



Webinar - Ecotoxicology of cathodic protections

Assessing the chemical risk of elements released from galvanic anode and impressed current on the marine environment and its food webs (ECOCAP R&D project)

29/04/2025





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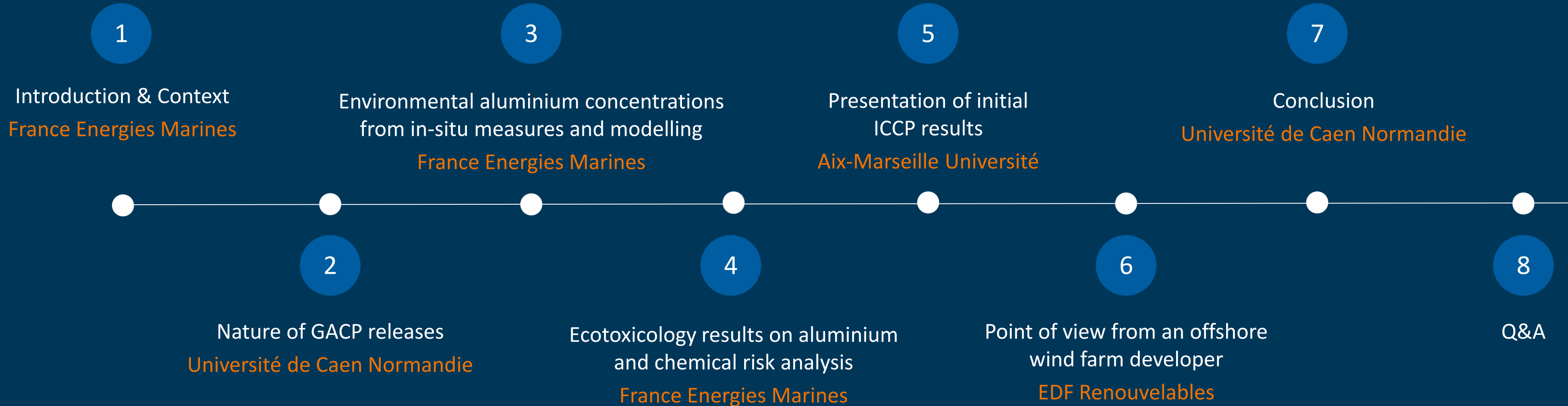
Emma Gouze – *EDF Renouvelables*



