

Fishermen recording marine invasive species

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<http://wfa-cpc.wales/>

The national voice of Welsh fishermen

Introduction

- The Welsh Fishermen's Association
- Invasive non-native marine species (INNS) recording project
- Future role for fisher's recording marine data

INNS project – why?

- Threat to biodiversity and commercial fisheries



- Legislation and government policy
- Demonstrate fishers' capability

INNS project – species

Eleven INNS were chosen for the trial:

American lobster (*Homarus americanus*)

American oyster drill (*Urosalpinx cinerea*)

American jack knife clam (*Ensis directus*)

Mantis shrimp (*Rissoides desmaresti*)

Pacific oyster (*Crassostrea gigas*)

Mediterranean mussel (*Mytilus galloprovincialis*)

Slipper limpet (*Crepidula fornicata*)

Chinese mitten crab (*Eriocheir sinensis*)

Kuruma prawn (*Penaeus japonicus*)

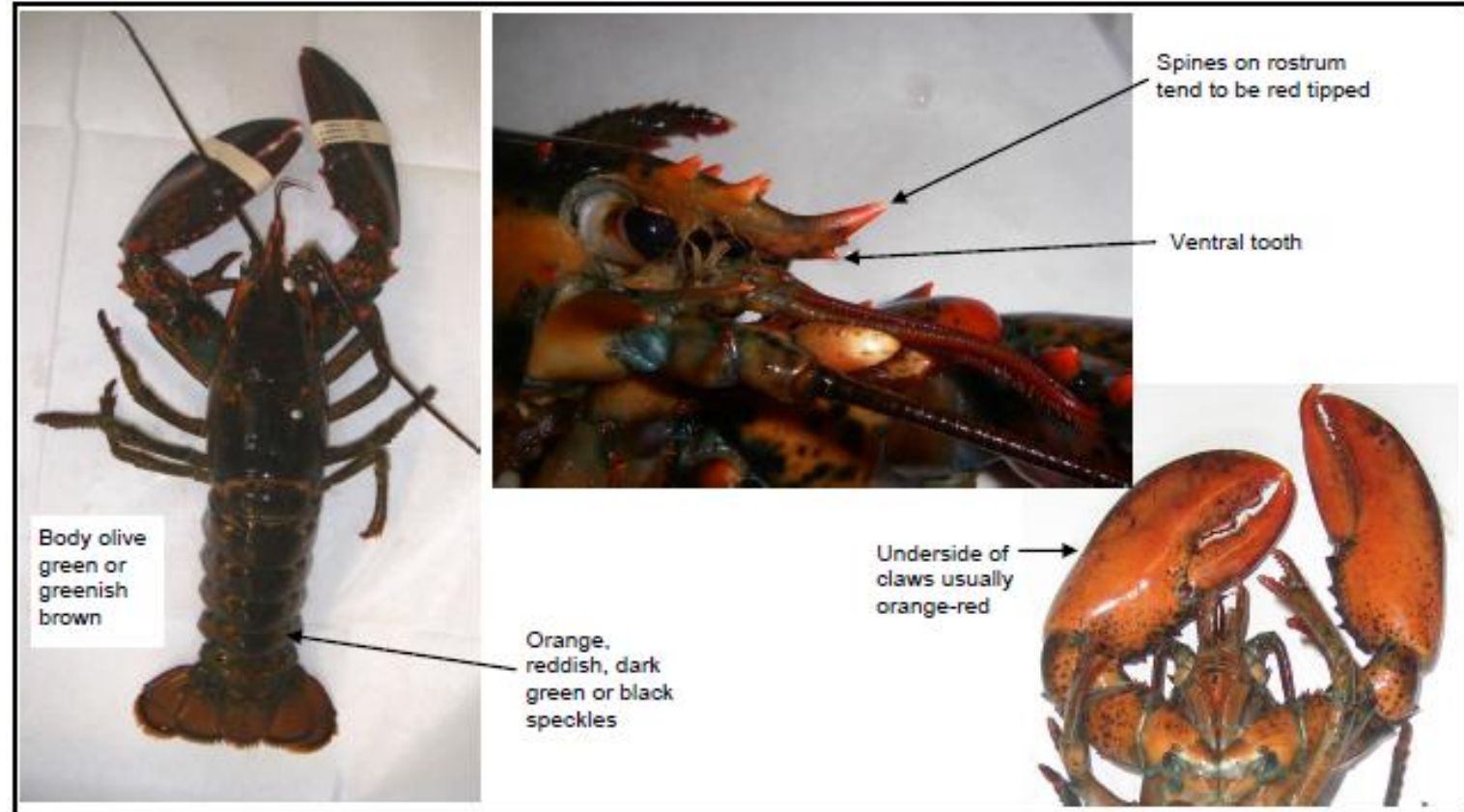
Wakame (*Undaria pinnatifida*)

