ORJIP Ocean Energy

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Making Sense of the Marine Environment™

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  - Key activities
  - Key outputs
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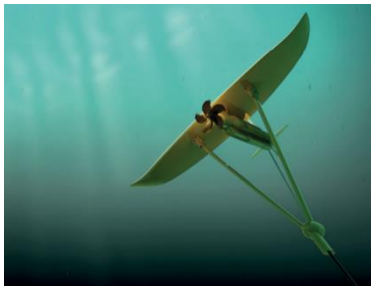
  - Introduction
  - Tethys and other activities
  - State of the Science report

Introduction- ORJIP Ocean Energy

- UK based programme
- Overall aim to reduce environmental consenting risks for wave and tidal energy projects
- Facilitating a **strategic, coordinated and prioritised approach to monitoring and research**
- Endorsed by industry, regulators and statutory nature conservation bodies and researchers



How is this achieved?

- Three key methods in achieving ORJIP Ocean Energy's remit

  1. Discussion and consultation with varied groups of stakeholders to come to consensus on research priorities

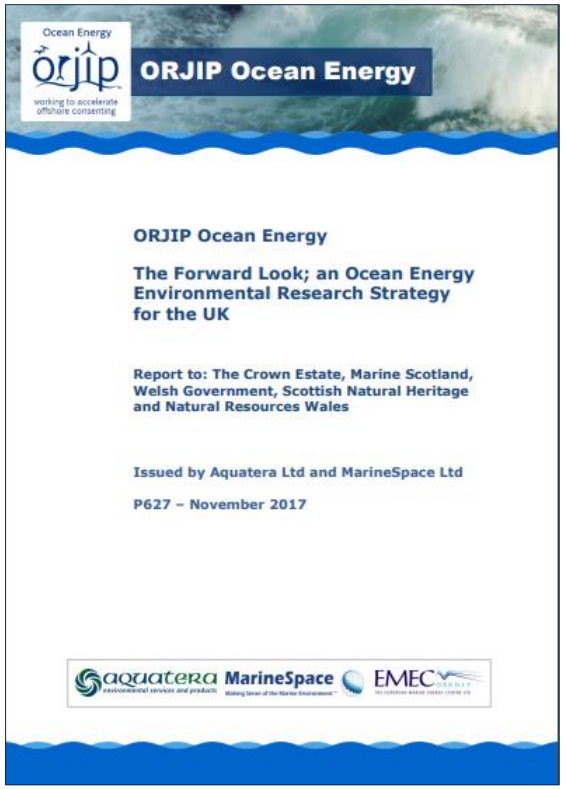
  2. Sharing information widely with the global ORJIP OE Network

  3. Written deliverables

     - The Forward Look (2017)
     - Critical Evidence Needs (2020)
     - Sharing Environmental Monitoring Data (2020)

The Forward Look

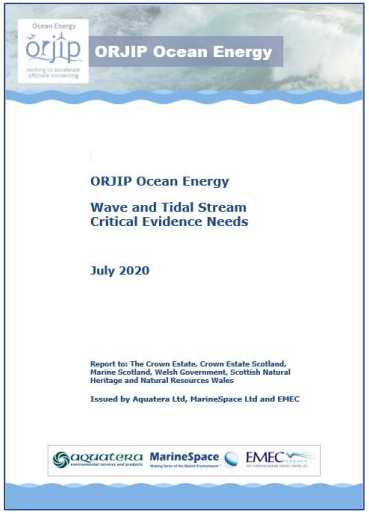
- The Forward Look
  - A prioritised list of strategic research projects to address key EIA/HRA issues
  - Sets out the purpose, required timing and broad scope of the research projects necessary to meet ORJIP Ocean Energy's overall aim.



Critical evidence needs

- Condensed and updated version of the prioritised knowledge gaps for environmental consenting risks of wave and tidal energy

1. Methods and instruments to measure mobile species occupancy and behaviour in high energy environments
2. Near field interactions between mobile species and tidal stream turbines
3. Occupancy patterns, fine-scale distribution and behaviour of mobile species in high energy environments
4. Far-field responses of mobile species to wave and tidal stream devices and arrays
5. Tools for assessing and managing risk to mobile species populations for large-scale wave and tidal stream development.



