

Static gear fisheries

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Lobster: *Homarus gammarus*



Brown Crab: *Cancer pagurus*



Spider crab:
Maja squinado / brachydactyla



Whelk: *Buccinum undatum*



Shrimp: *Palaemon serratus*

Image source: Google images



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Why do we need this science?

SUSTAINABLE FISHING

→ Maintenance of fishing livelihoods for the future

MARINE STRATEGY FRAMEWORK DIRECTIVE

→ Appropriate assessments for Good Environmental Status



KEY OUTCOMES

Baseline data for stock assessment and for the assessment of environmental status



KEY OUTCOMES

Recruitment index



Provides a warning mechanism for years of low recruitment

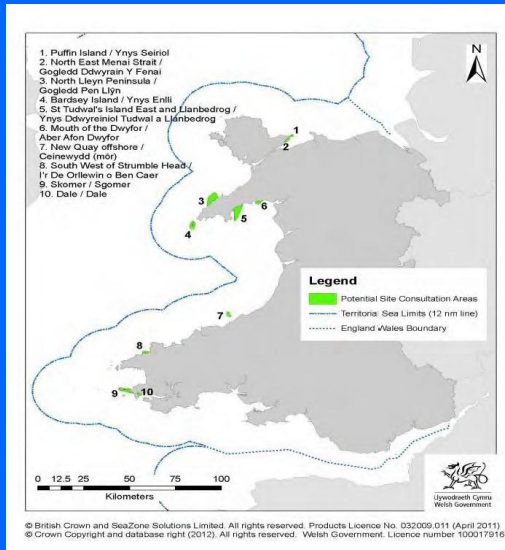


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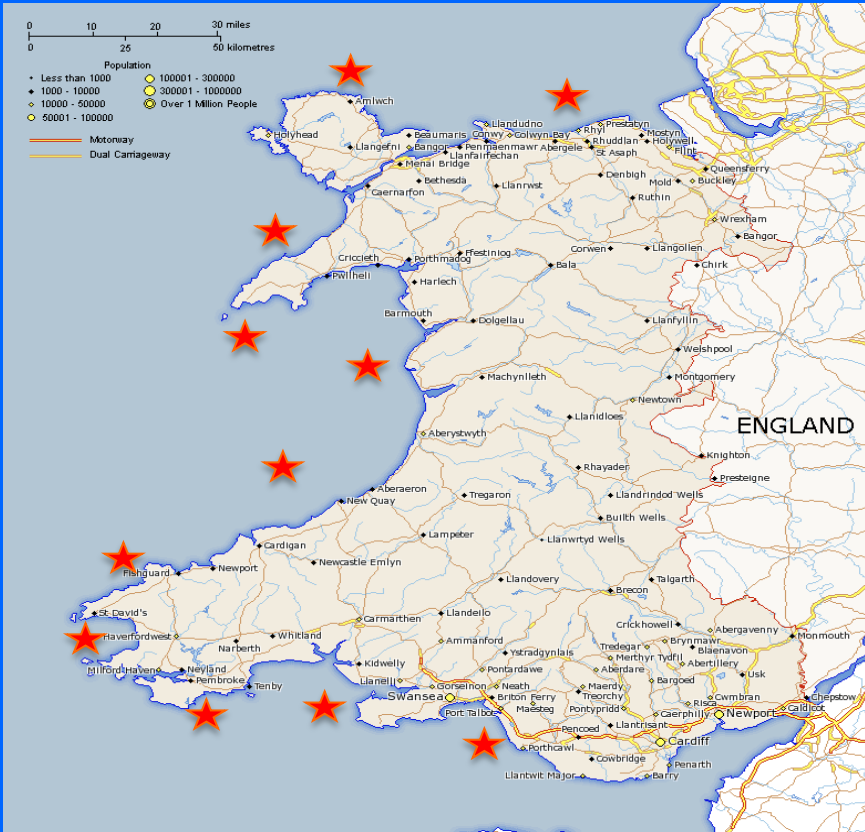
KEY OUTCOMES

Evidence to support management decisions



HOW WILL WE ACHIEVE THIS?

