Developing criteria for ‘low impact’ fishing

Chris Williams, Senior Programme Manager
Coastal Futures, January 16th 2020

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Change the rules of the Economy

- Social justice & sustainability
  - ✓ **A new social settlement** (work, pay, debt, housing, health, community-led regen, renters union).
  - ✓ **A Green New Deal** (How to finance a GND, Greening the BoE, community mobilisation vs fracking, just transition, nature restoration, Blue New Deal, EU / UK fisheries).
  - ✓ **Democratise the economy** (local economies, scrap HS2, coop childcare, Vs – deregulation / air pollution, democratising data).
- Every policy is climate policy

1. Introduction to criteria-based allocation of fishing opportunities

2. Overview of NEF work on allocation criteria

3. Concept of *low impact fishing*

4. UK policy overview

5. Defra co-design project

1. Introduction to criteria based allocation of fishing opportunities

- Fishing opportunities: "***a quantified legal entitlement to fish, expressed in terms of catch and/or fishing effort***"
  - i.e. quota, days / hours at sea, spatial access, etc
- EU / UK allocation > ***historic track record (TAC share & FQAs)***
  - Doesn't align with public good– environmental or social impact not considered..
  - Requires objective criteria > 'who gets to fish'.
  - How to approach and operationalise > NEFs fisheries research and advocacy since 2011.

2. Overview of NEF research on allocation criteria (*what we care about*) and indicators (*how we measure it*)

Value Slipping Through the Net: Managing fish stocks for public benefit (Crilly & Esteban, 2011).

- Using CBA, trawls and fixed gill nets compared for cod in the North Sea.
- Compared 5 environmental, social, and economic variables:
  1. private fishing revenues and costs;
  2. employment;
  3. GHG emissions;
  4. discard rates;
  5. subsidies.

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Value Slipping Through the Net: Managing fish stocks for public benefit (Crilly & Esteban, 2011).
https://neweconomics.org/uploads/files/ca653c8f1c06e3d579_5jm6bohab.pdf

that over the 2006–2008 period:

- For every tonne of cod landed, trawlers delivered negative value ranging from -£116 for the smallest trawlers to almost -£2,000 for the largest.
- Gillnets, on the other hand, generated a net +£865 of value.
- Trawlers landed almost 6,000 tonnes of cod, while gillnets landed less than 3 per cent of this – just 163 tonnes.
- The largest trawlers received direct subsidies of £219/tonne of cod landed while gillnets received £38.

The implications are clear: the current quota-allocation system in the UK is privileging a sector of the UK fleet that is costing the British public real value.

Article 17 of the CFP : MS shall "*use transparent and objective criteria including those of an environmental, social and economic nature. The criteria to be used may include, inter alia, the impact of fishing on the environment, the history of compliance, the contribution to the local economy and historic catch levels. Within the fishing opportunities allocated to them, Member States shall endeavour to provide incentives to fishing vessels deploying selective fishing gear or using fishing techniques with reduced environmental impact, such as reduced energy consumption or habitat damage.*"

Small versus large-scale, multi-fleet fisheries: The case for economic, social and environmental access criteria in European fisheries (2013) Crilly and Esteban Marine Policy. Volume 37, January 2013, Pages 20-27
https://www.sciencedirect.com/science/article/pii/S0308597X12000875#aep-abstract-sec-id15

2. Overview of NEF research and work to date on allocation criteria and indicators (continued).

NEF working paper on sea bass (*Dicentrarchus labrax)* and article 17 of the CFP. (Williams & Carpenter, 2015).
https://www.researchgate.net/publication/284430910_NEF_working_paper_on_sea_bass_Dicentrarchus_labrax_and_article_17_of_the_reformed_Common_Fisheries_Policy_CFP

► What could Art 17 look like in practise?

