

Defra co-design project

Co-designing the principles for defining low impact fishing



CONTEXT

UK policy overview (II)

“We want an efficient but sustainable industry. Technological advances have driven greater efficiency and modern smaller boats are able to catch far more fish than previously. We will therefore consider new criteria to define low impact inshore fishing vessels to replace the current ‘under 10 metre’ category.”

Fisheries White Paper - Sustainable fisheries for future generations (2018)

UK policy overview (III)

“We will consider a targeted scientific trial using an effort (days at sea) based regime in place of a quota regime for some low impact inshore fisheries.”

“If ...shows that such approaches are successful with the low impact inshore fleet, ... then we will give careful consideration to ... trials for deployment of effort based regimes or alternative hybrid models in other parts of the demersal fleet.”

Defra <https://www.gov.uk/government/consultations/fisheries-white-paper-sustainable-fisheries-for-future-generations/sustainable-fisheries-for-future-generations-consultation-document>

UK policy overview (IV)

“Defra and MMO can use this opportunity to review how the English inshore fleet, many parts of which could be viewed as relatively low impact (such as artisan fishers with close ties to their coastal communities), is managed and regulated.

Instead of the current ‘under 10 metre’ category we will consider a variety of potential options including limits to engine power and restrictions on where such vessels can fish. This approach supported by vessel monitoring and electronic catch-reporting could allow us to provide increased fishing opportunities, or lighter regulation, for those involved in low impact fishing activity. At the same time, it would be necessary to monitor the potential cumulative impact of medium impact vessels.”

Defra tender in August 2019 – “Co-designing the principles for defining low impact fishing”

- ✓ **Brief intro from Defra setting out their vision for the work**

Defra co-design project (II)

This is “an original piece of work to **develop a framework of principles** for low impact fishing, and to **agree the processes** for applying them. The scope of this work extends only to England for operational reasons, but it is recognised the outputs may be of interest at a UK-wide scale and beyond.”



Co-designing the principles for defining low impact fishing

- Defra has commissioned NEF to conduct a project to **involve fishermen in the design of a new set of principles for 'low impact fishing' in England**. Fishers and others with interests in the UK fishing sector are invited and encouraged to take part in this important initiative through attending workshops in either Brixham, Eastbourne, or North Shields.
- Building on discussions at the recent 'Future of Our Inshore Fisheries' Conference, which was attended by over 50 fishermen, **these workshops are another stepping stone towards English domestic policy reform as the UK exits the European Union**.



Co-designing the principles for defining low impact fishing (II)

- In these workshops the project contractor (NEF) will seek your direction on the **factors/variables that you think should be considered to define low impact fishing**. NEF will publish a report following these workshops and feedback to Defra.
- The **new set of principles will inform policy thinking into a possible transition from the 'under 10 metre' vessel categorisation to something more appropriate to support a diverse, profitable and sustainable fleet that serves the needs of coastal communities and the UK economy**.

PROJECT

Introduction to the project

- Scope/purpose of research
 - Focus on **environmental** impacts

Defra:

- *Why 'low impact'?*
- *What does co-design mean?*
- *How data might be used*
- *How results will be fed back*

What is Co-design?

- It's a process that goes beyond 'consultation'
- Guiding Principles
 - **Outcomes focused:** Focusing on positive policy development
 - **Participative:** Active engagement with stakeholders at moments when input can be meaningful
 - **Respectful:** Recognition that participants knowledge, time and support is valuable
 - **Adaptive:** Maintaining flexibility, feedback loops and learning processes
- Objectives
 - To work with stakeholders in early phase of policy development to co-design principles for low impact fishing
- But need to recognise boundaries
 - Broader policy focus as set out in 25 Year Environment Plan etc.

- Literature review & Defra workshops (2019)
- Project delayed due to election

What's happening

- Series of workshops in Jan and Feb to kick start the process.
- Each location will have 2 workshops, each 2 weeks apart
- Final project symposium in April 2020



