
Dundrum Bay Outer			High (IQI)	
Reefs (Intertidal rock and boulder communities)	Rathlin Island	Favourable	Rathlin	High (RSL)
	Skerries & Causeway	Favourable	North Coast	High (RSL)
			Portstewart Bay	High (RSL)
	The Maidens	Favourable	Maidens	High (RSL)
	Strangford Lough	Favourable	Strangford Lough North	Good (RSL)
			Strangford Lough South	High (RSL)
Mudflats and sandflats not covered by seawater at low tide	Strangford Lough	Favourable	Strangford Lough North	High (Seagrass)
				Good (MBT)
			Strangford Lough South	High (MBT)
	Murlough	Unfavourable	Dundrum Bay Inner	Poor (Seagrass)
				Moderate (MBT)
			Dundrum Bay Outer	-

A relatively good level of agreement was achieved between intertidal rock and boulder communities (reefs) and the intertidal rocky shore macroalgal index (RSL); where assessed, intertidal conservation status of 'Favourable' corresponded with 'Good' or 'High' RSL classifications. Good agreement was also observed between 'mudflats and sandflats not covered by seawater at low tide' and both the intertidal seagrass tool and opportunistic macroalgal blooming tool. These results, however, are not surprising since WFD seagrass monitoring data is also used to inform conservation status assessments. The benthic infaunal quality index (IQI) showed alignment with 'sandbanks which are slightly covered by seawater all the time' for the North Channel and Dundrum Bay Outer water bodies; both water bodies were classified as 'good' to 'high' with a corresponding 'Favourable' conservation status.

The 'Good' to 'High' IQI classification of three remaining water bodies (Rathlin, North Coast, and Portstewart Bay), however, did not agree with the corresponding SAC assessment. Rathlin Island and Skerries and Causeway SACs were assessed at

Unfavourable status due to epifaunal disturbance by mobile fishing gear. These effects are unlikely to be detected by the infaunal community.

Although there appears to be good alignment between certain marine water dependent habitats and WFD assessment tools, not all habitat feature attributes are covered by the WFD (Table 5). Furthermore, where potential overlap exists, the WFD monitoring tool typically covers only one component of the attribute; the intertidal rocky shore macroalgal index, for example, does not include intertidal fauna.

7. Alignment between SAC conservation status and WFD water body status

In addition to individual WFD tools; potential correspondence between overall WFD water body surface water status and Habitats Directive conservation status were also investigated. WFD classifications were based on 2014 assessments while conservation status was taken from the JNCC 3rd UK Habitats Directive Reporting 2013 (<http://jncc.defra.gov.uk/page-6387>) and was based only on marine water-dependant habitats and species. ‘Unfavourable’ conservation status was assigned to those sites where one or more marine water dependant feature was considered ‘Unfavourable’. If a site was considered ‘Unfavourable’ (due to a non marine water dependent feature) but all marine water dependant features were in ‘Favourable’ condition, then the site was classified as ‘Favourable’.

Table 7. Overall WFD water body classifications and Habitats Directive conservation statuses (HMWB – Heavily Modified Water Body, EP - Ecological Potential).

WFD Water Body	WFD 2014 Classification	SAC	N2K Status
Upper Foyle	Moderate	River Foyle and Tributaries	Favourable
Lough Foyle	Good	Magilligan	Unfavourable
Portstewart Bay	Good		
North Coast	Good	Skerries and Causeway	Unfavourable
		North Antrim Coast	Unfavourable
Bann Estuary (HMWB)	Poor (EP)	Bann Estuary	Unfavourable
Rathlin	Good	Rathlin Island	Unfavourable
North Channel	Good	Red Bay	Favourable
Maiden Islands	High	The Maidens	Favourable
Strangford Lough South	Moderate	Strangford Lough	Unfavourable
Strangford Lough North	Moderate		
Dundrum Bay Outer	Good	Murlough	Unfavourable
Dundrum Bay Inner	Poor		

Seven WFD water bodies were classified at 'good' or better status, however, only two (North Channel and Maiden Islands) had a corresponding conservation status of 'Favourable' (based on marine water dependent features). Four water bodies (Bann Estuary, Strangford Lough South, Strangford Lough North, and Dundrum Bay Inner) were classified as 'Moderate' or worse with a corresponding conservation status of 'Unfavourable'. Reasons for non agreement may be due to differences in the nature and scope of assessment parameters and techniques. Moreover, several of the conservation features that are 'Unfavourable' are non-aquatic habitats (category 2C).

