



Development of Regional Joint Master Program in Maritime Environmental Protection and Management - MEP&M -

KNOW-HOW TRANSFER RELATED TO THE TO THE LATEST TOPICS IN
INTERNATIONAL LAWS ON CLIMATE CHANGE AND MARINE POLLUTION
(DEV.3.4.3)

Université Côte d'Azur (UCA-F)

Frederic Villers, OFB (French Office for Biodiversity)

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Virtual meeting via Zoom application

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European law context

EIA is a process designed to ensure that projects likely to have significant effects on the environment because of their nature, size or location are subject to an assessment of these effects before development consent is given

EIA directive (1985 latest update in 2014)

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0052>

=> French law in 2016 with the definition of specific env. thresholds for a list of projects and to improve the consultation process

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Ex. of thresholds

2 options : small / exhaustive Impact Assessment depending on the importance of the project

Milieux aquatiques, littoraux et maritimes

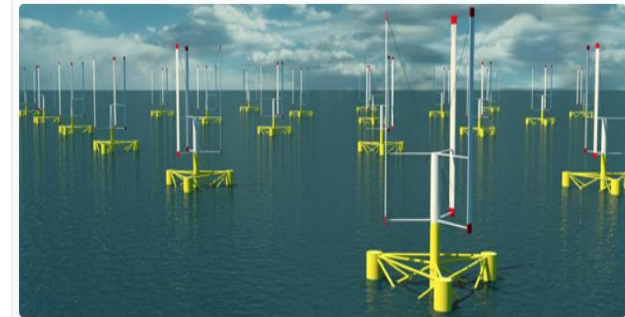
9. Infrastructures portuaires, maritimes et fluviales.	a) Voies navigables et ports de navigation intérieure permettant l'accès de bateaux de plus de 1 350 tonnes.	a) Construction de voies navigables non mentionnées à la colonne précédente.
	b) Ports de commerce, quais de chargement et de déchargement reliés à la terre et avant-ports (à l'exclusion des quais pour transbordeurs) accessibles aux bateaux de plus de 1 350 tonnes.	b) Construction de ports et d'installations portuaires, y compris de ports de pêche (projets non mentionnés à la colonne précédente).
	c) Ports de plaisance d'une capacité d'accueil supérieure ou égale à 250 emplacements.	c) Ports de plaisance d'une capacité d'accueil inférieure à 250 emplacements.
		d) Zones de mouillages et d'équipements légers.

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HOW TO PREDICT AN IMPACT ???

Not always easy, if impact indirect / direct / cumulative
=> inertia of oceans



© Nénuphar



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E.g.: 500 p. EIA doc. Nice beach in France

