



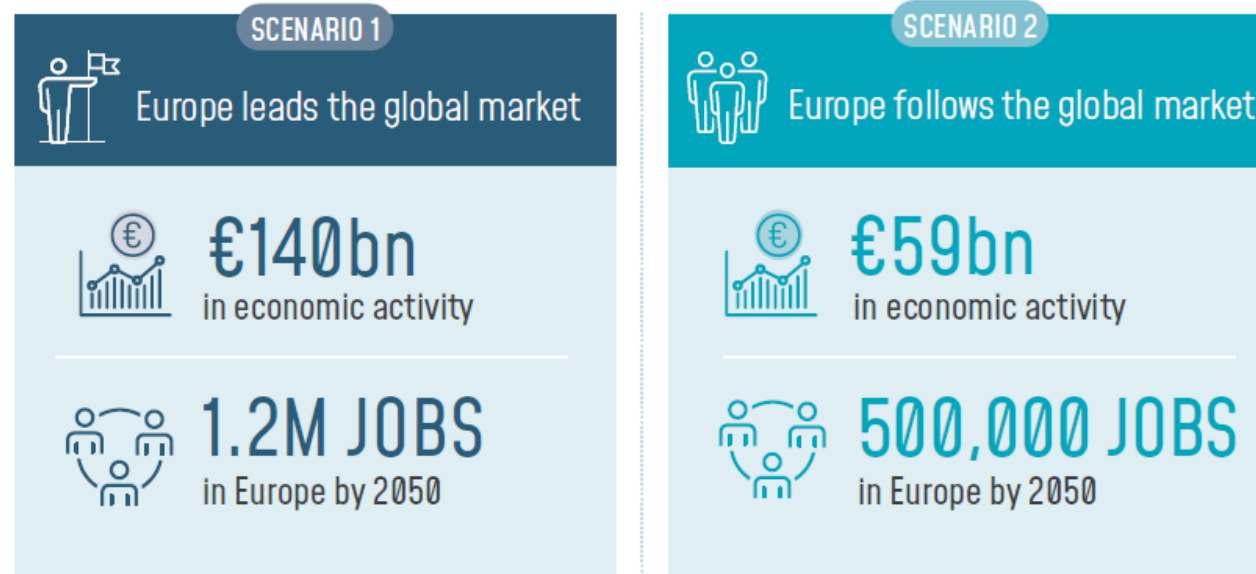
European Technology & Innovation Platform for Ocean Energy

