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Llywodraeth Cymru  
Welsh Government



# Welsh Marine Evidence Strategy



## 2019-2025

A Collaborative Agenda  
for Marine Research,  
Monitoring & Analysis

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# Ministerial Foreword

Sustainable marine development, protecting marine ecosystems and encouraging access to the coast for future generations are issues of great importance to Wales. Our stunning coastline, seas and abundance of marine diversity are integral to the unique appeal of Wales and attract millions of people here every year.

With the threat of climate change, amongst other pressures, there has never been a more important time to enhance our knowledge and understanding of our marine environment. This Welsh Marine Evidence Strategy, created in partnership with Natural Resources Wales (NRW), provides an overview of the high level marine evidence priorities in Wales and a framework through which we will meet those evidence challenges. This Strategy will support the delivery of marine evidence to implement, monitor and evaluate the marine policies and plans of the Welsh Government and NRW, which look to restore and conserve marine biodiversity, promote sustainable marine use, protect our coastlines and enhance our coastal communities.

Protection and sustainable use of our marine environment is underpinned by our commitment to the Well-being of Future Generations Act and Prosperity for All: the national strategy. This Welsh Marine Evidence Strategy will support these commitments by strengthening our understanding of the Welsh marine environment and its value to present and future generations. We recognise that in order to meet our aims it is critical that we work closely with stakeholders across the UK and beyond, bringing together the necessary expertise to enable an efficient and holistic approach to evidence gathering to underpin effective management of our seas.

I am delighted to recommend this Welsh Marine Evidence Strategy. I would encourage partners and institutions across Wales, the UK and beyond to work collaboratively with the Welsh Government and NRW to help develop our marine evidence base and achieve our collective aim of 'clean, healthy, safe, productive and biologically diverse oceans and seas'.



**Lesley Griffiths AM**

Minister for Environment, Energy and Rural Affairs

# 1. Introduction

- 1.1** Welsh seas cover approximately 30,000km<sup>2</sup> (compared to a land area of around 21,000 km<sup>2</sup>) with a biodiversity of flora and fauna including internationally important species and habitats from Manx shearwater and Angel sharks to eelgrass and horse mussel beds.
- 1.2** A large percentage of Wales' population lives and works at the coast with the marine environment providing a wealth of benefits supporting the well-being of coastal communities and wider society. These include, but are not limited to:
- a range of habitats and species that make up the wider marine ecosystem and provide 'ecosystem services' such as sequestering carbon, recycling nutrients and mitigating coastal erosion
  - food from fish and shellfish, and renewable energy from wind, waves and tide
  - jobs for local communities relating to, for example, fisheries, aquaculture, renewable energy, tourism and recreation
  - supporting wider well-being through access to the coast, providing opportunities for education, training and research.
- 1.3** The Welsh Government and Natural Resources Wales (NRW) have jointly developed this Strategy as key public bodies in Wales undertaking evidence work on our marine environment. Both organisations lead a diverse range of responsibilities within the marine environment that cover spatial planning, licensing, enforcement, conservation and national reporting. However, delivering this work will require involvement of other public, private and voluntary bodies in the marine sector, bodies that are hoped to become future partners of this Strategy.
- 1.4** This Strategy has been developed to define high level, strategic marine evidence priorities for Wales and to provide a framework for collecting this evidence, whilst improving collaboration. Evidence includes research and development, monitoring and surveillance, and secondary analysis and synthesis.
- 1.5** This Strategy covers evidence needs to support delivery of our objectives and policies for the marine area between high water and the offshore boundaries with other nations (e.g. Ireland and England). However, a strict spatial boundary for this Strategy has not been set since the evidence requirements to support management may extend some way in land depending on the issue being addressed. In particular, evidence around coastal communities, environmental issues and economy are reflected in the Strategy where relevant.

