



INTERREG VA IMPACT EVALUATION

PRIORITY 2 – ENVIRONMENT – KEY FINDINGS PAPER



Special EU Programmes Body
Foras Um Chláir Speisialta An AE
Boord O Owre Ocht UE Projecks



Cogent Management Consulting LLP

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INTERREG VA IMPACT EVALUATION

PRIORITY 2 - ENVIRONMENT

CONTENTS

	Page
1. INTRODUCTION AND BACKGROUND	1
1.1 Introduction	1
1.2 Background to the INTERREG VA Programme.....	1
1.3 Priority Axis 2: Environment & its Objectives.....	2
1.4 The Evaluation – SEUPB’s Requirements	10
2. OVERVIEW OF PROGRAMME ACTIVITY & SUPPORTED PROJECTS	12
2.1 Introduction	12
2.2 Overview of Approved Projects	12
3. KEY EMERGING FINDINGS	16
3.1 Introduction	16
3.2 Priority Level Activity & Project Financing	16
3.3 Reasonableness of targets established	18
3.4 The extent to which the Specific Objectives & Result Indicators have been achieved.....	18
3.5 Effectiveness and added value of cross-border collaboration	23
3.6 New ways of working/partnerships/relationships created	23
3.7 Key areas of best practice and learning identified.....	23
3.8 Level of mainstreaming that has occurred.....	24
3.9 Barriers to cross-border cooperation	24
3.10 Contribution of the Priority Axis to Policy Objectives	25
3.11 Recommendations	25

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List of Abbreviations

Abbreviation	Definition
ACT	Argyll and the Isles Coast and Countryside Trust
ADI	Asset Discharge Improvements
AFBI	Agri-Food and Biosciences Institute
ABCBC	Armagh City, Banbridge & Craigavon Borough Council
AMU	Asset Management Unit
ANSWER	Agricultural Need for Sustainable Willow Effluent Recycling
AUV	Autonomous Underwater Vehicles
AWQMS	Automatic Water Quality Monitoring Station
BC	Butterfly Conservation
BGS	British Geological Survey
BOD	Biochemical Oxygen Demand
BWD	Bathing Water Directive
BWI	BirdWatch Ireland
CABB	Conservation Across Borders for Biodiversity
CaBA	Catchment Based Approach
CAFRE	College of Agriculture, Food and Rural Enterprise
CANN	Collaborative Action for the Natura Network
CAP	Conservation Action Plan
CCGHT	Causeway Coast and Glens Heritage Trust
CENIT	CENtral NITrogen
CEO	Chief Executive Officer
CIWEM	Chartered Institution of Water and Environmental Management
COMPASS	Collaborative Oceanography and Monitoring for Protected Areas and Species
CPMR	Capital Programme Monitoring and Reporting System
DAERA	Department of Agriculture, Environment and Rural Affairs
DAFM	Department of Agriculture, Food and Marine
DAP	Drainage Area Plan
DCC	Donegal County Council
DEFRA	Department of Environment, Food and Rural Affairs
DfI	Department for Infrastructure
DWPAs	Drinking Water Protected Areas
EBR	East Border Region Ltd.
EC	European Commission
ECNI	Equality Commission for Northern Ireland
EIAs	Environmental Impact Assessments
EMODnet	European Marine Observation and Data Network
ENGOS	European Non-Governmental Organisation
EPA	Environmental Protection Agency
EU	European Union
EUNIS	European Nature Information System
EVA	Earned Value Analysis
FAEB	Fisheries and Aquatic Ecosystems Branch
GAW	Global Atmosphere Watch
GDPR	General Data Protection Regulation
GES	Good Environmental Status
GET	Golden Eagle Trust
GIS	Geographic Information System
GLAS	Green Low-Carbon Agri-Environment Scheme
GMIT	Galway-Mayo Institute of Technology
GSI	Geological Survey of Ireland
HSO	Higher Scientific Officer
HNV	High Nature Value
IE	Intestinal Enterococci
IFI	Inland Fisheries Ireland
IUCN	International Union for Conservation of Nature
IW	Irish Water
KNIB	Keep Northern Ireland Beautiful
LA	Loughs Agency
LAWCO	Local Authority Water and Communities Office
LoO	Letter of Offer
MarPAMM	Marine Protected Areas Management and Monitoring

Abbreviation	Definition
MCC	Monaghan County Council
MFTF	Moors for the Future
MI	Marine Institute
MMP	Marine Management Plans
MoU	Memorandum of Understanding
MPAs	Marine Protected Areas
MSFD	Marine Strategy Framework Directive
MSS	Marine Scotland Science
MST	Microbial Source Tracking
NGO	Non-Governmental Organisation
NI	Northern Ireland
NIEA	Northern Ireland Environment Agency
NIW	Northern Ireland Water
NMDDC	Newry, Mourne & Down District Council
NPWS	National Parks and Wildlife Service
OPEX	Operational Expenditure
PAG	Project Advisory Group
PAM	Passive Acoustic Monitoring
PE	Population Equivalent
PM	Project Manager
PMO	Programme Management Office
PPE	Personal Protective Equipment
PxP	Project Execution Plan
QUB	Queen's University Belfast
RBAPS	Results Based Agri-environment Pilots
RBMPs	River Basin Management Plans
R&D	Research and Development
RDPs	Rural Development Programmes
RHAT	River Hydromorphology Assessment Technique
ROI	Republic of Ireland
RSPB	Royal Society for the Protection of Birds
SACs	Special Areas of Conservation
SAMS	Scottish Association for Marine Science
SCAMP	Sustainable Catchment Area Plan
SDS	Sustainable Development Strategy
SEPA	Scottish Environmental Protection Agency
SEUPB	Special EU Programmes Body
Sligo IT	Institute of Technology Sligo
SMART	Specific, Measurable, Achievable, Realistic, Time-Bound
SMILE	Sustainable Mariculture in Northern Irish Sea Ecosystems
SNH	Scottish Natural Heritage
SPAs	Special Protected Areas
SSSI	Site of Special Scientific Interest
STMB	Scientific and Technical Management Board
StT	Source to Tap
SWAT	Soil and Water Assessment Tool
SWELL	Shared Waters Enhancement and Loughs Agency
TRT	The Rivers Trust
UAV	Unmanned Aerial Vehicle
UCC	University College Cork
UCD	University College Dublin
UoG	University of Glasgow
UU	Ulster University
UW	Ulster Wildlife
UKWIR	UK Water Industry Research
UWWTD	Urban Wastewater Treatment Directive
WFD	Water Framework Directive
WTWs	Water Treatment Works
WWTWs	Wastewater Treatment Works

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

The Special EU Programmes Body (SEUPB) has commissioned Cogent Management Consulting LLP (Cogent) to carry out an impact evaluation of INTERREG VA Programme¹ Investment Priority 2: Environment. This report provides a summary of the key findings emerging from the first formative evaluation of the Investment Priority. More substantive analysis and commentary can be found in the main Evaluation report and accompanying appendices.

1.2 Background to the INTERREG VA Programme

Launched in January 2016, the INTERREG VA Programme is one of over 60 funding programmes across the EU that have been specifically designed to address problems that arise from the existence of borders. Borders can reduce economic development, hamper the efficient management of the environment, obstruct travel and hinder the delivery of essential health and social care services. The INTERREG VA Programme, therefore, aims to promote greater levels of economic, social and territorial cohesion to create a more prosperous and sustainable cross-border region.

The INTERREG VA Programme has a total value of €283m, which is funded as follows:

- 85% (€240m) via the European Regional Development Fund (ERDF), which is within the European Structural and Investment Funds (ESIF).
- 15% (€43m) via match funding from non-EU sources e.g. national, regional, local government, a project's own resources or private contributions. Contributions in-kind may be used as match-funding. NB: arrangements for match-funding may vary between priority axes of the Programme.

Figure 1.1: INTERREG VA Programme Priority Axes²



¹ For Northern Ireland, Ireland and Western Scotland

² Source: Citizens' Summary: INTERREG VA Programme (2014-2020).

As depicted above, the INTERREG VA Programme has four key priority axes, which were selected to address identified weaknesses in the programme region’s economy, as set out in the Cooperation Programme for the INTERREG VA Programme 2014-2020³. The Cooperation Programme states that the priority axes are congruent with ‘Europe 2020 - A Strategy for Smart, Sustainable and Inclusive Growth’ and the priority areas identified for European Territorial Cooperation within the EU Commission Position Papers for the UK and Ireland.

The following subsections provide further details of Priority Axis 2: Environment.

