

NRW Stony Reef Overview

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NRW would like to.....



- Clarify and refine definitions and thresholds for low stony reef to assist with Annex 1 designation and casework advice
- Refine guidelines on stony reef identification for data analysts (including habitat / biotope assignment and boundary delineation)

Annex 1 reef in Wales

Overview of Annex 1 reef distribution:

- Variety of reef types
- Data sources range from fully ground-truthed acoustic surveys to expert judgement
- Reef polygons classified using a number of attributes including status (definite / potential), confidence (good, fair, poor) and reef type where known
- Reef is a designated feature in 6 of our 7 SACs



Areas of Subtidal Stony Reef in Wales

- Subtidal stony reef present throughout Wales and in most SACs
- Clearly defined in some areas (characteristic easily matched to Irving guidelines)
- Poorly defined in other areas where substrate is <40% cobbles / boulders, or survey data is lacking
- Predominant subtidal reef type in Cardigan Bay SAC is stony; varying levels of certainty of Annex 1 status



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Example:

Assessing Welsh Fishing Activities - reef feature delineation

- Aim: delineate areas of reef / not reef within SACs to inform options to re-open and / or manage scallop fishery
- MBES and sidescan data obtained; ground-truthed with towed video
- Outputs: Video data currently being analysed (WG contract) – expected later this year. Preliminary results from onboard analysis (next slide)
- Issue: delineation and classification of low density stony seabed areas



Example: Greenlink cable route, Pembrokeshire Marine SAC



Greenlink stony reef examples





Low grade reef (average figures)

MEASURE OF 'REEFINESS'	NOT A STONY REEF	LOW	MEDIUM	HIGH
Composition		10-30%	-	-
Elevation	have	0.064 m	87.5	.7.
Extent	()	>25 m ²		



Medium grade reef (average figures)

MEASURE OF 'REEFINESS'	NOT A STONY REEF	LOW	MEDIUM	нісн	
Composition	-		40-95 %	-	
Elevation	-	2-53	0.064 m-2 m	-	
Extent	-		>25 m ²		

Problems encountered by NRW

Survey data and analysis:



- Difficult to determine thresholds for mosaic / reef / sediment from linear video transect
- How should we deal with mosaic habitats (alternating sediment / stony habitat lump or split!? Lumping as "mosaic" is easy; splitting is more time consuming but gives more useful output)
- Irving guidance advises using infaunal vs epifaunal dominance as a reefiness threshold; differing interpretations of what this means
- Are the substratum thresholds valid and appropriate for survey methods and data analysis (e.g. threshold of detection for MBES; extent assessment from video etc.)
- Can we better describe faunal indicators e.g. develop standard species look-up tables (reef / not reef links with data analysis and lumping / splitting for species lists)

Casework advice:

 Irving guidance states strong justification is required for "low reef" areas to qualify as Annex 1 reef habitat; what does strong justification mean? Under what circumstances would you say it is Annex I Reef and therefore consider it during HRA etc?

Desired outcomes



- Guidance translated into practical advice for video analysts and surveyors
- Guidance on dealing with mosaic habitats (for data capture / analysis and spatial representation / GIS)
- Standard look-up tables for reef / not reef species (species traits)
- Clarification on what constitutes "strong justification" for low reef areas to be classified as Annex 1 habitat
- Mechanism for ensuring consistency between agencies on stony reef classification and casework advice