15 000 rocks refilled every year on the main center beach

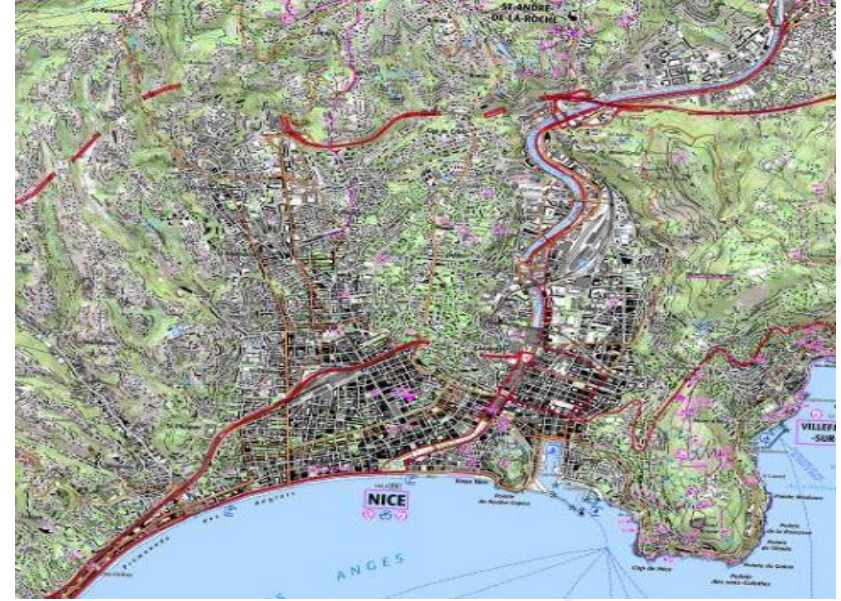


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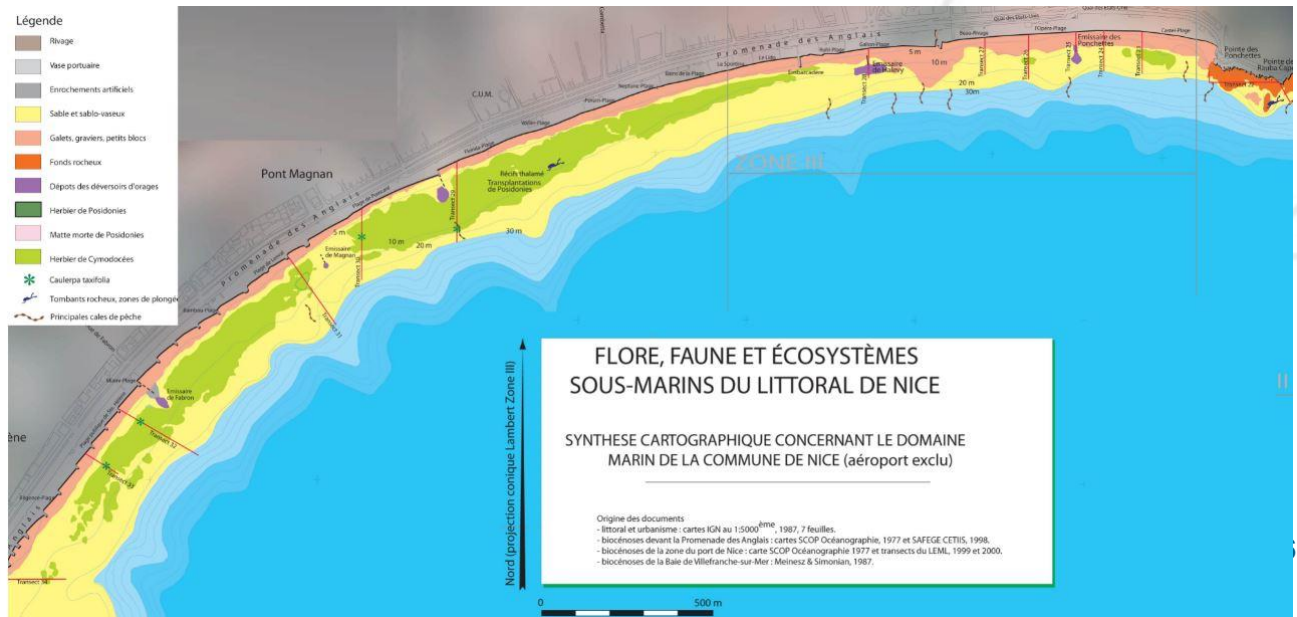


chaque hiver à Nice on engraisse les plages pour lutter contre l'érosion naturelle. © France3Côtedazur



Légende

- Rivage
- Vase portuaire
- Enrochements artificiels
- Sable et sablo-vaseux
- Galets, graviers, petits blocs
- Fonds rocheux
- Dépôts des déversements d'orages
- Herbière de Posidonies
- Matte morte de Posidonies
- Herbière de Cymodoceés
- Caulerpa taxifolia
- Tombants rocheux, zones de plongée
- Principales cales de pêche