ETIPOcean webinar –Social Value of Ocean Energy

14 December 2021

Socio-economic benefits

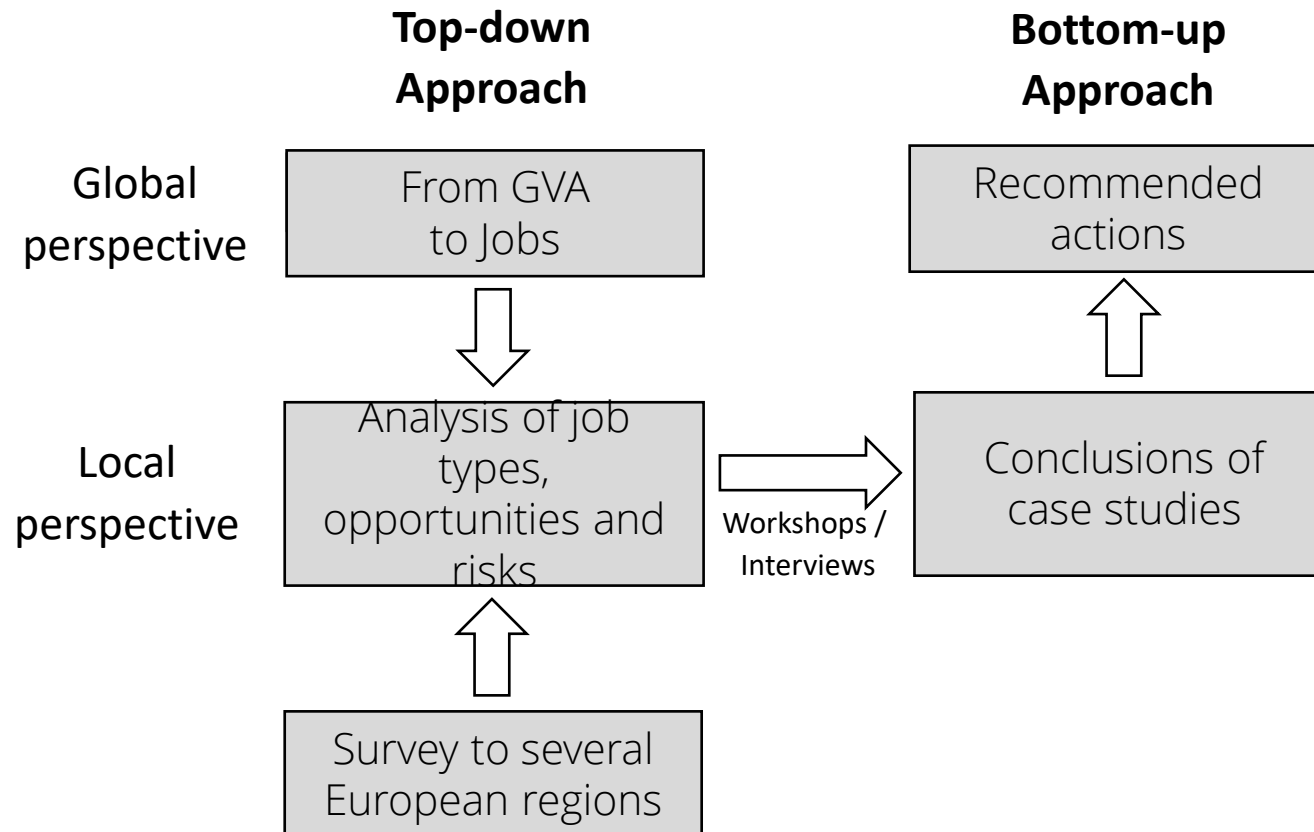
- The EU prioritisation of ocean energy is not just about **decarbonisation** and **energy system balancing**;
- It is also about **economic opportunities** for the European industry and **employment** for the citizens.



Purpose of the Study

- To quantify and discuss the future value of the ocean energy sector in Europe in terms of its **socioeconomic benefits**.
- Based on a previous **GVA analysis** (led by the University of Edinburgh).
- Gathering evidence on the direct and indirect impacts of ocean energy on **regions** in terms of various **assessment parameters** such as jobs, training needs or business opportunities.
- **Case studies** to identify lessons learnt and specific opportunities.

Overall Approach



Characterisation of European Regions (NUTS 2)

- Why **regions**?
 - ✓ Easier to identify key stakeholders (with the support of regional associations)
 - ✓ Enough critical mass (industry, jobs...) to get conclusions
- Regions are characterised according to several parameters, grouped in two set of key indicators:
 - ✓ **Drivers** or **Opportunities**: These indicators refer to favourable external factors that could give the local community a competitive advantage.
 - ✓ **Capabilities** or **Strengths**: These indicators describe the outstanding features that separate this type of local community from the rest.
- Whereas opportunities focus on external factors, capabilities pay attention to the internal characteristics of regions.

Assessment of European Regions (I)

- **1st Step:** Select **relevant factors** to measure opportunities and capabilities.

Opportunities

Political factors	
Presence of strategies to support the ocean energy deployment in the region.	
Presence of labour policies to support the ocean energy deployment in the region.	
Policies in place to support new businesses in the field of ocean energy.	
Economic factors	
Presence of market pull funding mechanisms for the development of new ocean energy projects.	
Share of renewable energy in gross final energy generation in the region.	
Level of dependence on external energy sources.	
Societal-environmental factors	
Social perception of ocean energy in the region.	
Potential of the region's ocean resources for energy generation (*).	
Specific consenting process for ocean energy.	

