



Marine Institute
Foras na Mara

New Connections III: Exploring Ireland's International Marine Research Partnerships

A Review of Irish Participation
in EU Marine Research
Projects 2014-2016



January 2017

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“to undertake, to co-ordinate, to promote and to assist in marine research and development and to provide such services related to research and development that, in the opinion of the Institute, will promote economic development and create employment and protect the marine environment”

Marine Institute Act - 1991

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It should also be noted that as projects evolve, some original partners may leave the project partnership, sometimes to be replaced by others, sometimes not, new partners may join and SME partners may merge or be taken over by other SMEs. You are advised, therefore, to consult the relevant project website for up-to-date information.

Where appropriate, project descriptions are copied from the project website.

New Connections III

Exploring Ireland's International Marine
Research Partnerships

A Directory of Ireland's International Marine Research
Projects 2014-2016

January 2017







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Foreword



This report, New Connections III (2014-2016), complements its predecessors New Connections I and II (2007-2013). Together these directories illustrate the increasing success of the Irish marine research community

in competitive EU funded programmes and in H2020 in particular. Over the past decade, more than 120 Irish marine research centres, marine-related SMEs and public bodies participated in almost 300 collaborative projects drawing down over €100 million in EU grant-aid. Since 2014, 41 Irish marine participating organisations have successfully partnered in 77 marine-related projects bringing a minimum of €29.7 million in EU grant-aid to Ireland. Our competitive record represents 7% of the total available drawdown for Ireland for a range of research, development and innovation projects, well in excess of the *juste retour* principle.

On the policy front, the EU's Blue Growth Agenda and the resultant EU Atlantic Action Plan (together with parallel initiatives such as the Galway Statement on Atlantic Ocean Cooperation) are closely aligned to the National Marine Research and Innovation Strategy 2021. The publication of the national Integrated Marine Plan for Ireland (Harnessing Our Ocean Wealth) in 2012 put the marine economy firmly on the national agenda. Irish researchers and SMEs featured here are at the forefront of EU research cooperation and are key players in realising the full potential of Ireland's marine resource.

The project profiles in New Connections III are particularly welcome as they show the breadth and scale of marine-related research, training and innovation being undertaken in Ireland. We are building on key national infrastructural investments (e.g. R.V. Celtic Explorer & Celtic Voyager, ROV Holland, I-ROV & the MRE ROV, SmartBay test bed, LIR National Ocean Test Facility, iMARL observatory), domain expertise and SFI centres (e.g. MaREI, iCrag and Beacon) to address future global and societal challenges. These issues include climate change impacts, anthropogenic pollution of our seas, population growth predictions, as well as emerging opportunities for new knowledge-based products and services enabled by technologies in areas such as advanced marine technology, renewable ocean energy, the Digital Ocean, marine biotechnology & the bioeconomy.

For the next phase of EU funding instruments, we have a unique opportunity to evolve marine research capacity in Ireland, by the collaboration and integration of international expertise from areas previously unconnected to the marine sector. This is the ambitious challenge we are setting ourselves as a nation with 220 million acres under the sea - I look forward to seeing the results of those endeavours in the coming years.

Peter Heffernan, PhD, MRIA
Chief Executive - Marine Institute
January 2017



Overview

The purpose of this report, *New Connections III**, is to present the Irish participation in European Union (EU) funded and co-funded collaborative marine-related projects during the financial period 2014-2016, providing profiles of the 77 projects funded during this period.

Over the past decade, more than 120 Irish marine research centres, marine-related SMEs and public bodies participated in almost 300 collaborative projects drawing down over €100 million in EU grant-aid. Since 2014, 41 Irish marine research centres have successfully partnered in marine-related projects worth over €400 million, bringing a minimum of €29.7 million in EU grant-aid to Ireland. This illustrates a very vibrant participation of Irish marine research institutes and knowledge-based SMEs in EU co-funded programmes.

For the purposes of this report, Irish participation in marine-related projects in six EU funded programmes (Table 1.1) are reviewed. Thereafter, each Programme active during the 2014 to 2016 period is reviewed separately, as they are not strictly speaking comparable, given different priorities, eligibility and partnership rules.

Table 1.1 EU Grant-aid received by Irish partners from EU-funded and co-funded marine related projects between 2014 and 2016

EU Programme	Number of projects	Total value (in million euros)
Horizon 2020	48	24.9
INTERREG-V	6	2.7
COST	2	0.2
ERASMUS+	19	0.2
LIFE+	1	0.4
European Regional Development Fund (ERDF)	1	1.3
TOTAL	77	29.7

*Projects funded during the period 2007-2010 are profiled in *New Connections I* (2011) and projects funded during the period 2011-2013 are profiled in *New Connections II* (2014).



Overview

1.1. What is the distribution of funding between different types of organisations?

In the last two versions of the New Connections publication (2007-2014), SMEs have made up half of the organisations receiving funding from EU funding initiatives. The SME sector was the main recipient of EU grant-aid in the projects reviewed here (46%), followed closely by third level institutes (29%) and public bodies (20%). This sustained SME sector performance is encouraging, particularly as it is mainly catered for in the European Commission's (EC) 7th Framework Programme (FP7) and Horizon 2020 Programme (Figure 1.1).

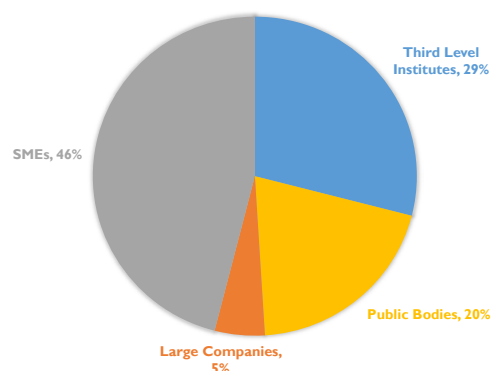


Figure 1.1 Organisation type of the Irish participants (2014-2016)

1.2 What is the regional distribution of funding?

A breakdown of grant-aid, based on the location of the recipient partner, rather than the geographical scope of the project (e.g. Irish Sea, Celtic Sea), indicates that the Dublin region accounted for half of the funding (49%). A large portion of this was for universities and public research institutes, with the remaining organisations being divided equally across the rest of the country (Figure 1.2).

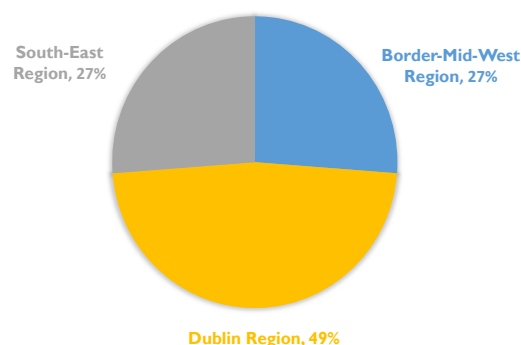


Figure 1.2 Regional distribution of grant-aid (2014-2016)

1.3 What is the typical level of grant-aid received?

From 2014-2016, the Horizon 2020 programme offered the highest levels of grant-aid to Irish participants. Most grants were between €100,000 and €500,000 per partner, but several grants exceeded €750,000 (Figure 1.3). Two INTERREG projects led to individual Irish partners receiving a total grant-aid exceeding €250,000.

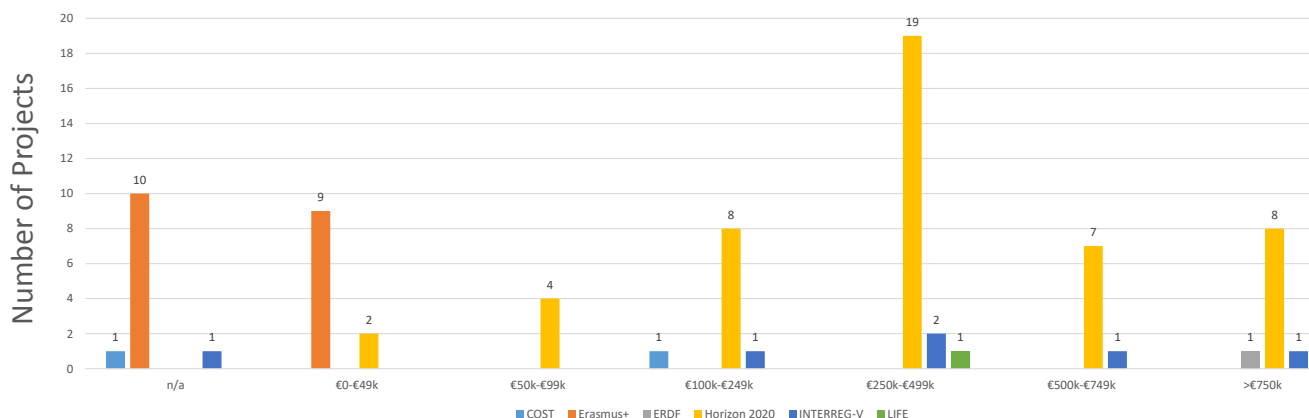


Figure 1.3 Total grant-aid received by Ireland, per project



Overview

1.4 What countries does Ireland cooperate with?

Irish participants cooperate with partners from 48 countries (Figure 1.4). Not surprisingly, cooperation with our nearest neighbours and Atlantic countries dominates, reflecting common interests and geographical perspectives.

1.5 What is the job creation potential of the received grant-aid?

A brief survey of job creation and capacity building indicated that 22 jobs were created as a direct result of Ireland's involvement in marine projects (Table 1.2).

A more detailed survey would show an increase in these values, as response rates were low.

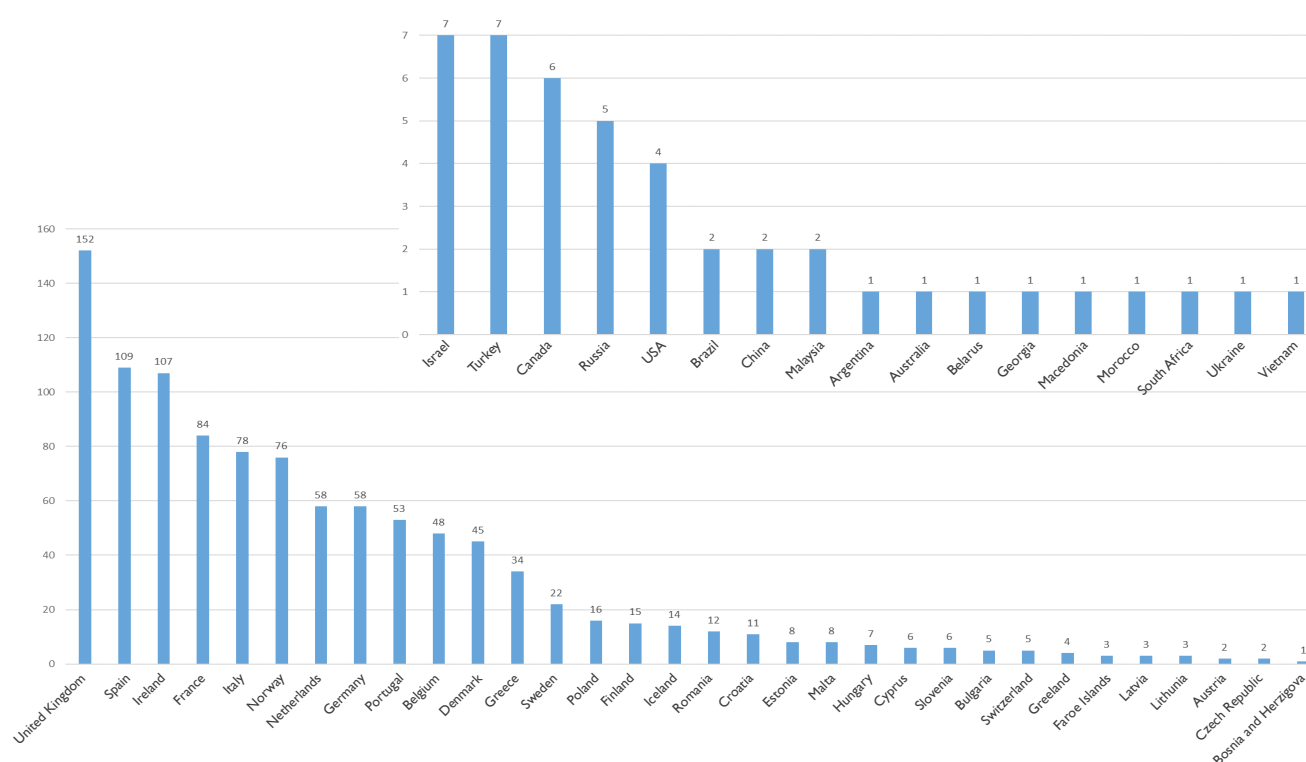


Figure 1.4 Countries (in Europe [bottom] and the rest of the world [top]) with whom Ireland cooperated in EU funded and co-funded marine related projects 2014-2016

Table 1.2 New research capacity created as a result of Irish involvement in European marine projects between 2014 and 2016, in terms of full term equivalent roles

	Third Level Institutes	Public Bodies	SMEs	Total
Researchers	9.5	-	-	9.5
Research Assistants	1	-	-	1
Technicians	-	1	-	1
Project Manager	1	2	2	5
Admininstrator / Intern	3	0.5	-	3.5
PhD Scholarships	1	1	-	2
Total	15.5	4.5	2	22



Overview

FACTS AND FIGURES AT YOUR FINGERTIPS

77

Total number of marine related projects with Irish participation

41

Total number of Irish participating organisations

€29.7
MILLION

Total drawdown in grant-aid by Irish participants

HIGHEST
PROJECT
VALUE

Trinity College Dublin
(€2.5 million for
NORfish)

TOP 5
PARTNER
COUNTRIES

UK, Spain, France
Italy, Norway

LEADING
ORGANISATIONS

Leading SME:
AquaTT (€2.3 million)
Leading Public Body:
Marine Institute (€4.5 million)

MOST
PROJECTS

Marine Institute
(13 projects)

HORIZON 2020

48

Marine-related projects with Irish participants

12

Irish led Projects

27

Irish organisations involved: 15 SMEs, two public bodies, eight third level institutes and two large companies

€24.9
MILLION

Drawdown in EU grant-aid by Irish participants

5

Number of Irish partnerships receiving over €1 million in grant-aid

7%

of the total value of projects with Irish involvement drawn down to Ireland



Overview

INTERREG-V

6

Marine-related projects with Irish participants

1

Irish led Projects

TOP PERFORMER

SmartBay Ireland Ltd (€1.3 million)

€2.7 MILLION

Drawdown in EU grant-aid by Irish participants

6

Irish organisations involved: two SMEs, two public bodies and two third level institutes

HIGHEST INDIVIDUAL AWARDS

Donegal County Council (WaterPro €279,000 and HERICOAST €252,000)

COST

2

Marine-related projects with Irish participants

1

Participating third level institute (Trinity College Dublin)

1

Participating SME (The Archaeological Diving Company)

ERASMUS+

19

Marine-related projects with Irish participation

11

Participating Irish organisations

LIFE+

€0.4 MILLION

Drawdown in EU grant-aid by a single Irish organisation (BirdWatch International)

ERDF

€1.3 MILLION

Drawdown in EU grant-aid by a single Irish organisation (Trinity College Dublin)

HORIZON 2020 PROJECT PROFILES

“Science is competitive, aggressive, demanding. It is also imaginative, inspiring, uplifting”

Vera Rubin, American Astronomer (1928-2016)

Running from 2014 to 2020 with a budget approaching €80 billion, Horizon 2020 is the EU's programme for research and innovation and is part of the drive to create new growth and jobs in Europe.

Horizon 2020 plays a key role in achieving the EC's growth strategy: investing in future jobs and growth, addressing people's concerns about their livelihoods, safety and environment and strengthening the EU's global position in research, innovation and technology.



Marine Institute
Foras na Mara



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Horizon 2020

2.1 Horizon 2020

Horizon 2020 is the research and innovation programme for the period 2014-2020 and will implement the EU's Innovation Union policy. It has a budget of almost €80 billion, and is designed to drive economic growth and create jobs, as well as secure Europe's global competitiveness.

Horizon 2020 combines all previous research and development programmes (the 7th Framework Programme, the Competitiveness and Innovation Framework Programme and the European Institute of Innovation and Technology) under one initiative, and consists of three pillars:

• **Excellent Science:** has a dedicated budget of approximately €25 billion to strengthen the position of the EU science base and to make the research and innovation system more competitive globally. Pillar I comprises:

- European Research Council
- Marie Skłodowska-Curie Actions (MSCA)
- Future and Emerging Technologies
- Research Infrastructures

• **Industrial Leadership:** has been provided a budget of €17 billion designed to speed up the development of the technologies and innovations necessary for future technology and to help innovative European SMEs to grow through access to finance and the provision of other support services. Pillar II comprises:

- Leadership in enabling and industrial technologies, including Earth Observations and Nanotechnologies, Advanced Materials and Production (NMP)
- Access to risk finance
- Innovation in SMEs

• **Societal Challenges:** will invest more than €30 billion in addressing the major societal challenges facing the EU.

These include:

- Health, demographic change and wellbeing
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy (includes Blue Growth and Sustainable Food Security)
- Secure, clean and efficient energy (includes Competitive low-carbon energy)
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials (including biodiversity and ecosystems, and water)
- Europe in a changing world - inclusive, innovative and reflective societies (including New Ideas, Strategies and Governance Structures for Europe)
- Secure societies - protecting freedom and security of Europe and its citizens

2.2 How are Irish researchers performing in Horizon 2020?

Irish researchers and SMEs led or are leading 12 marine-related projects running under Horizon 2020. More than €24.9 million has already been secured by them in grant-aid under Horizon 2020.

2.3 What Irish marine research groups and SMEs are participating in Horizon 2020?

Participants currently come from 15 SMEs, eight third level institutes (including universities, institutes of technology), two public research institutes and two large companies (Table 2.1).

Of the €24.9 million awarded to Irish partners: 50% went to the higher education sector; 24% to SMEs, 18% to public bodies and research institutes and almost 7% to large companies (Figure 2.1).



Horizon 2020

Table 2.1 Irish organisations participating in marine-related Horizon 2020 projects

SMEs	Third Level Institute	Others
<ul style="list-style-type: none"> • AquaTT • Daithi O'Murchu Marine Research Station (DOMMRS) • DARE Technology • DP Energy • Éirecomposites Teoranta • Gavin & Doherty Geosolutions Ltd • Irish Observer Network Ltd • Marine Law and Ocean Policy Research Services Ltd • Q-Validus Ltd • SLR Environmental Consulting (Ireland) Ltd • SmartBay Ireland • Sonarsim Ltd • T.E Laboratories Ltd • Technology from Ideas Ltd • Vet-Aqua International 	<p>Universities</p> <ul style="list-style-type: none"> • Dublin City University (DCU) • NUI-Galway (NUIG) • NUI-Maynooth (NUIM) • Trinity College Dublin (TCD) • University College Cork (UCC) • University College Dublin (UCD) • University of Limerick (UL) <p>Institutes of Technology</p> <ul style="list-style-type: none"> • Waterford Institute of Technology (WIT) 	<p>Large Companies</p> <ul style="list-style-type: none"> • EirGrid PLC • OpenHydro Group Limited <p>Public Bodies</p> <ul style="list-style-type: none"> • Bord Iascaigh Mhara (BIM) • Marine Institute (MI)

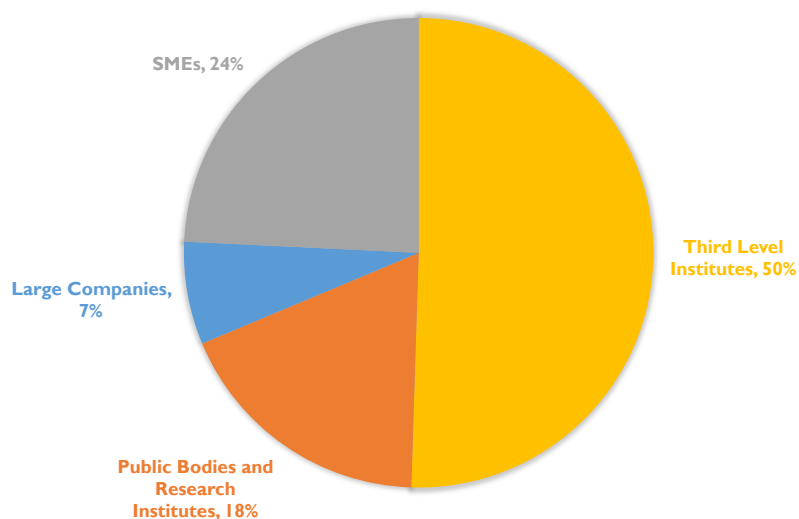


Figure 2.1 Allocation (%) of the €24.9 million Horizon 2020 grant-aid to Irish marine participants according to recipient type

Horizon 2020

2.4 In what research areas did Ireland perform best?

Based on the number of successful Horizon 2020 marine-related projects with Irish participation, Irish researchers performed best in Blue Growth (14 projects) and research infrastructure (10 projects), followed by food security, including fisheries (seven projects) and energy (five projects) (Figure 2.2).

Based on the total value of grant-aid (Figure 2.3), Irish marine researchers performed best in Blue Growth topics, contributing to projects worth €126.9 million.

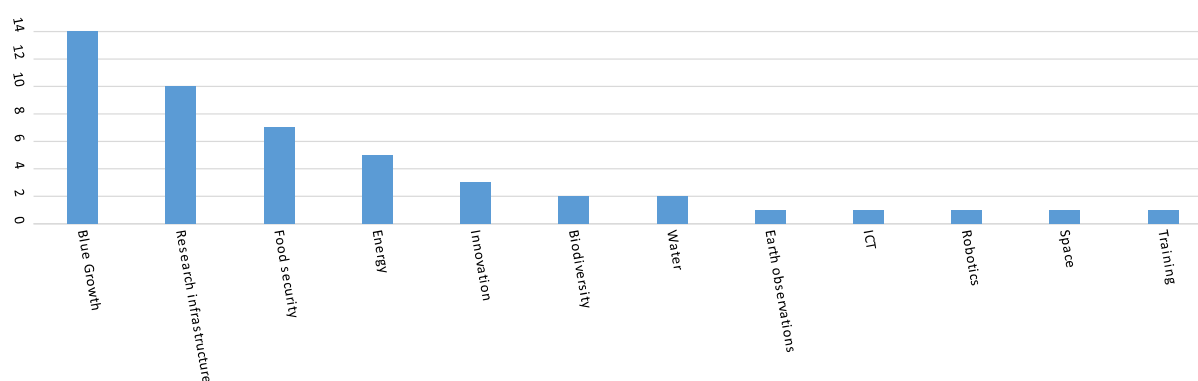


Figure 2.2 Number of Horizon 2020 funded marine-related research projects with Irish participation, by sector

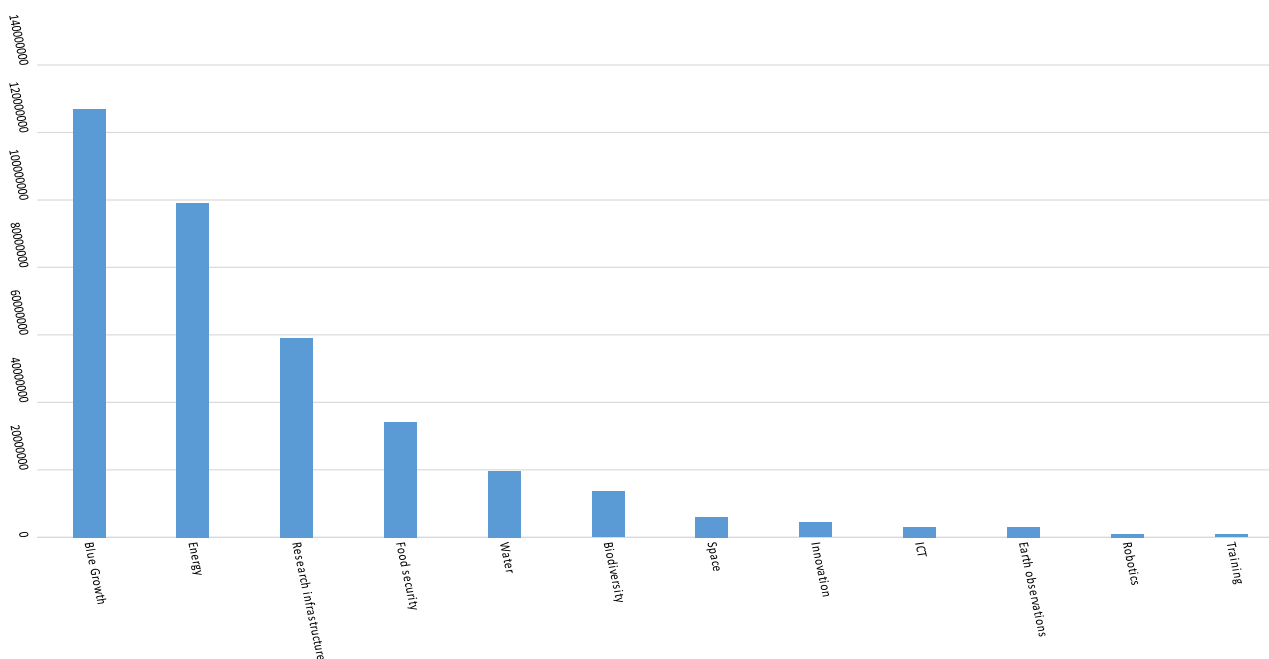


Figure 2.3 Value of Horizon 2020 funded marine-related research projects with Irish participation, by sector



Horizon 2020

The individual awards in grant-aid to Irish partners in Horizon 2020 projects ranged from €25,000 to over €2.5 million, with the NorFISH project being worth €2.5 million to Trinity College Dublin. Most drawdown to Irish partners, however, fell into the range €250,000-€500,000 (Figure 2.4). Five Irish organisations received a total of over €750,000 in grant-aid for their participation in Horizon 2020 projects.

