

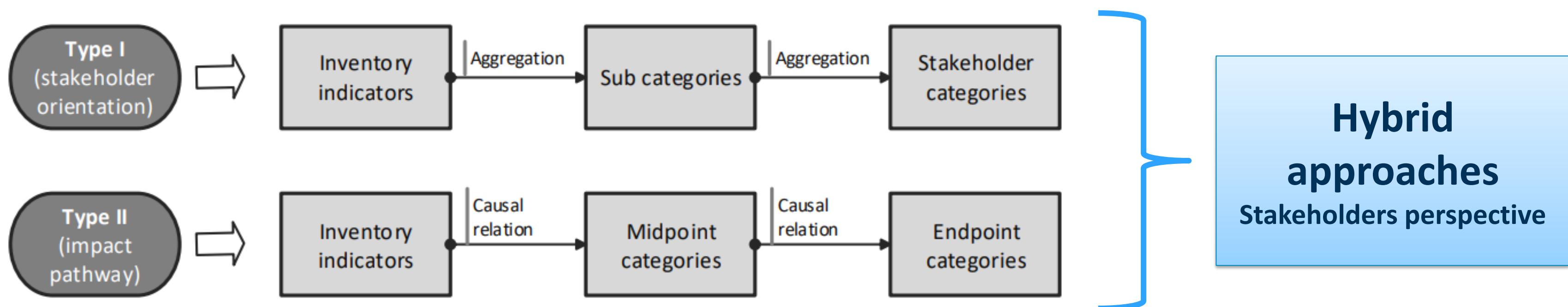
# The challenges of social integration of offshore wind power in France

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Researcher in sociology, France Energies Marines

[Webinar TTI.5] Wind power: forecasts, environmental impacts and social integration  
Mines Paris –PSL  
25/09/2025

- Social LCA : a systematic approach for the evaluation of social and socio-economic aspects of a technological project throughout its life-cycle
  - Considering geographical and contextual social risks
  - Understanding impacts of decisions on different stakeholders
  - Supporting decision-makers choosing among options depending on prioritized criteria
  - Linking territorial integration with identified social criteria
- Two types of Social LCA approaches

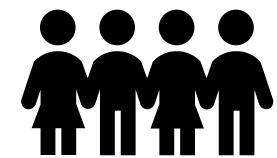


- New ISO 14075 standard on Social LCA framework – October 2024

- UNEP Guidelines (2020)

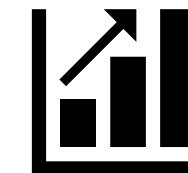
Defining involved/concerned social groups (e.g. stakeholders)

Who are we talking about ?



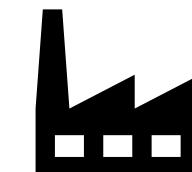
Defining indicators to measure risks and social performance of companies

How to measure it ?



Defining the system and industrial process (common to environmental and social LCA)

What are we talking about ?



- Necessity for sectoral adaptation of the S-LCA framework

- ANR LIF-OWI (2020-2023): Social LCA in offshore wind energy context
  - Adapting tools according to different geographical scopes



## ➤ Application

### Global

- Technological scenarios for risk estimation in supply chain



10MW x 50      50 km



12MW x 42      80 km

### Local

### National

- Case studies for site-specific data collection

Lehmann et al., 2021, 2024



- Examples of social impact indicators applied on offshore wind context (based on literature review)

Spatial scope	Stakeholder category	Impact subcategory	Normalised gap score	Indicator
Local community	Local community	Sharing of spaces	15%	Percentage of willingness to practice recreational fish near OWF
		Local employment	11%	Indirect local job
Local	Consumers	Service to consumers	18%	Percentage of local consumption for the administrative department
	Value chain	Wealth distribution	31%	Local content: share of project cost captured by regional companies
	Workers	Equal opportunity	12%	Social clauses

- Need for further site-specific sustainability studies to improve the assessment of these indicators

