Sectoral Marine Planning for Offshore Renewable Energy in Scotland

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The Scottish Government
Riaghaltas na h-Alba

MULTI-LEVEL GOVERNANCE IN MARITIME SPATIAL PLANNING THROUGHOUT THE BALTIC SEA REGION

PartiSEApate

OFFSHORE WIND ENERGY WORKSHOP

12-13 November 2013
Vilnius, Lithuania

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Outline

- Marine management in Scotland
- Scottish Government's green energy targets
- Planning for Offshore Renewable Energy
  - Sectoral marine planning process
  - Spatial Criteria for offshore energy
  - Science support
- Research projects

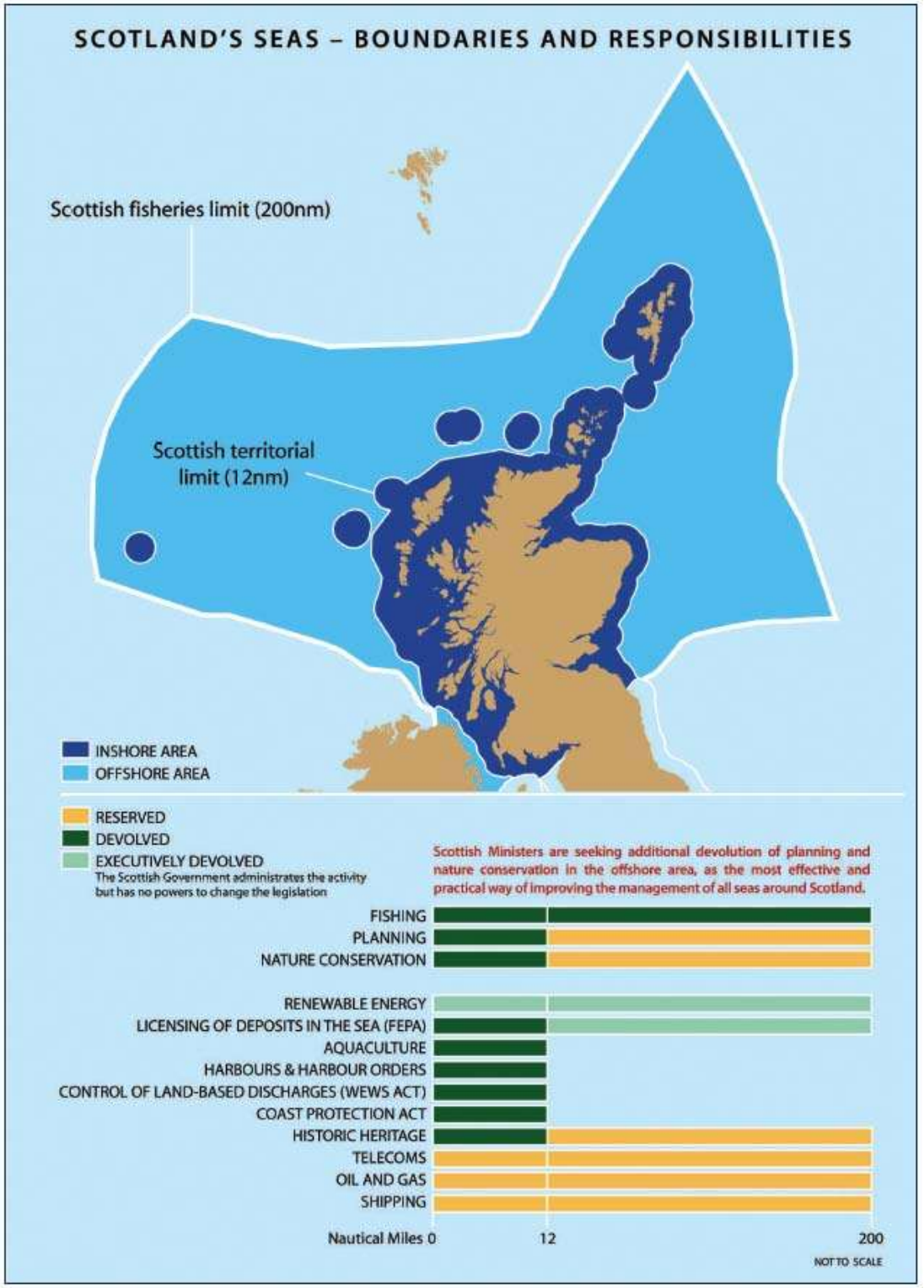
Marine Management in Scotland

Marine Scotland

(SG Directorate)

- Science
- Planning & Policy
- Performance & Aquaculture
- Fisheries
- Compliance & IT

- The lead Marine Management Organisation in Scotland



SG Green Energy Policy

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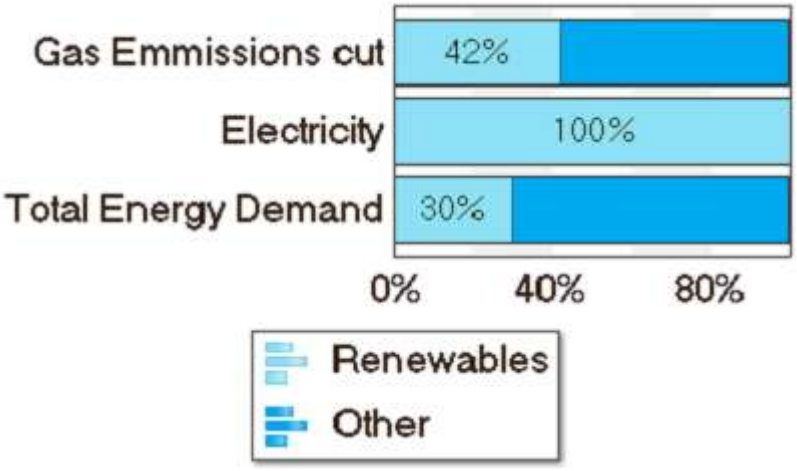
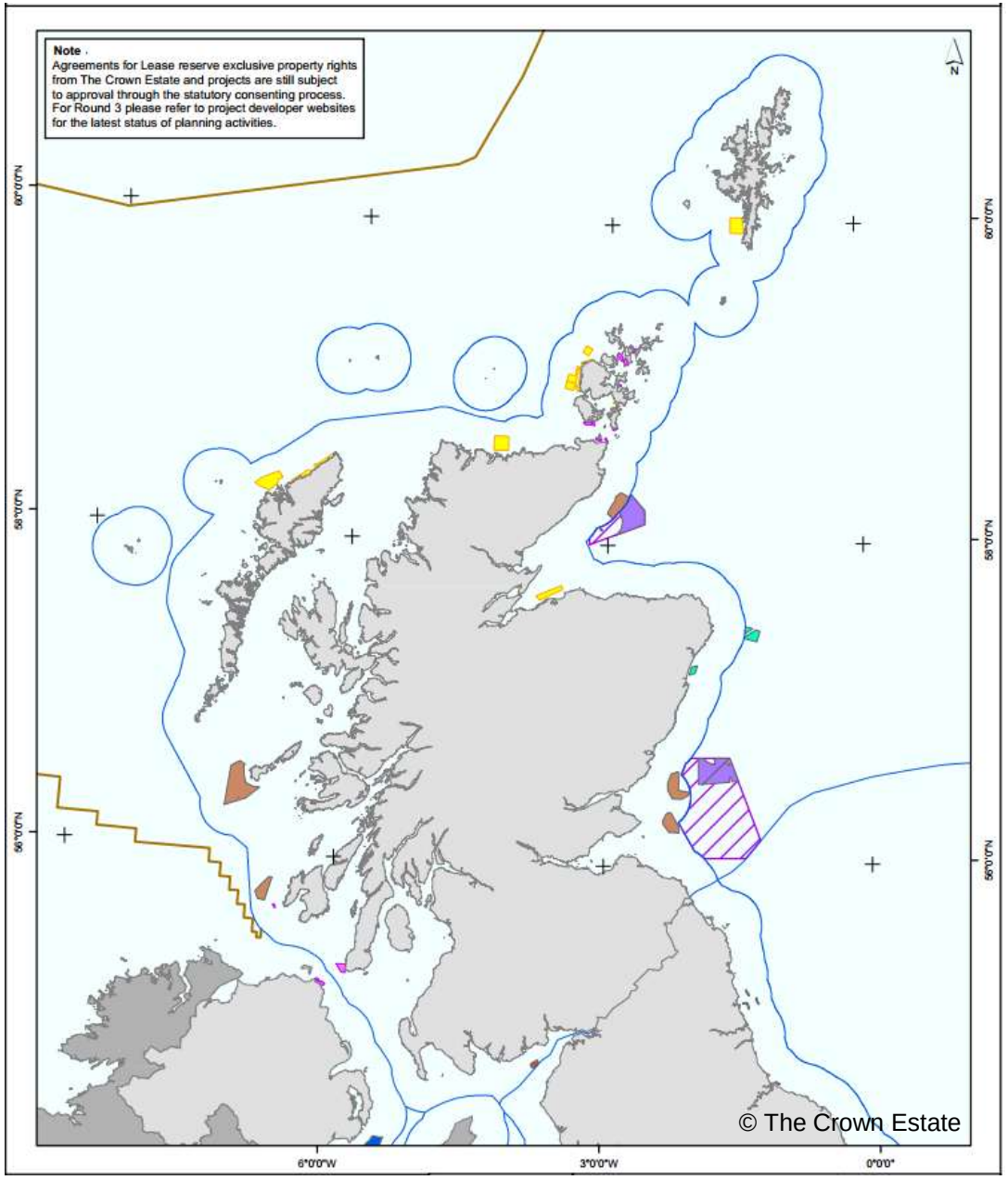
2020 Targets

