Environmental Planning as the key challenge for a sustainable blue economy





Carlos Barrientos Carrasco

Director of Environmental Consulting at TECNOAMBIENTE SPAIN

https://www.linkedin.com/company/tecnoambiente---tradebe/

https://www.tecnoambiente.com





To start deep...

 95% of the oceans (seabeds) is unexplored, aprox. 65% of the earth surface.
 Life came from the oceans,

and we are coming back to them (to do what?)

WHAT WE DO IN THE MARINE SPACE

Blue Economy Sectors



Sector	Sub-sector	
	Primary production	
Marine living resources	Processing of fish products	
	Distribution of fish products	
	Oil and gas	
Marine non-living resources	Other minerals	
	Support activities	
Marine renewable energy	Offshore wind energy	
	Cargo and warehousing	
	Port and water projects	
Chinhuilding and yonair	Shipbuilding	
Shipbunung and repair	Equipment and machinery	
	Passenger transport	
Maritime transport	Freight transport	
	Services for transport	
Coastal tourism	Accommodation	
	Transport	
	Other expenditure	

PROBLEMS WE CREATE

Environmental issues

Conflicts

1)human-nature

2) among human uses(stakeholder competition)



Overfishing and Marine Living Resources Depletion: overexploitation can lead to the collapse of entire fisheries.



Pollution and Habitat Destruction: plastic waste and landbased pollution, oil spills, and chemical runoff from industrial activities.



Climate Change and Ocean Acidification: carbon emissions, rising temperatures and acidification leads to sea-level rise and disruptions in marine organisms and food chains.



Biodiversity Loss: destruction of habitats (coral reefs, mangroves or seagrass beds) threatens the resilience of the ocean and its ability to provide essential services.



RULES WE HAVE IN PLACE Environmental Planning

TOOLS WE HAVE FOR PLANNING

Improving Marine Spatial Planning & stakeholder engagement

MSP cyclical process CONTINUOUS REVISION PROCESS Figure 1: the continuing MSP planning cycle COPING REVISE START PLAN REVISE REVISE PRE-PLANNING PLAN **MSP** PROCESS EVALUATI **EVALUATE** PLEMENTIN IMPLEMENT IMPLEMENT IMPLEMENT A. Morf and co-authors (taken from Source: Ehler and Douvere, 2009

ENGAGE: stakeholders' consultation & involvement. **INNOVATE & IMPROVE**: More activities and spatial constraints.

> New evidence & methodologies (Ecosystem Services, AI) New spatial demands: multi-use and co-existence of activities (3D).



Sources: MUSES Project, 2018; W+B and WMR, 2020.

Giacometti et al. 2020).

TOOLS WE HAVE FOR EP

Environmental Assessment & other tools

Aspects	SEA Strategic Environmental Assessment	EIA Environmental Impact Assessment	Other Environmental Permits & Authorisations	ESG reporting & compliance (EMS, Taxonomy)		
Environmental Planning Level	Policies, Plans Programmes	Project Env. License for specific activities requiring EIA	Project sectorial licenses for specific activities not requiring EIA	Private corporations & institutions		
Spatial Scale	Regional & Sectorial Planning	Small scale & Project boundary impacts	Small scale & Project boundary impacts (discharges, Appropriate Assessment N2000)	Operational footprint		
Effect & impact ass. dimension	Generalist, positive or negative	Quantification and significance required.	Brief qualitative description of activities or impacts	Operational ESG performance		
Approach	Flexible, analyse different scenarios & alternatives	Propose layout alternatives. Design of measures programme.	Compliance with environmental licensing legislation	Reporting and tracking sustainability performance. Investment decisions		
Responsibility	Planning Authority	Proponent	Proponent	Big Companies, Institutions		
Al as a support tool or THE TOOL ??						

CASE STUDY

Environmental Licensing for Multi-national Data Cable Projects in the







Economic Exclusive Zones in the Western Mediterranean Sea



EIA regulation for Data Cable projects

	Explicitly in EIA	Not explicitly in EIA	Project subject
	legislation	legislation	to EIA
Countries			
Portugal			
Spain			
France			
Italy			
Morocco			
Algeria			
Tunisia			

CASE STUDY

Environmental Licensing for Multi-national Data Cable Projects in the

MED



EIA & Permitting Phases Data Cables in the MED



CASE STUDY

Environmental Licensing for Multi-national Data Cable Projects in the







Competent Environmental Authorities: puzzle.



National EIA requirements: EIA or just a simple environmental permit.

Timelines for EIA & permitting: strong variability per country.

Protected Areas: different categories and regulations African and European countries.

Da ma

Data Availability & Access. African countries / Emodnet. Poor data (ecosystems, marine habitats, geomorphology). Data acquired by PRIVATE promotors.

La madre del Cordero (lamb's mother) Ruling & Enforcement EIA & Monitoring in High-Seas





Ocean Governance

REGULATORY INTEGRATION

HARMONIZE conflicting interests among STAKEHOLDERS (countries, sectors...)

SURVEILLANCE & ENFORCEMENT

HIGH SEAS Environmental regulation & protection (OSPAR, ZEPIM, etc)

MSP Cycles

 Learn & Improve: FAST CHANGES AND NEW EVIDENCES (5-6 years revisions) Environmental Planning Tools:

INTEGRATE & STANDARDIZE:

- indicators & methodologies
- terminology positive and negative impacts
- sensitive & vulnerability mapping
- aggregation of impacts, (cumulative impact, health impact, habitat risk assessment)

ENVIRONMENTAL LICENSE for multi-use activities

Marine impacts in CROSS-BORDER projects (ESPOO) Data & knowledge:

- LACK OF COMPREHENSIVE DATA:
- increase observation and monitoring
- PUBLIC INTEREST INFORMATION
- Global Ocean
 Observing System.
 Fragmented

KNOWLEDGE

- Combine SCIENTIFIC evidence with local STAKEHOLDERS OBSERVATIONS
- Al tool or God? We rule the Al or it just rules us.



Nature & NBS at the front of planning:

ECOSYSTEM BASED APPROACH: from sectorial spatial conflicts to ES & COST-BENEFIT.

Sustainable Fisheries Management (fishing gears, polyculture) CONSERVATION: MARINE PROTECTED AREAS (MPA). EU Biodiversity Strategy for 2030 (30% protected and 10% Reserves)

RESTORE: NATURE BASED SOLUTIONS (NBS)

- Compensation & Habitats Restoration from private & public initiatives
- Remediation of water quality with algae
 Beach sands retention by organic covers.



Integrating risks in EP: Climate Change

MITIGATION:

- blue carbon
 sequestration (benthic
 habitats, seagrasses,
 plankton)
- •Decarbonise: marine energies (offshore Wind & others), fuels for shipping (Hydrogen, Biofuels)

ADAPTATION:

- assess. of physical risks.
- ports, islands and coastal cities (critical impacts & biodiversity).

Stakeholders Engagement

AHEAD: ENVIRONMENTAL PLANNING KEY CHALLENGES



More questions than answers...

- Have we learnt enough from land Env. Planning mistakes in the past?
- 2) Has Environmental Planning the potential to be fully automatized (soon)?
- 3) Is an integrated ocean management system achievable?



Let's continue the conversation!

Message me your questions or comments in the IAIA25 app.

Carlos Barrientos Carrasco

Director of Environmental Consulting at TECNOAMBIENTE

SPAIN

https://www.linkedin.com/company/tecnoambiente---tradebe/

https://www.tecnoambiente.com

