

Environmental Sensitivity Mapping



ESM Webtool

*Bringing environmental assessment
to your fingertips*

 GeoHive



Assoc. Profesor Ainhoa González
Project PI, School of Geography, University College Dublin

SEA and Spatial Planning



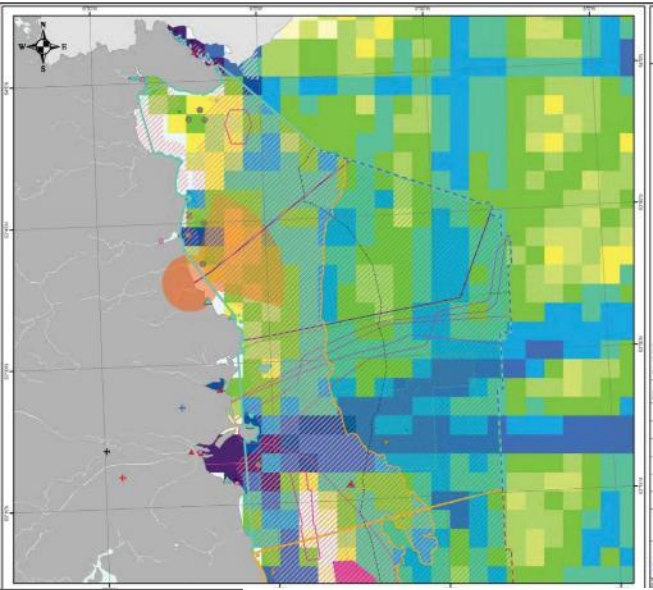
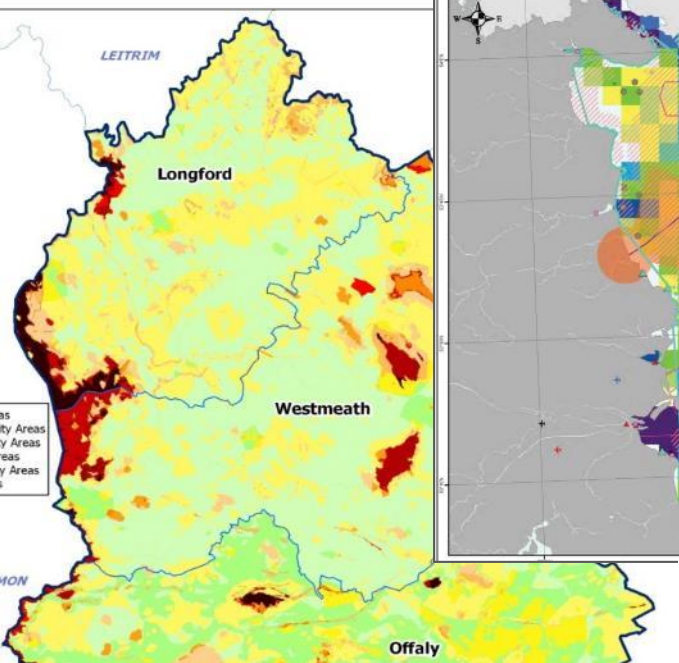
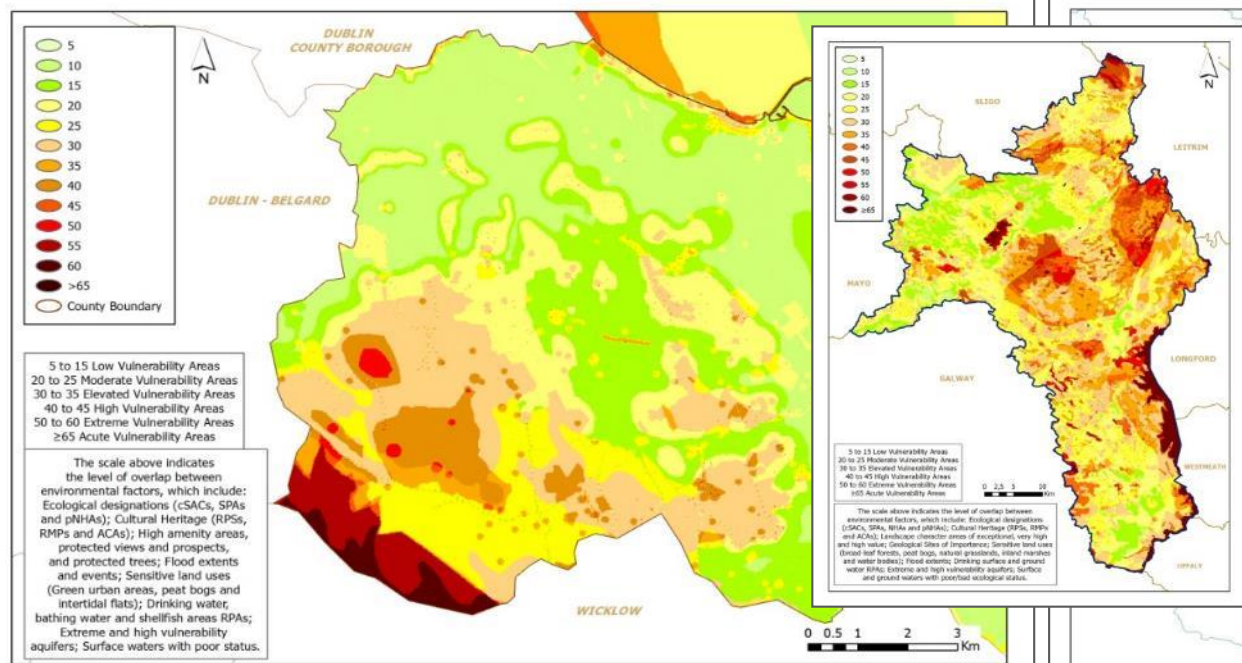
- Population and human health
- Biodiversity, flora, fauna
- Air and climate
- Soils and geology
- Water
- Landscape
- Cultural heritage
- Material assets
- Inter-relationships