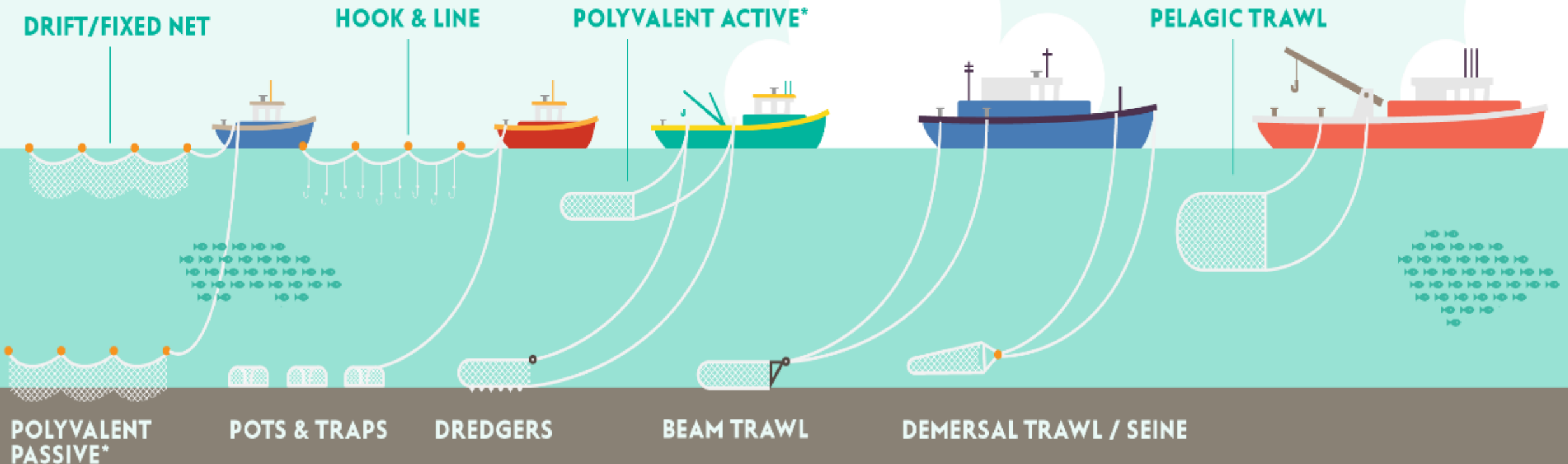
Identifying the principles for defining 'low-impact' fishing: A review of the literature.



Review to identify the kinds of environmental impacts that can be attributed to fishing

While fishing is recognised make important contributions to society, there can be environmental impacts associated with fishing activities.

Our review has sought to identify some of the types of environmental impacts associated with fishing and fisheries that are documented in the scientific literature. It is hoped that the impacts identified will contribute to this debate where we aim to identify, collectively, what impacts might be important.



Seabed impact

e.g., gear dragged along the seabed, anchors, pots and traps, or even angling weights on the bottom

Target stock population

e.g., mortality of target species as a direct result of fishing

By-catch

e.g., mortality of non-target species as a direct result of fishing

Ghost fishing

e.g., nets, pots, baited hooks *etc* lost at sea that continue to fish

Fish welfare

e.g., suffering avoidance during and after capture

Bycatch (other marine life)

