



Research Vessel *Corystes*

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Fisheries and Aquatic Ecosystems Branch

Agri-Food and Biosciences Institute

Created on 1st April 2006 as a non-departmental public body

Provides essential scientific support to the Department of Agriculture, Environment and Rural Affairs (DAERA) and the agri-food industry

Analytical, diagnostic, R&D, statutory, advice

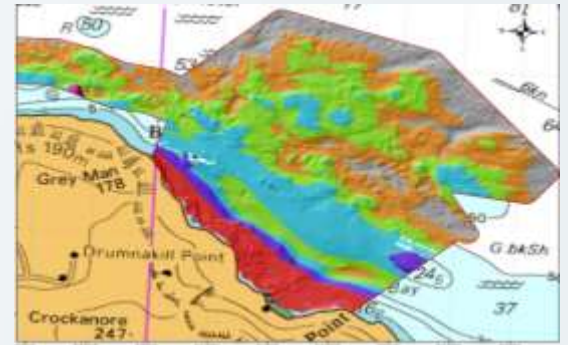
Two scientific divisions: Sustainable Agri-Food Sciences, Veterinary Sciences

~ 610 staff

Fisheries and Aquatic Ecosystems Branch

Three core science programme areas:

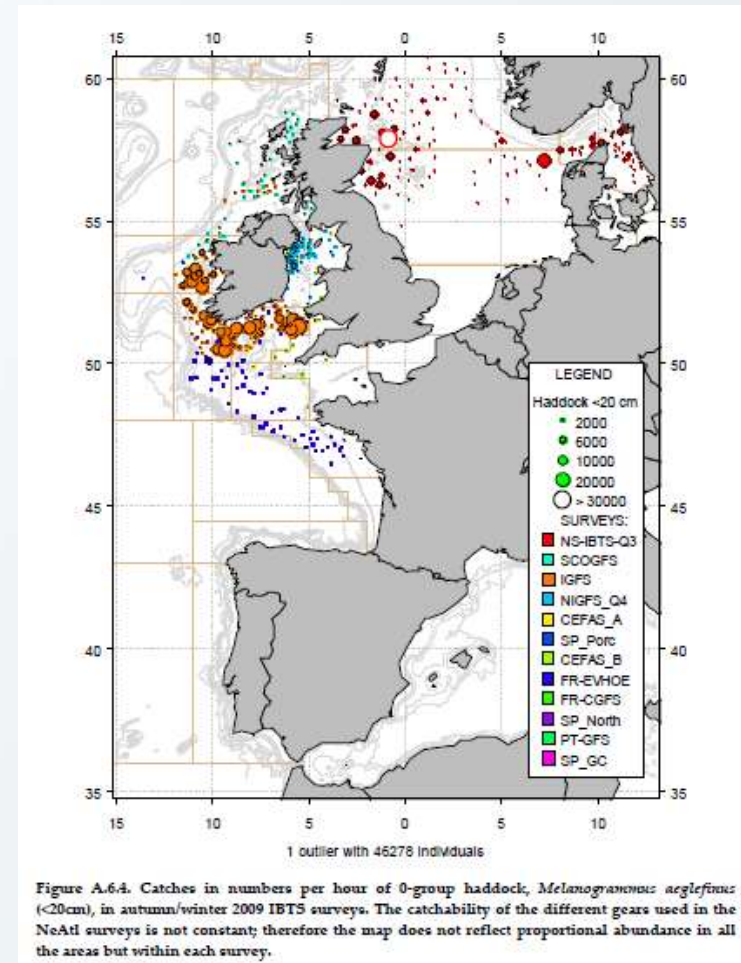
- **Freshwater fisheries stock assessment**
(salmon, eels, coarse fish, trout)
- **Coastal zone science**
(oceanography and marine environmental monitoring, mariculture, MCZs, resource assessment, marine renewable energy)
- **Marine fisheries stock assessment**
(CFP, inshore fisheries)



Ecosystem health and management

Operations

- Operates out of Port of Belfast
- Year-round capability - enables AFBI to conduct an integrated marine science programme
- Current operational area includes Malin Shelf, Irish Sea, Celtic Sea and the English Channel
- Research to support policy (primarily commissioned by the Department for Agriculture, Environment and Rural Affairs)



RV Corystes: Background

- Purpose built fisheries research vessel (commissioned by the UK government for Cefas)
- Built by Ferguson Ailsa in Troon, Scotland, in 1988
- AFBI owned since 2005 (refitted)
- Crewing and maintenance outsourced to a private company (Heyn Engineering Belfast)
- Standard crew complement at sea is 12 (5 officers and 7 crew) with accommodation for 11 scientist
- Nominal endurance – 20 days
- Contracted for 240 days at sea