**Multiple considerations,
spatial implications, consultation**

Spatial evidence-base for SEA and planning decisions

- ✓ Assessment consistency and transparency
- ✓ Intrinsic environmental conditions > susceptible to change
- ✓ Early-warning of potential land-use conflicts





Strategic Environmental Assessment of Wave, Tidal and Offshore Wind Development in Irish Waters
Figure 13.2: Technical Constraints Assessment Area 5

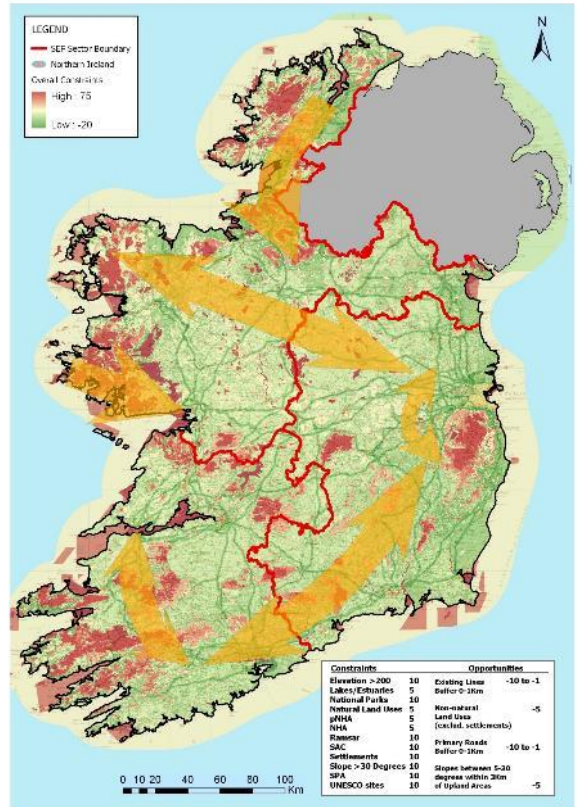
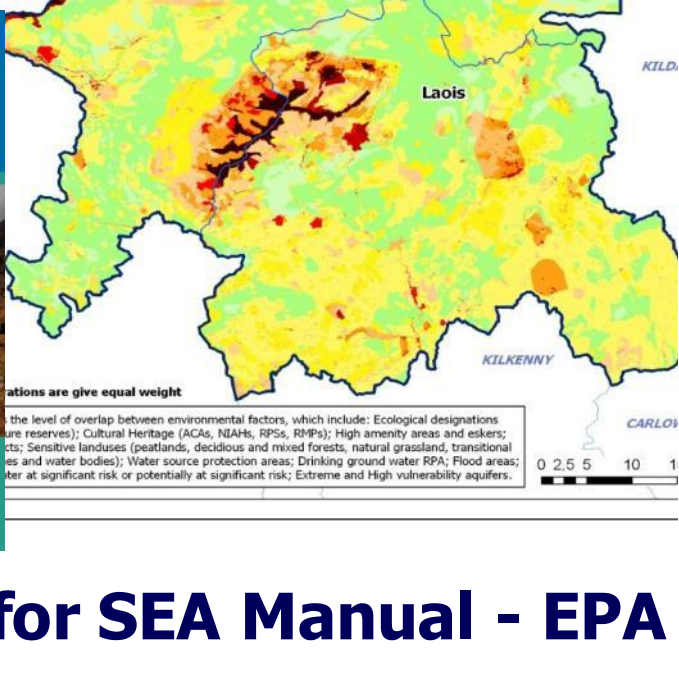
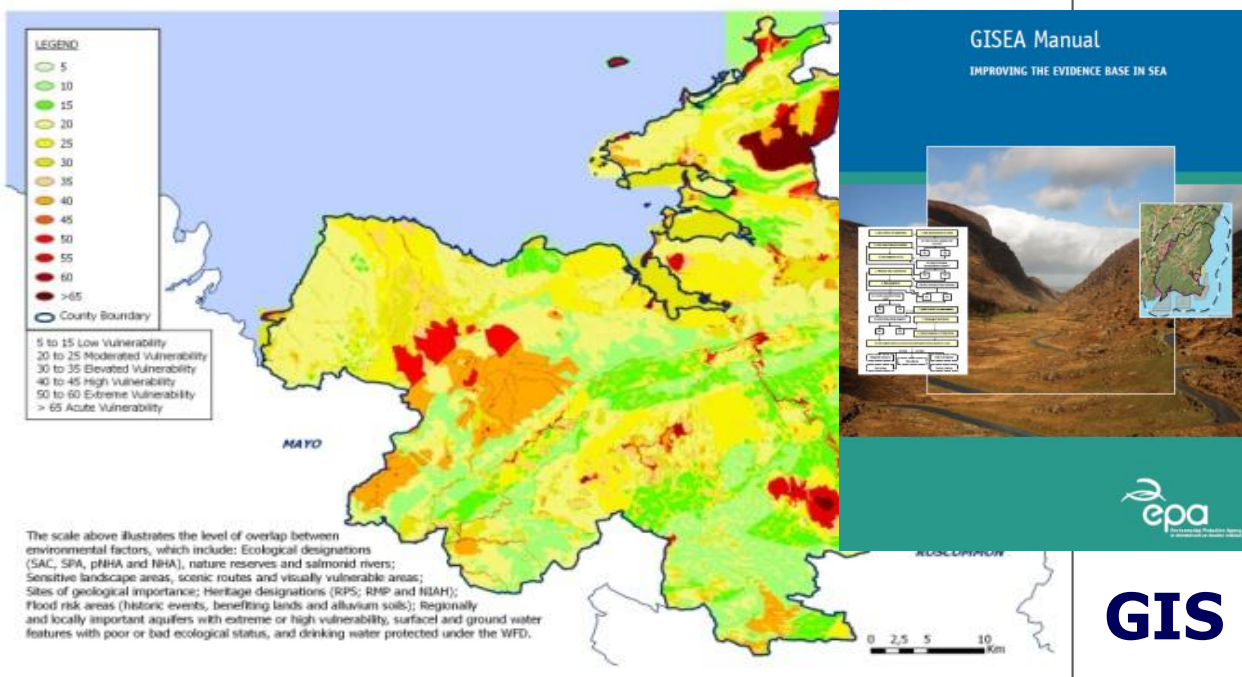
Legend