1.3 Priority Axis 2: Environment & its Objectives

1.3.1 Introduction

The Cooperation Programme states that the key aim of Priority Axis 2: Environment is to “*encourage investment to achieve a resource-efficient, sustainable economy through the implementation of green infrastructure and environmental risk management strategies*”.⁴

It also states that two key challenges in the programme region will be tackled through this priority axis, namely the integrity of its:

1. Biodiversity; and
2. Water quality.

The **selected investment priorities** under Priority Axis 2: Environment and their **associated objectives** are as follows:

Table 1.1: Priority Axis investment priorities and associated objectives	
Investment Priority	Associated Objectives
2a - Protecting and restoring biodiversity and soil and promoting ecosystem services, including through Natura 2000, and green infrastructure.	2.1 Recovery of Protected Habitats and Priority Species
	2.2 Manage Marine Protected Areas and Species
2b - Investing in the water sector to meet the requirements of the Union’s environmental acquis and to address needs, identified by the Member States, for investment that goes beyond those requirements.	2.3 Improve Water Quality in Transitional Waters
	2.4 Improve Freshwater Quality in Cross-Border River Basins

The following subsections provide further details of the four objectives (objectives 2.1 – 2.4) that sit under Priority Axis 2: Environment.

1.3.2 Objective 2.1 – Recovery of Protected Habitats and Priority Species

A key challenge for the region is to address common environmental issues and to meet the EU Biodiversity Strategy’s overall aim to “*halt biodiversity loss by 2020*”. Scientific evidence indicates that in addition to unsustainable development and use of natural resources, climate change is also likely to have a substantial effect on biodiversity in the region.

The investment by the programme in this area will try to promote an integrated approach by the relevant statutory agencies to environmental management across the entire programme region. It is anticipated that this will result in the development of collaborative cross-border approaches that will increase the potential to achieve the targets of the EU Birds and Habitats Directives and the Biodiversity Strategy⁵.

The need to protect the environment is one of the key themes in the EU 2020 Strategy. It is also one of the needs and priorities identified in the Socio-Economic Profile of the Region and in the Position Papers

³ Formally adopted in February 2015.

⁴ The Cooperation Programme identifies that the proposed financial allocation for Priority Axis 2: Environment is anticipated to be €84.71m (€72m from ERDF and €12.71m via national match funding).

⁵ Source: The Call Documentation issued for Objective 2.1

from the European Commission for the United Kingdom and Ireland. The investment by the programme in this important area will be aimed at ensuring that designated habitat sites of cross-border importance and identified areas for priority species will achieve or be approaching favourable conditions. These include nationally designated areas (areas of specific scientific interest (ASSI), sites of special scientific interest (SSSIs), natural heritage areas (NHAs)) and European designated areas (special protection areas (SPAs) and special areas of conservation (SAC)). Other areas for breeding wader species and marsh fritillary that are not designated may also be considered where they are important to the ecological functioning of habitats within the designated site network. In many cases, sites will be close to or straddle the border. However other sites further from the terrestrial border, including those in Western Scotland, may be included, where the site is of cross-border significance.

It is anticipated that increased levels of integration in the planning and management of the environment across the region will result in the development of best practice methodologies and increased levels of public sector efficiency. It is also anticipated to lead to increased awareness of, and responsiveness to, the potential threats of climate change to habitats and species.

The aim of Objective 2.1 is, therefore, to *“promote cross-border cooperation to facilitate the recovery of selected protected habitats and priority species”*.

In order to achieve this objective, it was anticipated that it would be necessary to invest in increased cross-border integrated planning and management of habitats and species, using best-practice methodologies. It is anticipated that this investment will lead to results beyond the lifetime of the Programme in the form of increased compliance with EU directives in the area of environmental protection.

The three jurisdictions have prioritised 7 protected habitats and 7 priority species. These have been selected from habitats and species common to all three jurisdictions and include habitats that have an important role in connectivity between protected areas and protected species that migrate across the eligible region⁶. All habitats and species selected for investment will be taken from this priority list:

Protected Habitats	<ol style="list-style-type: none"> 1. Alkaline fens 2. Blanket bog 3. Active raised bog 4. Marl Lakes 	<ol style="list-style-type: none"> 5. Calcareous fens 6. Petrifying springs with tufa formation 7. Transition mires and quaking bogs
Priority Species	<ol style="list-style-type: none"> 1. Hen Harrier 2. Marsh Fritillary 3. White-clawed crayfish 4. Breeding waders (curlew, lapwing, redshank and snipe) 	<ol style="list-style-type: none"> 5. Golden plover 6. Corncrake 7. Red grouse

Only sites important to these protected habitats or priority species can be chosen for investment by the Programme.

The INTERREG Programme’s impact is monitored through the use of output and result indicators. The **output indicators**⁷ for Objective 2.1 are set out below⁸:

- 4,500 hectares of habitats supported in order to attain a better conservation status; and
- 25 conservation action plans.

⁶ NB: The Call Documentation issued for Objective 2.1 provided details of specific protected sites and species that were identified as being of particular cross-border relevance.

⁷ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020)

⁸ See Appendix II for the definitions of each of the output indicators for Objective 2.1

It was stated that the above outputs could be achieved through the following **indicative actions**:

Table 1.2 Indicative Actions ⁹
<ul style="list-style-type: none"> • Development of mapping of protected habitats and sites of cross-border relevance; • Development and implementation of conservation action plans for protected sites of cross-border relevance; • Tangible conservation actions for protected habitats and species; • Conservation management and protection activities to encourage sustainable natural regeneration of species populations; • Development and sharing of best practice and enhancement of skills in ecosystem management; • Development and use of databases to assist conservation actions; • Removal of invasive species; • Research into species and habitats, including the impact of climate change, which supports the actions within the Programme; and • Education and outreach activities.

The **result indicator**¹⁰ for this specific objective is the percentage of selected protected habitats in or approaching, favourable condition. The stated baseline value for 2014 (i.e. the start of the Programme period) is 1%, whilst the target value for 2023 is 10%¹¹.

Applicants to this call were required to demonstrate that the project proposed would facilitate the recovery of selected protected habitats and/or species and provide a conservation action plan to guide activities and provide a framework for future action. Proposed activities also had to align with the EU Birds and Habitats Directive, the EU Biodiversity Strategy and the Prioritised Action Frameworks (PAFs) of the three countries and in particular selected protected sites and species of cross-border relevance.

1.3.3 Objective 2.2 – Manage Marine Protected Areas and Species

The EU Atlantic Strategy advocates the sustainable development of the Atlantic region’s natural resources and has an overriding objective of creating sustainable jobs and growth. One of the key challenges for Northern Ireland, the Border Region of Ireland and Western Scotland is addressing environmental issues associated with development in the marine environment while achieving the EU Biodiversity Strategy’s overall aim to halt biodiversity loss by 2020.

The Marine Strategy Framework Directive (MSFD) requires EU Member States to co-operate in the management of regional seas with the objective of meeting Good Environmental Status by 2020. Increased co-operation in this area can mitigate climate change impact. The need for a coherent approach across the region is particularly relevant in this area because of the shared waters. Maintaining biodiversity is a requirement to achieve Good Environmental Status and an inherent part of the delivery of MSFD is to develop an ecologically coherent network of Marine Protected Areas across Europe. With the marine environment coming under increasing pressure from human activity, such a network will ensure that biodiversity is safeguarded.

Studies illustrate that the marine environment shared by Northern Ireland, Ireland and Scotland is regarded as having one of the greatest renewable energy resources in Europe, with the capacity to support economically viable wind, wave and tidal energy projects. Within the confines of a network of marine protected areas, developments need to be managed and mitigated in a manner which will promote, sustain and conserve the marine environment. Investment by the programme in this area is aimed at increasing the capacity for integrated planning and management of marine resources and increasing the effectiveness of cross-border marine management strategies. It is anticipated that new

⁹ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020).

¹⁰ The Programme’s impact is monitored through the use of output and result indicators. Projects receiving funding through INTERREG VA are expected to report progress against output indicators only (Output Indicator Guidance document for Objective 2.1, December 2016).

¹¹ Source: Cooperation Programme for the INTERREG VA Programme 2014-2020.

cross-border cooperation strategies will be developed on the basis of existing and newly acquired data. This will lead to an increase in compliance with the EU MSFD.

It is further envisaged that investment by the programme will lead to an increased understanding of and ability to capitalise on the marine resources in the region. This will include an increase in the availability of comprehensive mapping programmes; the development and growth of a regional “blue economy” based on the maritime resource and the alignment of regional activities with the EU Atlantic Strategy and Action Plan.

The aim of Objective 2.2 is to “develop cross-border capacity for the monitoring and management of marine protected areas and species”.¹²

In order to achieve this objective, it was considered that it would be necessary to invest in cross-border data capture and mapping for the development of joint marine management and development activities. It is anticipated that the sustainability of this activity beyond the lifetime of the Programme will be evidenced by the creation of a regional marine innovation centre that will provide a focal point for these activities. This will result in an increased contribution to the achievement of the targets associated with EU Marine strategies.