ONLY WITH YOUR HELP!



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On-board camera system

What we want to know:

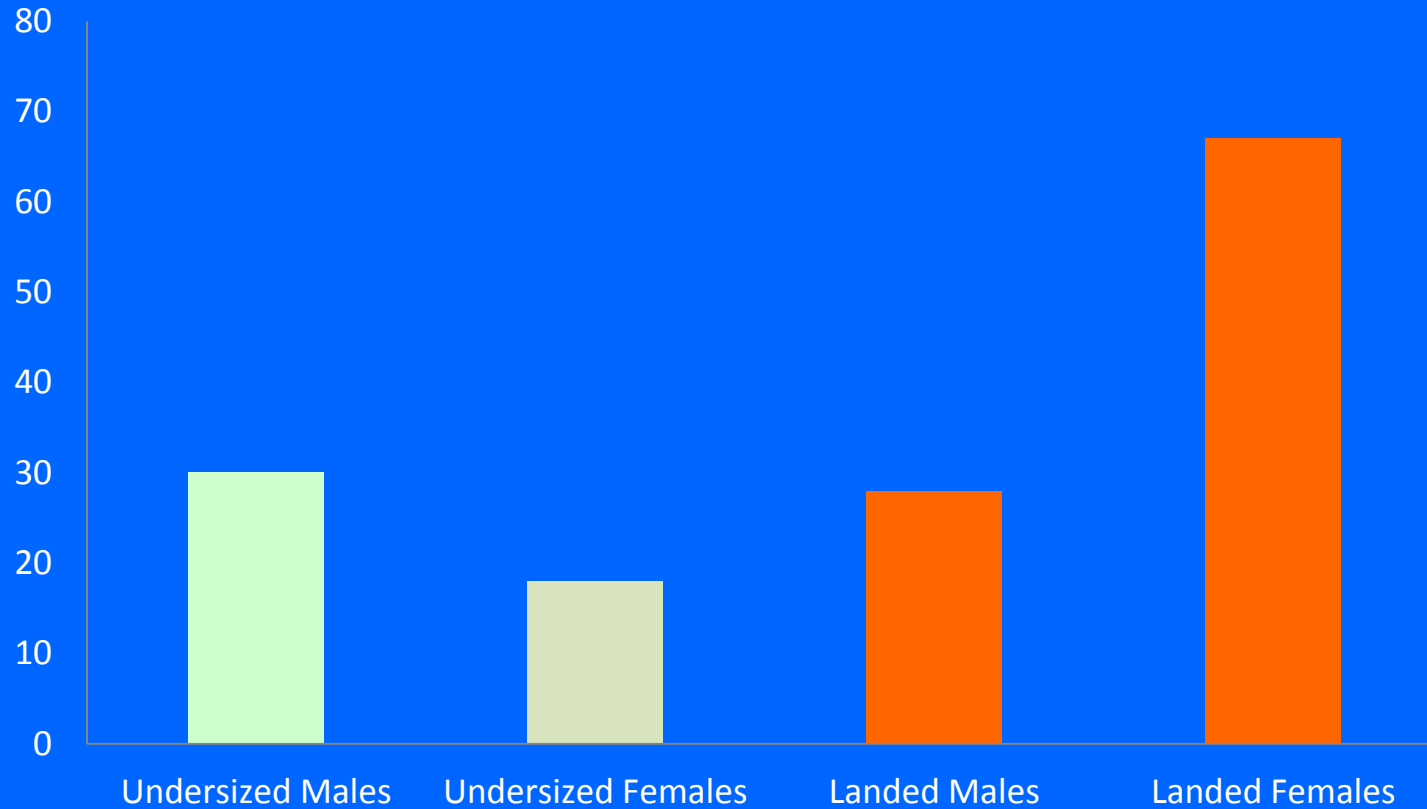
- Catch (landed & discarded)
- Size
- Sex (and berried females)



