

Phase 3- Risk assessment

Questions

- How to assess risks from trawling impacts?
- What are risks by gears/ fisheries/ locations
- (What are risks in relation to benefits?)

Trawling Best Practice, UW Seattle, 17 June 2013
Simon Jennings

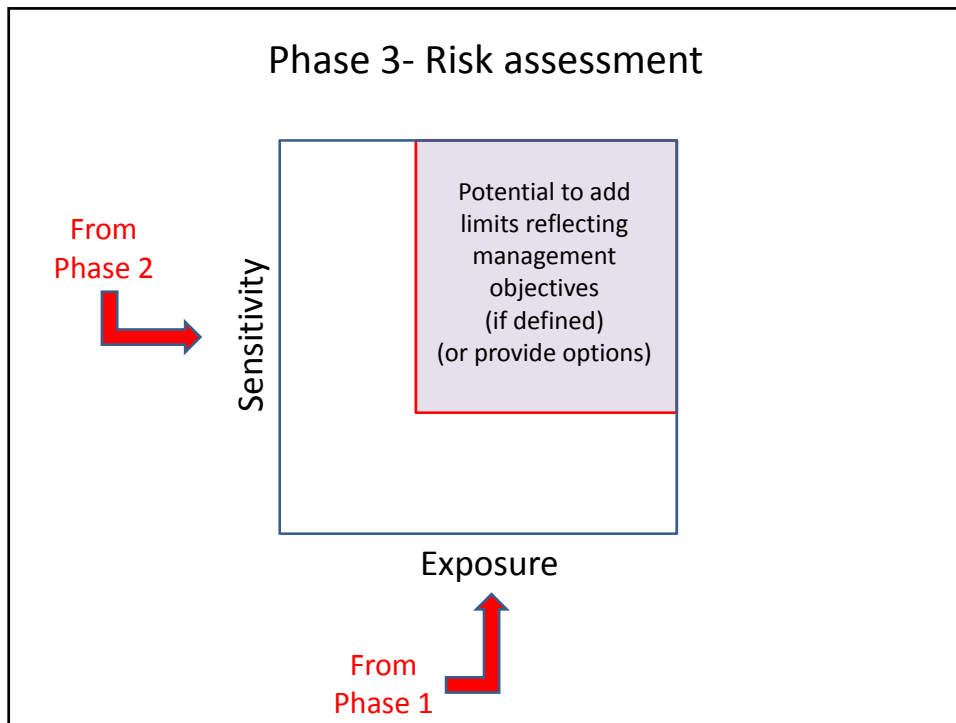
Phase 3- Risk assessment

Predicated on:

- Estimates of sensitivity
- Estimates of 'exposure'

Some issues to address when answering these questions:

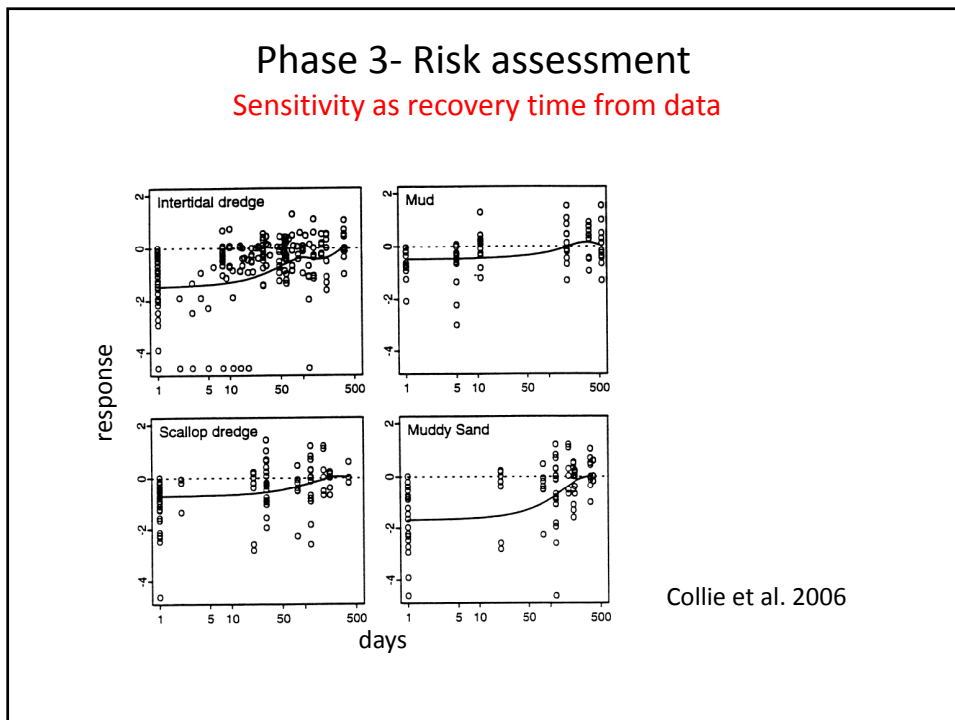
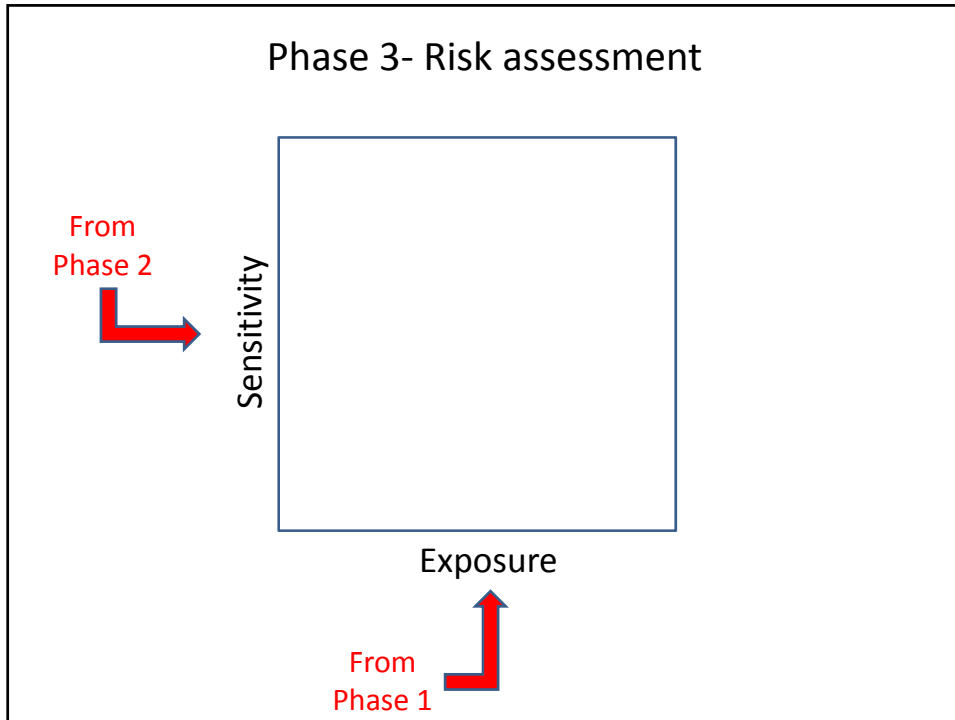
- Resolution of fisheries and gears (sensitivity and exposure)
- Resolution of habitats (in environment and review)
- Resolution of assessment
- Adding a 'benefit' component to our analysis