# Monitoring offshore wind impacts on coastal tourism activities

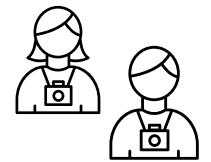


SEM-REV demonstrator ©FEM/Y.Baulaz



Banc de Guérande OWF ©FEM/Y.Baulaz

- Approaches to study the impacts of offshore wind farms (OWF) on tourism



*Tourist  
behaviors*



*Recreational  
activities  
dynamics*



*Perceptions*



*Local tourism development  
strategies*

***Very limited research specific on the impacts of offshore wind farms on tourism and recreational activities***

## Benin and +

 *Trandafir and Lang 2020*

 *Fortin et al. 2017*

 *Glasson et al. 2022*

 *Cabanis 2018*

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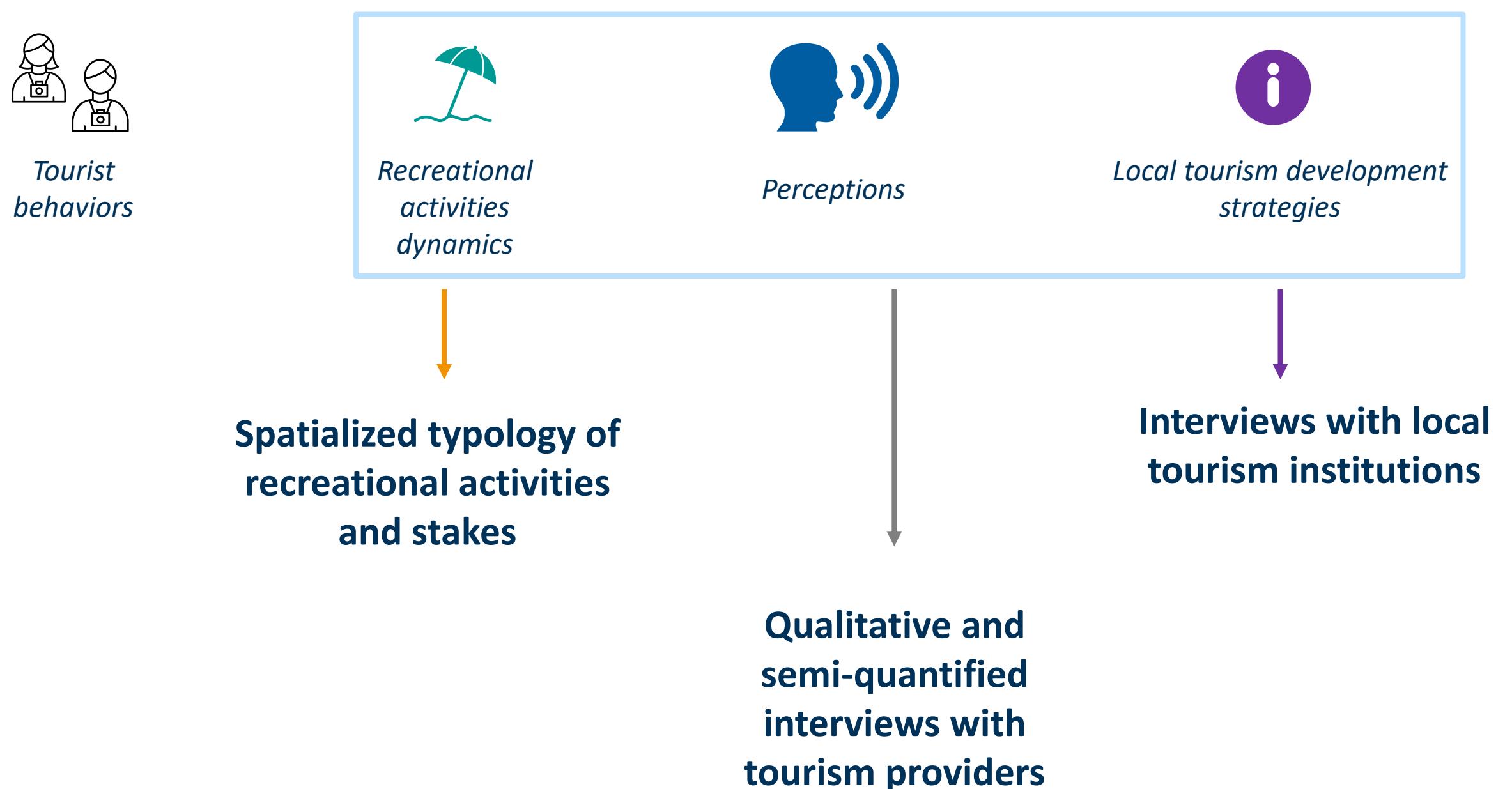
 *Voltaire and Koutchade 2020*

 *Broekel and Alfken 2015*



*The tourist behaviors  
evolved with time ...*

Comparative & Empirical inductive approaches  
A participatory perspective - from stakeholders providing tourism supply



Baulaz and Fofack-Garcia, 2024

- 3 OWF case studies

- Fixed OWF
- Floating
- Floating pilot site

- Competitive tendering
- In development
- Authorization obtention
- Construction
- End of construction
- In operation