The **output indicators**¹³ for Objective 2.2 are set out below¹⁴:

- 1 network of buoys for regional seas, including telemetry and oceanographic monitoring (e.g. for seals, cetaceans and salmonids);
- 5 models developed to support the conservation of marine habitats and species;
- 6 complete marine management plans for designated protected areas; and
- 1 system for the prediction of bathing water quality and the installation of real-time signage.

It was stated that the above outputs could be achieved through the following **indicative actions**:

Table 1.3: Indicative Actions¹⁵

- | |
|--|
| <ul style="list-style-type: none"> • Development and implementation of cross-border management plans for marine protected areas and species; • Mapping of marine/seabed environment; • Creation of a network of marine protected areas; • Research and development in the marine environment (including the impact of climate change); • Marine skills initiatives; • The coordinated research programme of direct relevance to the management challenges of the eligible area; • Knowledge and data sharing; • Prediction model development and signage for short-term pollution and real-time management of bathing water quality in coastal waters. |
|--|

The **result indicator** for this specific objective is an increase in the cross-border capacity for monitoring and management of marine protected areas and species. The stated baseline value for 2014 (start of the Programme period) is ‘a little collaboration’, whilst the target value for 2023 is a ‘lot of collaboration’¹⁶.

¹² The Output Indicator Guidance document for Objective 2.2 (January 2016) states that Marine Protected areas (MPAs) or conservation areas are locations which receive protection because of their recognised natural, ecological and/or cultural values. Special Protected Areas (SPAs) with marine components are defined as those sites with qualifying Birds Directive species or regularly occurring migratory 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.

¹³ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020).

¹⁴ Each output indicator is defined in the ‘Output Indicator Guidance’ document for Objective 2.2 – See Appendix II for details.

¹⁵ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020).

¹⁶ Source: Cooperation Programme for the INTERREG VA Programme 2014-2020.

Applicants to this call were required to demonstrate that the proposed project would contribute to improved monitoring and management of marine protected areas and species; and knowledge sharing of research data and outputs.

1.3.4 Objective 2.3 – Improve Water Quality in Transitional Waters

Within the Programme area, Ireland and Northern Ireland share the following transitional water bodies:

1. Carlingford Lough - between County Louth in Ireland and County Down in Northern Ireland; and
2. Lough Foyle - between County Derry in Northern Ireland and County Donegal in Ireland.

According to the Programme’s Citizens’ Summary, cross-border collaboration is essential to improve the water quality of these shared transitional waters and thus efficiently address the requirements of the Water Framework Directive¹⁷. In particular, this specific objective will seek to achieve a good or high water quality status for these two shared transitional waters. Modelling of cross-border waters can identify the potential sources of pollution and the optimum way to achieve and maintain good water quality status. Such modelling will identify the most effective interventions and improvements required for the sewage network and wastewater treatment works that impact upon the shared transitional waters.

It is also anticipated that the Programme will facilitate the implementation of common approaches to the management of the water resources and the sharing of best practice and technical expertise across the eligible region, drawing on the relative strengths of the three jurisdictions.

The aim of Objective 2.3 is, therefore, to “*improve the water quality in shared transitional waters*”.

In order to achieve this objective, it is stated that it will be necessary to invest in cross-border solutions and the joint management of water bodies that straddle the border. It is anticipated that this will result in long term impacts on the quality of water in the region beyond the lifetime of the Programme.

The **output indicators**¹⁸ for Objective 2.3 are set out below¹⁹:

- 10,000 people benefiting from improved wastewater treatment; and
- 2 sewage network and wastewater treatment projects completed to improve water quality in shared transitional waters.

It is stated that the above outputs could be achieved through the following **indicative actions**:

Table 1.4: Indicative Actions ²⁰
<ul style="list-style-type: none"> • Research and development in wastewater treatment technologies, including the use of sustainable technologies with direct relevance to the shared transitional waters; • Creation of demonstration sites in the catchment areas to illustrate best practice wastewater treatment methodologies; and • Sewerage network and wastewater treatment projects to protect and enhance the Water Framework Directive classification of the cross-border catchment areas.

The **result indicator** for this specific objective is the percentage of shared transitional waters in the region with ‘good’ or ‘high’ quality. The stated baseline value for 2014 (start of the Programme period) is 0%, whilst the target value for 2023 is 100%²¹.

¹⁷ Which is an EU directive that commits EU member states to achieve good qualitative and quantitative status of all water bodies (including marine waters up to one nautical mile from shore) by 2015.

¹⁸ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020).

¹⁹ Each output indicator is defined in the ‘Output Indicator Guidance’ document for Objective 2.3 – See Appendix II for details.

²⁰ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020).

²¹ Source: Cooperation Programme for the INTERREG VA Programme 2014-2020.

Factors that were considered in the quality of project design for applications under this Objective include:

- All projects activities had to align with the EU Water Framework Directive requirements;
- Activities involving urban wastewater treatment plants had to have a strategy for the disposal of sewage sludge;
- Climate change impacts on wastewater treatment had to be given attention, in particular in terms of stormwater management;
- Alternative innovative solutions should be taken into account where appropriate (e.g. in particular in remote areas/small villages);
- The financial sustainability of projects had to be considered and pertinent information such as proposed tariffs had to be given due consideration.
- Operational costs (including maintenance) had to be considered;
- Since wastewater collection and treatment is not compulsory below 2,000 population equivalent, any public investment there had to be duly justified technically and economically, compared to the alternative of individual septic tanks; and
- Proposed investments had to be able to meet current and future needs, without becoming oversized.

1.3.5 Objective 2.4 – Improve Freshwater Quality in Cross-Border River Basins

In order to improve water quality across the region, it is necessary to promote the shared management of shared water resources and to invest in cross-border solutions to achieve the targets within the EU Water Framework Directives. It is anticipated that investment by the programme will lead to an improvement in the baseline condition of water quality, physical structure and habitat in a number of cross-border catchment areas. This will contribute towards the achievement of targets relating to good water quality and ecological status of all water bodies (rivers, lakes, groundwater, transitional).

Importantly, such improvements in water quality may mitigate the need for capital investment and contribute to reducing operating costs whilst also protecting and enhancing biodiversity.

It is further anticipated that the investment will provide for an increase in the level of cross-border integrated management of river catchment areas and the development of shared solutions to meet EU targets with regard to water quality. There are also opportunities to share best practice approaches across the region. This will, in turn, lead to an increased number of water bodies with the higher classification of moderate, good or high quality and a decreased number of water bodies classified as poor or bad quality, in line with the designations contained within EU Water Directives.

It was anticipated that interventions supported under this Objective would focus on the following:

- The river catchment activities would be limited to river catchments where the area is on both sides of the Northern Ireland / Ireland border.
- The location of the groundwater wells would be on both sides of the Northern Ireland / Ireland border to support monitoring and pollution of the river catchment activities.
- The sustainable catchment area management modelling and plan would be a cross-border plan focusing on a freshwater capture area, encompassing activities in areas exclusive to some of the border counties of Ireland and the adjacent border counties of Northern Ireland.
- Knowledge transfer and exchange of best practice within the three jurisdictions.

The aim of Objective 2.4 is, therefore, to “*improve freshwater quality in cross-border river basins*”. Within the Programme area, Ireland and Northern Ireland share the following 11 cross-border river basins²²:

Table 1.5: Cross-Border River Basins	
1. Blackwater River	7. Finn Foyle River
2. Burnfoot River	8. Flurry River
3. Castletown River	9. Foyle Deelee River
4. Derg River	10. Lower Erne River
5. Fane River	11. Upper Erne River
6. Finn Fermanagh River	

In order to achieve this objective, it is stated that it will be necessary to invest in cross-border solutions and the joint management of water bodies that straddle the border. It is anticipated that this investment will lead to an improvement in the baseline condition of water quality, physical structure and habitat in a number of cross-border catchment areas.

The **output indicators**²³ for Objective 2.4 are set out below²⁴:

- 3 river water quality improvement projects completed;
- 50 cross-border groundwater monitoring wells installed; and
- 1 cross-border drinking water Sustainable Catchment Area Management Plan.

It is stated that the above outputs could be achieved through the following **indicative actions**:

Table 1.6: Indicative Actions ²⁵
<ul style="list-style-type: none"> • Development and implementation of integrated river basin management plans and actions; • Development and implementation of a management plan and projects for designated drinking water protected areas so that Water Framework Directive water classifications can be maintained and improved; • Activities related to the improvement of river water quality; • Activities related to freshwater quality management research; and • Activities related to establishing groundwater monitoring wells.