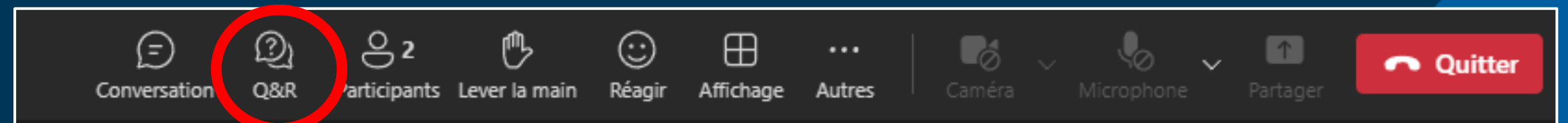
Agenda

Duration: 1h30

~1h15 of presentation and 15 min of questions

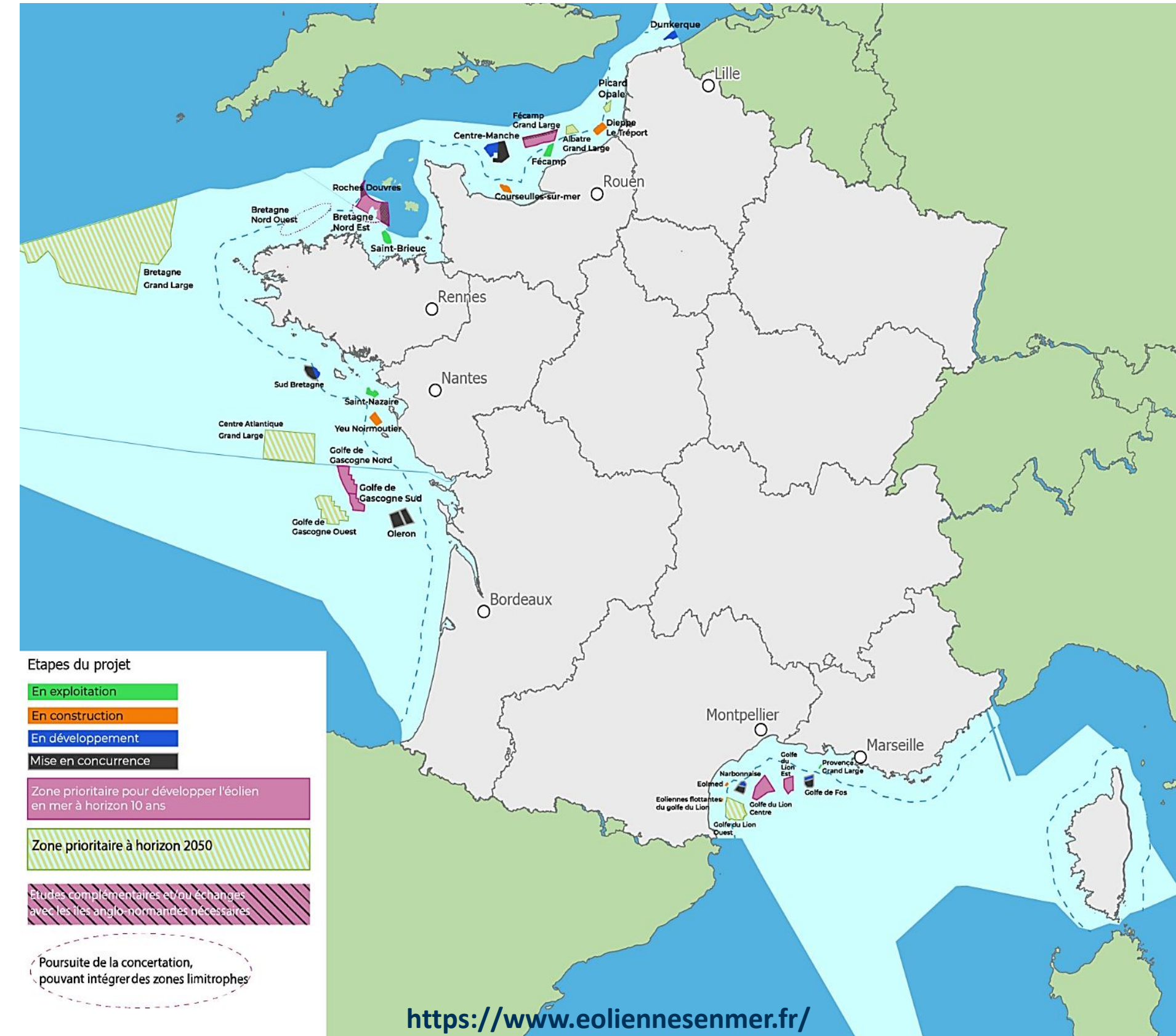


"Q&R" or "Q&A" to ask questions that will be addressed during Q&A session

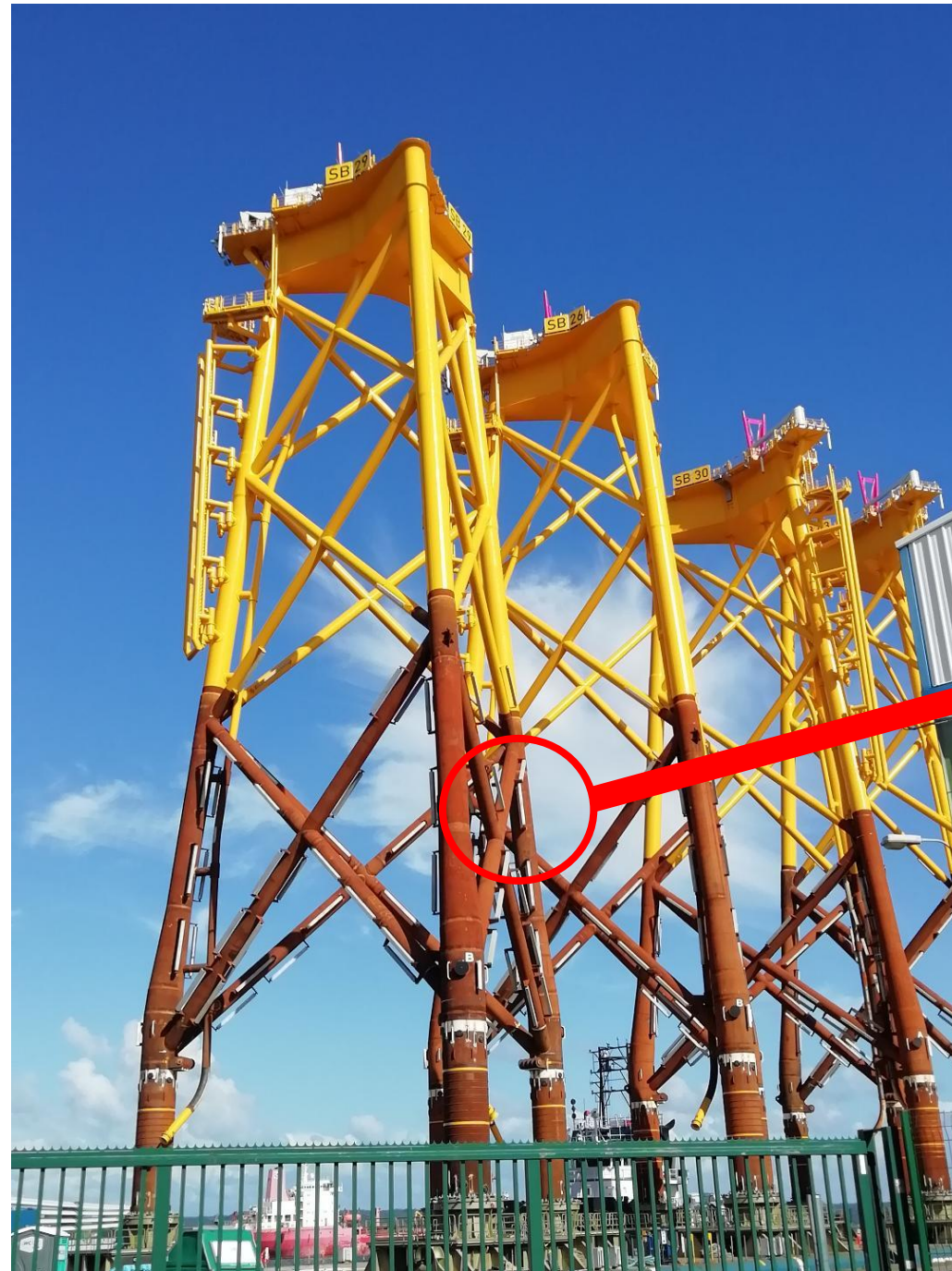


The Zoom meeting control bar includes the following icons and labels from left to right: Conversation, Q&R (highlighted with a red circle), Participants (with a '2' next to it), Lever