Capabilities

Industry configuration	
Weight of the industry sector in the region's economy (*).	
Infrastructures for the deployment of ocean energy.	
Region's readiness to supply products or services for ocean energy.	
Level of entrepreneurship in the region (*).	
Technological development	
Region's gross domestic expenditure on R&D (*).	
Region's innovation index (*).	
Number of product or process innovators in the region (*).	
Region's key technological know-how for the development of ocean energy.	
Human resources	
Employment in medium and high tech manufacturing and knowledge intensive services (*).	
Workforce with STEM skills (*). (STEM: Science, Technology, Engineering and Mathematics)	
Region's labour productivity (*).	

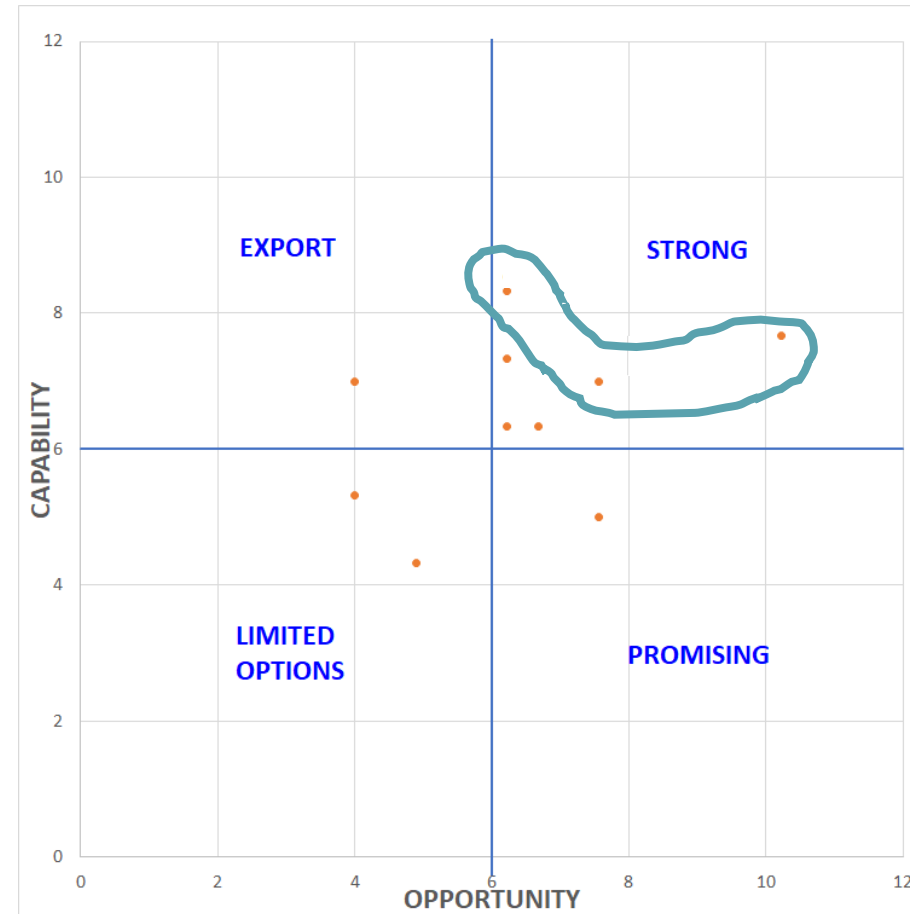
Assessment of European Regions (II)

- **2nd Step:** Assign **scaling statements** to each factor. Four scaling levels considered:
 - ✓ 0 or Low.
 - ✓ 4 or Low to medium.
 - ✓ 8 or Medium to high.
 - ✓ 12 or High.
- **3rd Step:** Gather values for each factor (20):
 - ✓ The values for **9 factors (*)** have been obtained through **public data sources** (Eurostat, Regional Innovation Scoreboard, ...)
 - ✓ The values for **11 factors** have been requested from the regions through a **questionnaire** designed for this purpose