Use this data to estimate abundance, Size frequency and sex ratio of catch for lobsters and crabs. It will also be used to create an index of recruitment to the fishery for the following year



Brown Crab Catch from 86 pots



70% of landed crabs were female



WHELK FISHERY



- Freeze 50 whelk Once / month (randomly chosen pre-riddled sample)
- For 1 year
- Welsh Government are already collecting from some sites and we will collect samples from alternative areas to ensure coverage across Wales.
- Sex ratio, size at maturity, imposex rates, size structure



PRAWN FISHERY

Does this area fish for prawns?

Are you planning on increasing the prawn fishery?

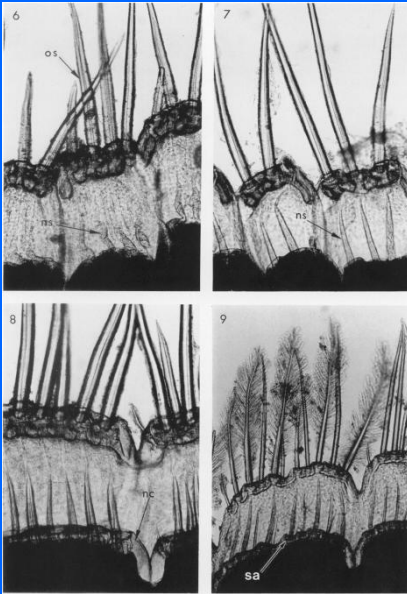


Moulting cycle and growth in the European lobster

Collect non-lethal Pleopod sample.

Use slides and microscopic analysis of lobster pleopods to identify moult stage.

Tagging of lobsters to measure growth increments between moults and to estimate the proportion of individuals that moult twice in a season.



All of this data will be used to create an index of the numbers of undersized lobsters which should recruit to the fishery in a year and two years time.