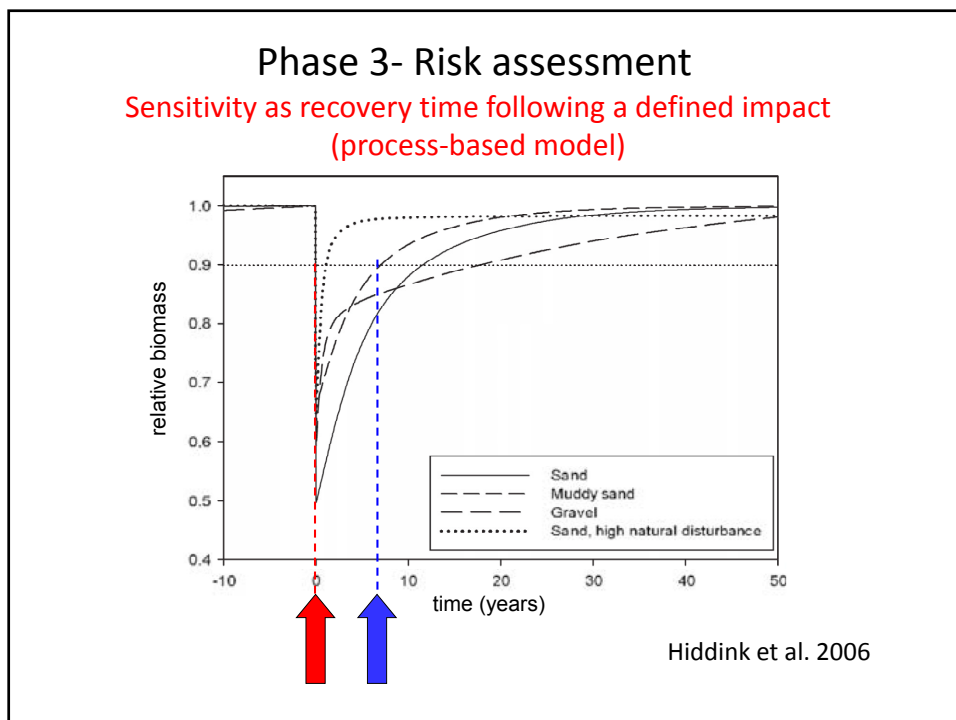
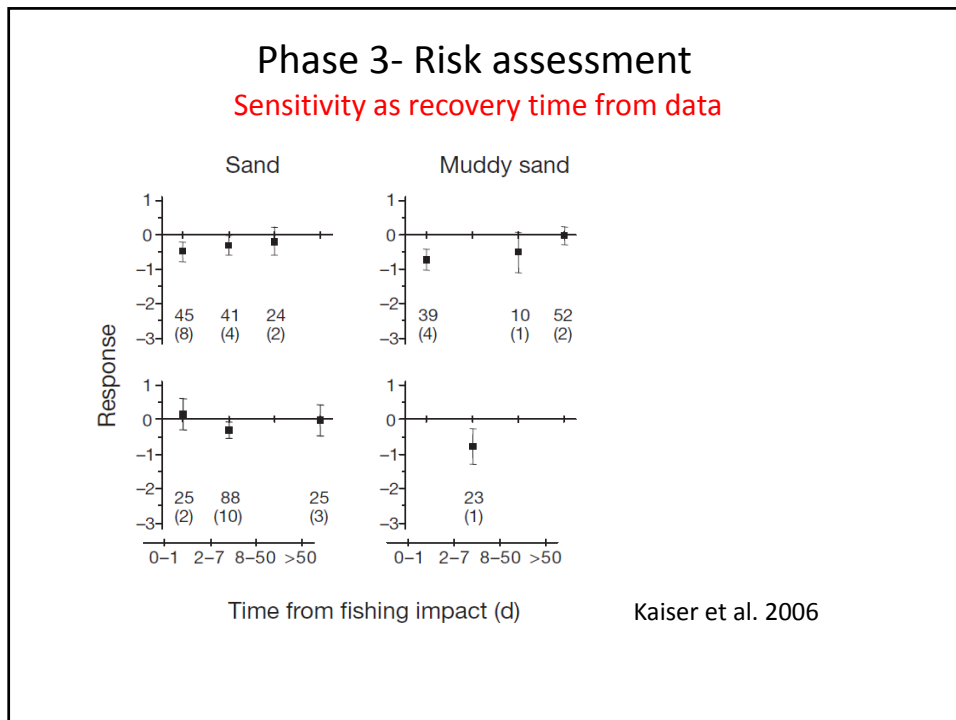


Phase 3- Risk assessment

May provide an alternative to some of the emerging tools for conservation planning

Fishing gear type	Feature	Habitats										Large shallow inlets and bays			Lagoons		Reef		
		Sub-Feature	Depth (m)	Substrate	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	
Trawl	Beam trawl (shallow)	1a																	
	Beam trawl (deep)	1a																	
	Beam trawl (shallow)	1a																	
	Beam trawl (deep)	1a																	
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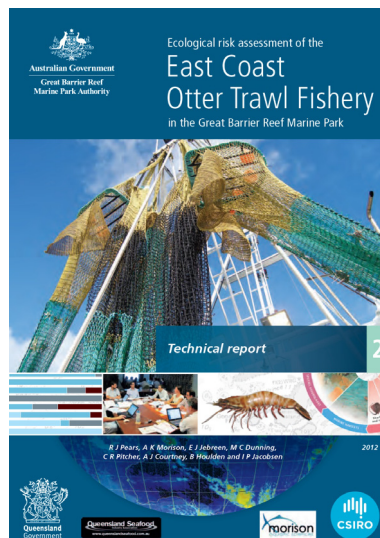
Phase 3- Risk assessment

Matrix would also contribute to steps in a formal process e.g. ERAEF, Hobday, Smith et al

Trawling activities are assumed to pose high risks in the absence of information, evidence, or logical argument to the contrary and as issues are elevated to higher levels of analysis so the resource demands increase.

Phase 3- Risk assessment

More data-demanding approaches



Phase 3- Risk assessment
 Use of risk-based methods to define
 indicators of relative impact for gears/ fisheries/ shelves

Could be one of two approaches to provide alternatives
 to some of the existing indicators of trawling impacts

Existing efforts to report trawling impacts

Yale University

Environmental Performance Index

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Environmental Performance Index (EPI)

The Environmental Performance Index (EPI) ranks countries on performance indicators tracked across policy categories that cover both environmental public health and ecosystem vitality. These indicators provide a gauge at a national government scale of how close countries are to established environmental policy goals.