- ✓ Harvest Scotland's huge resource potential





Marine Planning in Scotland

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Marine (Scotland) Act 2010

Coastal Access Act 2009

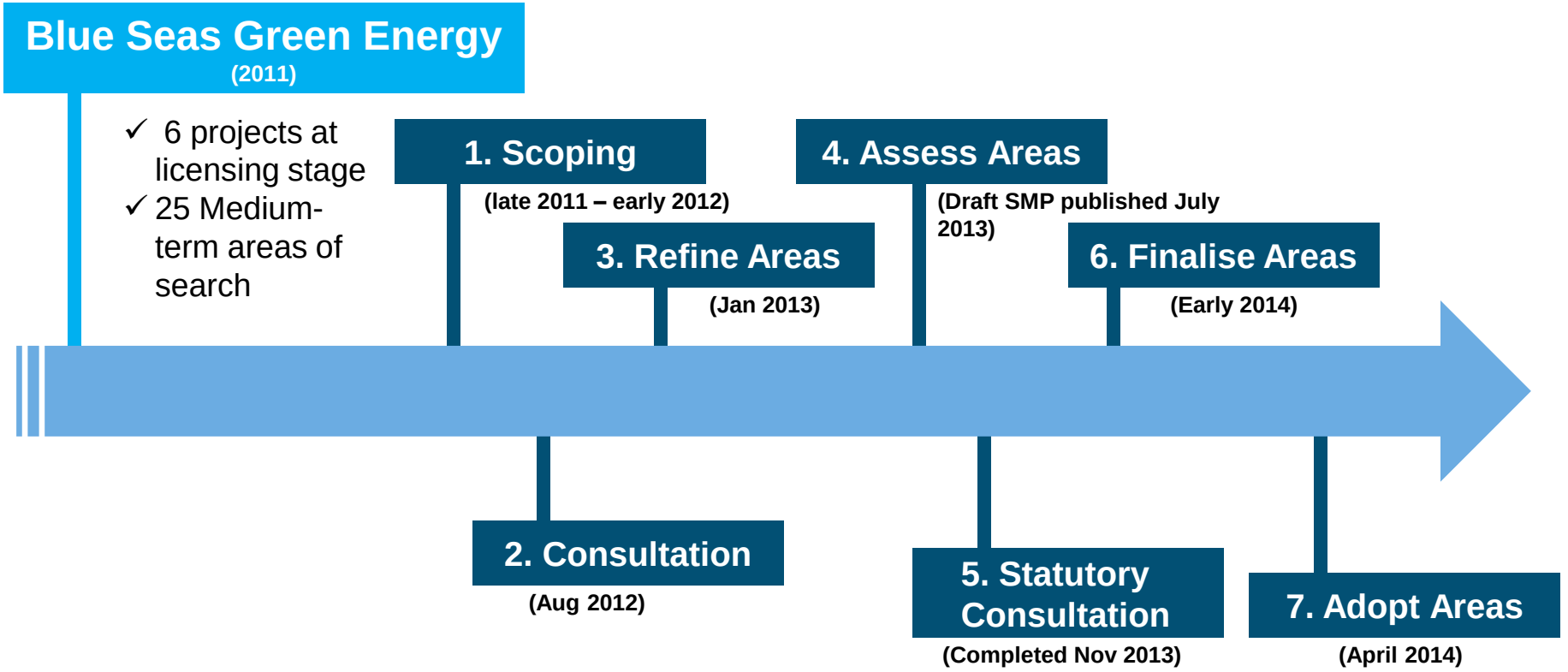
Legislative framework for marine planning in Scotland's offshore area

National Marine Plan	Regional Marine Plans	Sectoral Marine Plans
▪ Sets out the legislative and regulatory framework for the development of statutory plans ▪ Proposes the strategic policies for sustainable use of Scottish marine resources out to 200nm	▪ Address specific issues within a smaller area ▪ Allows for local ownership and local decision-making ▪ Directed by NMP objectives and policies	▪ Progressed within the broader context of NMP ▪ Complement both NMP and RMPs ▪ Provision of relevant information & assessment on strategic spatial locations ▪ In this case, suitable to progress the development of commercial scale offshore renewable energy

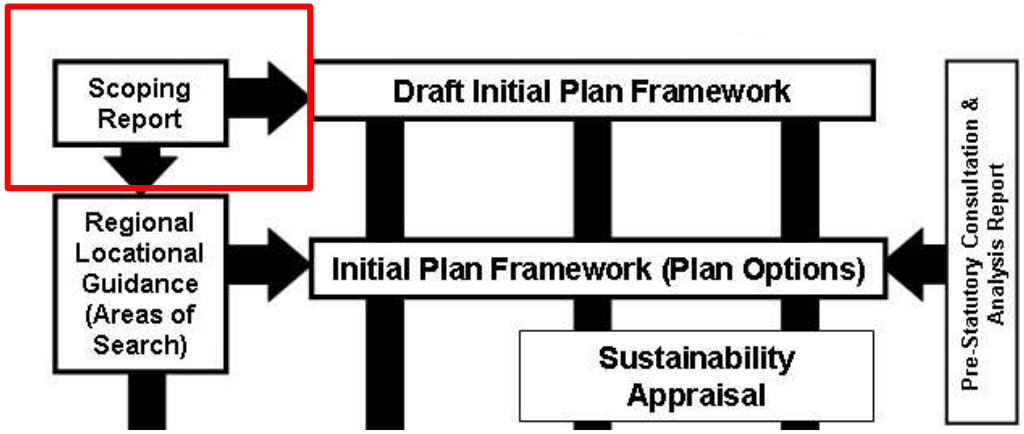
Sectoral Marine Planning

Why Sectoral Marine Planning? 'Proportionate' Licensing

- Identify strategic opportunities, constraints, and measures for mitigation
- Identify key strategic issues for consideration at the project level
- Enhance the framework in which consenting recommendations can be made by the Scottish Ministers



Sectoral Marine Planning process



Stage 1 – Scoping

- ✓ Constraint & opportunity mapping using The Crown Estate's Marine Resource System (MaRS)

