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06 — 10 Sep 2017 Portugal

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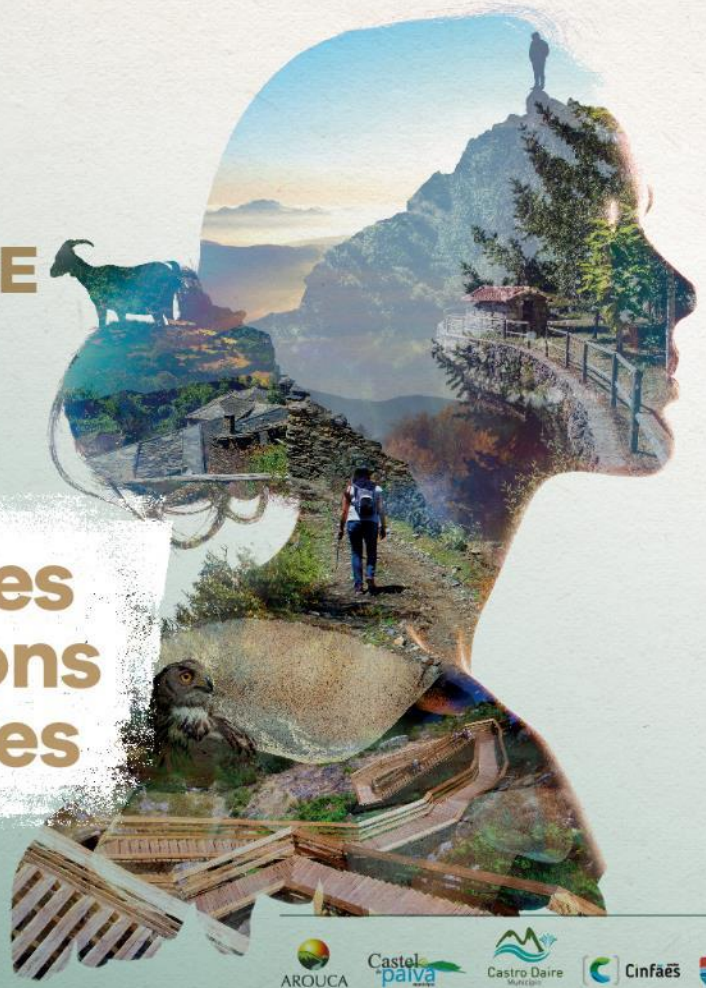

New Voices
New Visions
New Values

for People and Nature in Europe

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New Voices
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for People and Nature in Europe

From ecological meltdown to community-led marine protection;