OES Environmental

- Global programme of knowledge sharing for wave and tidal energy projects
- Run by the Pacific Northwest National Laboratory in USA
- 15 official member countries of the programme including Australia, Canada, China, Denmark, Grand, India, Ireland, Japan, Norway, Portugal, South Africa, Sweden, UK, USA
- Key Activities:
  - Tethys
  - Consultation and discussion with key stakeholders
  - State of the Science report (2020)

Ocean Energy orjip working to accelerate offshore consenting

Tethys

TETHYS

Log in | Register

ABOUT CONTENT TOOLS CONNECTIONS BROADCASTS HELP

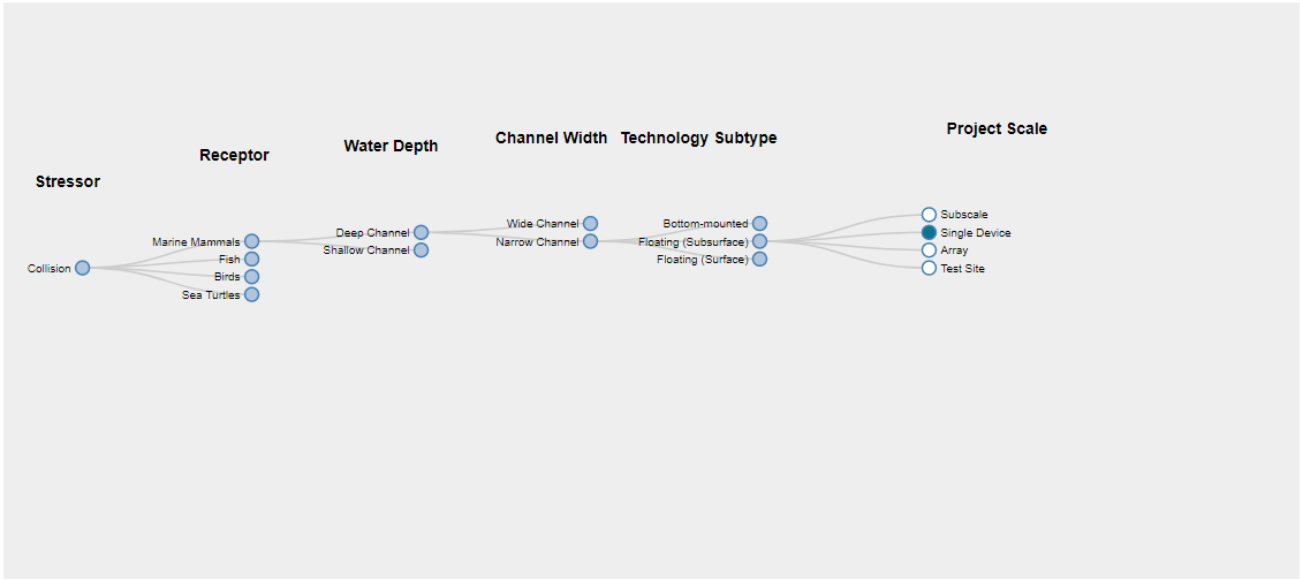
Monitoring Datasets Discoverability Matrix

The **monitoring datasets discoverability matrix** (matrix) is an interactive tool that classifies monitoring datasets from already consented (or permitted) projects and research studies for six key environmental **stressors**. The goal of the matrix is to allow regulators, developers, and the larger marine renewable energy community to easily discover datasets from already consented projects that can be used to aid consenting processes for future MRE projects (see **data transferability** page for more information).

Collision | Underwater Noise | Electromagnetic Fields (EMF) | Habitat Change (Water Column) | Habitat Change (Benthic) | Displacement | Changes in Flow

Collision

View Results



Home » Content » OES-Environ

OES-Environmental distributes renewable energy project sites a data and reports. Content is upd

Nova Innov

Description

The Scottish tidal energy develop Sound, Shetland in 2016, creatin M100 device comprises a cylindri (therefore requiring no seabed d connected to the base by means height of 9 m, making the total h the Shetland Tidal Array are insta least 15 m below lowest astronor requirements for surface markers 80 tonnes.

Each turbine has a separate 1.2 k communications. The three cable information on operation and per electricity into the Shetland grid. and associated infrastructure at baseload tidal power to the Shetl

The next phase of the Shetland T addition, a subsea hub and inter- dedicated export cable for each t

The small size of Nova's devices and facilitated the development content from the Northern Isles,

Location

Bluemull Sound, Shetland

Licensing Information

A Marine Licence was issued und Bluemull Sound site on 13 April 2

The marine licence document an **http://www.gov.scot/Topics/**

Project Progress

Home » Content » Knowl

Knowledg

You are currently viewi

Marine Energy Content

The Knowledge Base provi Relevant documents from keyword filters on the righ appear on the next page.