Environmental Theme





Industrial Theme





Socio-cultural theme



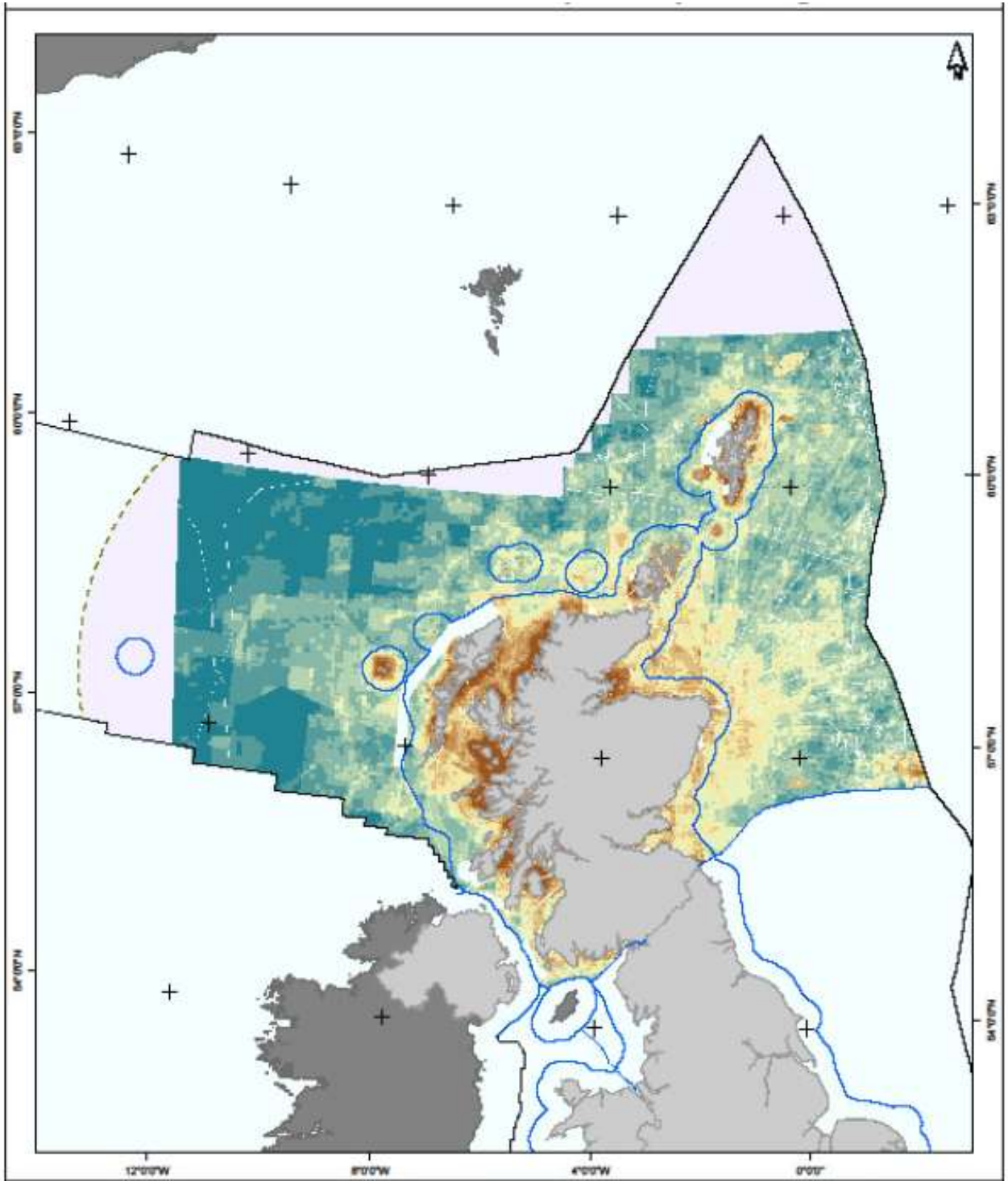


Scoping areas of search

These models have been combined to develop overall expressions of relative degree of constraints