E.g. : 500 p. EIA doc. Nice beach in France

Cymodocea : marine protected species

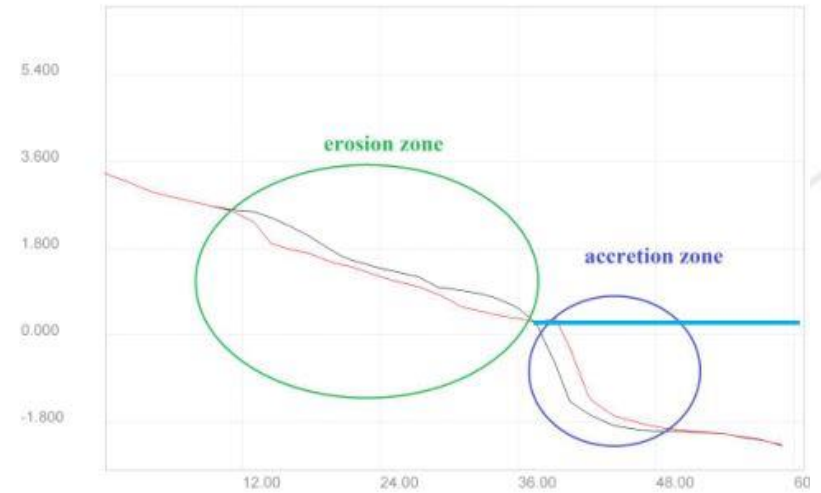


VILLE DE NICE
www.nice.fr

Complément au dossier d'Autorisation au titre des articles L214-1 à L122-1 du Code de l'Environnement – Travaux de rechargement décennal de plages sur la commune de Nice



COMPLEMENT TECHNIQUE



Vue transversale d'un profil de plage (avant simulation en noire ; et après simulation en rouge)



Nivellement des matériaux (Source : Ville de Nice)

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Some definitions

- ⇒ Impact # effect?
- ⇒ effect # pressure?
- ⇒ indirect / cumulative impact?
- ⇒ **Important to define what you mean**
- ⇒ **EIA : term used for the assessment of the environmental consequences (positive and/or negative) of a project prior to the decision to move forward with the proposed action**

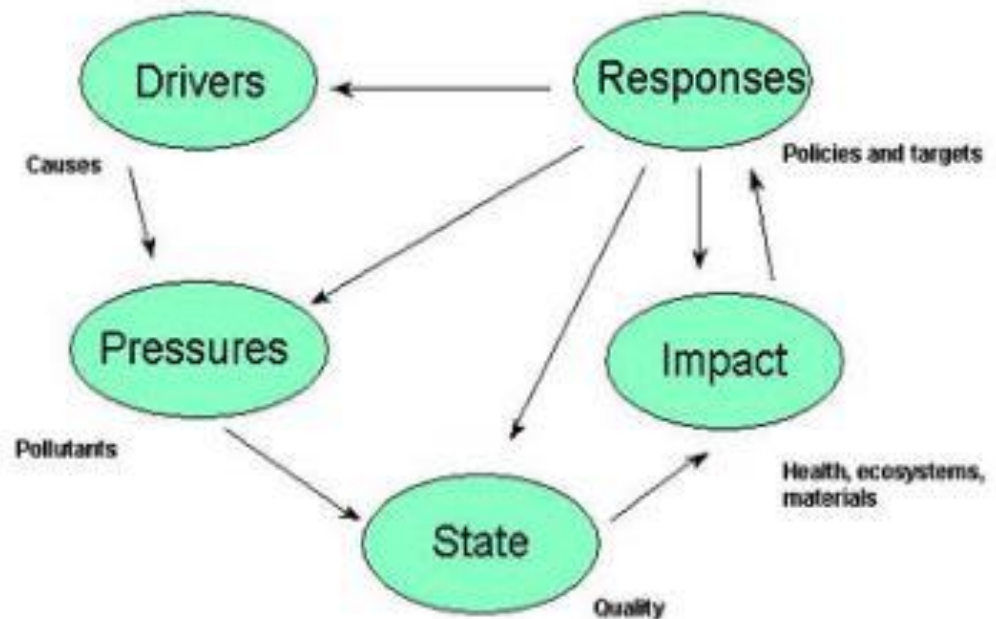
DPSIR model

(since 1998 !)