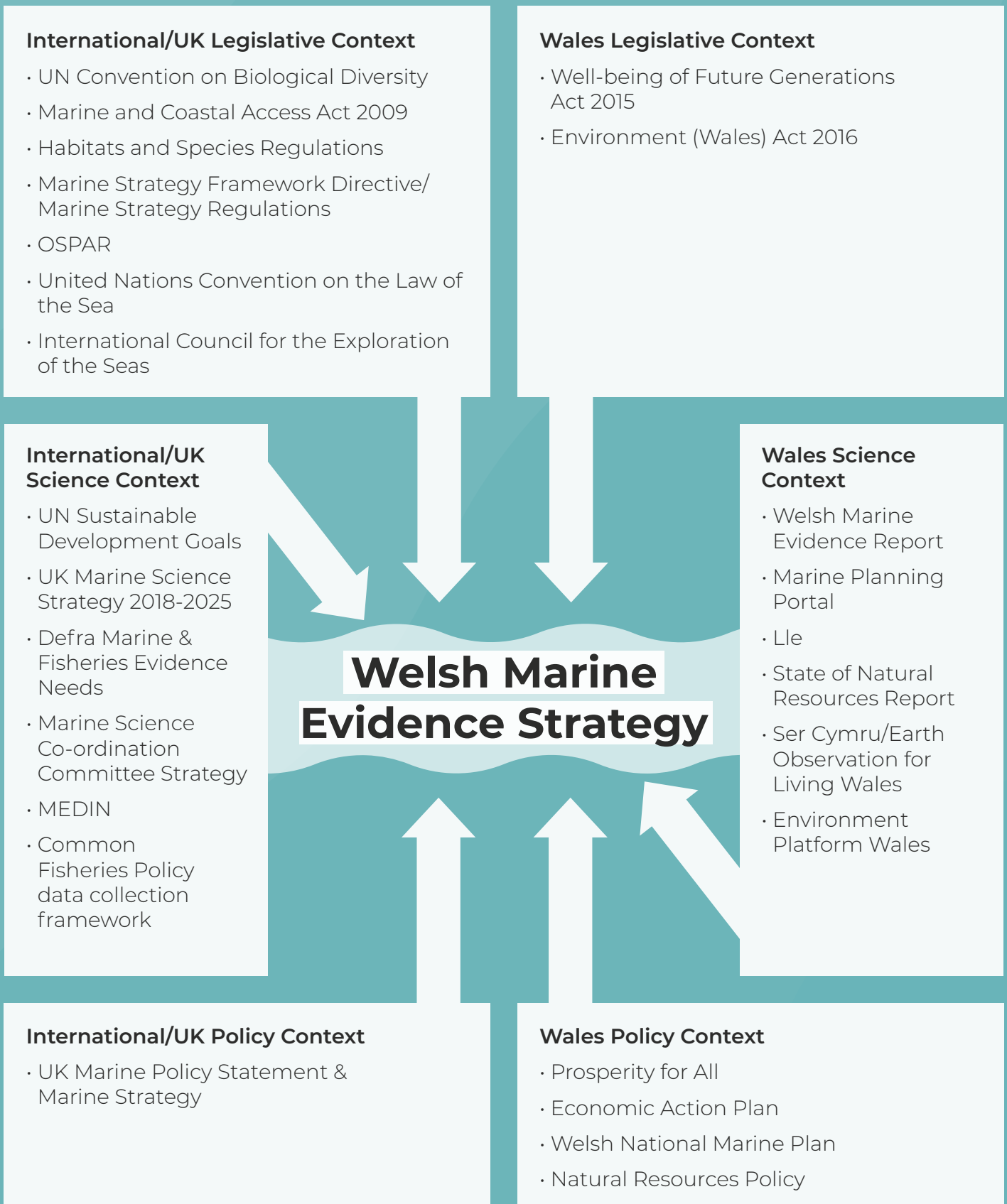
## 2. Policy and Evidence Context

- 2.1 The Welsh Government and NRW's vision for the marine environment is that Welsh seas are 'clean, healthy, safe, productive and biologically diverse'. We will seek to achieve this vision through:
- an ecosystem based approach where natural resources are sustainably managed and our seas are healthy and resilient, supporting a sustainable and thriving economy
  - improving access, understanding and enjoyment of the marine environment and maritime cultural heritage, health and well-being
  - Blue Growth. Where more jobs and wealth are being created and are helping coastal communities become more resilient, prosperous and equitable with a vibrant culture
  - the responsible deployment of low carbon technologies, where the Welsh marine area makes a strong contribution to energy security and climate change emissions targets.
- 2.2 Maintaining and improving Wales' marine environment for the well-being of future generations is integral to the Well-being of Future Generations (Wales) Act 2015. This is consistent with our policies and actions to achieve or maintain Good Environmental Status (GES) in our seas. Such an approach requires developing appropriate targets, indicators, assessment criteria and monitoring programmes to acquire relevant data to help us understand the condition of our marine environment and aid decision making.
- 2.3 We can support our well-being goals by ensuring that our marine resources are managed sustainably – this is what we term 'sustainable development'. The Welsh Government's Economic Action Plan and Welsh National Marine Plan (WNMP) provide policy and guidance indicating where Government will focus its resources and support.
- 2.4 Looking after our rich and diverse maritime environment is addressed by a plethora of strategies, policies and legislation at Wales, UK and international levels as shown for simple illustrative purposes in figure 1.
- 2.5 Robust evidence is vital for delivery of these policies, plans and legislation. Gathering, interpreting and acting upon evidence is not something any one organisation can do in isolation; therefore to be successful, industry, government, academics, non-governmental organisations (NGOs) and other stakeholders will need to collaborate in this area. The need for this is summed up in the "Foresight Future of the Sea"<sup>1</sup>:
- "[Of the] four structural [marine] issues that the UK, often in partnership with the rest of the world, must address in order to adapt and succeed in the future ... First and foremost is our 'sea blindness', a widespread lack of understanding of the sea and its value... The consequence of this is an increased risk of policy makers, industry and the public underestimating the opportunities from the sea, and the implications of damaging its environment."