Wireweed (*Sargassum muticum*)

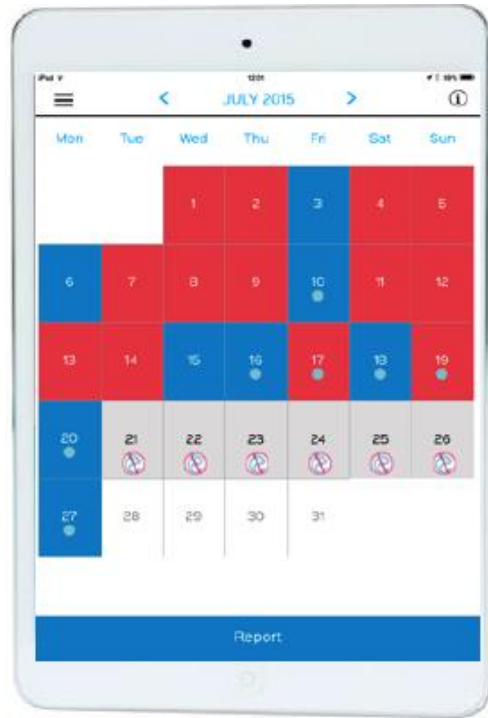
INNS project – spp identification

Identification sheets

Fact sheets



INNS project – recording on CatchApp



INNS project – participants



INNS project – location

- Menai Straits
- Pen Llyn
- Cardigan Bay
- Swansea Bay



INNS project – recordings

- Slipper limpets recorded in Oxwich and Swansea Bay and Wireweed in the Menai Straits and Inner Caernarfon Bay.
- Two American lobsters were reported by pot fishermen in new areas; one was caught in an area called 'The Gibleet Shoals' off Pwllheli in August 2016 (verified by NRW) and the other caught off Conwy in November 2017 (verified by a Mermaid Ltd – a local seafood merchant).
- An unverified report of an American jack knife clam was recorded in Caernarfon Bay in November 2017.
- Fishermen also reported past sightings of Chinese mitten crab off Penmaenmawr in 2014 and an American lobster beneath the Great Orme lighthouse around 2006.

INNS project – photo recording



INNS project – feedback

The trial demonstrated fishermen and shellfish farmers were capable of monitoring, identifying and recording both the presence and absence of INNS on an App.

Some fishermen found reporting at sea too difficult (especially when using an iphone) and recorded their data on land.

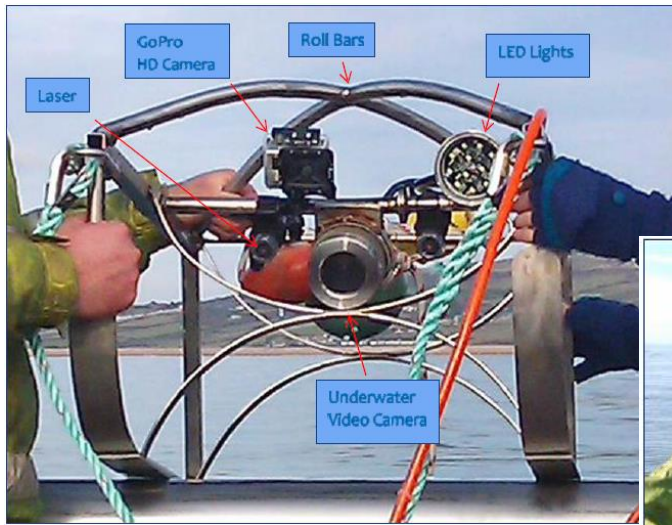
The project generated a lot of support from industry and a willingness to continue monitoring and recording following the end of the trial.