As an alternative to the Kn

Search All:

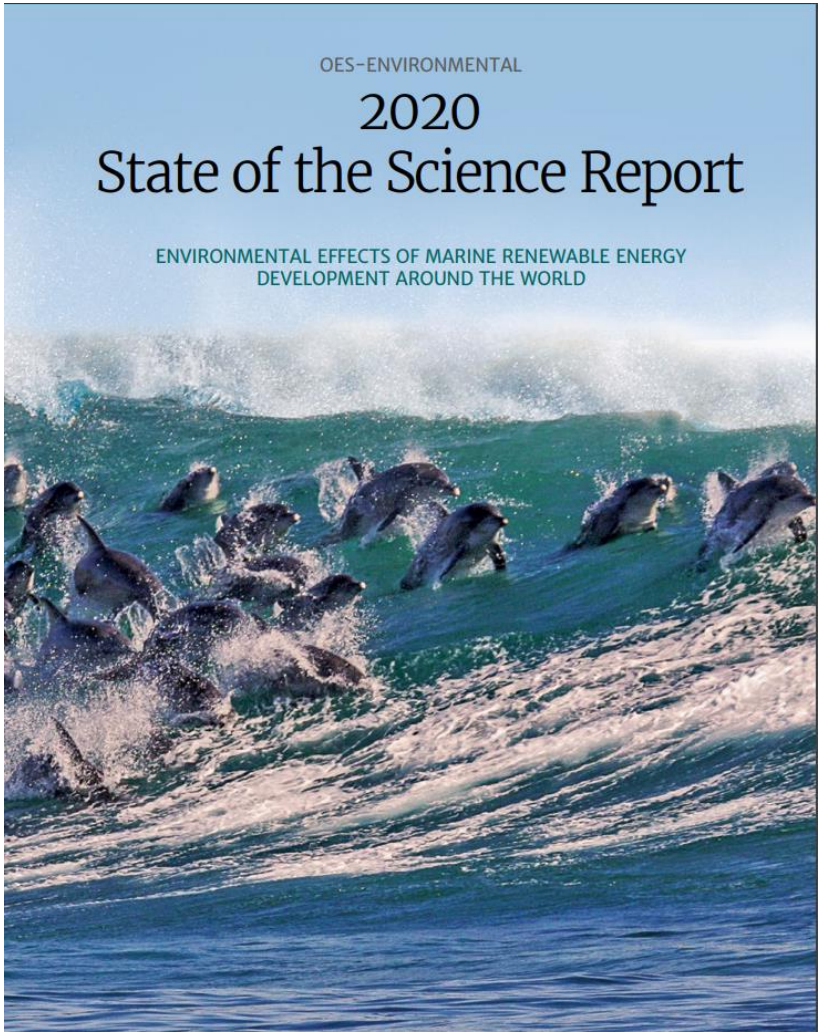
Enter Search Term(s)

Enter terms to search for in all

Title
PacWave South Test Si
Collision risk modelling tidal energy devices: A flexible simulation-bas approach
Wave Swell Energy Kin Island Project
Migratory and diurnal activity of North Atlant killer whales (Orcinus off northern Norway
Accelerating Energy Innovation for the Blue Economy