The Cooperation Programme also states that:

- The river catchment activities will be limited to river catchments where the area is on both sides of the Northern Ireland/Ireland border.
- The location of the groundwater wells will be on both sides of the Northern Ireland/Ireland border to support monitoring and pollution of the river catchment activities.
- The suggested sustainable catchment area management modelling and plan will be a cross-border plan focusing on a freshwater capture area, encompassing activities in areas exclusive to some of the border counties of Ireland and the adjacent border counties of Northern Ireland.

The **result indicator** for this specific objective is the percentage of cross-border freshwater bodies in ‘good’ or ‘high’ quality. The stated baseline value for 2014 (start of the Programme period) is 32%, whilst the target value for 2023 is 65%²⁶.

Applications to this call were required to align with the EU Water Framework Directive (including integrated river basin management plans).

²² As outlined in the Call Documentation issued for Objective 2.4.

²³ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020).

²⁴ Each output indicator is defined in the ‘Output Indicator Guidance’ document for Objective 2.4.

²⁵ Source: Citizens’ Summary: INTERREG VA Programme (2014-2020).

²⁶ Source: Cooperation Programme for the INTERREG VA Programme 2014-2020.

1.3.6 Summary of Specific Objectives, Result Indicators and Targets

Tables 1.6 and 1.7 provide a summary of the Specific Objectives, Result Indicators and Targets for Priority Axis 2: Environment:

Table 1.7: Specific Objectives, Result Indicators and Targets			
Specific Objective	Result Indicator	Baseline	Target
2.1 To promote cross-border co-operation to facilitate the recovery of selected protected habitats and priority species	The percentage of selected protected habitats in or approaching favourable condition	1%	10%
2.2 To develop cross-border capacity for the monitoring and management of marine protected species in the region	Cross-border capacity for monitoring and management of marine protected areas and species	A little collaboration	A lot of collaboration
2.3 To improve the water quality in shared transitional waters	The percentage of shared transitional waters in the region with good or high quality	0%	100%
2.4 To improve freshwater quality in cross-border river basins	The percentage of cross-border freshwater bodies in cross-border river basins with good or high quality	32%	65%

The anticipated Output Indicators are summarised below:

Table 1.8: Anticipated Output Indicators		
Output Indicator	Measures by Number of:	Number
Surface Area of Habitats supported in order to obtain a better conservation status	Hectares	4,500
Conservation action plans	Conservation action plans	25
The network of buoys for regional seas	Networks	1
Models developed to support conservation of marine habitats and species	Models	5
Marine Management Plans for designated protected areas	Complete plans	6
System for the prediction of bathing water quality and the installation of real-time signage	Systems	1
People benefiting from improved wastewater treatment	People	10,000
Sewage network and wastewater treatment projects completed to improve water quality in shared transitional waters	Projects	2
Cross-border drinking water Sustainable Catchment Area Management Plans	Plans	1
Cross-border groundwater monitoring wells installed	Wells	50
River water quality improvement projects	Projects	3

1.4 The Evaluation – SEUPB’s Requirements

To fulfil the requirement of Article 114(1) of the Common Provisions Regulation (EU No: 1303/2013), SEUPB’s Managing Authority has submitted to the Commission an Evaluation Plan for the INTERREG VA Programme²⁷. The Evaluation Plan has been put in place to facilitate learning and maximise the proposed investments of the Programme²⁸.

The Plan outlines two types of evaluations:

1. **Implementation Evaluations** which will assess the efficiency and effectiveness of the implementation mechanism established for the programme (these will not form any part of this assignment); and
2. **Impact Evaluations** will be carried out on each priority axis to test the intervention logic of that priority axis and form a view of the effectiveness and impact of the investment.

In relation to the Impact Evaluations, the Plan states that the evaluations will assess achievements as regards effectiveness (the attainment of the specific objectives set and of the intended results), efficiency (the relationship between the funding disbursed and the results achieved) and impact (the contribution of the programme to the end-objectives of the EU Cohesion Policy).

SEUPB has commissioned Cogent to undertake a longitudinal Impact Evaluation of Priority Axis 2 – Environment to include 3 reports due by end of 2018, end of 2020 and early 2022²⁹.

The overall focus of the evaluation is to assess (at three stages of implementation), the impact of the interventions within the ‘Environment’ Priority Axis. As a full implementation evaluation is being undertaken across INTERREG VA concurrently with the Impact Evaluation, **the Impact Evaluation does not seek to assess the implementation of projects nor how the Programme is operating. Rather than addressing financial and operational issues**, the purpose of the impact evaluation is learning, through an exploration of the contribution of the Programme to the movement of the Result Indicator, to inform the remainder of the INTERREG VA Programme and potential future programming periods.

²⁷ The Evaluation Steering Group (ESG), a sub-group of the Programme Monitoring Committees for the PEACE IV and INTERREG VA Programmes, was established to ensure the effective implementation of the Evaluation Plan for each Programme.

²⁸ Article 56(3) of Regulation (EC) No: 1303/2013 requires that an evaluation should assess how the support provided has contributed to the achievement of the objectives of the programme. Article 54 requires the impact evaluation to comment on the contribution of the priority axis to the EU 2020 objectives. In addition, Article 7 of the above regulation requires that Member States ensure equality between men and women and the integration of a gender perspective are taken into account and promoted throughout the preparation and implementation of the programmes, including in the monitoring and evaluation of the programmes. Article 7 also specifies that the programme authorities must take appropriate steps to prevent any discrimination on any of the specified grounds. Article 8 requires that the objectives of the funds shall be pursued in line with the principle of sustainable development and with the European Union’s promotion of the aim of preserving, protecting and improving the quality of the environment taking into account the polluter pays principle.

²⁹ The report received in 2022 will include a summary of all previous findings and will contribute directly to the programme summary of evaluation findings, to be submitted to the EU Commission.

As such, the Impact Evaluation Team is required to address the following:

- To what extent have the Specific Objectives been achieved?
- To what extent have the targets for the Result Indicators listed in Section 1.3.6 been achieved?
- Comment on the effectiveness and added value of cross-border collaboration in relation to the specific objectives?
- What external factors have impacted, positively or negatively, on the achievement of the Specific Objective?
- What new ways of working/partnerships/relationships have been created as a result of activities carried out within the priority axis?
- Identify key areas of best practice and learning;
- What level of mainstreaming has occurred for cross-border delivery of environmental work?
- Are there barriers to cross-border cooperation that the priority axis is not addressing?
- What is the contribution of the priority axis to³⁰:
 - EU 2020 objectives;
 - The Atlantic Strategy; and
 - The horizontal principles of equality and sustainable development?

³⁰ NB An overview of the aims and objectives of these strategies is provided in Appendix I.

2. OVERVIEW OF PROGRAMME ACTIVITY & SUPPORTED PROJECTS

2.1 Introduction

This section of the report provides a brief overview of the projects that have been approved and supported under Priority Axis 2: Environment.

2.2 Overview of Approved Projects

There were five calls for applications under Priority Axis 2: Environment. A two-stage process³¹ was then initiated by the SEUPB's Joint Secretariat to assess applications submitted under each of these calls. Full details of the assessment process, including admissibility criteria, were outlined for applicants in the 'Call Documentation' and the 'Guide for Applicants'.

Details of the calls and the number of applications received at each stage are presented below:

	Call opened	Call closed	Applications received		Applications approved
			Stage 1	Stage 2	
Objective 2.1	7 th October 2015	8 th January 2016	4	2	2
Objective 2.2	7 th October 2015	8 th January 2016	6	4	3
	18 th May 2017	9 th June 2017	3	3	2
Objective 2.3	5 th August 2015	30 th October 2015	1	1	1
Objective 2.4	7 th October 2015	8 th January 2016	2	2	2
Total			-	-	10

As reflected above, 10 applications were approved under Priority Axis 2: Environment. However, the Lead Partner for one of the projects approved under Objective 2.2 subsequently withdrew its application, leaving 9 projects to go forward.

As detailed in Table 2.3, the 9 projects represent cumulative ERDF commitment of €73.8 million against a budget of €72m (102%). Across the 9 projects, should all proceed to plan, each of the Programme outputs within this priority will be met.

