

## Marine Renewable Energy Environmental Effects

Marine Renewable energy is a new but promising source of clean electrical power. The technology is steadily being developed and commercialized in the UK and other parts of the world, including eastern Canada at the Bay of Fundy.

While it may be natural to assume that moving or rotating devices such as tidal energy converters will be harmful to marine life, the ongoing environmental research to date seems to indicate that, if sensibly applied, marine renewable energy technologies could coexist quite well with natural ecosystems, having far less impact than commercial shipping and other human originated marine activity. We are cautiously optimistic and continue to follow the research closely.

Please refer to the following websites for the latest environmental research information and the attached Pathways of Effects chart to understand how marine/offshore energy systems can potentially interact with the environment.

### [Marine Current Turbines Seagen Environmental Monitoring Report](#)

MCT's Seagen turbine has been safely operating and generating commercial power since 2008. Extensive monitoring of the resident seal population and other marine life was completed as part of the project.

### [TETHYS - US Department of Energy](#)

Tethys is a database and knowledge management system that provides access to information and research pertaining to the potential environmental effects of marine and hydrokinetic (MHK) and offshore wind development. Tethys also hosts data from Annex IV, an international collaboration to gather information on MHK environmental research worldwide. → *To view a summary of the latest research, read the Final Annex IV Report (2013).*

### [FERN – Fundy Energy Research Network](#)

The Fundy Energy Research Network (FERN) is an independent Canadian non-profit organization initiated by academic and government researchers as a forum to: *Coordinate and foster research collaborations, capacity and information exchange to understand the environmental, engineering & socio-economic factors associated with tidal energy development in the Bay of Fundy.* Refer to the latest newsletter for a summary of some of the fascinating research going on.

### [OEER – Offshore Energy Environmental Research Association](#)

OEER is a not-for-profit Canadian corporation dedicated to fostering offshore energy and environmental research and development including examination of marine renewable energy resources and their interaction with the marine environment. They spearheaded the [Strategic Environmental Assessment \(SEA\) for the Bay of Fundy](#).

### [NNMREC - Northwest National Marine Renewable Energy Center](#)

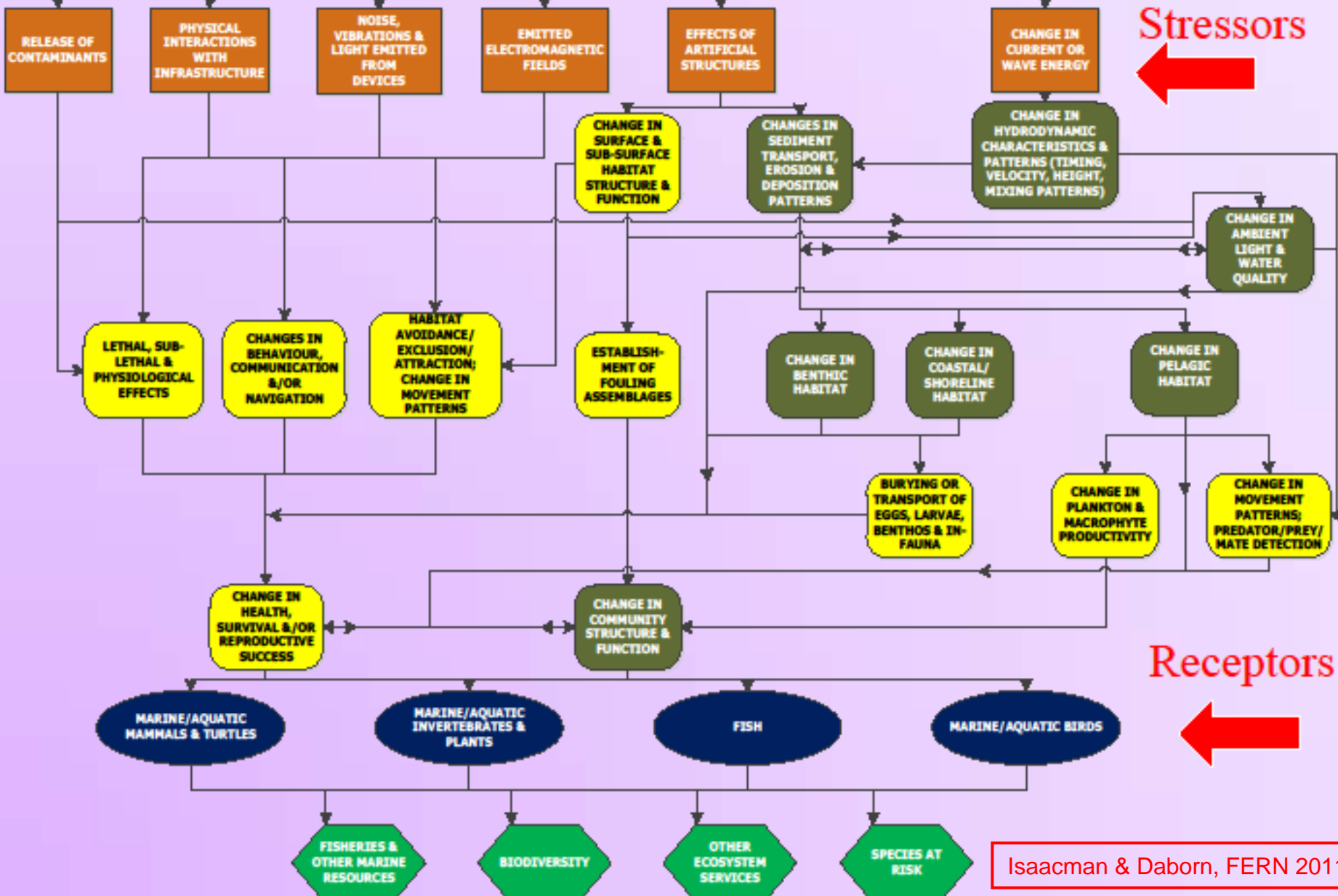
The Northwest National Marine Renewable Energy Center (NNMREC) is a DOE-funded partnership between Oregon State University and the University of Washington. University of Washington is responsible for tidal energy research and development. [Oregon State University](#) is responsible for wave energy research and development. Check their website Documents and Research pages for information libraries.

ALL OFFSHORE RENEWABLE ENERGY TECHNOLOGIES

OPERATION

# Pathways of Effects Model

Stressors



Receptors