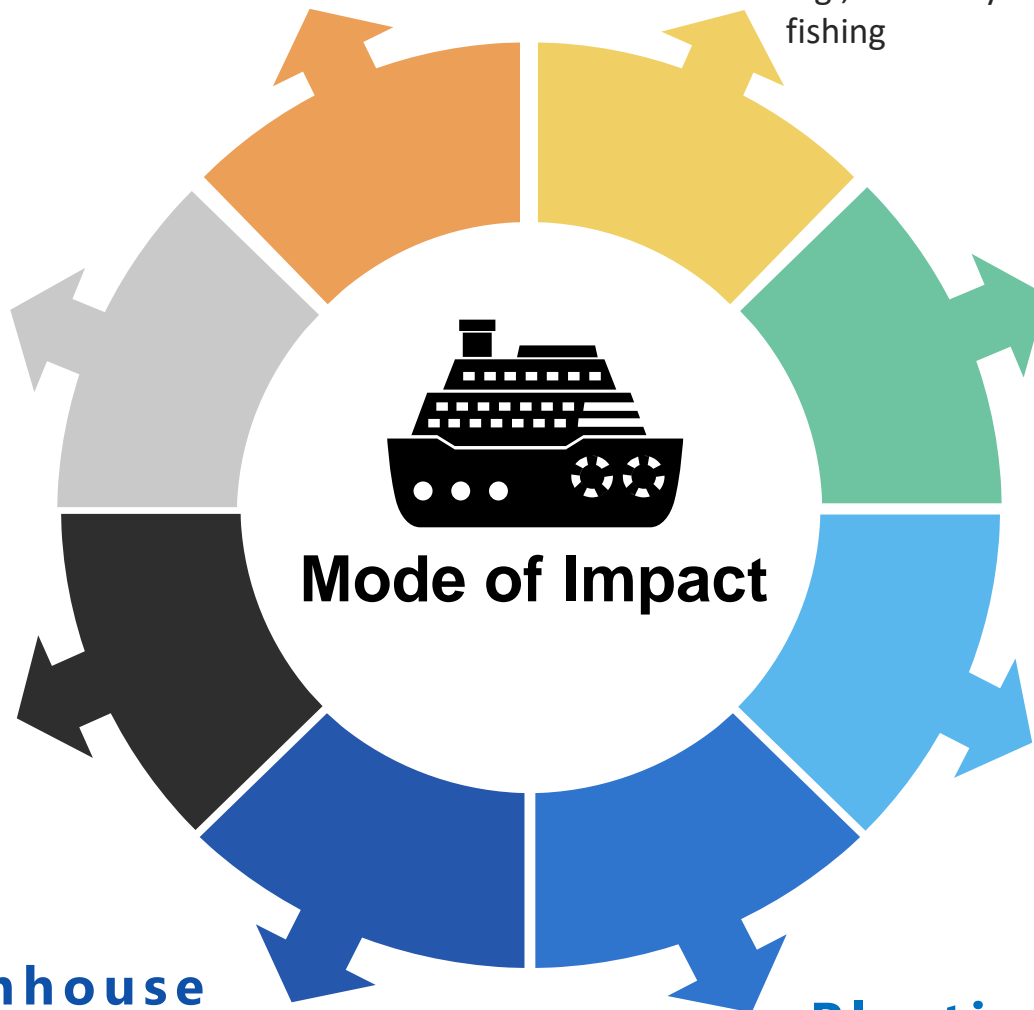
e.g., mortality of birds, seals, turtles, whales and dolphins as a direct result of fishing

Fuel use / greenhouse gasses

e.g., the release of green house gasses from fishing related activities such as running an engine, lights, refrigeration *etc*