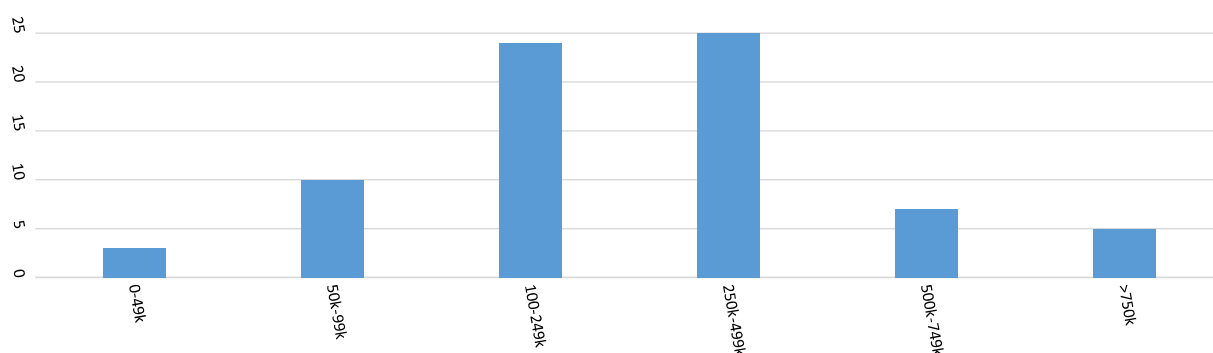


Figure 2.4 The number of projects receiving various levels of funding (€) received by Irish partners for Horizon 2020 marine-related projects

2.5 What countries did Ireland co-operate with?

Of the 48 Horizon 2020 projects in which Ireland participates, 25% were led by Ireland; eight are led by the UK; six by France and by Spain; and four by Germany and by Italy (Figure 2.5). Figure 2.6 illustrates the countries that participate in Irish-led projects.

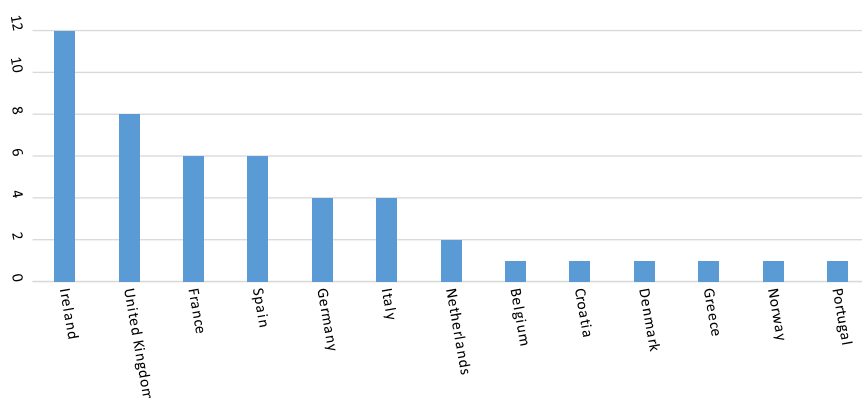


Figure 2.5 Breakdown of countries which led Horizon 2020 funded marine research projects with Irish participation.

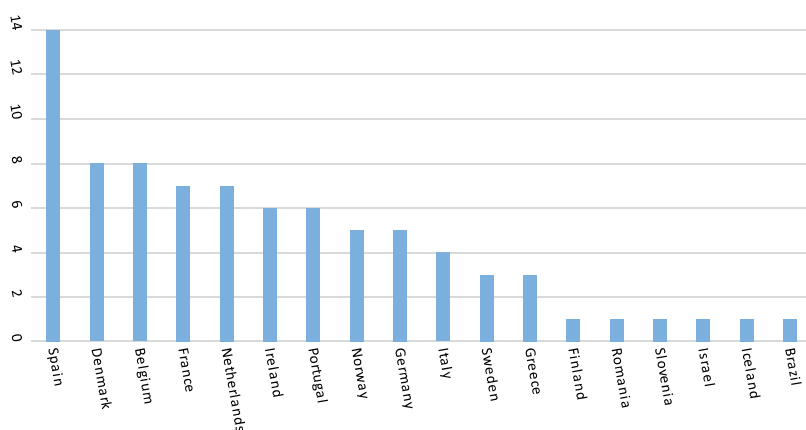


Figure 2.6. Partner countries included in Irish led Horizon 2020 marine-related projects, excluding Irish partners

Horizon 2020

2.6 Who are the top Irish marine Horizon 2020 performers?

Performance can be gauged by (a) who leads a Horizon 2020 project; (b) the total number of projects an organisation participates in; or, (c) the total grant-aid accumulated by a particular organisation or institute.

- 12 Horizon 2020 research projects were led by Irish organisations (Table 2.3). University College Cork leads three projects and Trinity College Dublin leads two projects.
- On the basis of the number of projects in which an organisation participates, the Marine Institute leads with 13 projects, followed by University College Cork (11 projects), the National University of Ireland, Galway (nine projects), AquaTT (eight projects),

SmartBay Ireland (five projects) and Trinity College Dublin (three projects).

- On the basis of the total value of the grant-aid won, University College Cork leads with €4.6 million, followed by the Marine Institute (€4.5 million), Trinity College Dublin (€3.1 million), the National University of Ireland, Galway (€2.8 million), and AquaTT (€2.3 million).

The highest individual grants to Irish participants were: Trinity College Dublin (NorFISH €2.5 million), OpenHydro Group Ltd (OCTTIC, €1.7 million), the Marine Institute (AORA, €1.3 million) and University College Cork (MARINET2, €1.1 million).

Table 2.3 Marine-related Horizon 2020 projects and support actions led by Irish organisations

ACRONYM	Lead Partner	No. of partners
AORA	Marine Institute	9
AquaSmart	Waterford Institute of Technology	8
COLUMBUS	Bord Iascaigh Mhara	27
ICONN	Trinity College Dublin	2
MARIBE	University College Cork	8
MARINERGI	University College Cork	13
MARINET2	University College Cork	39
NorFISH	Trinity College Dublin	1
OCTTIC	OpenHydro Group Ltd	5
SEAMETEC	Éirecomposites Teoranta	2
SME Instruments		
Hi-Gen	Dare Technology	1
SINANN	SonarSIM Ltd	1



Notes



AORA – The Atlantic Ocean Research Alliance

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-14-2014

Funding Scheme:

CSA – Coordination and Support Action

Project Duration:

1 March 2015 - 29 February 2020

Total Project Value:

€4,295,137.50

EU Grant-Aid:

€3,447,000

Funding to Ireland:

€1,265,000

Website:

www.atlanticresource.org/aora

The objective of **AORA** is to provide scientific, technical and logistical support to the EC in developing and implementing trans-Atlantic marine research cooperation between the EU, the United States of America and Canada. The Coordination and Support Action (CSA) is carried out within the framework of the AORA as outlined in the Galway Statement on Atlantic Ocean Cooperation (May 2013). The hallmark of this proposal is that it is flexible, responsive, inclusive, efficient, innovative, value-adding and supportive.

To support the Commission in negotiations with the USA and Canada on trans-Atlantic ocean research cooperation, the AORA support and governance structure comprises a Secretariat and Management Team, guided by a high-level Operational Board, representative of the major European marine research programming and funding organisations as well as those of the USA and Canada.

The CSA, reporting to the Commission representatives of the AORA, will be responsible for the organisation of expert and stakeholder meetings,

workshops and conferences required by AORA and related to identified research priorities (e.g. marine ecosystem-approach, observing systems, marine biotechnology, aquaculture, ocean literacy, seabed and benthic habitat mapping), support actions (e.g. shared access to infrastructure, dissemination and knowledge transfer, establishment of a knowledge sharing platform) and other initiatives as they arise, taking into account related Horizon 2020 supported trans-Atlantic projects (e.g. BGI, BG8 and BG13) and on-going national and EU collaborative projects (e.g. FP7).



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Project Partners

Project Coordinator	Marine Institute - Ireland
Denmark	International Council for the Exploration of the Sea
France	Institut Français de Recherche Pour l'Exploitation de la Mer
Spain	Plataforma Oceánica de Canarias
Portugal	Ciência Viva
United Kingdom	World Ocean Limited
Norway	Havforskningsinstituttet
Iceland	The Icelandic Centre for Research
Brazil	Ministério da Ciência, Tecnologia e Inovação



AQUACROSS – Knowledge, assessment, and management for AQUatic biodiversity and ecosystem services aCROSS EU policies

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SC5-06-2014

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 June 2015 - 30 November 2018

Total Project Value:

€6,913,116.25

EU Grant-Aid:

€6,343,613.75

Funding to Ireland:

€287,500

Website:
www.aquacross.eu


AQUACROSS aims to support EU efforts to enhance the resilience and stop the loss of biodiversity of aquatic ecosystems as well as to ensure the ongoing and future provision of aquatic ecosystem services. It focuses on advancing the knowledge base and application of the ecosystem-based management concept for aquatic ecosystems by developing cost effective measures and integrated management practices.

AQUACROSS considers the EU policy framework (i.e. goals, concepts, time frames) for aquatic ecosystems and builds on knowledge stemming from different sources (i.e. WISE, BISE, Member State reporting, modelling) to develop innovative management tools, concepts, and business models

(i.e. indicators, maps, ecosystem assessments, participatory approaches, mechanisms for promoting the delivery of ecosystem services) for aquatic ecosystems at various scales. It thereby provides an unprecedented effort to unify policy concepts, knowledge, and management concepts of freshwater, coastal, and marine ecosystems to support the cost-effective achievement of the targets set out by the EU 2020 Biodiversity Strategy.

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Project Partners

Project Coordinator	Ecologic Institute - Germany
Germany	Research Association Berlin
France	United Nations Educational, Scientific and Cultural Organization ACTeon Environment
Netherlands	Stichting Dienst Landbouwkundig Onderzoek
Spain	Instituto IMDEA Agua BC3 Basque Centre for Climate Change
Austria	University of Natural Resources and Life Sciences, Vienna
Portugal	Universidade do Aveiro
Belgium	Royal Belgian Institute of Natural Sciences International Union for Conservation of Nature
Ireland	University College Cork
Sweden	Stockholm University
Romania	Institutul National de Cercetare Dezvoltare Delta Dunarii
Switzerland	Swiss Federal Institute of Aquatic Science and Technology
UK	Centre for Environment, Fisheries and Aquaculture Science University of Wales University of Aberdeen Marine Scotland University of Liverpool



AQUAEXCEL²⁰²⁰ – AQUAculture infrastructures for EXCELlence in European fish research towards 2020

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRAIA-I-2014-2015

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 October 2015 - 30 September 2020

Total Project Value:

€9,708,867

EU Grant-Aid:

€9,708,867

Funding to Ireland:

€228,937.50

Website:

www.aquaexcel2020.eu

AQUAEXCEL²⁰²⁰ aims to integrate top class European aquaculture research facilities of very diverse nature, covering all relevant scientific fields for research and innovation in aquaculture, from genetics to technology through pathology, physiology and nutrition. It has put in place a user-friendly one-stop access to high-quality services and resources from 39 aquaculture research infrastructures (RIs) in 11 European countries covering both established and new aquaculture species, all types of experimental systems as well as sequencing facilities. Giving a prominent place to EU aquaculture industry research needs through a

strong involvement of the European Aquaculture Technology and Innovation Platform, it will enable excellent research and sustainable innovation to both public and private sector. It will benefit from the support of the ESFRI infrastructures EMBRC (Marine Biology) and ELIXIR (Life Sciences data) and bring aquaculture research specificities to their agendas.



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United Kingdom	The University of Stirling
Spain	Agencia Estatal Consejo Superior de Investigaciones Científicas Universidad de Las Palmas de Gran Canaria Instituto Español de Oceanografía
Greece	Hellenic Centre for Marine Research
Hungary	Nemzeti Agrárkutatási és Innovációs Központ, Halászati Kutatóintézet
France	Institut Français de Recherche Pour l'Exploitation de la Mer INRA Transfert S.A. Université de Lorraine
Czech Republic	Jihočeská univerzita v Českých Budějovicích
Netherlands	Stichting Dienst Landbouwkundig Onderzoek Wageningen University
Belgium	Ghent University European Aquaculture Technology and Innovation Platform
Ireland	AquaTT UETP Ltd
Denmark	Danmarks Tekniske Universitet
Portugal	Centro de Ciências do Mar do Algarve



AQUASMART – Aquaculture smart and open data analytics as a service

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme: ICT-15-2014

Funding Scheme:

 IA – Innovation Action
Collaborative Project

Project Duration:

2 February 2015 - 1 February 2017

Total Project Value:

€3,109,077.50

EU Grant-Aid:

€2,717,432.37

Funding to Ireland:

€1,176,375

Website:
www.aquasmartdata.eu


AQUASMART's objective is to enhance innovation capacity to the aquaculture sector, by addressing the problem of global knowledge access and data exchanges between aquaculture companies and its related stakeholders. Offering aquaculture production companies the tools to access and share global open data and strong data analytics in a multi-lingual, multi-sector and cross-border setting strengthens their competitiveness and growth potential. Experienced research institutes that participate in the consortium as technology suppliers will transfer their solutions to the aquaculture stakeholders in the consortium. The data collected in the AQUASMART open data cloud is suitable to be reused in other industrial domains if needed, (e.g., environmental or transportation data), providing a cross-sectorial setting to the provided solution. The AQUASMART multi-lingual adaptive eTraining program, assures that staff receive the proper training and assures the transfer of the AQUASMART innovations are sustainable. AQUASMART will have a very positive impact on the environment by helping companies to

better estimate daily biomass, optimise feeding rates and management practices. This will improve the Feed Conversion Rate (FCR), which means less feed will be provided to the fish and therefore, less organic material and energy are consumed to produce the feed. AQUASMART also helps companies to reduce mortalities, which will have a further positive impact on environment. On the social level, AQUASMART contributes to the development of highly skilled workforce through online training programmes.

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Project Partners

Project Coordinator	Waterford Institute of Technology - Ireland
Greece	Olokliromena Pliroforiaka Sistimata Grammos S.A.
Portugal	Uninova-Instituto de Desenvolvimento de Novas Tecnologias- Associacao
Israel	Ardag Cooperative Agricultural Society Ltd
Spain	Niordseas SL
Ireland	Q-Validus Ltd
Slovenia	Institut Jozef Stefan

AquaSpace – Ecosystem approach to making space for aquaculture

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SFS-11a-2014

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 March 2015 - 28 February 2018

Total Project Value:

€3,625,581.25

EU Grant-Aid:

€2,989,814.50

Funding to Ireland:

€200,000

Website:
www.aquaspace-h2020.eu

The **AquaSpace** project has the goal of providing increased space for aquaculture to allow increased production. The project will achieve this by identifying the key constraints experienced by aquaculture development in a wide range of contexts and aquaculture types, considering all relevant factors and advised by a Reference User Group. AquaSpace will then map these constraints against a wide variety of tools/methods that have already been developed in national and EU projects for spatial planning purposes, including some that have been designed specifically for aquaculture. In the freshwater sector only, AquaSpace

will also consider ecosystem services provided by aquaculture that are relevant to integrated catchment planning and management. AquaSpace will assess appropriate tools using a common process to facilitate synthesis and comparison at 16 case study sites having a variety of scales, aquaculture at different trophic levels with different environmental interactions and most importantly with a range of key space-related development constraints as defined by local stakeholders. This case study approach will generate a large amount of information and is allocated about a third of the project's resources.



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Project Partners

Project Coordinator	The Scottish Association for Marine Science - United Kingdom
United Kingdom	Agrifood and Biosciences Institute The James Hutton Institute Longline Environment Ltd; Marine Scotland
Spain	Fundación AZTI Agencia Estatal Consejo Superior de Investigaciones Científicas
Italy	Bluefarm SRL Food and Agriculture Organization of the United Nations
Norway	Christian Michelsen Research AS Havforskningsinstituttet
Hungary	Nemzeti Agrárkutatási és Innovációs Központ Biharugrai Halgazdaság Mezőgazdasági Termelői Ertekezési Egyesület
France	Institut Français de Recherche Pour l'Exploitation de la Mer
Portugal	Sagremarisco-Viveiros de Marisco Lda
Germany	Johann Heinrich von Thünen-Institut. Bundesforschungsinstitut für Ländliche Räume, Wald und Fischerei
Ireland	University College Cork
Greece	Panepistimio Kritis
Canada	Dalhousie University
China	Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences
Australia	The University of Western Australia



AtlantOS – Optimizing and enhancing the Integrated Atlantic Ocean Observing System

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-08-2014

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 April 2015 - 30 June 2019

Total Project Value:

€20,652,921

EU Grant-Aid:

€20,652,921

Funding to Ireland:

€682,125

Website:
www.atlantos-h2020.eu

AtlantOS will fill existing in-situ observing system gaps and will ensure that data is readily accessible and useable. AtlantOS will demonstrate the utility of integrating in-situ and Earth observing satellite based observations towards informing a wide range of sectors using the Copernicus Marine Monitoring Services and the European Marine Observation and Data Network and connect them with similar activities around the Atlantic.

AtlantOS will support activities to share, integrate and standardise in-situ observations, reduce the cost by network optimisation and deployment of new technologies, and increase the competitiveness of European industries, and particularly of the small and medium enterprises of the marine sector. AtlantOS will promote innovation, documentation and exploitation of innovative observing systems. All AtlantOS work packages

will strengthen the trans-Atlantic collaboration, through close interaction with partner institutions from Canada, USA, and the South Atlantic region. AtlantOS will develop a results-oriented dialogue with key stakeholders' communities to enable a meaningful exchange between the products and services that the Integrated Atlantic Ocean Observing System (IAOOS) can deliver and the demands and needs of the stakeholder communities. Finally, AtlantOS will establish a structured dialogue with funding bodies, including the EC, USA, Canada and other countries to ensure sustainability and adequate growth of IAOOS.



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Project Partners

Project Coordinator	GEOMAR Helmholtz Zentrum für Ozeanforschung Kiel - Germany
Belgium	GIE Eumetnet Flanders Marine Institute European Global Ocean Observing System
Faroe Islands	Havstovan
Italy	Centro Euro Mediterraneo sui Cambiamenti Climatici S.c.a r.l. Alma Mater Studiorum-Università di Bologna ETT S.p.A. - Electronic Technology Team CLU Srl
Croatia	Bruncin
Canada	Dalhousie University MEOPAR Incorporated
Brazil	Ministério da Ciência, Tecnologia e Inovação
United States	Woods Hole Oceanographic Institution
South Africa	Council for Scientific and Industrial Research

AtlantOS – Optimizing and enhancing the Integrated Atlantic Ocean Observing System

Project Partners	
Netherlands	Stichting Koninklijk Nederlands Instituut Voor Zeeonderzoek MARIS B.V.
United Kingdom	Natural Environment Research Council Sir Alister Hardy Foundation for Ocean Science The Scottish Association for Marine Science MET Office University of Exeter Oxford University University of Plymouth European Centre for Medium-Range Weather Forecasts Plymouth Marine Laboratory Seascope Consultants Ltd (EMODNET Secretariat) Blue Lobster Ltd
Ireland	Marine Institute; Daithi O'Murchu Marine Research Station Ltd.; T.E. Laboratories Ltd
Germany	Universitat Bremen Konsortium Deutsche Meeresforschung e.V. Alfred Wegener Institut Helmholtz Zentrum für Polar- und Meeresforschung RIBOCON GMBH Develogic GmbH CONTROS Systems & Solutions GmbH
Denmark	Danmarks Meteorologiske Institut International Council for the Exploration of the Sea Danmarks Tekniske Universitet
France	Centre National de la Recherche Scientifique Universite Pierre et Marie Curie - Paris 6 Institut de Recherche pour le Dévelop., Lab. d'Etudes en Géoph. et Océanog. Spatiales Collecte Localisation Satellites Institute of Electrical and Electronics Engineers Inc Institut Français de Recherche Pour l'Exploitation de la Mer Mercator Ocean United Nations Educational, Scientific and Cultural Organization Euro Argo ERIC NKE ACRI-ST
Poland	Institute of Oceanology Polish Academy of Sciences
Norway	Havforskningsinstituttet Universitetet i Bergen Norsk Institutt for Vannforskning
Spain	Agencia Estatal Consejo Superior de Investigaciones Científicas Plataforma Oceánica de Canarias Instituto Español de Oceanografía
Portugal	University of the Azores Centro Interdisciplinar de Investigação Marinha e Ambiental Universidade do Algarve



ATLAS – A Trans-Atlantic Assessment and deep-water ecosystem-based spatial management plan for Europe

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-01-2015

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 May 2016 - 30 April 2020

Total Project Value:

€9,207,915.61

EU Grant-Aid:

€9,100,316.86

Funding to Ireland:

€1,021,991.25

Website:
www.eu-atlas.org


ATLAS creates a dynamic new partnership between multinational industries, SMEs, governments and academia to assess the Atlantic's deep-sea ecosystems and marine genetic resources to create the integrated and adaptive planning products needed for sustainable Blue Growth. ATLAS will gather diverse new information on sensitive Atlantic ecosystems to produce a step-change in our understanding of their connectivity, functioning and responses to future changes in human use and ocean climate. This is possible because ATLAS takes innovative approaches to its work and interweaves its objectives by placing business, policy and socioeconomic development at the forefront with science.

The ATLAS team has the track record needed to meet the project's ambitions and has already developed a programme of 25 deep-sea cruises, with more pending final decision. These cruises will study a network of 12 Case Studies spanning the Atlantic including sponge, cold-water coral, seamount and mid-ocean ridge ecosystems. The team has an unprecedented track record in policy development at national, European and international levels. An annual ATLAS Science-Policy Panel in Brussels will take the latest results and Blue Growth opportunities identified from the project directly to policy makers.

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Project Partners

Project Coordinator	The University of Edinburgh - Scotland, UK
Denmark	Aarhus Universitet University of Southern Denmark
Portugal	IMAR - Instituto do Mar Secretaria Regional do Mar, Ciência e Tecnologia
United Kingdom	British Geological Survey; Marine Scotland; Dynamic Earth; University of Oxford; University College London; University of Liverpool; Scottish Association for Marine Science; Seascope Consultants
Netherlands	Gianni Consultancy Royal Netherlands Institute for Sea Research
France	Institut Français de Recherche Pour l'Exploitation de la Mer
Germany	Universität Bremen
Belgium	Iodine
Ireland	University College Dublin National University of Ireland, Galway AquaTT UETP Ltd
Norway	The Arctic University of Norway
Spain	Instituto Español de Oceanografía
United States	University of North Carolina at Wilmington

CERES – Climate change and European aquatic RESources

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-02-2015

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 March 2016 - 29 February 2020

Total Project Value:

€5,586,851.25

EU Grant-Aid:

€5,586,851.25

Funding to Ireland:

€250,000

Website:
www.ceresproject.eu

CERES will define policy, environment, social, technological, law and environmental climate change scenarios to be tested. This will:

- Provide regionally relevant, high resolution projections of key environmental variables for European marine and freshwater ecosystems
- Integrate the resulting knowledge on changes in productivity, biology and ecology of wild and cultured animals, and 'scale up' to consequences for shellfish and fish populations
- Utilise innovative risk-assessment methodologies that encompass drivers of change, threats, expert knowledge, barriers and likely consequences if measures are not put in place
- Anticipate responses and assist in the adaptation of aquatic food production industries to underlying biophysical changes
- Consider market-level responses to changes in commodity availability because of climate change
- Formulate viable autonomous adaptation strategies within the industries and for policy to circumvent/prevent perceived risks or to access future opportunities
- Effectively communicate these findings and tools to potential end-users and relevant stakeholders



Project Partners

Project Coordinator	Universität Hamburg - Germany
Norway	Havforskningsinstituttet
Romania	Institutul National de Cercetare - Dezvoltare Delta Dunarii
Germany	Johann Heinrich von Thünen-Institut. Bundesforschungsinstitut für Ländliche Räume, Wald und Fischerei
Turkey	Mersin Üniversitesi; Kilic Deniz Ürünleri Üretimi İhracat İthalat Ve Ticaret AŞ
United Kingdom	The Secretary of State for Environment, Food and Rural Affairs.; Longline Environment Ltd; Plymouth Marine Laboratory; University of Hull
Italy	Consorzio Nazionale Interuniversitario per le Scienze del Mare
Denmark	Danmarks Tekniske Universitet
Greece	Hellenic Centre for Marine Research
Spain	Instituto Español de Oceanografía; Agencia Estatal Consejo Superior de Investigaciones Científicas
France	Institut Français de Recherche Pour l'Exploitation de la Mer
Ireland	National University of Ireland, Galway; Vet-Aqua International
Sweden	Sveriges Meteorologiska och Hydrologiska Institut
Poland	Zachodniopomorski Uniwersytet Technologiczny W Szczecinie Inskie Centrum Rybactwa Spolka Zoo
Portugal	Instituto Português do Mar e da Atmosfera Sagremarisco-Viveiros de Marisco Lda
Netherlands	Stichting Wageningen Research; Pelagic Freezer Trawler Association; Cooperative Kottvisserij Nederland UA

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COLUMBUS – Monitoring, managing and transferring marine and maritime knowledge for sustainable Blue Growth

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-11-2014

Funding Scheme:

CSA – Coordination and Support Action

Project Duration:

1 March 2015 - 28 February 2018

Total Project Value:

€3,997,488

EU Grant-Aid:

€3,997,488

Funding to Ireland:

€688,561.15

Website:
www.columbusproject.eu

The **COLUMBUS** project intends to capitalise on the EC's significant research by ensuring accessibility and uptake of research Knowledge Outputs by end-users (policy, industry, science and wider society). COLUMBUS will ensure measurable value creation from research investments contributing to sustainable Blue Growth within the timeframe of the project. Adopting proven methodologies and building on significant past work, COLUMBUS will first identify end-user needs

and priorities. It will then set about identifying and collecting "Knowledge Outputs" from past and current EC projects.

Rigorous analysis will take place to identify specific applications and end-users. Transfer will be achieved and measured through tailor-made knowledge transfer. All knowledge collected will be made accessible the pre-existing Marine Knowledge Gate.



Project Partners

Project Coordinator	Bord Iascaigh Mhara - Ireland
Ireland	AquaTT UETP Ltd SmartBay Ireland Ltd
Portugal	Fundação EurOcean
Denmark	Danmarks Tekniske Universitet; Europas Maritime Udviklings center; International Council for the Exploration of the Sea
Germany	Forschungszentrum Jülich GMBH Center of Maritime Technologies e.v.
United Kingdom	Marine South East; Centre for Environment, Fisheries and Aquaculture Science ;Aquatea Ltd; Seascope Consultants Ltd; Natural Environment Research Council
Greece	Aquark
Spain	Plataforma Oceánica de Canarias; Centro Tecnológico Del Mar - Fundacion Cetmar; Innovatec
Belgium	Vlaams Instituut Voor de Zee Vzw; Eurogoos AISBL; ECOMAR - European Council for Maritime Applied R&D Association; European Aquaculture Society
France	Université Pierre Et Marie Curie - Paris 6 Nausicaá - Société D'exploitation du Centre National de la Mer
Norway	Norges Teknisk-Naturvitenskapelige Universitet
Romania	Unitatea Executiva pentru Finantarea Invatamantului Superior; a Cercetarii, Dezvoltarii si Inovarii
Switzerland	Swiss Federal Institute of Aquatic Science and Technology

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COOP+ – Cooperation of research infrastructures to address global challenges in the environment field

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRA-SUPP-6-2014

Funding Scheme:

CSA – Coordination and Support Action

Project Duration:

1 March 2016 - 31 August 2018

Total Project Value:

€1,997,990

EU Grant-Aid:

€1,997,990

Funding to Ireland:

€121,875

Website:

www.coop-plus.eu

The general goal of **COOP+** is to strengthen the links and coordination of the European Strategy Forum on Research Infrastructures (ESFRI) Research Infrastructures (RIs) related to marine science, Arctic research and biodiversity with international counterparts and to leverage international scientific cooperation and data exchange with non-EU countries aiming at creating a common ground for the development of a global network of research infrastructures that can address global environmental challenges.