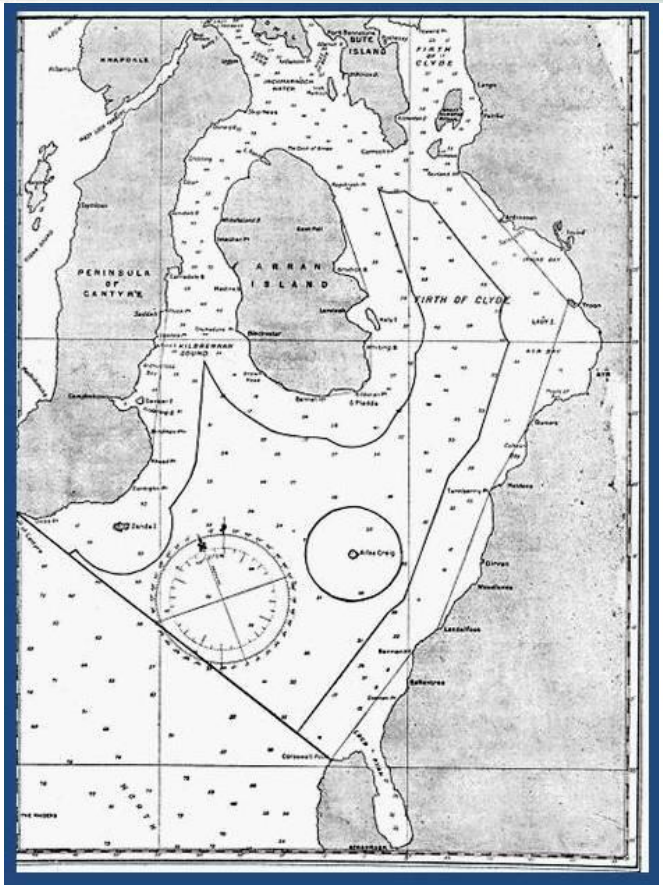
the Community of Arran case study

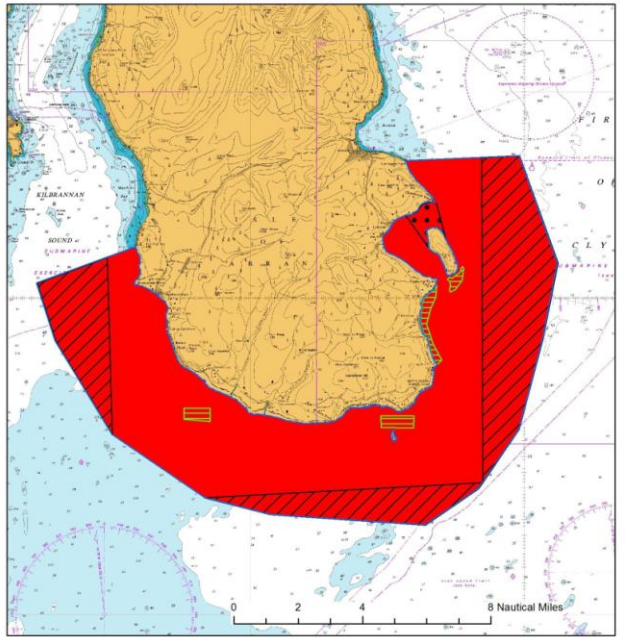
Howard Wood

Chair and Co-Founder of COAST

The Community of Arran Seabed Trust

1. The demise of the Clyde
2. Island community action
3. The hurdles
4. The success
5. Current situation





South Arran MPA

MPA boundary
Lamlash Bay No Take Zone
no static gear
derogated area
management area

Within the red area no suction dredge, mechanical dredge, beam trawl, or demersal trawl (including seine net) is permitted.
By way of derogation demersal trawl will be permitted in the black hatched areas by vessels smaller than 120 gross tonnes.
No static gear (creels, bottom set nets, or long lines) permitted in the green hatched areas.
No fishing of any kind in the Lamlash Bay No Take Zone

Projection: Mercator Datum: WGS 1984 Standard Parallel: 55.5'N Scale 1:175,000

Community of Arran Seabed Trust
COAST
Established 1995

Until 2011 run by volunteers

Now has 3 full time staff and dozens of volunteers

The main issue
Scotland's seas were managed by Government & Commercial fishermen. Coastal communities were excluded from management

In 2009 this paper was published

It led to many more studies
as to the real state of the Clyde.

What divers and sea anglers had been saying for over 20 years was true

Ecological Meltdown in the Firth of Clyde, Scotland: Two Centuries of Change in a Coastal Marine Ecosystem

Ruth H. Thurstan, Callum M. Roberts*

Environment Department, University of York, York, United Kingdom

Abstract

Background: The Firth of Clyde is a large inlet of the sea that extends over 100 km into Scotland's west coast.

Methods: We compiled detailed fisheries landings data for this area and combined them with historical accounts to build a picture of change due to fishing activity over the last 200 years.

Findings: In the early 19th century, prior to the onset of industrial fishing, the Firth of Clyde supported diverse and productive fisheries for species such as herring (*Clupea harengus*, Clupeidae), cod (*Gadus morhua*, Gadidae), haddock (*Melanogrammus aeglefinus*, Gadidae), turbot (*Psetta maxima*, Scophthalmidae) and flounder (*Platichthys flesus*, Pleuronectidae). The 19th century saw increased demand for fish, which encouraged more indiscriminate methods of fishing such as bottom trawling. During the 1880s, fish landings began to decline, and upon the recommendation of local fishers and scientists, the Firth of Clyde was closed to large trawling vessels in 1889. This closure remained in place until 1962 when bottom trawling for Norway lobster (*Nephrops norvegicus*, Nephropidae) was approved in areas more than three nautical miles from the coast. During the 1960s and 1970s, landings of bottomfish increased as trawling intensified. The trawl closure within three nautical miles of the coast was repealed in 1984 under pressure from the industry. Thereafter, bottomfish landings went into terminal decline, with all species collapsing to zero or near zero landings by the early 21st century. Herring fisheries collapsed in the 1970s as more efficient mid-water trawls and fish finders were introduced, while a fishery for mid-water saithe (*Pollachius virens*, Gadidae) underwent a boom and bust shortly after discovery in the late 1960s. The only commercial fisheries that remain today are for *Nephrops* and scallops (*Pecten maximus*, Pectinidae).

Significance: The Firth of Clyde is a marine ecosystem nearing the endpoint of overfishing, a time when no species remain that are capable of sustaining commercial catches. The evidence suggests that trawl closures helped maintain productive fisheries through the mid-20th century, and their reopening precipitated collapse of bottomfish stocks. We argue that continued intensive bottom trawling for *Nephrops* with fine mesh nets will prevent the recovery of other species. This once diverse and highly productive environment will only be restored if trawl closures or other protected areas are re-introduced. The Firth of Clyde represents at a small scale a process that is occurring ocean-wide today, and its experience serves as a warning to others.