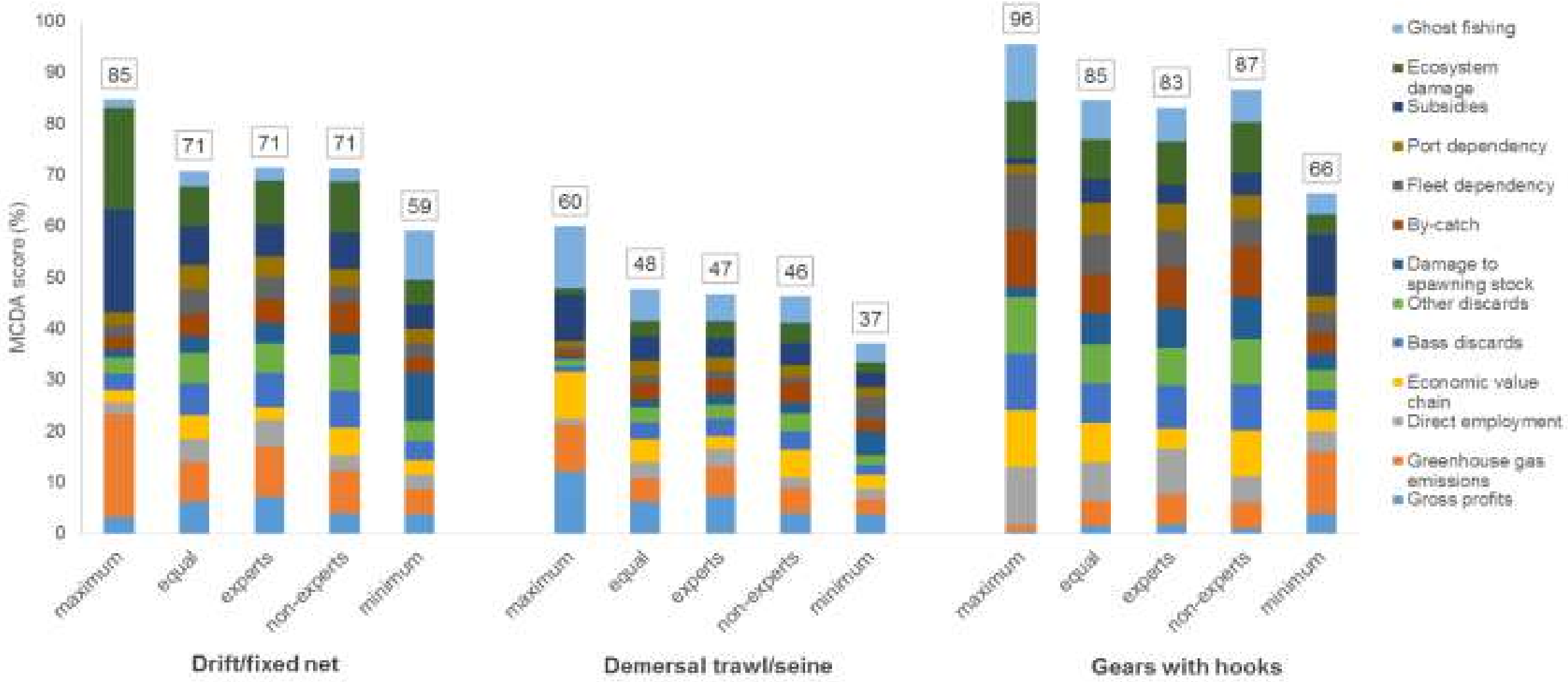
►13 indicators for social, environmental and economic criteria in the EU sea bass fishery.

► MCDA; weightings; expert/non-expert

Criteria	Measure	Drift/fixed nets	Demersal trawl/seine	Gears with hooks
Profits	£/kg of bass landed	4	4	1
Employment	jobs/kg of bass landed	3	2	5
Greenhouse gas emissions	kgs of CO2/kg of bass landed	5	3	3
Subsidies	£/kg of bass landed	5	3	3
Economic value chain	price/kg of bass landed	3	3	5
Bass discards	kgs of bass/kg of bass landed	4	2	5
Other discards	kgs of discards/kg of bass landed	4	2	5
Spawning season mortality	spawning stock damage/kg bass landed	2	1	4
Bycatch	descriptive	3	2	5
Ecosystem damage	descriptive	5	2	5
Ghost fishing	descriptive	2	4	5
Fleet dependency	percentage	3	1	5
Port dependency	percentage	3	2	4
Total		**46**	**31**	**55**

The results of the multi criteria decision making analysis (MCDA), using the gear performance scores and different weighting scenarios, are illustrated below.

