

Using science and collaboration to improve environmental impact assessment and management of sound-generating activities

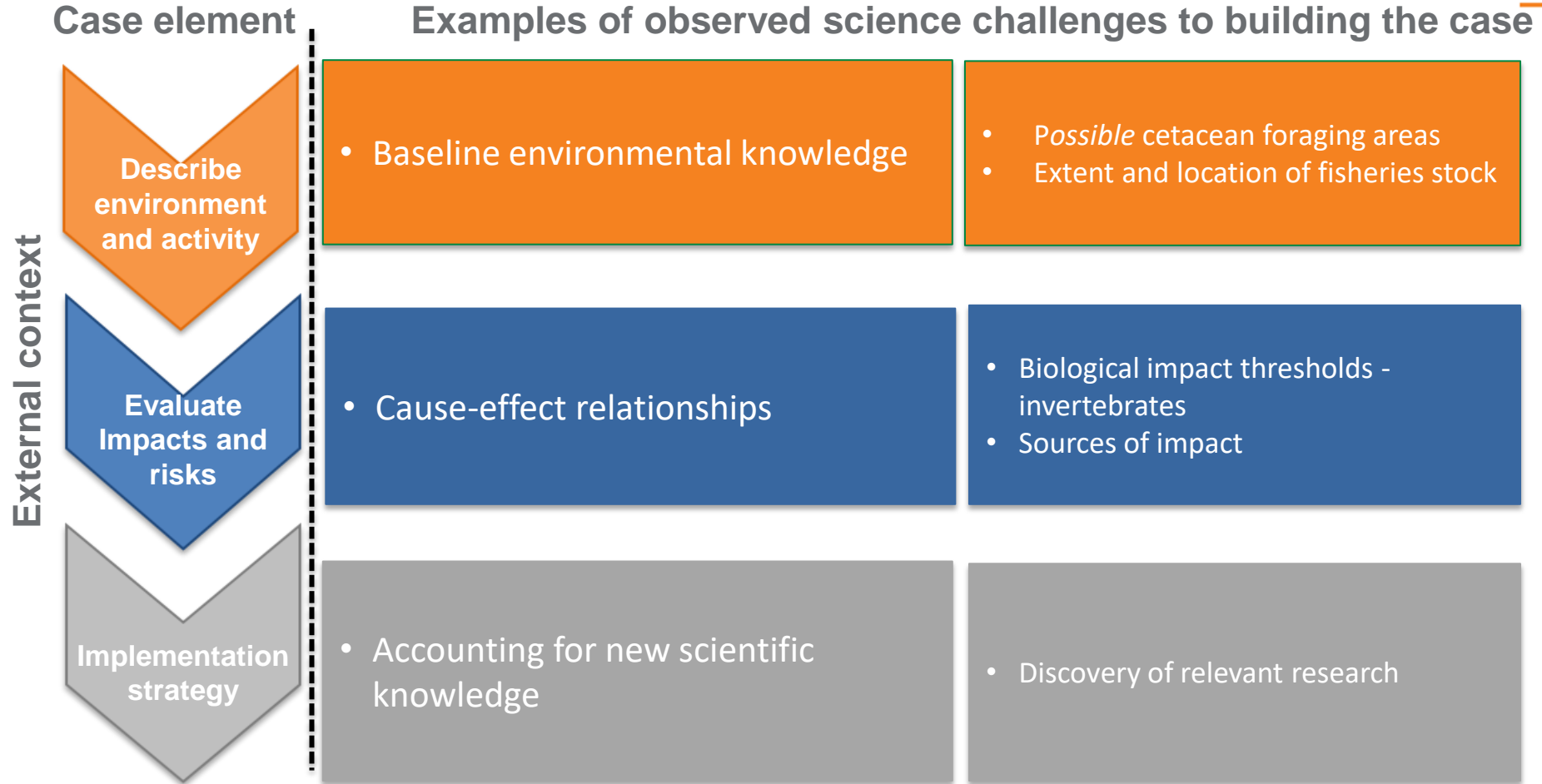
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- Offshore petroleum activities and underwater sound
- Making an environmental management ‘case’
- Challenges and implications
- Considerations for research planning and implementation to address challenges

Offshore petroleum and sources of underwater sound

- Marine seismic surveys
 - Intense sound emissions, continually moving source, survey objectives and design
 - Proponents seeking operational flexibility
 - Can interact with a wide variety of sensitivities
- DP vessels and MODUs, drilling equipment, pile driving, pipelines and production equipment, vessels and helicopters
 - Sources are around fixed locations



- Challenges generate uncertainty
- Precautionary principle in decision-making
- Implications
 - Application of more or more conservative controls
 - Protracted assessment and authorisation timeframes
 - Reduced stakeholder confidence/social license.

Some options for dealing with scientific uncertainty

- Expand knowledge of the existing environment
- Studies under real-world conditions
 - Seismic surveys and strategic opportunities
- Tools to support EIA and management
 - Cause-effect pathways - start conceptual and refine
 - ‘Standards’/guidance.

Research planning considerations

- Understand problems
 - Allow research users to lead problem identification of EIA-related issues that generate uncertainty.
- Define research outcomes and outputs
 - Outcomes – high level goals
 - Outputs – more specific to allow uptake
 - Test utility of proposed outputs with end users.
- Then decide how to generate outputs
 - Resources – real-world commercial vs experimental
 - Scope of expertise required.

- Like any process based on predictions EIA carries uncertainty.
- Addressing uncertainty can have considerable environmental, social and economic benefits.
- Some simple steps can help maximise success of research in enhancing capacity to predict and manage seismic survey impacts.

Thank you