la main, Réagir, Affichage, Autres, Caméra, Microphone, Partager, and a red 'Quitter' button.

- Deployment of offshore wind power in France
- Different environmental pressures: noise, collision, electromagnetic fields...
- Public authorities, ORE developers and civil society concern about the **chemical risk** related to OWF



- The question of Galvanic Anode Cathodic Protection (**GACP**)

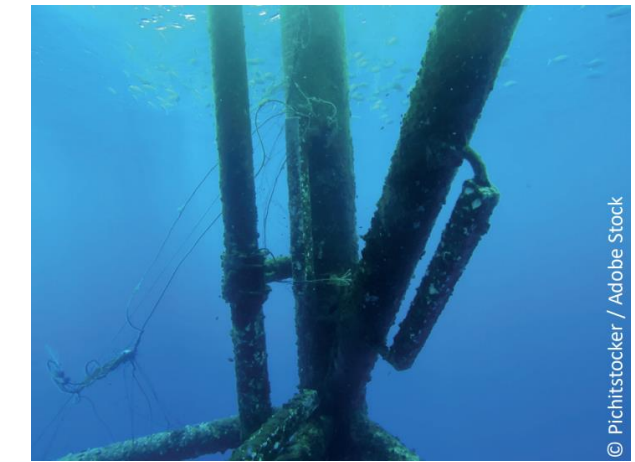


Al
(94 to 98%)