Figure 9: MCDA scores by gear from different weighting scenarios



Source: NEF calculations

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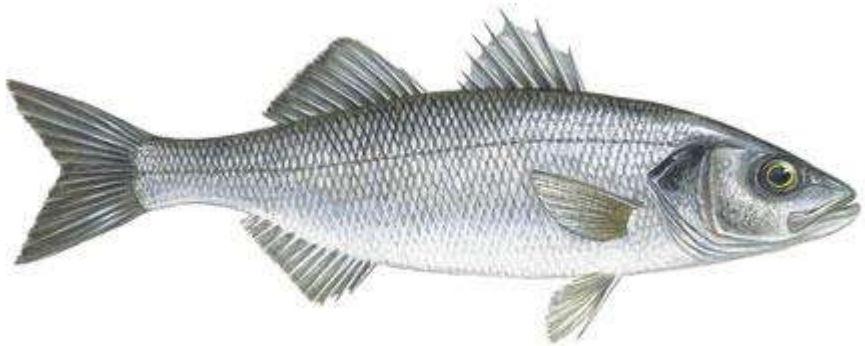

- From 2015: EU Emergency Measures
- Restricted catches by trawls and drift nets
- Rod and line fisheries – higher allocation
- Following a criteria based allocation – *although bass is a non quota species* (selectivity, dependence, bycatch..)

2. Overview of NEF research and work to date on allocation criteria and indicators (continued).

NEF working paper The Scottish Nephrops fishery: Applying social, economic, and environmental criteria. (Williams & Carpenter, 2016)

► Criteria for allocation of fishing opportunities e.g. access to inshore waters in Scotland.

► Aligned with the Scottish government's Strategic Objectives: *wealthier and fairer, smarter, healthier, safer and stronger, and greener.*

► 17 Indicators

► MCDA; weightings; expert/non-expert

https://www.researchgate.net/publication/303523398_NEF_working_paper_The_Scottish_Nephrops_fishery_Applying_social_economic_and_environmental_criteria

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Strategic Objective	Criteria	Indicator	Creelers	Trawlers
Wealthier and fairer	Gross profits	profit/kg of landings	4	3
Wealthier and fairer	Economic value chain	GVA/kg Nephrops landed; GVA/day at sea; price/kg of Neprophs landed	5	3
Wealthier and fairer	Direct employment	jobs/kg landings	5	2
Wealthier and fairer	Ability to change	description of technical ability	5	2
Smarter	Supporting science	description of non-fishing vessel activity	1	3
Smarter/Healthier	Citizen access	description of ecosystem damage	3	1
Healthier	Employment health and wellbeing	average hours worked; average length of contract; proportion full time	3	2
Safer and stronger	Safety	description of safety concerns	2	2
Safer and stronger	Port dependency	percentage of major Nephrops ports supplied by each fleet	4	3
Greener	Nephrops discards	kgs of nephrops per haul	5	3
Greener	Other discards	kgs of discards per haul	5	2
Greener	Damage to spawning stock	description of catch seasons and selectivity	3	3
Greener	Bycatch/ghost fishing	description of bycatch and safety concerns	3	3
Greener	Greenhouse gas emissions	kgs of CO2/kg of landings; kg of CO2/day at sea	3	2
Greener	Ecosystem damage	description of ecosystem damage	4	2
Good governance	Ease of enforcement and compliance	description of monitoring and enforcement issues	2	4
Good governance	Subsidies	subsidies/kg of landings	3	2
Omitted	Fairness	Value generation	N/a	N/a
Omitted	Vessel-level inequality	Ratio of crew wages to profits	N/a	N/a
Omitted	Fleet dependence	kg of nephrops landed/kg of landings	N/a	N/a
Omitted	Historical share	kg of nephrops landed per fleet/total kg of nephrops landed	N/a	N/a
Total			60	42