Combined models: relative weightings were changes

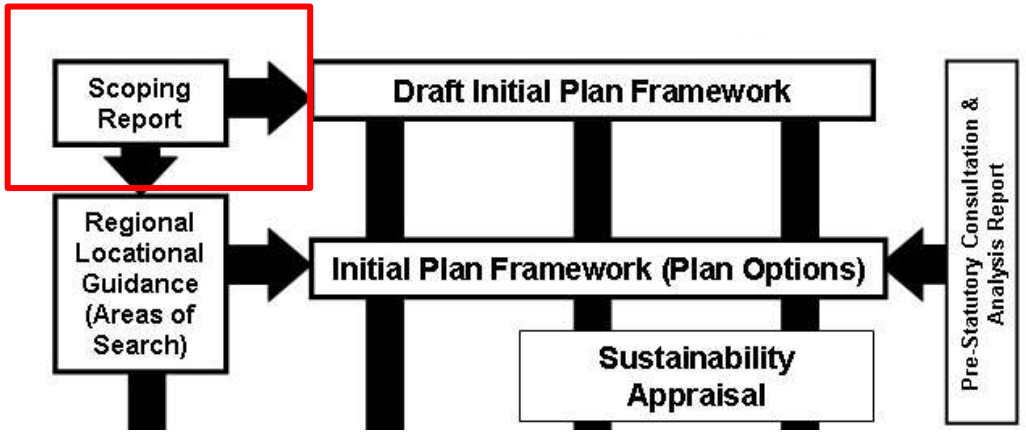
Equal weighting model was taken forward



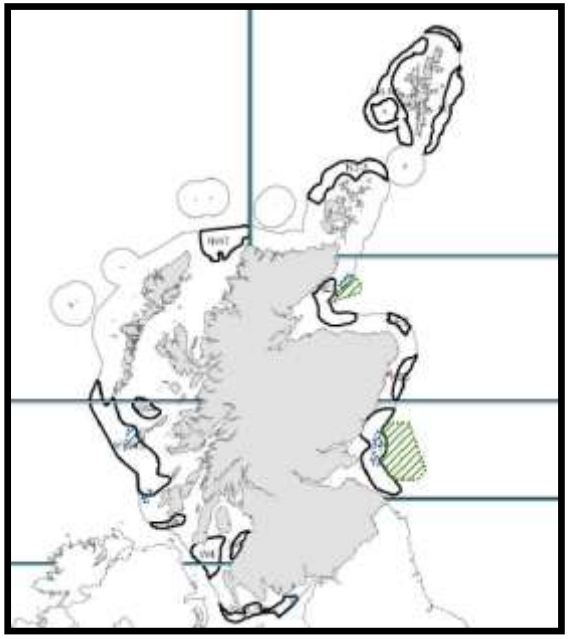
Sectoral Marine Planning

Stage 1 – Scoping

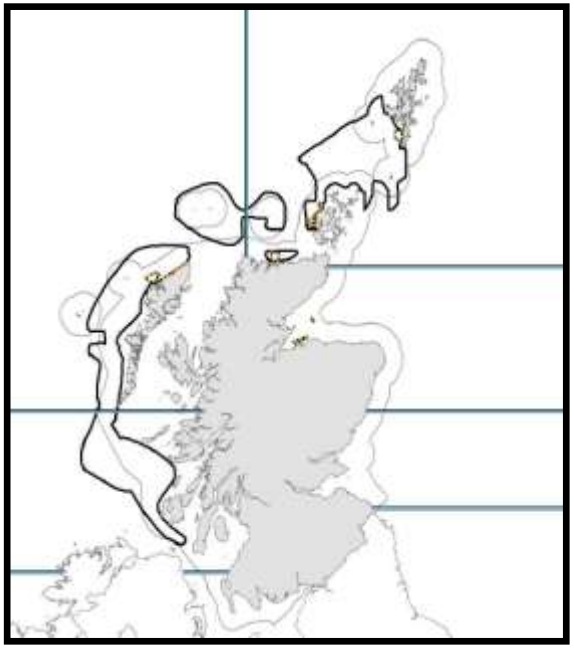
- ✓ Output - Scoping Areas of Search



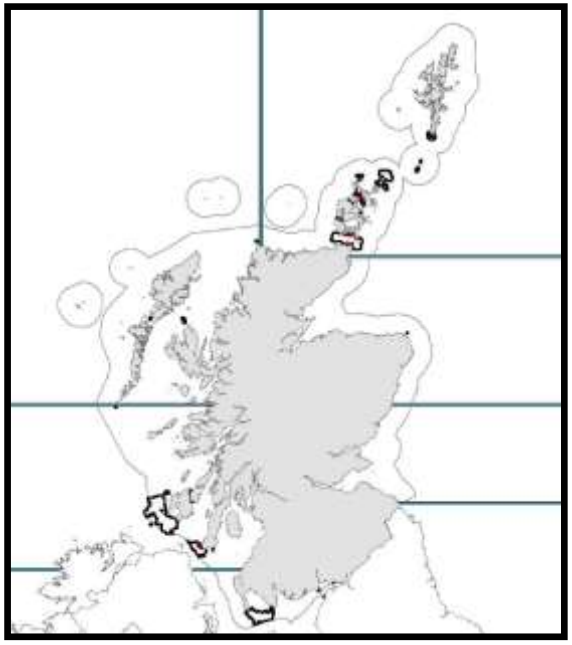
Offshore wind



Wave



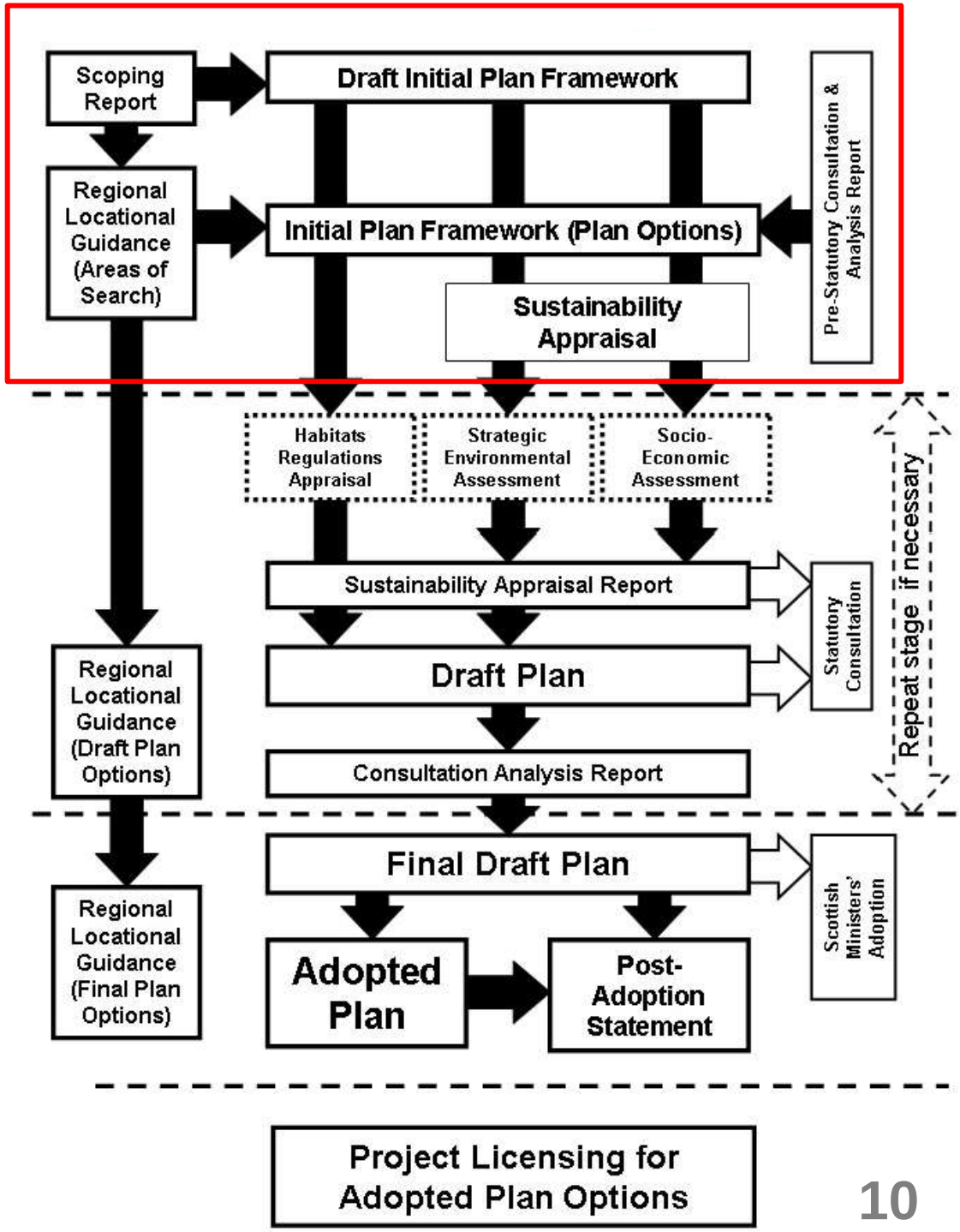
Tidal



Sectoral Marine Planning

Stage 2 – Plan options identification

- ✓ Draft Initial Plan Framework
- ✓ Draft Regional Locational Guidance
- ✓ Pre-statutory consultation
- ✓ Initial Plan Framework



Sectoral Marine Planning

Stage 3a – Sustainability Appraisal

- ✓ **Habitats Regulations Appraisal**

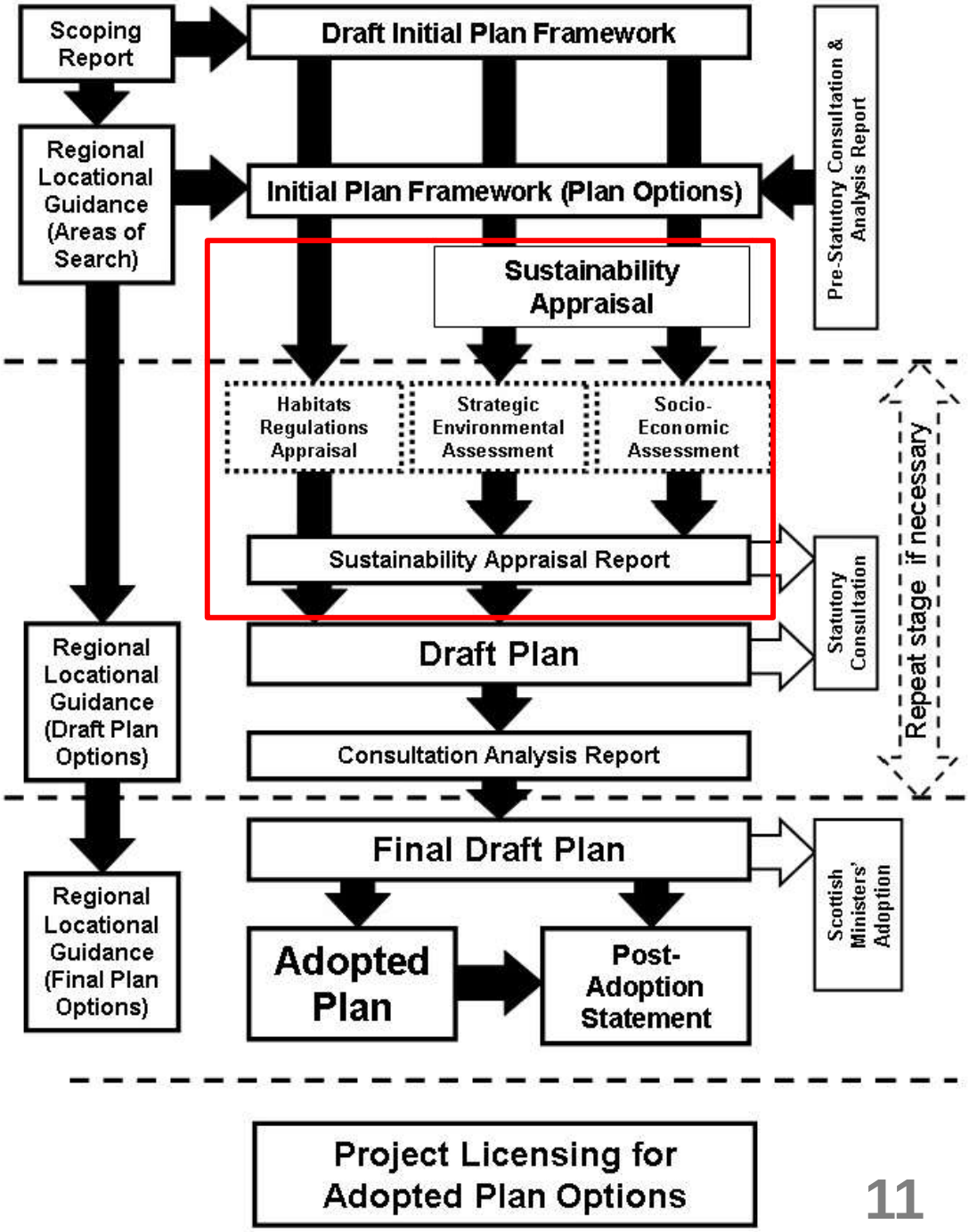
Assess any significant effects on Natura 2000