Citation: Thurstan RH, Roberts CM (2010) Ecological Meltdown in the Firth of Clyde, Scotland: Two Centuries of Change in a Coastal Marine Ecosystem. PLoS ONE 5(7): e11767. doi:10.1371/journal.pone.0011767

Editor: Richard Kazimierz Frank Unsworth, Northern Fisheries Centre, Australia

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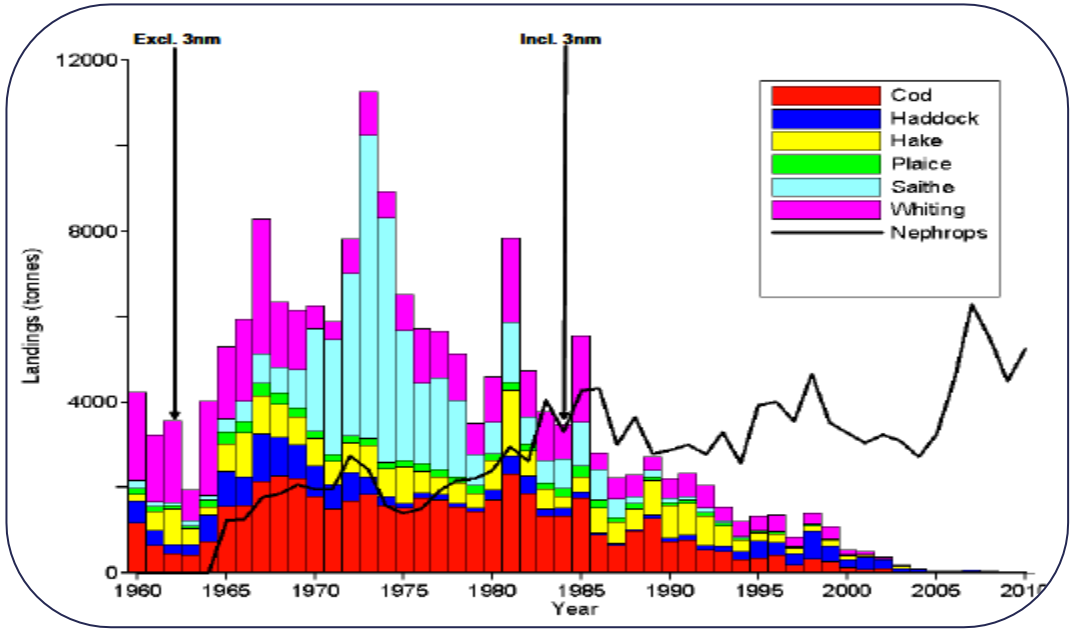
Competing Interests: The authors have declared that no competing interests exist.

* E-mail: cr10@york.ac.uk

THE CLYDE IS NOW A FISHERY OF LAST RESORT



The landings of the principle demersal fish, and of Nephrops , from the Clyde since 1960

- **Reduction in diversity and abundance** of catch

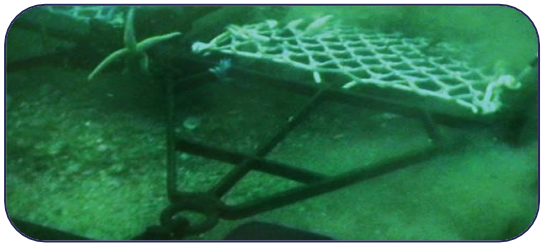
Commercial catches of **fin fish ceased in 2003**

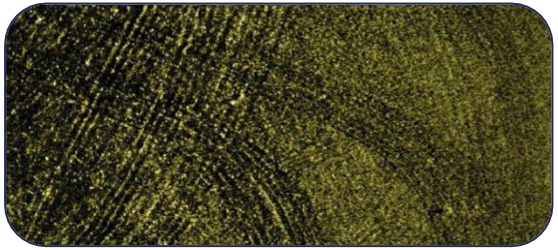
***Nephrops* and scallop**, at the bottom of the food chain account for over **99% of commercial catch** in the Clyde today

The **removal of the 3 nautical mile exclusion zone to trawling** coincides with the **decline in landings**





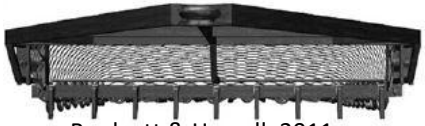




THE EMERGENCE OF BOTTOM TOWED MOBILE GEAR

Key facts on bottom trawling and dredging

- They are **dragged across the seabed** by a boat.
- They are very **indiscriminate**; not only do they catch target species but damage non-target species and sea floor habitats.
- *Dredgers have teeth on springs which penetrate into the seabed to take scallops out of the sediment and are* ***considered the most destructive fishing method worldwide.***