At the Objective level:

- Two projects are being implemented under Objective 2.1 (Recovery of protected habitats and species), with a total ERDF allocation of €12.2m. Both projects (CANN and CABB) will carry out a range of conservation activities through the development of 35 Conservation Action Plans in total.
- Four projects are being implemented under Objective 2.2 (Manage marine protected areas and species), with a total ERDF allocation of €15.9m. These projects (COMPASS, SWIM, MarPAMM and Sea Monitor 2) will focus on diverse areas of marine conservation through the development of a bathing water quality prediction model and the delivery of a fully coherent network of monitoring buoys across the regional seas of Northern Ireland, Ireland and Western Scotland.
- One project is being implemented under Objective 2.3 (Improvement of water quality in transitional waters), with a total ERDF allocation of €29.8m. This project (SWELL) which is led by Northern Ireland Water has been approved to deliver a two-phased approach. Phase 1 has been successfully completed and focused on catchment investigation, which has, in turn, informed Phase 2;
- Two projects are being implemented under Objective 2.4 (Improvement of freshwater quality in river basins), with a total ERDF allocation of €15.9m. These projects (Source to Tap and Catchment Care) will focus on improving freshwater quality in a number of cross-border river basins.

³¹ Stage one - short application form and admissibility checks. Stage two – submission of full business plan and associated appendices (prepared in line with SEUPB's Business Plan Guidance).

Details of the **nine projects** approved by the INTERREG VA Programme Steering Committee³² (which excludes the project that withdrew under Objective 2.2) are included in the table below. As illustrated, the Lead Partners for each of the nine projects are from the statutory and voluntary sectors across Northern Ireland and Ireland, and include a range of project partners, with an interest in the environment.

Table 2.2: Projects Approved for Funding – Named Project Partners (source: Letters of Offer issued by the SEUPB)			
Project Ref	Lead Partner	Project Name	Named Project Partners
Objective 2.1			
032	Newry, Mourne & Down District Council	Collaborative Action for the Natural Network (CANN)	<ul style="list-style-type: none"> • Monaghan County Council • Argyll & The Isles Coast and Countryside Trust • East Border Region • Agri-food and Biosciences Institute • Armagh Banbridge and Craigavon Borough Council • Scottish Natural Heritage • Ulster Wildlife • Ulster University • Institute of Technology Sligo • Golden Eagle Trust
037	Royal Society for the Protection of Birds (RSPB) NI	Cooperation Across-borders for Biodiversity (CABB)	<ul style="list-style-type: none"> • Birdwatch Ireland • Butterfly Conservation • NI Water • Royal Society for the Protection of Birds Scotland • Moors for the Future
Objective 2.2			
034	Agri-food and Biosciences Institute (AFBI)	Collaborative Oceanography and Monitoring for Protected Areas and Species (COMPASS)	<ul style="list-style-type: none"> • Scottish Association for marine species • Marine Scotland Science • Inland Fisheries Ireland • Marine Institute
038	University College Dublin (UCD)	System for Bathing Water Quality Monitoring (SWIM)	<ul style="list-style-type: none"> • Keep Northern Ireland Beautiful • Agri-Food and Biosciences Institute
5059	Agri-food and Biosciences Institute (AFBI)	Marine Protected Areas Management and Monitoring (MarPAMM)	<ul style="list-style-type: none"> • Scottish Natural Heritage • Birdwatch Ireland • University College Cork • Marine Scotland • Scottish Association for Marine Science • Ulster University
5060	Loughs Agency	Sea Monitor 2	<ul style="list-style-type: none"> • Marine Institute (MI) • University of Glasgow (UoG) • Queen’s University, Belfast (QUB) • Agri-Food and Biosciences Institute (AFBI) • Galway-Mayo Institute of Technology (GMIT) • University College, Cork (UCC) • Ocean Tracking Network, Dalhousie University (Canada) • The University of California, Davis (USA)
Objective 2.3			
005	Northern Ireland Water (NIW)	Shared Waters Enhancement and Loughs Legacy (SWELL)	<ul style="list-style-type: none"> • East Border Region • Loughs Agency • Irish Water • Agri-food and Biosciences Institute
Objective 2.4			
029	Northern Ireland Water (NIW)	Source to Tap	<ul style="list-style-type: none"> • Irish Water Ltd • Agri-food and Biosciences Institute • Land-Incentive Scheme – farmers (beneficiaries not partners) • The Rivers Trust • Ulster University • East Border Region Ltd
027	Donegal County Council	CatchmentCARE	<ul style="list-style-type: none"> • Agri-food and Biosciences Institute • Loughs Agency • Armagh, Banbridge and Craigavon Borough Council • Inland Fisheries Ireland • University of Ulster • British Geological Survey • Geological Survey Ireland

³² The decision as to whether to fund a project rests entirely with the INTERREG VA Programme Steering Committee.

Per Table 2.3, the total anticipated project costs across the nine projects are circa €88m, which equates to an average cost per project of circa €9.78m. In total, the nine projects were offered up to €73.8m ERDF funding through the INTERREG VA Programme, which represents 84% of the total project costs.

Table 2.3: Projects Approved for Funding (source: Letters of Offer issued by the SEUPB)							
Project Ref	Lead Partner	Project Name	Operational start date	Operational end date	Project Cost (€)	ERDF Allocation	
						(€)	%
Objective 2.1							
032	Newry, Mourne & Down District Council	CANN	01/01/2017	31/12/2021	€9,406,313	€7,995,366	85%
037	RSPB NI	CABB	01/01/2017	31/12/2021	€4,926,403	€4,195,586	85%
Subtotal					€14,332,716	€12,190,952	
Objective 2.2							
034	Agri-food and Biosciences Institute (AFBI)	COMPASS	01/01/2017	31/03/2022	€7,726,441	€5,632,299	73%
038	University College Dublin (UCD)	SWIM	01/01/2017	30/06/2020	€1,108,358	€891,530	80%
5059	AFBI	MarPAMM	01/01/2018	31/03/2022	€6,361,317	€5,385,015	85%
5060	Lough Agency	Sea Monitor 2	25/07/2017	31/03/2022	€4,722,671	€4,014,271	85%
Subtotal					€19,918,787	€15,923,115	
Objective 2.3							
005	Northern Ireland Water (NIW)	SWELL ³³	18/11/2014	31/12/2022	€35,047,604	€29,790,464	85%
Subtotal					€35,047,604	€29,790,464	
Objective 2.4							
029	NIW	Source to Tap	01/10/2016	31/03/2022	€4,909,921	€4,173,433	85%
027	Donegal County Council	Catchment Care	01/10/2017	31/10/2022	€13,792,436	€11,723,571	85%
Subtotal					€18,702,357	€15,897,004	
Total					€88,001,464	€73,801,535	

³³ NB The SWELL project received an original Letter of Offer (dated 31st January 2017) offering a grant of up to a maximum of €3,282,786.52 (ERDF + Government Match Funding) to be expended and claimed by 30th April 2018 (The period of assistance was for 42 months starting on 1st November 2014 and completing on 30th April 2018), towards total anticipated project costs of €3,282,786.52. This Letter of Offer was later superseded by a second letter of offer that incorporated both Phase I and Phase II of the project.

The following table outlines the stated contributions of each of the nine projects (as outlined in their respective Letters of Offer) to the Output Indicators for Priority Axis 2: Environment.

Table 2.4: Projects Approved for Funding – Stated Contributions to Output Indicators (source: Letters of Offer issued by the SEUPB)										
Output Indicator	Objective and Project Ref								Total	
	2.1		2.2				2.3	2.4		
	032	037	034	038	5059	5060	005	029		027
4,500 ha of habitats supported in order to attain a better conservation status	3,650	2,228								5,878
25 conservation action plans	27	8								33
1 network of buoys for regional seas, including telemetry and oceanographic monitoring (e.g. for seals, cetaceans and salmonids)			1	-	-	-				1
5 models developed to support conservation of marine habitats and species			3	-	4	5				12
6 complete marine management plans for designated protected areas			-	-	6	3				9
1 system for the prediction of bathing water quality and the installation of real-time signage			-	1	-	-				1
10,000 people benefiting from improved wastewater treatment							10,000			10,000
2 sewage network and wastewater treatment projects completed to improve water quality in shared transitional waters							2			2
3 river water quality improvement projects completed								-	3	3
50 cross-border groundwater monitoring wells installed								-	50	50
1 cross-border drinking water Sustainable Catchment Area Management Plan								1	-	1

3. KEY EMERGING FINDINGS

3.1 Introduction

This section provides a summary of the key findings emerging from the first tranche of research. For ease of reference, the key findings have been summarised in-line with each aspect of the Terms of Reference.

3.2 Priority Level Activity & Project Financing

As detailed below, 9 projects representing a cumulative ERDF commitment of €73.8 million against a budget of €72m (102%) have been supported. Across the 9 projects, should all proceed to plan, each of the Programme outputs within this priority will be met.