9



# Methodology – case studies

- Saint-Nazaire - Banc de Guérande OWF

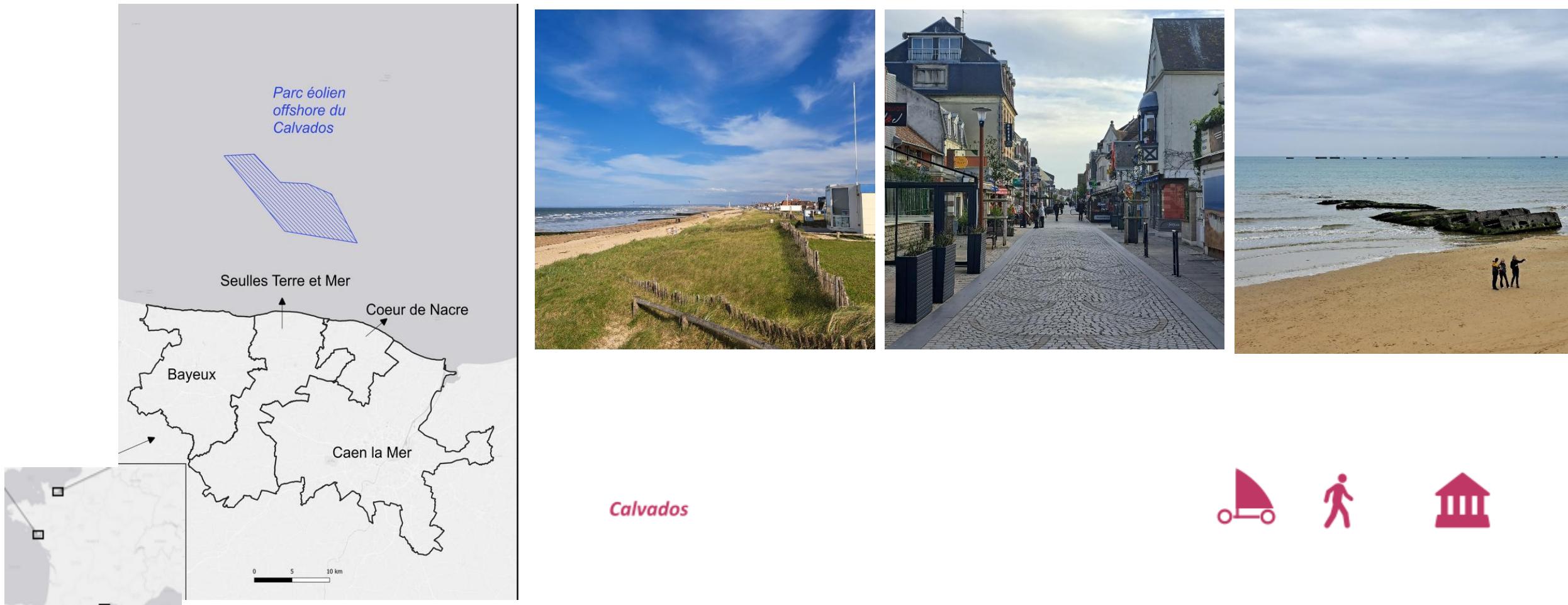


*Banc de Guérande*



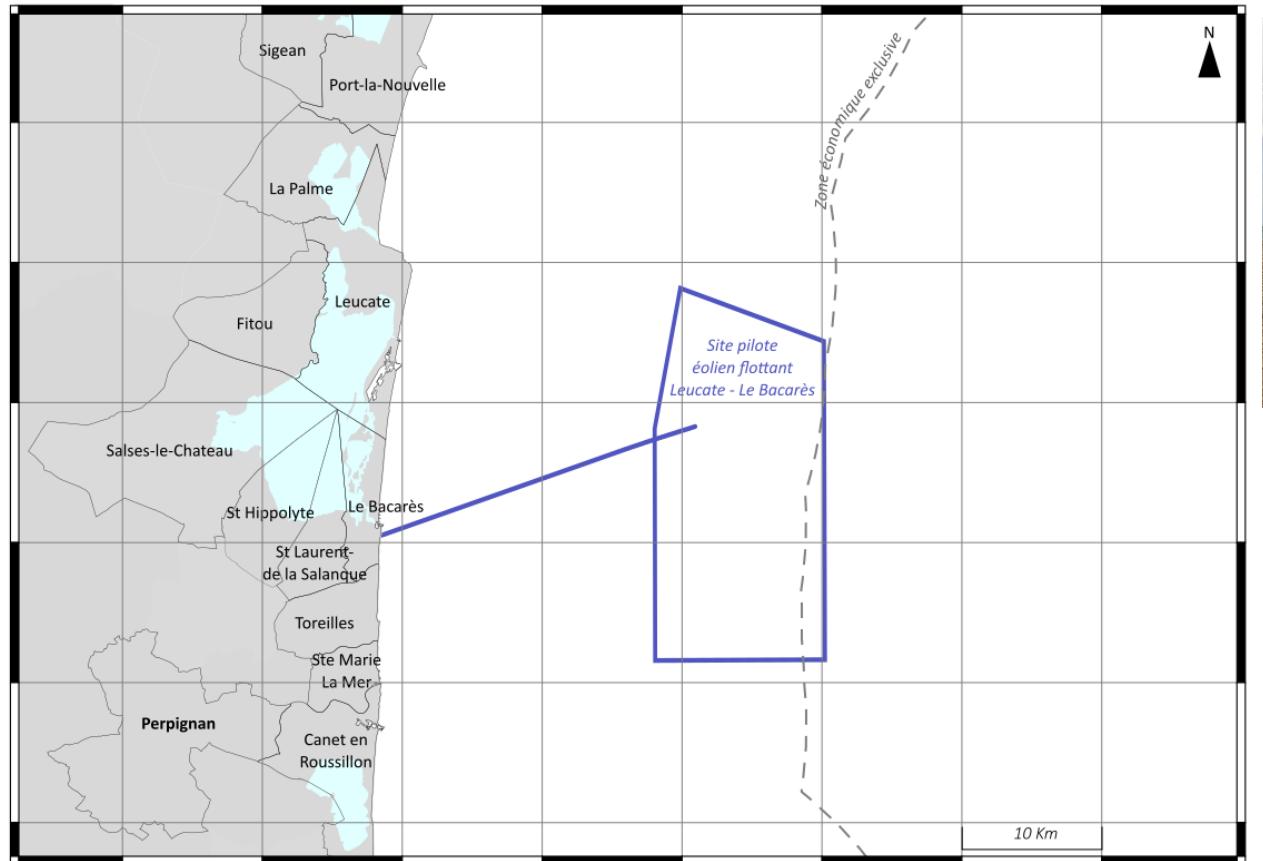
# Methodology – case studies

- Courseulles-sur-mer / Calvados OWF



# Methodology – case studies

- Leucate pilot floating OWF