Boulcott & Howell, 2011

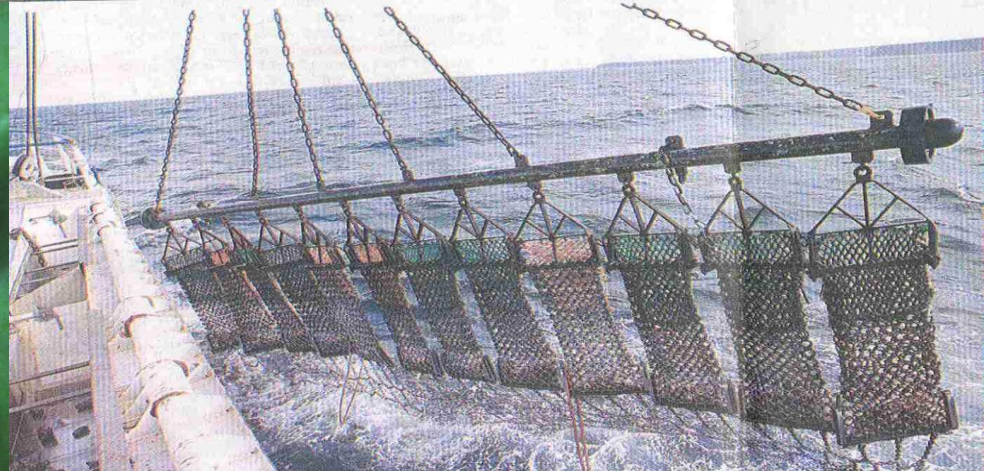
Trawling began

Newhaven spring tined Dredging began

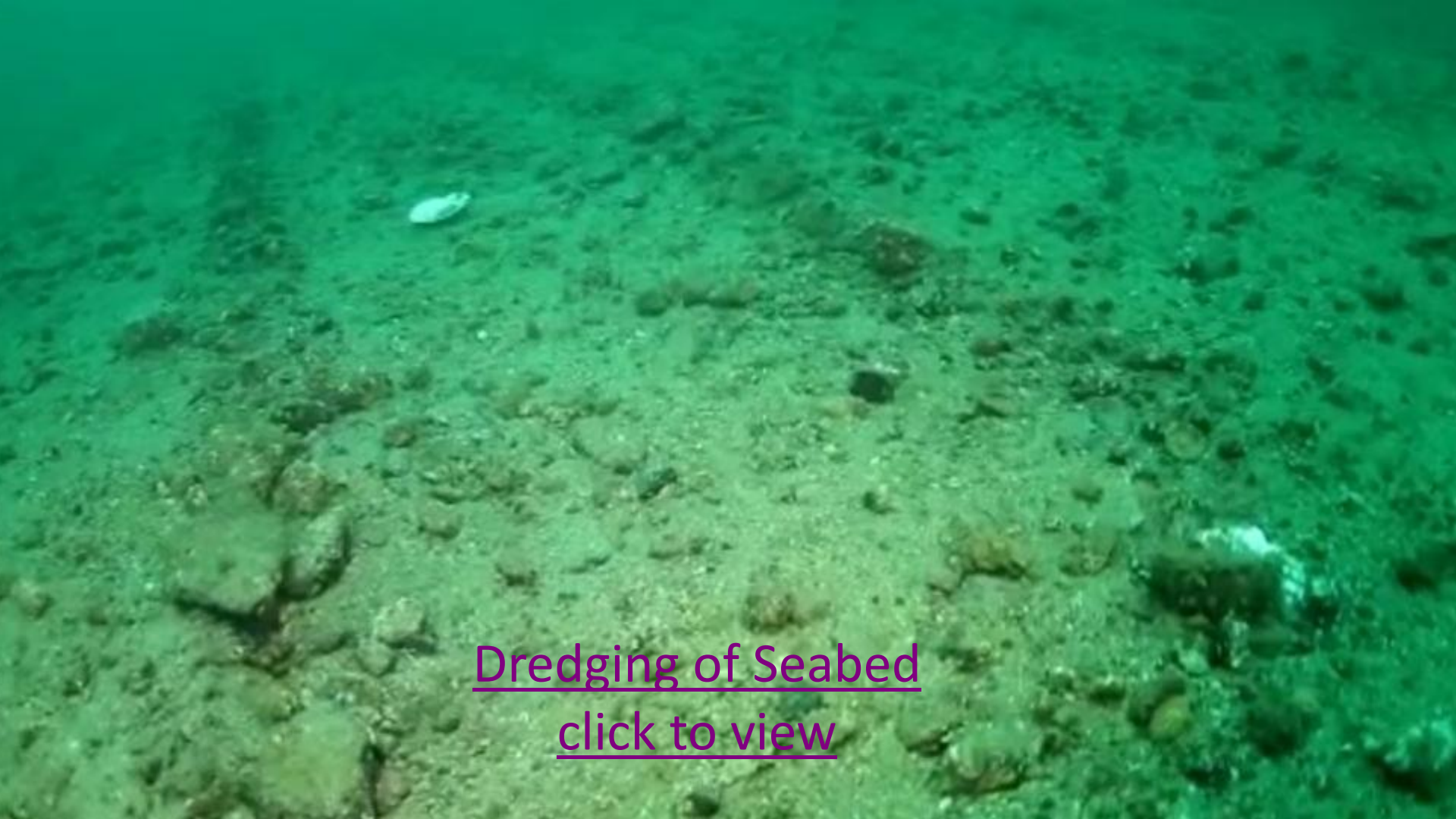
1889
Designated a complete ban on the trawling in the Clyde.

1962
Otter trawling became allowed within the Clyde up to the 3 nautical mile limit. This regulation was altered in 1968, allowing year round otter trawling in the Clyde.

