

# Filling the Gaps

## Using marine observer data from seismic surveys to enhance our understanding of marine mammal distribution in Irish waters

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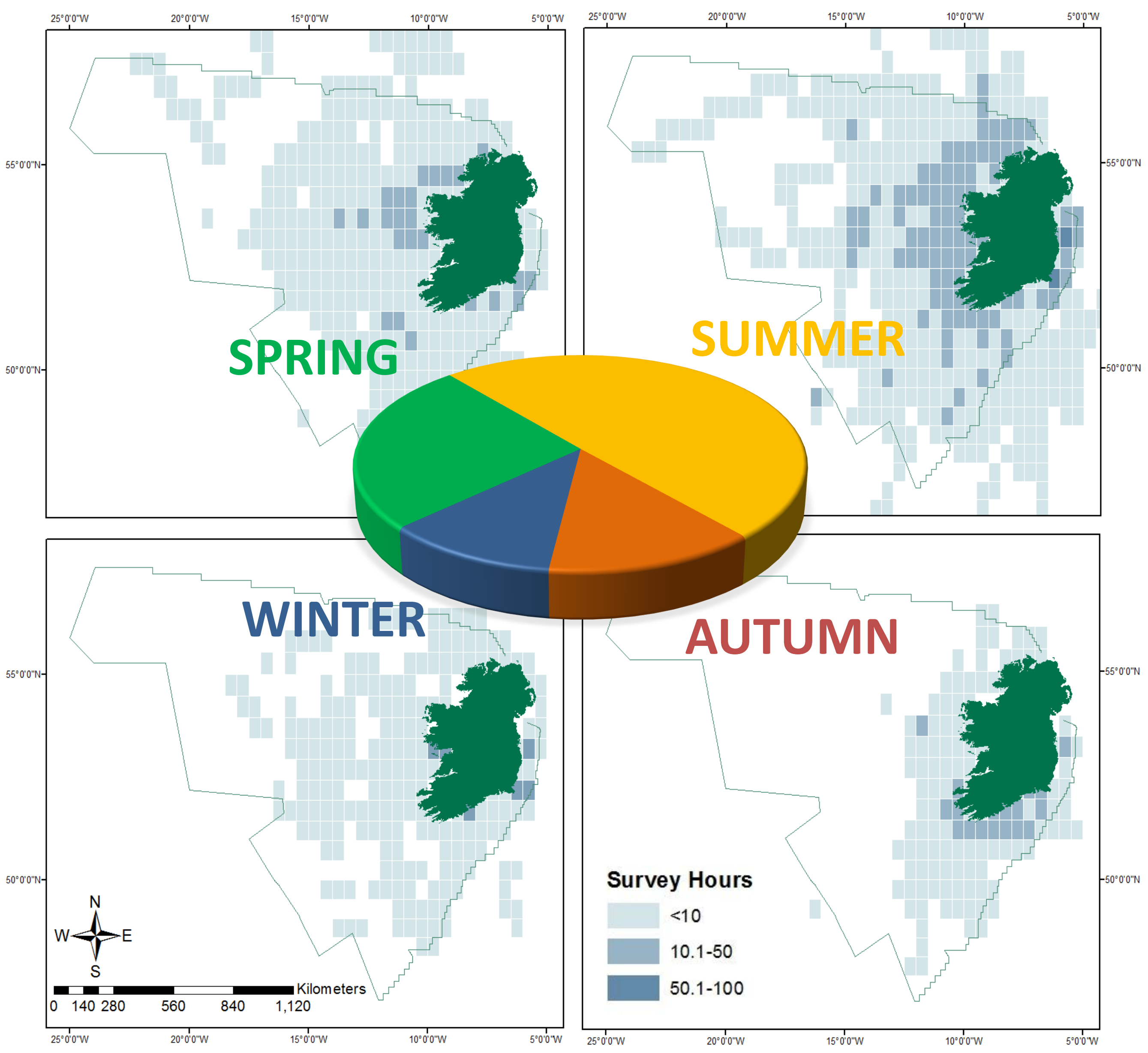
### INTRODUCTION

Irish waters are a geologically diverse region and highly productive in terms of natural resources. The region also supports over 20 species of marine mammals. There are over 5000 hours of targeted (dedicated and opportunistic) survey effort examining the distribution of marine mammals currently available. However, the temporal and spatial coverage of these surveys often differ, and large areas such as the Porcupine Basin remain poorly surveyed. This reduces our knowledge of the distribution of rare and vulnerable species of marine mammals and compromises our ability to inform policy and manage human activities such as Oil and Gas exploration.

### SURVEY GAPS

**Seasonal gaps** in targeted Surveys: survey effort is concentrated in summer months with coverage gaps (i.e. low effort) in both autumn and winter (October through March).

