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EMODnet Marine data for the offshore renewable energy sector in the Mediterranean Sea and Black Sea

20-21 OCTOBER 2022

Integration of EMODnet data portal information into decision support tools to identify suitable areas for offshore renewable energy projects

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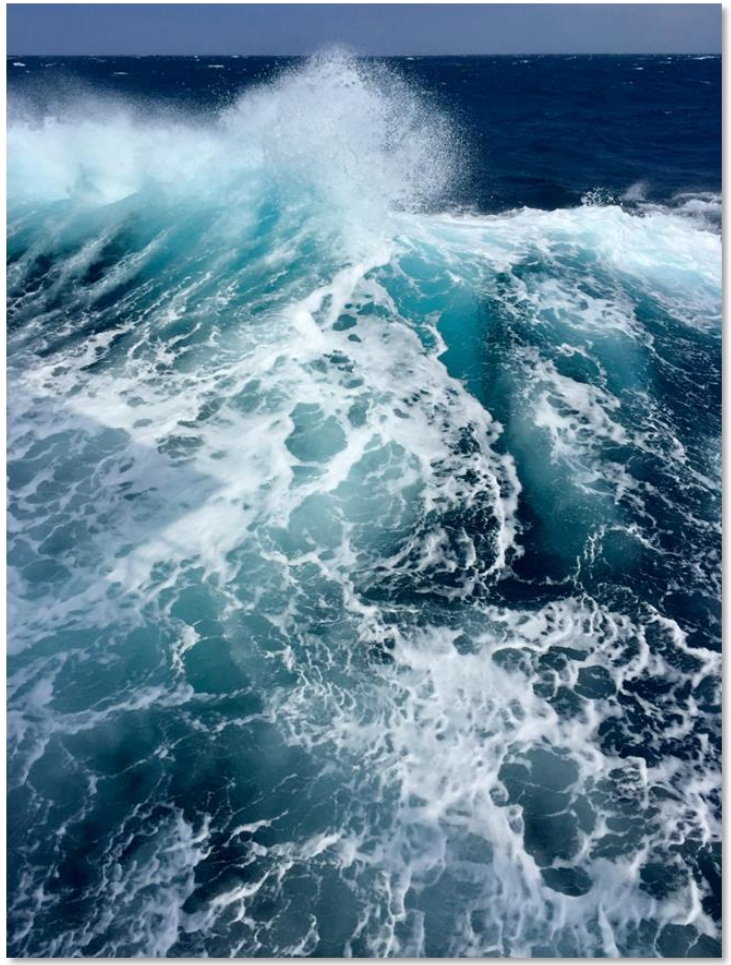
#MarineData4OffshoreEnergy

EMODnet European Marine Observation and Data Network

European Commission

Renewable energy getting an overriding public interest



Need for space

- Less than 3% of the European maritime space[1,2]
- Definition of “go-to-areas”[3]
- Potential competition and conflicts with other marine sectors
- Maritime Spatial Planning (MSP)

Consenting process

- Regarded as a non-technological barrier caused by the complexity and the lack of dedicated legal frameworks

Environmental risk and uncertainties

- Potential cumulative pressures to the ones produced by existing activities
- Ensure that 'Do no significant harm’ and do not imperil achievement of Good Environmental Status and nature conservation objectives