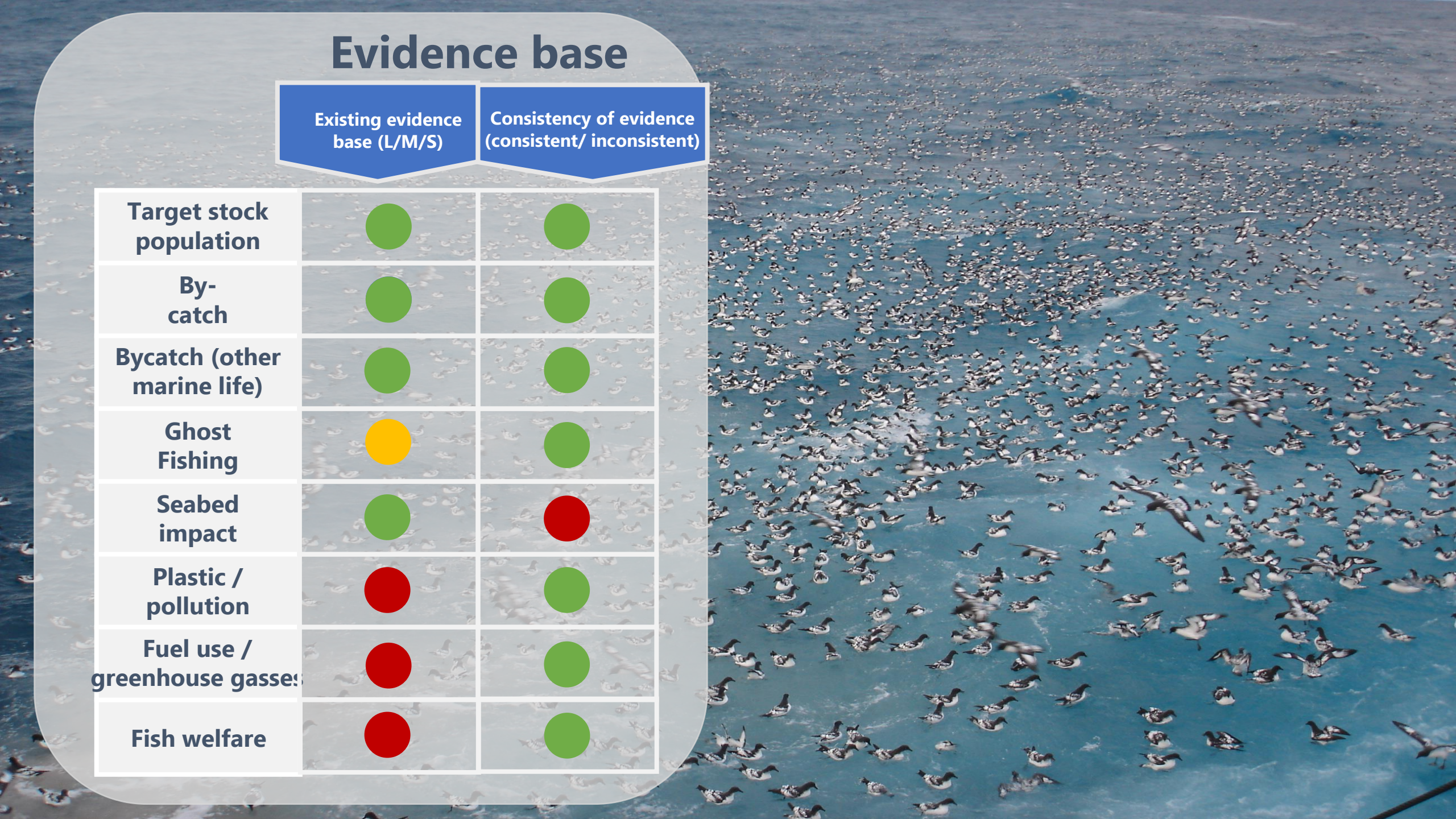
Plastic / pollution

e.g., the loss of plastics overboard that then pollute the marine environment



Evidence base

	Existing evidence base (L/M/S)	Consistency of evidence (consistent/ inconsistent)
Target stock population	●	●
By-catch	●	●
Bycatch (other marine life)	●	●
Ghost Fishing	●	●
Seabed impact	●	●
Plastic / pollution	●	●
Fuel use / greenhouse gasses	●	●
Fish welfare	●	●



ANGLING IMPACTS

- **High exploitation** rates and pronounced selectivity.
- Use and loss of natural and live bait organisms – **non native intro**.
- **Lead** input in water bodies due to lead containing sinker or lure loss.
- **Bycatch** of threatened and protected species.
- Commercial bait harvest and non native species
- Private collection of natural **bait** organisms.
- Boating, **noise**, walking, car driving on shorelines and wildlife disturbance associated with MRF.
- Discarding or loss of fishing lines and hooks and angling related **littering**.



Three impacts were ranked as high-risk impacts (severe impacts that are difficult to reverse and to manage, and that

may require management measures on a broad spatial scale):

- (1) the **direct and indirect impacts of high and selective fishing mortality** (truncation of the natural age and size structure, loss of genetic variability, evolutionary changes, and food web changes)
- (2) the **use of live bait organisms that originate from water bodies elsewhere** because released or lost live bait organisms potentially impact the genetic, species, and ultimately ecosystem diversity, and
- (3) the **loss of lead containing fishing tackle** that potentially causes environmental contamination.

Lewin et al (2019)



PLAN FOR TODAY



PLANS FOR TODAY (1)

- **Discussion 1: Identifying the environmental impacts of fishing**

Discuss in table groups:

- *What are the environmental impacts of fishing / angling independent of fishing type?*
.....Write each impact on a Post-It note.
- *How do environmental impacts vary across different scales (e.g. local inshore waters, regional, global)?*
.....Cluster impacts according to scale

PLANS FOR TODAY (2)

- **Discussion 2: Defining low impact fishing**

Discuss in table groups:

- *What impacts could be reduced?*
- *What criteria should be used to define low impact fishing (referring to identified impacts from Discussion 1)?*
- *How could these criteria be measured/assessed?*

NEXT STEPS....

- Review workshop findings
- Run 2nd workshop with the same stakeholders
– **Eastbourne – Wed 19th of Feb**
- **Final symposium**
- **Project report**

Thank you.