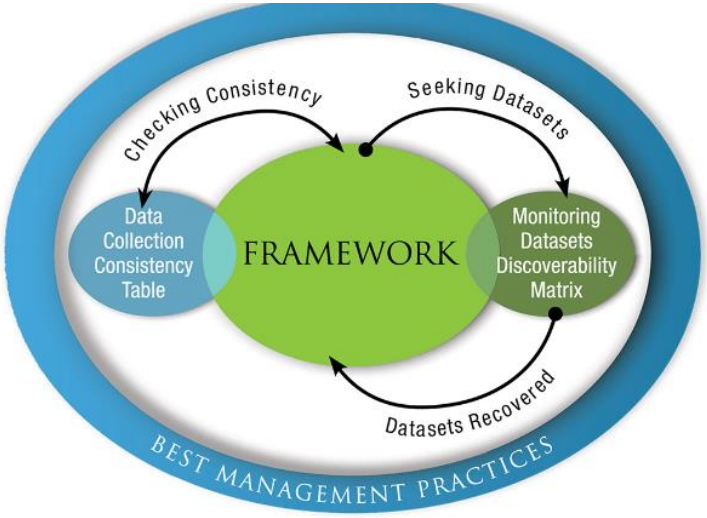
State of the Science

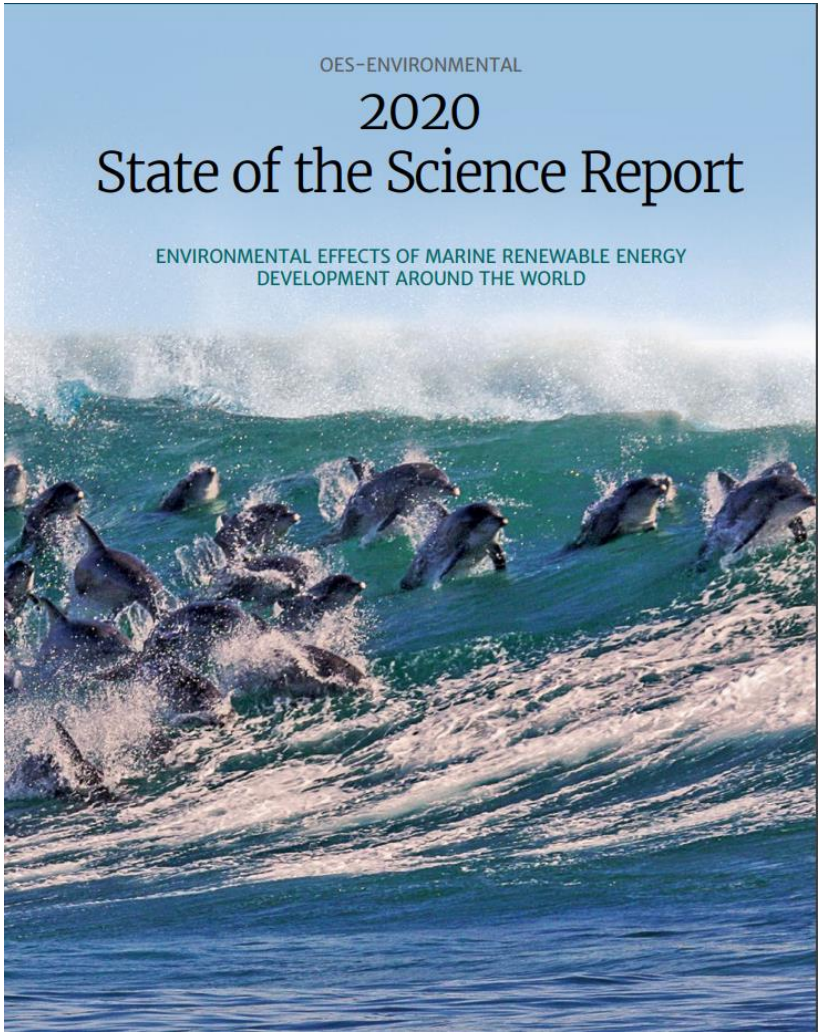
- Update from the 2016 version
- The **most current and pertinent** published information about **interactions** of marine energy devices with the animals and habitats in the marine environment
- Individual chapters covering
  - Collision risk
  - Underwater noise
  - Electromagnetic fields
  - Changes in habitat
  - Changes in oceanographic systems
  - Encounters with mooring systems and cables
  - Socio economic impacts



State of the Science

- Additional chapters dedicated to:
  - Methodologies and technologies used in monitoring marine energy devices to detect marine animals
  - Marine spatial planning and marine energy
  - Adaptive management and marine energy
  - Risk retirement and data transferability





Useful links

- ORJIP Ocean Energy
  - http://www.orjip.org.uk/oceanenergy/about/background
- ORJIP OE- Links to UK projects consenting information
  - http://www.orjip.org.uk/Wave-Tidal-Project-Info
- ORJIP OE- Forward Look
  - http://www.orjip.org.uk/documents
- OES Environmental- Tethys
  - https://tethys.pnnl.gov/
- State of the Science Report
  - https://tethys.pnnl.gov/publications/state-of-the-science-2020
- Webinars, workshops & Tethys Blast
  - https://tethys.pnnl.gov/broadcasts

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