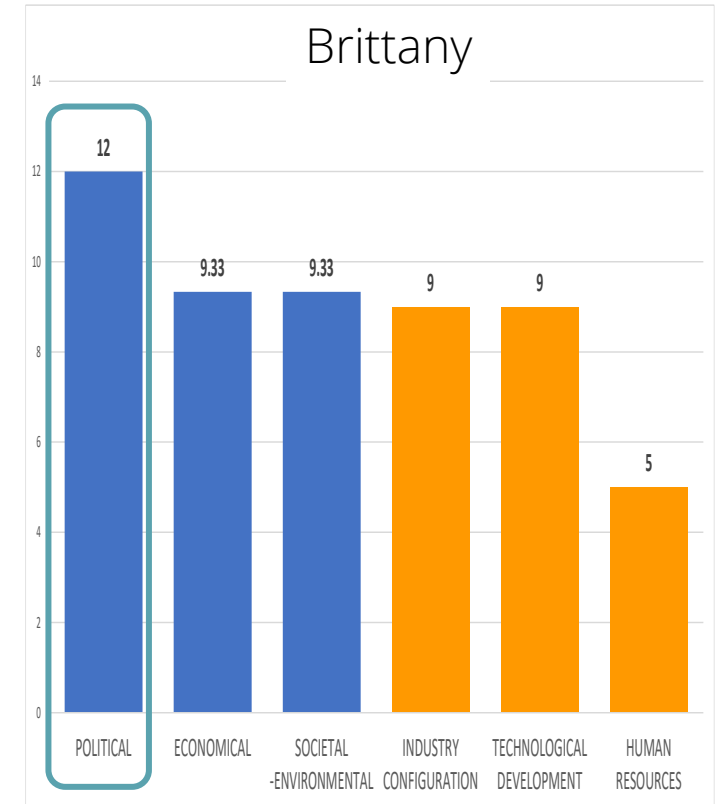
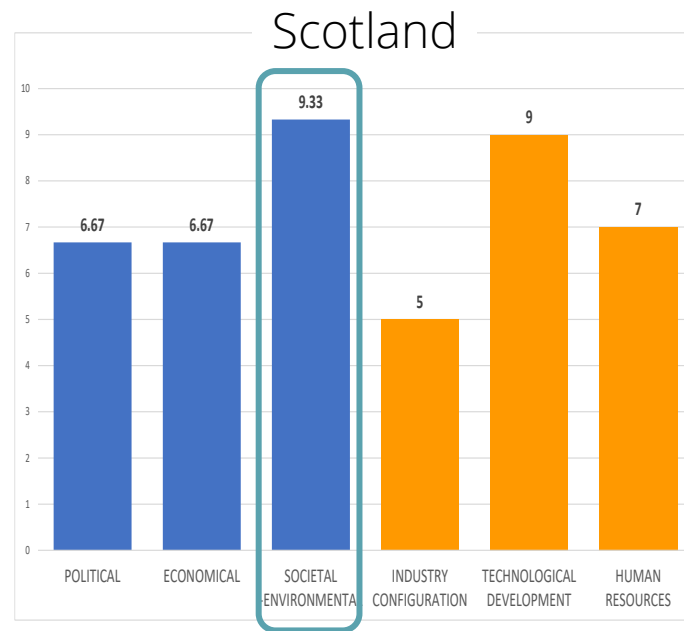
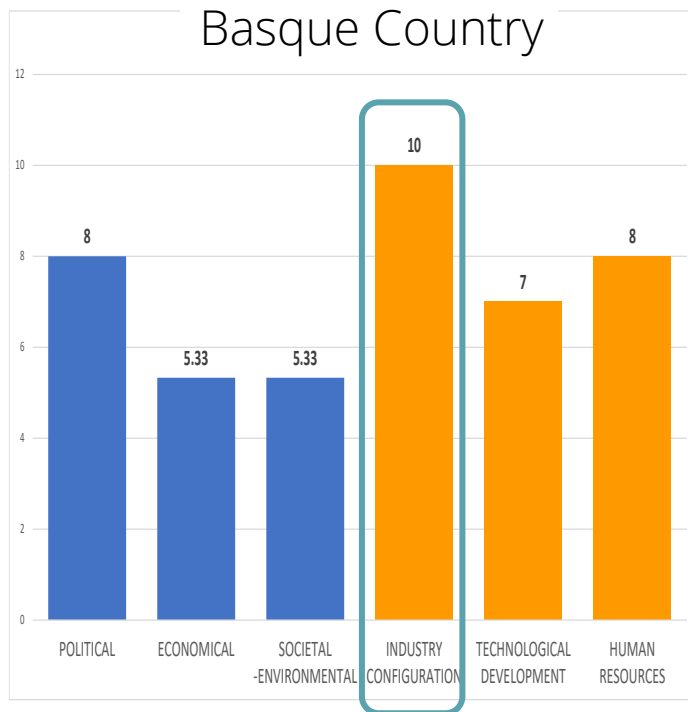
Scoring Results (I)

