



Streamlining the Assessment of Environmental Effects of Wave Energy

Final remarks and conclusions



European Technology & Innovation Platform for Ocean Energy

28 November 2024



This Project is co-funded by the European Climate, Infrastructure and Environment Executive Agency (CINEA)



**Environmental
Research Strategy**

**Consenting and
Planning Strategy**

**Public Engagement
Strategy**

**CONCLUSION AND
PATH FORWARD**



KNOWLEDGE

UNCERTAINTY



SHARED





CONSENTING AND PLANNING STRATEGY

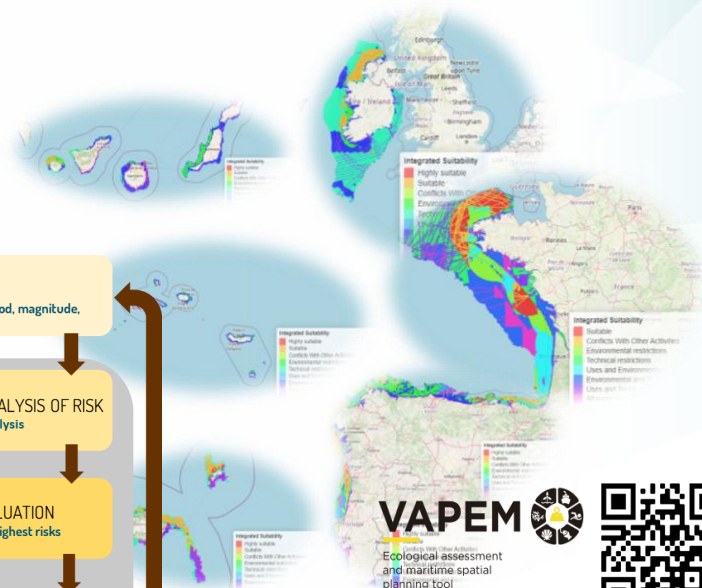
Step 1
DESCRIBE CONTEXT
site description, pressure likelihood, magnitude,
intensity, receptor

Step 2
CHARACTERISATION & ANALYSIS OF RISK
likelihood and consequence analysis

Step 3
RISK ASSESSMENT & EVALUATION
rank risks, identify relative risk, highest risks

Step 4
MANAGE RISK & IMPLEMENT MITIGATION
deploy, manage risk, implement mitigation measures

Collect data, Adaptive Management Approach



Environmental Research Strategy

Consenting and Planning Strategy

Public Engagement Strategy

CONCLUSION AND PATH FORWARD



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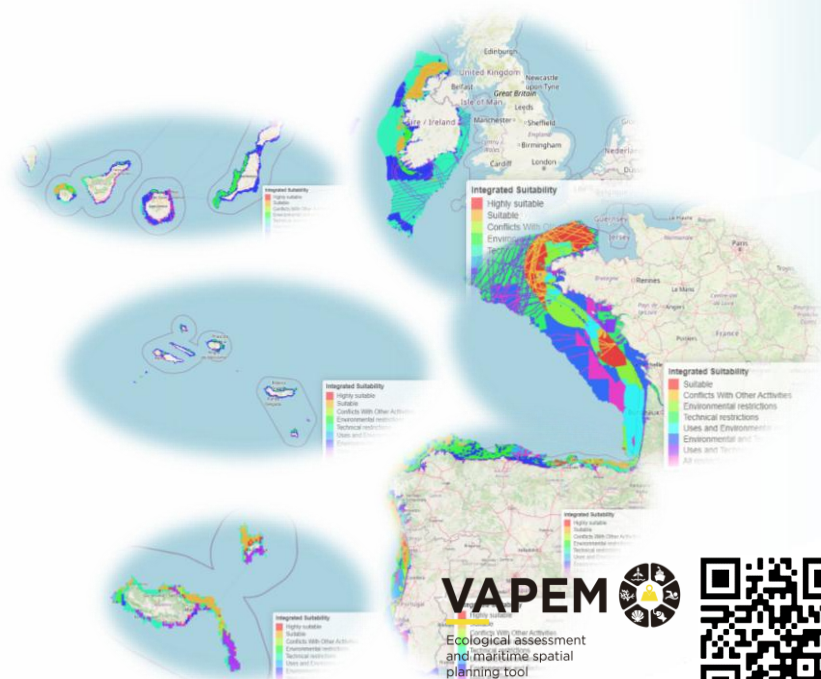
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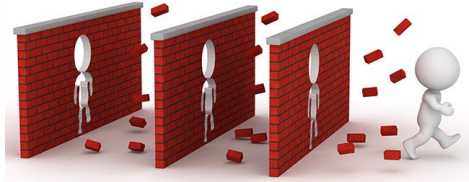


Education and Public Engagement (EPE) programmes tailored



TEST





The MAIN OBJECTIVE of the SafeWAVE project was to contribute to **overcoming**:

1. The environmental **risk and uncertainty**.
2. Potential **competition and conflicts** between WE and other marine users.
3. The complex and long **consenting processes**.
4. The opposition among **host communities** of future WE deployments.