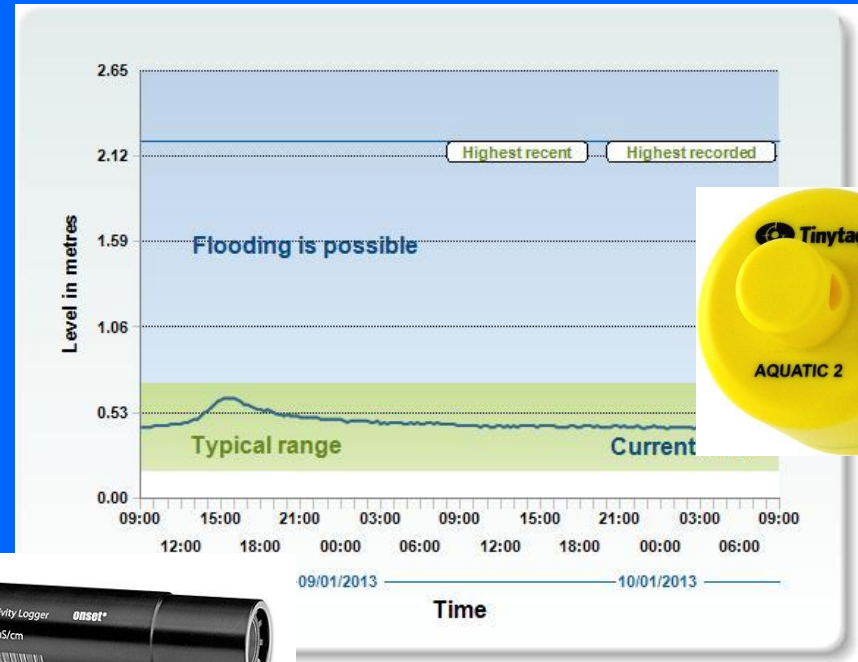


Nursery habitats

Identification of preferred habitat for juvenile crabs and lobsters

Environmental parameters

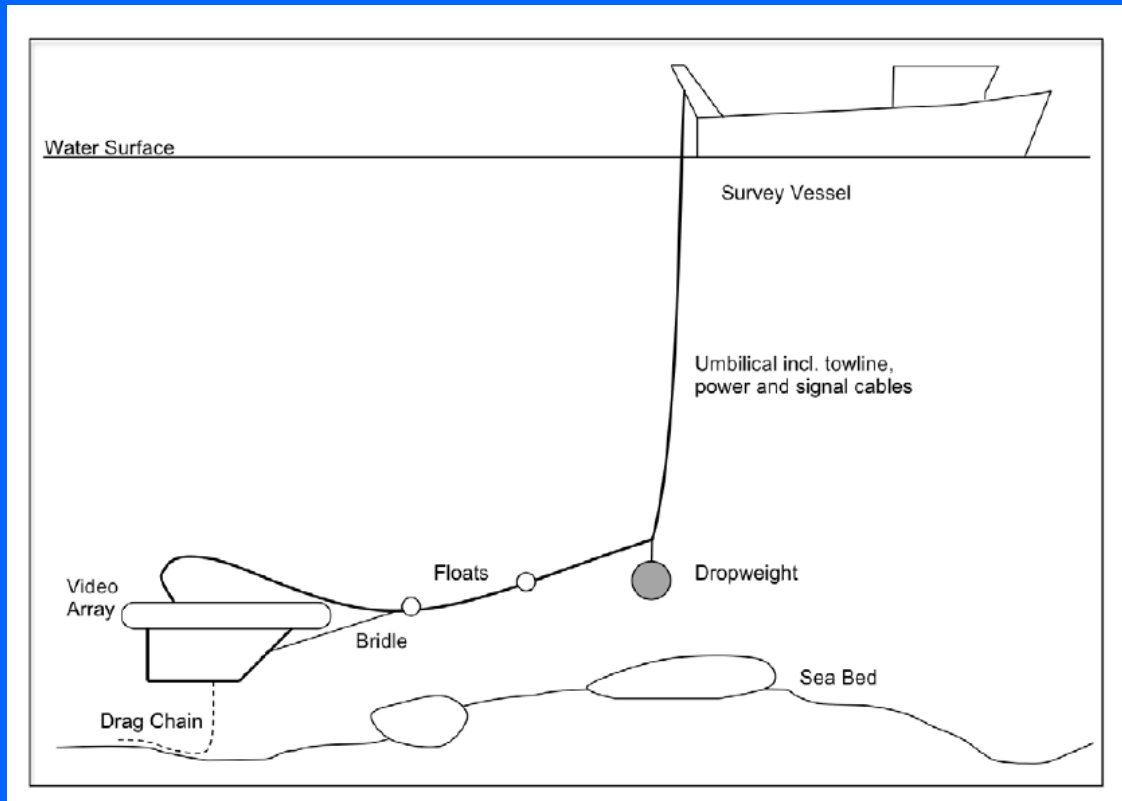
Using prawn pots or specially adapted pots to catch juvenile lobster and crab



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HABITAT SURVEY





Lobster Paternity



- Multiple paternity increases genetics diversity
- Bias in the sex ratio may decrease genetic diversity

GENETIC DIVERSITY PROVIDES RESILIANCE TO CHANGE

Aims

- Does multiple paternity exist for this species?
- What is the sex ratio of reproductively successful individuals?
- Are larger males more reproductively successful than smaller ones?
- Does population density affect the observed reproductive ratios?

Also started collecting berried brown crabs for multiple paternity analysis



Spider Crabs

- Genetic study being undertaken by a team in Spain
- We can send Welsh samples and they will include in their Europe wide study



For other studies we are doing

Website:

<http://fisheries-conservation.bangor.ac.uk/>

Quarterly Newsletter:

- Online
- Register and we'll post or email one to you!



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