Chris Williams, Senior Programme Manager

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UK policy overview (I)

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 - Outcomes focused
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 - Respectful
 - Adaptive
- Objectives
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- Literature review (terms associated with *low impact**) & Defra workshops (2019)
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What's happening

- Series of workshops in Feb / March to kick start the process...
- Each location will have 2 workshops, each 2 weeks apart
- Final project symposium April 24th 2020



*Literature review: Terms related to low impact fishing

Low Impact

Sustainable

Responsible

Small Scale

Inshore

Artisanal

Ethical

Marine Stewardship

Environmentally Friendly

Catch and Release



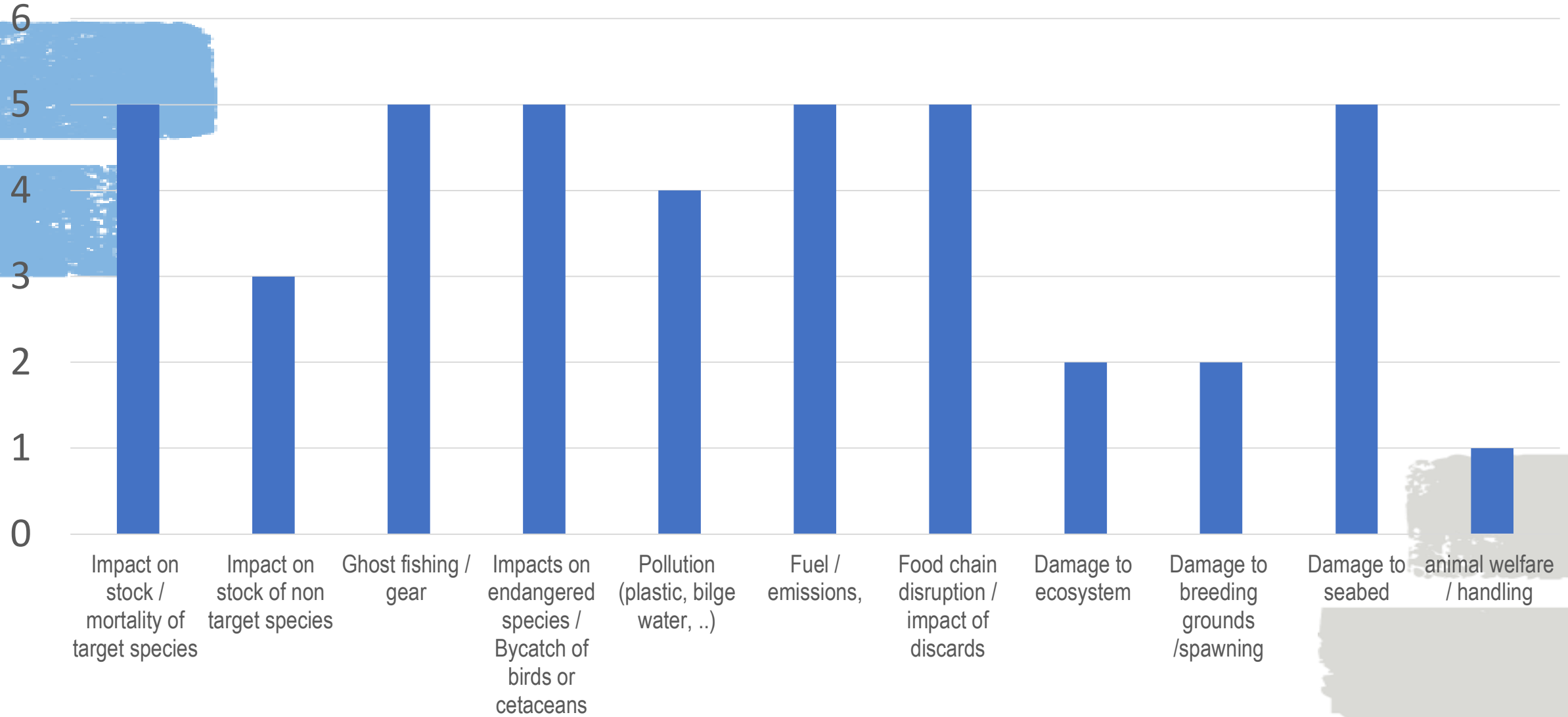
Workshop #1 summary



Comments made by attendees

- “Would like the lads to come together.”
- “Want to have a voice on management.”
- “Keen for a better definition of ‘low impact fishing’”
- “Want to see British produce promoted in the South and across our country, with less exports.”
- “Want to see common sense with positive PR on local sustainability.”
- “A stronger voice for the under 10s.”
- “Anglers want to support under 10s over other sectors.”
- “Let’s co-manage fishing! Defra, all fishing sectors, MMO...”
- “Want to control quota ourselves a bit more.”