Both the WFD and N2K aim to protect aquatic ecosystems, however, while N2K focuses on the protection of certain species and habitats, the WFD utilises biological elements as indicators of ecological status (together with physico-chemical and hydromorphological characteristics). Ecological status for water bodies under the WFD therefore should be interpreted separately from assessments for N2K protected areas.

8. Alignment between WFD environmental objectives and N2K conservation objectives

Article 4 (1a) of the WFD requires that Member States implement the necessary measures to prevent the deterioration of the status of water bodies and to restore all surface waters to good ecological and chemical status (good ecological and chemical potential for artificial and heavily modified water bodies) by 2015. Member states are also required to implement measures to reduce pollution from priority substances and ceasing and phasing out emissions, discharges and losses of priority hazardous substances. These objectives are achieved through the implementation of programmes of measures (POM's) within River Basin Management Plans (RBMBs).

Article 4 (1c) of the WFD also requires that for protected areas, '*Member States shall achieve compliance with any standards and objectives ... specified in the Community legislation under which the individual protected areas have been established*'. Furthermore, Article 4 (2) requires that where more than one objective is set, the most stringent will apply. The overarching aim for N2K protected areas is to protect, maintain or restore at Favourable conservation status, selected species and habitats of Community importance. Conservation status of species and habitats is assessed

through the establishment of conservation objectives for each N2K area. The conservation objectives contain a list of attributes and targets for each feature against which its condition is assessed. The ultimate objective of N2K protected areas is to achieve Favourable conservation status (FCS) of the features for which it has been designated.

Determining whether protected areas are meeting the requirements of Article 4 (1c) is independent of the WFD classification of water bodies. Water bodies may meet the requirements of Article 4 (1a & 1b) i.e. good status/potential, but the protected area may fail to meet the requirements of Article 4 (1c) i.e. Favourable conservation status. UKTAG (2011) guidance has established a set of criteria for determining whether N2K protected areas (and their features) are meeting the requirements of Article 4 (1c) of the WFD. Water dependent features shall be judged as meeting their Article 4 (1c) objectives if:

- (i) that feature was reported to the JNCC as meeting the relevant conservation objectives
- (ii) the environmental conditions necessary to achieve conservation objectives have been established and are in place or
- (iii) the feature was assessed as not meeting these criteria but this was due a failure to achieve a target for an attribute that is clearly not water related.

Where a protected area is designated for more than one water-dependent feature, that Protected Area shall be reported as meeting the requirements of Article 4 (1c) when:

- (i) all the water dependent features are assessed as meeting the relevant conservation objectives or
- (ii) the environmental conditions necessary to achieve conservation objectives have been established and are in place or
- (iii) any feature was assessed as not meeting these criteria but this was due a failure to achieve a target for an attribute that is clearly not water related.

In establishing standards and objectives under Article 4 of the WFD, individual WFD water body status and objectives were compared with the conservation status of the appropriate SPA/SAC protected area. Six SPAs had feature(s) at Unfavourable conservation status (Table 8). The features of two SPAs (Lough Foyle, and Rathlin Island), however, were not marine water associated features. Reasons for the failure of the remaining features were not considered marine water related, with the exception of the redshank in Belfast Lough, which uses the intertidal area for

foraging and feeding (Table 8). Additional objectives and programmes of measures under WFD River Basin Management Plans are not required.

Table 8. WFD water body status and objectives and SPA protected area status.