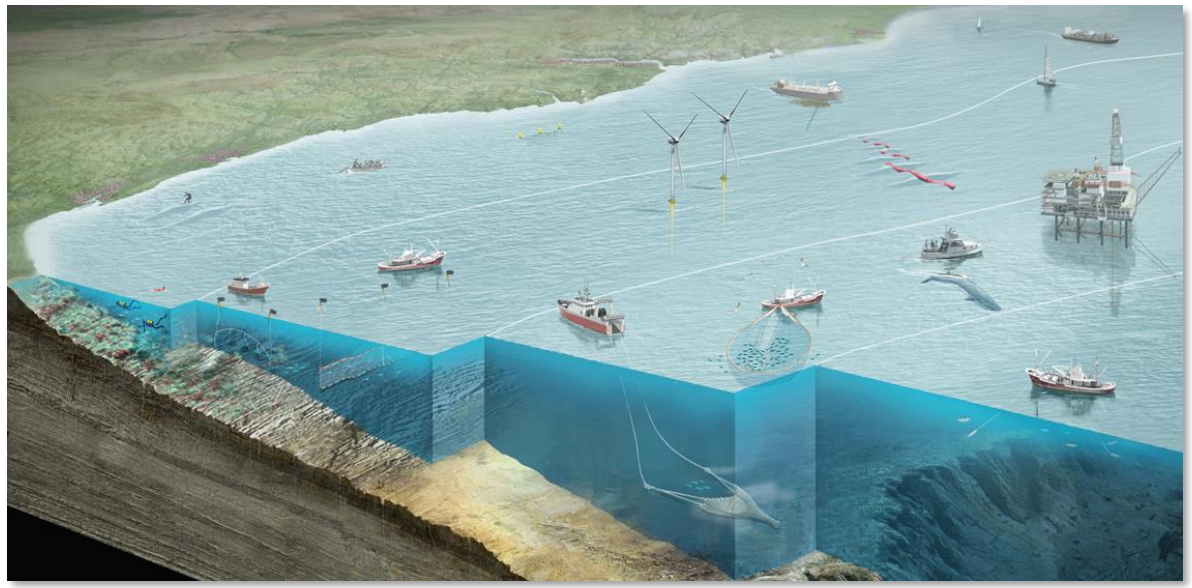
[1]European Commission, 2020. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future. Brussels, 19.11.2020 COM(2020) 741 final.

[2]JRC (2019) JRC ENSPRESO - WIND - ONSHORE and OFFSHORE. European Commission, Joint Research Centre (JRC) [Dataset] PID: http://data.europa.eu/89h/6d0774ec-4fe5-4ca3-8564-626f4927744e