- ✓ **Strategic Environmental Assessment**

Identifies key receptors, effects, and mitigation measures; key issues to be addressed in project level

- ✓ **Socio-economic assessment**

Potential socio-economic consequences on existing marine activities



Support to Socio-economic assessment

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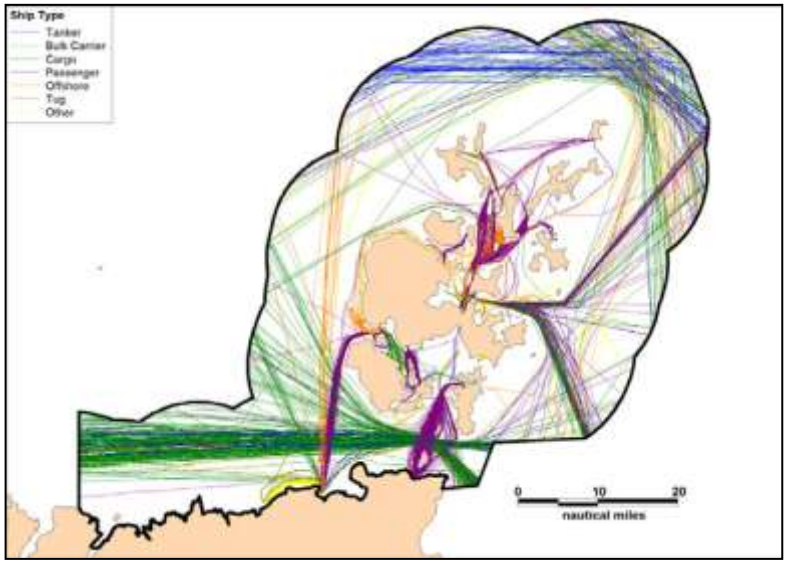
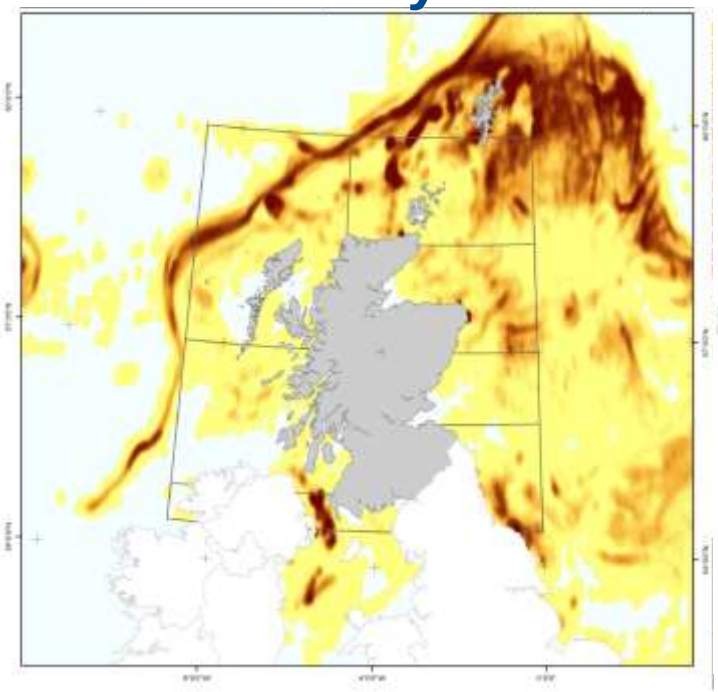
Navigation Traffic Assessments



Vessel traffic data used to define navigational tracks and main shipping routes

VMS analysis



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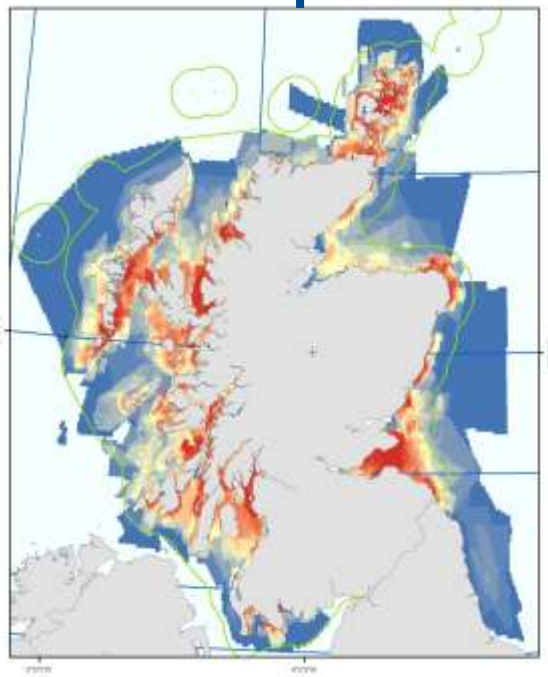
ScotMap



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Studies on commercial fisheries covering bigger vessels (≥15m) fitted with VMS and smaller vessels