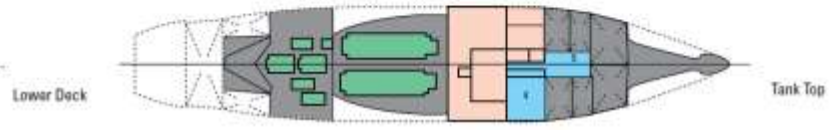
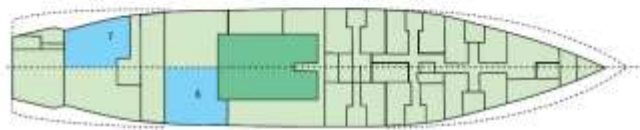
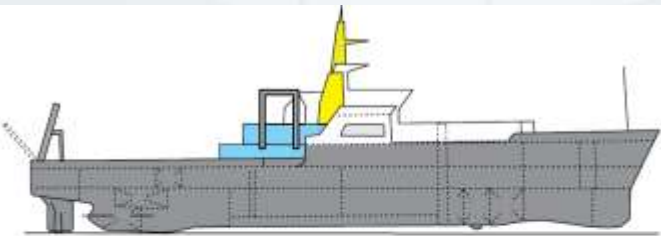
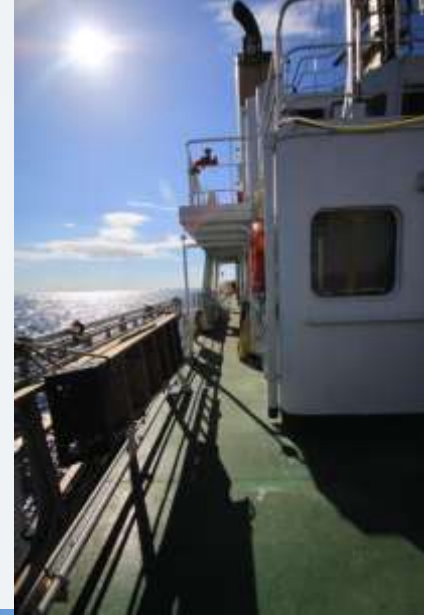
RV Corystes: Specification

- **Double-hulled diesel electric**
- **Power Generation 1926 kW (2 diesel electric a.c generators each raft mounted)**
- **Propulsion Power 1194 kW (2 tandem mounted d.c motors)**
- **Length 53.25 m**
- **Beam 12.8**
- **Draught 5m**
- **Gross Tonnage 1280 t**
- **ICES 209 compliant**
- **Winches, fishing and scientific, designed for 1000 m depth**
- **Sea Tubes (1 x 0.35 m and 1 x 0.80 m)**



RV Corystes: Advantages

- Stable platform with few days lost to weather
- Fuel economy: single engine running possible for many tasks
- Comfortable accommodation for crew and scientists
- Low noise - good quality fisheries and hydrographic acoustic data
- Laboratory spaces
- Deck space including containerised laboratory
- Operating costs relatively low
- Capital depreciation low



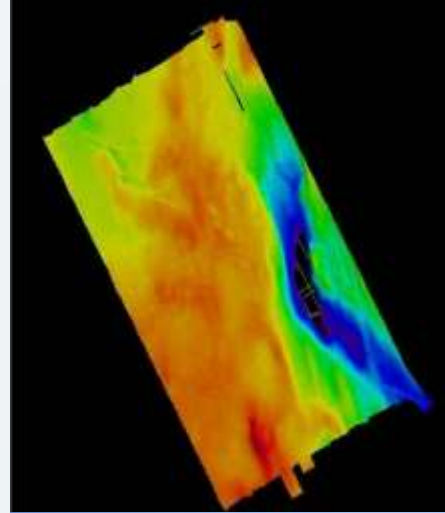
RV Corystes: Disadvantages

- Age - analogue technology
- Escalating and unpredictable engineering cost
- One major breakdown every 2 -3 years
- Vessel appearance difficult to maintain to good standard between dry-docks
- Remaining life estimated to be 2 to 3 years



RV Corystes: Control measures

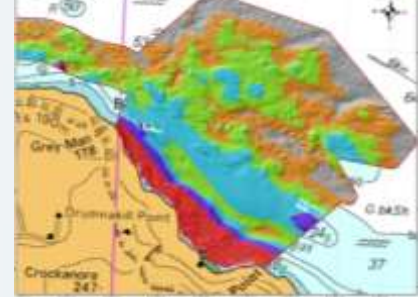
- Up to 2014 all risks management contract arrangement - considered unaffordable being loaded to cater for a “worst case scenario” (all risk with contractor)
- Actual cost or pass through contract was considered - no incentive for contractor to keep costs under control (all risks with vessel owner)
- Agreed on target cost contract. Contract for management, crewing, maintenance and operation being awarded via public tender to Heyn Engineering Belfast



RV Corystes: Control measures

Target cost contract

- Common in construction sector
- Working successfully for two years
- Risks – between all risks and actual cost contract
- Expenditure above the target cost due to unforeseen breakdowns etc. shared between AFBI and contractor according to a pre-determined mathematical formula
- Arrangement provides an incentive for both parties to work together to reduce costs to an affordable level while still allowing the contractor to achieve a reasonable profit
- Not without its pitfalls and can be difficult to manage if partnership breaks down, if target cost not well defined



Future plans....