At the Objective level:

- Two projects are being implemented under Objective 2.1 (Recovery of protected habitats and species), with a total ERDF allocation of €12.2m. Both projects (CANN and CABB) will carry out a range of conservation activities through the development of 35 Conservation Action Plans in total.
- Four projects are being implemented under Objective 2.2 (Manage marine protected areas and species), with a total ERDF allocation of €15.9m. These projects (COMPASS, SWIM, MarPAMM and Sea Monitor 2) focus on diverse areas of marine conservation through the development of a bathing water quality prediction model and the delivery of a fully coherent network of monitoring buoys across the regional seas of Northern Ireland, Ireland and Western Scotland.
- One project is being implemented under Objective 2.3 (Improvement of water quality in transitional waters), with a total ERDF allocation of €29.8m. This project (SWELL) which is led by Northern Ireland Water has been approved to deliver a two-phased approach. Phase 1 has been successfully completed and focused on catchment investigation, which has, in turn, has informed Phase 2;
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Table 3.1: Projects Approved for Funding (source: Letters of Offer issued by the SEUPB)							
Project Ref	Lead Partner	Project Name	Operational start date	Operational end date	Project Cost (€)	ERDF Allocation	
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Subtotal					€19,918,787	€15,923,115	
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Subtotal					€35,047,604	€29,790,464	
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Subtotal					€18,702,357	€15,897,004	
Total					€88,001,464	€73,801,535	

³⁴ NB The SWELL project received an original Letter of Offer (dated 31st January 2017) offering a grant of up to a maximum of €3,282,786.52 (ERDF + Government Match Funding) to be expended and claimed by 30th April 2018 (The period of assistance was for 42 months starting on 1st November 2014 and completing on 30th April 2018), towards total anticipated project costs of €3,282,786.52. This Letter of Offer was later superseded by a second letter of offer that incorporated both Phase I and Phase II of the project.

3.3 Reasonableness of targets established

Based on its review of the output and result indicators/targets established for the Investment Priority, the Evaluation Team is of the view that greater focus should have been placed on ensuring that all indicators/targets were Specific, Measurable, Achievable, Realistic and Timebound. For example:

- In relation to the Results Indicator associated with Objective 2.2, it is anticipated that the four projects (COMPASS, SWIM, MarPAMM and Sea Monitor 2) will enhance cross-border capacity for monitoring and management of marine protected areas and species by stimulating levels collaboration. However, it is unclear what constitutes either the baseline ('a little') or the target ('a lot of') levels of collaboration or how any change would ultimately be measured (as proposed, through the survey of Departments) as a result of the implementation of the project. As such, greater attention should have been given to ensuring this indicator was more specific and measurable;
- In relation to the Outputs Indicators associated with Objective 2.3, it is envisaged that the SWELL project would directly contribute to (inter alia) 10,000 people benefiting from improved wastewater treatment. However, the SWELL project promoters consider that
 - Given the nature of the result indicator, it will be influenced not only by projects funded by the Programme but will also be influenced by other policy and funding initiatives external to the Programme.
 - The results indicator is an unachievable project target given the level of funding and external pressures.

Nonetheless, the SWELL project partners intend to deliver a programme of measures to improve water quality and thus contribute towards the achievement of "good status" of the receiving waters. However, according to the project partners, the project will not guarantee that any improvement will be made to WFD status by the year 2023 but will instead contribute towards it. As noted later, according to the project partners, there are several external reasons, beyond the control of the water companies, as to why this is the case, including diffuse pollution, industrial discharges, changes in catchment practices e.g. Rural Development Programmes, the Nitrates Directive etc. Based on these points, greater attention could have been given to ensuring this indicator was more achievable (as a direct result of project activity) and realistic;

- Related to this point, it is unclear whether other potential external influences (including other projects) have been considered within the context of the Results targets established for Objectives 2.1, 2.3 and 2.4. Ultimately, this may preclude both the project promoters, an Evaluator or SEUPB from drawing definitive conclusions on the causal link (i.e. additionality) between the delivery of individual projects and the subsequent realisation of the targets (or otherwise).

In addition, per Section 1, it is noted that projects receiving funding through INTERREG VA are expected to report progress against the Priority Axis output indicators only (i.e. not monitor against the Results indicators). However, this requirement may inadvertently lead to a lack of 'ownership' of the ultimate Result indicator by project promoters under each specific objective.

3.4 The extent to which the Specific Objectives & Result Indicators have been achieved

Discussion with each of the project partnerships indicates that various activities are underway on each of the projects and they are making positive progress towards achieving their respective outputs. Some notable key achievements reported by project partnerships include:

Table 3.2: Notable Key Achievements

<p>CANN</p>	<p>Further to the project partners' original work plan, an additional work plan within the CANN project was approved by Steering Committee on 24 July 2018. As a result, it is now anticipated that the CANN project will deliver additional (from those originally proposed) outputs on an important cross-border site, comprising:</p> <ul style="list-style-type: none"> • 500 additional hectares of habitats supported in order to attain a better conservation status bringing the projected total to 3,650 ha; • 2 additional Conservation Action Plans (Cuilcagh Mountain SAC in Northern Ireland and Cuilcagh Anierin Uplands SAC in Ireland) bringing the project total to 27 conservation action plans (exceeding the output target of 25). <p>A highlight for the CANN project has been the discovery of a rare snail <i>Vertigo moulinsiana</i> which has been found in large numbers on one of the project sites. Field visits to other sites have been undertaken in order to update habitat maps, and data collection work is underway in order to inform the draft conservation action plans which will directly contribute to the programme outputs once completed.</p> <p>In addition, there has been a significant level of liaison with local stakeholders to inform the public of the activities and actions that will be undertaken and the benefits that the project will bring. This has included consultation and dissemination of information to landowners and other local interested parties. On an overall basis, this has been received positively. However, in one specific area, there has been a number of tensions between the project and a small group of local landowners. This has unfortunately culminated in the project withdrawing from one of the original selected sites (Boleybrack Mountain in Co. Leitrim). Fortunately, the project team had gathered sufficient data to produce a draft Conservation Action Plan for this particular site (albeit no conservation actions will take place), which will provide a legacy for future action beyond the lifetime of the project. The SEUPB is currently working with the Lead Partner on a strategy to transfer some of the works to different sites. Any significant changes will be reported to the Steering Committee and relevant approvals sought.</p> <p>Importantly, 12 draft Conservation Action Plans have been developed and the Accountable Departments in each jurisdiction are working with the SEUPB to provide feedback on the plans. SEUPB is developing mechanisms for final sign off and verification of the outputs as per programme requirements.</p> <p>Of further note, during September 2018, the CABB and CANN projects delivered a joint event showcasing activities undertaken to that date and demonstrated their commitment to joined-up working.</p>
<p>CABB</p>	<p>Since its commencement, the CABB project has undertaken several surveys and mapping exercises in order to gain a more thorough understanding of the habitats and species located within the project and programme area. This work is assisting the project in its development of the Conservation Action Plans (CAPs) which will ultimately result in the achievement of the outputs. However, it is noted that the mapping exercises have taken longer than first envisaged (after the project partners encountered some issues with sub-contractors), with it now estimated that the mapping will be completed by August 2019. This will likely impact on the project delivery timeframes for some of the CAPs. Nonetheless, at May 2019, the CAP for Garron Plateau is being produced in a first draft format and RSPB Scotland has produced some draft sections of the CAPs for Shiel Farm and Airds Moss.</p> <p>Positively, work is ongoing at all of the sites, with it anticipated that this work will provide improvements of the habitats within this project area. Activities including drain blocking and predator fencing are underway. General fencing and scrub removal at the Montiaghs Moss site has been completed and this has enabled successful grazing of cattle at the site.</p> <p>The capital works at Dungonnell catchment have been completed. The project has reported that 493ha of blanket bog will be positively impacted by drain blocking and should move the land into 'favourable' condition.</p>
<p>COMPASS</p>	<p>The project partnership has been undertaking surveys, fish tagging, data collection (via acoustic moorings) and examining scientific models e.g. collecting data on the movement</p>