Sectoral Marine Planning

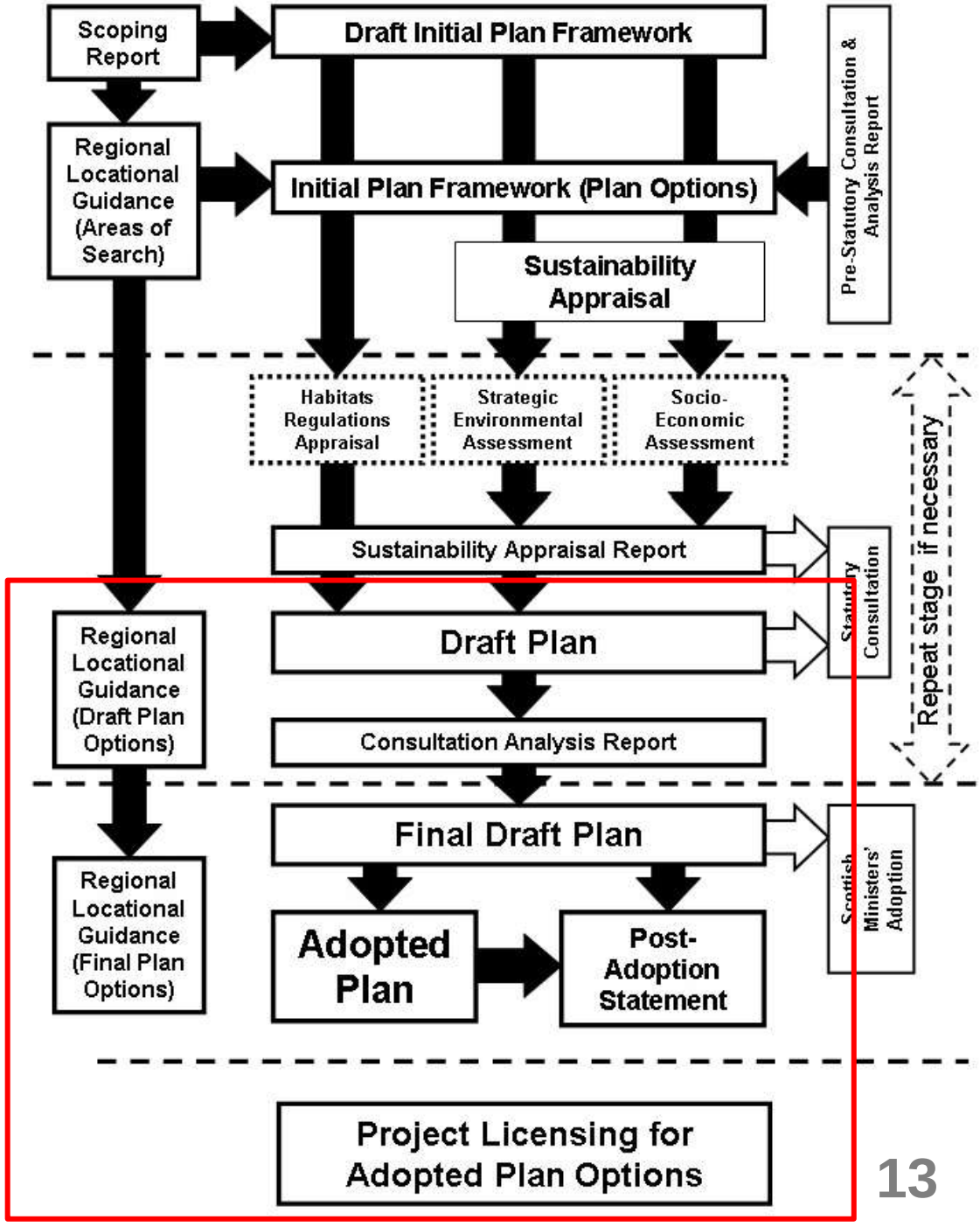
Stage 3b – Draft Plan

- ✓ Key findings from sustainability appraisal report inform the development of the draft plan
- ✓ Outcomes of RLGs to inform options within Draft Plans

Stage 4 – Consultation

Stage 5 – Plan adoption & publication

- ✓ Final Plan and adoption
- ✓ Post Adoption Statement
- ✓ Appropriate Assessment



Sectoral Marine Planning

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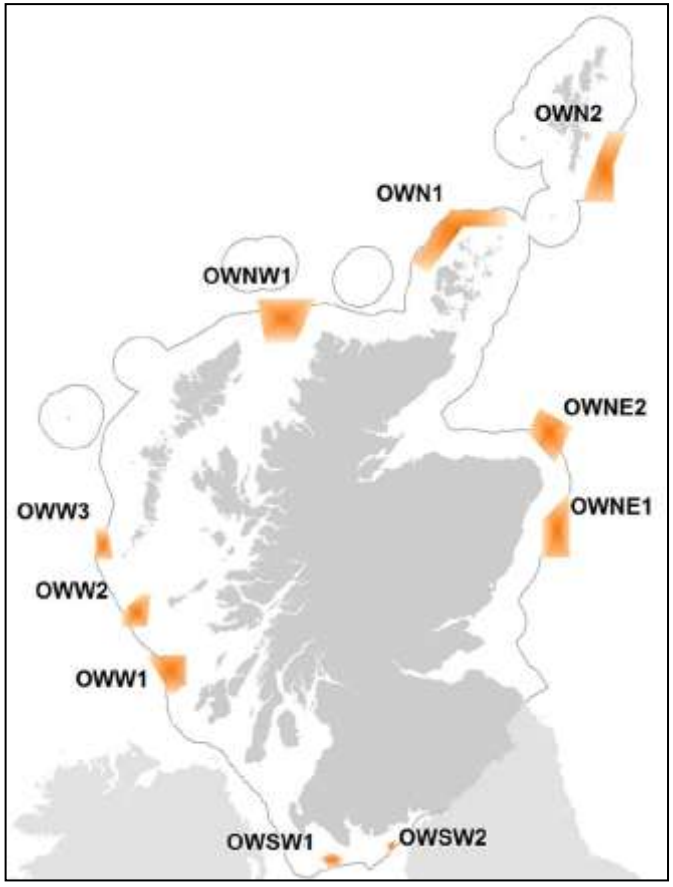
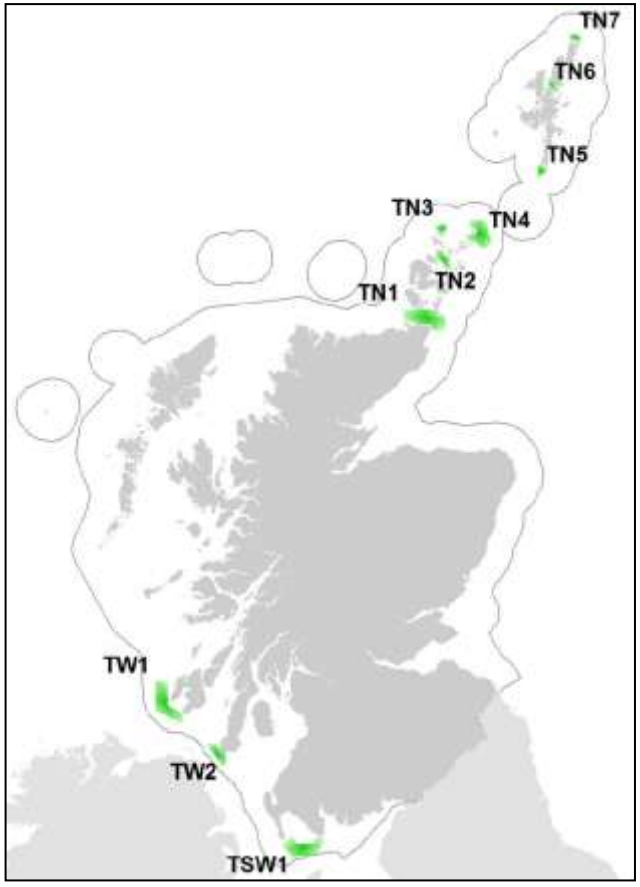
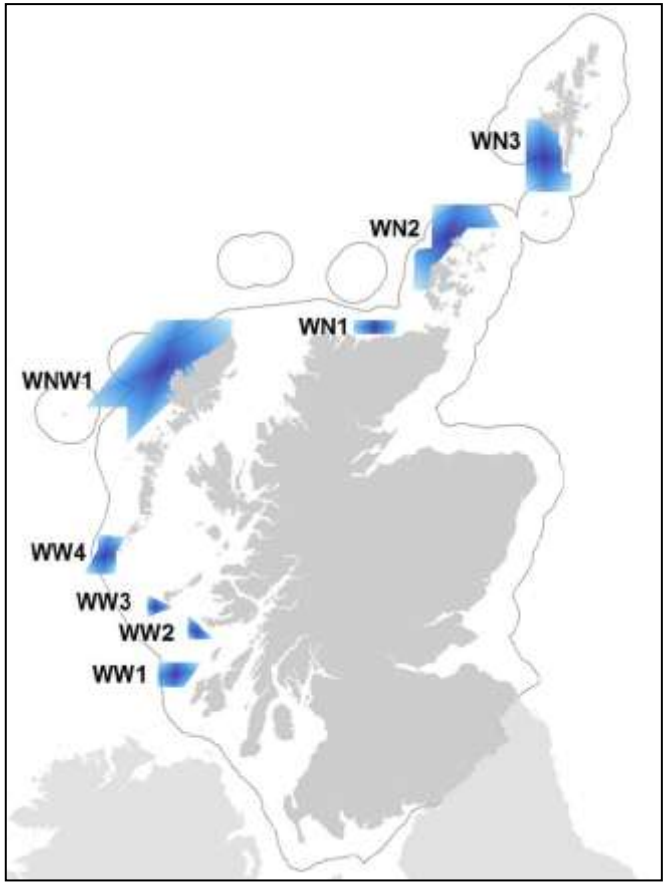
Draft Plan Options