Map 1: Assessment Area where both the coast (at least High Water) and the shoreline are within the boundaries of the Vulnerability Assessment Area 5

Map 2: Not to be used for navigation

Table 1: Technical Constraints Assessment Area 5

Constraint	Value	Opportunity
Elevation > 200	10	Existing Linear
Landscape	5	Water > 10m
National Parks	10	Non-marine
Natural Land Use	5	Land Use
pNHAs	5	(excl. wetlands)
RPSs	10	Primary Roads
SAC	10	Water > 10m
Settlements	10	Slopes between 5-20
Slope > 30 Degrees	10	Slopes within 20m of Urban Areas
SPA	10	
UNESCO sites	10	



GIS for SEA Manual - EPA

Data Viewer

Access, Visualisation, Discovery

GeoHive Environmental Sensitivity Mapping

Layer List

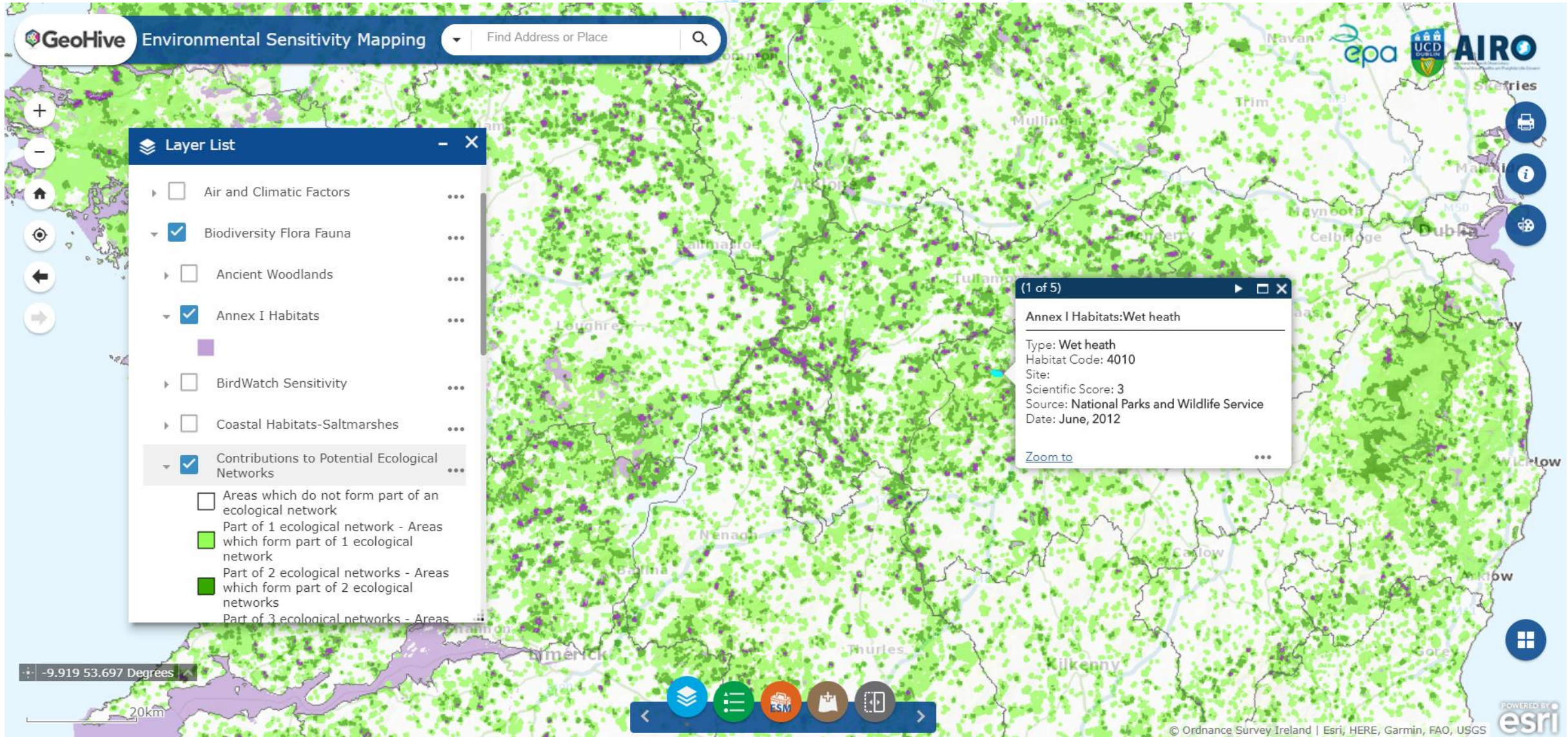
- Air and Climatic Factors
- Biodiversity Flora Fauna
- Ancient Woodlands
- Annex I Habitats
- BirdWatch Sensitivity
- Coastal Habitats-Saltmarshes
- Contributions to Potential Ecological Networks
 - Areas which do not form part of an ecological network
 - Part of 1 ecological network - Areas which form part of 1 ecological network
 - Part of 2 ecological networks - Areas which form part of 2 ecological networks
 - Part of 3 ecological networks - Areas