Leucate

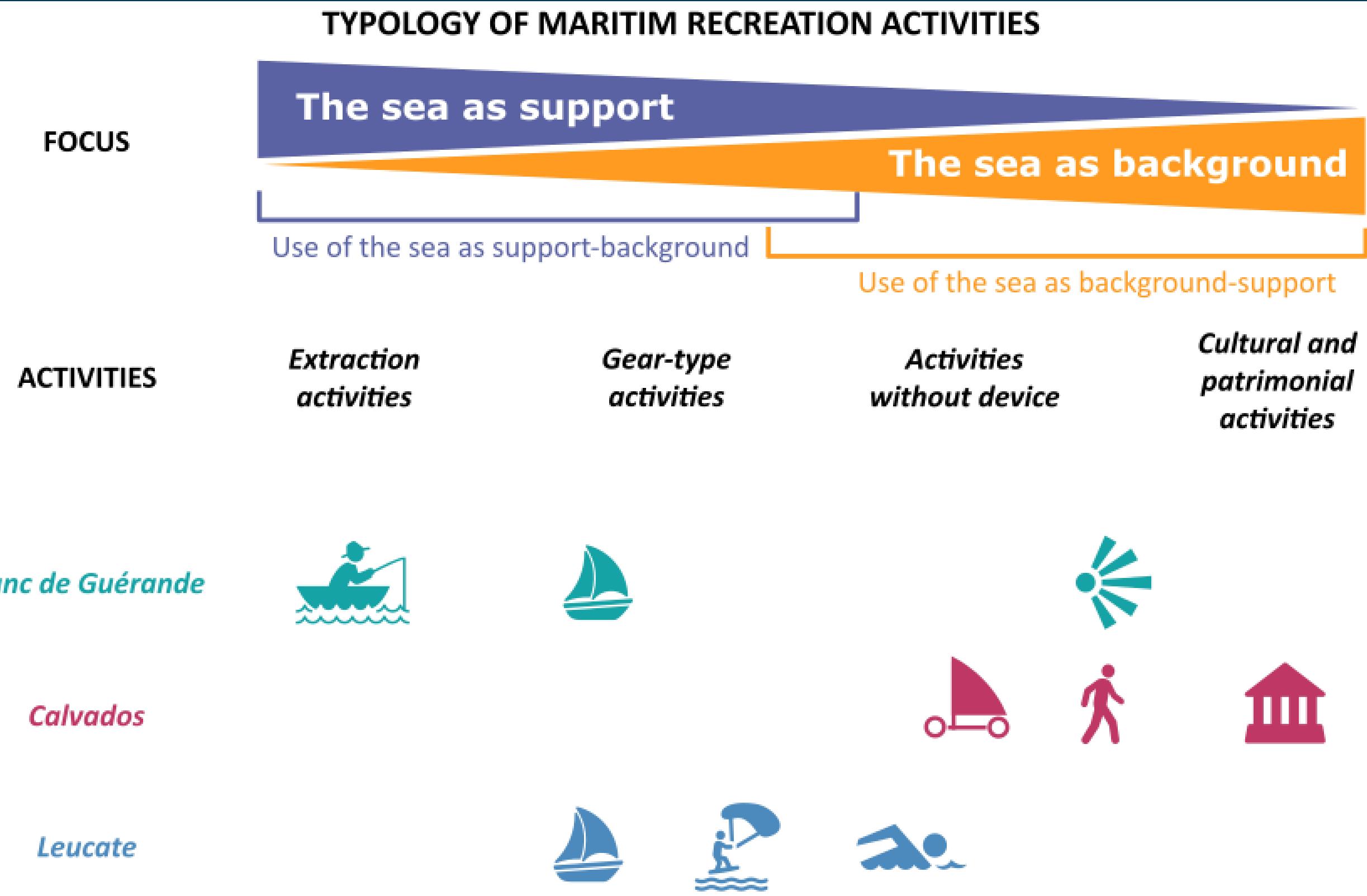


## Interviews

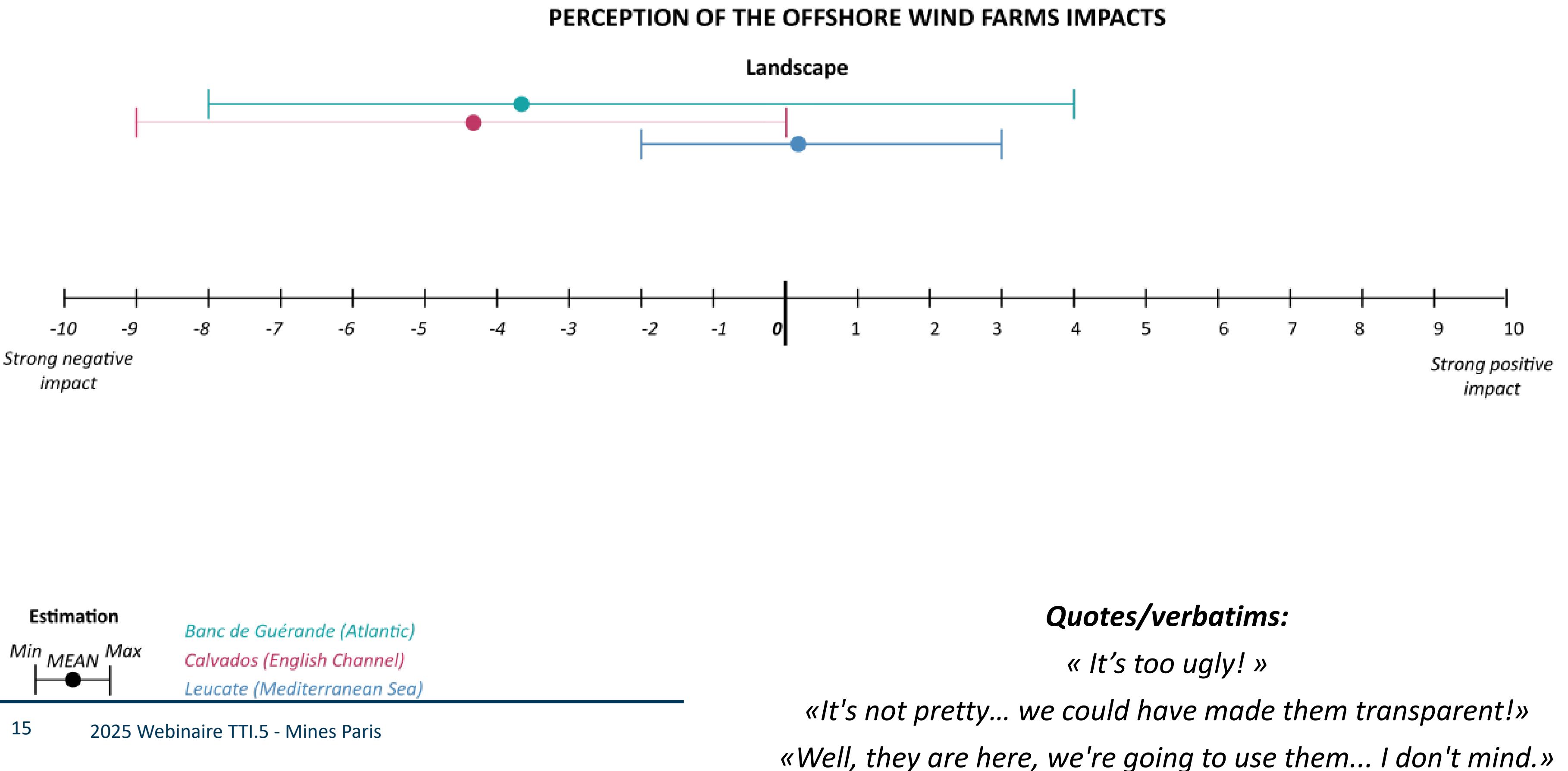
- In 2023
- *Objective: collect empirical informations, define touristic destinations and understand OWF potential impacts*

Study site	Banc de Guérande	Calvados	Leucate
<b>Recreation activities representatives</b>			
Angling	2	1	1
Rent & Boat tour	2	1	1
Sailing	2	0	1
Diving	1	1	1
Kitesurf & kayak	2	1	1
Surf	1	0	0
<b>Tourism administrative</b>			
Receptionists	6	5	5
Directors & politics	3	3	2
<b>TOTAL</b>	<b>19</b>	<b>12</b>	<b>12</b>