On-going Research

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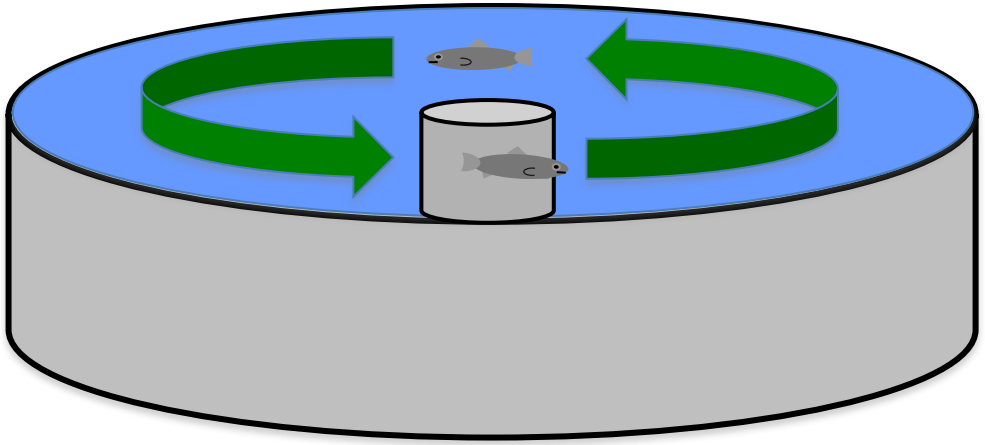
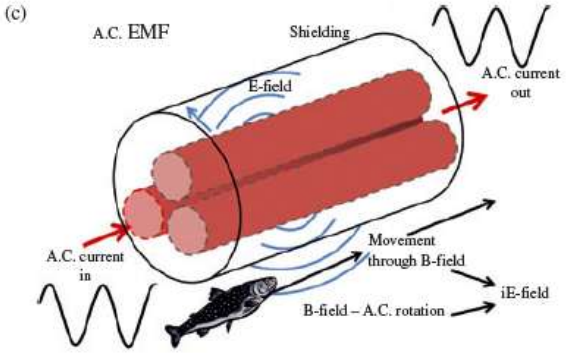
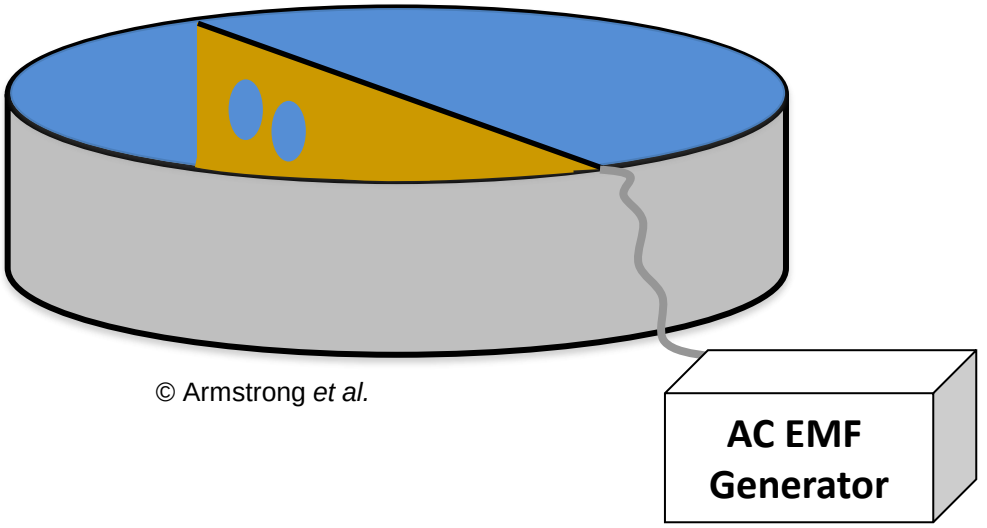
EMF from subsea cables interactions with migrating fish



Tank diameter of 9.8 m





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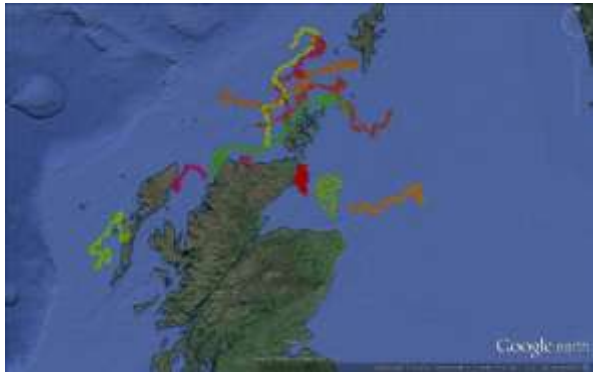
On-going Research

Acoustic & satellite fish tagging

Depth use by homing Atlantic salmon in Scottish coastal waters



On-going Research

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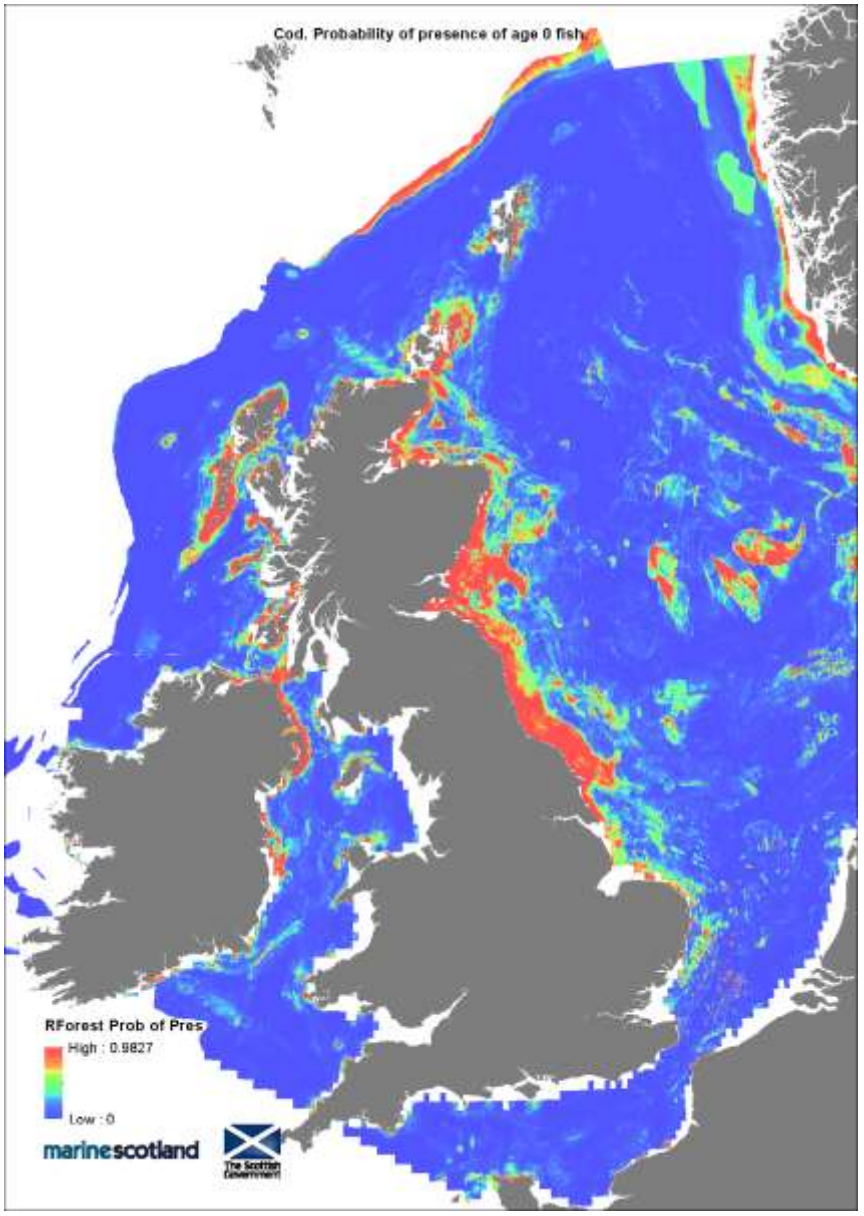
Fish sensitivity maps: Spawning and nursery grounds