<sup>1</sup> [www.gov.uk/government/publications/future-of-the-sea--2](http://www.gov.uk/government/publications/future-of-the-sea--2)

# Figure 1

Links between evidence networks/projects and principal legislation/policy in the Welsh marine environment.



## 3. Aim of this Strategy

- 3.1** To achieve the national vision for the marine environment, Wales will need to enhance its' marine science and data collection and interpretation capability. In particular it is clear that new evidence gathering and analysis will be critical to understanding and responding to the risks and opportunities that arise from both EU exit and climate change. This document provides the strategic framework for the gathering, reporting and use of marine evidence and data in Wales. However, we recognise that many evidence priorities are common across the UK and funding is often provided at this level too. This Strategy will, therefore, seek to strengthen Wales' involvement in programmes of partners including the Department for Business, Energy and Industrial Strategy (BEIS), Department for the Environment, Food and Rural Affairs (Defra), the Joint Nature Conservation Committee (JNCC), the Marine Management Organisation (MMO) and the Marine Science Coordination Committee (MSCC).
- 3.2** The Strategy's specific purposes are to identify the high level, strategic marine evidence priorities needed to support marine policies and plans of the Welsh Government and NRW through:
- providing a framework to support the collection and improved use of marine evidence (Sections 8 & 9)
  - guiding the implementation, monitoring and review of actions to meet evidence priorities (Sections 5, 6 and 7)
  - improving collaboration, co-ordination and sharing of scientific knowledge among Wales' marine evidence stakeholders (Section 8)
  - helping align and develop Wales' marine evidence capacity and promote innovation (Section 8).
- 3.3** This Strategy sets out high level priorities needed to ensure that marine evidence in Wales supports the achievement of the Welsh Government's vision for the marine environment. These priorities will evolve as marine evidence yields new understanding and government policies and programmes change. It is anticipated that more detailed evidence programmes will be developed to deliver these high level priorities.
- 3.4** This Strategy sets a common purpose for bodies in Wales with a responsibility for gathering and analysing marine data and information, and reporting evidence<sup>2</sup>. It recognises that public sector funding will remain tightly constrained and, coupled with the challenges of EU exit, will mean that effective prioritisation and collaboration will be essential to delivering a robust marine evidence base for Wales. It is, therefore, hoped that other bodies will use the Strategy to inform their own evidence programmes.
- 3.5** A range of marine evidence projects are being delivered on behalf of Welsh Government and NRW. This Strategy recognises that these projects could often be better aligned and seeks to provide a framework and process to support such potential efficiencies.
- 3.6** Many marine evidence priorities will be common across England and Wales, the UK, or internationally. To this end collaborative working with partners outside of Wales will be vital, for example through the Marine and Fisheries Evidence Steering Group (MFESG), the MSCC and UK Research and Innovation (UKRI).

<sup>2</sup> These bodies include the Welsh Government, NRW, local government, Cefas, JNCC, industry, NGOs and the wider research and academic sectors.



## 4. Scope and high level evidence priorities

- 4.1** The UK's seas are a shared resource and we need to work with other Administrations in the UK to achieve a healthy environment and sustainable marine economy. The UK and Welsh vision for the marine environment are aligned to deliver 'clean, healthy, safe, productive and biologically diverse oceans and seas'. The UK high level marine objectives attached to this shared vision, as captured in the UK Marine Policy Statement<sup>3</sup>, form the basis of the priorities in this Strategy. These are:
- achieving a sustainable marine economy
  - ensuring a strong, healthy and just society
  - living within environmental limits
  - promoting good governance
  - using sound science responsibly
- 4.2** The evidence requirements for our policy objectives in the marine area are often cross cutting, requiring a range of evidence to support delivery. Many of the evidence priorities that follow are relevant to more than one of the high level marine objectives; each priority has been assigned to the objective deemed to be most relevant.
- 4.3** The evidence priorities in the first (2019) version of this Strategy are those identified by the Welsh Government and NRW, but many of these will be shared and addressed by other marine stakeholders. The Strategy seeks to set a common purpose for bodies in Wales with a responsibility for gathering and analysing marine data and information, and reporting evidence. It is intended that the ongoing development, implementation and review of the Strategy will increasingly involve other key marine evidence stakeholders in the years ahead.

