Fisheries & Conservation Science

European Fisheries Fund Project

Sustainable Use of Fisheries Resources in Welsh Waters

Fishing intensity trials in Cardigan Bay – 11th December 2012

Y Gronfa Pysgodfeydd Ewropeaidd:
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Investing in Sustainable Fisheries

Llywodraeth Cymru
Welsh Government

PRIFYSGOL
BANGOR
UNIVERSITY

Fishing intensity trials in Cardigan Bay – 11th December 2012

The Cambria, Aberystwyth

Attendees:

Bangor University: Hilmar Hinz, Gwladys Lambert
Welsh Government: Phil Coates, Stuart Evans
Countryside Council for Wales: Kirsten Ramsay (via telephone)
Welsh Fisherman's Association: Jim Evans
Seafish: Holly Whiteley

Summary of main points

Hilmar outlined 4 possible scenarios for the experimental work, A, B, C and D (see attached notes for outline and pros and cons of each approach).

There was an agreement that option C was the best way forward, in terms of achieving short term goals of opening ground, as was as conducting novel science and informing fisheries management in that area.

Option C involves opening a currently closed area within the SAC to controlled fishing, and monitoring impacts on stock, the environment as well as monitoring recovery following cessation of fishing in certain areas.

This approach requires an appropriate assessment of the area to identify any possible features of conservation importance (i.e. cobble reefs, sandbanks) before experimental work can take place. An area west of the current open area was proposed as suitable, due to the high density of seabed video data already available (CCW also confirmed there were no known sandbanks present in the area).

It was agreed that Mark Roberts would complete the seabed video survey of the area, and that the Welsh Government enforcement vessel would be used to conduct a Sidescan survey. A sampling scale of around 1 km between each line/transect was recommended, equating to approximately 5 transects across the whole area. These data were considered sufficient to inform the appropriate assessment. The likelihood of any conflict with dolphins was considered very low due to the area being beyond the 3 nm limit.

Initial ideas for the experimental design and management included:

- Open area is divided into three large areas where fishing intensity is regulated by capping the total number of hours of effort. A different number of total hours in each area would allow a rough division into low, medium and high fishing intensity.
- VMS tracking (using Suckerfish 10 minutes pings) and maybe even the fishermen's track-plot data can be used to create a detailed map of effort to further identify gradients of intensity within each area (fishermen could provide track-plot data as a condition of the 'experimental permit').
- Area is opened on 1st October, one month before the Scallop season.
- A restrictive permit system would be required to manage access and effort in the opened area.

- Following fishing activity certain areas across a range of intensities will be closed for 12-24 months for monitoring environmental impact and recovery.

Discussion

Access and effort control

- What allocation methodology/ranking system will be used to decide who is able to fish in the area, and for how long? Needs to be fair and transparent.
- Will also require a 'precautionary' approach for effort control in the first season. Following this the emerging results of the experiment will inform recommended effort levels in future years.
- An effective restrictive permit system needs to be developed between now and next September.

Timing of the experiment

- In terms of monitoring disturbance and recovery of the seabed community, the time of year of the disturbance is likely to make a difference to results.
- It would be most realistic to do the experiment as close to the usual fishing season as possible to observe realistic fishery impact and recovery.
- Also perhaps more of an incentive for fishermen to take part if experiment runs close to the usual season.
- Should the area be open for whole season or for just a couple of months?
- Should try and mirror real fleet behaviour as closely as possible.
- Typical behaviour of the fleet is to target a small area for short amount of time, fish down then move on once fishing there becomes uneconomical.
- What other Nations/areas fish for scallop in October? There may be other vessels from other geographic areas wanting to participate. Consider this when developing permitting and enforcement system.

Re-closure of areas

- With respect to the size and configuration of closed areas, need to be careful about edge effects and accidently fishing. Will require large enough areas with sufficient buffer zones to minimise un-wanted effects.
- Area requires good enforcement following re-closure. Need to make full use of VMS and geo-fencing on suckerfish interface.
- Following re-closure, areas could be re-opened incrementally in line with monitoring programme timescales, with tight management/effort restrictions in place to maintain condition of fishery. E.g. one area opened after 12 months, another opened after 24 months etc.

Sidescan survey

- Current sampling resolution of other areas is approximately 1-1.5 km between each transect. Each transect has a swath width of 200m.
- One transect over whole area of interest is estimated to take 2 hours.
- If aiming for 1 km sampling resolution, will need 4 or 5 transects to cover whole area.
- Survey to take place in January 2013, using Welsh Government enforcement vessel.
- 2 -3 full days of Sidescan survey required, either in block or spread out over the month.

ACTIONS

Action 1
Get video camera and sled ready and deliver to Mark Roberts in the next two weeks.
– HILMAR HINZ + JIM EVANS

NOTE: Need to let Mark know to communicate to WG when conducting video sled work. I.e. phone Milford office before starting. Work will not require a dispensation.

Action 2
Re-write specification/proposal for experiment and draw up detailed time plan. Circulate ASAP.
– HILMAR HINZ + GWLADYS LAMBERT

Action 3
Check availability of enforcement vessel for Sidescan survey. Welsh Government to get sidescan software, equipment and enforcement vessel set up in time for survey in January.
– PHIL COATES

Action 4
Welsh Government to develop a restrictive permitting scheme. Need to ensure vessel monitoring systems can be used to control effort in experiment areas, and investigate how vessels/fisherman will be selected and involved in the experiment.
– STUART EVANS

Action 5
Introduce and discuss proposed experimental approach at WFA board meeting on Friday 14th and gain industry opinion.
– JIM EVANS + GWLADYS LAMBERT