The project will be the central hub for worldwide collaboration of the RIs involved, coordinating all their common activities and fostering international agreements. As the EC communication emphasised, Global challenges are very important drivers for research and innovation, and COOP+ will

focus on them, and according to the experience in COOPEUS (FP7), will try to reinforce the cross-disciplinary view adding participants for other regions. COOP+ will use the methodology of case studies to assess the cooperation capabilities of international RIs and to learn how to cope with global environmental challenges. This cross-disciplinary and global collaboration among RIs that is required to address these challenges implies a significant effort on common practices including access and sharing of data. COOP+ will promote an open coordination framework for global cooperation, with initial participation from relevant RIs from EU, USA, Canada, Australia and Brazil; providing support to new agreements on reciprocal use or access to RI, openness and joint development of new resources including co-financing.



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Project Partners

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Italy	Istituto Nazionale di Geofisica e Vulcanologia Università degli Studi della Toscana
Finland	Finnish Meteorological Institute University of Helsinki
Sweden	EISCAT Scientific Association
Germany	Universität Bremen
Ireland	Marine Institute
France	Commissariat à l'Énergie Atomique et aux Énergies Alternatives



Co-ReSyF – Coastal waters Research Synergy Framework

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

EO-02-2015

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 January 2016 - 31 December 2018

Total Project Value:

€2,999,901.25

EU Grant-Aid:

€2,999,901.25

Funding to Ireland:

€481,100

Website:
www.co-resyf.eu


The **Co-ReSyF** project will implement a dedicated data access and processing infrastructure, with automated tools, methods and standards to support research applications using Earth Observation (EO) data for monitoring of coastal waters, leveraging on the components deployed in SenSyF (FP7 project 2012-2015). The main objective is to facilitate the access to EO data and pre-processing tools for the research community, towards the future provision of future coastal water services based on EO data. Through Co-ReSyF's collaborative front end, even novice and inexperienced researchers in EO will be able to upload their applications to the system to compose and configure processing chains for easy deployment on the cloud infrastructure. Users will be able to accelerate the development of high-performing applications taking full advantage of the scalability of resources available in the cloud framework.

Co-ReSyF functionalities and tools, optimised for distributed processing, include an EO data access catalogue, discovery and retrieval tools and as several pre-processing toolboxes for manipulating EO data. Advanced users will also be able to go further and take full control of the processing chains and algorithms by having access to the cloud back-end. They will be able to optimise their applications for fast deployment for Big Data access and processing. The Co-ReSyF capabilities will be supported and initially demonstrated by a series of early adopters that will develop new research applications on the coastal domain, guide the definition of requirements and serve as system beta testers. A competitive call has been issued within the project to further demonstrate and promote the usage of the Co-ReSyF release. These pioneering researchers will be given access not only to the platform itself, but also to extensive training material on the system and on coastal water research themes, as well as to the project's events, including the Summer School and Final Workshop.

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Project Partners

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France	ACRI-HE
United Kingdom	Argans Ltd
Portugal	Instituto Hidrografico Laboratório Nacional de Engenharia Civil
Ireland	University College Cork
United Kingdom	Natural Environment Research Council

DEMOGRAVI3 – DEMOnstration of the GRAVI3 technology – innovative gravity foundation for offshore wind

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

LCE-03-2015

Funding Scheme:

IA – Innovation Action

Project Duration:

1 January 2016 - 31 December 2019

Total Project Value:

€26,523,602.50

EU Grant-Aid:

€19,037,465.50

Funding to Ireland:

€247,625

Website:

www.demogravi3.com


DEMOGRAVI3

Offshore wind business competitiveness is strongly related to substructures and offshore logistics.

DEMOGRAVI3 addresses these areas through a very promising solution called GRAVI3. GRAVI3 is an innovative hybrid steel-concrete offshore sub-structure for transitional water depths between 35 and 60m. It will sustainably reduce the levelised cost of energy by up to 15% by combining the following vectors:

- Using three concrete caissons, with water ballast, instead of more complex and costly steel solutions and anchoring systems; using a small steel structure
 - Performing all construction and assembly onshore and towing the complete unit to the site where it is submerged with an innovative and robust method
 - Preventing the use of heavy lift vessels and reducing the level of complexity and risk of offshore operations
- GRAVI3 has undergone the typical technology development process and
- is presently at Technology Readiness Level 5. The logical next step is the demonstration at full scale in real operational conditions. The project will design, engineer, build, assemble, transport, install and demonstrate a full-scale foundation, equipped with a 2MW offshore wind turbine, in a consented and grid connected demonstration site. Additionally, the project will undertake further technology development for improved design and perform an in-depth evaluation of the technology's future industrialisation, competitiveness and bankability. The core partners are committed to bringing the technology to market with the intention to:
1. Form a company with the objective to commercialize the GRAVI3 technology
 2. Prepare themselves to take on important segments of the industrial value chain which will be put in place to move the GRAVI3 product forward
 3. Foster the use of the technology, namely in the wind farms they are developing

Project Partners

Project Coordinator	EDP Renovaveis SA - Spain
Portugal	Centre for New Energy Technologies, S.A. A. Silva Matos – Energia, SA Wavec/Offshore Renewables - Centro de Energia Offshore Associacao
Germany	Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung e.v..
Spain	Técnica y Proyectos S.A. Universidad Politecnica de Madrid Acciona Infraestructuras S.A.
Ireland	Gavin & Doherty Geosolutions Ltd
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DiscardLess – Strategies for the gradual elimination of discards in European fisheries

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SFS-09-2014

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 March 2015 - 28 February 2019

Total Project Value:

€5,551,125.25

EU Grant-Aid:

€5,000,000

Funding to Ireland:

€469,990

Website:
www.discardless.eu

DiscardLess will evaluate the impacts of discarding on the marine environment, on the economy, and across the wider society. DiscardLess will evaluate these impacts before, during and after the implementation of the landing obligation, allowing comparison between intentions and outcomes. Eliminating discards is as much a societal challenge as a fishery management one, so DiscardLess will also evaluate stakeholders' perceptions of discards. DiscardLess will describe the changes in management and the associated governance structures needed to cement the process. DiscardLess will propose approaches

to managing discards in a range of case study fisheries across Europe, encompassing differences in specific discarding issues. All these innovations will be combined in integrated Internet based interactive programs (DMS toolbox) that will help fishers to evaluate the present and future situation and to take a more qualified decision of how to adjust to the new regime. DiscardLess will also disseminate the outcomes of the project and maximise knowledge transfer across Europe through an educational environment – teaching the next generation – as well as more conventional routes.



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Project Partners

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France	Institut Français de Recherche Pour l'Exploitation de la Mer; Université de Bretagne Occidentale; Aquimer; Institut Supérieur des Sciences Agronomiques, Agroalimentaires, Horticoles et du Paysage
Spain	Instituto Español de Oceanografía; Simrad Spain SLU; Fundación AZTI; Barna SA
Norway	Universitetet i Bergen; Universitetet i Tromsø
Italy	Food and Agriculture Organization of the United Nations
United Kingdom	University of Strathclyde; Sea Fish Industry Authority Marine Scotland; Safetynet Technologies Ltd; The Secretary of State for Environment, Food and Rural Areas; TRACE Wildlife Forensics Network Limited
Denmark	Københavns Universitet; Alphafilm & Kommunikation APS
Iceland	Hampidjan HF; Matis OHF; Marel HF
Ireland	Marine Institute; Irish Observer Network Ltd
Greece	Ioanna N. Argyrou Simbouloi Epicheir Isiakos Anaptyxis Etaireia; Periorismenis Eythynis
Portugal	Instituto do Mar
Poland	Shipcon SP Zoo
Belgium	Nutrition Sciences NV; Fishfix
Canada	Memorial University of Newfoundland

EMSOdev – EMSO implementation and operation: DEvelopment of instrument module

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRADEV-3-2015

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 September 2015 - 31 August 2018

Total Project Value:

€4,529,864.98

EU Grant-Aid:

€4,298,602

Funding to Ireland:

€292,420

Website:
www.emso-eu.org


The **EMSOdev** general objective is to catalyse the full operations of the European Multidisciplinary Seafloor and water column Observatory (EMSO) distributed Research Infrastructure, through the development and deployment of the EMSO Generic Instrument Module (EGIM). EGIM will provide accurate, consistent, comparable, long-term measurements of ocean parameters, which are key to addressing urgent societal and scientific challenges (e.g. climate change and hazards). The project's objectives are to:

1. design and implement a state-of-the-art, standardised multidisciplinary EGIM, a common, harmonised, observation system
2. fully test, calibrate, validate and assess the effectiveness of this innovative module in order to ensure its maximum quality, long-term durability, and reliability
3. strengthen the data management and delivery backbone of the EMSO RI

4. promote the uptake of the project results and public-private partnerships establishing links with industry and SMEs for technology transfer.

These objectives will be achieved through:

- Research & Innovation activities focused on the design, development, test, replication and deployment of EGIMs at EMSO nodes and data management system implementation
- Communication, dissemination and exploitation activities aimed at disseminating and facilitating the uptake of the project results, and setting up activities to increase the innovation potential of EMSODEV technological output, and to explore EGIM commercialisation.

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Project Partners

Project Coordinator	Istituto Nazionale di Geofisica e Vulcanologia – Italy
France	Institut Français de Recherche Pour l'Exploitation de la Mer
Greece	Hellenic Centre for Marine Research
Spain	Agencia Estatal Consejo Superior de Investigaciones Científicas
United Kingdom	Natural Environment Research Council
Ireland	Marine Institute SLR Environmental Consulting (Ireland) Ltd
Germany	Universität Bremen
Portugal	Instituto Português do Mar e da Atmosfera
Romania	Institutul National de Cercetare-Dezvoltare pentru Geologie si Geoeologie Marina - Geoecomar
Italy	Engineering – Ingegneria Informatica Spa



EMSO-Link – Implementation of the strategy to ensure the EMSO ERIC's long-term sustainability

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRADEV-03-2016-2017

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 March 2017 - 28 February 2020

Total Project Value:

€4,359,451.24

EU Grant-Aid:

€4,359,451.24

Funding to Ireland:

€357,055

Website:
www.emso-eu.org

EMSO-Link is a 3-year project underpinning the long-term sustainability of EMSO ERIC, the pan-European distributed Research Infrastructure composed of fixed point open ocean observatories for the study and monitoring of European seas. EMSO pursues the long-term objective to be part of the upcoming European Ocean Observing System (EOOS), which is expected to integrate multiple platforms and data systems, including other ERICs, to achieve the first sustained, standardised and permanent observatory network of the European seas.

EMSO ERIC coordinates the access to the facilities and supports the management of data streams from EMSO observatories. EMSO-Link will accelerate the establishment of EMSO ERIC governance rules and procedures and will facilitate the coordination of EMSO infrastructure construction, operation, extension and maintenance.



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Project Partners

Project Coordinator	EMSO-ERIC - Italy
Italy	Instituto Nazionale di Geofisica e Vulcanologia INNOVA SRL
France	Institut Français de Recherche Pour l'Exploitation de la Mer Centre National de la Recherche Scientifique
United Kingdom	Natural Environment Research Council
Greece	Hellenic Centre for Marine Research
Ireland	Marine Institute
Spain	Universitat Politècnica de Catalunya



EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SFS-24-2016

Funding Scheme:

CSA – Coordination and Support Action

Project Duration:

1 January 2017 - 31 December 2020

Total Project Value:

€1,998,779

EU Grant-Aid:

€1,998,779

Funding to Ireland:

€126,248

The core objective of the **EURASTIP** project is to evaluate and prepare for the launch of an international multi-stakeholder platform, the European-Asian Technology and Innovation Platform, which will provide a new mechanism to create and reinforce international cooperation on sustainable aquaculture between Europe and South-East Asia. This platform will be composed of stakeholders from Europe and South-East Asia, and will focus on actions that will provide mutual benefit to both regions.

The overall concept of EURASTIP is to provide a structured basis for multi-stakeholder dialogue, building on the experience of EATiP, the ASEM aquaculture projects and the individual organisations involved. It also responds to the Banda Seri Begawan Plan of Action for strengthening the ASEAN-EU enhanced partnership (2013-2017), which specifies cooperation to address regional and global challenges of shared concern.

Project Partners

Project Coordinator	European Aquaculture Technology and Innovation Platform - Belgium
Malaysia	International Center for Living Aquatic Resources Universiti Malaysia Terengganu
Belgium	Ghent University European Aquaculture Society INVE Aquaculture Group
Netherlands	Wageningen University
Vietnam	Nonglam University Ho Chi Minh City
Ireland	AquaTT UETP Ltd
Iceland	The Icelandic Centre for Research
Brazil	Ministério da Ciência, Tecnologia e Inovação
United Kingdom,	University of Stirling Scottish Aquaculture Innovation Centre
Norway	Technology akvARENA National Centre of Expertise Seafood innovation Cluster National Centre of Expertise Aquaculture Havforskningsinstituttet
Spain	Plataforma Tecnológica Española de la Pesca y la Acuicultura
Germany	KNAQ
Hungary	Platform for Fish Farming Technology Development
Spain/ France	ECOQUA
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EXCELLABUST – EXCELLing LABUST in marine robotics

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

TWINN-2015

Funding Scheme:

CSA – Coordination and Support action

Project Duration:

1 January 2016 - 31 December 2018

Total Project Value:

€1,014,551

EU Grant-Aid:

€1,014,551

Funding to Ireland:

€228,342.75

Website:
www.excellabust.fer.hr

The Laboratory for Underwater Systems and Technologies (LABUST) at the University of Zagreb Faculty of Electrical and Engineering (UNIZG-FER) in Croatia has positioned itself in recent years as the regional leader in marine robotics: LABUST has the required technologies, people, infrastructure, and experience in field experiments. What LABUST is missing is research excellence that will allow it to fully exploit and bring available resources to

a level compatible with internationally leading institutions in marine robotics.

The main goal of **EXCELLABUST** project is to address networking gaps and deficiencies between the Faculty of Electrical Engineering and Computing, University of Zagreb (UNIZG-FER) and internationally leading counterparts at EU level, by significantly strengthening marine robotics research within LABUST through twinning with expert partners.



EXCELLABUST
EXCELLING LABUST IN MARINE ROBOTICS

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Project Partners

Project Coordinator	Sveučilište u Zagrebu, Fakultet elektrotehnike i računarstva – Croatia
Italy	Consiglio Nazionale delle Ricerche
Spain	Universitat de Girona
Ireland	University of Limerick

FloTEC – Floating Tidal Energy Commercialisation project

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

LCE-03-2015

Funding Scheme:

IA - Innovation Action

Project Duration:

1 January 2016 - 30 June 2019

Total Project Value:

€13,711,731.50

EU Grant-Aid:

€9,782,380.25

Funding to Ireland:

€1,538,861.25

Website:
www.scotrenewables.com/projects/flotec


The **FloTEC** project will demonstrate the potential for floating tidal stream turbines to provide low-cost, high-value energy to the European grid mix. The FloTEC project has five core objectives:

1. Demonstrate a full-scale prototype floating tidal energy generation system for optimised energy extraction in locally varying tidal resources
2. Reduce the Levelised Cost of Energy of floating tidal energy from current estimated €250/MWh to €200/MWh, through both CAPEX and OPEX cost reductions in Scotrenewables Tidal Technology
3. Develop potential of tidal energy generation towards flexible, baseload generation, through the integration of energy storage
4. Demonstrate the potential for centralised MV power conversion

to provide a generic, optimised low-cost solution for tidal arrays

5. Progress tidal energy towards maturity and standard project financing by reducing cost and risk, improving reliability, and developing an advanced financing plan for first arrays

This will be realised through the construction of a M2-SR2000 2 MW turbine - which will incorporate the following innovations: 50% greater energy capture through enlarged rotors with a lower rated speed; Automated steel fabrication; Centralised MV power conversion; Integrated Energy Storage Mooring load dampers; and, Composite Blade Manufacturing. The SR2000-M2 will be deployed alongside the existing SR2000-M1 at EMEC to form a 4 MW floating tidal array, serving as a demonstration platform for commercially viable tidal stream energy as a baseload supply.

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Project Partners

Project Coordinator	Scotrenewables Tidal Power Ltd – United Kingdom
Ireland	DP Energy Ireland Ltd EireComposites Teoranta Technology from Ideas Ltd University College Cork
United Kingdom	Harland and Wolff Heavy Industries Ltd European Marine Energy Centre Ltd ABB Limited
Germany	SKF GMBH



GENIALG – GENetic diversity exploitation for Innovative macro-ALGal biorefinery

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-01-2016

Funding Scheme:

IA - Innovation Action

Project Duration:

1 January 2017 - 31 December 2021

Total Project Value:

€12,224,237.50

EU Grant-Aid:

€10,885,817.25

Funding to Ireland:

€1,027,172.50

The **GENIALG** project aims to boost the Blue Biotechnology Economy (BBE) by increasing the production and sustainable exploitation of two high-yielding species of the EU seaweed biomass: the brown alga *Saccharina latissima* and the green algae *Ulva spp.* The consortium integrates available knowledge in algal biotechnology and ready to use reliable eco-friendly tools and methods for selecting and producing high yielding strains in economically feasible quantities and qualities. By cracking the biomass and supplying a wide diversity of chemical

compounds for existing as well as new applications and markets, GENIALG will anticipate the economic, social and environmental impacts of such developments in term of economic benefit and job opportunities liable to increase the socio-economic value of the blue biotechnology sector.

In a larger frame, conservation and biosafety issues will be addressed as well as more social aspects such as acceptability and competition for space and water regarding other maritime activities.



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Project Partners

Project Coordinator	Centre National de la Recherche Scientifique - France
United Kingdom	The Scottish Association for Marine Science University of York IOTA Pharmaceuticals Biome Technologies Plc The Biorenewables Development Centre Ltd
Norway	Seaweed Energy Solutions SINTEF Fiskeri og Havbruk AS
Portugal	ALGApplus Produção e Comercialização de Algas e seus Derivados LDA Instituto de Ciência e Inovação em Engenharia Mecânica e Engenharia Industrial Centro Interdisciplinar de Investigação Marinha e Ambiental Universidade de Aveiro
Netherlands	Stichting Dienst Landbouwkundig Onderzoek
France	Amadeite SAS Cargill France SAS Lessonia C-Weed-Aquaculture
Ireland	National University of Ireland, Galway AquaTT UETP Ltd

Hi-GEN – Technical, economic and commercial feasibility assessment into a crane-deployed, marine wind turbine

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SMEInst-09-2016-2017

Funding Scheme:

SME Instrument Phase I

Project Duration:

1 January 2017 - 31 May 2017

Total Project Value:

€71,429

EU Grant-Aid:

€50,000

Funding to Ireland:

€50,000

This project is a technical, economic and commercial feasibility assessment into a portable wind turbine for ships (the **Hi-GEN**) which will cut reliance on auxiliary, fossil fuel generators when ships are at anchor or in port (referred to as “downtime”). Fuel costs and greenhouse gas emissions are significant issues for the shipping and fishing industries, especially during downtime. External costs of port emissions for the largest 50 ports is estimated at €12 billion. Global fisheries account for 1.8% of total global oil consumption and international fishing contributes between 13 and 20 million tonnes of CO₂ emissions annually. Yet fishing vessels spend between 44% and 70% of the year not at sea. The objective of the overall project is to establish the Hi-GEN as a cost effective, environmentally friendly and preferred source of auxiliary power for commercial vessels during downtime.

The overall objective of this study is to identify and consider all relevant factors into the economic and technical viability of the Hi-GEN. The Hi-GEN is an innovative and novel low carbon technology. IP is owned by the Company and currently patent pending with the UK and the Patent Cooperation Treaty (PCT). Every vessel in the world which has a crane could benefit from using the Hi-GEN. The benefits would be significant:

- Vessel owners could make significant savings on operating costs and achieve an economic payback of between two and four years;
- Marine industries could save up to 32 million litres of fuel and 4.5 million tonnes of CO₂ per annum, boosting the blue economy
- The company could add 40 new jobs and €24 million of revenue over four years, a fraction of the total market potential of over €2 billion

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Project Partners

Project Coordinator	DARE Technology - Ireland
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ICONN – European Industrial DoCtorate on Offshore wiNd and wave energy

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

ITN-2015-EID

Funding Scheme:

MSCA

Project Duration:

1 October 2015 - 30 September 2019

Total Project Value:

€845,838.36

EU Grant-Aid:

€845,838.36

Funding to Ireland:

€265,674.60

Website:

www.eid-icomm.eu/index.html



ICONN is a unique European Industrial Doctorate (EID) initiative to meet the current and future demand for highly skilled offshore wind and wave energy engineers by developing and advancing European capacity in the design, development and performance optimisation for offshore wind and wave energy installations.

The ICONN EID will:

1. provide state-of-the art training to Early Stage Researchers jointly with industries in the scientific and engineering disciplines of power take-off (PTO) and structural control, wave mechanics and hydrodynamics, computational fluid dynamics, sensing and system identification
2. advance expertise, and research capacity, in the techno-economic-environmental factors that impact on the reliability and operational efficiency of offshore renewable energy installations

3. instil business, management, entrepreneurship and innovation skills pertaining to offshore wind and combined wind-wave energy sector to encourage entrepreneurship and innovation
4. promote clearly defined scientific dissemination, public outreach and commercialisation/IP agendas

The three scientific work packages, which scaffold the individual research activities, progress from addressing specific challenges and capability deficiencies that impede the effective and efficient deployment of offshore wind and wave infrastructures (floating systems and optimisation of PTO) through to activities that seek to create, and innovate in, new control algorithms and in operational efficiency domain (fatigue control, new algorithms for control of PTO).

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Project Partners	
Project Coordinator	Trinity College Dublin – Ireland
Denmark	Aalborg Universitet Floating Power Plant A/S



INMARE – Industrial Applications of Marine Enzymes: Innovative screening and expression platforms to discover and use the functional protein diversity from the sea

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-04-2014

Funding Scheme:

IA – Innovation Action

Project Duration:

1 April 2015 - 31 March 2019

Total Project Value:

€7,396,689.65

EU Grant-Aid:

€5,999,557.13

Funding to Ireland:

€330,000

Website:

www.inmare.bangor.ac.uk

INMARE is a collaborative Innovation Action to streamline the pathways of discovery and industrial applications of new marine enzymes and bioactives for targeted production of fine chemicals, drugs and in environmental clean-up applications. The INMARE consortium will unify the multidisciplinary expertise and facilities of academic and industry partners. This will include integrating the following core activities: advanced technologies to access and sample

unique marine biodiversity hot-spots; state-of-the art technologies for construction of metagenomic libraries; innovative enzyme screening assays and platforms; cutting-edge sequence annotation pipelines and bioinformatics resources; high-end activity screening technology; bioanalytical and bioprocess engineering facilities and expertise, nanoparticle-biocatalysts; high-quality protein crystallisation and structural analysis facilities and experts in IP.



Project Partners

Project Coordinator	Bangor University – United Kingdom
Germany	Universität Hamburg; Heinrich-Heine-Universität Duesseldorf Bayer Aktiengesellschaft; Jacobs University Bremen gGmbH Evocatal GmbH; Cluster Industrielle Biotechnologie 2021 e.v..
Spain	Agencia Estatal Consejo Superior De Investigaciones Científicas Pharmamar, S.A.
Italy	Consiglio Nazionale delle Ricerche Alma Mater Studiorum - Università Di Bologna Università Degli Studi Di Milano
Denmark	Novozymes A/S
Norway	Universitetet i Bergen UNI Research AS
Ireland	University College Cork
Lithuania	Vilniaus Universitetas
Greece	Technical University of Crete
Portugal	Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento
Switzerland	INOFEA AG Fachhochschule Nordwestschweiz
United Kingdom	London School of Economics and Political Science Seascope Consultants Ltd
Canada	The Governing Council of the University of Toronto

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INTAROS – INTegrated ARctic Observation System

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-09-2016

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 January 2017 - 31 December 2021

Total Project Value:

€15,490,066.78

EU Grant-Aid:

€15,490,066.78

Funding to Ireland:

€88,338.75



The overall objective of **INTAROS** is to develop an integrated Arctic Observation System (iAOS) by extending, improving and unifying existing systems in the different regions of the Arctic. INTAROS will have a strong multidisciplinary focus, with tools for integration of data from atmosphere, ocean, cryosphere and terrestrial sciences, provided by institutions in Europe, North America and Asia. Satellite Earth Observation (EO) data plays an increasingly important role in such observing systems, and the amount of EO data for observing the global climate and environment grows year by year. In situ observing systems are much more limited due to logistical constraints and cost limitations. The sparseness of in

situ data is therefore the largest gap in the overall observing system. INTAROS will assess strengths and weaknesses of existing observing systems and contribute with innovative solutions to fill some of the critical gaps in the in situ observing network. INTAROS will include development of community-based observing systems, where local knowledge is merged with scientific data. An integrated Arctic Observation System will enable better-informed decisions and better-documented processes within key sectors (e.g. local communities, shipping, tourism, fisheries), in order to strengthen the societal and economic role of the Arctic region and support the EU strategy for the Arctic and related maritime and environmental policies.