<sup>3</sup> [www.gov.uk/government/publications/uk-marine-policy-statement](https://www.gov.uk/government/publications/uk-marine-policy-statement)

# 5. Achieving a sustainable marine economy

5.1 Sustainable development not only contributes to our economy but supports wider well-being objectives. All marine sectors support the economy in some way and the following list indicates those sectors currently operating in Welsh waters:



- Aggregates
- Aquaculture
- Coastal defence
- Defence
- Dredging and disposal
- Fisheries (commercial, diadromous and recreational)
- Oil and gas
- Ports and shipping
- Renewable energy
- Subsea cabling
- Tourism and recreation
- Water treatment and disposal

## Strategic policy goals

5.2 Based on current understanding of future issues and growth opportunities set out within the WNMP, marine sectors that have particular potential for sustainable growth include:

- marine renewable energy
- ports and shipping
- aquaculture
- coastal tourism

Though fisheries are discussed within the WNMP they are not considered as a potential growth area of themselves. There is, however, potential for diversification and increased resilience of the industry as well as the opportunity to maximise benefits to Wales as part of the EU Exit.

## Current evidence base framework

5.3 Key evidence sources for this priority area include:

- Wales' Marine Evidence Report and Planning Portal
- the Marine Data Exchange

5.4 Organisations and networks that provide data and evidence related to this priority area include, for example:

- the Welsh Government
- NRW
- JNCC
- Centre for Environment, Fisheries and Aquaculture Science (Cefas)
- the Marine Environmental Data and Information Network (MEDIN)

- MMO
- Offshore Wind, Offshore Renewable Joint Industry Project (ORJIP)
- UK Hydrographic Office (UKHO)
- the UK Productive Seas Evidence Group (PSEG)
- The Crown Estate (CE)



## Current evidence priorities

### Marine Renewables

- Understanding opportunities and financial implications for the deployment of different renewable energy technologies in Welsh waters to evolve and support WNMP policies.

### Aquaculture

- Obtaining best available evidence of current and future aquaculture potential based on environmental and social parameters and other opportunities and constraints.

### Ports and Shipping

- Improving our knowledge of the state of the Welsh fishing industry (e.g. vessel capacity, gear usage) and the associated infrastructure (e.g. port and auction facilities).

### Coastal Tourism

- Developing an understanding of the current and likely future distribution and intensity of coastal and marine recreation and tourism activity, to support identification of key areas of use and potential future use and understanding.

### Fisheries

- Identifying opportunities for fishing industry diversification and/or increasing the value of current activities and future planning to address challenges associated with climate change.
- Improve our understanding of where people fish (including recreational anglers) and why, how fishing patterns are changing, and why, and what the socio-economic implications are from displacement of fishing activities.
- Improve the availability of routine stock assessment data for fisheries as required, particularly in relation to fish and shellfish fisheries of key importance to the Welsh fishing industry.
- Improve our understanding of diadromous fish and their migrations through the marine environment.

### Wider Supporting Evidence

- Developing a holistic approach to determining/understanding the economic and societal value of Wales' seas.
- Understanding and making available evidence on sector specific economic constraints and opportunities in Welsh waters. The initial focus will be on fishing, aquaculture, renewable energy and aggregates.
- Understanding how to improve biosecurity to prevent impacts from invasive non-native species.

## 6. Ensuring a strong, healthy and just society

6.1 Our seas are an intrinsic part of our history, economy and way of life. A large percentage of the population of Wales lives and works on the coast, with all of the major cities and many important towns also located there. The Welsh Government and its delivery partners develop, implement and evaluate policies relating to a range of aspects including coastal regeneration, heritage, coastal change and flooding and climate change.



### Strategic policy goals

6.2 These include:

- reducing poverty and supporting the development of vibrant, more equitable, culturally distinct, cohesive and resilient coastal communities
- supporting enjoyment and stewardship of our coast and seas and their resources by encouraging equitable and safe access to the marine environment, whilst protecting and promoting valuable landscapes, seascapes and heritage assets
- reducing the risks of coastal flooding and erosion including maximising opportunities for natural coastal adaptation

### Current evidence framework

6.3 Key evidence sources for this priority area include:

- Wales' Marine Evidence Report and Planning Evidence Portal
- Development of a Coastal Community Typology for Wales
- Flood and Coastal Erosion Risk Management: Development of a National Strategy for Wales
- the National Survey for Wales
- National and Local Seascape Character Assessments for Wales
- Water Framework Directive reports
- Oslo and Paris Convention (OSPAR) including Quality Status Report
- Bathing water reports
- Shellfish Quality Assessments
- Flood risk and erosion maps

6.4 Organisations and networks that provide data and evidence related to this priority area include:

- CADW
- NRW
- the Wales Coastal Monitoring Centre
- Cefas
- MMO

- European Centre for Environment and Human Health
- UKHO
- the UK Clean and Safe Seas Evidence Group (CSSEG), Healthy and Biologically Diverse Seas Evidence Group (HBDSEG), PSEG, and Underwater Sound Forum



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## Current evidence priorities

### Increasing community resilience

- Improving understanding of current and future potential of coastal community benefits (including cultural and social) from marine activities through implementation of marine planning.
- Developing our understanding of how best to build resilience in coastal areas, including maximising opportunities for natural coastal adaptation, by evidence gathering and analysis to support improved implementation of shoreline management plans and policies around Wales.

