

# Pre- and post-consenting environmental surveys

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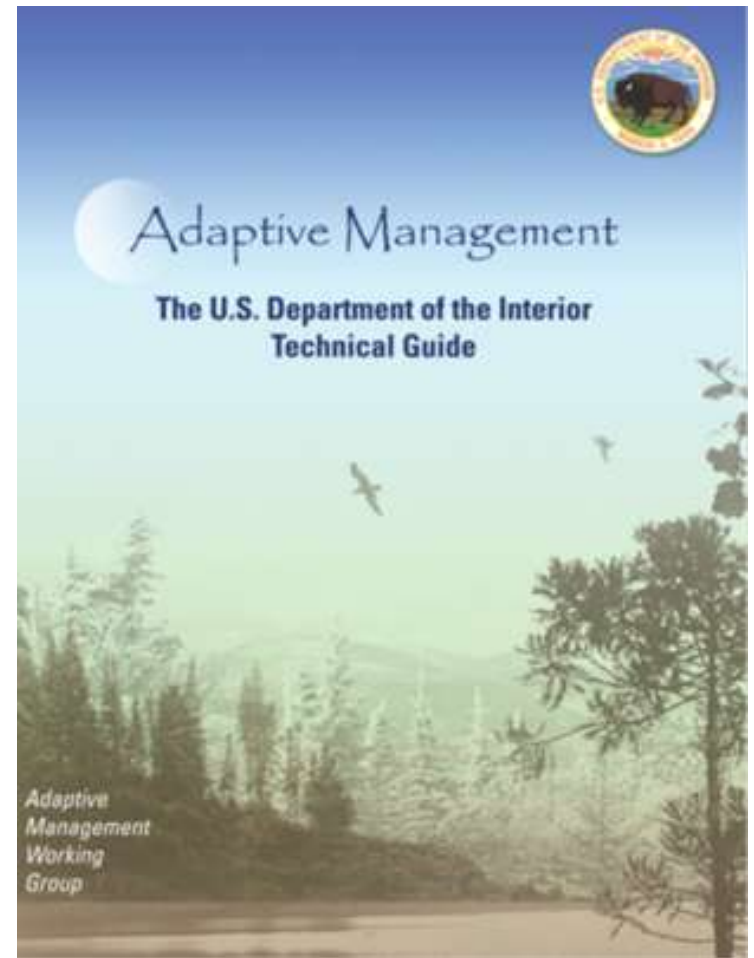
Finlay Bennet



- Introducing Adaptive Management
- Pre-consent surveys
- Post-consent surveys
- Lessons learned by the RiCORE project

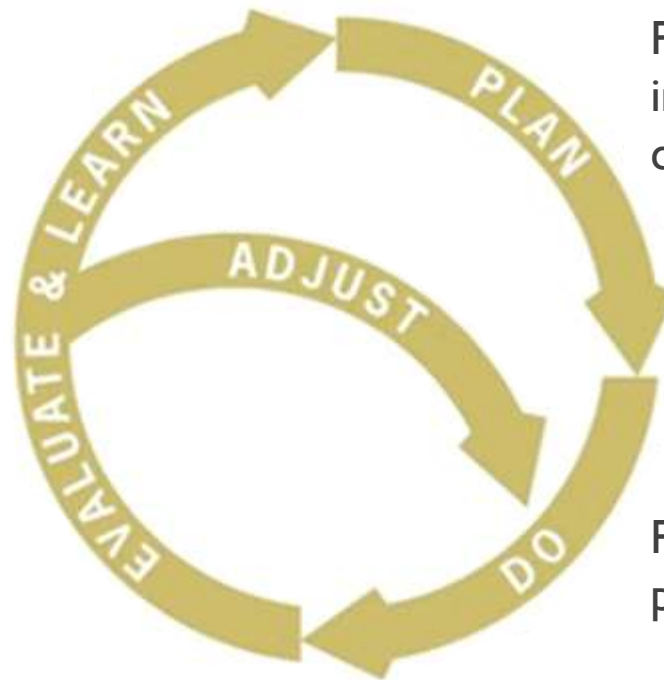


- Reducing uncertainty
- Improving confidence in assessments
- Tolerance thresholds of impact
- Avoid DRIPy monitoring
- Affordable



## The Adaptive Management Cycle applied to MRE projects

Learning to either inform future plans or adjust measures at existing projects.

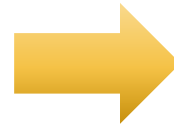


Pre-consent surveys,  
impact assessment &  
consent decision

Post-consent surveys,  
planning & data collection

MRE projects' pre-consenting stage includes

- Preliminary site characterisation
- EIA scoping exercise



What is currently required?  
How to improve pre-consenting efficiency?