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Project Partners

Project Coordinator	Stiftelsen Nansen Senter for Mjøg Fjernmaling – Norway
Norway	Universitetet i Bergen Havforskningsinstituttet University Centre in Svalbard Norut Northern Research Institute AS Norsk Institutt for Vannforskning DNV GL AS
Sweden	Stockholms Universitet Sveriges Meteorologiska och Hydrologiska Institut
Germany	Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung Max Planck Gesellschaft zur Förderung der Wissenschaften e.v. Universität Bremen Universität Hamburg Helmholtz Zentrum Potsdam Deutschesgeoforschungszentrum GFZ
Poland	Instytut Oceanologii Polskiej Akademii Nauk Instytut Geofizyki Polskiej Akademii Nauk

INTAROS – INTeGrated Arctic Observation System

Project Partners	
UK	Centre for Environment, Fisheries and Aquaculture Science University of Wales University of Aberdeen Marine Scotland
Denmark	Danmarks Tekniske Universitet Aarhus Universitet Geological Survey of Denmark and Greenland Nordisk Fond for Miljø og Udvikling
Finland	Ilmatieteen Laitos Helsingin Yliopisto
United Kingdom	The University of Sheffield The Open University
Ireland	Maynooth University
France	Institut Français de Recherche pour l'Exploitation de la Mer Centre National de la Recherche Scientifique Association pour la Recherche et le Développement des Méthodes et Processus Industriels C-Weed-Aquaculture
Belgium	EuroGOOS AISBL
Portugal	Fundacao Eurocean
Spain	Universidad Politécnica de Madrid Barcelona Supercomputing Center- Centro Nacional de Supercomputación
Italy	Terradue SRL
Greenland	Gronlands Naturinstitut
Russia	All-Russian Research Institute of Hydrometeorological Information – World Data Centre
USA	Woods Hole Oceanographic Institution The Regents of the University of California
Canada	Université Laval
China	Institute of Remote Sensing and Digital Earth – Chinese Academy of Sciences



JERICO-NEXT – Joint European Research Infrastructure network for Coastal Observatory: Novel European eXpertise for coastal observatories

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRAIA-I-2014-2015

Funding Scheme:

RIA - Research and Innovation action

Project Duration:

1 September 2015 - 31 August 2019

Total Project Value:

€9,998,876.47

EU Grant-Aid:

€9,998,876.47

Funding to Ireland:

€342,614

Website:
www.jerico-ri.eu


The coastal area is the most productive and dynamic environment of the world ocean with significant resources and services for mankind. **JERICO-NEXT** (33 organisations from 15 countries) emphasises that the complexity of the coastal ocean cannot be well understood if interconnection between physics, biogeochemistry and biology is not guaranteed. Such an integration requires new technological developments allowing continuous monitoring of a larger set of parameters. In the continuity of JERICO (FP7), the objective of JERICO-NEXT consists in strengthening and enlarging a solid and transparent European network in providing operational services for the timely, continuous and sustainable delivery of high quality environmental data and information products related to marine environment in European coastal seas. Other objectives are to: support European coastal research communities; enable free and open access to data; enhance the readiness

of new observing platform networks by increasing the performance of sensors; showcase of the adequacy of the so-developed observing technologies and strategies; and propose a medium-term roadmap for coastal observatories through a permanent dialogue with stakeholders. JERICO-NEXT is based on a set of technological and methodological innovations. One main potential innovation is to provide a simple access to a large set of validated crucial information to understand the global change in coastal areas. Although JERICO-NEXT already includes industrial partners, it is open to other research institutes, laboratories and private companies which could become associated partners to the project. JERICO-RI shall send data and information in an operational mode to European data systems, with dedicated service access. One of the strengths of JERICO-NEXT lies in the fact that technological and methodological developments shall be deployed in natural environment.

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Project Partners

Project Coordinator	Institut Française de Recherche Pour l'Exploitation de la Mer - France
Spain	Fundacion AZTI – AZTI Fundazioa Agencia Estatal Consejo Superior De investigaciones Científicas Socib - Consorcio Para el Diseno, Construccion, Equipamiento y Explotacion del Sistema de Observacion Costero de Las Illes Balears Universitat Politecnica de Catalunya
United Kingdom	Blue Lobster IT Ltd The Secretary of State for Environment, Food and Rural Affairs
Malta	Universita ta Malta

JERICO-NEXT – Joint European Research Infrastructure network for Coastal Observatory: Novel European eXpertise for coastal observatories

Project Partners	
Italy	Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici Consiglio Nazionale delle Ricerche ETT SPA Istituto Nazionale di Oceanografia e di Geofisica Sperimentale
France	Centre National de la Recherche Scientifique Fluidion Euro-Argo Ericf
Netherlands	Stichting Deltares Mariene Informatie Service maris BV Ministerie Van Infrastructuur En Milieu
Belgium	Eurogoos AISBL Vlaams Instituut Voor De Zee Vzw
Finland	Ilmatieteen Laitos Suomen Ympäristökeskus
Greece	Hellenic Centre for Marine Research
Germany	Helmholtz-Zentrum Geesthacht Zentrum für Material- Und Küstenforschung
Portugal	Instituto Hidrográfico
Bulgaria	Institute Of Oceanology - Bulgarian Academy Of Sciences
Ireland	Marine Institute SLR Environmental Consulting (Ireland) Ltd SmartBay Ireland Ltd
Norway	Norsk Institutt for Vannforskning Durand Dominique, Denis, Fabrice Havforskningsinstituttet International Research Institute Ofstovanger As
Sweden	Sveriges Meteorologiska Och Hydrologiska Institut



MARIBE – MARine Investment for the Blue Economy

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-05-2014

Funding Scheme:

CSA - Coordination and Support Action

Project Duration:

1 March 2015 - 31 August 2016

Total Project Value:

€1,977,951.25

EU Grant-Aid:

€1,977,951.25

Funding to Ireland:

€555,712.50

Website:

www.maribe.eu



The primary objective of the **MARIBE** project is to identify the most promising business models in the Blue Growth (BG) economy (in particular multi-purpose platforms). Plans will be developed to overcome their challenges, propose how these models can be advanced to large scale pilot stage, and test the feasibility of the recommended business models. The pilots will be enabled by securing support from the investment community and liaising with the EC to implement the outcomes of the project and continue funding support via H2020. The final aim of this project is to unlock the sustainable growth and jobs potential of BG. A new consortium has been created with connections to H2Ocean, TROPIS and MERMAID having with the desired degree of independence, impartiality to ensure neutral business model assessment. Business models will

first be mapped according to best practice methodology, cognisant of their value chains. The technical and non-technical challenges of the business will be measured based on their life cycle stage and proposals made for their mitigation. Key stakeholders from all sectors of Blue Economy to BG will be engaged, as well as key investors. Following these reviews and engagements, four Think Tank workshops will be organised to envision innovative new business models, in particular considering multi-purpose platforms. The final workshop will then define implementation plans for best business models for each of the four basins. Outcomes from the project will include toolkits and guidelines for stakeholders and investment community with regards to the BG socio-economic trends and technical and non-technical challenges as well as reports on best business models for BG.

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Project Partners

Project Coordinator	University College Cork - Ireland
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Belgium	Ecoast
United Kingdom	Swansea University Heriot-Watt University BVG Associates Ltd
Spain	Universidad de Cantabria
Malta	Aquabiotech Ltd
Italy	Food and Agriculture Organization of the United Nations



MARINA – Marine knowledge sharing platform for federating responsible research and innovation communities

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

ISSI-3-2015

Funding Scheme:

CSA – Coordination and Support Action

Project Duration:

1 May 2016 - 30 April 2019

Total Project Value:

€2,999,943.75

EU Grant-Aid:

€2,999,943.75

Funding to Ireland:

€229,488.75

Website:

www.marinaproject.eu



Marine Knowledge Sharing
Platform for Federating
Responsible Research
and Innovation Communities

The **MARINA** overall aim is to create an all-inclusive Knowledge Sharing Platform (KSP) catalysing and organising the convergence of already existing networks, communities, online platforms and services providing an online socio-technical environment that facilitates and stimulates the direct engagement of researchers, Civil Society Organisations (CSOs), citizens, industry stakeholders, policy and decision makers, research funders and communicators for improving Responsible Research and Innovation (RRI). In particular, the project will establish, curate and experiment an RRI platform involving societal actors working together during the whole research and innovation process for aligning better both the process and its outcomes, with the values, needs and expectations of European society, integrating citizens' visions, needs and desires into science

and innovation, promoting RRI with focus on marine issues and pressures that have important effects on European societies.

The project activities and outcomes, even if connected with marine research field, will define this systematic approach in order to make it transferable and reproducible for any RRI thematic domain. All project results and activities will be extrapolated from the RRI marine field to general RRI and broadly disseminated. The expected outcome of the work programme is a clear improvement of the integration of society in science and innovation. The MARINA project will follow this strategic line of "strengthening and facilitating" the capacity of the research and innovation to align and integrate the social needs through a suitable knowledge sharing platform and unifying activities.

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Project Partners

Project Coordinator	Consiglio Nazionale delle Ricerche - Italy
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Cyprus	XPRO Consulting Limited Cyprus Neuroscience and Technology Institute
Portugal	Fundaceo EurOcean
Romania	Organizatia Ecologista Neguvernamentala Mare Nostrum
Estonia	Sihtasutus Teaduskeskus Ahhaa
Ireland	SmartBay Ireland Ltd
France	Societe d'Exploitation du Centre National de la Mer
Belgium	Reseau Ocean Mondial AISBL
Spain	Asociacion – Centro de Investigacion Cooperativa en Nanociencias – CIC Nanogune
Denmark	Aalborg Universitet
Turkey	Istanbul Universitesi



MARINERG-i – Marine renewable energy research infrastructure

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRADEV-02-2016

Funding Scheme:

RIA - Research and Innovation Action

Collaborative Project

Project Duration:

1 January 2017 - 30 June 2020

Total Project Value:

€1,999,799

EU Grant-Aid:

€1,999,799

Funding to Ireland:

€433,063#

Website:

www.marinerg-i.eu



The objective of **MARINERG-i** is to become the leading internationally distributed infrastructure in the Marine Renewable Energy (MRE) sector. Its integrated nature and co-ordinated approach will accelerate the research development and deployment of offshore wind, wave, tidal and combined energy technologies and help maintain Europe as a global leader in this industry. In addition MARINERG-i will strengthen European scientific and engineering excellence and expertise as its combined facilities represent an indispensable tool to foster innovation across a large variety of MRE technologies and systems and through all key stages of technology development (TRLs 1-9).

The purpose of this INFRADEV project is to undertake development work which will ensure MARINERG-i is effectively positioned to attain the

criteria necessary for being successful in a future ESFRI roadmap application. This proposal takes on board the comments and recommendations provided in feedback from the ESFRI 2016 reviewers and has also analysed and updated the positioning of the MARINERG-i concept based on the current status of the sector. In this context it is proposed to:

- Broaden the number of member states involved
- Create a design study and scientific plan
- Develop a business plan including governance, legal, financial and strategic issues
- Secure further national support from partners
- Create and agree an implementation plan that will bring the proposal to the roadmap

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Project Partners

Project Coordinator	University College Cork - Ireland
United Kingdom	University of Strathclyde Bird & Bird LLP
France	Institut Français de Recherche pour l'Exploitation de la Mer
Portugal	Wavec/Offshore Renewables - Centro de Energia Offshore Associacao
Spain	Consorcio para el Diseno, Construcción, Equipamiento y Explotación de la Plataforma Oceanica de Canarias
Norway	SINTEF Energi AS
Germany	Fraunhofer-Gesellschaft zur Förderung der Angewandten Forschung
Italy	Consiglio Nazionale delle Ricerche
Belgium	Ghent University
Netherlands	Stichting Maritiem Research Instituut Nederland
Sweden	Uppsala Universitet
Denmark	Aalborg Universitet



MaRINET2 – Marine Renewables Infrastructure Network for enhancing Energy Technologies, Part 2

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRAIA-01-2016-2017

Funding Scheme:

RIA-Research and Innovation Action

Project Duration:

1 January 2017 - 30 June 2020

Total Project Value:

€10,592,285

EU Grant-Aid:

€10,592,285

Funding to Ireland:

€1,622,610

Website:

www.marinet2.eu



MaRINET2 will ensure the continued integration and enhancement of all leading European research infrastructure and facilities specialising in research, development and testing of offshore renewable energy systems. MaRINET FP7 proved the added value of uniting these facilities, and substantially improving their capability as a community of practice to deliver consistent testing services. This ensured quantifiable, stepwise innovation and progress in the development of devices and key components, and identified critical areas for further technical investigation and enhancement. The consortium and scope of work is expanded to include 39 partners in 13 countries with 57 facilities. The e-infrastructure programme fills a strategic gap. Taking stock of existing capacities for data management/sharing; it addresses user requirements

and demonstrates the operation of a new system based on standards and tools adapted from the SeaDataNet infrastructure. The EC and member states recognise offshore renewable energy as an important source of clean energy that can: generate economic growth and employment; increase energy security; and boost competitiveness and technological innovation. The realisation of this potential depends on the accelerated development, deployment and grid integration of reliable, efficient technologies for harvesting offshore renewable energy, which in turn requires robust and exhaustive testing in dedicated facilities operated by practitioners with specialised expertise. MaRINET2 provides this ecosystem, and is pre-eminently suited to fostering the next generation of offshore renewable energy devices

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Project Partners

Project Coordinator	University College Cork - Ireland
United Kingdom	European Marine Energy Centre University of Strathclyde Offshore Renewable Energy Catapult The University of Exeter Flowave TT Ltd University of Plymouth Queens University Belfast University of Surrey University of Edinburgh
France	Institut Francais de Recherche pour l'Exploitation de la Mer Ecole Centrale de Nantes Oceanide
Belgium	European Ocean Energy Association EU OEA
Germany	Gottfried Walhelm Leibniz Universität Hannover



MaRINET2 – Marine Renewables Infrastructure Network for enhancing Energy Technologies, Part 2

Project Partners	
Spain	Fundacion Tecalia Research and Innovation Fundacion Instituto de Hidraulica Ambiental de Cantabria Fundacion CENER-CIEMAT Fundacion Centro Tecnológico de Componentes Consorcio Para el Diseno, Construcion, Equipamiento y Explotacion de la Plataforma Oceanica de Canarias Ente Vasco de la Energia Biscay Marine Energy Platform SA
Denmark	Denmarks Tekniske Universitet Aalborg Universitet
Portugal	Wavec Offshore Renewables – Centro de Energia Offshore Associacao Fandaceo EurOcean
Netherlands	Stichting Tidal Testing Centre Stichting Maritiem Researc Institut Nederland Mariene Informatie Service MARIS BV
Ireland	SmartBay Ireland Ltd National University of Ireland, Galway University of Limerick
Norway	SINTEF Energi AS Norges Teknisk-Naturvitenskapelige Universitet
Italy	Consiglio Nazionale delle Ricerche Universita Degli Studi Di Firenze
Sweden	SSPA Sweden AB Uppsala Universitet
Finland	CSC - Tieteen Tietoteknikan Keskus OY



MarTERA – Maritime and Marine Technologies for a new ERA

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-05-2016

Funding Scheme:

ERA-NET-Cofund

Project Duration:

1 December 2016 - 30 November 2021

Total Project Value:

€31,118,822

EU Grant-Aid:

€10,269,211.26

Funding to Ireland:

€471,946.20

Website:

www.martera.eu

The realisation of a European research and innovation agenda needs a broad and systematic cooperation in all areas of waterborne transport, offshore activity, marine resources, maritime security, biotechnologies, desalination, offshore oil and gas, fisheries, aquaculture etc. covering all relevant maritime and marine sectors and regions for a sustainable development of the maritime sector. Research and innovation activities in these fields cannot be tackled either at national levels alone, or solely by a single sector. Coordinated actions are required for the maritime industry to strengthen Europe's position in this important and complex economic field in a global market. The consortium will

organise and co-fund, together with the EU, a joint call for trans-national research projects on different thematic areas of Blue Growth. Furthermore, additional joint activities that go beyond this co-funded call are planned, in order to contribute to the national priorities as well as to the Strategic Research Agenda of JPI Oceans and WATERBORNE.

With the cooperation of ERA-NET MARTEC and JPI Oceans, a broader variety of topics with a larger amount of funding will be available for the trans-national projects. Moreover, the focus of development in **MarTERA** is given to technologies (instead of sectors) due to their potentially large impact to a wide range of application fields.



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Project Partners

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Germany	Bundesministerium fuer Wirtschaft und Technologie
France	Agence Nationale de la Recherche Ministere de l'Ecologie, du Developpement Durable et de l'Energie
Argentina	Ministerio de Ciencia, Tecnologia e Innovacion Productive
Belarus	National Academy of Sciences of Belarus
Belgium	Vlaamse Gewest
Ireland	Marine Institute
Italy	Ministero dell'Istruzione, dell'Universita e Della Ricerca
Malta	Ministry for Education and Employment
Netherlands	Nederlandse Organisatie voor Wetenschappelijk Onderzoek
Norway	Norges Forskningsrad
Poland	Narodowe Centrum Badan i Rozwoju
Portugal	Fundacao Para a Ciencia e a Tecnologia
Romania	Unitatea Executiva pentru Finantarea Invatamantului Superior, a Cercetarii, Dezvoltarii si Inovarii
Spain	Centro Para el desarrollo Tecnológico Industrial
Turkey	Türkiye Bilimsel ve Teknolojik Arastirma Kurumu



MERCES – Marine Ecosystem Restoration in Changing European Seas

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SC5-07-2015

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 June 2016 - 31 May 2020

Total Project Value:

€6,651,118.20

EU Grant-Aid:

€6,651,118.20

Funding to Ireland:

€291,920

Website:
www.merces-project.eu


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The **MERCES** project will provide the EU with new, ecologically and economically sustainable protocols for the restoration of threatened and damaged marine ecosystems. European seas are facing a huge number of pressures from coastal development to the exploration of deep-sea minerals on the Mid Atlantic Ridge. Of all European environments, the marine environment shows greatest disparity between the level of human's impacts now being experienced and the level of knowledge required to restore ecosystems to a Good Environmental Status.

In addition, the marine focus allows a truly multi-disciplinary project to be established within the cost restrictions of the Call. The overall

goal is to enhance the EU capacity to restore degraded and/or damaged marine ecosystems and habitats and the services they provide to human well-being. This will be achieved by offering policy makers and stakeholders new solutions for marine restoration, creating the knowledge base for new professions in the field of marine environmental services, and creating new job opportunities in both the private and public sectors associated with (economic) interests in the remediation of degraded/damaged marine ecosystems. It will also involve the analysis of the effects of restoration on the recovery of ecosystem services and societal benefits and the provision of a cost-benefit analysis of restoration activities.

Project Partners

Project Coordinator	Universita Politecnica delle Marche - Italy
Spain	Agencia Estatal Consejo Superior De Investigaciones Cientificas; Ecopath International Initiative Association
Greece	Hellenic Centre for Marine Research
Portugal	Instituto do Mar
Germany	Alfred-Wegener-Institut Helmholtz-Zentrum für Polar und Meeresforschung
France	Institut Français de Recherche pour l'Exploitation de la Mer
Ireland	National University of Ireland, Galway
Netherlands	Wageningen University; Stichting Koninklijk Nederlands Instituut voor Onderzoek der Zee; Stichting Katholieke Universiteit
Denmark	Aalborg Universitet
Finland	ABO Akademi
Estonia	Tartu Ülikool
Croatia	Faculty of Science University of Zagreb
Italy	Consorzio Nazionale Interuniversitario per le Scienze del Mare Associazione
Norway	Norsk Institutt for Vannforskning
United Kingdom	Natural Environment Research Council

MyOcean Follow On – Pre-Operational marine service continuity in transition towards Copernicus

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

Adhoc-2014-20

Funding Scheme:

CSA - Coordination and Support Action

Project Duration:

1 October 2014 - 31 May 2015

Total Project Value:

€6,000,000

EU Grant-Aid:

€6,000,000

Funding to Ireland:

€25,287.69

Website:
www.marine.copernicus.eu

The main objective of the **MyOcean Follow On** project was to operate a rigorous, robust and sustainable ocean monitoring and forecasting component of the pre-operational Copernicus Marine Service delivering ocean physical state and ecosystem information to intermediate and downstream users in the areas of marine safety, marine resources, marine and coastal environment and weather, climate and seasonal forecasting. The project proposed to sustain the current pre-operational marine activities until March 2015 to avoid any interruption in the critical handover phase between pre-operational and fully operational services. In effect, any significant interruption in these

services could potentially jeopardise several important high-level policy objectives and undermine other related scientific activities. In the period from October 2014 to March 2015, MyOcean-FO ensured a controlled continuation and extension of the services already implemented in MyOcean and MyOcean2 FP7 projects that have advanced the pre-operational marine service capabilities. To enable the move to full operations, MyOcean-FO targeted the prototype operations, and developed the management and coordination to continue the provision of Copernicus Marine service products and the link with independent R&D activities.



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Project Partners

Project Coordinator	Ecologic Institute - Berlin, Germany
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Netherlands	Stichting Dienst Landbouwkundig Onderzoek
Spain	Instituto IMDEA Agua BC3 Basque Centre for Climate Change
Austria	University of Natural Resources and Life Sciences, Vienna
Portugal	Universidade de Aveiro
Belgium	Royal Belgian Institute of Natural Sciences International Union for Conservation of Nature
United Kingdom	University of Liverpool Centre for Environment, Fisheries and Aquaculture Science University of Wales University of Aberdeen Marine Scotland
Ireland	Marine Institute
Sweden	Stockholm University
Romania	Institutul National de Cercetare Dezvoltare Delta Dunarii
Switzerland	Swiss Federal Institute of Aquatic Science and Technology



NoMorFilm – Novel marine biomolecules against biofilm: Application to medical devices

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-03-2014

Funding Scheme:

 RIA – Research and Innovation Action
Collaborative Project

Project Duration:

1 April 2015 - 31 March 2019

Total Project Value:

€7,651,315

EU Grant-Aid:

€7,651,315

Funding to Ireland:

€358,759

Website:
www.nomorfilm.eu


Microalgae are a source of secondary metabolites useful as new bioactive compounds. Activity of these compounds against bacterial pathogens and biofilm formation has not been determined yet. Biofilm formation is especially important in infections and tissue inflammation related to implants and catheters. These problems finally cause a release of the implant, which must be removed and replaced by a new one, entailing an increase in antibiotic consumption, together with health costs of about €50,000-90,000 per infection episode. Taking both problems in account, the search of new antimicrobial agents that will be effective against the bacteria in their two ways of life, planktonic and biofilm stage, is a priority need in clinical practice. For this reason, the overall objective of the **NoMorFilm** project is to search for antibiofilm compounds isolated from microalgae that will be useful in the treatment of these kinds of infections and could be incorporated in the manufacturing of medical prosthetic devices.

For this purpose, 4,000 microalgae species will be deeply screened specifically for new antibacterial and antibiofilm molecules. Structural elucidation of bioactive compounds from these extracts will assure that only new chemical entities, with anticipated new mechanisms of action, will progress to further project stages. This project also addresses the biosynthesis of the targeted bioactive compounds in sustainable microalgae co-cultures, diminishing cultivation costs by mimicking natural aquatic ecosystems. The most industrially interesting antibiofilm molecules will be incorporated into nanoparticles to develop manufacturing methodologies able to incorporate these compounds into real prosthetic device matrixes. Marketing of results is assured by the presence of diverse SMEs along the manufacture and distribution of prosthetic devices, and the corresponding consortium agreements with respect to IPRs.

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Project Partners

Project Coordinator	Fundacion Privada Instituto de Salud Global Barcelona – Spain
Portugal	Universidade de Coimbra; CIIMAR
Spain	Universidad de Oviedo; Universidad de Almeria; MBA Incorporado SL
Sweden	Karolinska Institutet
Italy	Universita Degli Studi di Firenze; Fotosintetica & Microbiologica S.r.l Ktedogen S.r.l.
Denmark	Kobenhavns Universitet
Ireland	Trinity College Dublin
United Kingdom	Nanomedpharma Ltd
Greece	Pyrogenesis SA
France	Universite Pierre et Marie Curie – Paris 6

NorFISH – North Atlantic Fisheries: An environmental history, 1400-1700

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

ERC-ADG-2014

Funding Scheme:

ADG - Advanced Grant

Project Duration:

1 January 2016 - 31 December 2020

Total Project Value:

€2,499,265

EU Grant-Aid:

€2,499,265

Funding to Ireland:

€2,499,265

Website:
www.tcd.ie/history/research/centres/ceh/norfish

NorFISH aims to understand the restructuring of the North Atlantic fisheries, fish markets and fishery-dependent communities in the late medieval and early modern world. The project exploits a multi-disciplinary, humanities-led approach to marine environmental history, assessing and synthesizing the dynamics and significance of the North Atlantic fish revolution, equipped by methodological advances in which the Principal Investigator (PI) has been to the fore in delivering. It establishes a robust quantitative framework of extractions, supplies and prices, while also charting the qualitative preferences and politics that motivated actors of the fish revolution across the North Atlantic. Conditioned by market forces, the 'fish

revolution' of the 1500s and 1600s reshaped alignments in economic power, demography, and politics. With acute consequences in peripheral Atlantic settlements from Newfoundland to Scandinavia, it held strategic importance to all the major western European powers. In short, the core questions are what were the natural and economic causes of the fish revolution, how did marginal societies adapt to changing international trade and consumption patterns around the North Atlantic, and how did economic and political actors respond? The answers will help explain the historic role of environment and climate change, how markets impacted marginal communities, and how humans perceived long-term change.



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Project Partners

Project Coordinator	Trinity College Dublin
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OCTTIC: Open-Centre Tidal Turbine Industrial Capability

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

FTIPilot-2016-I

Funding Scheme:

IA - Innovation Action

Project Duration:

1 December 2016 - 30 November 2018

Total Project Value:

€4,271,654.50

EU Grant-Aid:

€2,990,158.16

Funding to Ireland:

€1,773,297.40

OpenHydro holds a unique position in the tidal industry. It has developed a state-of-the-art Open-Centre Turbine with a proven ability to generate and deliver electricity to the national grid and a patented method to deploy and recover turbines quickly, safely and economically on the seabed. Simplicity is at the core of OpenHydro's design philosophy: the turbine has only one moving part, minimising the number of interventions for maintenance. Fundamentally, the Open-Centre Turbine system is designed to deliver the lowest cost of energy. Since the installation of OpenHydro's first turbine in 2006, the technology has been developed and tested extensively, with prototype designs optimised to provide higher outputs and improved economics. Validation of the full-scale, 2.0 MW 16 m turbine system following the deployment, grid connection and operation of a two turbine array at the Paimpol-Bréhat test site in France brings the technology to TRL 7. OpenHydro's stated objective is to match and beat the Levelised Cost of

Energy (LCoE) of offshore wind.

The **OCTTIC** FTI Pilot project, which brings together a consortium of five industrial partners led by OpenHydro, will achieve this through advancement of the turbine system design to improve performance, efficiency and reliability. These advancements when combined with a reduction in operational and maintenance requirements, will deliver significant reductions in capital and operational costs to achieve LCoE targets. OCTTIC will establish a robust industrial production platform and the associated supply chain to produce, assemble and deploy the turbines at scale to deliver LCoE targets and lead the development of the tidal energy market. The outputs of this project will be implemented immediately through the deployment of commercial tidal array projects in partnership with energy utilities to make significant contributions towards the decarbonisation of the European energy system and securing energy supply.