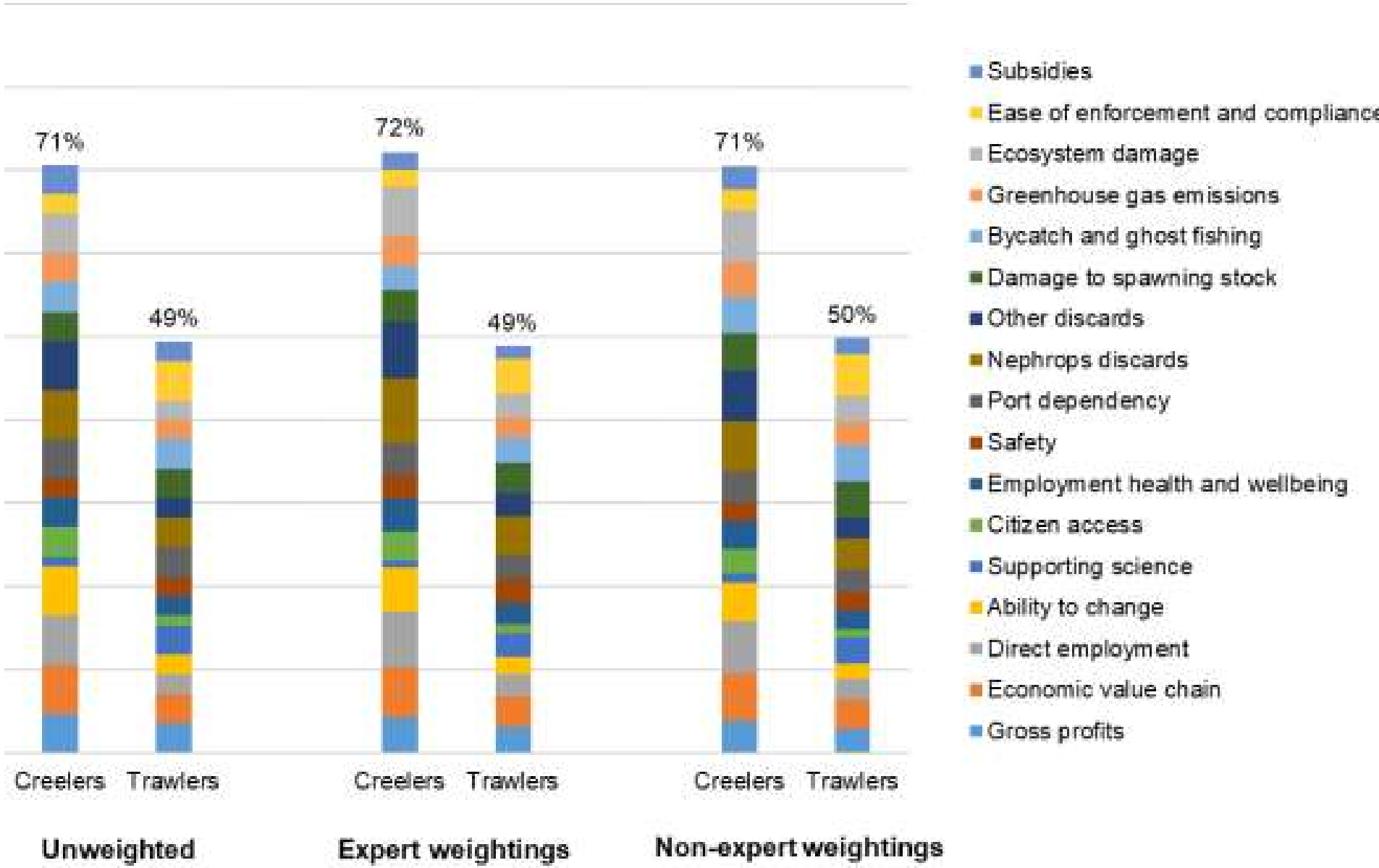

Figure 14: MCDA results using weighted, expert weighted, and non-expert weighted scores

2. Overview of NEF research and work to date on allocation criteria and indicators (*continued*)

Who gets to fish for sea bass? Using social, economic and environmental criteria to determine access to the English sea bass fishery. Marine Policy. Williams, Carpenter, Clark & O' Leary (2018)

https://www.researchgate.net/publication/324075041_Who_gets_to_fish_for_sea_bass_Using_social_economic_and_environmental_criteria_to_determine_access_to_the_English_sea_bass_fishery

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Table 2
Criteria for the allocation of sea bass fishing opportunities under Article 17 of the CFP.