1984
All restrictions inshore for trawling have been removed.



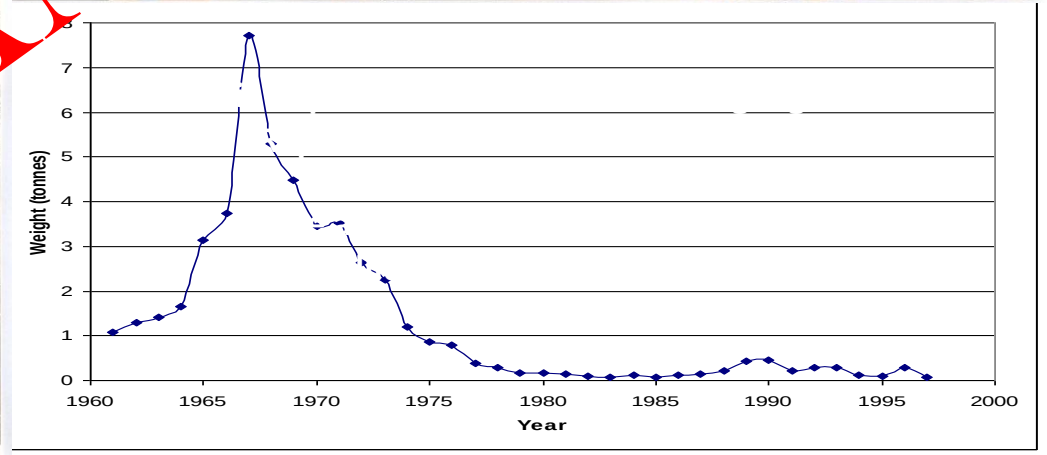
The many issues surrounding the controversial activity of scallop dredging


Dredging of Seabed
click to view

2009 Government report: Sea Angling was worth over **£9 million** to Clyde economy

CLYDE SEA ANGLING FESTIVALS

ALL CANCELLED



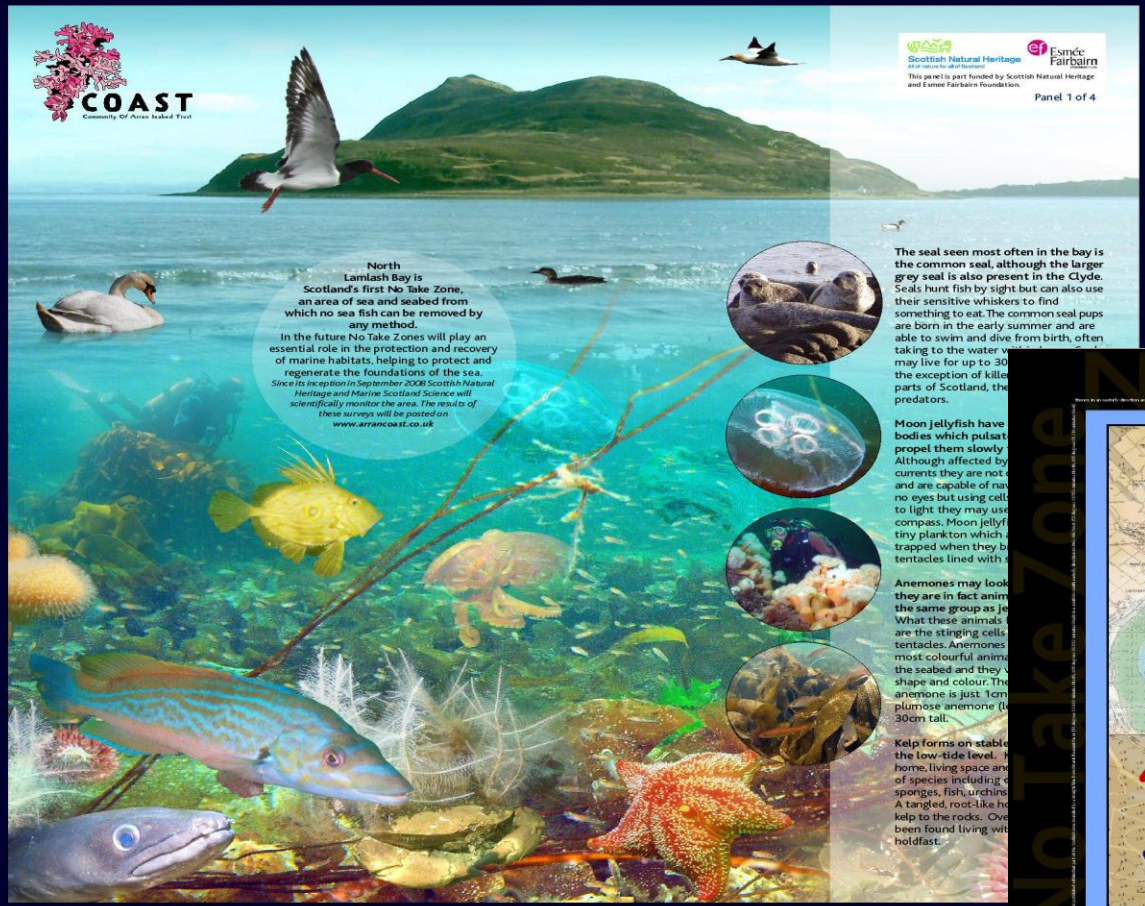

COAST HAD TO CHALLENGE
THE STATUS QUO

COMMUNITY ENGAGEMENT AND EDUCATION

In 2004 after a decade of procrastination, COAST appeal directly to the new Scottish Parliament