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Project Partners

Project Coordinator	OpenHydro Group Ltd - Ireland
Belgium	Cockerill Maintenance and Ingenierie
United Kingdom	Frazer Nash Consultancy Ltd Nitronica Ltd
Netherlands	JL Mag

OpenGovIntelligence – Fostering innovation and creativity in Europe through public administration modernisation towards supplying and exploiting linked open statistical data

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

EURO-6-2015

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 February 2016 - 31 January 2019

Total Project Value:

€2,788,012.50

EU Grant-Aid:

€2,788,012.50

Funding to Ireland:

€592,362.50

Website:
www.opengovintelligence.eu

The **OpenGovIntelligence** project aims to stimulate sustainable economic growth in Europe through fostering innovation in society and enterprises. Towards this end, OpenGovIntelligence suggests a holistic approach for the modernisation of Public Administration (PA) by exploiting Linked Open Statistical Data (LOSD) technologies. This includes new business processes, policies, and tools that will enable the active participation of the society and enterprises in data sharing and in the co-production of innovative data-driven public services. The objectives of the OpenGovIntelligence project include:

- The creation of a framework comprising business processes, policies, and data infrastructure architectures. This framework specifies a user-centric LOSD Innovation Ecosystem that orchestrates the collaboration of society and PA for opening and

exploiting LOSD to address relevant challenges and facilitate the co-production of innovative data-driven public services

- The delivery of the OpenGovIntelligence ICT toolkit comprising easy-to-use and user-centric tools to facilitate realising the LOSD Innovation Ecosystem
- The OpenGovIntelligence pilots in six countries to validate and prove the usability and effectiveness of the LOSD Innovation Ecosystem. The pilots will develop services at both national and local level to tackle societal and PA challenges in various problem areas such as internal decision-making in PAs, enhancing e-services provided by Points of Single Contact in Europe, and improving policy-making in the areas of environment protection, economic growth, and unemployment.



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Project Partners

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Netherlands	Technische Universiteit Delft
Ireland	National University of Ireland, Galway Marine Institute
Estonia	Tallinna Tehnikaukool
Belgium	Proxmi Bvba Vlaams Gewest
United Kingdom	Swirrl IT Ltd Trafford Borough Council
Greece	Hellenic Ministry of Interior and Administrative Reconstruction
Estonia	Majandus ja Kommunikatsiooniministeerium
Lithuania	Versli Lietuva Viesoji Istaiga



OPERA – Open sea operating experience to reduce wave energy cost

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

LCE-02-2015

Funding Scheme:

RIA-Research and Innovation Action

Project Duration:

1 February 2016 - 31 July 2019

Total Project Value:

€5,741,263.75

EU Grant-Aid:

€5,741,263.75

Funding to Ireland:

€459,750

Website:
www.opera-h2020.eu

OPERA will remove the roadblock of limited access to open-sea operating data by collecting and sharing two years of open-sea operating data of a floating oscillating water column wave energy converter. In addition, the project will be the first open-sea deployment for four cost-reducing innovations that will be advanced from TRL3-4 to TRL5. Together, these four innovations have a long-term cost reduction potential of over 50%. These are: a 50% more efficient turbine, latching and predictive control, a shared mooring system for wave energy similar to those that have reduced mooring costs 50% in aquaculture, and an elastomeric

mooring tether that reduces peak loads at the hull-mooring connection by 70% and thus addresses one of the most pressing challenges for structural survivability of wave energy devices.

Documenting and sharing this open-sea experience will also induce a step-change in our knowledge of risk and uncertainties, costs and societal and environmental impacts of wave energy. The consortium brings together world leaders in wave energy research from four European countries and the IPR owner and most advanced teams to exploit each of these innovations.



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Project Partners

Project Coordinator	Fundacion Tecnalia Research & Innovation - Spain
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United Kingdom	Iberdrola Engineering and Construction UK Limited Global Maritime Consultancy Ltd DNV GL UK Limited University of Edinburgh University of Exeter
Portugal	Kymaner-Technologias Energeticas LDA Instituto Superior Tecnico
Ireland	University College Cork

ParaFishControl – Advanced tools and research strategies for parasite control in European farmed fish

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SFS-10a-2014

Funding Scheme:

RIA – Research and Innovation Action

Project Duration:

1 April 2015 - 31 March 2020

Total Project Value:

€8,104,133.75

EU Grant-Aid:

€7,800,000

Funding to Ireland:

€139,000

Website:
www.parafishcontrol.eu

ParaFishControl aims to increase the sustainability and competitiveness of European aquaculture by improving understanding of fish-parasite interactions and by developing innovative solutions and tools for the prevention, control and mitigation of the major parasites affecting Atlantic salmon, rainbow trout, common carp, European sea bass, gilthead sea bream and turbot. The project will:

1. generate new scientific knowledge on key fish parasites, including genomics, life-cycle, invasion strategy and host-parasite interaction data, with special emphasis on host immunity, pathogen virulence and immunomodulation, providing a scientific basis for improved prophylaxis
2. determine the transfer of parasites between farmed and wild host populations
3. develop a wide range of novel prophylactic measures, including vaccines and functional feeds
4. provide a range of advanced or alternative treatments for parasitic diseases
5. develop cost-effective, specific and sensitive diagnostic tools for key parasitic diseases
6. assess the risk factors involved in the emergence, transmission and pathogenesis of parasitic diseases
7. map the zoonotic risks due to fish helminths
8. provide a catalogue of good husbandry practices to obtain safe and high-quality fish products



Project Partners

Project Coordinator	Consejo Superior de Investigaciones Científicas – Spain
Denmark	Aarhus Universitet; Danmarks Tekniske Universitet; Københavns Universitet
Czech Republic	Biology Centre of the Academy of Sciences of the Czech Republic
Croatia	Institut za Oceanografiju i Ribarstvo
United Kingdom	Centre for Environment, Fisheries and Aquaculture Science ; The University of Aberdeen; The University of Stirling; Vertebrate Antibodies Ltd
Greece	Hellenic Centre for Marine Research; Aquark; Andromeda Group
Spain	Instituto Nacional De Investigación y Tecnología Agraria y Alimentaria; Universidad de Santiago de Compostela; Fundacion AZTI; Inmunología y Genética Aplicada S.A.
Hungary	Magyar Tudományos Akadémia
Italy	Università degli Studi di Udine; Alma Mater Studiorum Università di Bologna
Norway	Universitetet i Bergen; Skretting Aquaculture Research Centre AS; Stiftelsen Industrielaboratoriet
The Netherlands	Wageningen University; ZF-Screens BV; Koninklijke Nederlandse Akademie van Wetenschappen
Ireland	AquaTT UETP Ltd
Germany	W42 GmbH Industrial Biotechnology
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PROMOTioN – Progress on meshed HVDC Offshore transmission networks

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

LCE-05-2015

Funding Scheme:

IA - Innovation Action

Project Duration:

1 January 2016 - 31 December 2019

Total Project Value:

€51,685,330

EU Grant-Aid:

€39,327,743.88

Funding to Ireland:

€32,550

Website:
www.promotion-offshore.net

Network infrastructure is urgently required to link off-shore wind parks and on-shore grids in different countries in order to unlock the full potential of Europe's offshore resources. HVDC technology is envisaged but the deployment of meshed HVDC offshore grids is currently hindered by the high cost of converter technology, lack of experience with protection systems and fault clearance components, and immature international regulations and financial instruments.

PROMOTioN will overcome these barriers by development and demonstration of three key technologies, a regulatory and financial framework and an offshore grid deployment plan for 2020 and beyond. A first key technology is presented by the Diode Rectifier offshore converter. This concept is ground breaking as it challenges the need for complex, bulky and expensive converters, significantly reducing investment and maintenance costs and increasing availability.



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Project Partners

Project Coordinator	DNV GL, Kema Nederland BV - Netherlands
Sweden	ABB BA; Kungliga Tekniska Hogskolan; Affarsverket Svenska Kraftnat
Belgium	Katholieke Universiteit Leuven; Tractebel Engineering S.A.; Association Europeenne de l'industrie des Equipements et des Services de Transmission et de Distribution d'electricite Aisbl
Ireland	EirGrid Plc
France	Supergrid Institute; RTE Reseau de Transport d Electricite SA
Germany	Deutsche Wind Guard GmbH; Stiftung der Deutschen Wirtschaft für die Nutzung und Erforschung der Windenergie auf See (Offshore-Stiftung); Siemens Aktiengesellschaft ; Rheinisch-Westfaelische Technische Hochschule Aachen; Forschungsgemeinschaft für Elektrische Anlagen und Stromwirtschaft e.v..
Netherlands	Mitsubishi Electric Europe BV; Technische Universiteit Delft; Tennet Tso Bv; Rijksuniversiteit Groningen
United Kingdom	Alstom Grid UK Ltd (Trading as GE Grid Solutions); The University Court of the University of Aberdeen; The Carbon Trust; University of Strathclyde; Scottish Hydro Electric Transmission PLC
Norway	Statoil Asa
Denmark	Danmarks Tekniske Universitet; Dong Energy Wind Power AS; MHI Vestas Offshore Wind AS; Energinet.DK
Spain	Universitat Politecnica De Valencia; Iberdrola Renovables Energia Sa; Adwen Offshore S.L.
Italy	European University Institute; Prysmian



ResponSEable – Sustainable Oceans: Our collective responsibility, our common interest. Building on real-life knowledge systems for developing interactive and mutual learning media

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-13-2014

Funding Scheme:

CSA - Coordination and Support Action

Project Duration:

1 April 2015 - 31 March 2019

Total Project Value:

€3,696,644

EU Grant-Aid:

€3,696,644

Funding to Ireland:

€309,125

Website:

www.responseable.eu

RESPONSEABLE

The **Respon-SEA-ble** project will develop well-targeted and sound communication material that raises awareness on our (individual and collective) responsibility and interest in ensuring the sustainability of the ocean and of its ecosystems. The project builds on critical assessments of:

1. Existing communication strategies, material and governance that focuses on the ocean
2. The values, perceptions and understanding of the state, functioning and role of the ocean by different types of stakeholders and the wider public
3. The (scientific) knowledge that exist on the ocean-human relationship, in particular in terms of ecosystem services that can be delivered by ocean ecosystems and support (future) development opportunities and Blue Growth and of pressures that are imposed on the oceans

These critical assessments will help identify priority target groups with key responsibilities and interests in the state of our oceans. Within a participatory process involving the stakeholders of the knowledge creation and sharing system from four European marine regions (Baltic Sea, Mediterranean Sea, Northern Sea and Atlantic - including the transatlantic dimension), and building on the scientific knowledge-base established and on the project-dedicated IT structure/platform, the project will then develop and test under real conditions innovative communication tools. Finally, specific activities will be performed ensuring communication tools are made accessible and available to their future users in Europe but also elsewhere.

Project Partners

Project Coordinator	Acteon Sarl - France
Norway	Grid Arendal Norsk Institutt for Vannforskning
Ireland	National University of Ireland, Galway
Netherlands	Prosea Marine Education
Portugal	Cofac Cooperativa De Formacao e Animacao Cultural Crl
Romania	Institutul National de Cercetare-Dezvoltare Delta Dunarii
Italy	CSP - Innovazione Nelle ICT S.c.a.r.l.
Germany	Baltic Environmental Forum Deutschland EV
Spain	Fundacion AZTI
United Kingdom	The Marine Foundation Ltd University of Plymouth Television for the Environment
Greece	Seven Engineering Consultants OE
France	Universite de Bretagne Occidentale

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REvived water – Low energy solution for drinking water production by a REVival of ElectroDialysis systems

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

NMP-24-2015

Funding Scheme:

IA - Innovation Action

Project Duration:

1 May 2016 - 30 April 2020

Total Project Value:

€9,795,085

EU Grant-Aid:

€7,633,672

Funding to Ireland:

€441,875

Website:

www.revivedwater.eu



REvived water aims to contribute to overcoming the drinking water challenge by establishing ElectroDialysis (ED) as the new standard for desalination of seawater. The goal is to produce safe, affordable and cost-competitive drinking water with significantly reduced energy consumption compared to state-of-the-art Reverse Osmosis (RO) technology. The REvived water project will focus on developing several new innovative ElectroDialysis systems and assessing them in different real environments.

The REvived water project will focus on the following systems and applications:

1. A simplified ED system that can be used for brackish water desalination in developing countries or for tap-water softening in Europe
2. A multistage ED system for industrial-scale seawater desalination
3. Combinations of the multistage ED system with the latest Reverse ElectroDialysis system (RED) for further reduction of energy consumption for seawater desalination
4. Combinations of ED with RO systems that will allow initial market introduction, without the need to replace the extensive RO infrastructure

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Project Partners

Project Coordinator	FujiFilm Manufacturing Europe BV – Netherlands
Belgium	Universiteit Gent
Germany	Deukem GmbH Phaesun GmbH
Ireland	AquaTT UETP Ltd
Italy	European Desalination Society Universita degli Studi di Palermo
Spain	Abengoa Research SL
The Netherlands	Redstack BV European Centre of Excellence for Sustainable Water Technology



RiCORE – Risk based Consenting for Offshore Renewables

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

LCE-04-2014

Funding Scheme:

CSA - Coordination and Support Action

Project Duration:

1 January 2015 - 30 June 2016

Total Project Value:

€1,393,532.50

EU Grant-Aid:

€1,393,532.50

Funding to Ireland:

€285,900

Website:

www.ricore-project.eu



It is the aim of the **RiCORE** project to establish a risk-based approach to consenting where the level of survey requirement for offshore renewables is based on the environmental sensitivity of the site, the risk profile of the technology and the scale of the proposed project. RiCORE will study the legal frameworks in place in the partner Member States to ensure any recommendations developed will be capable of roll out across these Member States and further afield. The next stage of the RiCORE project is to consider the practices, methodologies and implementation of pre-consent surveys, and post-consent and post-deployment monitoring. This will allow a feedback loop to inform the development of the risk-based framework for the environmental aspects of consent and provide best practice.

The project will achieve these aims by engaging with the relevant stakeholders including regulators, industry and Environmental Impact Assessment practitioners, through a series of expert workshops and developing their outcomes into guidance. The impact of the project will be to improve consenting procedures in line with the requirements of the Renewable Energy Directive, specifically Article 13 (1), on consenting processes to ensure cost efficient delivery of the necessary surveys, clear and transparent reasoning for work undertaken, improving knowledge sharing and reducing the non-technical barriers to the development of the Offshore Renewable Energy sector to deliver clean, secure energy.

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Project Partners

Project Coordinator	The Robert Gordon University – United Kingdom
France	E-Cube Strategy Consultants
Ireland	University College Cork
Portugal	Wavec/Offshore Renewables - Centro De Energia Offshore Associacao
Spain	Fundacion AZTI
United Kingdom	Marine Scotland



SALTGAE – Demonstration project to prove the techno-economic feasibility of using algae to treat saline wastewater from the food industry

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

WATER-1b-2015

Funding Scheme:

IA - Innovation Action

Project Duration:

1 June 2016 - 31 May 2019

Total Project Value:

€9,799,168.75

EU Grant-Aid:

€8,294,318.88

Funding to Ireland:

€904,750



The aim of the **SALTGAE** project is to implement and demonstrate at large scale the long-term technological and economic feasibility of an innovative, sustainable and efficient solution for the treatment of high salinity wastewater from the food and drinks industry. Conventional wastewater treatments have proven ineffective for this kind of wastewater, as the bacterial processes typically used for the elimination of organic matter and nutrients are inhibited under high salinity contents. Therefore, combinations of biological and physicochemical methods are generally used which greatly increase the costs of the treatment, making it unaffordable for SMEs, who voluntarily decide not to comply with EU directives and discharge without prior treatment, causing severe damage to the environment.

SALTGAE's solution to this issue consists in the implementation of innovative technologies for each step of the wastewater treatment which will promote energy and resource

efficiency, and reduce costs. Amongst these, the use of halotolerant algae/ bacteria consortiums in high-rate algal ponds for the elimination of organic matter and nutrients stands out for its high added value: not only will it provide an effective and ecological solution for wastewater treatment, but it will also represent an innovative way of producing algal biomass, which can subsequently be valorised into different by-products, reducing the economic and environmental impact of the treatment.

Moreover, the project will also address cross-cutting barriers to innovation related to wastewater by developing a platform for the mobilisation and networking of stakeholders from all the different sectors related to wastewater, and for the dissemination of results. This will enable the development of a common roadmap for the alignment of legislation, regulation and pricing methodologies and promotion of financial investment and a paradigm shift in perception from 'wastewater treatment' to 'resource valorisation'.

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Project Partners

Project Coordinator	Tecnologias Avanzadas Inspiralia SL - Spain
Spain	Biboaqua SL Produmix SA Asociacion Cluster Food +I
Italy	Archimede recherche SRL Oxidine Water Technology SL Consorzio Interuniversitario Nazionale per la Scienze e Tecnologia dei Materiali Enco SRL European Desalination Society

SALTGAE – Demonstration project to prove the techno-economic feasibility of using algae to treat saline wastewater from the food industry

Project Partners	
Slovenia	Algen, Center za Algne Tehnologije, DOO Koto Proizvodno in Trgovsko Podjetje DOO
Israel	Arava Building and Development Ltd
Ireland	Dublin City University
Portugal	Nova ID FCT – Associacao para a Inovacao e Desenvolvimento DA FCT Instit Instituto de Biologia Experimental e Tecnologica uto de Biologia Experimental e Tecnologica
France	Centre de Valorisation des Glucies et Produits Naturels
Belgium	European Biomass Industry Association
Sweden	SP Svergies Tekniska Forskningsinstitut AB



Sea Change

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-13-2014

Funding Scheme:

CSA - Coordination and Support Action

Project Duration:

1 March 2015 - 28 February 2018

Total Project Value:

€3,494,876

EU Grant-Aid:

€3,494,876

Funding to Ireland:

€583,141.25

Website:
www.seachangeproject.eu

The overarching goals of the **Sea Change** project are to bring about a fundamental “Sea Change” in the way European citizens view their relationship with the sea, by empowering them – as ‘Ocean Literate’ citizens - to take direct and sustainable action towards healthy seas and ocean, healthy communities and ultimately - a healthy planet. Key objectives of Sea Change are to:

- Compile an in-depth review of the links between seas and ocean and human health, based on latest research knowledge outputs
- Build upon significant work to date, adopting best practice and embedding Ocean Literacy across established strategic initiatives and networks to help maximise impact and ensure sustainability
- Ensure that efforts to sustain an Ocean Literate society in Europe continue beyond the life of Sea Change through codes of good practice, public campaigns and other ongoing community activities
- Ensure that all activities of Sea Change are carefully monitored and evaluated to ensure maximum sustainability, effectiveness and efficiency
- Ensure knowledge exchange with transatlantic partners to bring about a global approach to protecting the planet’s shared seas and ocean



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Project Partners

Project Coordinator	Marine Biological Association of the United Kingdom
Ireland	AquaTT UETP Ltd National University of Ireland, Galway
United Kingdom	Centre for Environment, Fisheries and Aquaculture Science CoExploration Ltd
Sweden	Goeteborgs Universitet
Belgium	Vlaams Instituut Voor De Zee Vzw European Marine Board Association Europeenne Des Expositions Scientifiques Techniques Et Industrielles (Ecsite) Eurogeo Vzw
Denmark	Danmarks Tekniske Universitet
Portugal	Ciencia Viva-Agencia Nacional Para A Cultura Cientifica e Tecnologica Centro Interdisciplinar de Investigação Marinha e Ambiental
France	United Nations Educational, Scientific And Cultural Organization Reseau Ocean Mondial AISBL / World Ocean Network
Greece	Hellenic Centre for Marine Research
Spain	SUBMON

SeaDataCloud – Further developing the pan-European infrastructure for marine and ocean data management

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

INFRAIA-01-2016-2017

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 December 2016 - 30 November 2020

Total Project Value:

€9,999,737.50

EU Grant-Aid:

€9,999,737.50

Funding to Ireland:

€119,375

The SeaDataNet pan-European infrastructure has been developed by the National Oceanographic Data Centres and major research institutes from 34 countries. Over 100 marine data centres are connected and provide discovery and access to data resources for all European researchers. Moreover, SeaDataNet is a key infrastructure driving several portals of the European Marine Observation and Data network (EMODnet), initiated by EU DG-MARE for Marine Knowledge, the Marine Strategy Framework Directive, and Blue Growth. SeaDataNet complements the Copernicus Marine Environmental Monitoring Service (CMEMS), coordinated by EU DG-GROW.

However, more effective and convenient access is needed to better support European researchers. The standards, tools and services developed must be reviewed and upgraded to keep pace with demand, such as developments of new sensors, and international and IT standards. Also EMODnet and Copernicus pose extra challenges to boost performance and foster INSPIRE compliance. More data from more data

providers must be made available, from European and international research projects and observing programmes.

SeaDataCloud aims to considerably advance SeaDataNet services and increase their usage, adopting cloud and HPC technology for better performance. More users will be engaged and for longer sessions by including advanced services in a Virtual Research Environment. Researchers will be empowered with a collection of services and tools, tailored to their specific needs, supporting marine research and enabling generation of added-value products. Data concern the wide range of in-situ observations and remote sensing data. To have access to the latest cloud technology and facilities, SeaDataNet will cooperate with EUDAT, a network of computing infrastructures that develop and operate a common framework for managing scientific data across Europe. **SeaDataCloud** will improve services to users and data providers, optimise connecting data centres and streams, and interoperate with other European and international networks.



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Project Partners

Project Coordinator	Institut Francais de Recherche pour l'Exploitation de la Mer – France
Netherlands	Mariene Informatie Service Maris BV Stichting Nioz, Koninklijk Nederlands Instituut voor Onderzoek der Zee Stichting Deltares
United Kingdom	Natural Environment Research Council
Sweden	Sveriges Meteorologiska och Hydrologiska Institut
Spain	Instituto Español de Oceanografía
Turkey	Middle East Technical University



SeaDataCloud – Further developing the pan-European infrastructure for marine and ocean data management

Project Partners	
Germany	Bundesamt für Seeschifffahrt und Hydrographie Alfred-Wegener-Institut Helmholtz – Zentrum für Polar – und Meeresforschung
Greece	Hellenic Centre for Marine Research
Italy	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile Istituto Nazionale di Geofisica e Vulcanologia Consiglio Nazionale delle Ricerche ETT SPA
Russia	All-Russian Research Institute of Hydrometeorological Information – World Data Centre P.P. Shirshov Institute of Oceanology of Russian Academy of Sciences
Belgium	University de Liege Joint Research Centre – European Commission Institut Royal des Sciences Naturelles de Belgique Vlaams Instituut voor de Zee Vzw EuroGOOS AISBL
Norway	Havforskningsinstituttet
Denmark	Aarhus Universitet International Council for the Exploration of the Sea
Ireland	Marine Institute
Portugal	Instituto Hidrografico
Iceland	Hafrannsóknastofnunin
Finland	Ilmatieteen Laitos Suomen Ympäristökeskus
Poland	Instytut Meteorologii i Gospodarki wodnej – Państwowy Instytut Badawczy Instytut Oceanologii Polskiej Akademii Nauk
Estonia	Tallina Tehnikaülikool
Latvia	Latvijas Hidroekoloģijas Instituts
Bulgaria	Institute of Oceanology – Bulgarian Academy of Sciences
Romania	Institutul National de Cercetare – Dezvoltare Marina Grigore Antipa
Georgia	Ivane Javakishvili Tbilisi State University
Croatia	Institute of Oceanography and Fisheries
Slovenia	Nacionalni Institut za Biologijo
Malta	Università ta' Malta
Israel	Israel Oceanographic and Limnological Research Ltd
Spain	Agencia Estatal Consejo Superior de Investigaciones Científicas
Ukraine	Ukrainian Scientific Centre of Ecology of the Sea



SEAMETEC – Smart Efficient Affordable Marine Energy Technology Exploitation using Composites

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SIE-01-2014-1

Funding Scheme:

SME instrument phase I

Project Duration:

1 October 2014-31 March 2015

Total Project Value:

€71,429

EU Grant-Aid:

€50,000

Funding to Ireland:

€50,000

The **SEAMETEC** project aims to develop smart, efficient tidal-turbine blades and offshore wind-turbine blade structures at an affordable cost. The strategic objective is to increase the availability of secure, low-cost, low-carbon electricity from ocean and offshore energy. These objectives will be achieved by using a novel, but commercially proven, patented, composites manufacturing process and by adding sensor technology that reduces maintenance costs and improves reliability.

The project will be delivered by ÉireComposites in partnership with EnerOcean, two companies with excellent track records in managing European projects and developing new technologies. EnerOcean has performed technology- and resource-quantification studies on a wide range of tidal technologies and offshore wind. ÉireComposites has commercialised a novel technology for manufacturing wind-turbine blades.

The project will play an important role in creating a new European industry – the production of tidal stream turbines – while also giving Europe a competitive advantage in offshore wind. Offshore wind is an established multi-billion euro market. Tidal stream energy is an emerging market that will create up to 120GW of electricity and a €400 billion industry. The SEAMETEC partners will access these markets by collaborating with Suzlon (a leading global wind OEM) and Marine Current Turbines (a Siemens business and key player in tidal energy).

The project is a game-changing innovation for tidal energy: it will result in reliable, cost-efficient blades, without which the aggressive launch of tidal arrays may not proceed. It will stimulate the innovation potential of SMEs for a low-carbon and efficient energy system (SIE-01-2014-1) and strongly contribute to the Horizon 2020 Societal Challenge 'Secure, Clean and Efficient Energy'. The two collaborating SMEs will develop clean, affordable technology solutions that increase security of supply of electricity, protect the environment and grow the economy.

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Project Partners

Project Coordinator	ÉireComposites Teoranta - Ireland
Spain	EnerOcean SL



SINANN – Sonar INtegrated Advanced NavigatioN

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

BG-12-2014-1

Funding Scheme:

SME instrument phase I

Collaborative Project

Project Duration:

1 March 2015 - 31 August 2015

Total Project Value:

€71,429

EU Grant-Aid:

€50,000

Funding to Ireland:

€50,000

SINANN will leverage the identified capability of SonarSim's high-performance Computational Ocean Acoustics framework to unlock a tangible 10-15% efficiency improvement in coastal zone seabed survey operations. The resulting productivity step change could potentially double the profit margin of a typical survey vessel, an expensive capital investment costing a minimum of €10 million per annum to operate. A significant portion of operational survey time is wasted collecting redundant seabed data and correcting routine errors caused by the inherent deficiencies in traditional manual based vessel path planning and swath coverage prediction processes.

SINANN enables end users to identify the optimal fit for purpose survey configuration pre-survey, predict expected seabed survey performance analytics, and execute the optimal survey strategy in the field through smart high performance computerised solutions.

Target end users are blue chip survey organisations involved in national charting, offshore oil and gas, marine renewable energy, and subsea telecoms.