Criteria	Description	Indicator
Profits	Profits are important to generate economic activity while minimising costs and ensure a financially sustainable industry.	£/kg landed weight
Employment	Fishing creates jobs by providing a viable economic opportunity. Often these jobs are created in marginal coastal communities with high unemployment.	jobs/kg landed weight
Greenhouse gas emissions	Fuel use from fishing generates greenhouse gas emissions which contribute to climate change.	kg of CO_2/kg landed weight
Subsidies	The fishing industry receives subsidies in different forms. This masks true performance and deprives governments of funds for other purposes.	£/kg landed weight
Economic value chain	The impact of fishing does not stop when a fish is caught. Economic impacts continue through processing, transport and other secondary industries generating economic activity and employment.	price/kg landed weight
Sea bass discards	Sea bass discards result from undersized fish being caught. Depending on survivability when discarded this can increase fishing mortality.	kg of sea bass/kg of sea bass landed
Other discards	Discards from other species result from undersized or non-commercial fish being caught. Depending on survivability when discarded this can increase fishing mortality.	kg of discards/kg landed weight
Spawning season mortality	Fishing during particular seasons and in particular areas can damage a fish stock when it is reproducing. This leads to lower fish populations than would result from the fishing activity itself.	amount of fishing taking place during spawning season
Bycatch	Bycatch is the unintended capture of marine wildlife such as dolphins, birds, turtles or seals. This can damage or kill the captured wildlife.	Risk Assessment for Sourcing Seafood (RASS) score (1 low risk–5 high risk)
Ecosystem damage	Fishing activity can harm the marine environment and destroy habitats. This can lead to lower populations and a loss of biodiversity.	Risk Assessment for Sourcing Seafood (RASS) score (1 low risk–5 high risk)
Ghost fishing	Ghost fishing occurs when fishing gear is lost in the water. This entangles fish and causes fishing mortality.	Descriptive from literature
Fleet dependency	Some fishing fleets heavily rely on certain types of fishing for their economic activity. Any policy change should ensure limited impacts where dependency is high.	Percentage of total value from sea bass landings (%)
Port dependency	Some ports heavily rely on certain types of fishing for their economic activity. Any policy change should ensure limited impacts where dependency is high.	Percentage of sea bass landings to sea bass-dependent ports (> £10,000 and > 10% of landed value)

3. Concept of *low impact* fishing

Article 4 of the CFP provides a definition of 'low impact fishing': *low impact fishing' means utilising selective fishing techniques which have a low detrimental impact on marine ecosystems or which may result in low fuel emissions, or both;“*

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1380&from=EN

= low *environmental* impact fishing

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lifeplatform.eu

LOW IMPACT FISHERS OF EUROPE

Home | The Platform | Our Mission | Media & Projects | Membership | External contacts | Extras | English (English)

– Welcome to LIFE –

The Low Impact Fishers of Europe is an umbrella organisation run by fishers for fishers.

The aim of LIFE is to provide a clear and coherent voice at EU level for the previously mainly silent majority of European fishers, who are smaller scale and who use low impact fishing gears and methods, but have historically lacked dedicated and effective representation in Brussels and at Member State level.



SEAS AT RISK

Moving Towards Low Impact Fisheries In Europe

Policy Hurdles & Actions

soleofdiscretion.co.uk/pages/manifesto

SOLE of DISCRETION

Ethical • Quality • British

landings from the fisherman, even those that hitherto have been of low value or discarded, matching your demand to the catch, to avoid incentivising discarding, not the catch to the market which incentivises such.

6. Community owned: Our fisherman are paid an agreed price rather than market price and because the trading company is a Community Interest Company that the fishers own, profits go back into their fishing communities.
7. Fair prices: We provide the fishers fish to your plate at a true cost, not at the expense of the sea. Instead of low-impact fishers receiving prices that are governed by the landings of the highly commercial factory vessels, we agree a fair price in advance. This means that even if the price on the market is very low because many fish have been landed, the low impact fishers are still rewarded. We are thereby creating a mechanism to reward good practise and preserve the ecology of the sea.
8. Social: We believe in playing a role in keeping the skills of the inshore small-scale fisher intact, and that by guaranteeing them a fair prices and supporting sustainable fishing practices we are safe-guarding the productive future of our seas. The population of small-scale fishers in the UK

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Countdown 2020 – will the EU deliver its promise of healthy seas and shift to low-impact fishing?