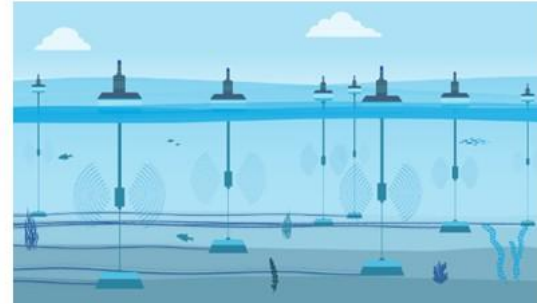


BUT.....

SINGLE



LARGER ARRAYS

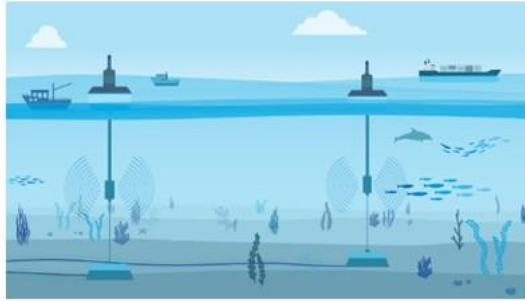


Research has been focused on **single devices**.

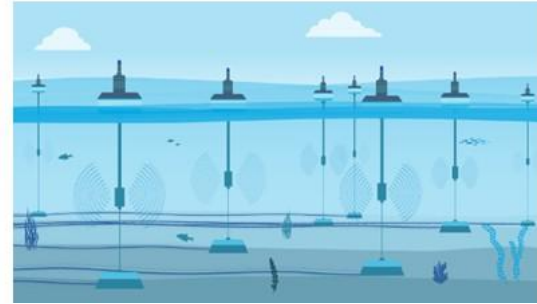
Most of these single devices are **prototypes** in **test centers**. These centers play a key role in the environmental research around wave energy.

As larger arrays will be deployed, there will be a need to develop a deeper understanding of these **environmental, social** and economic **effects**.

SINGLE



LARGER ARRAYS



It is also very difficult to **match** the timeline of a **research project** (which depends on the deadline of the funding call), with the **timeline of the developers**.

We need to include the environmental research since the beginning in the developer's perspective and timeline. Developers need funding calls that not only support the technological development of the device but also to pay attention to the environmental aspects.

ENVIRONMENTAL
RESEARCH



Underwater noise



Electromagnetic fields

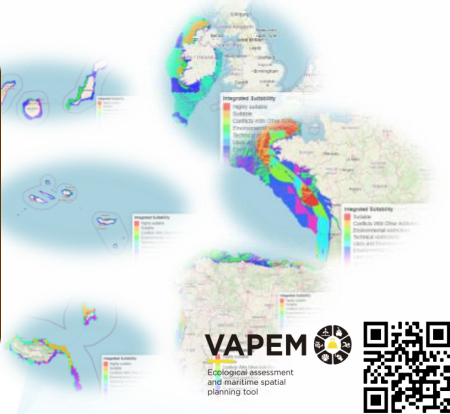
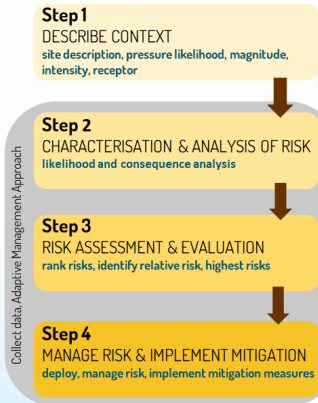
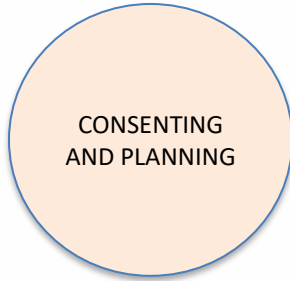


Oceanographic systems



Changes in habitat

- Longer monitoring periods
- Species-specific impact assessments
- Measurements during high power production = strong sea states
- Enforce remote sensing



• Integration of **other technologies**



- Additional knowledge on environmental impacts
- Integration of **cumulative pressures**



- **Social and economic** aspects integration (improved data)

This Strategy could be a single research Project by itself



PUBLIC
ENGAGEMENT

1. We need the **public to be better informed**.
2. We need to be **better informed about the public** – developing greater understanding of their attitudes, beliefs and values related to the ocean environment and potential MRE deployment.
3. We need to **develop public engagement capabilities**
4. **Develop outreach, education, and training** initiatives.
5. We need the **engagement from the start** from different stakeholders, clarity in the content (so can be understood by all), transparency, and time .
6. *Etc.*



ACKNOWLEDGEMENTS



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HORIZON EUROPE
DIGITAL RESEARCH
& TECHNOLOGY ALLIANCE





¡¡MANY THANKS FOR YOUR ATTENTION!!

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