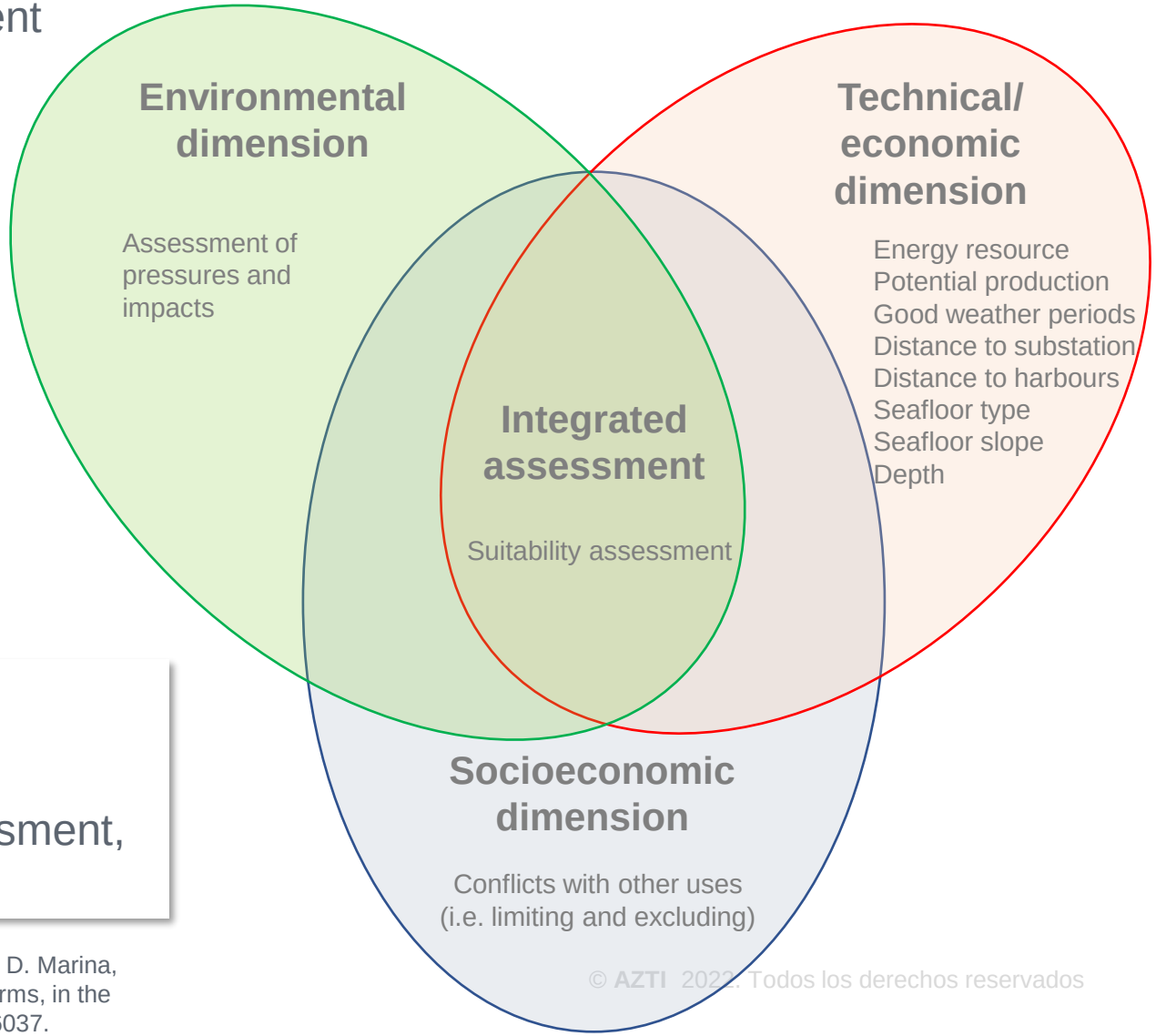
[3]European Commission, 2022. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. REPowerEU Plan. Brussels, 18.5.2022 COM(2022) 230 final

Development of decision support tools

Site identification: most suitable areas for the development and deploying of energy production projects

