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An ecosystem approach for studying the reef and reserves effects of offshore wind farms: the Fécamp platform

Jean-Philippe Pezy^{1*}, Aurore Raoux¹, Mael Deloor², Pascal Claquin², Régis Gallon³, Isabelle Poirier³, Anne-Marie Rusig², Isabelle Mussio², Mathilde Charbonnelle¹, Fabrice Leroy⁴, Lucille Furgerot¹

⁽¹⁾ Normandie Univ., UNICAEN, UNIROUEN, CNRS UMR 6143 M2C, Laboratoire Morphodynamique Continentale et Côtière, 24 rue des Tilleuls, 14000 Caen, France;

⁽²⁾ Unité Biologie des Organismes et Écosystèmes Aquatiques (BOREA), MNHN, CNRS, IRD, Sorbonne Université, Université de Caen Normandie, Université des Antilles, CS 14032, F-14000 CAEN, France

⁽³⁾ Conservatoire National des Arts et Métiers/INTECHMER–Laboratoire Universitaire des Sciences Appliquées de Cherbourg LUSAC, UNICAEN, 51000 Cherbourg, France

⁽⁴⁾ France Energie Marines, 53 Rue de Prony, 76600 Le Havre, France

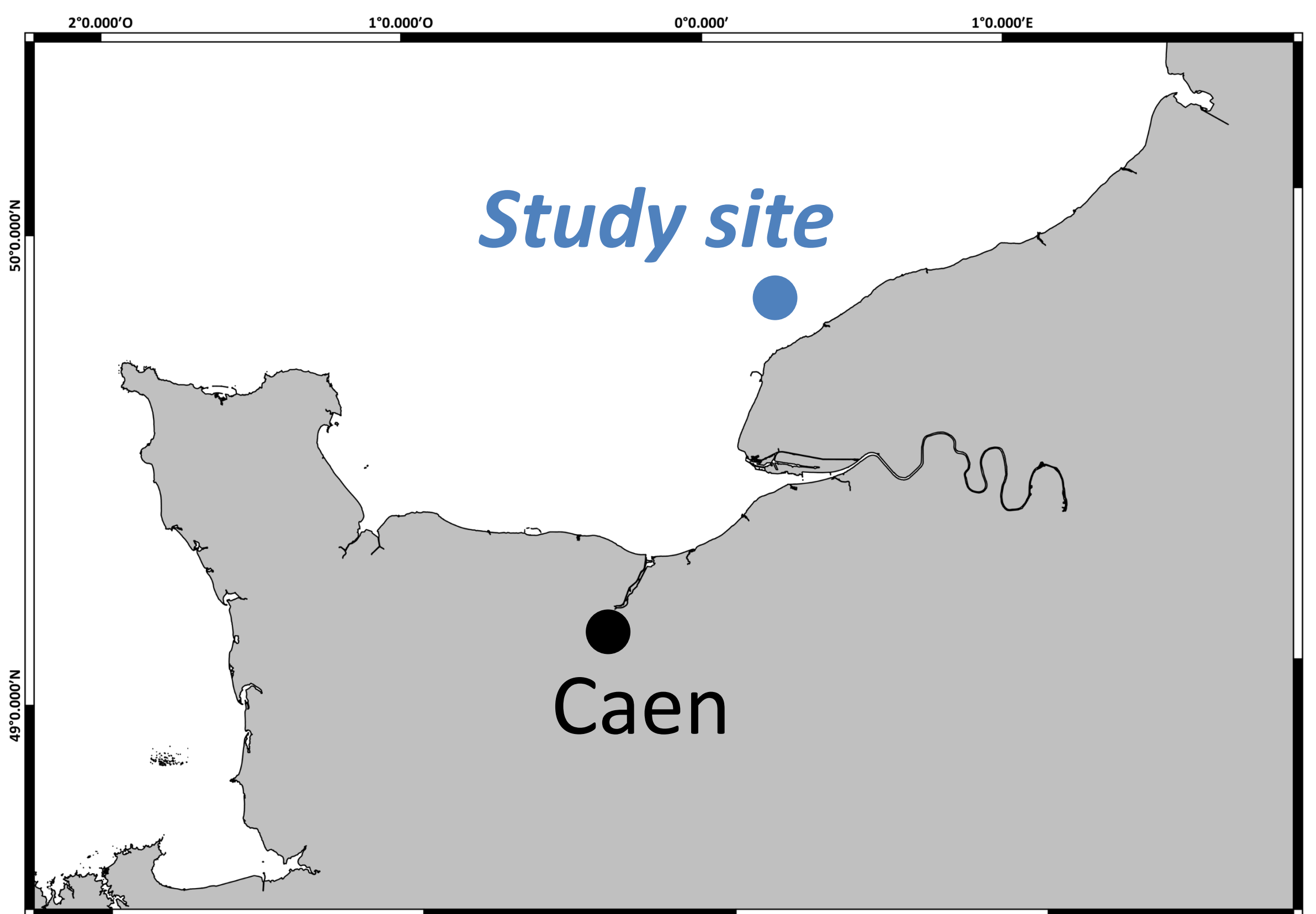
* Email: Jean-philippe.pezy@unicaen.fr

Introduction:

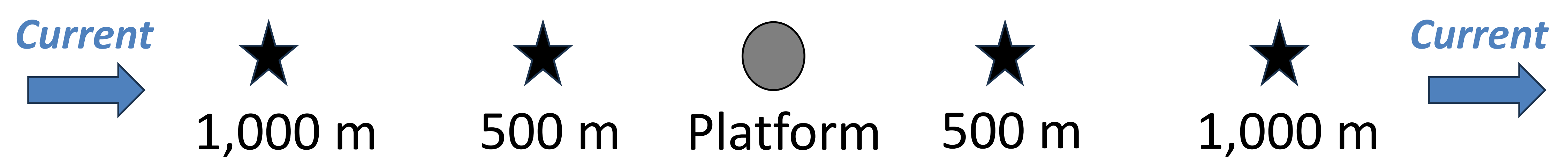
The DRACCAR project is the first French offshore research platform dedicated to offshore wind energy. The aim of this project is to improve the understanding of the interactions between offshore wind energy and the environment, to optimise the design of wind turbines and to co-construct a permanent observation network of the maritime coasts. Six topics are thus studied: ecosystem approach; marine megafauna; fishery resources, biofouling and benthos; wind; structure behaviour and hydro-sedimentary processes.

Ecosystem approach:

- Phytoplankton
- Zooplankton
- Suprabenthos
- Soft bottom benthos
- Suprabenthos
- Hard substrate (flora and fauna)
- Demersal fishes

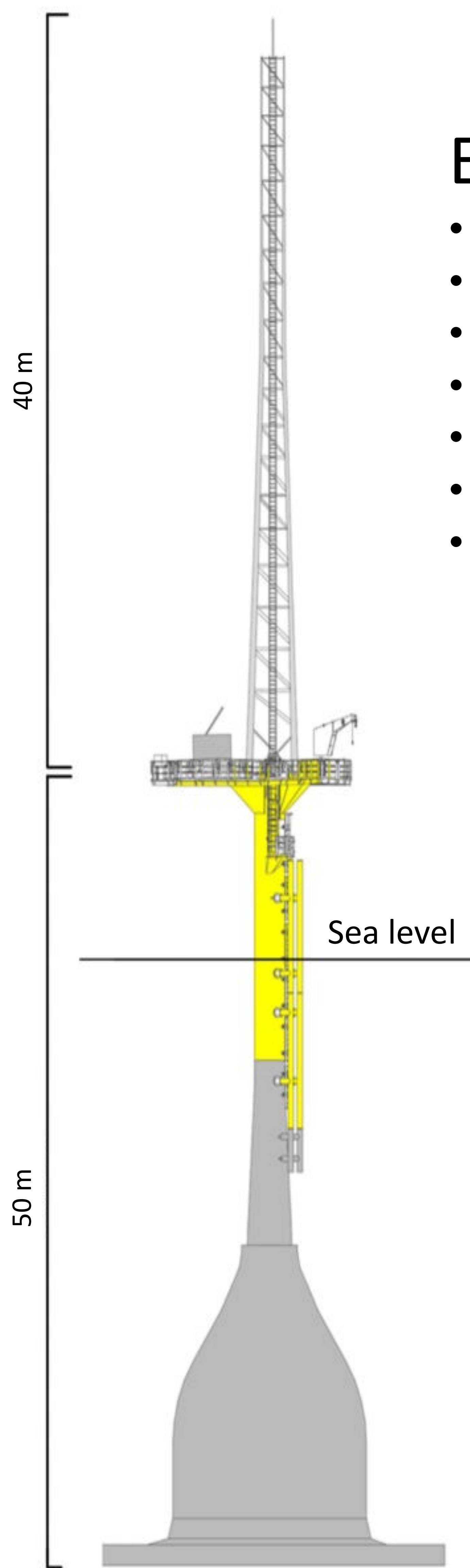


Gradient sampling:



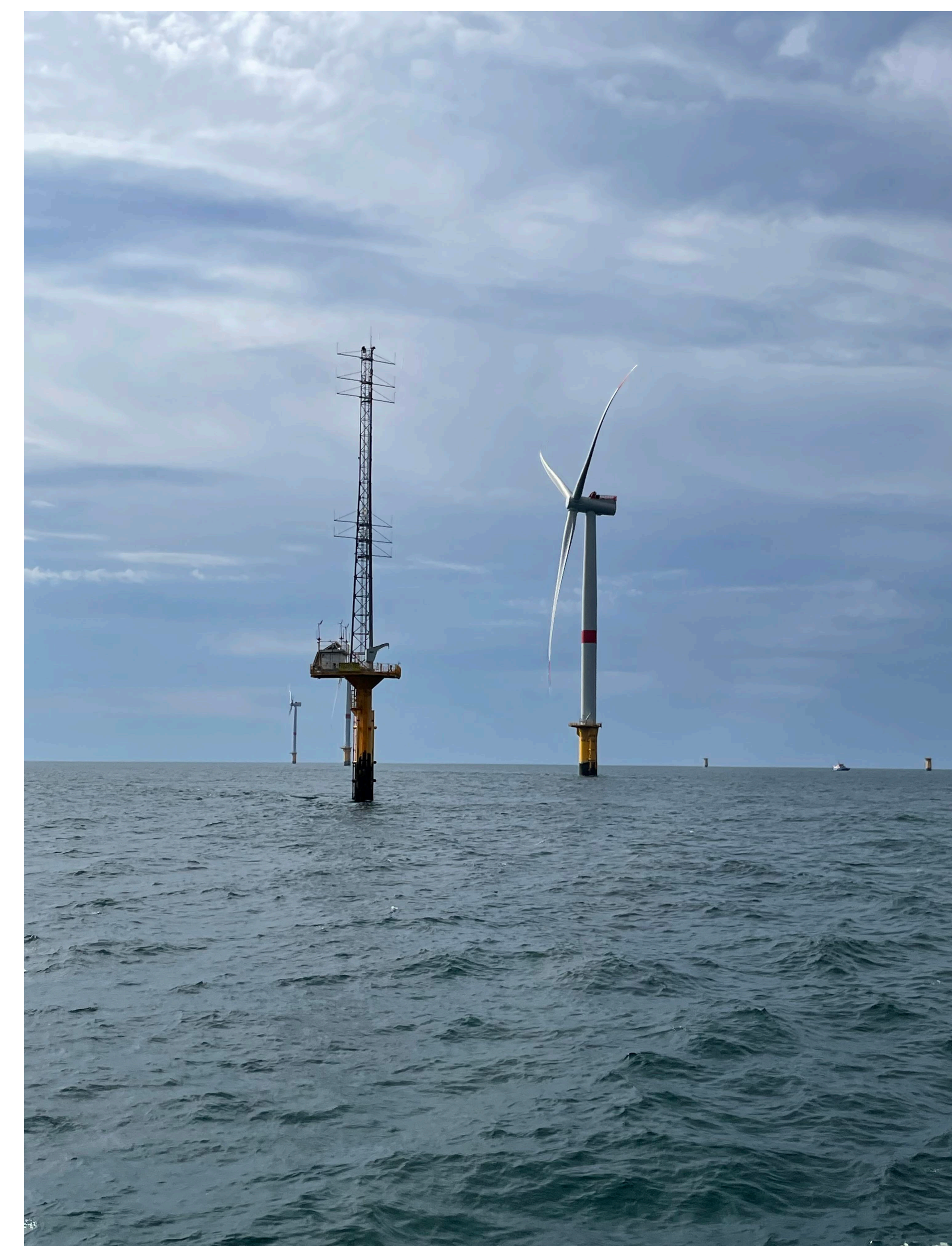
Descriptive approach for each compartment coupling to isotopic analyses and stomacal contents for demersal fishes :

- Reef effect?
- Reserve effect?
- Presence of Non-Indigenous Species?



Experimental approach:

Steel panels installation at different distances from the platform to study the spatio-temporal dynamics of biofouling colonization. Coupling with the larval dispersion (numerical model) and the hydrodynamism



A methodology for a national observatory in France