WFD Water Body	WFD 2014 status	WFD 2021 Objective	SPA	SPA Status	Reason	Water Related?
Foyle Harbour and Faughan (HMWB)	Moderate (EP)	Good (EP)	Lough Foyle	Unfavourable	Bewick's Swan	No - Not a marine water associated feature.
Lough Foyle	Good	Good				
North Coast	Good	Good	Sheep Island	Unfavourable	Great Cormorant	No - Breeding population has recently split with approximately 50% of birds now using alternative site Portrush (Skerries) - this may represent the a return to earlier breeding distribution but may also be a result of site specific factors
Rathlin	Good	High	Rathlin Island	Unfavourable	Peregrine	No - Not a marine water associated feature.
Larne Lough North (HMWB)	Good (EP)	Good (EP)	Larne Lough	Favourable		
Larne Lough South	Moderate	Good				
Larne Lough Mid	Good	Good				
			Swan Island	Favourable		
Belfast Harbour (HWMB)	Bad (EP)	Good (EP)	Belfast Lough	Unfavourable	Redshank	Yes- Redshank uses intertidal area for foraging / feeding
Belfast Lough Inner	Moderate	Good	Belfast Lough Open Water	Favourable		
Belfast Lough Outer	Good	Good	Outer Ards	Unfavourable	Ringed Plover	No - Known changes in wintering distribution likely to be reason behind unfavourable status
Ards Peninsula	Good	Good	Copeland Islands	Favourable		
Strangford Lough South	Moderate	Good	Strangford Lough	Favourable		
Strangford Lough North	Moderate	Good				
Quoile Pondage (HMWB)	Moderate (EP)	Moderate (EP)				
Dundrum Bay Outer	Good	Good	Killough Harbour	Favourable		
Mourne Coast	Good	Good	Carlingford Lough	Unfavourable	Common Tern Sandwich Tern	No - Appears to be due to combination of site disturbance and predation both relating to presence of large gulls (Greater Black-backed Gull especially) on island during breeding season. Combination of gull scaring and nest removal appears to be producing positive results
Carlingford Lough	Moderate	Good				

Seven SACs had feature(s) at Unfavourable conservation status (Table 9). Reasons for the failure of most features, however, were not considered marine water related.

Four features, coastal lagoons, intertidal mudflats and sandflats, Atlantic salt meadows, and *Salicornia* colonizing mud and sand were considered Unfavourable due to water related issues. These included increased sedimentation and the presence of non-native species in The Dorn lagoon (Strangford Lough); the effects of eutrophication on *Zostera* in inner Dundrum Bay, and the impact of the invasive plant *Spartina anglica* on salt marsh habitats in Strangford Lough and Murlough SACs (Table 9)

Eutrophication has been identified as a problem in Dundrum Bay Inner (as indicated by the opportunistic macroalgal blooming tool), the WFD objective of 'Good' status for this water body should contribute toward achieving Favourable conservation status. Sedimentation and the presence of non-native species in the Dorn lagoon are issues that require further investigative monitoring to establish the nature, extent and cause of the problem. However, saline lagoons do not form part of the WFD monitoring programme. The invasive plant species *Spartina anglica* has invaded coastal sites at Strangford Lough, Carlingford Lough, Murlough Bay, Roe Estuary and Lough Foyle. A programme for the control and eradication of this species has been established through the *Spartina* Control Group, led by NIEA.

Table 9. WFD water body status and objectives and SAC protected area status.