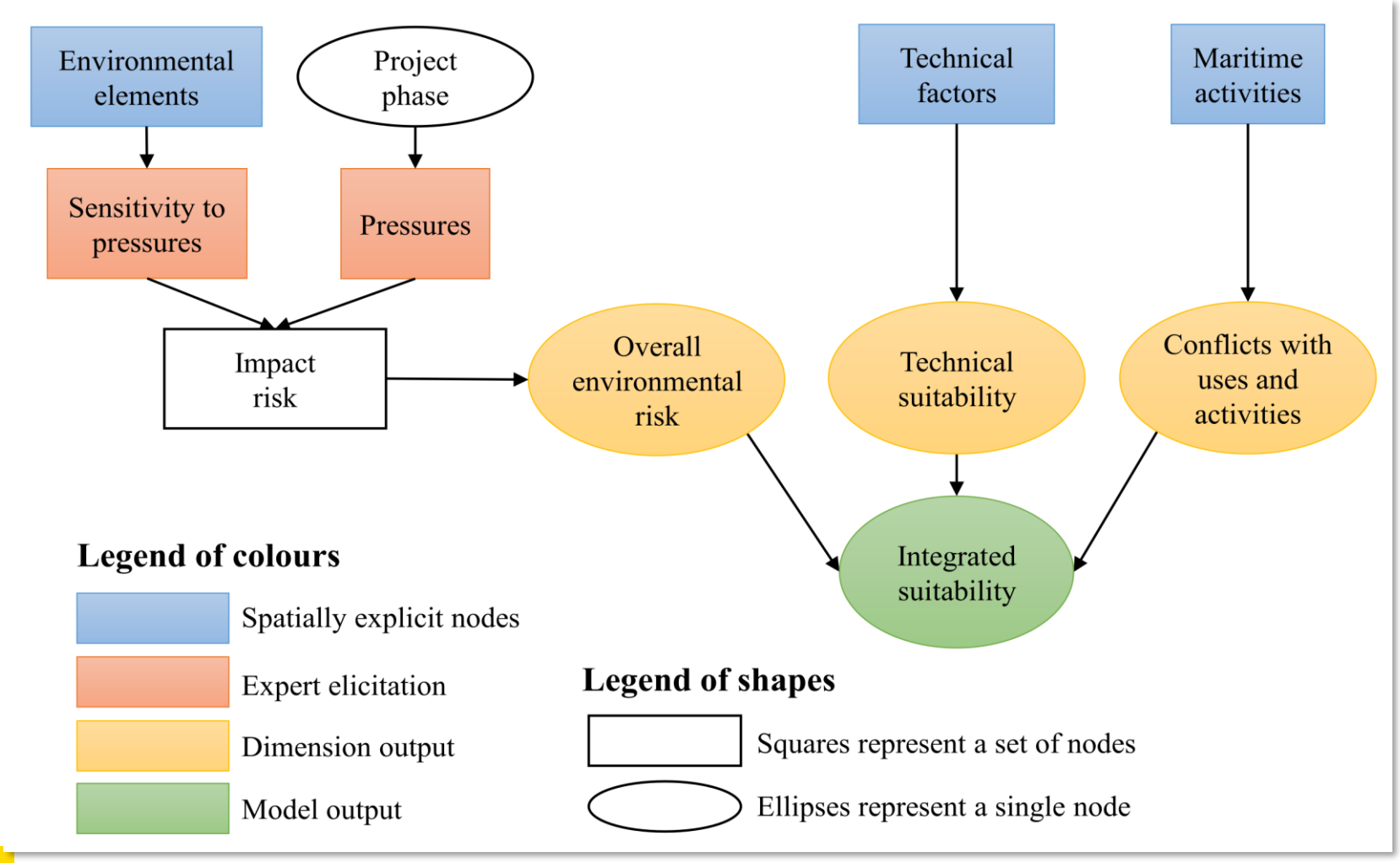


- Multiple criteria: key factors
- Spatially explicit
- Useful for management, Strategic Environmental Assessment, decision-making, consenting, public consultation, MSP



Maldonado, A. D., I. Galparsoro, G. Mandiola, I. de Santiago, R. Garnier, S. Pouso, Á. Borja, I. Menchaca, D. Marina, L. Zubiate, J. Bald, 2022. A Bayesian Network model to identify suitable areas for offshore wave energy farms, in the framework of ecosystem approach to marine spatial planning. Science of The Total Environment, 838: 156037.