Lamlash Bay *Community* Marine Conservation Area

Conservation of the sea and seabed, restoring habitats and species



Underwater forests and M

A hidden world with thousands of magical plants and cr

No Take Zone

COLLABORATIVE RESEARCH AND MONITORING

York University NTZ research

INSIDE THE NO TAKE ZONE…

Scallops (2015)

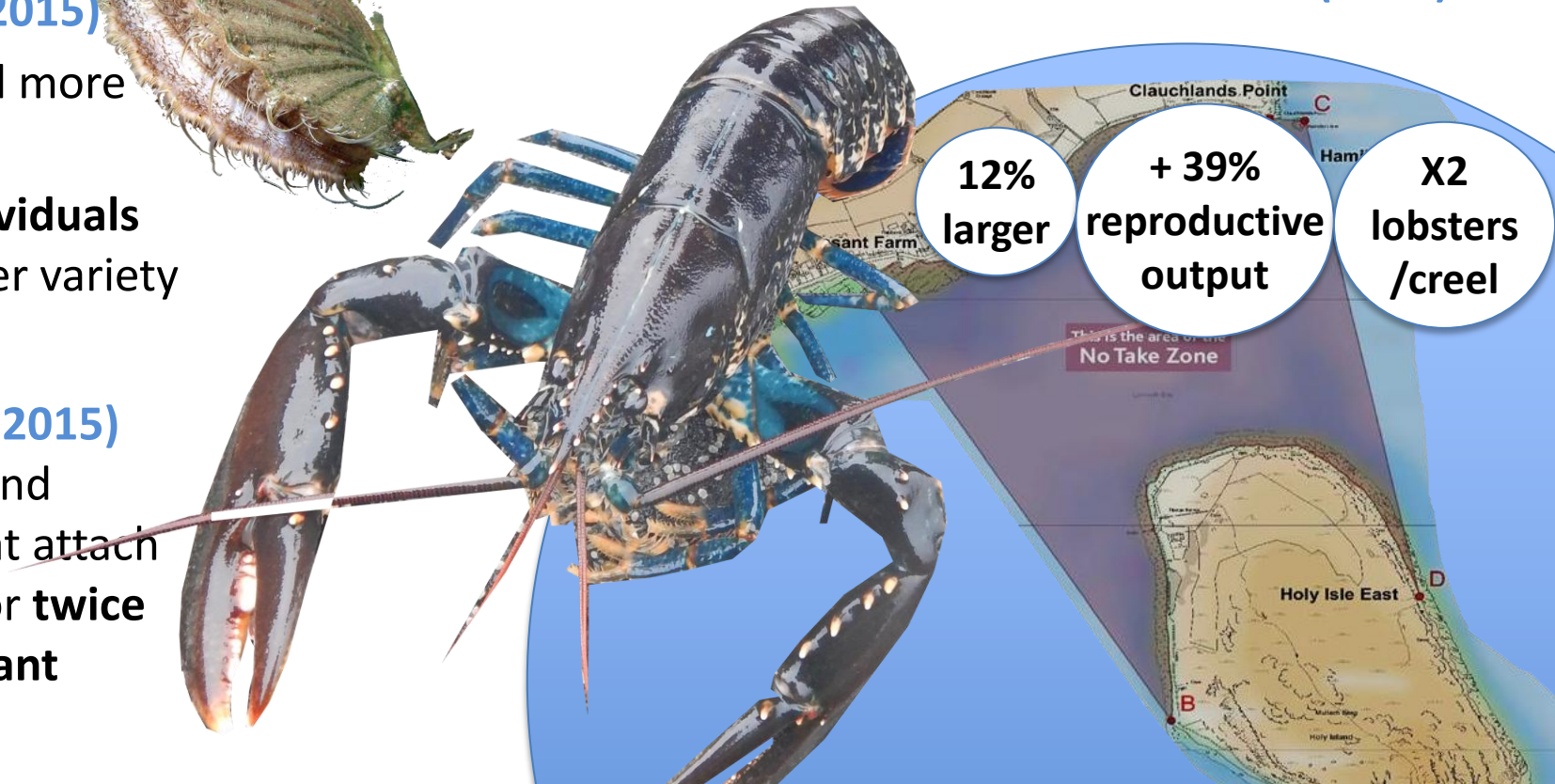
Larger and more plentiful

More individuals and a wider variety of species

Seafloor (2015)