Table 3.2: Notable Key Achievements													
	<p>of Humpback Whales across the region. Sensors have also been deployed at various locations. It is understood that the project successfully conducted its first Glider mission (underwater autonomous vehicle) on the Malin Shelf.</p>												
SWIM	<p>The partnership has identified and agreed on the beaches that will be monitored and weather stations and river level sensors have been deployed. It is understood that weather monitoring, water sampling, flow meter data collection, and other relevant data is now being collected (and being transmitted back to the project team), including that being captured by a weather station that was installed at a local primary school (St. Patrick's School in Glenariff in Waterfoot). Further discussion with the project partnership suggests that the location of this particular weather station will provide an excellent opportunity for learning.</p> <p>The project partnership advised that a substantial amount of historical data has also been provided by Met Eireann to inform the development of the scientific model.</p> <p>In addition, the general public can access the project's interactive website, where data is collected and analysed in preparation for the development of the models. Furthermore, software developers have commenced work on the App that will be made available to the public, whilst the real-time signage is, as of May 2019, being procured.</p>												
MarPAMM	<p>The project partnership has been undertaking various data collection and research activities, including surveys and the collection of video footage. For example, as part of the Benthic habitat mapping and modelling work package, video footage collected on the project survey was analysed and SAMS commenced testing on UAV (Unmanned Aerial Vehicle) and new anodes and cable were purchased to facilitate testing.</p>												
Sea Monitor 2	<p>The project's Letter of Offer was issued during November 2018 and the project was launched in April 2019. All members of the administrative team took up their posts in early 2019. Positively, the project partnership has already made initial contact with other relevant INTERREG VA funded projects (COMPASS, MarPAMM, and CatchmentCARE), SEUPB and the sponsoring departments³⁵.</p>												
SWELL	<p>At INTERREG VA application stage, the SWELL Partnership had identified key agglomerations that had the greatest potential to improve water quality within the Carlingford Lough and Lough Foyle catchments. Identification was on the basis of expert knowledge on network and treatment capability, age of the plant, compliance history, and operational performance. However, subsequently, during Phase 1 of the SWELL Project, baseline catchment investigations and flow & load surveys were undertaken to justify site selection and to enable the development of Business Cases for the identified sites to demonstrate the cost-effectiveness and value for money of the proposed capital upgrade solutions.</p> <p>In total, 10 Business Cases were developed to maximise funding potential, with the following 8 preferred sites (considered as most likely to deliver the required water quality improvements, results, and outputs), submitted for Government Departmental and SEUPB approval:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #ffff00;">Catchment</th> <th style="background-color: #ffff00;">Work Package</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Carlingford</td> <td>Newpoint SPS</td> </tr> <tr> <td>Warrenpoint WwTW</td> </tr> <tr> <td>Omeath DAP</td> </tr> <tr> <td rowspan="5">Foyle</td> <td>Strabane WwTW</td> </tr> <tr> <td>Donemana WwTW</td> </tr> <tr> <td>Lifford WwTW</td> </tr> <tr> <td>Killea WwTW</td> </tr> <tr> <td>Carrigans WwTW</td> </tr> </tbody> </table> <p>The 8 sites are considered to represent key agglomerations with the greatest potential to improve water quality within the Carlingford Lough and Lough Foyle catchments. Identification was on the basis of expert knowledge on network and treatment capability, age of the plant, compliance history, and operational performance. The project partners</p>	Catchment	Work Package	Carlingford	Newpoint SPS	Warrenpoint WwTW	Omeath DAP	Foyle	Strabane WwTW	Donemana WwTW	Lifford WwTW	Killea WwTW	Carrigans WwTW
Catchment	Work Package												
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	Killea WwTW												
	Carrigans WwTW												

³⁵ Department of Agriculture, Environment and Rural Affairs (DAERA) and Department of Communications, Climate Action and Environment (DCCAE).

Table 3.2: Notable Key Achievements													
	<p>have a high level of confidence regarding the negative impact of the named problem sites and a belief that their rectification will make a significant positive contribution towards the results indicator.</p> <p>Discussion with the project partnership indicates that the sites located in Northern Ireland are at construction stage (contractor procured), whilst those located in Ireland are at the design stage, as illustrated below:</p> <table border="1"> <thead> <tr> <th>Work Package</th> <th>Status (as of May 2019)</th> </tr> </thead> <tbody> <tr> <td>Donemana WwTW</td> <td rowspan="4">At the construction stage</td> </tr> <tr> <td>Newpoint SPS</td> </tr> <tr> <td>Strabane WwTW</td> </tr> <tr> <td>Warrenpoint WwTW</td> </tr> <tr> <td>Carrigans WwTW</td> <td rowspan="4">At the design stage</td> </tr> <tr> <td>Killea WwTW</td> </tr> <tr> <td>Lifford WwTW</td> </tr> <tr> <td>Omeath DAP</td> </tr> </tbody> </table>	Work Package	Status (as of May 2019)	Donemana WwTW	At the construction stage	Newpoint SPS	Strabane WwTW	Warrenpoint WwTW	Carrigans WwTW	At the design stage	Killea WwTW	Lifford WwTW	Omeath DAP
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Lifford WwTW													
Omeath DAP													
Source to Tap	The project partnership has been undertaking weekly water sampling and analysis in the Finn and Derg catchments. It is also understood that the pilot Land Incentive Scheme was launched on the 25 th July 2018 in Castledearg and the event was attended by 82 landowners. Community engagement has also been supported via social media e.g. Twitter, Facebook, and Instagram.												
CatchmentCARE	<p>The project partnership has, in line with its work packages, been undertaking research activities to identify areas that require further monitoring e.g. establishing the toxicity of metal salts, which will contribute to the fixing of phosphorous levels within the lakes.</p> <p>It is understood that site surveys and assessments have been undertaken in order to evaluate future project impacts, whilst site plans are being prepared for land improvements (e.g. planting of native plant species and the installation of stock fencing) that will assist the project partners to prepare their River Water Quality Improvement Projects (NB: the project partners are seeking relevant landowner agreements).</p> <p>It is also understood that some boreholes have been identified and work will commence on drilling once the relevant approvals are in place.</p>												

Notwithstanding the above, further discussion with each of the project partnerships indicates their anticipated (approved) project outputs have, as of May 2019, not been achieved (albeit, it was not expected of the projects at this stage in their implementation, as they have a 2023 delivery date). This is illustrated in the table overleaf:

Table 3.3: Extent to which Approved Outputs have been achieved (by Project)			
Name of Output (by Project)	Programme Output Indicator Target ³⁶	Project Target	Status (as of May 2019)
CANN			
Nature and biodiversity Surface area of habitats supported in order to attain a better conservation status (hectares)	4,500ha	3,650ha	0
Conservation Action Plans	25	27	0
CABB			
Nature and biodiversity Surface area of habitats supported in order to attain a better conservation status (hectares)	4,500ha	2,228ha	0
Conservation Action Plans	25	8	0
COMPASS			
A network of buoys for regional seas, including telemetry and oceanographic monitoring (e.g. for seals, cetaceans and salmonids)	1	1	0
Models developed to support the conversation of habitats and species	5	3	0

³⁶ NB Appendix II provides an overview of the specific indicators relevant to Priority Axis 2, with associated targets, definitions and reporting details.

Table 3.3: Extent to which Approved Outputs have been achieved (by Project)			
Name of Output (by Project)	Programme Output Indicator Target³⁶	Project Target	Status (as of May 2019)
SWIM			
System for the prediction of bathing water quality and install real-time signage	1	1	0
MarPAMM			
Models developed to support the conversation of habitats and species	5	4	0
Marine management plans for designated protected areas complete	6	6	0
Sea Monitor 2			
Models developed to support the conversation of habitats and species	5	5	0
Marine management plans for designated protected areas complete	6	3	0
SWELL			
People benefit from improved wastewater treatment	10,000	10,000	0
2 Sewage network and wastewater treatment projects completed to improve water quality in shared transitional waters	2	2	0
StT			
Cross-border drinking water 'Sustainable Catchment Area Management Plan' research and pilot project	1	1	0
CatchmentCARE			
Develop and implement cross-border groundwater monitoring wells	50	50	0
Establish 3 river water quality improvement projects	3	3	0

Given the early stage of each project's implementation and the fact that the projects have yet to achieve their anticipated (approved) project outputs, the nine projects are, therefore, at May 2019, making only marginal progress towards the Priority's Result Indicator Targets and Specific Objectives as illustrated below. However, this should be expected at this stage of the projects' implementation (as they have a 2023 delivery date), and should not be considered a concern.

Table 3.4: Progress towards the Priority's Result Indicator Targets and Specific Objectives				
Specific Objective	Result Indicator	Baseline	Target	Change between baseline and target (as of May 2019)
1.1 To promote cross border co-operation to facilitate the recovery of selected protected habitats and priority species	The percentage of selected protected habitats in or approaching favourable condition	1%	10%	0%
1.2 To develop cross-border capacity for the monitoring and management of marine protected species in the region	Cross border capacity for monitoring and management of marine protected areas and species	A little collaboration	A lot of collaboration	0
1.3 To improve the water quality in shared transitional waters	The percentage of shared transitional waters in the region with good or high quality	0%	100%	0%
1.4 To improve freshwater quality in cross border river basins	The percentage of cross-border freshwater bodies in cross-border river basins with good or high quality	32%	65%	0%

During consultation with the project partnerships, the uncertainty associated with the UK's potential withdrawal from the EU ('Brexit') was highlighted as an external factor that may impact on the achievement of the Specific Objectives. Whilst the nature and extent of any future arrangements between the EU and the UK are yet to be agreed, some of the project partners reported that future environmental legislation across Ireland, Northern Ireland and Scotland may diverge post 'Brexit', with different regulatory regimes and standards applying across the UK (Scotland and Northern Ireland) and the EU (Ireland). This may potentially impact on the relationship between the project partners (and in turn, project delivery), as each will be required to adhere to the relevant legislation in their respective jurisdiction.