Session 1 – fishing impacts



ANGLING IMPACTS

- Impact on stock / mortality of target species
- Impact on stock of non target species
- Unintended mortality as a result of catch and release
- Impact on localised stocks (wrecks)
- Impact on spawning fish
- Breeding season disturbance
- Tackle / gear loss (pollution)
- Ecosystem impacts (eg high concentration of local activity) eg bait collection
- Changes to habitat are not well understood – but can be damaging eg anchoring
- Impacts on endangered species
- Pollution
 - Water (fuel / emissions, plastic / single use for bait containers,...)
 - Noise pollution

Session 2 – impact reduction

- Looked at which impacts easier / medium / harder to reduce
- Each table had a different focus
- Write up was circulated
- *Homework – what are the trickier impacts to reduce?*

PLAN FOR TODAY

Session 1: 1615 – 1700

Session 2: 1715 – 1800

Session 3: 1810 - 1830

PLANS FOR TODAY (1)

Discussion 1: Applying the criteria to your fishery / gear type (small groups or individuals)

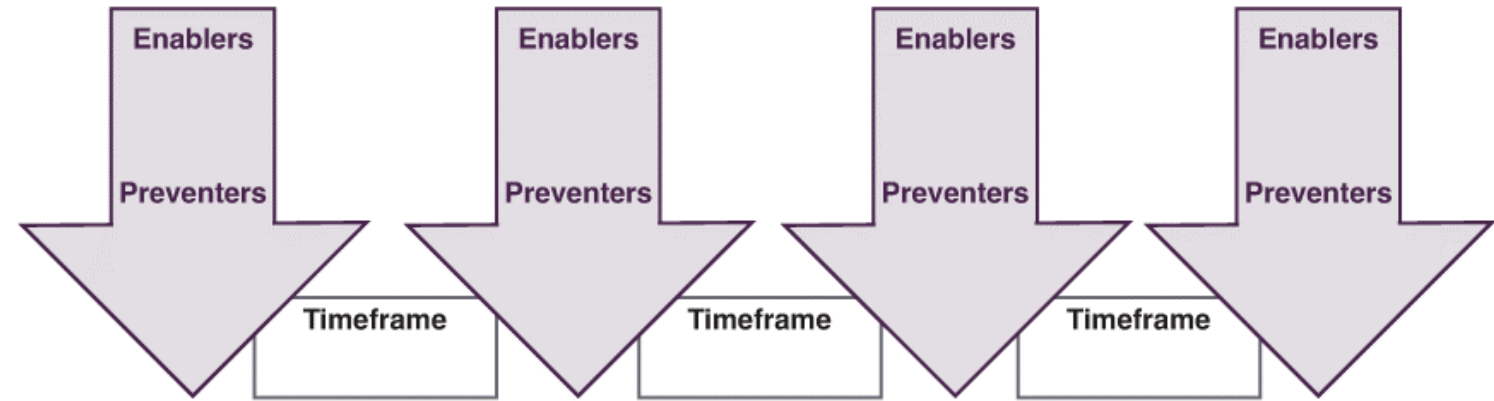
- *Is the terminology/language in the criteria appropriate for your fishing type? (10 mins)*
- *Use the criteria to self-assess your fishery on its performance using sliding scales of high to low to create a map of current environmental performance (30mins)*
- *Add / remove as you see fit (and explain why > feedback)*

PLANS FOR TODAY (2)

Discussion 2: Creating a roadmap for environmental impact reduction in your fishery

- *What are the key impacts/criteria that need to be addressed in your fishery to improve environmental performance? (20 mins) > create a 2nd set of points*
- *What steps would need to be taken to reduce the impact? (20 mins) > map barriers and enablers*
 - *What enablers are there?*
 - *What barriers are there?*