### Increasing access to the marine environment

- Data on people's use of the marine environment (and monitoring).
- Evidence on the causal mechanisms linking the marine environment to human health and subjective well-being.
- Completing seascape characterisation mapping for all of Welsh waters.
- Understanding and making available evidence on sector specific social constraints and opportunities in Welsh waters. The initial focus will be on fishing, aquaculture, renewable energy and aggregates.
- Development of cheaper and more accurate water quality monitoring and assessment techniques, including:
  1. Improved understanding of sources and impact of emerging chemicals on ecology and on human health issues such as antimicrobial resistance
  2. Enhanced understanding of how mixtures of chemicals impact on ecology along with the potential for in combination effects with other environmental pressures, and how to assess the cost of chemicals that are a risk to the water environment and human health
- Development of an improved ability to determine causes of diffuse pollution in catchments.
- Improved understanding of the dynamics of bacterial pathogens to enhance management of Bathing and Shellfish Waters.

### Coastal Flooding and Erosion

- Further developed understanding of the impacts of coastal adaptation on estuarine and coastal habitats.
- Continued development of climate change model projections through enhanced model parameterisation, including the most up to date UKCP18 predictions.
- Enhanced understanding of the potential changes to protected sites, such as salt marshes, that are providing coastal protection.

# 7. Living within environmental limits

**7.1** Marine ecosystems are dynamic and provide a range of goods and services that we depend on, such as a healthy food source, protection against natural disasters and the regulation of our climate. The Environment (Wales) Act 2016 requires that Wales' natural resources are managed sustainably to maintain and enhance our ecosystems and the benefits that they provide.

## Strategic policy goals

**7.2** These include:

- maintaining and enhancing the resilience of marine ecosystems and the benefits they provide to meet the needs of present and future generations by supporting the achievement and maintenance of Good Environmental Status (GES)
- protecting, conserving, restoring and enhancing marine biodiversity to halt and reverse its decline including through:
  - developing and completing an ecologically coherent, well-managed network of Marine Protected Areas (MPA)
  - developing a comprehensive prioritised programme of marine biodiversity monitoring to inform national and global assessments, reporting and management.

## Current evidence framework

**7.3** Key evidence sources on environmental status for use in this priority area include:

- Welsh Government Marine Evidence Report and Planning Portal, the Lle Geo-Portal, the MPA Network Management Framework and Marine Act reporting
- NRW's State of Natural Resources Report (SoNaRR), Area Statements, Special Sites Database and indicative feature condition assessments for European Marine Sites (EMS)
- NRW's Section 18 report under the Flood & Water Management Act 2010
- Habitats Directive (Article 17) and Biological Diversity (Article 26) Reports
- State of Nature – Wales reports
- Marine Strategy Framework Directive (MSFD) reports
- Water Framework Directive (WFD) reports
- OSPAR including Quality Status Report
- UK National Ecosystem Assessments
- UK Marine Climate Change Impacts Partnership (MCCIP) and report cards and UKCP18.

**7.4** Organisations and networks that provide data and evidence related to this priority area include:

- NRW
- JNCC
- Cefas
- CSSEG
- Directory of the Marine Observing Systems
- EMODnet

- HBDSEG, Ocean Processes Evidence Group (OPEG)
- MEDIN
- Underwater Sound Forum
- ORJIP.

## Current evidence priorities

### Safeguarding marine ecosystem resilience

- Understanding resilience and the impacts of key pressures in Welsh marine ecosystems, including:
  1. improving our understanding of the potential impacts of renewable energy developments on mobile species (marine and diadromous fish, marine mammals, seabirds)
  2. improving our understanding of the potential impacts of climate change on marine ecosystems, in particular in relation to fish stocks (including disease and aquaculture), MPA features, and Section 7 habitats and species
  3. improve our understanding of the potential impacts that underwater noise and vibration (notably from large scale infrastructure projects) may have upon the marine environment
  4. improving our understanding of the sources and spread of marine litter in Welsh waters
  5. understanding the impacts of invasive non-native species and potential introduction pathways
  6. better understand the migratory behaviour of diadromous fish.
- Understanding and making available evidence on sector specific environmental constraints and opportunities in Welsh waters. The initial focus will be on fishing, aquaculture, renewable energy and aggregates .
- Developing our knowledge of the spatial distribution of Welsh fish stocks including the distribution and sensitivity of fish migration, feeding, breeding (spawning and nursery grounds) and associated habitats. Focus species will be those identified as having high ecological or economic importance.