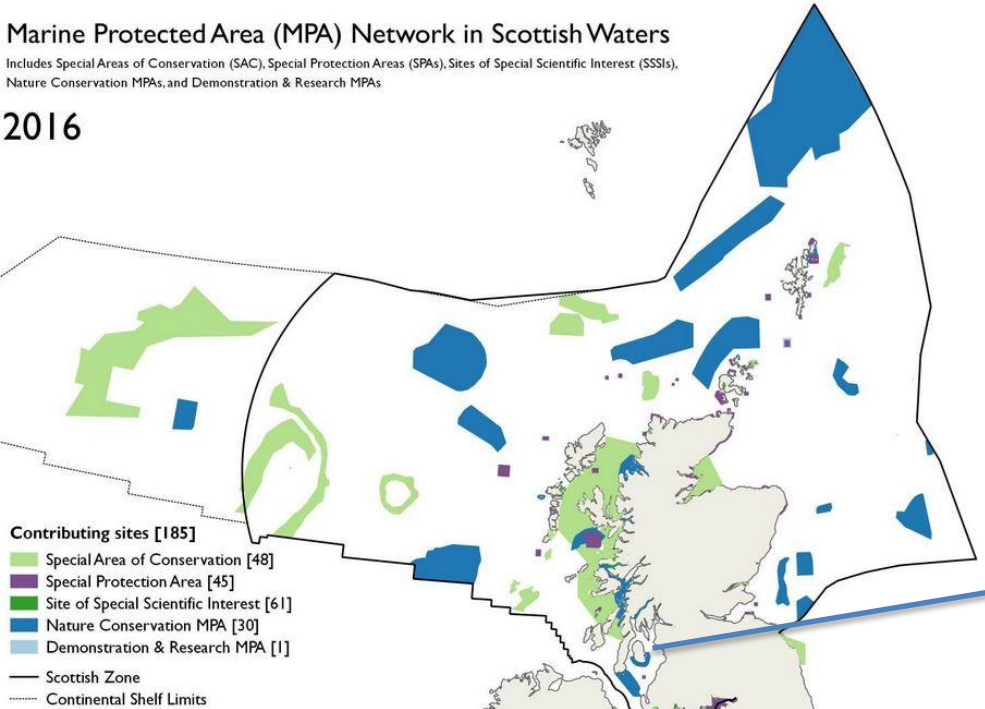
Animals and plants that attach to seafloor **twice as abundant**

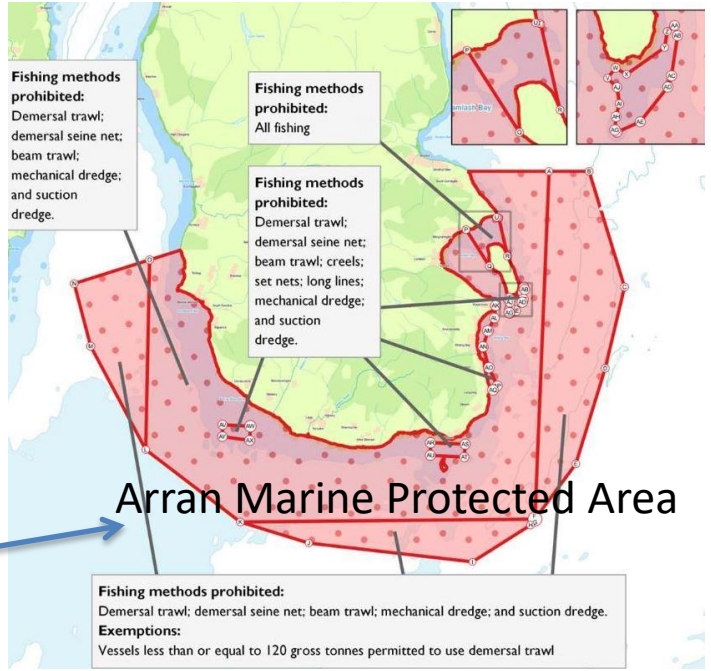
Lobsters (2017)



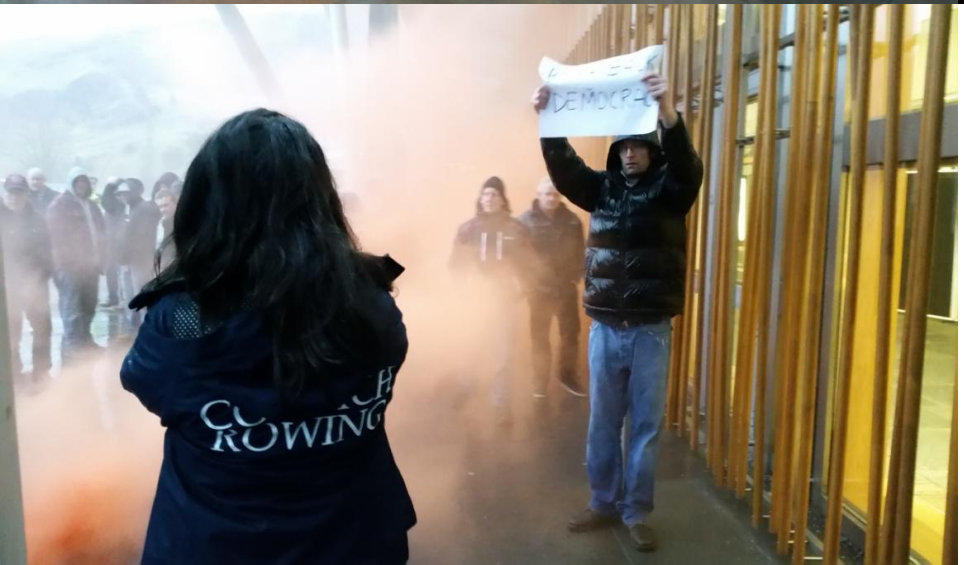
Scottish MPA network = 20% of our seas

Real protection from damaging activity is **patchy**





Arran Marine Protected Area



27th January 2016
Dredge & Trawl Fishermen clash with COAST outside Scottish Parliament.