- 10 regions surveyed from 5 European Countries

No.	NUTS2 Region	Country
1	Pays de la Loire	France
2	Brittany	France
3	Scotland	UK
4	Wales	UK
5	Basque Country	Spain
6	Cantabria	Spain
7	Galicia	Spain
8	Asturias	Spain
9	Flanders	Belgium
10	Province of Gelderland	Netherlands



Scoring Results (II)



Case Studies: Basque Country, Scotland & Brittany

What **benefits** do ocean energy technologies have for the **Region**?

And what **challenges** do these technologies pose for us here?

What **good practices** do you know about making the most of the opportunities offered by **ocean energy** in the **Region**?

And what **actions** would you implement to make better use of these opportunities in the **future**?

Summary of Best Practices & Actions: Capabilities

- **Industry configuration**
 - A regional association to coordinate the value chain.
 - Strengthen the value chain: infrastructures, supply chain, developers, test centres & RTOs.
 - Create a specific ocean energy brand to gain visibility beyond the region.
 - Accredited entities to provide technology verification.
- **Technology development**
 - Demonstrate technological and financial reliability.
 - Webinars and reports to capture best practices and lessons learnt from deployments.
 - Concentrate efforts on solving specific technology challenges to the sector.
 - Diversify and transfer skills from other sectors – such as oil and gas or maritime
 - Participate in European and international networks and collaborative programmes.
- **Human resources**
 - Achieve a critical mass of researchers, workers and dedicated staff involved in ocean energy.
 - Leading universities and research centres contributing to valuable research outputs.
 - Promote training at all levels to have access to very specific knowledge in the sector.

Summary of Best Practices & Actions: Opportunities

- **Political factors**

- Define a regional strategy specific for ocean energy, establish targets and future planning requirements.
- Strong institutional support.
- Innovate with respect to the support mechanisms for ocean energy (e.g. Wave Energy Scotland, Saltire Fund).
- Provide consistent funding for early stage technology developers (i.e. long term stability).
- Promote lighthouse projects to develop practical expertise, build confidence and align efforts.
- Develop standardised consenting and licensing processes.

- **Economic factors**

- Efficient use of scarce resources.
- Existence of market pull mechanism (e.g. a feed-in-tariff with contract for difference).

- **Socio-environmental factors**

- Public engagement, continued communication with local communities and other maritime users to raise awareness.
- Support jobs and economic growth, particularly in fragile coastal communities and islands.
- Maximise local content within the supply chain needs (i.e. company increase in scale and production volumes).
- Create a Renewable Energy Community to materialise more local socio-economic impacts (e.g. social cohesion).

Next steps

1. Regions interested in ocean energy are invited to **make a self-assessment** of their opportunities and capabilities to know the current positioning.
 - **Strong quadrant:** Regions show good opportunities and good capabilities.
 - **Promising quadrant:** Regions show good opportunities but limited capabilities. An improvement in their capabilities may lead them to the strong quadrant.
 - **Exporting quadrant:** Regions show high capabilities but limited opportunities. They can therefore export their capabilities to other regions with greater opportunities.
 - **Limited options quadrant:** Regions have both limited opportunities and capabilities.
2. Build the **region's strategy** to rip the desired socio-economic benefits and impacts:
 - Setting the right direction to reinforce the capabilities and maximise the opportunities;
 - Providing an indication of the level of effort to achieve this.

Thank you!

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