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Project Partners

Project Coordinator	SonarSim Ltd - Ireland
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TAPAS – Tools for Assessment and Planning of Aquaculture Sustainability

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SFS-11b-2015

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 March 2016-29 February 2020

Total Project Value:

€6,918,512.50

EU Grant-Aid:

€6,918,512.50

Funding to Ireland:

€542,473.75

Website:
www.tapas-h2020.eu

Aquaculture is one of five sectors in the EU's Blue Growth Strategy, aimed at harnessing untapped potential for food production and jobs whilst focusing on environmental sustainability. **TAPAS** addresses this challenge by supporting member states to establish a coherent and efficient regulatory framework aimed at sustainable growth. TAPAS will use a requirements analysis to evaluate existing regulatory and licensing frameworks across the EU, taking account of the range of production environments and specificities and emerging approaches such as offshore technologies, integrated multi-trophic aquaculture, and integration with other sectors.

TAPAS will also evaluate existing tools for economic assessment of aquaculture sustainability affecting sectoral growth. TAPAS will improve existing and develop new models for far- and near-field environmental assessment providing better monitoring, observation, forecasting and early warning technologies. The innovative methodologies and components emerging from TAPAS will be integrated in an Aquaculture Sustainability Toolbox complemented by a decision support system to support the development and implementation of coastal and marine spatial planning enabling less costly, more transparent and more efficient licensing. Training, dissemination and outreach activities will specifically target improvement of the image of European aquaculture and uptake of outputs by regulators, while promoting an integrated sustainable strategy for development.



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Project Partners

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Norway	Norsk Institutt For Vannforskning
Denmark	DHI
Netherlands	Water Insight BV Stichting Wageningen Research
United Kingdom	Plymouth Marine Laboratory Aquaculture Stewardship Council
Spain	Universidad de Murcia Fundacion Imdea Agua
France	Universite de Nantes
Greece	Hellenic Centre for Marine Research
Hungary	Szent Istvan University Kozep Es Kelet Europai Akvakulturakozpontok Egyesulet
Malta	Aquabiotech Ltd
Ireland	Marine Institute



VIVALDI – Preventing and mitigating farmed bivalve disease

Project Details

Funding Programme:

Horizon 2020 (H2020)

Sub Programme:

SFS-10b-2015

Funding Scheme:

RIA - Research and Innovation Action

Project Duration:

1 March 2016 - 29 February 2020

Total Project Value:

€5,414,417.50

EU Grant-Aid:

€4,503,082.50

Funding to Ireland:

€412,992.50

Website:

www.vivaldi-project.eu



The overarching goal of **VIVALDI** is to increase the sustainability and competitiveness of the European shellfish industry by improving the understanding of bivalve diseases and by developing innovative solutions and tools for the prevention, control and mitigation of the major pathogens affecting the main European farmed shellfish species: Pacific oyster (*Crassostrea gigas*), mussels (*Mytilus edulis* and *M. galloprovincialis*), European flat oyster (*Ostrea edulis*), clams (*Venerupis philipinarum*) and scallops (*Pecten maximus*). The project addresses the most harmful pathogens affecting either one or more of these shellfish species: the virus OsHV-1, *Vibrio* species including *V. aestuarianus*, *V. splendidus*, *V. harveyi* and *V. tapetis*, as well as the parasite *Bonamia ostreae*. The project is committed to providing practical solutions based on the most advanced knowledge. VIVALDI will dissect the disease mechanisms associated with pathogen virulence and pathogenesis and host immune responses, develop

in-vivo and in-vitro models, and apply “omic” approaches that will help the development of diagnostic tools and drugs against pathogen targets, and breeding programmes in a collaborative effort with industrial partners. The proposal will include a global shellfish health approach, recognising that cultured bivalves are often exposed to several pathogens simultaneously, and that disease outbreaks can be due to the combined effect of two or more pathogens. The proposal will also investigate advantages and risks of the use of disease-resistant selected animals to improve consumer confidence and safety.

VIVALDI is both multi- and trans-disciplinary. To cover both basic and applied levels from molecules to farm, the proposal will integrate partners with a broad range of complementary expertises in pathology and animal health, epidemiology, immunology, molecular biology, genetics, genomics and food safety.

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Project Partners

Project Coordinator	Institut Français De Recherche Pour l'exploitation de la Mer – France
France	Centre National de la Recherche Scientifique Syndicat des Selectionneurs Avicoles et Aquacoles Français Labogena DNA
Spain	Agencia Estatal Consejo Superior de investigaciones Cientificas Institut de Recerca i Tecnologia Agroalimentaries

VIVALDI – Preventing and mitigating farmed bivalve disease

Project Partners	
Ireland	University College Cork Marine Institute National University of Ireland, Galway
Israel	Atlantium Technologies Ltd
Italy	Universita Degli Studi di Genova Universita Degli Studi di Padova Universita Degli Studi di Trieste
Norway	Nofima AS Havforskningsinstituttet
Netherlands	Stichting Wageningen Research
United Kingdom	The Secretary of State for Environment, Food and Rural Affairs The Queen's University of Belfast The University of Liverpool
Germany	Alfred-Wegener-Institut Helmholtz- Zentrum für Polar- Und Meeresforschung
Denmark	Danmarks Tekniske Universitet

INTERREG-V PROJECT PROFILES

“Science and everyday life cannot
and should not be separated”

Rosalind Franklin, Chemist (1920 - 1958)

The European Territorial Co-Operation Programme, INTERREG, is a suite of competitive EU Regional Development funded programmes designed to strengthen economic and social cohesion by fostering balanced development through cross-border, transnational and interregional cooperation. INTERREG programmes are funded to support the harmonious development of the EU's territory at different levels. The fifth period of Interreg is based on 11 investment priorities laid down in the European Regional Development Fund (ERDF) Regulation contributing to the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth.



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INTERREG-V

3.1 The INTERREG-V Programme

European Territorial Cooperation (ETC), better known as INTERREG, aims to address challenges that are cross-border in nature, requiring collaborative action amongst Member States or bodies within those states to find solutions through sharing of expertise, good practice and new and innovative approaches. Five programming periods span more than a quarter of a century since the start of INTERREG.

INTERREG is built around three strands of cooperation: cross-border, transnational and interregional. INTERREG-V (2014-2020) has a budget of €10.1 billion invested in over 100 cooperation programmes between regions and territorial, social and economic partners:

- 60 cross-border programmes - INTERREG-VA, along 38 internal EU borders.
- 12 Instrument for Pre-Accession Assistance (IPA) cross-border collaboration programmes - supporting both cross-border co-operation between Member States and candidate/potential candidate countries, and among the candidate/potential candidate countries themselves.
- 16 European Neighbourhood Instrument (ENI) cross-border collaboration programmes - promoting co-operation and economic integration between the EU and partner countries.
- 15 Transnational programmes - INTERREG-VB, covering larger areas of cooperation such as the Baltic Sea, Alpine and Mediterranean regions.
- The interregional cooperation programme - INTERREG-VC, INTERREG Europe, and three networking programmes (Urbact III, Interact III and ESPON) providing a framework for exchanging experience between regional and local bodies in all 28 Member States of the EU.

INTERREG-V is based on 11 investment priorities laid down in the European Regional Development Fund (ERDF). Regulation contributing to the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth. These thematic objectives are provided as a menu for each programme to select its priorities:

- Innovation and R&D
- ICT: Improving access; quality and usage
- SMEs: Improving competitiveness
- Shift towards a low-carbon economy
- Climate change adaptation and risk management
- Environmental protection and resource efficiency
- Sustainable transport and unblocking key networks
- Employment and supporting labour mobility
- Social inclusion and combating poverty
- Education, skills and lifelong learning
- Improving institutional capacity for efficient public administrations

The INTERREG-V programmes that are relevant to Ireland are shown in Table 3.1 and those that Ireland is participating in are INTERREG-VB and INTERREG-VC (Table 3.3).

INTERREG-V

3.2 How is the Irish marine sector performing in INTERREG-V?

Six Irish organisations had involvement in six INTERREG-V projects between 2014 and 2016. The projects cover areas as diverse as yacht tourism, renewable energy and repurposing of discarded fishing nets (Table 3.3). With €2.6 million in grant-aid being received by Irish organisations, grant-aid is normally in the region of €100,000-€750,000 (Figure 3.1), with one project receiving over €750,000 in grant-aid (FORESEA).

3.3 Who, from the Irish marine sector, is participating in INTERREG-V?

Funded between 2014 and 2016, Donegal County Council are participating in three projects. In total, two public bodies, two third level Institutions and two SMEs are participating in INTERREG-V projects from Ireland (Table 3.2).

3.4. Who did the Irish marine sector participants co-operate with?

Transnational INTERREG-V projects can only involve organisations from the Programme specific nominated countries (e.g. Ireland and Wales; Atlantic Rim: UK, France, Spain, Portugal) (Table 3.1). It is hardly surprising therefore that the lead partners for projects with Irish participation are: the UK (two projects), Norway (two projects) and Finland (one project). Ireland collaborated mainly with the United Kingdom, the Netherlands, Norway and Iceland (Figure 3.2).

The Cork Institute of Technology is the only Irish organisation to coordinate an INTERREG-V project (Cool Route), with two other Irish partners, the consortium also includes Norway, the United Kingdom (three partners) and the Faroe Islands.

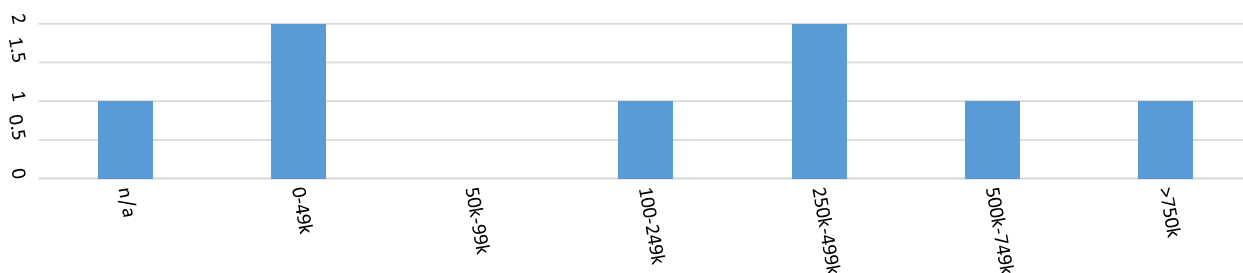


Figure 3.1 Range of grant-aid (€) received by Irish partners in INTERREG-V projects

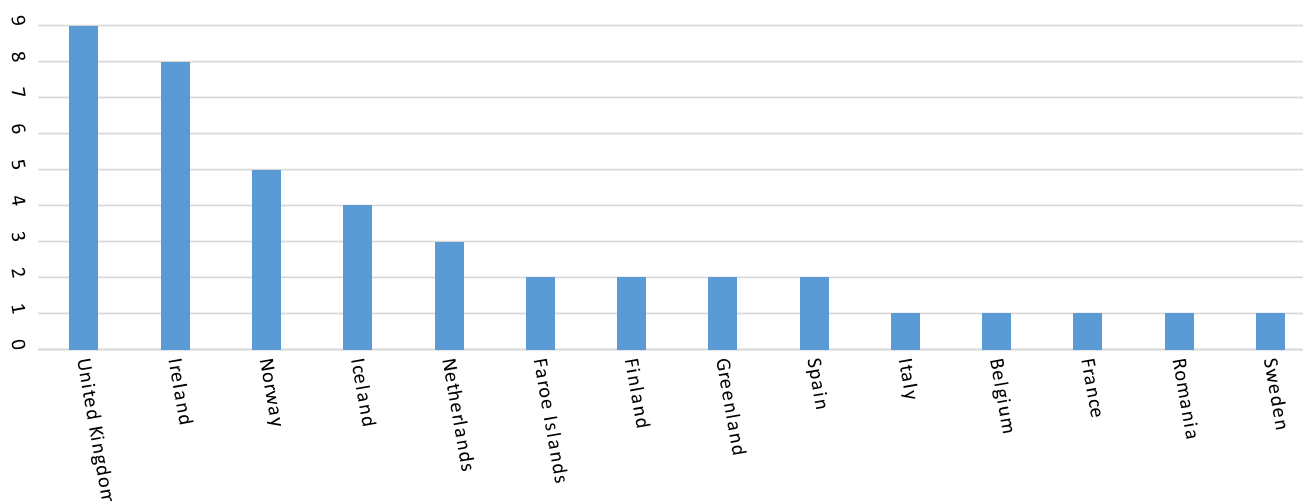


Figure 3.2 Countries engaging in EU INTERREG-V funded marine projects with Irish participation.

INTERREG-V

Table 3.1 INTERREG-V Programmes of direct interest to Ireland.

Programme/Strand/Title	Thematic Priorities	Geographical Coverage
Border, Midland and Western Regional Operational Programme 2014-2020	<ul style="list-style-type: none"> • Technical Assistance • Research and innovation • Information and communication technologies • SMEs competitiveness • Low-carbon economy • Environment and resource efficiency 	Ireland - Border, Midland and Western
Southern and Eastern Regional Operational Programme	<ul style="list-style-type: none"> • Technical Assistance • Research and innovation • Information and communication technologies • SMEs competitiveness • Low-carbon economy • Environment and resource efficiency 	Ireland - Southern and Eastern
Atlantic Area	<ul style="list-style-type: none"> • Technical Assistance • Research and innovation • Low-carbon economy • Climate change and risk prevention • Environment and resource efficiency 	Ireland, France, Spain, Portugal, United Kingdom
ESPO	<ul style="list-style-type: none"> • Technical Assistance • Better public administration 	EU28
INTERACT	<ul style="list-style-type: none"> • Technical Assistance • Better public administration 	EU28
URBACT	<ul style="list-style-type: none"> • Technical Assistance • Better public administration 	EU28
North West Europe	<ul style="list-style-type: none"> • Technical Assistance • Research and innovation • Low-carbon economy • Environment and resource efficiency • Transport and energy networks 	Belgium, France, Germany, Ireland, Luxembourg, Netherlands, United Kingdom
Ireland-United Kingdom (PEACE)	<ul style="list-style-type: none"> • Technical Assistance • Social inclusion 	Ireland - Border, Midland and Western United Kingdom - Northern Ireland
INTERREG-VA - United Kingdom-Ireland (Ireland-Northern Ireland - Scotland)	<ul style="list-style-type: none"> • Technical Assistance • Research and innovation • Environment and resource efficiency • Transport and energy networks • Social inclusion 	Ireland - Border, Midland and Western United Kingdom - Southwestern Scotland, Highlands and Islands, Northern Ireland
INTERREG-VA - United Kingdom-Ireland (Ireland-Wales)	<ul style="list-style-type: none"> • Technical Assistance • Research and innovation • Climate change and risk prevention • Environment and resource efficiency 	Ireland - Southern and Eastern United Kingdom - Wales: West Wales & The Valleys, East Wales
INTERREG Europe	<ul style="list-style-type: none"> • Technical Assistance • Research and innovation • SMEs competitiveness • Low-carbon economy • Environment and resource efficiencies. 	EU28

INTERREG-V

Table 3.2 Irish participants in marine-related INTERREG-V projects

Public Bodies	Third Level Institutes	Other
<ul style="list-style-type: none"> Donegal County Council Macroom E Enterprise Centre 	Institutes of Technology: <ul style="list-style-type: none"> Cork Institute of Technology Galway-Mayo Institute of Technology 	SMEs <ul style="list-style-type: none"> Royal Cork Yacht Club SmartBay Ireland

3.5. Who were the top Irish marine INTERREG-V performers?

As in the INTERREG-V Programme, performance can be gauged by (a) who leads an INTERREG-V project; (b) the total number of INTERREG-V projects an organisation participates in; or, (c) the total INTERREG-V grant-aid accumulated by a particular organisation or institute:

- Ireland currently leads one INTERREG-V project (Cool Route) and engages in six INTERREG-V projects (Table 3.3)
- The top performer in terms of the number of projects engaged in was Donegal County Council (three projects)
- The top Irish performers in terms of total grant-aid were: SmartBay Ireland Ltd (€1.3 million); Cork Institute of Technology (€0.6 million) and Donegal County Council (€0.5 million)

Table 3.3 INTERREG-V projects involving an Irish partner

Programme	ACRONYM	Irish Partner	No. of Partners	Leading country
VB	Circular Ocean	Macroom E Enterprise Centre	5	United Kingdom
VB	Cool Route	Royal Cork Yacht Club Donegal County Council Cork Institute of Technology	8	Ireland
VB	FORESEA	SmartBay Ireland Ltd	5	United Kingdom
VB	URCHIN	Galway-Mayo Institute of Technology	7	Norway
VB	WaterPro	Donegal County Council	9	Finland
VC	HERICOAST	Donegal County Council	8	Norway

Circular Ocean

Project Details

Funding Programme:

INTERREG-VA

Sub Programme:
Northern Periphery and Arctic Programme
2014-2020
Project Duration:

2015-2018

Total Project Value:

€1,472,216

EU Grant-Aid:

€921,195

Funding to Ireland:

€187,396.20

Website:
www.circularocean.eu

The total economic damage of marine plastic waste is estimated at almost €12 billion per year, including environmental, commercial and clean-up costs. Up to 12.7 million tons of marine plastic waste enters the oceans each year due to poor waste management practices.

In pursuit of innovative and sustainable solutions for marine plastic waste, the **Circular Ocean** project seeks to inspire enterprises and entrepreneurs to realise the hidden opportunities of discarded fishing nets and ropes in the Northern Periphery and Arctic (NPA) region.

As increasing levels of marine litter are particularly pertinent to the NPA region, the Circular Ocean project will act as a catalyst to motivate and empower remote communities to develop sustainable and green business opportunities that will enhance income generation and retention within local regions.

Through transnational collaboration and eco-innovation, Circular Ocean will develop, share and test new sustainable solutions to incentivise the collection and reprocessing of discarded fishing nets and assist the movement towards a more circular economy.



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Project Partners	
Project Coordinator	North Highland College - United Kingdom
Greenland	Arctic Technology Centre - Technical University of Denmark
Ireland	Macroom E Enterprise Centre (A wholly owned subsidiary of Cork County Council)
Norway	Norwegian University of Science and Technology
United Kingdom	University for the Creative Arts
Associated Partners	
Norway	Nofir as
Ireland	Environmental Protection Agency Local Enterprise Office South Cork
Iceland	Innovation Centre
United Kingdom	Marine Scotland Northern Ireland Fishery Harbour Authority

Cool Route – Cruising Oceans On Latitudes above 51° North

Project Details

Funding Programme:

INTERREG-VA

Sub Programme:
Northern Periphery and Arctic Programme
2014-2020
Project Duration:

2015-2018

Total Project Value:

€1,257,338

EU Grant-Aid:

€790,563

Funding to Ireland:

€635,142

Website:
www.sailcoolroute.eu

The **Cool Route** project investigates all aspects of the practical logistics and business potential to establish a yacht cruising route along the western offshore areas of the Northern Periphery Area (NPA), stretching from Cork in the south of Ireland, to the UK (Northern Ireland and western Scotland) and onwards to the Faroe Islands and Norway. Thereby promoting all of the cruising areas on the western coastline of Europe. As an eco-tourism product, exploiting the natural resources of the zone in a manner that is sustainable and environmentally viable; this new sea route will be marketed internationally and will have a common branding, booking and information system. The project will also address the future legacy of its work; by ensuring that the Cool Route continues as a viable self-financing economic entity, following the completion of the project.

Cool Route aims to:

- Strengthen the market reach and customer base for SMEs in remote communities
- Develop an exclusive product package to attract high end customers

- Develop a joint marketing strategy and ICT solution and cooperation on the logistics of overcoming barriers due to distance
- Design a marketing model focussing on “place based” development opportunities which also provides opportunities for promoting additional spin off activities – such as whale watching, walking tours, traditional music evenings, cultural events, photographic tours etc.

The expected outcomes are:

- Production of a detailed logistical plan for the overall cruising ground, including a gap analysis in terms of current facilities
- Production of a detailed business plan
- Production of a detailed marketing plan
- Addressing all the practicalities, financial, marketing and commercialisation aspects of the route design and realisation of an integrated IT based booking system for different facilities throughout the route

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Project Partners

Project Coordinator	Cork Institute of Technology - Ireland
Ireland	Donegal County Council Royal Cork Yacht Club
Faroe Islands	Port Authority of Torshavn
United Kingdom	Blue Seas Marinas Derry City & Strabane District County Glasgow Caledonian University

FORESEA – Funding Ocean Renewable Energy through Strategic European Action

Project Details

Funding Programme:

INTERREG-VA

Sub Programme:

North West Europe Programme 2014-2020

Project Duration:

2016-2019

Total Project Value:

€10,751,965

EU Grant-Aid:

€6,451,178

Funding to Ireland:

€1,306,648

Website:
www.foreseaproject.eu

The **FORESEA** (Funding Ocean Renewable Energy through Strategic European Action) project aims to help bring ocean energy technologies to market by providing access to north-west Europe's world-leading network of test centres.

Through the project, the performance of innovative ocean renewable energy technologies will be demonstrated in real sea conditions, helping to leverage the investment needed to take these new products to market.

Access to test sites will be provided through a programme of competitive calls, run by the project's consortium. The programme covers the following test centres:

- European Marine Energy Centre (EMEC): Orkney Islands, UK
- SmartBay: Galway, Ireland
- SEM-REV: Nantes, France
- Tidal Testing Centre: Den Oever, Netherlands

The test centres are supported by European industry group Ocean Energy Europe, based in Brussels.

European technologies are the clear global leader in ocean energy. To translate this leadership into a new industrial sector, it is essential that a critical mass of technologies receive enough private investment to take them to the marketplace. The cost of pre-commercial testing and demonstration for ocean energy is high and investors are reluctant to invest until the technology has been proven in the sea at scale. The result is that precisely at the point when risks are highest and capital requirements most intensive (e.g. open ocean testing and demonstration) technology developers hit a funding brick wall.

The FORESEA programme will encourage longer term testing and technology de-risking, thereby leveraging further investment and enabling progression towards the marketplace.

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Project Partners	
Project Coordinator	The European Marine Energy Centre Ltd - United Kingdom
Belgium	European Ocean Energy Association
France	Ecole Centrale de Nantes
Ireland	SmartBay Ireland Ltd
Netherlands	Stichting Tidal Testing Centre
Associate Partners	
Norway	Nofir as
United Kingdom	Marine Scotland Northern Ireland Fishery Harbour Authority
Ireland	Environmental Protection Agency Local Enterprise Office South Cork
Iceland	Innovation Centre

HERICOAST – Management of heritage in coastal landscapes

Project Details

Funding Programme:

INTERREG-VA

Sub Programme:

Environment and resource efficiency

Project Duration:

2016-2020

Total Project Value:

€1,738,029

EU Grant-Aid:

€1,738,029

Funding to Ireland:

€279,408

Website:
www.interregeurope.eu/hericoast


Europe's maritime and fluvial regions exist in great diversity, yet show parallels in spatial and political challenges. The Cultural heritage of these regions form an essential part of coastal landscape. This heritage is considered particularly vulnerable, exposed to spatial changes in transport, industrialisation of fisheries and use of coastal zones for tourism.

HERICOAST project aims to improve regional policies for heritage management in maritime and fluvial regions by facilitating policy learning and supporting exchange of experience, in line with the EC's advice on participatory governance of cultural heritage. In this way, the regions will achieve a better balance between exploitation and preservation measures when redeveloping coastal landscapes.

Regional policy instruments will be improved through new projects, improved governance and structural change. €7 million in Structural Funds

are estimated to be influenced by the project, as well as €1.030 million of other funds. The number of visitors to cultural heritage sites is expected to increase and public access to these sites expected to improve. The partnership covers eight partners from six countries.

A three-step interregional learning process will be applied:

1. Identification and analysis of heritage and territorial situations
2. Exchange of experience and good practice within heritage management
3. Development of regional action plans through participatory involvement of stakeholders

A methodological framework and a tool-box for assessing and developing heritage will serve as the backbone to the learning process.

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Project Partners

Project Coordinator	Vest-Agder County Council - Norway
Ireland	Donegal County Council
Italy	Molise Region
Romania	Tulcea County Council
Netherlands	Civilscape Vrije Universiteit Amsterdam, research institute CLUE+
Spain	Castilla y Leon Regional Government - Regional Ministry of Culture and Tourism Leartibai Development Agency

URCHIN – Utilising the Arctic Sea Urchin Resource

Project Details

Funding Programme:

INTERREG-VB

Sub Programme:
Northern Periphery and Arctic Programme
2014-2020
Project Duration:

2015-2018

Total Project Value:

€874,080

EU Grant-Aid:

€448,046

Website:
www.urchinproject.com

There are a number of challenges that have prevented the expansion of sea urchin fisheries in the NPA. These include environmental challenges to fishing, inadequate and inappropriate legislation and fisheries management and lack of technology and knowledge regarding sea ranching and roe enhancement of poor quality urchins.

Research to overcome these challenges has been disparate and there has been no transfer of knowledge between the NPA partner countries.

Within this framework, the **URCHIN** project aims to gather the existing expertise from Norway, Iceland, Ireland and Greenland, together with knowledge from Canada and Scotland, to optimise the fishing of high value sea urchins in northern and arctic areas. Furthermore, roe enhancement technology for roe fattening to increase the value of low value sea urchins once they have been collected in the northern arctic regions will be developed in Greenland and Iceland.

The project will also investigate sea ranching to repopulate areas that have been extensively overfished in the past in Ireland.

Issues regarding the provision of adequate legislation and fisheries management will be identified and legislative organisations will be provided with the appropriate knowledge to provide sensible and sustainable management of sea urchin fisheries. The project will also estimate market needs for sea urchin roe as well as establishing logistic routes from the NPA to markets.

This project will enable SMEs to fully utilise their respective sea urchin resources. It will also empower government and legislative bodies to create effective legislation to support these fisheries.

This in turn will create employment opportunities in the sea urchin fishing, roe fattening and sea ranching industries as well as spin off industries such as value added products, transport, packing and marketing.

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Project Partners

Project Coordinator	Nofima AS - Norway
Greenland	Royal Greenland
Iceland	Marine Research Institute Matis Ltd Thorisholmi
Ireland	Galway Mayo Institute of Technology
Norway	Arctic Caviar AS

WaterPro – Northern Runoffs into Profits

Project Details

Funding Programme:

INTERREG-VB

Sub Programme:

Northern Periphery and Arctic Programme
2014-2020

Project Duration:

36 months

Total Project Value:

€1,995,485

EU Grant-Aid:

€1,297,065

Funding to Ireland:

€252,000

Website:
www.water-pro.eu

While the agriculture and mining extractive industries are important sectors for the economy of Northern Periphery and Arctic (NPA) areas, their activities cause significant risk to the vulnerable environment through water and land pollution.

WaterPro aims to develop eco-efficient tools and models for stormwater runoff management practices and environmental protection

for the NPA sparsely populated region. This will be done through development of a Tool-Box of good management practices and a communication platform for agriculture and mining extraction runoff management. In addition, several innovative, low cost practices will be implemented in actual pilot sites and their treatment and cost-efficiency evaluated.