COAST's experience

- Must be a **real desire and rationale** to campaign for change
- Strength is in **community roots -** broad based and inclusive
- **Single objective/ clear agenda**
- **Tenacity and resilience** over the long-term
- Requires **political awareness** and campaigning zeal
- **Government will only implement progressive change with strong support from local communities**

2017 Current governance in the Clyde Scotland

Scottish Government
Riaghaltas na h-Alba
gov.scot

Regional Inshore Fisheries Groups (RIFGs)

Scottish Inshore fisheries management Groups still comprise only Commercial Fishermans representatives (Lack balance)

Clyde Marine Planning Partnership

COAST have now been allowed membership of the newly Established CMPP


Lamlash Bay NTZ
2017 Underwater
Footage click here

Bottom-up approach

Creation of the Lamlash Bay NoTakeZone

- COAST is a grassroots community initiative.
- Observed deterioration of the marine environment inspired its creation.
- Campaign for NTZ long and hard fight (1995 – 2008), resisted by mobile fishing sector and government.
- Strong community support on Arran and around Scotland won the day.
- First NTZ (2.67sq km) in Scotland declared in 2008.

- Meant we were well prepared for the campaign for effective MPAs between 2012 to 2016

COASTs success is now being emulated by 6 other Scottish Coastal communities

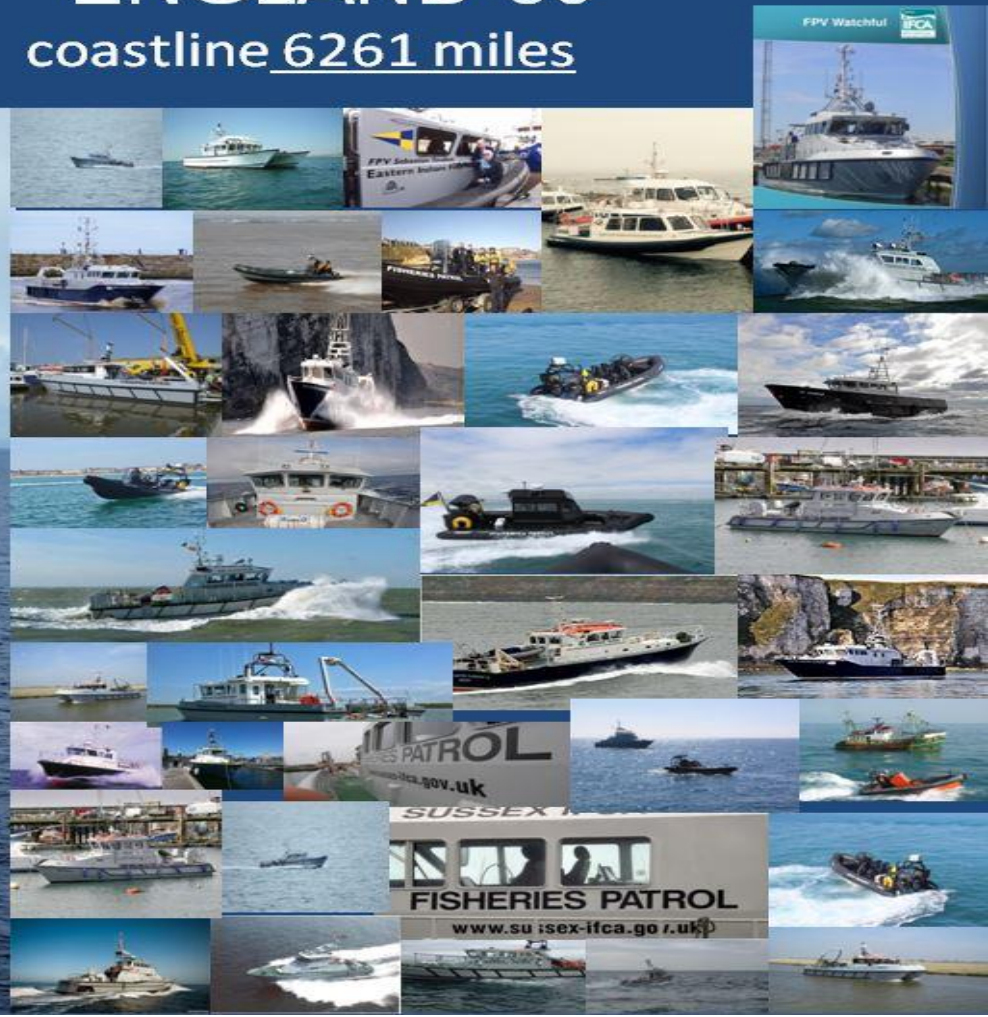
SCOTLAND 1

coastline 11,550 miles

2014 statistics Dedicated inshore patrol boats

ENGLAND 39

coastline 6261 miles



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Thank you!

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