### Protect, conserve, restore and enhance marine ecosystems

- Develop a strategic understanding of potential requirements for habitat compensation associated development and activities in Welsh waters, and opportunities to deliver both compensation and wider ecosystem restoration, taking into account the wider environmental, social and economic benefits (procedural, spatial and temporal).
- Improving our ability to monitor marine biodiversity to allow us to assess the condition and health of our marine ecosystem more effectively and efficiently, enabling us to better understand trends and the influence of human activities on the marine environment and to support management.
- Improving our understanding of the effectiveness of current management interventions in the Welsh marine environment.

# 8. Good governance, collaboration, knowledge exchange and using sound science responsibly

## Governance

- 8.1** Good governance means:
- supporting proportionate, consistent and integrated decision making through implementing forward-looking policies as part of a plan-led, precautionary, risk-based and adaptive approach to managing Welsh seas
  - applying the principles of Sustainable Management of Natural Resources to decision making as part of a plan-led approach delivered in line with ecosystem approach principles
  - transparency i.e. data being managed and published so it is relevant, accessible, timely and accurate<sup>4</sup>, combined with appropriate analysis and interpretation.
- 8.2** This governance has to be supported by using robust marine evidence in a sensible way recognising that:
- our understanding of the marine environment continues to develop through new research and data collection. This work should continue to endeavour to create shared understanding and, where necessary, clearly communicate any scientific uncertainty
  - evidence is needed to develop the tools necessary to manage our different marine management systems and to reduce uncertainty in decision making
  - synthesis of existing evidence is fundamentally important to demonstrate value for money and present a clear pathway for the uptake of evidence into policy.

## Data

- 8.3** Systematically collected and quality assured data are fundamental to supporting evidence on which advice can be based, as is the need for appropriate interpretation of data and research. The growing policy need for better integrated advice requires better management of data to ensure that assessments to support the likes of spatial planning, licensing, or MPA management, can be performed effectively.
- 8.4** The Welsh Government and NRW will continue to contribute actively to MEDIN and use its guidance and principles to ensure that:
- data are findable, accessible, interoperable and reusable and conform to the relevant standards
  - it is transparent how marine evidence data has been collected
  - data are handled in line with General Data Protection Regulation (GDPR) and other relevant data and information regulations.
- 8.5** The Welsh Government and NRW will put in place or utilise existing online hub(s) to support the sharing of marine data, evidence and information.

<sup>4</sup> [www.beta.gov.wales/welsh-government-open-data-plan](http://www.beta.gov.wales/welsh-government-open-data-plan)



## Infrastructure

- 8.6** Wales has some strong scientific infrastructure related to marine evidence:
- Bangor, Swansea, Aberystwyth and Cardiff Universities between them make up a strong marine and fisheries academic community in Wales, with additional expertise in other organisations, e.g. the National Museum Wales
  - NRW plays a major role in survey, monitoring and interpretation of different aspects of the marine and coastal environment and promotes and facilitates research
  - Welsh Government fisheries scientists and vessels with high-tech research capability.
- 8.7** Although there are many examples of collaboration across these areas (e.g. SEACAMS, ECOSTRUCTURE, CoastWEB projects), it is clear that there is scope for better coordination of current facilities and assets including survey vessels.
- 8.8** It is proposed that a project is undertaken to develop closer, more efficient, ways of using marine evidence infrastructure in Wales including research vessel programmes.
- 8.9** There may also be scope in Wales to use infrastructure such as vessels and laboratories through working in partnership with institutes in other parts of the UK such as Cefas and the Environment Agency (EA). Such collaboration will rely on building upon existing working relationships and ensuring alignment of strategic priorities and engagement with the relevant UK planning and coordination groups.
- 8.10** Looking to the future, it is clear that new and emerging technologies and applications, including artificial intelligence (AI), satellite sensors and autonomous and remotely operated vehicles will play an increasing part in how we gather data from our marine environment. Proving how such technologies can be best harnessed and integrated with existing infrastructure to meet our long-term science and policy requirements will continue to be a challenging area, but is necessary if we are to yield the benefits of these advancements.

## Collaboration and knowledge exchange

- 8.11** Falling public sector funding along with challenges around EU exit make it imperative that Wales' marine evidence community increases its collaboration, shares services where feasible and maximises the added value of its activities. The evidence priorities highlighted in this Strategy cannot be delivered by a single organisation.
- 8.12** The Environment Platform Wales brings together universities, research centres and others with the aim of translating research into high quality evidence for Welsh Government and NRW. This will be done by facilitating collaboration and supporting exchange of expertise and skills between researchers, policy makers and practitioners.
- 8.13** The scale of the challenges goes beyond our borders meaning collaboration at a UK level is essential – the “Foresight Future of the Sea” in particular provides a framework as we work jointly with organisations such as:
- Agri-food and Biosciences Institute (AFBI)
  - Cefas
  - Defra
  - JNCC
  - MMO

- MSCC
- Marine Scotland
- Natural England (NE)
- NGOs
- Public Health Wales
- Scottish Natural Heritage (SNH)
- Universities across the UK
- UKRI
- EA

Greater collaboration with industry bodies will also be sought, in particular to investigate where data sharing might be possible.