Environmental Performance Index

2012 EPI & Pilot Trend EPI

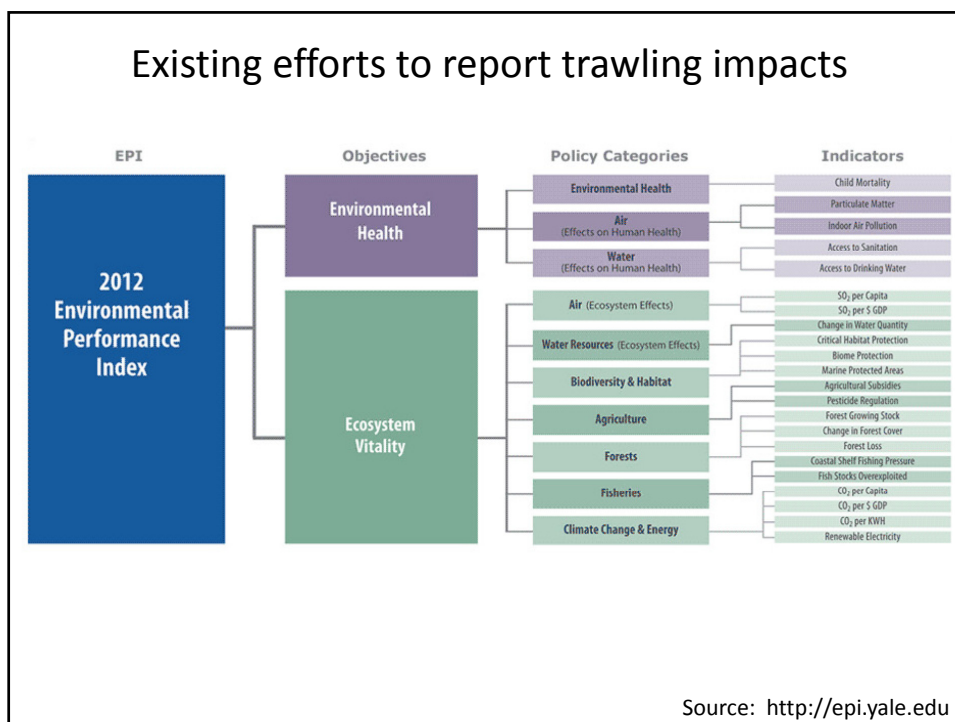
Data Explorer

Indicators in Practice

Community

Downloads

Source: <http://epi.yale.edu>



Existing efforts to report trawling impacts In 2008

Trawling Intensity Methodology
[Go to: Indicators Methodology](#)
[Go to: Previous Indicator](#) [Next Indicator](#)

Indicator Code: EEZTD
Objective: Ecosystem Vitality
Policy Category: Productive Natural Resources
Subcategory: Fisheries
Indicator Short Name: Trawling Intensity
Indicator Full Name: Percentage of Exclusive Economic Zone Area Trawled

Units: Percentage Area
Country Coverage: 175
Reference Year: 2004
Target: 0%
Target Source: Expert Judgment

Source: <http://epi.yale.edu>

Existing efforts to report trawling impacts In 2008

Methodology: This indicator is calculated based on the amount of catch that is trawled per one-half degree (30 arc-minute) grid cells. This results in a metric of the area (sq km) associated with combined bottom trawl or dredge catch (supergears 8 or 9) rates >0.05 tonnes/sq km/year within declared EEZ areas. The marine area of the cells are added up to find the total area trawled and then divided by total EEZ. Cells that have a minimal catch are not included in the analysis.

Source: <http://epi.yale.edu>

Existing efforts to report trawling impacts In 2012

Indicator: Coastal Shelf Fishing Pressure

Objective / Policy: **Ecosystem Vitality - Fisheries**

Code: *TCEEZ*

Description: This is the catch from trawling and dredging gears divided by the EEZ area by country and year.

INDICATOR SUMMARY

Unit of Measurement: Tonnes per square km

Target: 0.000016

Low performance benchmark: 1

Source: Expert opinion. The target is based c
performance benchmark is based on the 95th pe

Source: <http://epi.yale.edu>

Phase 3- Risk assessment

Initial steps for discussion:

1. Assess risk by gear type based on sensitivity (as recovery time) and exposure (as frequency of impact)
2. Apply to fisheries or areas to compare risks

Future steps:

1. Compare risks-benefits among fisheries and other strata
2. Use risk profiles to develop indicators, to complement footprint estimates etc

Phase 3- Risk assessment

Recap of issues:

- Resolution of fisheries and gears (sensitivity and exposure)
- Resolution of habitats (in environment and review)
- Resolution of assessment
- Adding a 'benefit' component to our analysis