60km

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Data Viewer

Access, Visualisation, Discovery



ESM Widget

Bespoke geoprocessing tool

GeoHive Environmental Sensitivity Mapping Find Address or Place

ESM SEA Tool

- Natural Heritage Areas
- Proposed Natural Heritage Areas
- Candidate Special Areas of Conservation
- Salmonid Waters
- Special Protection Areas
- Woodland Habitats

Weight: **2**

Theme: Cultural and Heritage

- National Inventory of Architectural Heritage
- Record of Monuments and Places

Weight: **1**

Theme: Soils and Geology

- Geoparks and Geosites

Map labels: Charleville, Tralee, Killarney, Mallow, Cork, Bandon, Skibbereen, Yough, Eglis, Garngall.

Logos: EPA, UCD DUBLIN, AIRO

Scale: -10.990 51.321 Degrees, 20km

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POWERED BY esri

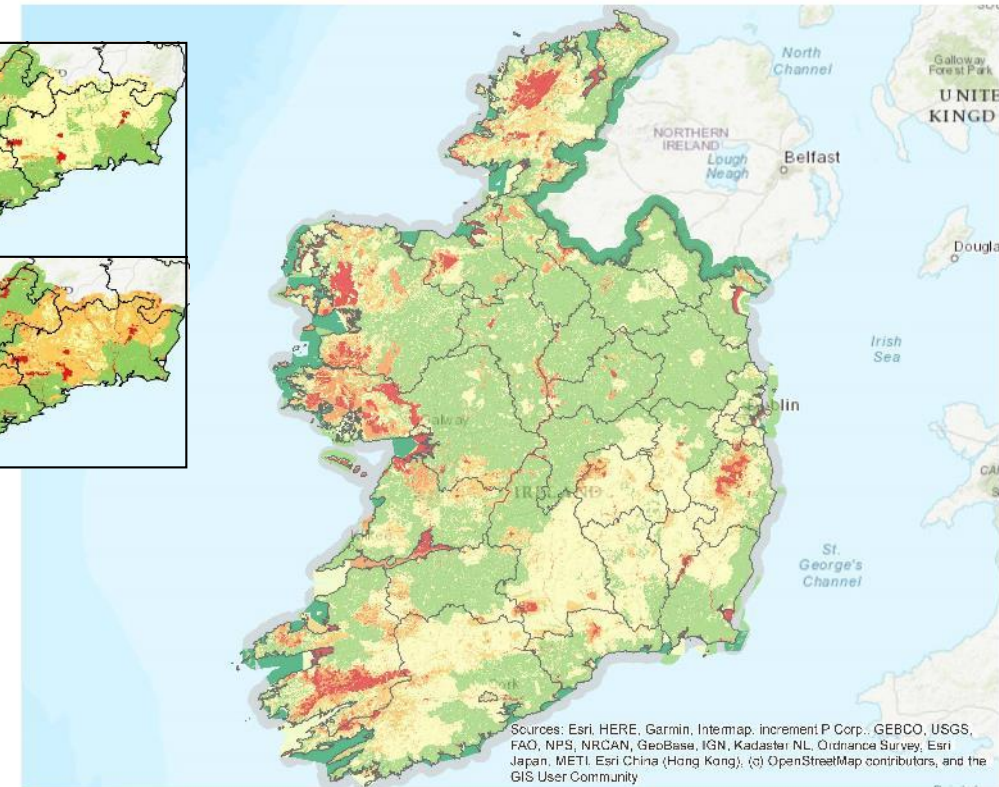
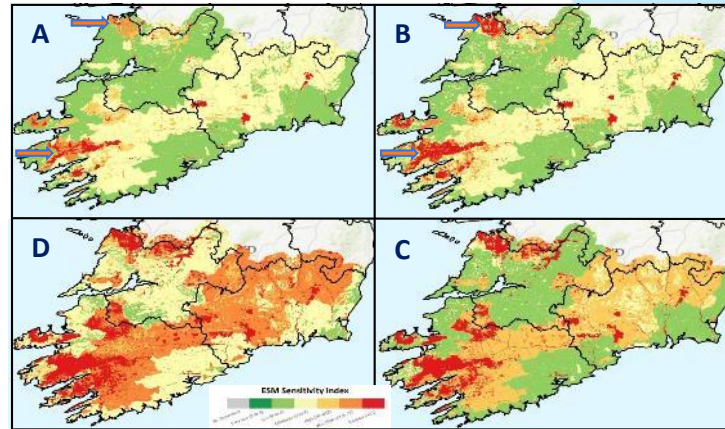
ESM Output