Development of decision support tools



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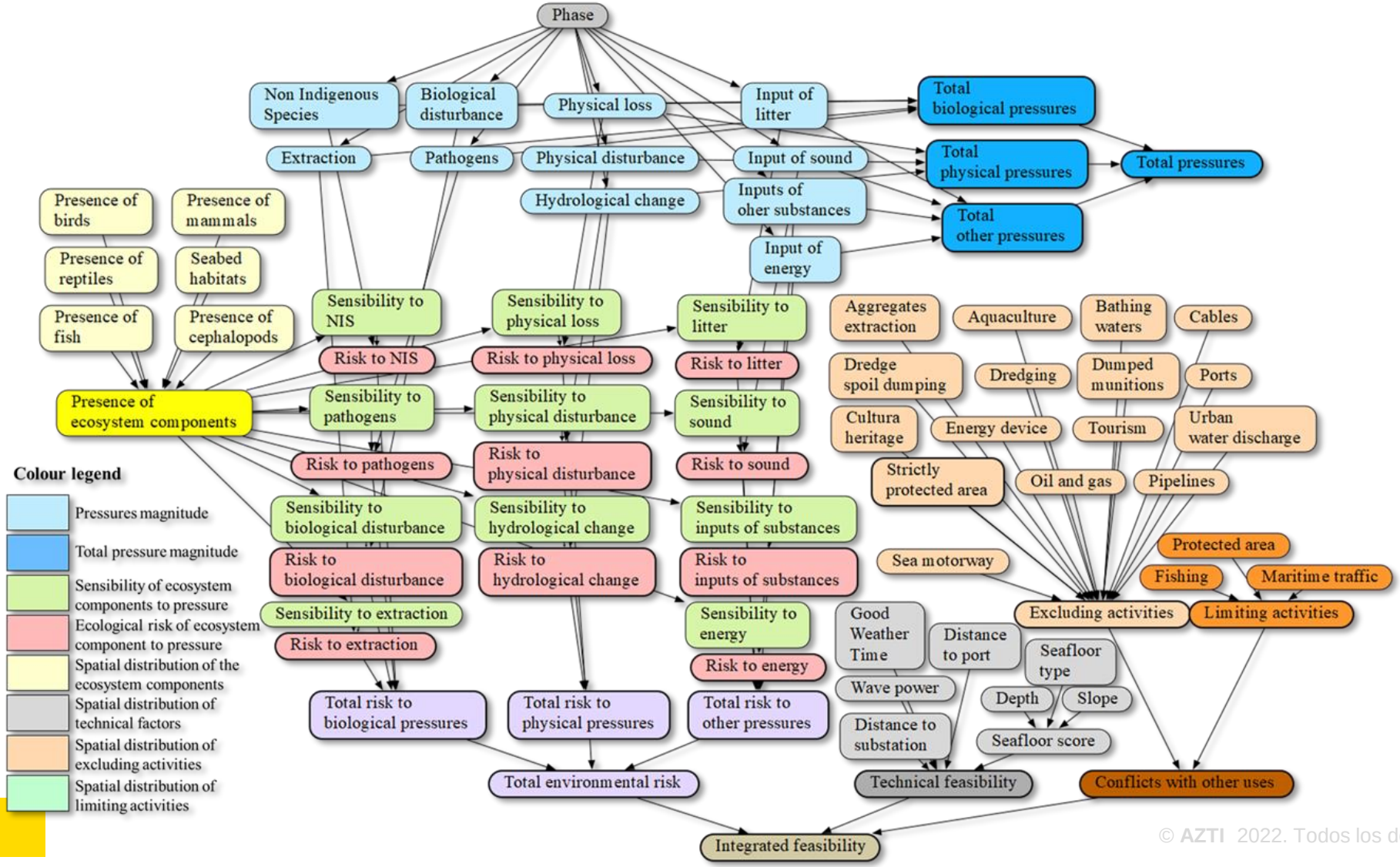