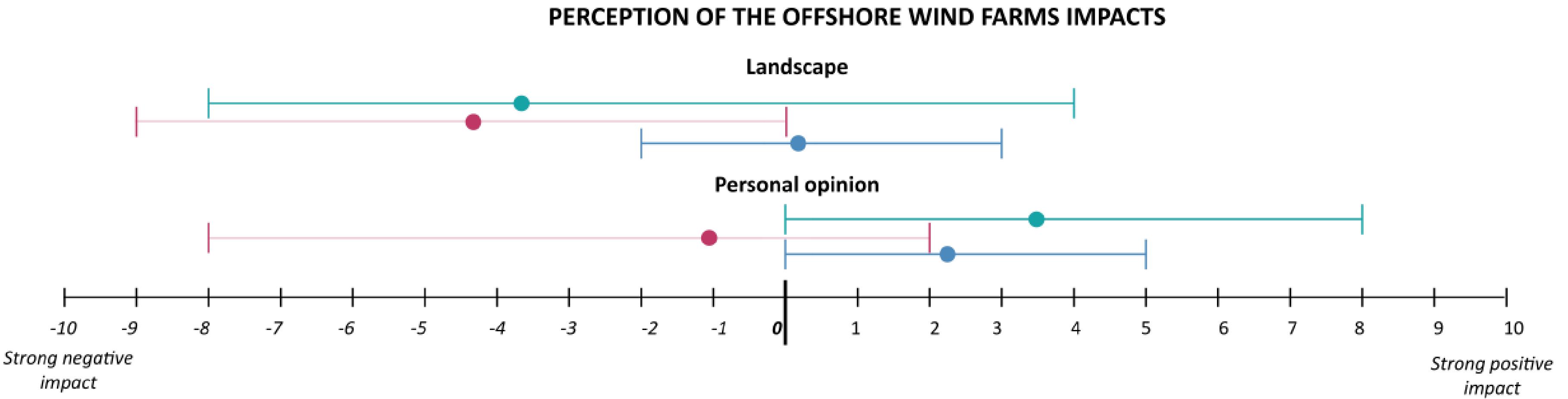
# Results: a comparison of recreational activities



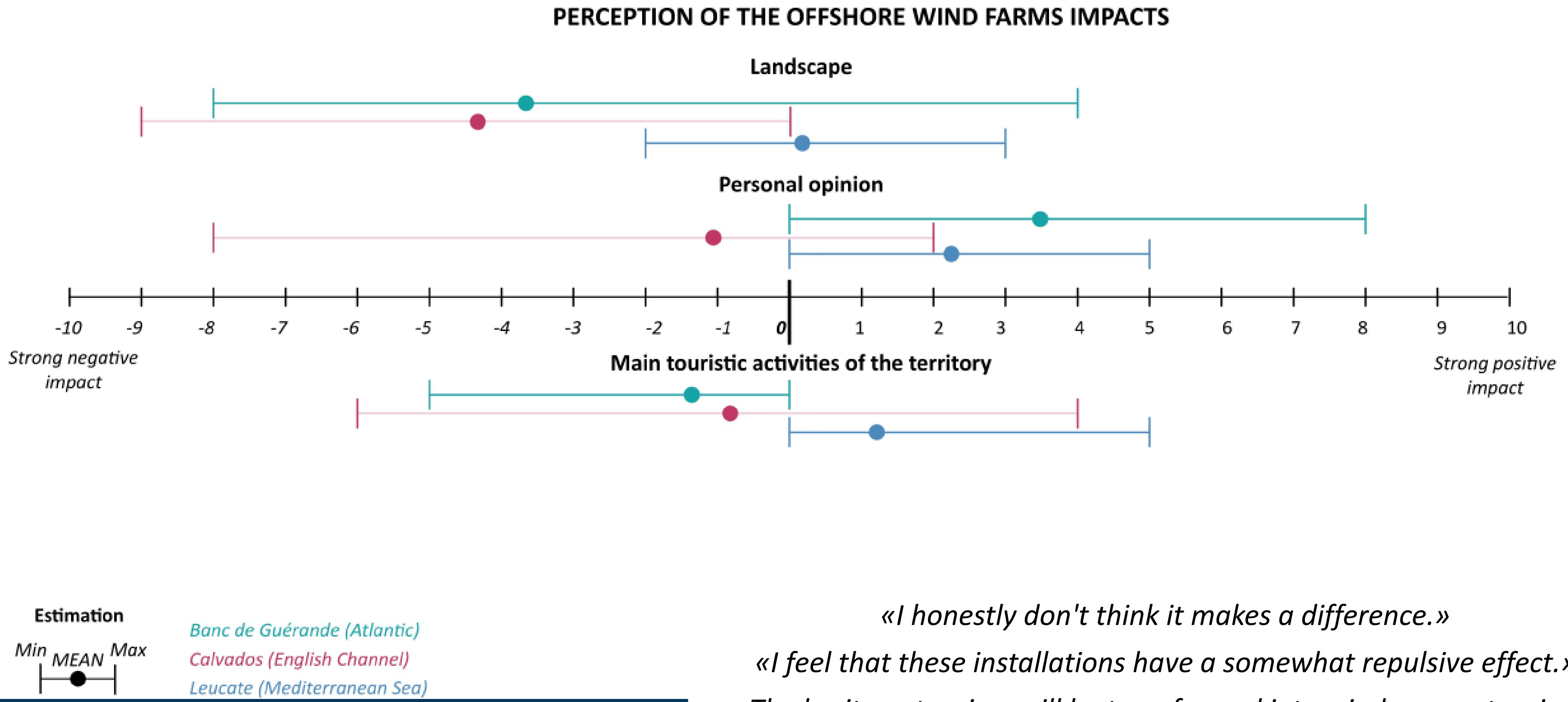
# Results: Social perceptions of the OWF impacts on tourism