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Project Partners

Project Coordinator	Savonia University of Applied Sciences Ltd - Finland
Finland	Geological Survey of Finland
United Kingdom	Agri-Food and Biosciences Institute Lough Neagh Partnership Ltd Heriot Watt University
Ireland	Donegal County Council
Iceland	Agricultural University of Iceland
Sweden	Luleå University of Technology
Faroe Islands	Agricultural Agency



LIFE+ PROJECT PROFILES

“The sea, once it casts its spell, holds one in its net of wonder forever”

Jacques Cousteau, Explorer (1910 - 1997)

LIFE+ is the EU's financial instrument supporting environmental, nature conservation and climate action projects throughout the EU. Since 1992, LIFE has co-financed some 4306 projects. For the 2014-2020 funding period, LIFE+ will contribute approximately €3.4 billion to the protection of the environment and climate.



Marine Institute
Foras na Mara



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LIFE+

4.1 The LIFE+ Programme

LIFE+ is the EU's financial instrument supporting environmental, nature conservation and climate action projects throughout the EU. The LIFE+ programme for the 2014-2017 period will contribute to the sustainable development of the Europe 2020 Strategy and the 7th Union Environmental Action Programme.

The programme has a budget of €3.5 billion, 75% of which is attributed to the Environment sub-programme (approx. €2.6 billion), and 25% of which is attributed to a new Climate Action sub-programme (€864 million).

The Environment strand of the new programme covers three priority areas: environment and resource efficiency; nature and biodiversity; and environmental governance and information. The Climate Action strand covers: climate change mitigation; climate change adaptation; and climate governance and information.

Co-financing for projects represents 81% of the LIFE+ 2014-2020 budget. For the 2014-2020 period, LIFE+'s "traditional" (Nature, Biodiversity, Environment and Information) best practice, demonstration, pilot and awareness-raising projects continue, with the addition of four new types of projects (integrated, technical assistance, capacity-building, preparatory). The maximum co-financing rates for the various project types vary between 55-100%.

Operating grants are also available for NGOs active in the field of the environment or climate action at EU level, along with two new financial instruments (Natural Capital Financing Facility (NCFF) and Private

Financing for Energy Efficiency (PF4EE)). The NCFF will provide financing opportunities in the form of loans or equity investments for pilot projects promoting the preservation of natural capital. PF4EE will provide loans for investments in energy efficiency projects prioritised by National Energy Efficiency Action Plans.

DG Environment and DG Climate Action manage the LIFE+ Programme. The Commission has also delegated the implementation of many components of the LIFE+ Programme to the Executive Agency for Small and Medium-sized Enterprises (EASME). The European Investment Bank will manage the two new financial instruments (NCFF and PF4EE).

4.2 Irish participation in LIFE+ marine-related projects

Since the launch of the LIFE+ programme by the European Commission in 1992, a total of 56 projects have been co-financed in Ireland. Of these, 38 focus on environmental innovation and 17 on nature conservation. These projects represent a total investment of €112.5 million, of which €48 million was contributed by the EU.

Since 2014, one marine project has been funded through the LIFE+ Programme. Surprisingly, relatively few marine-related projects have been supported by the LIFE+ Programme, notable exceptions being BIOMAR (1992-1996), ECOPRO (1992-1996), the Coastal Zone Management Strategy for Bantry Bay (1997-2000) and PISCES (2009-2012).



LIFE I 4 Roseate Tern – Improving the conservation prospects of the priority species roseate tern throughout its range in the UK and Ireland

Project Details

Funding Programme:

LIFE+

Sub-Programme:

Oceans of Tomorrow

Project Duration:

2015-2020

Total Project Value:

€3,229,020

EU Grant-Aid:

€2,421,765

Funding to Ireland:

€386,537

Website:

www.roseatetern.org



The overall goal of the **LIFE I 4 Roseate Tern** project is to improve the conservation prospects of roseate tern (*Sterna dougallii*) in the UK and Ireland. This aim will contribute to a long term goal of improving the conservation status of roseate tern across Europe.

Listed in Annex I of the Birds Directive, the roseate tern (*Sterna dougallii*) is classed as 'Rare in Europe' by BirdLife International and is a Species of European Conservation Concern. It breeds in just two areas of Europe, namely the Azores and the far northwest. The northwest metapopulation is spread across a small number of sites in France, Ireland and the UK; the French sites have recently been targeted by a LIFE project (LIFE05 NAT/F/I 37), and this new project was designed to build on the previous one.

In the UK, the roseate tern has been in decline since a high point in the 1960s. The cause of this decline is not fully understood, but contributing factors are thought to include predation and disturbance at breeding colonies, loss of nesting sites, emigration to Ireland, and trapping and/or fishing on the wintering grounds in West Africa. Five UK Special Protection Areas (SPAs) host roseate tern, but only one of these, Coquet Island, currently supports an established population.

In Ireland, three SPAs host roseate tern: two as breeding sites (Rockabill and Lady's Island Lake) and one mainly as a post-breeding site (Dalkey Islands). Rockabill is the principal site in the northwest Europe metapopulation, holding 79% of this metapopulation in 2014. The safeguarding of these sites is therefore of critical importance.

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Project Partners

Project Coordinator	The Royal Society for the Protection of Birds - UK
Ireland	BirdWatch Ireland
United Kingdom	North Wales Wildlife Trust



Erasmus+

ERASMUS+ PROJECT PROFILES

“A scientist in his laboratory is not only a technician: he is also a child placed before natural phenomena which impress him like a fairy tale”

Marie Curie, Physicist and Chemist (1867 -1934)

Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. Its budget of €14.7 billion will provide opportunities for over four million Europeans to study, train, gain experience, and volunteer abroad.



Marine Institute
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Erasmus+

5.1 Erasmus+

Erasmus+ is the EU programme for education, training, youth and sport for the 2014-2020 programming period and has a total budget of €14.7 billion, combining all previous programmes in these areas under one initiative.

Its overall objective is to support learning opportunities for individuals and cooperation between educational institutions, youth organisations, businesses, local and regional authorities, and NGOs. The programme involves these different groups in the development and implementation of innovative practices in education, training and youth activities and to promote employability, creativity and entrepreneurship.

The structure of the Erasmus+ programme comprises three key actions:

- **Key Action 1: Mobility of Individuals** - provides opportunities for individuals to improve their skills, enhance their employability and gain cultural awareness. Funds mobility projects to enable organisations to offer structured study, work experience, job shadowing, training and teaching opportunities to staff and learners
- **Key Action 2: Cooperation for Innovation and Exchange of Good Practices** - enables organisations to work in partnership with organisations from other participating countries to improve their provision for learners and share innovative practices
- **Key Action 3: Support for Policy Reform** - covers any type of activity aimed at supporting and facilitating the modernisation of education and training systems such as strategic activities supporting policy reform

In addition, Jean Monnet Activities promote the idea of European integration while actions in the field of sport support collaborative partnerships, dialogue with European stakeholders and the promotion of not-for-profit sporting events.

Public or private bodies active in the fields of education, training, youth and sport from the 28 EU Member States, the EFTA/EEA countries, and EU candidate countries may apply for funding within the Erasmus+ programme. Certain Erasmus+ programme actions are also open to organisations from partner countries.

5.2 How are Irish marine researchers performing in Erasmus+?

There are 19 ongoing Erasmus+ actions involving Irish partners, focusing on learning mobility of individuals and cooperation for innovation and the exchange of good practices. Five of these projects are led by Irish organisations.

5.3 What Irish marine research groups and SMEs are participating in Erasmus+?

11 Irish organisations are involved in the 19 marine-related projects running under Erasmus+, and leading five of these projects. Although much of the funds allocated to Irish organisations is unknown (as it is distributed according to take up of activities), over €220,000 has already been received by Irish partners and the total value of all the projects is €4.8 million.

Irish participants currently come from three SMEs, four third level institutes and four public bodies (Table 5.1).

Table 5.1. Irish organisations participating in marine-related Erasmus+ projects

SMEs	Third Level Institute	Others
<ul style="list-style-type: none"> • AquaTT • Landon Carver • Sea and Shore Safety Services 	Universities <ul style="list-style-type: none"> • Alpha College of English • Cork Institute of Technology • Galway-Mayo Institute of Technology • Liffey College Ltd 	Public Research Institute <ul style="list-style-type: none"> • Bord Iascaigh Mhara Public Bodies / Not-for-Profit <ul style="list-style-type: none"> • Donegal Education and Training Board • Sail Training for Youth Development • Teachers' Union of Ireland

Erasmus+

5.4 What countries did Ireland co-operate with?

In the 19 Erasmus+ projects, Irish organisations cooperated with organisations originating from 15 other countries (Figure 5.1).

5.5 Who are the top Irish marine Erasmus+ performers?

Performance can be gauged by (a) who leads an Erasmus+ project; (b) the total number of projects an organisation participates in; or, (c) the total grant-aid accumulated by a particular organisation or institute.

(a) Five Horizon 2020 research projects were led by

Irish organisations (Table 5.2) with Sail Training Ireland for Youth Development coordinating four of these projects.

(b) On the basis of the number of projects in which an organisation participates, Sail Training Ireland for Youth Development leads with seven projects, followed by the BIM and Liffey College Ltd (three projects).

(c) As previously stated, the total grant-aid received by Irish partners is unknown for some projects, but Sail Training Ireland for Youth Development again leads with €126,000 followed by BIM (€61,000).

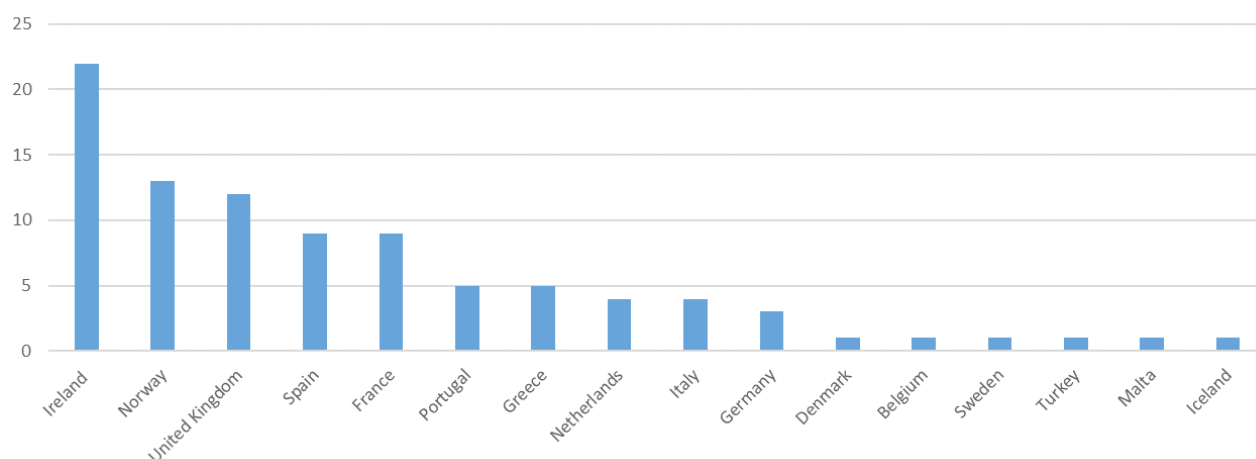


Figure 5.1 Breakdown of the origin of partners involved in the Erasmus+ projects involving Irish marine organisations

Table 5.2 Marine-related Erasmus+ projects led by Irish organisations

Project Title	Lead Partner	No. of partners
Course for Adventure Related Vocational Educators	Landon Carver	5
Sail Training Ireland Youth Development Project (I)	Sail Training Ireland for Youth Development	2
Sail Training Ireland Youth Development Project (II)	Sail Training Ireland for Youth Development	2
Train Sail Training	Sail Training Ireland for Youth Development	5
Youth Across the Sea	Sail Training Ireland for Youth Development	2

APOSTAMOS POR EUROPA (I & II) & EL FUTURO ES EUROPA

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2015-2016

EU Grant-Aid:

€16,089 (Apostamos Por Europa I)

€11,287 (Apostamos Por Europa II)

€42,051 (El Futuro Es Europa)

Website:
www.cifphesperides.es/erasmus

The port of Cartagena supports increased transit vessels activity that implies crew, agents, officials, supplies and stores. In addition, fisheries activity is very important being a vital for sustainable growth which enables economic growth that makes efficient use of resources for a greener and competitive sector. The project aims to support mobility of six students and five staff from PFIC Hesperides.

On board the training ship students will be part of the crew and will collaborate in the training of the “trainees” while receiving specific training of ship officers in tasks in this project point EI.

Computing students take part in the mobility in Videregående Bergen Maritime Skole and will develop learning outcomes of the cycle. They will collaborate with teachers in computer equipment maintenance.

Three staff are to be made to increase participant's language skills. The host

partner is one of the two language schools in Dublin, as available. This training is vital to the CIPF Hesperides. During 2014 - 2015, because of the forced adaptation to the LOE curriculum, some modules have to be taught in English.

Two staff in the Bergen Maritime Skole Videregående. During development, teaching methodologies in the maritime area will be observed analysing possible adaptation to its use in the CIPF Hesperides.

The expected results are:

- Open Europe range of job opportunities to disadvantaged youth
- Increase motivation of all students and teachers by making them aware of the need to increase the professional and linguistic skills
- Improving employability
- Improving language skills

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Project Partners (Apostamos Por Europa I)

Coordinator	CIFP Hesperides - Greece
Ireland	Liffey College Ltd
Norway	Bergen Maritime Videregående skole Stiftelsen Seilskipet Statsraad Lehmkuhl

Project Partners (Apostamos Por Europa II)

Project Coordinator	CIF Hesperides - Greece
Ireland	Liffey College Ltd
Norway	Stiftelsen Seilskipet Statsraad Lehmkuhl Bergen Maritime Videregående skole Visit AS



CARVE - Course for Adventure Related Vocational Educators

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2015-2017

EU Grant-Aid:

€150,117

CARVE provides staff and learners from the outdoor education and outdoor adventure sector in Ireland with work placement opportunities in the outdoor industry in UK, Scotland, Wales, France, Spain and Greece.

The different placements are listed below:

- Placement 1: two-week placement with Action Outdoors in Chamonix aimed at providing staff with the knowledge, skills and competencies to effectively build and manage a group adventure experience in the Alps
- Placement 2: 28-day programme for 12 staff in UCPA ski/board centres
- Placement 3: 58-Day placement for staff in Club Mistral windsurfing Centres in the Canary Islands
- Placement 4: eight-day experience for 16 staff from mountain biking centres
- Placement 5: 14-day experience in Cornwall for 12 staff from Irish sea kayaking centres

Learner/recent graduate placements are a 60 day placement for recently graduated learners from a FETAC Level 5 Outdoor Activity Award.

Through these placements the project aims to (among other goals):

- Improve the level of key competences and skills within the Active Leisure/ Outdoor Education and Adventure industry, with particular regard to their relevance for the labour market and participants' contribution to a cohesive society
- Provide the sector with increased opportunities for learning mobility through strengthened cooperation between the world of education and training and the world of work
- Foster quality improvements, innovation excellence and internationalisation at the level of education and training institutions, in particular through enhanced transnational cooperation between education and training providers and other stakeholders

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Project Partners

Coordinator	ICSET/a Landon Carver - Ireland
France	Action Outdoors Holidays Ltd
United Kingdom	Sea Kayaking Cornwall Ltd Wilderness Scotland Ltd
Germany	Club Mistral

Cultural diversity & Freedom at Sea & In the Footsteps of the Vikings

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2014

EU Grant-Aid:

€35,040 (Cultural Diversity)

€27,610.15 (In the Footsteps of the Vikings)

Young people from eight different countries; Germany, the Netherlands, Norway, Denmark, Portugal, Ireland, the UK and France, have set sail from Bergen (NO) to Esbjerg (DK) and Rostock (DE). It has been their challenge to sail the ship together, as means to exchange cultures (in the broadest sense) and develop themselves.

The group has been together for 14 days and done many activities, both ashore and at sea. The participants were divided in watches, as the vessel sailed for more than 24 hours in a row. When the participants were on watch (in the group on shift) they were responsible for all aspects of sailing the vessel; sail handling, navigating, steering, look-out, safety, cooking and cleaning. As this is a real-life activity, they experienced the cultural differences and similarities in all that they have done. The participants also challenged themselves to cross boundaries they never expected to cross.

Besides sailing, the participants, guided by the mentors, organised debates, games and other activities around the theme of cultural diversity and freedom.

Combining this sail training programme with the cultural exchange activities, created a unique possibility for the participants to learn about themselves, teamwork, and intercultural differences and similarities. The participants not only learnt about responsibility, teamwork and leadership skills, but each of them translated into personal goals for the exchange. Mostly the participants experienced how to work and live with a multi-cultural group of people. Getting to understand each other and working on the vessel together made it possible to really experience the differences and similarities in their cultures.

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Project Partners (Cultural Diversity & Freedom at Sea)

Project Coordinator	Europäisches Integrationszentrum Rostock e.V. - Germany
Denmark	Danish Sail Training Association
France	Amis des Grands Voiliers
Ireland	Sail Training Ireland
Norway	Elverum folkehogskule
Portugal	Associação Portuguesa de Treino de Vela
Netherlands	Stichting Sail Training Association Nederlands
United Kingdom	Ocean Youth Trust Northern Ireland

EUAqua – Increased knowledge about European aquaculture

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Cooperation for innovation and the exchange of good practices

Project Duration:

2014- 2016

Total Project Value:

€90,180

EU Grant-Aid:

€90,180

Funding to Ireland:

€33,450

Website:

www.euaqua.com

The **EUAqua** project aims to bring together a partnership of three organisations involved in aquaculture education, namely Val vgs in Norway, Bord lascaigh Mhara in Ireland and Lycée de la mer in France. These participants already have a history of cooperation and are looking to expand and capitalise on this cooperation. Aquaculture is developing rapidly worldwide with an ever increasing demand for seafood. Through this programme the project partners hope to improve aquaculture education as a whole, whilst developing an improved workforce.

The main objectives are to define and experience best practice in each country with an emphasis on improved production techniques and the possibilities afforded by the introduction of new/novel species, and to improve educational techniques and standards, leading to a better educated workforce for the developing aquaculture industry

During this partnership students and teachers will travel to the other participating countries to engage in

study trips, workshops and on site industrial work experience.

The host countries will coordinate the trips to their own organisations and industry. The benefit to the participants will also include language and cultural elements.

These study trips and collaborations will be informative not only for the participants but also the host countries and the EU through a series of detailed dissemination routes and although the further education of the participants is the primary focus, this project will also lead to improvements in general education techniques through the process of sharing and joint development.

The expected long-term benefit is to help the aquaculture sector to develop more rapidly through this increasingly motivated and improved workforce, encouraging further sharing and collaborations of ideas and techniques, helping to eliminate pitfalls and empower individuals to further develop and improve the aquaculture industry.

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Project Partners

Coordinator	Val videregående Skole AS - Norway
France	Les Amis des Grands Voiliers
Ireland	Bord lascaigh Mhara

Formation ostréicole en entreprises Irlandaises

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2014-2016

EU Grant-Aid:

€21,780

This project aims to send a complete class of eight students specialising in oyster farming and in the last year of vocational high school diploma to do an internship abroad (Ireland).

During this compulsory placement in the workplace, students will learn new breeding and farming techniques in a different and specific environment. They will also strengthen the techniques they already know. In parallel they will develop their observation capacity and critical faculties. They will also improve their English speaking and writing skills and will understand better the interest of the work carried out at school.

Moreover, this immersion in a professional, geographical and English speaking environment very different from the previous internships all made in France will allow students to become more mature and be more at ease to confront the world of work, especially in its international dimension. In fact, despite the rather difficult current economic conditions, the oyster farming skills and French professional materials are recognised abroad.

The relevant partners are SMEs working in oyster farming which have a good reputation in their field of expertise. They have been pre-selected by Bord lascaigh Mhara for their technical skills and their seriousness. All these SMEs are specialised in certain elements of oysters or mussels farming or marketing, which includes an important part of the technical knowledge necessary for the vocational high school diploma tests in oyster farming.

The student preparation for the stay in Ireland and the feedback of these four weeks will be used as privileged support material throughout their learning activities at school. It will allow the teachers to ask more and value more easily the students through this new and very original experience.

Finally, the partners will be invited the day when the students will speak about this experience and will receive a copy of their report. It will be interesting to deepen or to develop new relations with people in Ireland, above all in the oyster farming field.

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Project Partners

Project Coordinator	Lycée de la mer - France
Ireland	Bord lascaigh Mhara

IMBRSea – International Master in Marine Biological Resources

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2016-2021

Total Project Value:

€2,858,000

EU Grant-Aid:

€2,858,000

Website:

www.imbrsea.eu



Based on the objectives of the EMBRC consortium, **IMBRSea** covers a wide, yet consistent, range of subjects related to the sustainable use of marine biological resources. With an emphasis on marine biological and ecological processes, the programme links biology of marine organisms and environmental studies with subjects in marine policy and planning.

IMBRSea is a two year, 120 ECTS study programme that starts with a first semester of courses within the Fundamental Modules in which students gain the core competences required for starting any of the five Specialisation Tracks of the programme. During the second and the third semester, the students follow two Thematic Modules, leading to one of the five Specialisation Tracks defined according to the EU Horizon2020 Blue Growth innovation challenges:

1. Marine food production led by University of the Algarve (UAIG) and University of the Basque Country

2. Management of living marine resources led by University of Oviedo and Galway Mayo Institute of Technology (GMIT)
3. Applied marine ecology and conservation led by UPMC and GMIT
4. Marine environment health led by UAIG and the Polytechnic University Delle Marche
5. Global ocean change led by UPMC and University of Bergen

IMBRSea offers, beside a wide variety of courses in the Thematic Modules combined with a series of jointly developed activities for students to gain experience during six weeks of Professional Practice offered by potential future employers. During a Joint School students from the same cohort will come together for programme-wide training on multi-disciplinary topics. During the last semester students have the opportunity to develop an individual Thesis research project, tailored to their personal interests which will be presented on the IMBRSea Annual Symposium.

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Project Partners

Project Coordinator	Ghent University - Belgium
France	University of Pierre and Marie Curie
Ireland	Galway-Mayo Institute of Technology
Italy	Polytechnic University of Marche
Norway	Universitetet i Bergen
Portugal	Universidade de Algarve
Spain	Universidad del País Vasco, UPV Universidad de Oviedo

Improving teaching in refresher courses in safety and survival training for seafarers

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2014-2016

EU Grant-Aid:

€14,285

The main aim of this project is to obtain specified knowledge regarding refresher education/courses related to safety matters at sea and protection against marine pollution in accordance with international standards and the requirements of the EU. The purpose is to improve the quality of this education among seafarers in Iceland.

In Iceland there is only one training school that offer safety and survival education and training for seafarers and that is the sending organisation (MSSTC). Nations often interpret international conventions regarding education and training for seafarers on different matters and therefore is it important that MSSTC will not be isolated in special Icelandic conditions. It is very important for MSSTC to have comparison to other European nations. It is also important to know if there is some difference in implementation of European directives between cultural regions in Europe.

Schools that train seafarers in Europe were chosen and contacted because of the similar conditions in marine areas as Icelandic seafarers operate. Icelandic seafarers increasingly work on merchant ships in other European countries and therefore important that the safety and survival training in Iceland fulfil the requirements of neighbouring countries. Our training takes into account the extreme conditions in Icelandic waters with special focus on bad weather and extreme cold conditions.

All of the host partners offer safety and survival training according to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and European directives in their home countries and therefore selected by MSSTC. This project supported up to nine experienced persons of the MSSTC staff and they are all teachers or instructors in safety and survival training at the school. The project visited schools in Sweden, Ireland, France and the Netherlands.

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Project Partners

Project Coordinator	Slysavarnafélagið Landsbjörg - Iceland
France	CEPS
Ireland	Sea and Shore Safety Services Ltd
Netherlands	Stichting NHL



Optimal – Optimized Training – Innovative methods and tools for acceptance of prior learning in qualifications and workplace training

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Cooperation for innovation and the exchange of good practices

Project Duration:

2016-2019

EU Grant-Aid:

€376,437

The **Optimal** partner countries have set ambitious fish farming production growth targets. This has increased the demand from fish production and supply companies for job-seekers with proven expertise and competence. However, the lack of job applicants with evidence of the competence and skills potential employers are looking for is a shared concern. Many do have relevant knowledge and skills, which have been gained during fish farm employment informally or within a technically related sector, that go unrecognised, compounding the problem.

Optimal's goal is to develop a recognition of prior learning (RPL) system that enables an individual's informal competences and skills to become recognised and accepted within fish farming qualifications, and built on through individualised learning. The introduction of RPL will lead to individualised learning, allowing teachers and instructors to focus on the most challenging topics and concepts with individuals or groups of learners. Furthermore, methods and technology supporting RPL and individualised

learning will be developed and improved, fully involving VET providers, industry and learners within the process, addressing industry's skill needs priorities for key occupations, such as the cage farming operative.

More VET teachers will be enabled to apply improved and proven RPL methods and technology to the delivery of their VET courses, to make them more flexible. Consequently, VET will become driven by individual learning plans and supported by flexible and accessible learning resources, including e-learning.

The expected results of Optimal are:

- Increased access to workplace training in fish farming industry, while reducing training costs without affecting the quality of the training.
- New RPL-TOOL with potential to be used in many sectors outside VET education to map student's knowledge and skills.
- Adjusted and adapted training activities that reflect student's knowledge and competence.

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Project Partners

Project Coordinator	Blått kompetansesenter - Norway
France	Fédération Européenne des Producteurs Aquacoles
Ireland	Donegal Education and Training Board Teachers' Union of Ireland
Norway	Guri Kunna Videregående skole
United Kingdom	Polaris Learning Ltd Pisces Learning Innovations Ltd

Sail Training Ireland Youth Development Project (I & II)

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2015

EU Grant-Aid:

€56,480 (I)

€58,976 (II)

Youth leaders will have the opportunity to brainstorm, contribute ideas to and practice the implementation of programme activities, which are planned for the Youth Exchanges. They will develop competences necessary to deliver non-formal educational programmes and to work in a ship environment. The resulting competence development will transfer to their daily lives and their career opportunities.

The Youth Exchanges will be run consecutively on the same tall ship. Each voyage will last 14 days (13 nights) and visit a number of UK and Irish ports. Competences and skills will be acquired that will be transferable to the personal lives and future employability of the participants. The participants will develop hard-skills necessary to sail a tall ship and will have responsibilities such as keeping watch, cleaning and galley duty. The youth leaders will facilitate learning through activities, reviews and journal writing to achieve the stated learning aims. Career opportunities in the maritime sector will be explored.