- ⇒ **DRIVERS** = activities, coastal and port structures, etc.
- ⇒ **PRESSURES** = modification of physical / chemical parameters
- ⇒ **STATE** = state of species, habitat.
- ⇒ **IMPACT** = depends of the sensitivity of species / habitats to pressures
- ⇒ useful to determine direct and indirect impacts

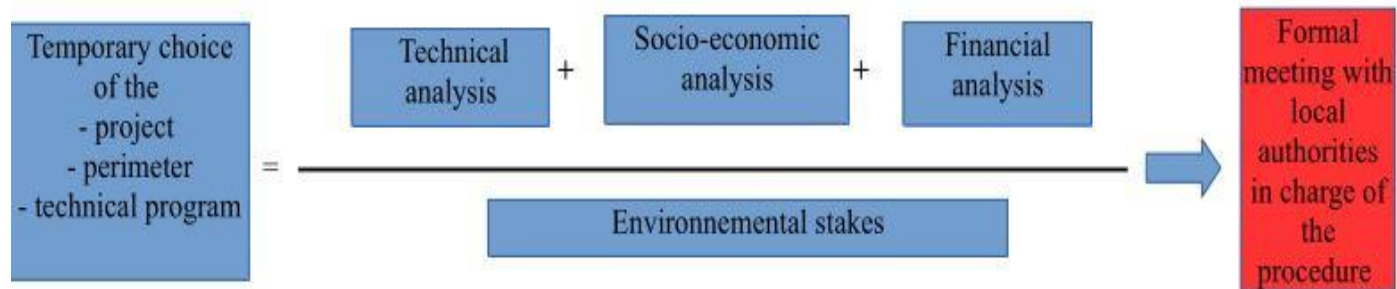
⇒ e.g. : dredging

Sometimes, P=D !