- 8.14** Action planning to meet the priorities identified in this Strategy will routinely begin with consideration of whether there are existing England/Wales or UK projects running or planned that could meet the need for evidence in Wales.
- 8.15** Broader engagement with the UKRI will be sought to strengthen the connections between policy and the science community, ensuring efficient and speedy uptake matching policy timescales.
- 8.16** International collaboration is especially important with the International Council for the Exploration of the Sea (ICES), the OSPAR Commission and the British-Irish Council. Scientists in Wales are recognised internationally and have well established links with these and equivalent organisations. We will work with them to ensure we benefit from collaborative working and influence international evidence programmes that help deliver our priorities.
- 8.17** The value that comes from the programme of applied marine evidence activity (and the action planning that will flow from this Strategy) will depend on how effectively the results are shared and used. We encourage the use of Welsh marine evidence in a wide range of ways, and continue to seek new ways of providing evidence to support policy development and practice.
- 8.18** From 2019 we will hold a biennial marine evidence conference where the Welsh Government, NRW and our marine evidence stakeholders will be invited to update the Welsh marine evidence community about their projects and findings. The first of these will be in Swansea in September 2019.

## 9. Implementation and delivery

- 9.1 The strategic monitoring and review of the Strategy and action planning will be the responsibility of a Welsh Government and NRW panel. The panel and action planning will be cognisant of evidence requirements that already exist, many of them statutory, around marine and fisheries evidence. A method for prioritising future evidence projects will be developed by the panel.
- 9.2 The panel will monitor implementation of evidence action plans on an annual basis as well as review lessons learned from collaborative and partnered working. The outcomes of the annual reviews will be documented and published online. The Strategy will be reviewed at the end of its life time to help guide the next Welsh Marine Evidence Strategy from 2025.
- 9.3 The panel, and associated work on the monitoring and review of the Strategy and delivery plan, will be supported by officials in the Welsh Government's Marine and Fisheries Division. Where appropriate the Panel will seek to engage with wider Divisions to meet evidence needs that transcend a simple marine and terrestrial divide.
- 9.4 The Welsh Government and NRW will form a network (overseen by the panel) to co-ordinate Welsh Government and NRW representation on key UK Government marine evidence groups (listed within Annex 2).



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# 10. Annex 1 – Links to Key Evidence Sources

- Area Statements: [www.naturalresources.wales/about-us/area-statements/?lang=en](http://www.naturalresources.wales/about-us/area-statements/?lang=en)
- Bathing water reports: [www.gov.uk/government/collections/bathing-waters](http://www.gov.uk/government/collections/bathing-waters)
- Development of a Coastal Community Typology for Wales: [www.gov.wales/development-coastal-community-typology](http://www.gov.wales/development-coastal-community-typology)
- Flood and Coastal Erosion Risk Management: Development of a National Strategy for Wales: [www.gov.wales/sites/default/files/consultations/2019-06/strategic-environmental-assessment-environmental-report.pdf](http://www.gov.wales/sites/default/files/consultations/2019-06/strategic-environmental-assessment-environmental-report.pdf)
- Flood risk and erosion maps: [www.naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en](http://www.naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en)
- Habitats Directive (Article 17) and Biological Diversity (Article 26) Reports: [www.archive.jncc.gov.uk/page-6397](http://www.archive.jncc.gov.uk/page-6397)  
[www.jncc.gov.uk/our-work/convention-on-biological-diversity-cbd/#reporting](http://www.jncc.gov.uk/our-work/convention-on-biological-diversity-cbd/#reporting)
- Indicative feature condition assessments for European Marine Sites (EMS): [www.naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/indicative-feature-condition-assessments-for-european-marine-sites-ems/?lang=en](http://www.naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/indicative-feature-condition-assessments-for-european-marine-sites-ems/?lang=en)
- Lle Geo-Portal: [www.lle.gov.wales/home](http://www.lle.gov.wales/home)
- Marine Data Exchange: [www.marinedataexchange.co.uk/](http://www.marinedataexchange.co.uk/)
- Marine Protected Area (MPA) Network Management Framework: [www.gov.wales/marine-protected-area-network-management-framework-wales](http://www.gov.wales/marine-protected-area-network-management-framework-wales)
- Marine Strategy Framework Directive (MSFD) reports:
  - UK Marine Strategy Part 1: Initial Assessment and Good Environmental Status – [www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69632/pb13860-marine-strategy-part1-20121220.pdf](http://www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69632/pb13860-marine-strategy-part1-20121220.pdf)
  - UK Marine Strategy Part 2: Marine Monitoring Programmes – [www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/341146/msfd-part-2-final.pdf](http://www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/341146/msfd-part-2-final.pdf)
  - UK Marine Strategy Part 3: Programme of Measures – [www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/486623/marine-strategy-part3-programme-of-measures.pdf](http://www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/486623/marine-strategy-part3-programme-of-measures.pdf)
- National and Local Seascape Character Assessments for Wales: [www.naturalresources.wales/media/682028/mca-00-technical-report-summary-method-appendix.pdf](http://www.naturalresources.wales/media/682028/mca-00-technical-report-summary-method-appendix.pdf)
- National Survey for Wales: [www.gov.wales/national-survey-wales](http://www.gov.wales/national-survey-wales)
- NRW's Section 18 report under the Flood & Water Management Act 2010: [www.naturalresources.wales/evidence-and-data/research-and-reports/reports-evidence-and-data-on-flooding/flood-and-coastal-erosion-risk-in-wales/?lang=en](http://www.naturalresources.wales/evidence-and-data/research-and-reports/reports-evidence-and-data-on-flooding/flood-and-coastal-erosion-risk-in-wales/?lang=en)