Fishermen recommended expanding the App to record other species of interest (note the App already has this facility).

Fishermen asked whether pictures could be sent via CatchApp

Future role for fisher's recording marine data

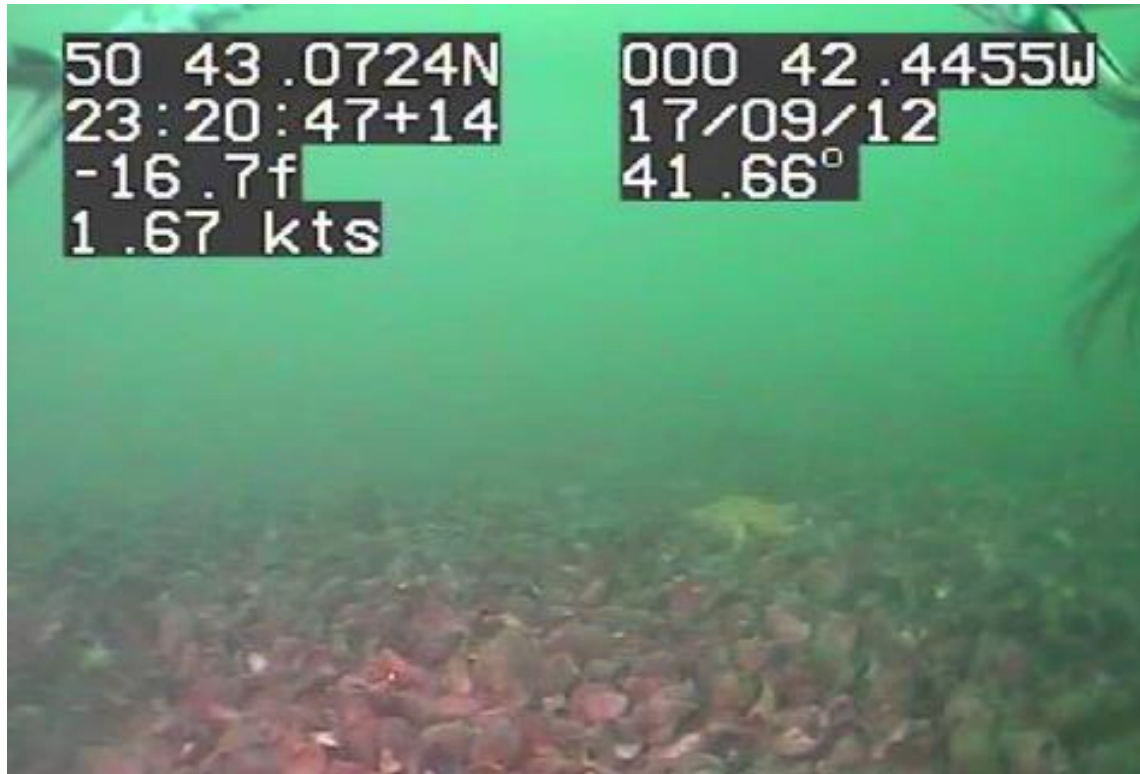
- Integrate fishers into formal INNS monitoring programs.
- Encourage more fishers and shellfish/fish farmers to record INNS on CatchApp (> spatio-temporal coverage, establish sentinel fishermen & aquaculture sites, settlement plates).
- Broaden monitoring to the wider environment (European marine site monitoring, protected species, WFD).
- Greater utilisation of fishers' knowledge, expertise and capability (a public good?).
- Efficient and effective monitoring in collaboration with experts (statutory bodies and research institutes).



Seabed recording systems



Recorded images



WFA-CPC report on the Public Goods that could be delivered by fishers

Environment	(1)	Healthy commercial stocks
	(2)	Healthy marine food chain
	(3)	Biodiversity protection
	(4)	Protection of key habitats and species
	(5)	Environmental monitoring
Food	(6)	Sustainable and healthy food source
	(7)	High public safety standards
Society	(8)	Preserving resilience of coastal communities, traditional skills and culture
	(9)	Utilizing vessels, maritime skills and knowledge for other uses and interests
	(10)	Public safety
	(11)	Enhanced amenity value