Within the framework of the project, partners will focus on:

1. Personal and professional development of youth leaders
2. Development of transferable skills in participants and their application to future employment opportunities particularly in the maritime sector
3. Inclusion and diversity and an acceptance of different backgrounds and abilities. Inclusion and diversity will be a core ethos in the recruitment of participants
4. Improving and strengthening the collaboration between the partner organisations
5. Promoting participants confidence and willingness to participate actively in society

The expected results of the project are:

- Impact on the overall personal development, skills, competences and employability of the participants and youth leaders
- Inclusion, diversity and accessibility will be highlighted as issues to be aware of in their communities
- Increase of active participation of participants in society
- Contribution to tackling youth unemployment

In addition to the abovementioned activities, a range of dissemination activities are planned including meetings, a public event and use of online and social media outlets.

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Project Partners (I & II)

Project Coordinator	Sail Training Ireland for Youth Development - Ireland
United Kingdom	Merseyside Adventure Sailing Trust

SeaofSkills - Enriching fishers' knowledge, skills and competences

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Cooperation for innovation and the exchange of good practices

Project Duration:

2014-2017

Total Project Value:

€347,206

EU Grant-Aid:

€347,206

Funding to Ireland:

€34,345

Website:
www.seaofskills.eu


The fisheries sector is recognised as one of the pillars of development at national, European and international level. The extent of its contribution to sustainable development, economic growth and food security highly depends on the knowledge, skills and competences of fishers. Continuing Vocational Education and Training (CVET) has a central role in responding to the changing training needs and new challenges this target group faces. Through CVET, knowledge, skills and competences are improved and updated, new ones are acquired allowing adaptation to the changing requirements and new developments.

The objective of the project is to identify the training needs in knowledge, skills and competences of fishers. It will produce added value in three dimensions:

- At the educational-training level: by incorporating innovative intellectual outputs developed in relevant EU Programmes and EU-funded projects, as well as best

practices successfully implemented at the European context, while adapting them to the new developments and requirements of the EU fisheries, education (VET) and economic sector

- At the operational level: by setting a quality assurance framework based on EU requirements; testing and assessing the deliverables through a pilot training in the participating countries; and by creating a web-network of stakeholders through a web-platform for communicating the need for empowering fishers and the deliverables of the project, while setting the ground for the sustainability of the initiative
- At the policy-making level: by developing policy recommendations on CVET for fishers will be developed in view of supporting the policy-making at the EU and national level and assisting its implementation

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Project Partners

Project Coordinator	'Maria Tsakos' Foundation Greece
Greece	Chios Chamber of Commerce Hellenic Centre of Marine Research Research & Innovation Strategy Experts University of the Aegean
Ireland	AquaTT UTEP Ltd
Malta	University of Malta
Spain	Consejo Superior de Investigaciones Científicas
Turkey	Ege University



Set Course for a United Europe

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2016

EU Grant-Aid:

€48,711

The project '**Set Course for a United Europe**', brings 58 youngsters from seven European countries (France, the Netherlands, Spain, Portugal, Germany, Ireland and the UK) and different socio-economic and cultural backgrounds, together for an once-in-a-lifetime opportunity to embark on a journey towards self-development, intercultural learning and international friendship.

On board, participants will be required to confront many demanding challenges, physical and emotional. This experience will inspire self-confidence and the acceptance of personal responsibility; promotes an acceptance of others whatever their social or cultural backgrounds, and develops a willingness to take controlled risks; and uses the experience of being at sea principally as a means to help people learn about themselves, discover hidden strengths and talents and understand the value of working as a team. Each participant experiences a leadership role, having to create teamwork and taking initiative.

The participants will end up sailing the vessel themselves, the crew only guarding the safety at all times.

The programme of intercultural learning activities will be run by the participants themselves. This way, and by letting the participants be actively involved in the preparations leading up to the Exchange, the participants will get ownership of their own learning experience.

Participants will improve their team working skills and become more aware of their abilities, strengths and weaknesses, both physically, mentally and linguistically. Their self-confidence will increase and their social skills improve. Due to the culturally diverse environment on board, participants will grow their awareness of cultural differences and similarities, and understanding of differences in values and norms. The participants' experience will not only influence their own lives, but will also inspire others to look beyond their everyday environment into the rest of the world.

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Project Partners

Project Coordinator	Stichting Sail Training Association Nederlands
France	Amis des Grands Voiliers
Ireland	Sail Training Ireland for Youth Development
Germany	Europäisches Integrationszentrum Rostock e.V.
Portugal	Associação Portuguesa de Treino de Vela
Spain	Sail Training Association Espana
United Kingdom	Atlantic Youth Trust

SUSSWATER – Sustainable use of water based resources

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Cooperation for innovation and the exchange of good practices

Project Duration:

2016-2019

Total Project Value:

€115,520

EU Grant-Aid:

€115,520

Funding to Ireland:

€27,630

Website:
www.susswater.com

SUSSWATER is a Strategic Partnership project between four host organisations offering post-16 and further education. Focusing on the sustainable use of natural water resources as a study theme - with special emphasis on the development of aquaculture and fisheries - the primary objective of the project is the exchange of best practice within educational methodology, but also with respect to the relevant industries, stimulating innovation. To achieve a sustainable use of natural resources within Europe, these partners are essential to ensure long-term, continuous improvements, leading to a motivated and skilled work force to bring about effective change and development. Each of the partners will host one week of activities, over the three-year programme, welcoming six students/instructors from each partner, with one activity each year. These activities will relate to a specific local geographical area bringing a focus on the merits sustainable development for all stakeholders and the potential of new species development with a mixture of theory, visits, work experience/exercises and workshops. As well as engaging with the host partner, these workshops will involve an engagement with governmental bodies, local industry and include instruction to people outside the project.

There will be close dialogue before and after the events to ensure proper planning and management, and to ensure the best outcome for the participants involved. The participants will each submit activity reports which will be uploaded to a dedicated website and they will be encouraged to engage via social media to share expectations and experiences. The activities will provide valuable new knowledge on the bio-economy, to each participant, as well as the partner organisation, improving motivation and skill, especially in the field of the sustainable use of our water resources.

Participation in this project for the partners will have an intrinsic marketing value in addition to an increased international network and improved teaching skills, along with increased understanding of the management and structure of this resource. The potential longer term benefit will be an increased interest in education and career development within bio-economy. Thus they will, as partners and institutions, be proactive creating opportunities for education and research within aquaculture in environmentally focused professions. They will help fight poverty and prepare young people for future employment.

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Project Partners

Project Coordinator	Val videregående Skole AS
Sweden	Bromangymnasiet
Ireland	Bord Iascaigh Mhara
United Kingdom	South Devon College

Train Sail Training

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of Individuals

Project Duration:

2016

Total Project Value:

€14,050

EU Grant-Aid:

€14,050

Sail Training is a fun and exciting adventure, which has a profound impact on the lives of participants. "Trainees" take part in voyages at sea on tall ships and large yachts during which they become part of the working crew. The aim is not to learn to sail but to learn from sailing, from the vessel, the sea and most importantly from yourself and each-other. It is a medium for education outside the classroom, a non-formal approach where the emphasis is on learning through experience. The project will focus on the development of Erasmus+ projects, partnership building and sharing of experience and learning with regards to harnessing the Sail Training experience as a medium for youth work and Erasmus + projects. The expected outcome will be more projects being run annually across Europe with multiple partnerships being formed. Within the framework of the project, participating organisations will:

- Develop an understanding of youth work and structured non-formal education
- Develop a greater understanding of the value of Sail Training as a medium for youth work and the development of life-skills

Sail Training Organisations will learn the importance of having youth work professionals as a partner in their projects:

- For these relationships to be formed through this project and partnerships built
- For participants to return home with the knowledge and experience to develop Erasmus+ projects using Sail Training as platform for educational programmes focusing on youth work and youth development and having their own specific learning objectives

It is through sharing this experience and knowledge that the project will empower more organisations to understand their role within the youth work field and start transnational youth work with their young people through youth exchanges and the Erasmus+ programme. Through this initial project a quality seminar will be developed that can be repeated over time to expand the number of organisations applying for Erasmus+ projects.

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Project Partners

Project Coordinator	Sail Training Ireland for Youth Development
Portugal	Associação Portuguesa de Treino de Vela
Spain	Asociación Juan de Lángara, cultural e instructiva de amigos de los veleros
United Kingdom	Maybe Sailing Youth Initiative Royal Borough of Greenwich



VET.PORT. – Applying ECVET and ECTS to certify competences and skills in maritime port sector

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Cooperation for innovation and the exchange of good practices

Project Duration:

2014-2017

Total Project Value:

€450,000

EU Grant-Aid:

€450,000

Website:

www.vetport.eu



The **VET.PORT.** project fosters the recognising of skills for port workers according to the ECVET system, developing innovation in the maritime and logistics field. Four countries - Italy, Spain, Ireland and the Netherlands - are implementing research on the minimum standards of skills for three most common professionals in the ports:

- Terminal Port Manager
- Planning supervisor
- Driver of articulated vehicles

Within the framework of the project, 123 workers (53 IT, 40 ES, 20 NL, 10 EI) belonging to the three professionals will spend a short period of training (8/10 days on average) related to their profiles in a port company/body of the country partners (Livorno, Rotterdam, Cork, Valencia, and Venice) during short mobility. In addition, there will be an assessment of the acquired skills, recognised by both the countries following the ECVET agreements.

The skills they acquired will be recognised and will be valid both in the sending and in the hosting country. This is a piloting process aims at enhancing the mobility of workers among ports in all Europe.

The goals of the project are:

- Establishing common minimum standards among IT, IE, ES, NL
- Recognising skills according to ECVET for three professional profiles
- Implementing agreements among EU countries
- Providing three ECVET recognised professional paths in IT, IE, ES, NL
- Delivering ECVET certification for 123 workers
- Encouraging authorities to adopt ECVET certification
- Contributing to an EU catalogue of qualifications in the port sector
- Favouring the mobility of workers among ports and through Europe

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Project Partners

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Ireland	Cork Institute of Technology
Italy	Consorzio Formazione Logistica Intermodale Provincia di Livorno Sviluppo
Netherlands	Stichting STC - Group
Spain	Fundacion Valenciaport



Youth Across the Sea

Project Details

Funding Programme:

Erasmus+

Sub Programme:

Learning Mobility of individuals

Project Duration:

2016

EU Grant-Aid:

€19,000

The **Youth Across the Sea** project aimed to run two main activities:

- Under 18s Youth Exchange (15-17 years old)
- Over 18s Youth Exchange (18-25 years old)

There will be a total of 56 participants on the project, eight of which will be group leaders/youth workers from the youth agencies involved. The recruitment process will emphasise diversity and inclusion. There will be an equal number of participants from Ireland and the UK. Furthermore, there will be an equal gender divide and equality of gender roles.

Within the framework of the project, partners will focus on:

1. Personal and professional development of youth leaders
2. Development of transferable skills in participants and their application to future employment opportunities particularly in the maritime sector
3. Inclusion and diversity and an acceptance of different backgrounds and abilities. Inclusion and diversity will be a core ethos in the recruitment of participants
4. Improving and strengthening the collaboration between the partner organisations

5. Promoting participants confidence and willingness to participate actively in society

The Youth Exchanges will be run consecutively on Tall Ship Maybe. Each voyage in the Under 18s and Over 18s Youth Exchange will be 10 days long and visit various ports in Ireland and the UK. Competences and skills will be acquired that will be transferable to the personal lives and future employability of the participants. The participants will develop hard-skills necessary to sail a tall ship and will have responsibilities such as keeping watch, cleaning and galley duty. The youth leaders will facilitate learning through activities, reviews and journal writing to achieve the stated learning aims. Career opportunities in the maritime sector will be explored.

The expected results of the project are:

- Impact on the overall personal development, skills, competences and employability of the participants and youth leaders
- Inclusion, diversity and accessibility will be highlighted as issues to be aware of in their communities
- Increase of active participation of participants in society
- Contribution to tackling youth unemployment

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Project Partners

Project Coordinator	Maybe Sailing Youth Initiative - United Kingdom
Ireland	Sail Training Ireland for Youth Development



Erasmus+

Irish Participation in Erasmus+2014-2016

NOTES

COST PROJECT PROFILES

“Science is a collaborative effort. The combined results of several people working together is often much more effective than could be that of an individual scientist working alone”

John Bardeen, Physicist and Engineer (1908-1991)

The European Cooperation in Science & Technology (COST) Programme is an intergovernmental framework for European cooperation in science and technology, allowing the coordination of nationally funded research on a European level.

There are two marine-related COST Actions ongoing.



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COST

6.1 The COST Programme

The European Cooperation in Science & Technology (COST) Programme is an intergovernmental framework to support coordination of nationally funded science and technology research through the creation of networks. Its mission is to reduce the fragmentation in European research investments and to open the European Research Area (ERA) to cooperation worldwide.

Under Horizon 2020, COST has a budget of €300 million over seven years (2014-2020). The average annual budget for a COST action is €137,000.

COST has 36 Member Countries and one Cooperating State, Israel. A designated list of Near Neighbour Countries and International Partner Countries are also able to participate.

6.2. How does COST work?

As a precursor of advanced multidisciplinary research, COST facilitates the building of the ERA. It complements the activities of the EU Framework Programmes constituting a “bridge” between the scientific communities of emerging countries. It also provides opportunities to increase the mobility of researchers across Europe and fosters the establishment of scientific excellence.

COST funds pan-European, bottom-up networks of scientists and researchers across all science and technology fields. These networks are called ‘COST Actions’. COST does not fund research itself, but provides support for networking activities carried out within COST Actions that are:

- Bottom-up science and technology networks open to researchers and stakeholders, with a four-year duration and a minimum participation of five COST member countries
- Based on a range of networking tools, such as meetings, workshops, conferences, training schools, short-term scientific missions (STSMs) and dissemination activities
- Open to researchers from universities, public and private research institutions, as well as to NGOs, industry and SMEs

COST invites researchers throughout Europe to submit proposals for COST Actions through a continuous Open Call. Following a thorough evaluation and selection process, the decision for funding a proposal is taken by the COST Committee of Senior Officials (CSO) within eight months of the collection date. Successful proposals are approved to become COST Actions and can expect to ‘kick-off’ within three months thereafter. Researchers can also apply to join an existing COST Action.

6.3. How are Irish marine researchers performing in COST?

A search of the EuroOCEAN Marine Knowledge Gate Database (www.kg.eurocean.org) revealed 25 marine-related COST Actions with Irish participation during the period 1971 to 2014. The current COST Actions with named Irish participation are listed below. (Table 6.1).

Table 6.1 Marine-related COST Actions with Irish participation

Action Title	Irish Participant
Ocean Governance for Sustainability - challenges, options and the role of science	Trinity College Dublin
Oceans Past Platform	Trinity College Dublin The Archaeological Diving Company

CA15217: Ocean Governance for Sustainability: Challenges, Options and the Role of Science

Project Details

Funding Programme:

CA COST Action

Funding Scheme:

Collaborative Project

Project Duration:

28 Sep 2016 - 27 Sep 2018

Total Project Value:

€480,000 approx

Funding to Ireland:

€240,000 approx

Website:

www.cost.eu/COST_Actions/ca/CA15217

The governance of oceanic systems and coastlines is moving into the center of European strategic and sustainability interests. Yet, it suffers from a high degree of fragmentation and the lack of a cross-scalar approach to addressing prevailing policy shortcomings. The proposed COST Action on “**Ocean Governance for Sustainability - Challenges, Options and the Role of Science**” comprises a unique, transdisciplinary network of 58 proposers with regional and international outreach. The network aims to establish an integrative vision, and a series of approaches that inform research and future policy directions on crosscutting sustainability-driven issues related to the fragmented governance framework of oceans, seas and coastlines within regional waters, and the open ocean in areas beyond national jurisdiction. The network differs from thematic predecessors in two distinct ways: While attending to the multiple

flows and connectivities between varied marine systems together with land- and sea-based interfaces that are biologically, culturally, politically and socio-economically entwined, it first renders equal importance to strengthening regional and interdisciplinary dialogue, producing scientific output, crosscutting the natural and social sciences. Synergistic issue-driven working groups will be created at a time when Europe is considering its role in global ocean governance, and will continue to evolve well after the COST Action ends. Second, the network creates a distinct multi-scalar and cross-sectoral platform for institutional partners across academia, policymaking and civil society, presenting inclusive spaces for transdisciplinary dialogue, capacity development and the advancement of practical toolkits that attend to science-policy gaps inherent within integrated ocean and coastal governance.

Project Partners

Project Coordinator	Leibniz-Zentrum für Marine Tropenökologie – Germany
Cyprus	University of Cyprus International Ocean Institute
Belgium	Ghent University
Bosnia and Herzegovina	University of Sarajevo
Bulgaria	Institute of Oceanology
Croatia	Josip Juraj Strossmayer University Institut Ruder Bošković
Denmark	Aalborg University
Germany	Institut für Fortgeschrittene Nachhaltigkeitsstudien Internationales Institut für Fortgeschrittene Nachhaltigkeitsstudien KDM Deutsches Meeresforschungs-Konsortium

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CA15217: Ocean Governance for Sustainability: Challenges, options and the role of science

Project Partners	
France	Institut français de recherche pour l'exploitation de la mer Institut pour le développement durable et les relations internationales
Greece	National Technical University of Athens Technological Educational Institute
Iceland	University of Iceland
Ireland	Trinity College Dublin
Israel	Technion
Italy	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale Università di Macerata
Malta	University of Malta
Netherlands	Vu University University of Amsterdam Wageningen University Utrecht University
Norway	Norwegian Institute for Water Research SINTEF
Portugal	Centro Interdisciplinar de Investigação Marinha e Ambiental Future Earth Alliance Universidade Nova de Lisboa ISCTE-IULA
Romania	University of Bucharest GeoEcoMar
Slovenia	National Institute of Biology
Spain	Universidad de Sevilla Universidad de la Laguna ICREA-ICTA Fundación Instituto de Hidráulica Ambiental de Cantabria Universidad del País Vasco,
Sweden	Lund University
Switzerland	University of Lucerne
Macedonia	IBU Skopje
United Kingdom	Durham University University of Liverpool Queens University Belfast University of Kent

ISI403: Oceans Past Platform (OPP)

Project Details

Funding Programme:

ISCH COST Action

Funding Scheme:

Collaborative Project

Project Duration:

17 Nov 2014 - 16 Nov 2018

Total Project Value:

€480,000 approx

Funding to Ireland:

€240,000 approx

Website:

www.cost.eu/COST_Actions/isch/ISI403



The Oceans Past Platform (OPP)

Action aims to measure and understand the significance and value to European societies of living marine resource extraction and production to help shape the future of coasts and oceans. The integrative platform will lower the barriers between human, social and natural sciences; multiply the learning capacity of research environments; and will enable knowledge transfer and co-production among researchers and other societal actors, specifically by integrating historical findings of scale and intensity of resource use into management and policy frameworks.

The oceans offer rich resources for feeding a hungry world. However, the sea is an alien space in a way that

the land is not. Fishing requires skills that must be learnt, it presupposes culinary preferences, technical ability, knowledge of target species, and a backdrop of material and intangible culture. OPP asks when, how and with what socio-economic, political, cultural and ecological implications humans have impacted marine life, primarily in European seas in the last two millennia.

The Action calls on historians, archaeologists and social scientists as well as colleagues from the marine sciences to engage in dialogue and collaboration with ocean and coastal managers. OPP will develop historical descriptors and indicators for marine and coastal management.

Project Partners

Project Coordinator	Trinity College Dublin - Ireland
Estonia	Estonian Marine Institute Institute of History
Austria	Zentrum für Baltische und Skandinavische Archäologie
Belgium	Flanders Marine Institute
Bulgaria	Institute of Oceanology
Croatia	Croatian Natural History Museum Institut Ruđer Bošković Institute for Tourism Blue World Institute of Marine Research and Conservation
Cyprus	Enalia Physis Environmental Research Centre
Finland	University of Helsinki
Denmark	Aalborg University Technical University of Denmark University of Southern Denmark Ministry of the Environment
Germany	Alfred-Wegener-Institut - Helmholtz-Zentrum für Polar- und Meeresforschung Leibniz-Zentrum für Marine Tropenökologie

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ISI403: Oceans Past Platform (OPP)

Project Partners	
France	Centre national de la recherche scientifique Institut pour le développement durable et les relations internationales
Greece	National Hellenic Research Foundation American School of Classical Studies Institute of Aegean Prehistory National Agricultural Research Foundation
Iceland	Marine Research Institute University of Akureyi
Ireland	The Archaeological Diving Company
Israel	ORANIM
Italy	Universita di Bologna Universita di Palova Istituto di Scienze Marine Venezia Istituto Superiore per la Protezione e la Ricerca Ambientale
Latvia	Institute of Food Safety
Malta	University of Malta
Netherlands	Instituut voor Marine Resources en Ecosystem Studies MARS network
Norway	Universitetet i Oslo Northern Research Institute The Arctic University of Norway
Poland	Nicolaus Copernicus University of Torun Institute of Oceanology
Portugal	FFaculdade de Ciências Sociais e Humanas Universidade Porto Universidade Lusiana
Spain	Universidad de Vigo Consejo Superior de Investigaciones Científicas Instituto Español de Oceanografía Universidad Autónoma de Madrid
Sweden	Stockholm University SP Food and Bioscience
Turkey	Gokceada School of Applied Science
UK	University of Cambridge English Heritage

NOTES



European Regional
Development Fund
Investing in your Future

EUROPEAN RESEARCH DEVELOPMENT FUND (ERDF) PROJECT PROFILES

“The science of today is the
technology of tomorrow”

Edward Teller, Theoretical Physicist (1908-2003)

The European Regional Development Fund (ERDF) aims to strengthen economic and social cohesion in the EU by correcting imbalances between its regions.



Marine Institute
Foras na Mara

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European Regional Development Fund

7.1 The ERDF Programme

The European Regional Development Fund (ERDF) is one of the main financial instruments of the EU's cohesion policy. Its purpose is to contribute to reducing disparities between the levels of development of European regions. Particular attention is paid to regions which suffer from severe and permanent natural or demographic handicaps, such as the northernmost regions with very low population density as well as island, cross-border and mountain regions.

Article 176 of the Treaty on the Functioning of the European Union (TFEU) provides that the ERDF is intended to help to redress the main regional imbalances in the EU. It can do that through support for:

- The development and structural adjustment of regions whose development is lagging behind
- The conversion of declining industrial regions

Following several revisions of the rules governing them, the ERDF, the ESF and the Cohesion Fund have two main goals for the period 2014-2020, namely:

- Investment for growth and jobs — aiming to strengthen the labour market and regional economies
- European territorial cooperation — aiming to strengthen cross-border, transnational and interregional cooperation within the EU

Resources assigned to the first goal will be allocated to three different categories of regions:

- More developed regions whose GDP per capita is above 90% of the EU average
- Transition regions whose GDP per capita is between 75% and 90% of the EU average
- Less developed regions whose GDP per capita is below 75% of the EU average

The ERDF also supports sustainable urban development.

At least 5% of the ERDF allocation for each Member State has to be earmarked for integrated actions for sustainable urban development that will tackle the economic, environmental, climate, demographic and social challenges affecting urban areas.

Details of the allocation and future use of ERDF funds are determined in the Partnership Agreements. These are strategy documents drawn up by each Member State with the assistance of regional and social partners.

Thematic concentration

As the ERDF contributes to the Europe 2020 Strategy for smart, sustainable and inclusive growth, it has to focus on the priorities specified in this strategy. The main priorities are:

- Research and innovation
- Information and communication technologies (ICT)
- Small and medium-sized enterprises (SMEs)
- Promotion of a low-carbon economy

The level of concentration required varies according to the category of regions being supported. More developed regions are to allocate at least 80% of their ERDF resources to at least two of these priorities and at least 20% to the low-carbon economy. Transition regions are to allocate at least 60% of their ERDF resources to at least two of these priorities and at least 15% to the low-carbon economy. Less developed regions are to allocate at least 50% of their ERDF resources to at least two of these priorities and at least 12% to the low-carbon economy.

7.2 How are Irish marine researchers performing in ERDF?

Only one project with Irish participation has been funded under ERDF. Worth over €3 million, the Dwr Uisce project was partnered by Trinity College Dublin who received €1.3 million in grant-aid.

Dwr Uisce – Energy Recovery in Water Services

Project Details

Funding Programme:

European Regional Development Fund (ERDF)

Funding Scheme:

Collaborative Project

Project Duration:

2015-2020

Total Project Value:

€3,336,795

EU Grant-Aid:

€2,669,436

Funding to Ireland:

€1,317,342

Website:

www.dwr-uisce.eu



Dwr Uisce

Energy Recovery in Water Services
Adennill Ynni yn y Diwydiant Dŵr

The **Dwr Uisce** project aims to improve the efficiency of water distribution by developing new low carbon energy-saving technology, including micro-hydropower turbines. The technology will be trialled in Ireland and the UK before being launched on the commercial market. The project also aims to build the capacity for innovation in the water industry by investigating how new practices can meet the challenges faced in Wales and Ireland due to environmental and climate change. Within the framework of the project, the following activities will be carried out:

- Building the innovation capacity of the water sector in Ireland and Wales: a cross-border and cross-sectoral benchmarking assessment of energy efficiency measures will be undertaken, both on the side of water service providers and end-users.
- Assessment of the environmental and economic impact of the water industry in Ireland and Wales, and supported by an energy audit to enable development of best-practice policy recommendations.
- Developing new, innovative energy-saving technology platforms, including prototypes, processes & services: New smart and low-carbon micro-hydropower (MHP) turbine technology for the water sector, both for the water supply and wastewater networks.
- Developing three technology platforms for energy saving in the water sector: MHP turbines, drain water heat recovery (DWHR) systems, and smart water network controls.
- Developing a cross-border smart specialisation cluster, to stimulate collaboration, knowledge exchange, innovation and economic growth: A cross-border cluster shall be established to facilitate knowledge transfer from HEIs to SMEs, government and other elements of the water sector in relation to water-energy challenges that will be achieved through the development of cross-border workshops and demonstrations, information-sharing sessions, online media and focused short courses.
- Innovating to reduce climate change impacts on the water industry: Climate change will impact on the future availability of water resources in Ireland and Wales, which will have direct effects on the cost of water supply in the region. The resource implications arising from climate change in Ireland and Wales will be quantified, as well as the knock-on effects on water availability, energy consumption and the economy.

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Project Partners

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EU Funding Programme Websites

Horizon 2020

ec.europa.eu/programmes/horizon2020

INTERREG-V

www.interregeurope.eu

COST

www.cost.eu

Life+

ec.europa.eu/environment/life

Erasmus+

www.erasmusprogramme.com

European Regional Development Fund

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