3. Concept of *low impact* fishing (continued)

► Allocation (+ whether low-impact criteria are applied)

- ✓ **always been up to national governments!!**

► Brexit: new fisheries legislation

- ✓ UK government taking this concept seriously

4. UK policy overview (I)

The 25YEP commits to sustainable fisheries and an approach, which prioritises the marine environment: *"Beyond our coastlines, we must do more to protect the seas around us and marine wildlife…We will develop a fishing policy that ensures seas return to health and fish stocks are replenished. We will also extend the marine protected areas around our coasts so that these stretches of environmentally precious maritime heritage have the best possible protection".*

"This 25 Year Environment Plan…calls for an approach to agriculture, forestry, land use and ***fishing that puts the environment first"***

Defra (2018) 25 year environment plan
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

CONTEXT

- The sector

The sector:
Vessels >10ms which are members of POs. Individual POs (23 in the UK) manage the quota for the vessels in their membership.

Photo credit: Billy Rowney
https://www.flickr.com/photos/28121598@N03/9141349735/

- The non-sector

The non-sector:
vessels >10m not fishing against quota allocations managed by POs.

Photo credit: Anna Hall
http://www.flickr.com/photos/35811354@N02/3778724497/

- The inshore fleet

The inshore fleet:
Vessels <10m not fishing against quota allocations managed by POs. More than half of the vessels in the inshore fleet are <8m in length. The inshore fleet employs some 65% of the workforce of the fleet as a whole.

Photo credit: Mooganic
https://www.flickr.com/photos/64588110@N00/12227247015/

http://www.mseproject.net/capture-fisheries/doc_download/MSEP_Series1_3_What%20are%20Producer%20Organisations.pdf

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Does size matter? Assessing the use of vessel length to manage fisheries in England

Peter Davies [a], Chris Williams [b], Griffin Carpenter [b], Bryce D. Stewart [a]

Show more

https://doi.org/10.1016/j.marpol.2018.06.013

Highlights

- Definitions of small-scale coastal fisheries (SSCF) vary widely around the world and within Europe.
- Few of the key stocks for SSCF in England would be considered sustainably managed according to Marine Stewardship Council criteria.
- The majority of landings from the English under-10 m fleet are by 'super-under-10' vessels designed in response to length-based fisheries management.

4. 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)

4. 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 evaluation of the outcomes shows that such approaches are successful with the low impact inshore fleet, consistent with our commitment to sustainable fishing, then we will give careful consideration to further selective 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

4. 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."*

4. UK policy overview (V)

Environmental criteria and indicators for a low impact-fishing standard.

Briefing for Sole of Discretion under the EMFF funded partnership pilot project ENG3055

Chris Williams, February 2019

Developed by the New Economics Foundation (NEF) in partnership with scientists at the Universities of Plymouth and Exeter and fisheries stakeholders (Sole of Discretion, based in Plymouth, the Soil Association and Organico) we have developed a set of environmental criteria and an assessment framework to use as the basis to create an industry standard in

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Defining criteria for low-impact fisheries in the UK

Chris Williams, New Economics Foundation

Introduction

The Fisheries White Paper makes extensive mention of the need to favour low-impact fisheries, but these are not defined and therefore this ambition cannot be met without having objective, transparent and measurable criteria. Without a definition of low-impact fishing[1], the bold statements in the Fisheries White Paper and 25 Year Environment Plan will be hollow and of no consequence for those fishers who use low-impact fishing methods.

5. Defra co-design project

Co-designing the principles for defining low impact fishing

5. Defra co-design project (II)

Tender in August 2019 - Co-designing the principles for defining low impact fishing:

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*."

