

Evidence gaps for tidal lagoons: A regulatory & advisory perspective

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Today

- NRW's role as a regulator and advisor.
- Tidal lagoons: opportunities and challenges.
- Evidence gaps, uncertainty and consenting risk.
- A prioritised approach to evidence.
- Key evidence gaps for lagoons.
- Recap and key messages.

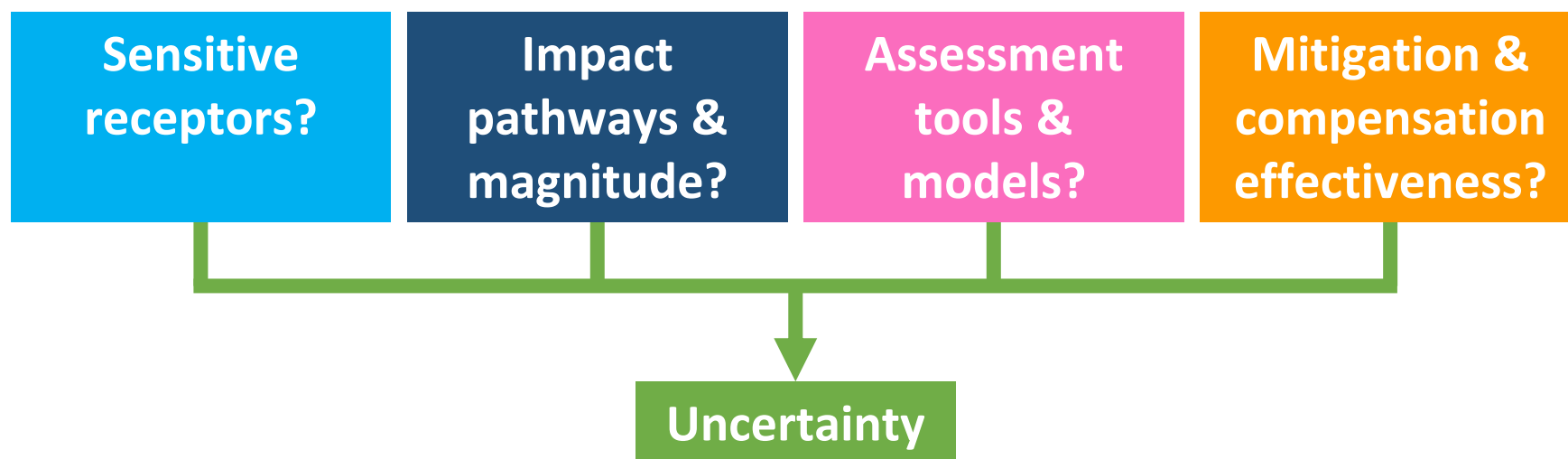
NRW & tidal lagoons



- **Regulator;**
 - Marine Licence (Marine & Coastal Access Act 2009).
 - Wildlife and Countryside Act 1981, Environmental Protection Act 1990, Water Resources Act 1991, etc.
- **Statutory advisor;**
 - Project EIA and HRA.
 - Strategic planning.
 - Hendry Review.
 - ORJIP OE tidal range Call for Evidence.
 - Severn Tidal Power Feasibility study.

Tidal lagoons: opportunities & challenges

- Potential to contribute to low carbon energy production – clear benefits and opportunities.
- Must comply with environmental legislation (Habitats Directive, Water Framework Directive).
- Evidence gaps present a challenge to decision-making and advice – create uncertainty.



Uncertainty & consenting risk



Consenting risk due to evidence gaps and uncertainty increases with project scale and duration.

Identifying key evidence gaps for lagoons

- Significant progress to date;
 - Swansea Bay Tidal Lagoon (and other projects).
 - ORJIP Ocean Energy tidal range Call for Evidence.
 - Hendry Review.
 - Severn Tidal Power Feasibility Study.
- Wide-ranging and comprehensive evidence gaps.
- Not all evidence gaps are unique to lagoons.
- Some evidence gaps are more pressing than others.

A prioritised approach to evidence



- ORJIP OE demonstrates the value of a prioritised approach for wave and tidal stream.
- Consensus across industry, regulators and other stakeholders on most pressing evidence gaps and research needs provides focus.
- Communicates key industry, regulator and advisor needs to the research community.
- Maximises impact of research, targeting it where it's needed most.
- Improves communication to accelerate incorporation of science into policy and decision-making.

Key evidence gaps for lagoons

- **Coastal processes:** models & prediction capabilities, baseline information, sediment budgets, consequences for biology, ecology, water quality, flood risk.
- **Fish and fisheries:** key species ecology, behaviour, habitat utilisation & life histories, stock assessment & population tools & models, economic value assessment tools.
- **Mitigation & compensation:** quantifying uncertainty, mitigation options, adaptive management & associated monitoring, compensation options over project lifetime.

Recap & key messages

- Uncertainty caused by evidence gaps presents a challenge to consenting.
- Many evidence gaps and sources of uncertainty; **some are more pressing than others.**
- Prioritised approach enables industry, regulators and advisors to communicate **key evidence needs** to the research community.
- **Focus for today is on identifying priority evidence needs for lagoons. Please stay focused on this objective!**

Contact details & further information



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