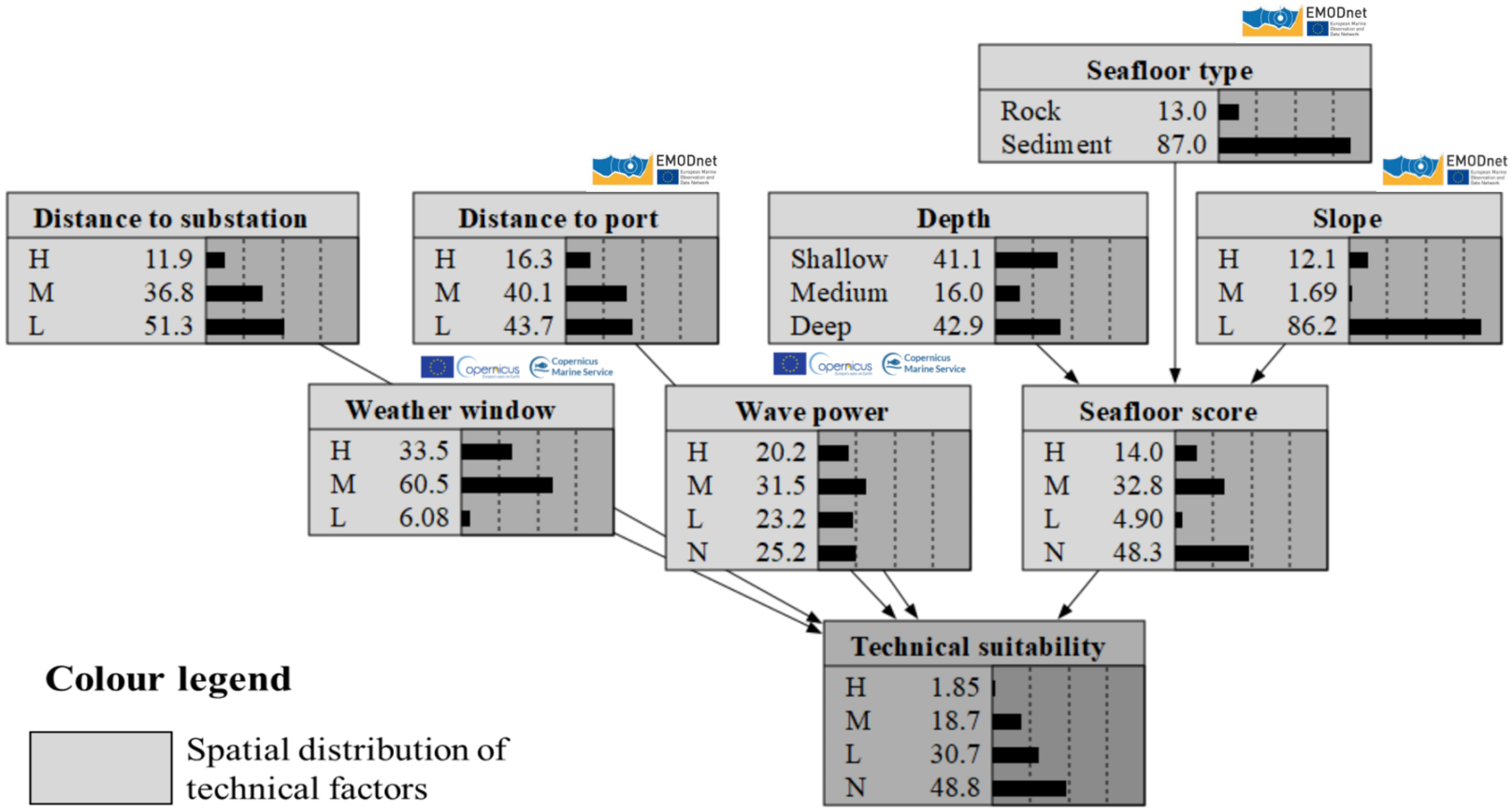
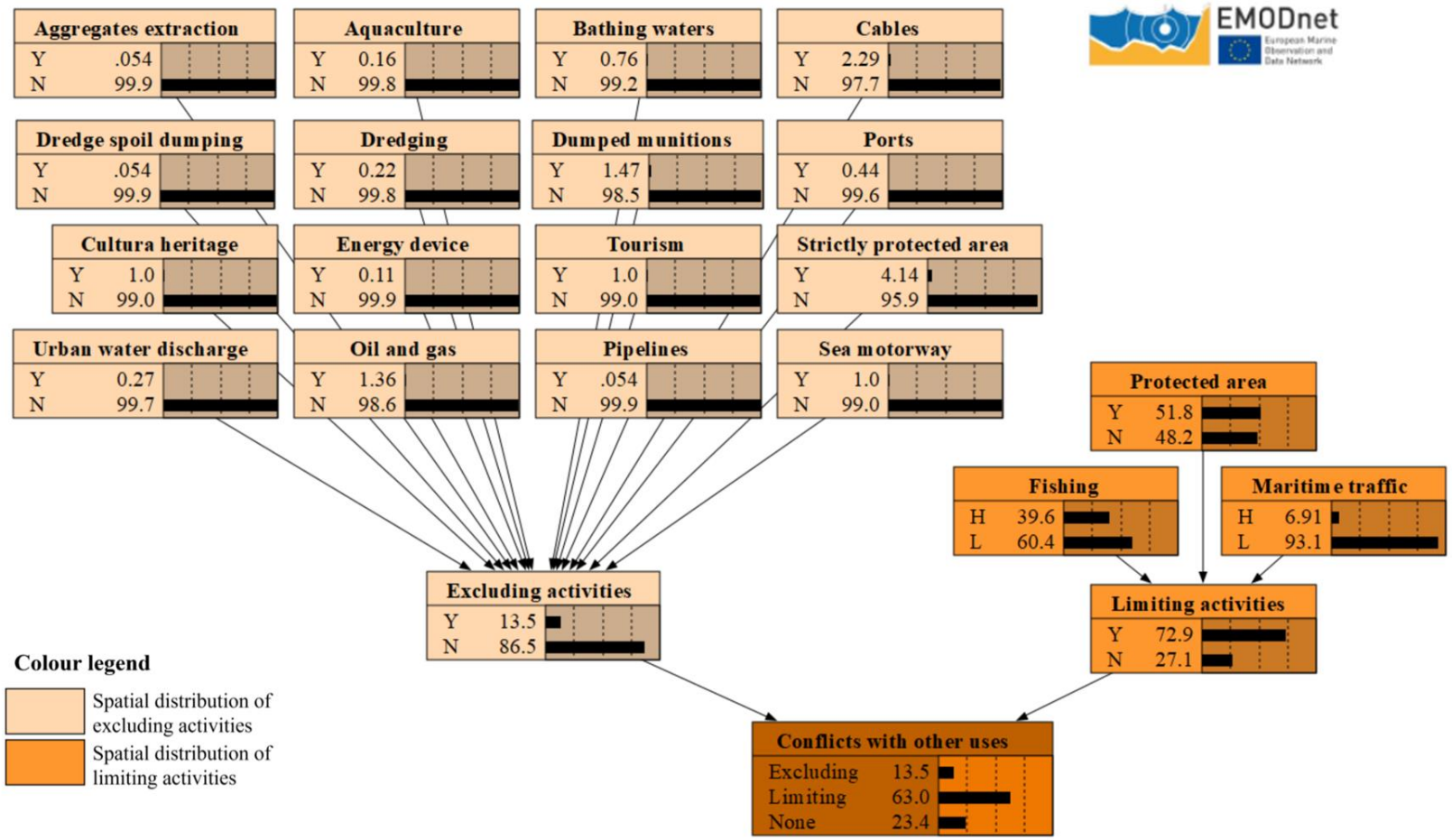