- NRW's State of Natural Resources Report (SoNaRR):  
[www.naturalresources.wales/evidence-and-data/research-and-reports/the-state-of-natural-resources-report-assessment-of-the-sustainable-management-of-natural-resources/?lang=en](http://www.naturalresources.wales/evidence-and-data/research-and-reports/the-state-of-natural-resources-report-assessment-of-the-sustainable-management-of-natural-resources/?lang=en)
- OSPAR including Quality Status Report:  
[www.oap.ospar.org/en/ospar-assessments/quality-status-reports/](http://www.oap.ospar.org/en/ospar-assessments/quality-status-reports/) and Intermediate Assessments: [www.oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/](http://www.oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/)
- Shellfish Quality Assessments:  
[www.naturalresources.wales/guidance-and-advice/environmental-topics/water-management-and-quality/water-quality/shellfish-water-protected-areas/?lang=en](http://www.naturalresources.wales/guidance-and-advice/environmental-topics/water-management-and-quality/water-quality/shellfish-water-protected-areas/?lang=en)  
[www.cefas.co.uk/cefas-data-hub/food-safety/classification-and-microbiological-monitoring/england-and-wales-classification-and-monitoring/shellfish-monitoring-results/](http://www.cefas.co.uk/cefas-data-hub/food-safety/classification-and-microbiological-monitoring/england-and-wales-classification-and-monitoring/shellfish-monitoring-results/)
- State of Nature – Wales reports:  
[www.rspb.org.uk/our-work/conservation/projects/state-of-nature-reporting/](http://www.rspb.org.uk/our-work/conservation/projects/state-of-nature-reporting/)
- UK Marine Climate Change Impacts Partnership (MCCIP) and report cards and UKCP18:  
[www.mccip.org.uk/](http://www.mccip.org.uk/)
- UK National Ecosystem Assessments: [www.uknea.unep-wcmc.org/](http://www.uknea.unep-wcmc.org/)
- Wales' Marine Evidence Report:  
[www.gov.wales/sites/default/files/publications/2018-05/wales-marine-evidence-report-wmer-summary.pdf](http://www.gov.wales/sites/default/files/publications/2018-05/wales-marine-evidence-report-wmer-summary.pdf)
- Wales Marine Planning Portal:  
[www.lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8](http://www.lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8)
- Water Framework Directive reports:  
[www.waterwatchwales.naturalresourceswales.gov.uk/en/](http://www.waterwatchwales.naturalresourceswales.gov.uk/en/)  
[www.naturalresources.wales/evidence-and-data/research-and-reports/water-reports/river-basin-management-plans/river-basin-management-plans-published/?lang=en](http://www.naturalresources.wales/evidence-and-data/research-and-reports/water-reports/river-basin-management-plans/river-basin-management-plans-published/?lang=en)

# 11. Annex 2 – Key UK Marine Evidence Groups

## Marine Science Strategy

Marine & Fisheries Evidence Steering Group (MFESG)

Marine Science Co-ordination Committee (MSCC)

Marine Assessment and Reporting Group (MARG)

## MSCC (Human & Economic Growth)

Marine Industries Liaison Group

Social Sciences Task Group

## UK Marine Monitoring and Assessment Strategy (UKMMAS)

Ocean Processes Evidence Group (OPEG)

UK Integrated Marine Observing Network

Clean and Safe Seas Evidence Group (CSSEG)

Healthy Biologically Diverse Seas Evidence Group (HBDSEG)

Productive Seas Evidence Group (PSEG)

Marine Climate Change Impacts Partnership (MCCIP)

Underwater Sound Forum

Marine Environmental Data & Information Network (MEDIN)

Research Vessels Working Group

## Other

Marine Biodiversity Evidence Steering Group

Marine Protected Areas Group (MPAG)

Marine Biodiversity Impacts Evidence Group

Marine and Freshwater Non-native Species R&D Group

Salmon and Freshwater R&D Liaison Group