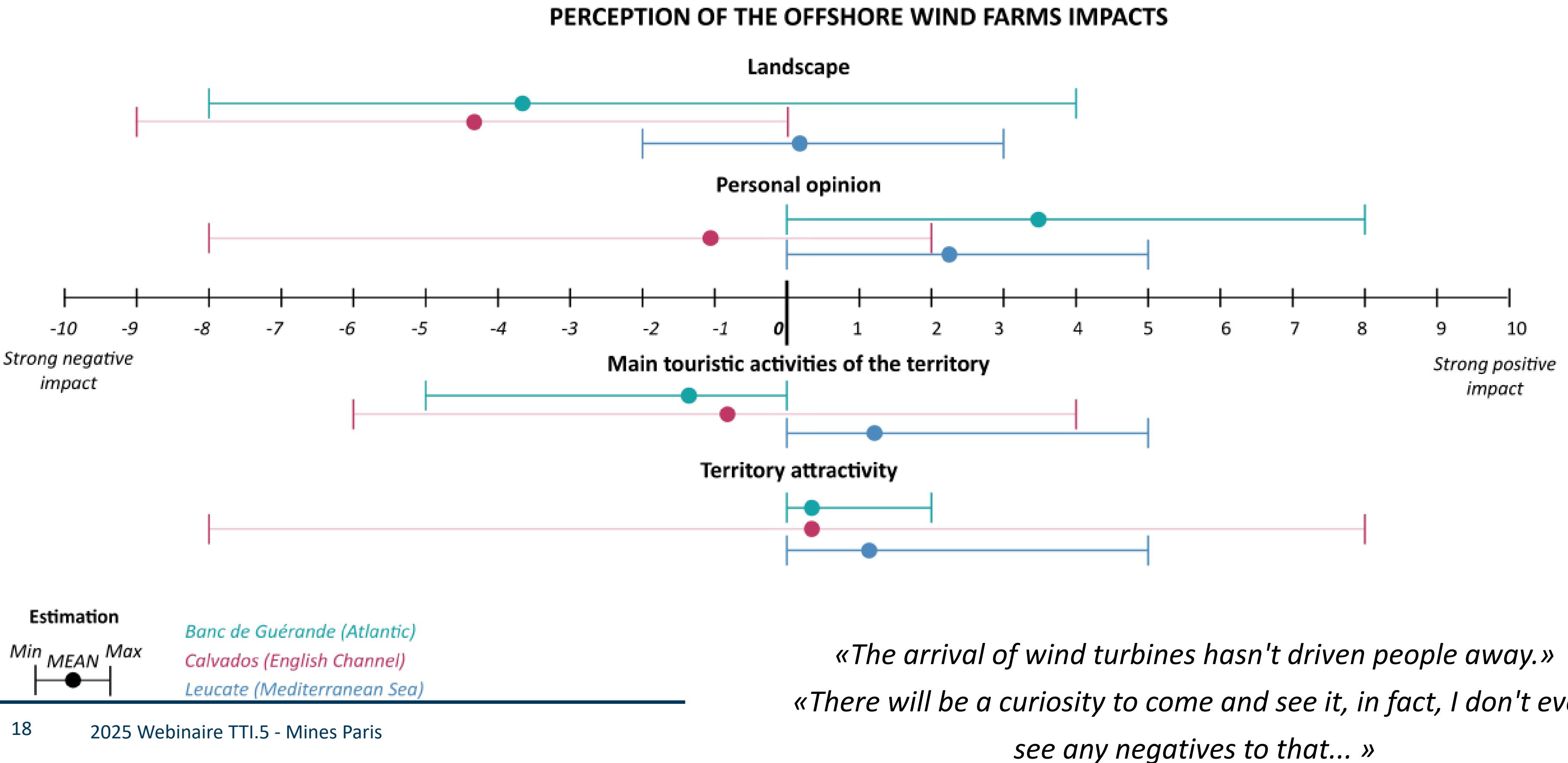
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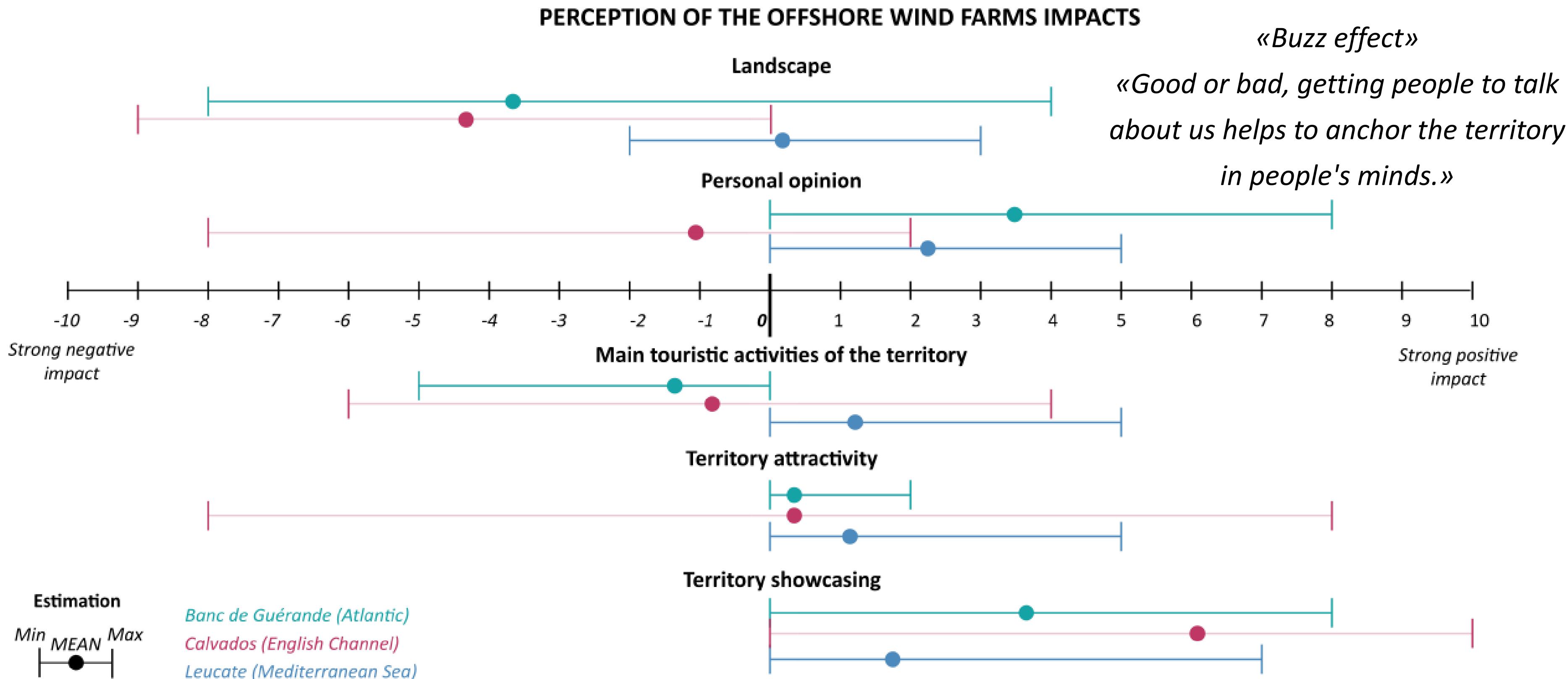
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# Summary of the results on social perceptions