Transparency

- Map creator
- Date
- Selected datasets
- Applied weights

Comparability

- Systematic approach
- Transboundary assessments
- *When selecting same criteria and weights



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



ESM Sensitivity Index



Date: 9/22/2019 Time: 2:16:21 PM Author: AIRO

*This map is an aggregate result based on the variables and user defined weights listed below.
Warning: Please note that weights are only to be used to emphasize the relative significance of an environmental aspect - applying weights to more than two themes would magnify, and possibly overstate, the overall sensitivity.

Air & Climatic: Weight: 1 Variables: Air Zones, Historical Flood Extents

Biodiversity, Flora and Fauna: Weight: 1 Variables: Ancient Woodlands, Annex I Habitats, Forest Inventory, Marginal Flora, Scientific Areas, Natural Heritage Areas, Proposed Natural Heritage Areas, Special Areas of Conservation, Special Protection Areas

Cultural Heritage: Weight: 1 Variables: National Inventory of Architectural Heritage (NIAH), Sites and Monuments Record

Population and Human Health: Weight: 1 Variables: WFD RPA Groundwater Drinking Water, WFD RPA Surface Water Drinking Water (Lakes), WFD RPA Surface Water Drinking Water (Rivers)

Soils and Geology: Weight: 1 Variables: Peat Bogs

Water: Weight: 1 Variables: Aquifer Vulnerability, Groundwater Source Protection Areas, Wetlands, WFD RPA Recreational Waters (Coastal and Transitional Water Bodies), WFD RPA (Recreational Waters (Lakes)), WFD RPA Water Dependant Habitats (SACs), WFD RPA Water Dependant Habitats (SPAs)

SEA and Planning Support Tool

- **Evidence-based assessments and decisions**
- **Efficiency...time and cost savings**
- **Good governance - consistency, transparency, comparability**

ESM Training

- **25th June 10:00-13:30**
- **Register: <https://www.eventbrite.ie/e/149717211209>**
- **Additional workshops in the Autumn**

The background is a solid blue color. On the left side, there are several dandelion seed heads. Some are in the foreground, appearing as dark blue silhouettes, while others are further back, appearing as white outlines. Numerous dandelion seeds are shown in flight, scattered across the upper half of the image, with some having long, thin stems and others as small, star-shaped heads.

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www.enviromap.ie

ainhoa.gonzalez@ucd.ie