- Workshop
- Discussion of existing methodologies and practices

Review of survey methodologies

- Listing innovative technologies
- Cost analysis

Guidance

Advice on the scope and intensity of monitoring / data collation

## Pre-consent legal requirements in EU Member States

- Tend to be established on a case-by-case basis
- More projects installed imply more prescriptive requirements
- For some receptors, monitoring duration is the only prescriptive requirement

Discussion on the need for more than one year data vs data representativeness



*RiCORE 1st workshop - Bilbao*

## Potential for using emerging and innovative monitoring technologies

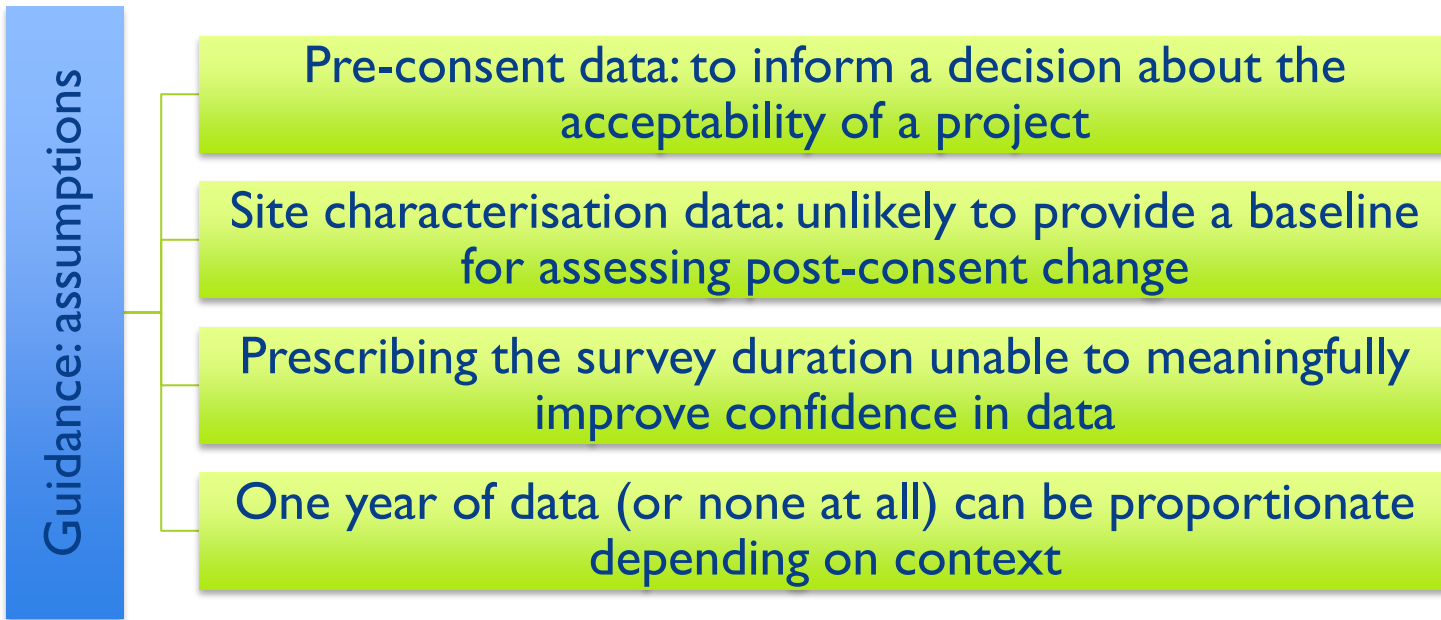
- High-Definition photography and video
- Unmanned Aerial Systems
- Remotely Operated Vehicles
- High-frequency sonar
- The FLOW, Water column and Benthic ECology 4-D (FLOWBEC-4D)
- Telemetry and other remote transmitters
- PAM devices
- VMS to monitor vessel traffic and fishing activity
- RADAR

Method	Hours on effort	Daily field costs	Cost per hour of effort	Cost per km of effort
Ship-based DP LT	5.5	51	205	205
Aerial DP LT	4	29	158	16
Ship SP LT	5.5	26	103	103
Aerial SP LT	4	27	147	15
Towed hydrophone array	22	6	6	6
PoOP visual survey	5.5	4	16	16
PoOP towed survey	22	1	1	1

*Standardised costs of visual and acoustic cetacean survey methods*

Seabirds and marine mammals are often the most challenging and controversial of the several receptors to overcome





## Guidance: contents



- Analysis of existing data and survey planning
- Survey periods and spatial coverage
- Efficient methodologies and sampling frequency
- Data analysis





# Technical solutions for turning off the DRIP

- Question led approach
- Study design
- Risk appetite informed by rates for false results
- Meta-analysis can provide cost savings



## Wider solutions for turning off the DRIP

- risk-averse institutional cultures
- technical knowledge/skills
- overly precautionary assessments
- coherence with N2k



Policies that promote an Adaptive Management approach (e.g. S, D&M)

- Pre-consent a flexible and proportionate approach can be both informative and more cost-effective

## Post-consent ‘learning by doing’

- co-ordinated monitoring programmes to focus on key scientific uncertainties
- demonstration studies
- technical skills needed
- risk-appetite