Department for Environment Food & Rural Affairs

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.**

Department for Environment Food & Rural Affairs

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

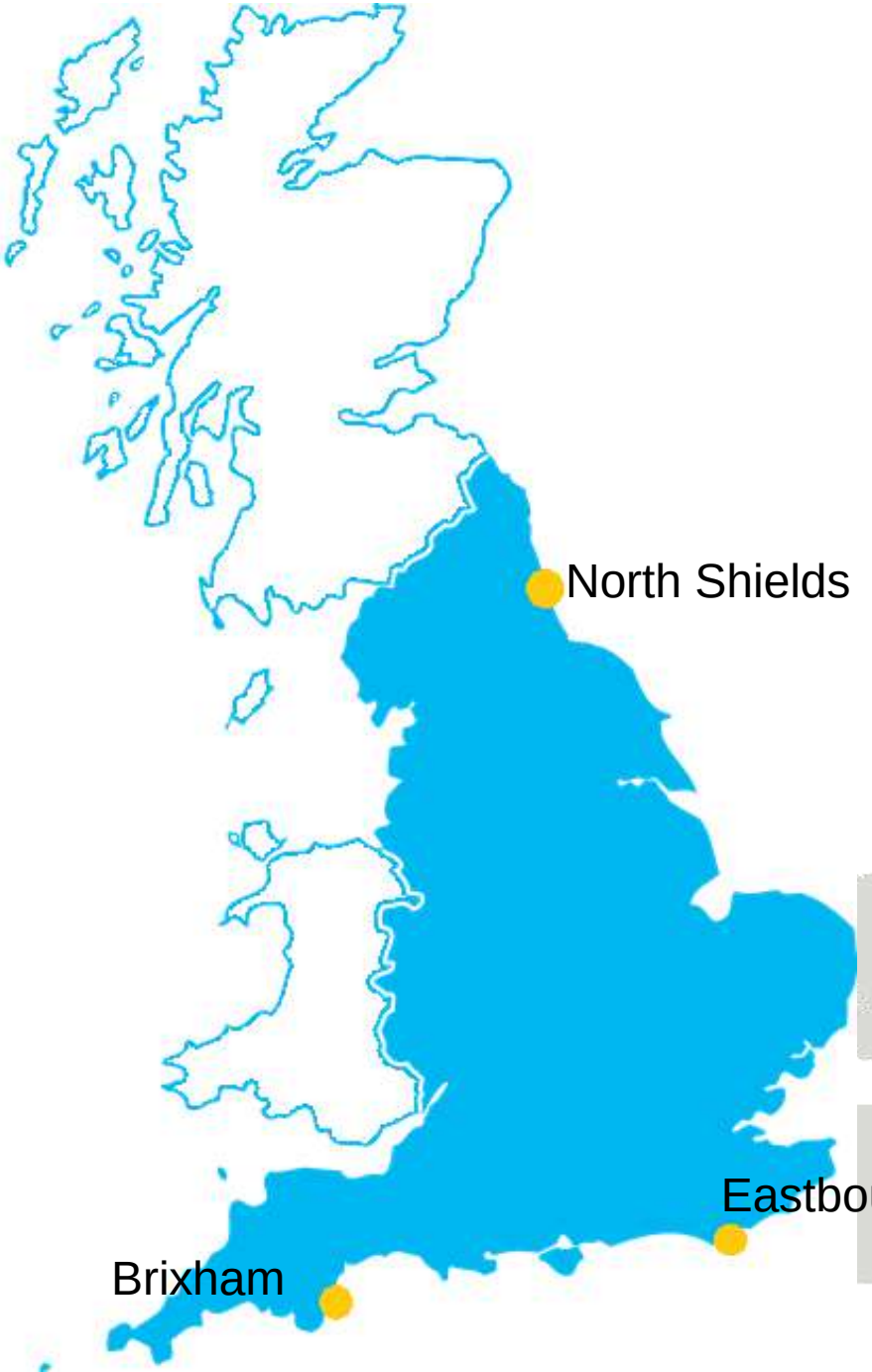
- In these workshops the project contractor (NEF) will seek your direction on the **factors/variables that you think should be considered to define low impact fishing.** NEF will publish a report following these workshops and feedback to Defra.

- 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.**

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

Next steps

- 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



Thank you. Get in touch.

Chris Williams, Senior Programme Manager

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Coastal Futures, January 16th 2020