**External
Factors**



CONTEXT

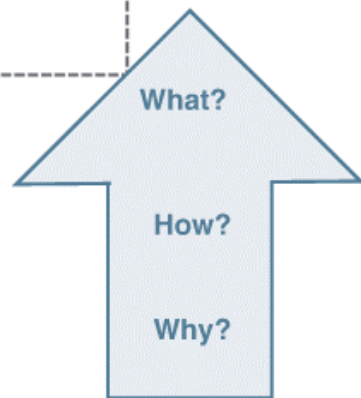
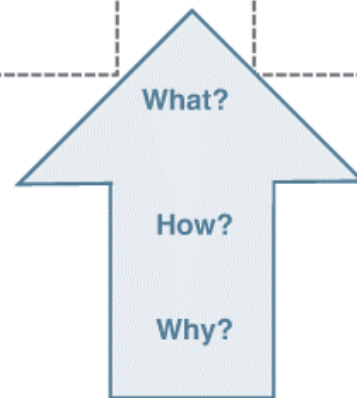
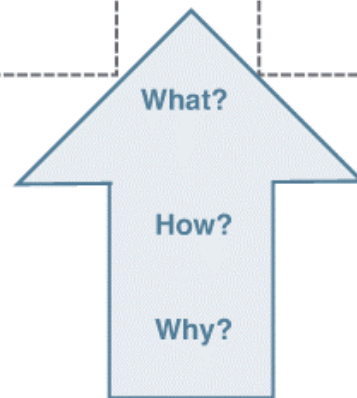
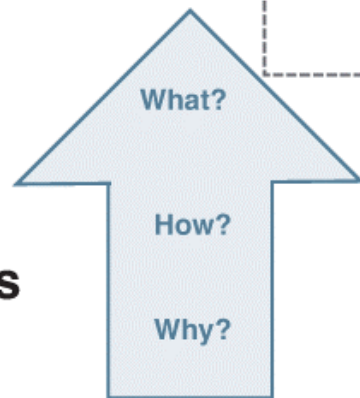
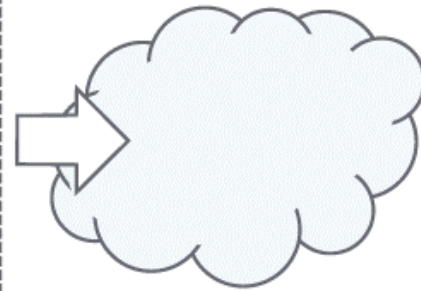


Short-term
outcomes

Medium-term
outcomes

Long-term
outcomes

AIM



Activities

Discussion 3: Reflections on low impact criteria

- FEEDBACK (+FORMS)
AND QUESTIONS
- NEXT STEPS
- SYMPOSIUM (APRIL 24th,
Fishmongers Hall,
LONDON)

Thank you.

Chris Williams, Senior Programme Manager

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Fisheries monitoring

Cefas commercial sampling programmes

Programme	Aim	What data is collected	Owner	Strengths	Main Limitations
Commercial landings and effort data	Census data of fishing activity	Census data – logbooks, sales notes, shellfish returns; VMS monitoring	Control agency MMO		Quality, completeness of the data
On-shore sampling programme	Age/size composition of landings from stock	<ul style="list-style-type: none"> Age, length and sex of landed species 	Cefas	Greater access to the fleet	Only capture landings components of the catches
Off-shore sampling programme	Age/size composition of all removals from stock Overall discard estimates	<ul style="list-style-type: none"> Age, length and sex of Target species Discards amounts By-catch (non-target stocks and PETS) 	Cefas	High quality fisheries data (total catch) Better resolution	Low coverage of the fleets (<1% of effort covered) Programme designed to collect data on commercial species Highly costly

- Commercial landings/effort data – gives you the **target species & biomass removal**
- On-shore sampling – **stock data** (i.e. biomass removal, CPUE),
- Off-shore sampling - **stock data** (i.e. biomass removal, CPUE), bycatch, marine mammals/birds bycatch
- Fisheries independent surveys – **stock data** (i.e. age-size distribution of stock), bycatch, marine litter/pollution, marine mammals/birds bycatch ... mainly for stock assessment, other information are add-ons, i.e. use is limited
- Gearing-up <https://gearingup.eu/> - the **gear trials include some of the impacts** and not others – not routine data collection, but impacts assessed (research question). All gear trials ever done by Cefas/Seafish, research question and outcome.
- **No regular data collection going on benthic impact**, only some trials as well.
- Fish welfare > some data
- Fishery dependent surveys: collect **data on litter**
- **RSA: have the catch data** (i.e. target species)
- > *most of the routine data collection > stock assessment (i.e. for ICES advice)*
- > *Some trials, some small short-term projects or simple add-ons to existing data collection programs > limitations on estimating the environmental impacts based on this data > scattered evidence base.*

MRF UK – data collection



- Participation

*How many anglers are there?
What are their characteristics?
What are their fishing methods?*



- Catch

*What are individual anglers keeping?
What are they releasing?*

- Economic impact (only 2016/17)

What are they spending?