3.5 Effectiveness and added value of cross-border collaboration

The preceding analysis illustrates that each of the project partnerships has demonstrated that their respective projects are jointly:

- Developed;
- Implemented;
- Staffed; and
- Financed.

The effectiveness and added value of the cross-border collaboration are further demonstrated by the fact that three of the projects supported under Objective 2.2 (the COMPASS, MarPAMM and Sea Monitor 2 projects) have adopted a collaborative and partnership working approach by holding 'synergy meetings' with each other. As part of this, the various partnerships have agreed to, amongst other things, prepare joint communication publications such as ezines and to potentially host a joint conference/seminar in November 2019. The Evaluation Team notes that this approach aligns with the objectives of the MSFD (as per Section 1), which states that the need for a coherent approach across the region is particularly relevant in this area because of the shared waters.

Similarly, discussion with the CABB project partnership suggests that the project partners engage in 'information share days' with, for example, NPWS, NIEA, DAERA and the various project partners involved in the CANN project. The purpose of this engagement is to discuss common issues and share pertinent information. It is understood that the project partnership hosted one of these days in October 2018 at Montiagh's Moss SAC.

3.6 New ways of working/partnerships/relationships created

Some specific new ways of working/ partnerships/ relationships have been created. For example, as part of the StT and CatchmentCARE projects, there is liaison with NIEA Catchment Officers (in Northern Ireland) and the Local Authority Water and Communities Office (LAWCO) in Ireland in relation to cross-border WFD issues. In doing so, project partnerships are of the view that this creates the potential to generate future initiatives and results in permanent sustainability benefits at cross-border level.

In addition, the SWELL project partners suggest that, prior to this project, there was minimal engagement/partnership working between the regions, and in particular between NIW and IW, in relation to the development of WWTWs. The SWELL project is, therefore, considered to be significant in terms of adding value on a cross-border basis.

3.7 Key areas of best practice and learning identified

Some specific areas of best practice and learning have been set out below:

- The COMPASS project benefits from having members of NGOs on its Advisory Group. As of May 2019, one of the main achievements of, or lessons learnt from, this project has been the successful interaction with stakeholders and civil society (or 'citizen science'). For example, as part of the project's Salmonid research, fishermen have played an important supporting role in catching trout and salmon for tagging and deploying equipment. The COMPASS project partnership notes that this results in a number of direct benefits:

- Catching fish by fly appears to cause the least distress to the fish;
 - Using fishermen at sea to deploy equipment brings additional knowledge and expertise to the project; and
 - This method provides an important opportunity to involve and engage a broader stakeholder group.
- As part of the Source to Tap project, the Project Manager is liaising with the Water Catchment Partnership, a working partnership with representatives from Ulster Farmers Union, the Voluntary Initiative, NIW, NIEA and CAFRE, in order to maximise opportunities for knowledge sharing on pesticide best practice.

3.8 Level of mainstreaming that has occurred

The preceding analysis indicates that it is, unsurprisingly (given the stage of implementation), too early for each project to have achieved any mainstreaming of cross-border delivery of environmental work (albeit many of the projects have set out their plans for such activity beyond their respective project period – please see relevant section for further details).

3.9 Barriers to cross-border cooperation

The preceding analysis indicates that, from the outset, each of the project partnerships was mindful that there were many potential constraints³⁷ and risks that could have a significant impact on the delivery of their respective projects and given this had developed strategic risk registers with potential mitigation measures.

However, some specific barriers to cross-border cooperation identified at this stage include:

- The uncertainty associated with the UK’s potential withdrawal from the EU (‘Brexit’), which may potentially impact on the relationship between the project partners (and in turn, project delivery), as each will be required to adhere to the relevant legislation in their respective jurisdiction.
- For the MarPAMM project partnership, one of the key risks to cross-border cooperation not evident at the time of its application for funding has been the delay between making a finance claim to the SEUPB and that finance being made available to individual project partners. One of the MarPAMM project partners is a registered charity (BWI), which relies heavily on having sufficient cash flow to deliver its project activities. The MarPAMM project partners note that cash flow issues for this particular partner pose a risk to project delivery, which may delay the implementation of those work packages that BWI is involved in. This, in turn, has the potential to impact on cross-border cooperation between the project partners. It is, however, understood that the Lead Partner is working with the BWI to ensure that it has sufficient cash flow on a quarterly basis to deliver its allocated work packages.
- The SWIM project partners identified that a key risk to cross-border cooperation was the delay associated with the partners agreeing a Collaborative Agreement (or Partnership Agreement) and a Data Sharing Agreement. It was noted that the delays associated with each partner agreeing to such arrangements have impacted on project delivery, with delays in the implementation of certain work packages. This, in turn, has impacted on the extent of cross-border cooperation between the project partners. Discussion with the SWIM project partners indicates that the two agreements have now been agreed and that the project partnership has undertaken activities to progress the project in a timely manner.

³⁷ At the outset potential constraints were identified as falling under headings such as technical, financial, organisational, economic, social, management, legal, timing or environmental.

3.10 Contribution of the Priority Axis to Policy Objectives

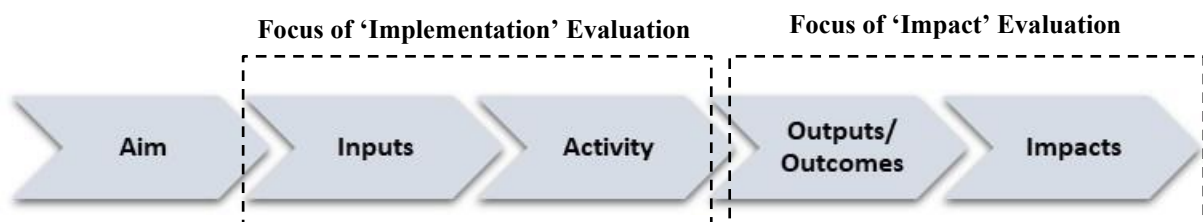
Each of the project partnerships has demonstrated that their respective projects are closely aligned (where applicable) with EU 2020 objectives; the Atlantic Strategy and the EU’s horizontal principles of equality and sustainable development. In addition, each of the project partnerships has demonstrated that their respective projects are closely aligned with a number of key EU directives and regional strategies (where applicable). For example:

Objective 2.1	<ul style="list-style-type: none"> • EU 2020 Strategy • EU Birds and Habitats Directive • EU Biodiversity Strategy • The Prioritised Action Frameworks (PAFs) of the three countries and in particular selected protected sites and species of cross-border relevance
Objective 2.2	<ul style="list-style-type: none"> • EU Atlantic Strategy and Action Plan • Marine Strategy Framework Directive • EU Marine strategies
Objective 2.3	<ul style="list-style-type: none"> • EU Water Framework Directive
Objective 2.4	<ul style="list-style-type: none"> • EU Water Framework Directive (including integrated river basin management plans)

3.11 Recommendations

1. By way of aiding post-project evaluation, SEUPB should ensure that all objectives, outputs and result indicators established for all future programmes adhere to the ‘SMART’ criteria.
2. The ‘logic chain’ to Evaluation illustrates the intrinsic linkages between an intervention’s aims, inputs, activities, outputs and outcomes (as depicted in Figure 3.1). However, the Evaluation Team understands that SEUPB has commissioned two separate evaluations – an ‘Implementation’ Evaluation and ‘Impact’ Evaluation - which focus on assessing the progress made by the Priority (and projects supported therein) at different stages of the logic chain.

Figure 3.1: The logic chain to Evaluation



However, given the interlinkages that exist between each stage of the logic chain, the Evaluation Team is of the view that a more rounded, holistic approach should be taken to Evaluation which would require the assessment of the implementation and impact made by the Priority axis as part of one evaluation. For example, in a scenario in which an intervention does not achieve its anticipated outputs/outcomes or impacts, this would naturally lead to the question as to why such a scenario arose. Based on the logic chain to Evaluation, such a scenario could have arisen as a result of the implementation of the activities of the intervention which, in turn, may have been influenced by the scale and quality of inputs utilised to deliver the activities. Therefore, any rationalisation as to why an intervention’s outturns are achieved (or otherwise) requires a ‘joined-up’ approach to Evaluation focused on each stage of the logic chain.