DRAFT TIMELINE

Activity	**To be completed by**	**Who**
All video and sidescan data for appropriate assessment to be collected and analysed.	Video survey to be completed by end of year. Sidescan survey to be completed by beginning of February	Mark Roberts Bangor University Welsh Government Fisheries Science Unit
Conduct appropriate assessment for experimental area.	End of February/March	Welsh Government CCW
Regulation mechanism using VMS and restricted permitting to be developed.	Start in January Finish by August/September	Welsh Government
Start collecting necessary stock and environmental data before experimental fishery starts. Define areas of different intensity.	Start in May Finish by September	Bangor University
Open area to fishing. Monitor activity.	Open on 1st October Closed when?	Welsh Government

Identify areas for closure and recovery monitoring	Following closure	Bangor University

Fishing intensity trials alternative options

The fishing intensity trials and the decision to open further ground in Cardigan Bay are closely interlinked. The plan to open further ground in the near future will need to be coordinated with the fishing intensity trials so that both short term ambitions and long term goals of the industry can be met.

The intensity trial after creating an initial impact will be monitored for 12 months or longer to determine the length of recovery of benthic communities after disturbance. This will mean that some areas of the seabed need to remain closed after the initial impacts for 12 month or longer i.e. preferably 24 months.

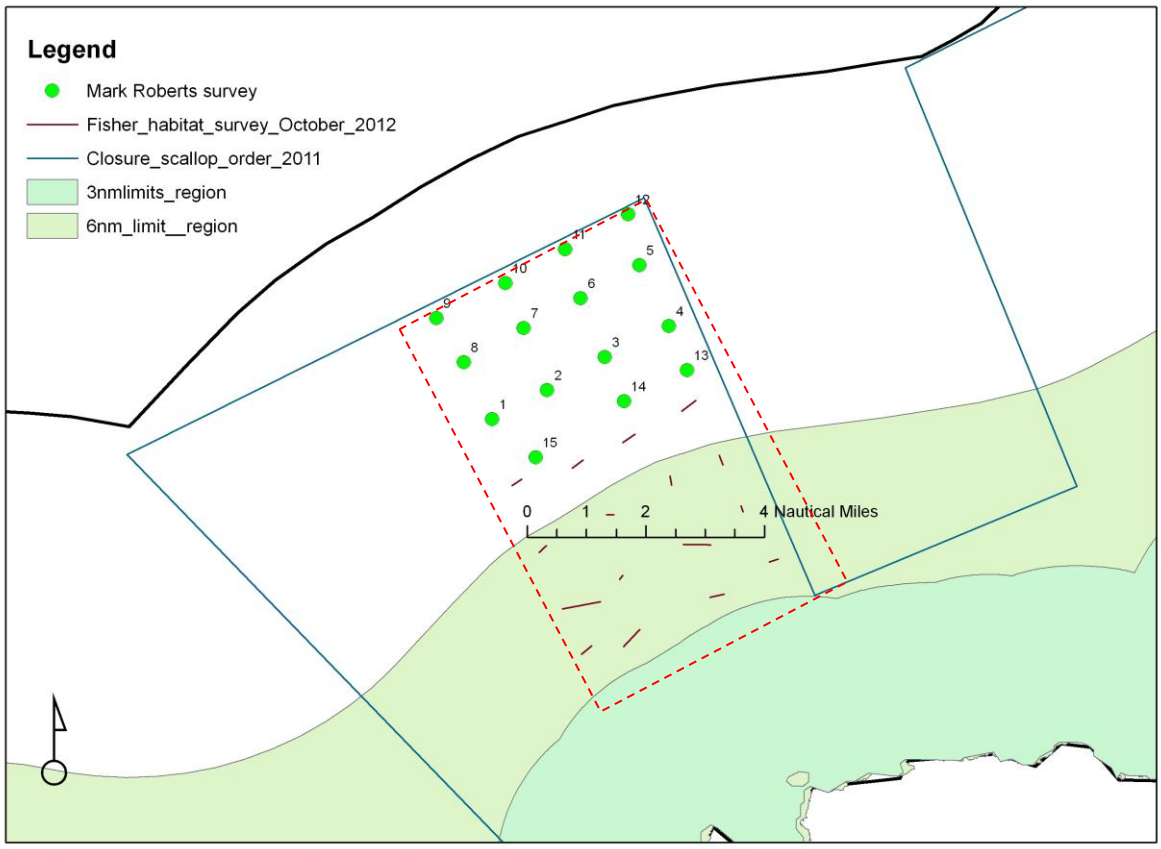
There are several alternative scenarios and we need to identify the one that will work best to achieve short and long term goals:

A) Initial proposal will be followed where small areas are being impacted and the experiment conducted over the whole closed area. There will be no further opening of ground within the area of the experiment for at least 12 months. **Positive**: Easy to control from an enforcement and from an experimental point of view **Negative:** Danger of disengagement from the industry.

B) Like A) but only part of the area will be used for the experiment **Positive**: Easy to control from an enforcement and from an experimental point of view **Negative:** Restrict experiment to a particular area that might not be representative of the whole of Cardigan Bay potentially weakening scientific conclusions.

C) Open parts of the area under experimental conditions (i.e. restrict effort) and let natural fishing occur. This approach would require intensive sampling prior to opening the area. **Positive**: Easy to control from an enforcement and from an experimental point of view. Realistic impacts and fleet behaviour. **Negative:** Restrict experiment to a particular area that might not be representative of the whole of Cardigan Bay potentially weakening scientific conclusions. Range of intensities might be limited and we might not be able to detect significant differences.

D) Like A) but keep experimental sites closed (impacts sites), including buffer even if other areas are being opened at a later date. **Positive**: A lot of control over the experiment and the levels of fishing intensity. **Negative:** More difficult to control from an enforcement point of view. Buffer areas need to be sufficiently large.



Area under discussion for the fishing trial experiment and future survey activity.