Zn
(3 to 6%)

Galvanic anodes

- The question of Galvanic Anode Cathodic Protection (**GACP**)
- Other issues of chemicals released:
 - Impressed Current Cathodic Protection (ICCP)
 - Anticorrosion paints
 - ...



OWF-related potential chemical emissions: >220 organic and inorganic chemicals

(Hengstmann et al., 2025)



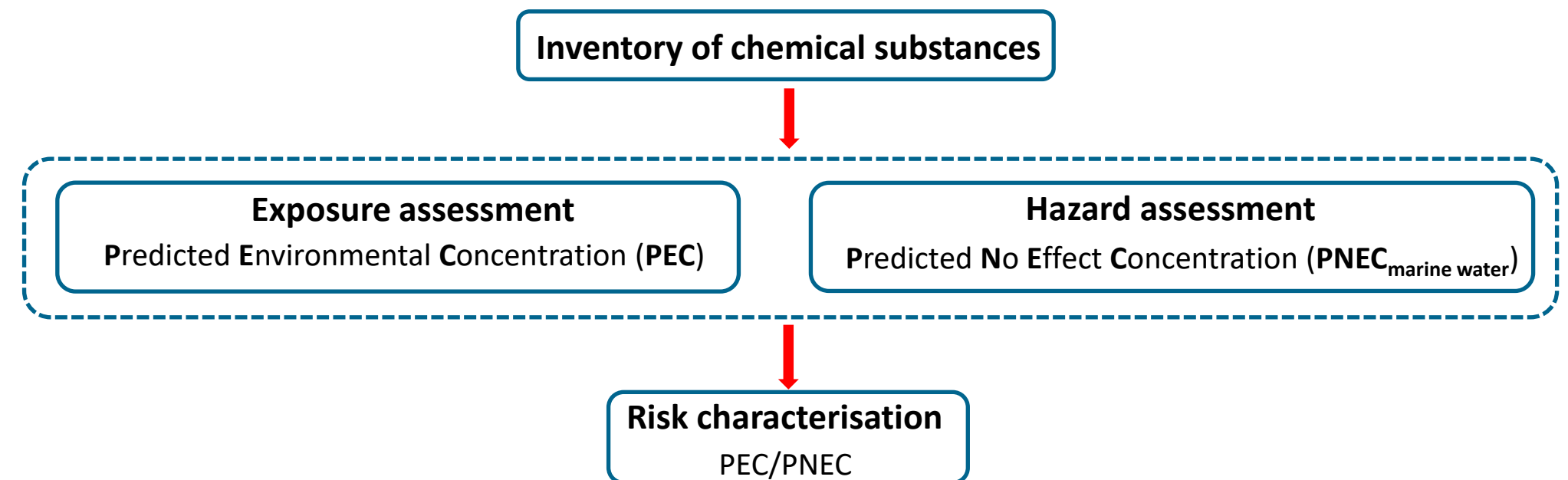
Challenge is to define the environmental pressure of OWF related to chemicals emissions:

- on specific compound and complex mixture
- Considering OWF activities and other



Lack of knowledge to assess/anticipate potential environmental impact of the releases

- Conduct a series of acute and chronic ecotoxicological studies on aluminum and cocktail from GACP
- Define the chemical pressure generated by the use of ICCP systems
- Assessing the environmental risks of anti-corrosion coatings, contaminant mixtures and bioaccumulation in marine food webs
- Characterize the chemical risk in the water column associated with the release of elements from GACP and ICCP



$PEC / PNEC < 1$: No expected risk for the environment
 $PEC / PNEC > 1$: Potential environmental risk