## Banc de Guérande

- No significative change on recreative activities
- The OWF is seen as a new opportunity

## Calvados

- Fears regarding a potential conflict with heritage tourism

## Leucate

- A territory already well invested by wind energy
- No concerns perceived regarding OWF potential impacts

# Results: An emerging « offshore wind tourism »

A new touristic offer under development

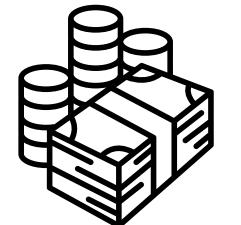


*EOL Center: first French museum dedicated to offshore wind energy*

*25 625 visitors in 2022*



*Boat tour to visit the OWF  
For one of the two main company:  
1 057 visitors in 2023 - 28 620 € sales*



*« Kitesurf festival » in Leucate – april 2024*



**EOLEN MER**  
OBSERVATOIRE

sciences milieux sociétés

- **Contrasting perceptions** between sites and specialization in tourism activities
- **Consolidated method** to monitoring evolutions in impacts and perceptions: **new surveys in 2025**
- Beyond tourism, need to consider **cumulative impacts** at different scales and throughout all life-cycle stages



Horizon Europe project (2025-2029)

- **COMPASS - Comprehensive Offshore Management Platform for Assessing Sustainability**
  - An Open-source tool platform designed to integrate environmental, economic and social (LCA) models
  - A holistic understanding of environmental, social and economic impacts of OWF from global to local scales
  - An adaptive decision-support platform that accounts for the variability of OWF designs (bottom-fixed and floating technologies)

Thank you for your attention.

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