- ✓ Presence/ absence of Age 0 fish aggregations



On-going Research

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Passive Acoustic Monitoring Network

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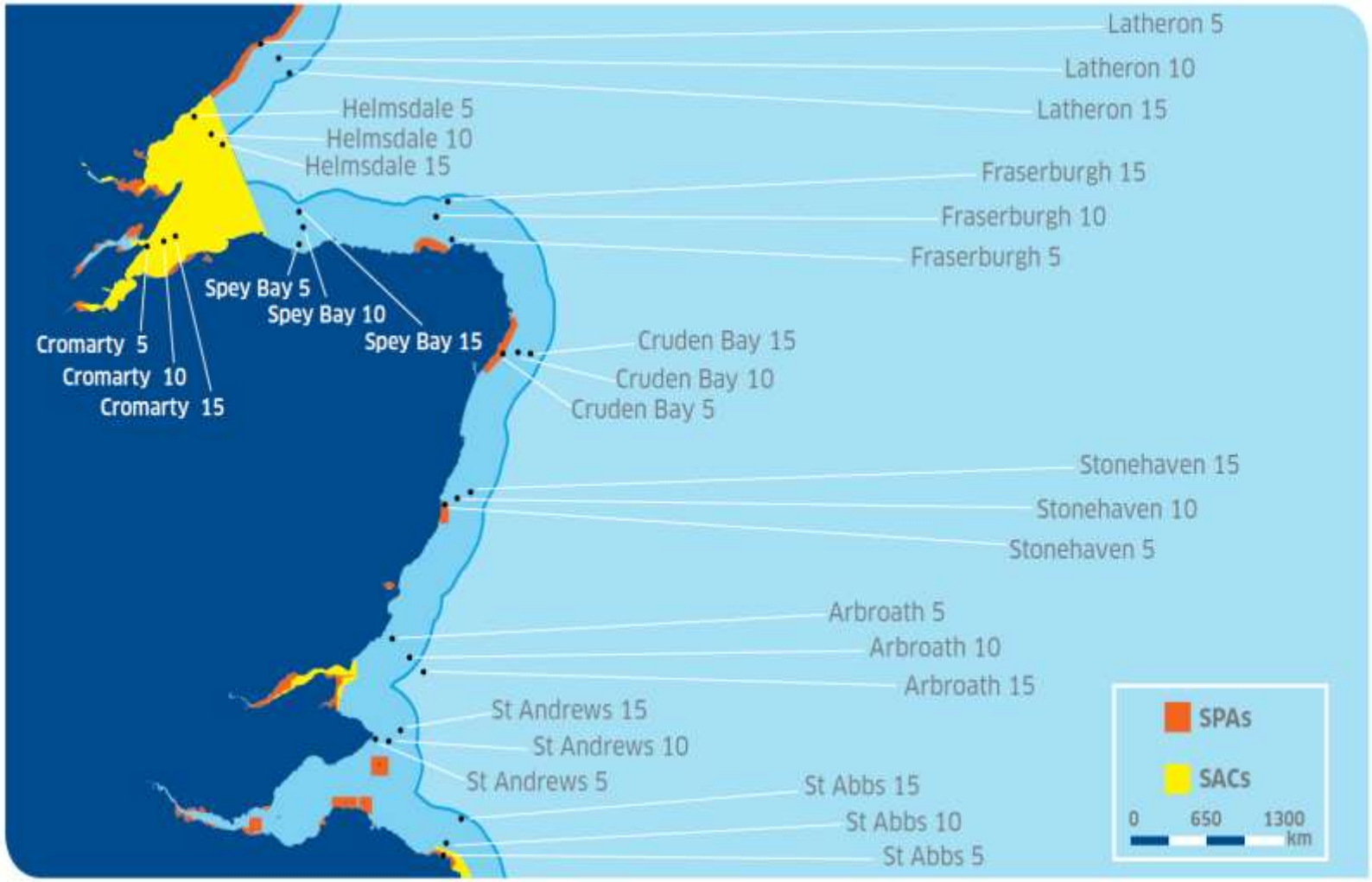
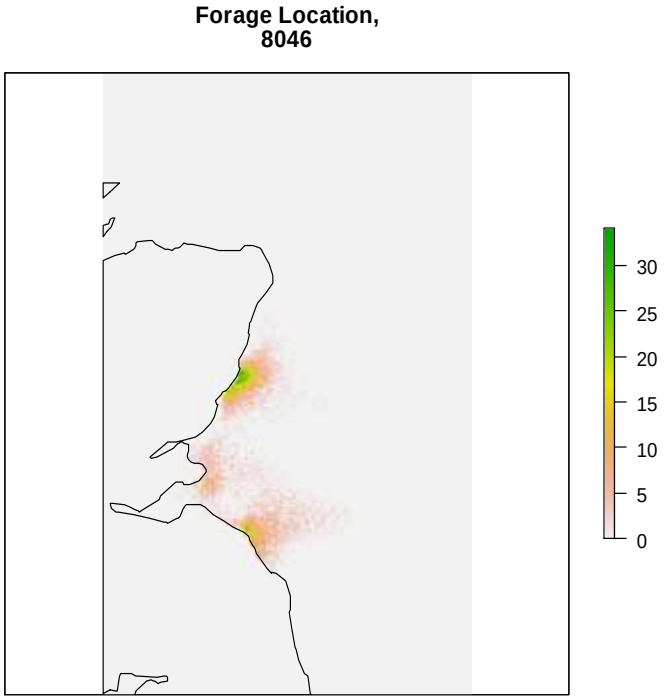


On-going Research

Modelled seabird foraging locations and energetic costs with and without windfarm

Foraging destinations of a seabird species from various colonies in the Forth and Tay region



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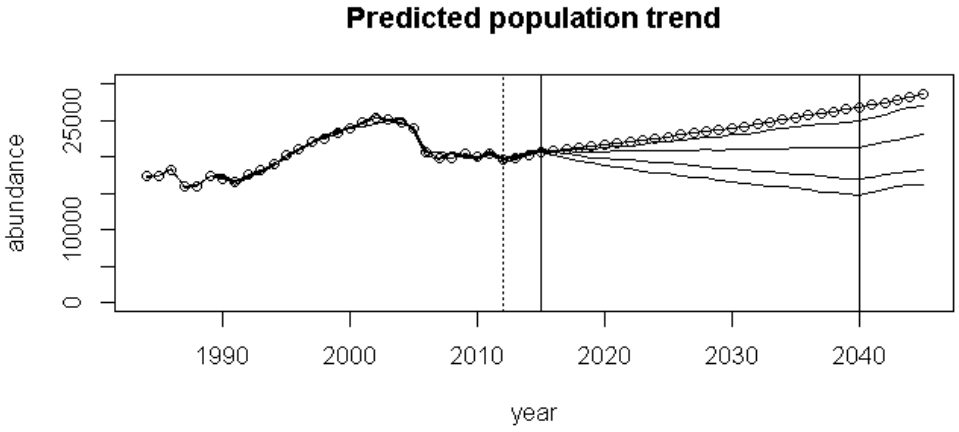

Changes in adult survival or productivity and forecast population trajectories

	Wind farm absent	Wind farm present
	Mean cost /hours (± S.D.)	
Flight Cost - GU	1.15 (±0.75)	1.18 (±0.8)
Foraging Cost - GU	5.86 (±1.15)	6.34 (±1.21)
Flight Cost - RB	2.85 (±0.81)	2.98 (±0.88)
Foraging Cost - RB	6.56 (±1.26)	6.91 (±1.29)

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More Information:
www.scotland.gov.uk/Topics/marine/marineenergy/Planning

Thank you!