WFD Water Body	WFD 2014 status	WFD 2021 Objective	SAC	SAC status	Reason	Water related?
Upper Foyle	Moderate	Good	River Foyle and Tributaries	Favourable		
Lough Foyle	Good	Good	Magilligan	Unfavourable	Grey dunes	No - Invasive species, under-grazing
Portstewart Bay	Good	Good			Humid dune slacks	No - Lack of remedial management, under-grazing
North Coast	Good	Good	Skerries and Causeway	Unfavourable	White dunes	No - Invasive species, recreation / disturbance
			North Antrim Coast	Unfavourable	Subtidal sandbanks	No - Mobile fishing gear has damaged <i>Atrina fragilis</i> communities.
Bann Estuary (HMWB)	Poor (EP)	Good (EP)	Bann Estuary	Unfavourable	Grey dunes	No - Under-grazing
Rathlin	Good	High	Rathlin Island	Unfavourable	Embryonic shifting dunes	No - Recreation / disturbance
					White dunes	No - Invasive species
North Channel	Good	Good	Red Bay	Favourable		
Maiden Islands	High	High	The Maidens	Favourable		
Strangford Lough South	Moderate	Good	Strangford Lough	Unfavourable	Reefs	No - Mobile fishing gear has damaged <i>Modiolus</i> reef.
Strangford Lough North	Moderate	Good			Coastal lagoons	Yes - Increased siltation and non-native species.
Strangford Lough North	Moderate	Good	Strangford Lough	Unfavourable	Large shallow inlets and bays	No - The subtidal main body of Strangford Lough is unfavourable based on the condition of the <i>Modiolus</i> reef.
					Atlantic salt meadows	Yes – Invasive species (<i>Spartina</i>)
Dundrum Bay Outer	Good	Good	Murlough	Unfavourable	<i>Salicornia</i> colonizing mud and sand	Yes – Invasive species (<i>Spartina</i>)
					Perennial vegetation of stony banks	No - Under-grazing
Dundrum Bay Inner	Poor	Good	Murlough	Unfavourable	Intertidal mudflats and sandflats	Yes - Loss of <i>Zostera</i> , smothering from opportunistic green algae, and non-native species.
Dundrum Bay Inner	Poor	Good	Murlough	Unfavourable	Atlantic salt meadows	Yes – Invasive species (<i>Spartina</i>)
					Grey dunes	No - Invasive species, under-grazing
					Atlantic decalcified fixed dunes	No - Invasive species, under-grazing
Dundrum Bay Inner	Poor	Good	Murlough	Unfavourable	White dunes	No - Invasive species
					Dunes with <i>Salix repens</i> ssp.	No - Invasive species, under-grazing

9. Summary

- Northern Ireland has 12 coastal and marine SPA's and 10 SACs.
- No potential alignment exists between WFD monitoring tools and SPA assessments.
- Three WFD monitoring tools have potential alignment with three SAC Annex I habitat features, sub-features, or attributes.
- No WFD tools could be applied to SAC Annex II marine water dependent species.
- Relatively good alignment exists between certain marine water dependent habitats and WFD assessment tools, however, not all habitat feature attributes are covered by the WFD tools.
- Agreement between overall WFD water body status and SAC conservation status was less than 50%; poor agreement is probably due to differences in the nature and scope of assessment parameters and techniques as well as the inclusion of non-aquatic habitats as water-dependent SAC features.
- Both the WFD and N2K aim to protect aquatic ecosystems; N2K focuses on the protection of certain species and habitats, the WFD utilises biological elements as indicators of ecological status. Ecological status for water bodies under the WFD should be interpreted separately from assessments for N2K protected areas.
- The WFD requires that Member States achieve compliance with the standards and objectives for which the protected areas have been established and that where more than one objective is set, the most stringent will apply. The ultimate objective of N2K protected areas is to achieve Favourable conservation status (FCS) of the features for which it has been designated.
- Six SPAs had feature(s) at Unfavourable conservation status; the features of three SPAs were not marine water associated features and reasons for the failure of the remaining features were not considered marine water related. Additional objectives and of measures under WFD are not required.
- Seven SACs had feature(s) at Unfavourable conservation status. Four features were considered Unfavourable due to water related issues. These include eutrophication, sedimentation, and invasive non-native species. Eutrophication is identified as an issue under the WFD and the objective of

'Good' status should contribute toward achieving Favourable conservation status. Saline lagoons, a feature for which sedimentation and the presence of non-native species are issues, require investigative monitoring; however, saline lagoons are not monitored under the WFD. The invasive plant, *Spartina anglica* is present at several coastal sites in Northern Ireland and a programme for its control and eradication has been established through the Spartina Control Group, led by NIEA.

10. References

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