Development of decision support tools



Development of decision support tools



Development of decision support tools

- Interface between complex models and GIS layers
- Free access, publicly available
- Software licenses are not needed

VAPEM

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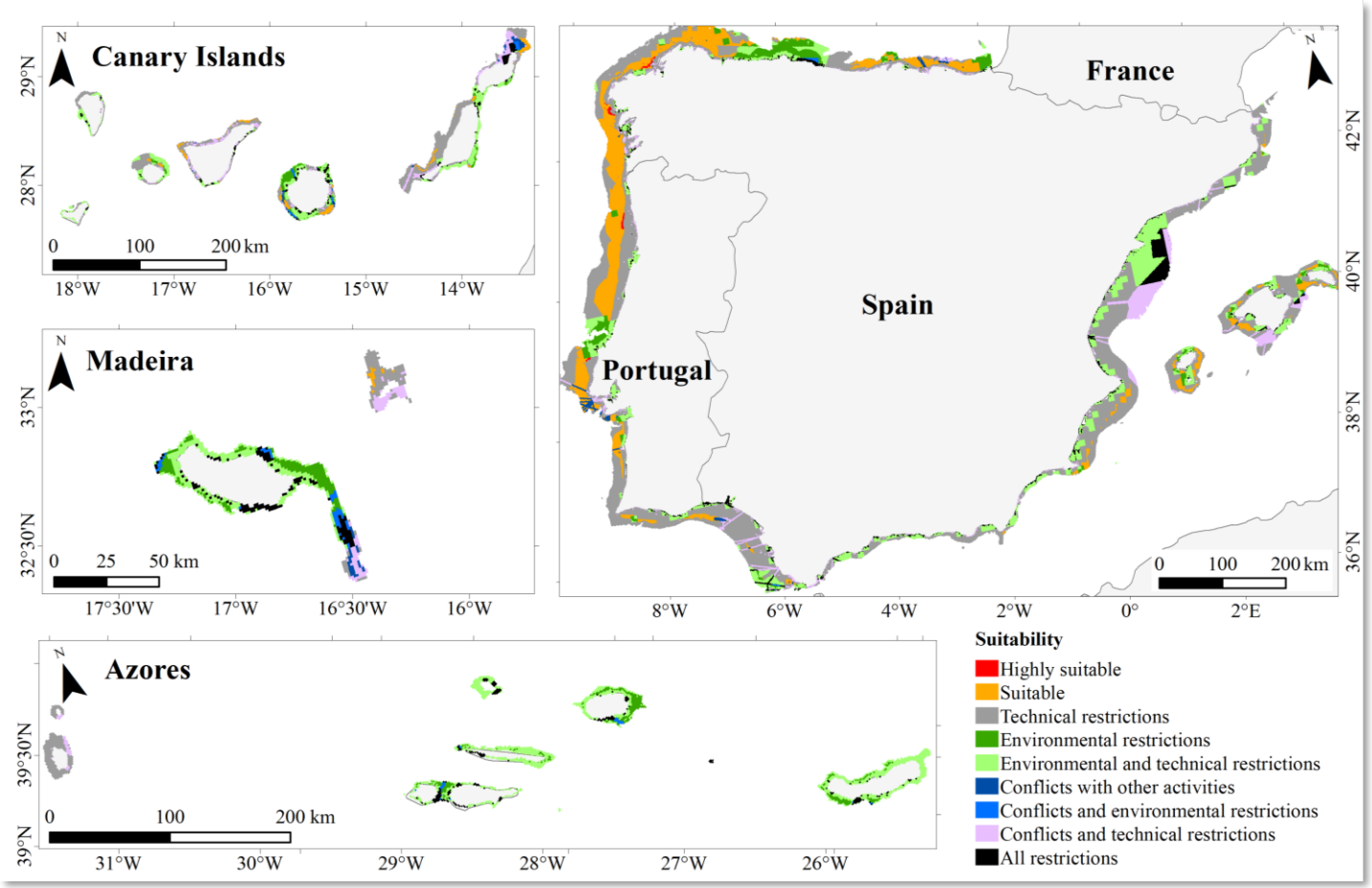
Identification of suitable areas for new projects



Identification of suitable areas for **wave energy farms**

Initially implemented for Spain and Portugal

Within the studied area:

- 17% suitable for the development of new projects
- 45.9% not suitable due to technical restrictions
- 5,3% very high environmental risks
- 0.9% excluded due to the presence of human activities or underwater infrastructures

VAPEM

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Now being implemented for the European Atlantic region and offshore wind

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Thank you very much!

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Wave Energy in Southern Europe (WESE) (Co-funded by the European Maritime and Fisheries Fund (EMFF); Agreement number EASME/EMFF/2017/1.2.1.1/02/SI2.787640)

Streamlining the Assessment of environmental efFEcts of WAVE energy (SafeWave) (Co-funded by the European Commission Executive Agency for Small and Medium-sized Enterprises (EASME); Grant Agreement number 101000175.

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