**Spatial gaps** in targeted surveys: wide spread but low density survey coverage; focused in relatively inshore waters. The Porcupine Seabight remains poorly surveyed.



### CONCLUSIONS

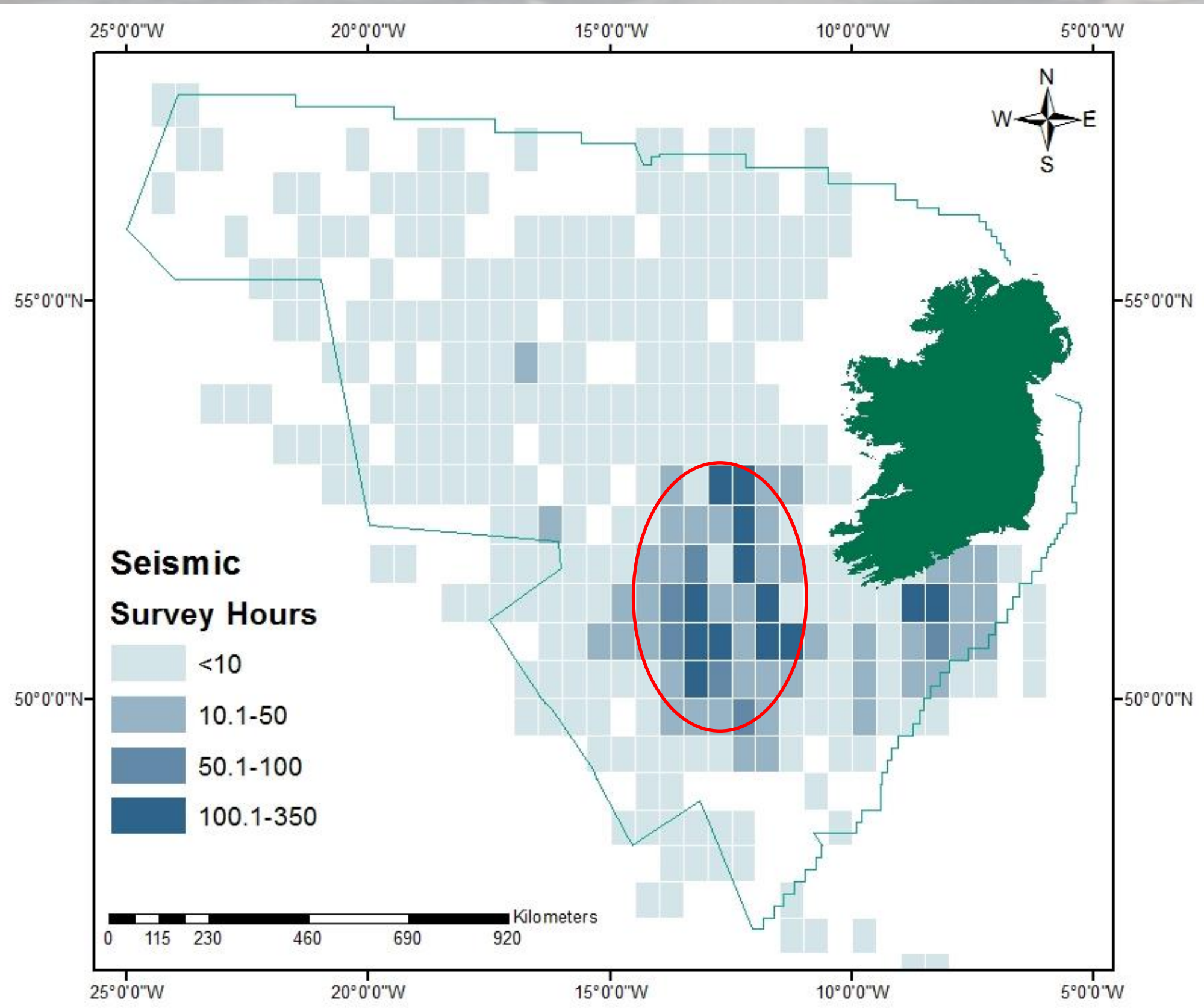
MMO data may be a useful addition to currently available datasets and contribute to filling some of the gaps in our knowledge of cetacean distribution. However, a number of factors such as the variation in data collection methodologies and the influence of seismic noise on the behaviour of animals need to be considered to ensure seismic and targeted datasets are comparable. Once these data have been validated and combined with existing data, future studies can be designed to prioritise survey coverage in data deficient or high value areas of Irish waters.