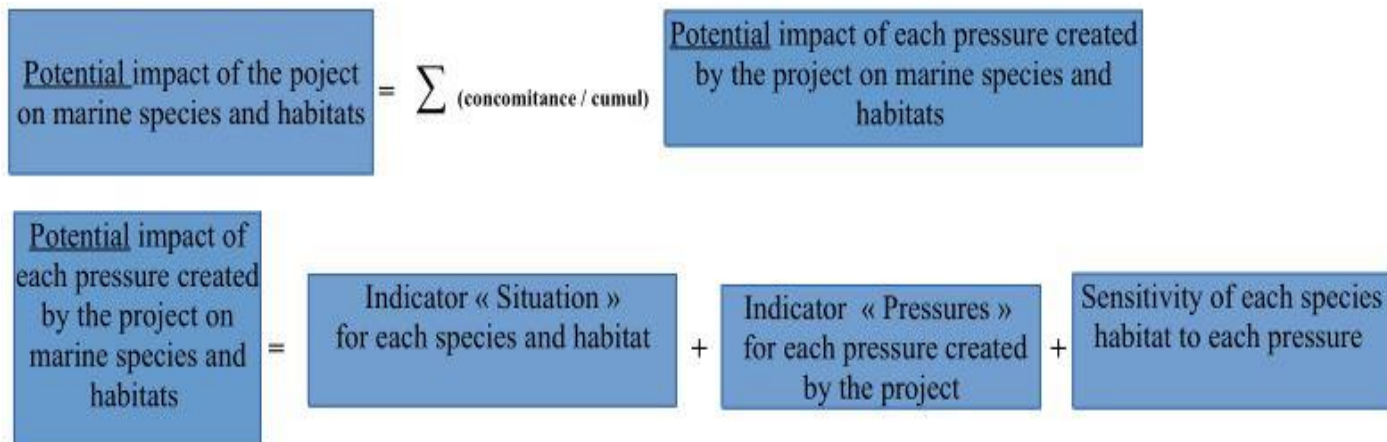


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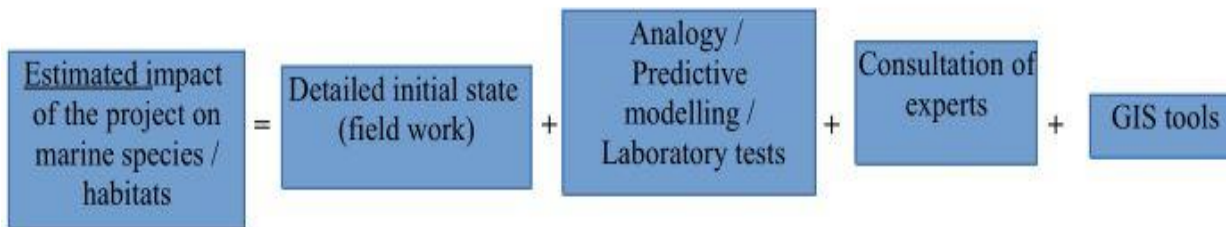
Step 2 : Multi criteria analysis to decide the type of the project, the perimeter, and technical program



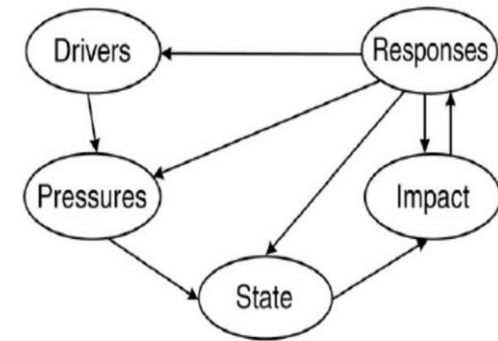
Step 3 : Analysis of the potential impact of the project on marine species and habitats



Step 4 : Detailed local analysis of the estimated impacts on marine species / habitats



Importance of indicators



The DPSIR model (Smeets and Weterings, 1999).