### FILLING THE GAPS

We identified a source of high-quality, effort-related sightings data that could be used to supplement existing data and fill gaps in targeted survey coverage. Observations made by marine mammal observers (MMOs) on board seismic vessels are carried out by trained observers, over extensive areas and prolonged periods.

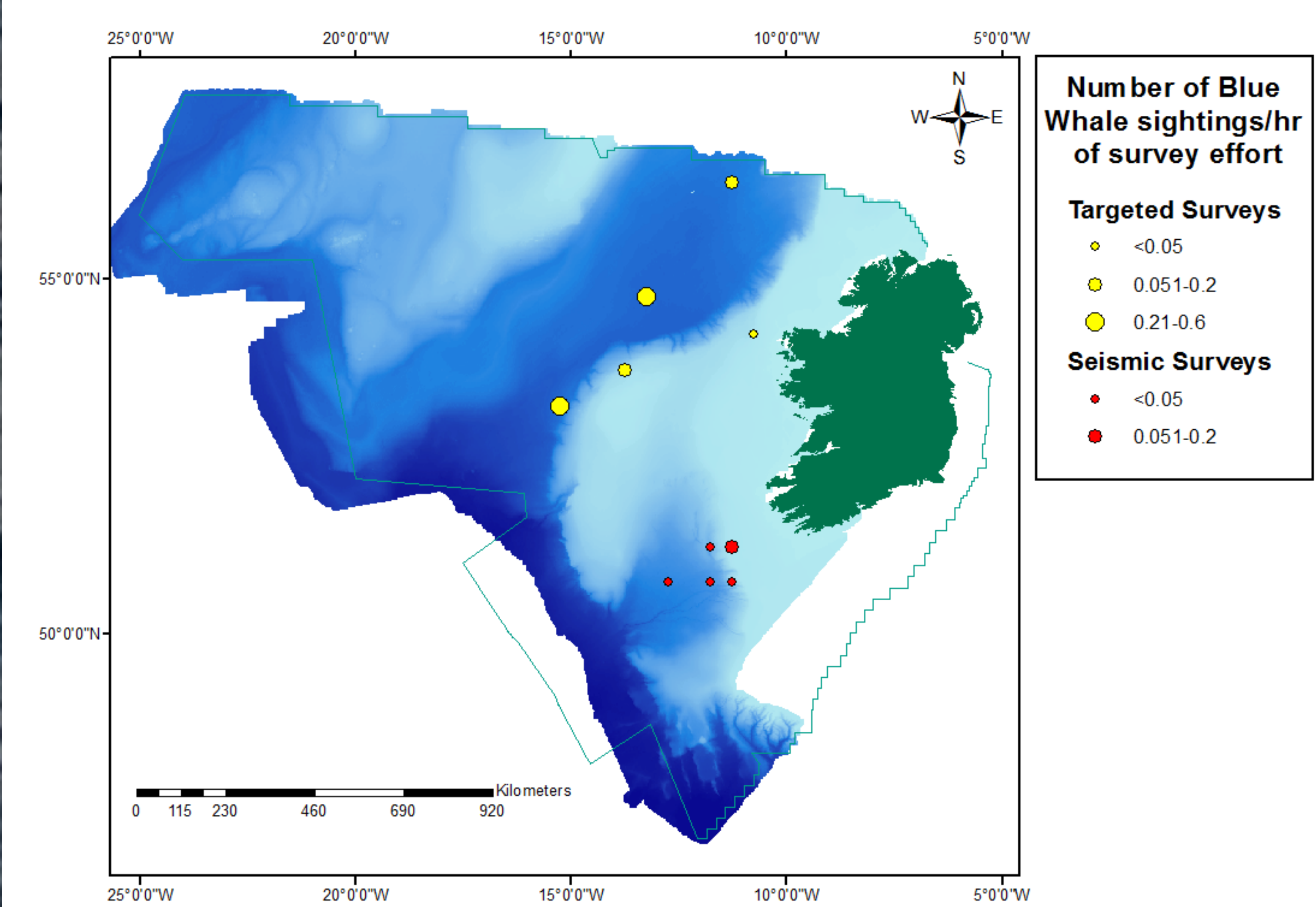
Over 4000 hours of MMO survey effort has been conducted, often in waters not frequented by targeted surveys.

The highest density of MMO survey effort occurs in the Porcupine Basin and may contribute to filling the spatial gaps in targeted survey coverage.



### Can MMO data enhance our understanding of marine mammal distribution?

#### Ex. Blue Whales



Targeted surveys identified blue whales along the edge of the Porcupine Bank and in the deep waters of the Rockall Trough. While two casual sightings of blue whales have been recorded in the Porcupine Seabight (not mapped), with the addition of seismic survey data we can confidently extend their known distribution in Irish waters into this area.

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