⇒ different definitions

e.g. : Eval Impact, 2018

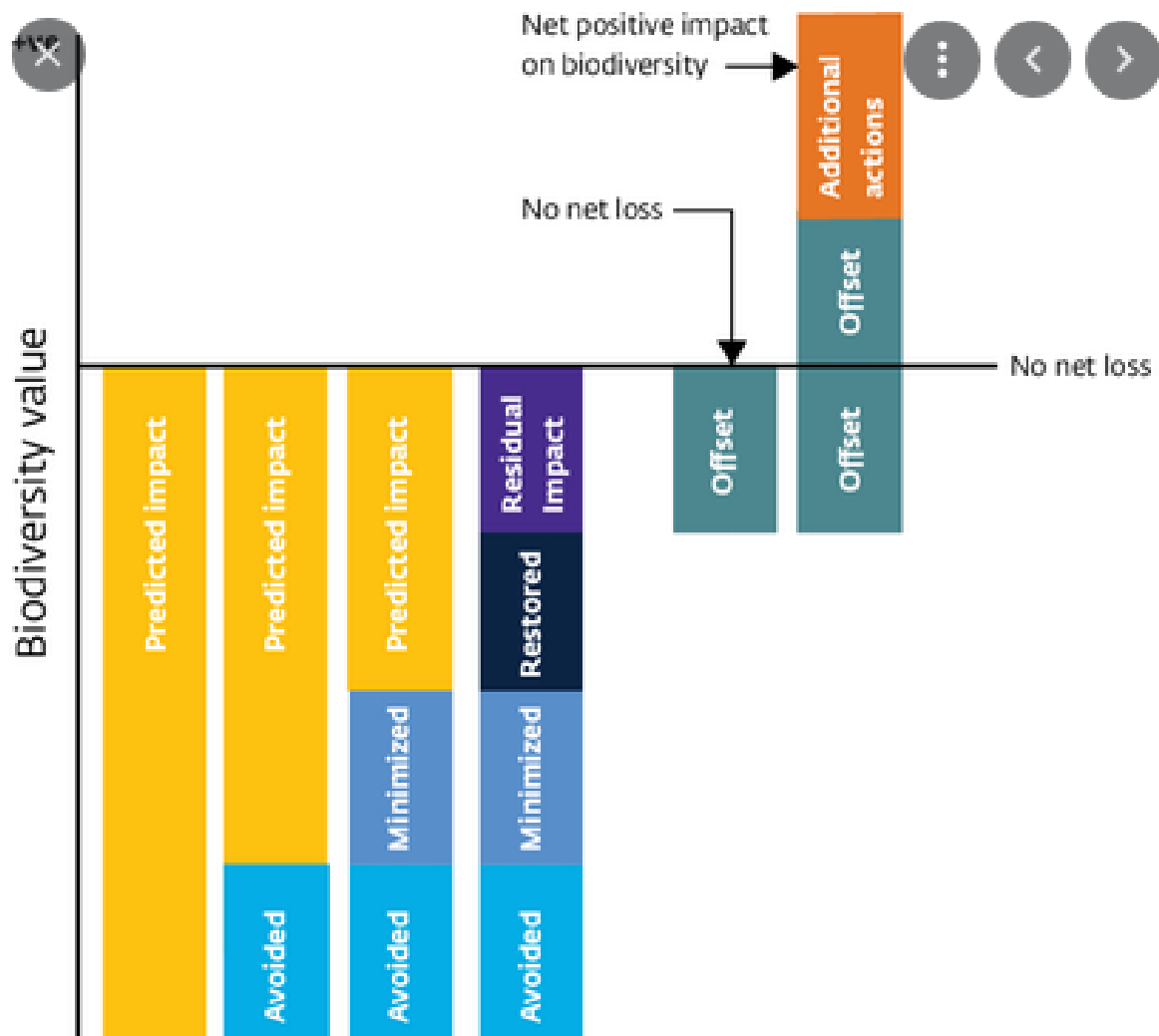
Indicator « situation » of each species / habitat	Indicator « pressure »	Sensitivity of each species / habitat
<p>Different factors to take into account :</p> <ul style="list-style-type: none"> - presence (spatial et temporal) - conservation state - dynamics of the population - ecological rarity ; - local sensitivity ; - confidence level linked to the above information 	<p>Different factors to take into account :</p> <ul style="list-style-type: none"> - occurrence ; - amplitude ; - spatial extension ; - time duration ; - period of the year ; - confidence level linked to the above information 	<p>It can be defined as the crossing between the capacity of a species / habitat to tolerate the pressure (resistance) and the requested time to be restored (resilience). It can vary with the site, the period of the year, etc.</p>

Level of confidence requested!

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Mitigation hierarchy : avoid, reduce and compensate



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Mitigation measures : Avoid, reduce and compensate

- Avoid the impact : change the project, the location, etc.
 - Reduce / minimize the impact : change *method* of maritime work, avoid the most sensitive periods, etc.
- ⇒ if there is still an important residual impact, the project should be forbidden!

in some exceptions (project of public interest), possibility to compensate the residual impact

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E.g. of compensatory measures in France

Conditions to be considered as a compensatory measure :

- Proportional to the environmental stakes and the nature of the project
- Time lapse correlated to the time of the impacts
- Equivalence : same type of habitat
- Additionality : « no net loss »
- Feasibility : legal, technical, economic
- Efficiency: compulsory
- Proximity: geographical and functional

=> ambitious and complex ! Compensation has to remain the exception.

Importance of monitoring

NOT MUCH DATA

⇒ **precautionary approach should be requested**

monitoring useful to :

- correct unpredicted impacts before destruction
- gather knowledge for the initial state, the relation activities / pressure, etc.

Most of the time, mitigation measures and monitoring represents less than 10 % of the project...

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Species and habitats are threatened by humans. It is dramatic, and the EIA is highly important to avoid destruction **before** maritime works / activities.

Really difficult to analyse **objectively** potential impacts

⇒ precautionary approach

⇒ importance to use DPSIR approach and quantify activities / pressures / sensitivity

⇒ monitoring priority

There is no easy and free area in the ocean for projects. There is always a stakeholder, a project under process.

=> importance to work with the different stakeholders to define collectively a compromise between economical and environmental stakes