

Proposal for a PhD Studentship Research Project

Thesis title: Emergence and organization of compensatory and facilitation measures related to offshore wind farms

Disciplines	<i>Economics, Political sciences</i>
University	<i>University of Western Brittany (UBO)</i>
Doctoral school	<i>Marine & Coastal Sciences Doctoral School (EDSML)</i>
Encadrement	<i>Supervisor (HDR): Matthieu Leprince (UMR AMURE) Co-supervisors: Adeline Bas (UMR AMURE), Manuel Bellanger (UMR AMURE)</i>
Research unit	<i>UMR 6308 AMURE</i>
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Résumé	<p>The installation and operation of an offshore wind farm is accompanied by various territorial measures: ecological compensation, economic compensation, and other facilitation measures. These measures can be implemented by the State (e.g., redistributive tax), local authorities (e.g., facilitation support to the industry) or the wind farm developer (e.g., ecological compensation measures). The objectives of the thesis project are: (1) to characterize the interplay of actors and institutional mechanisms that underlie the development of territorial measures; (2) to identify appropriate governance mechanisms (current or to be developed) for the implementation of different types of territorial measures; (3) to study the associated social and environmental justice issues; and (4) to identify the determinants of the acceptability of the different types of territorial measures that can be implemented to accompany the installation and operation of offshore wind farms. Thus, taking offshore wind energy as a case study, the thesis project intends to analyze the effectiveness of the governance modes chosen to coordinate the emergence of a new economic actor with the pre-existing industrial and traditional activities on the territory, in a context of societal debate at the energy-biodiversity interface and of increasing social demand for participatory democracy.</p>
Mots clés	Offshore wind energy; Governance; Territorial measures; Institutional analysis

1 Scientific background

The development of offshore wind power has experienced considerable growth in Europe since the 1990s. In France, the government's objectives for the offshore wind industry are to reach an installed capacity of 2.4 GW (i.e. approximately 420 turbines) in 2023 and more than 5 GW in 2028 (Programmation Pluriannuelle de l'Énergie 2019-2028). Nevertheless, wind farms are often located near densely populated coasts and can be a source of conflict due to impacts on marine ecosystems and interactions with other human activities in the area. Thus, the installation and operation of an offshore wind farm is accompanied by various territorial measures: ecological compensation, economic compensation, and other facilitation measures. These measures can be implemented by the State (e.g., redistributive tax), local authorities (e.g., facilitation support to the industry) or the wind farm developer (e.g., ecological compensation measures).

Territorial measures are at the heart of governance and acceptability issues for offshore wind farms. The negotiation, implementation and monitoring of territorial measures structure the interactions between the various actors: developer, government services, public institutions, professional and

recreational users, environmental associations, etc. The modalities of governance — bases for discussion, arenas for negotiation, evaluation processes — may or may not promote the emergence and acceptability of territorial measures. The stakes are high because the link between the acceptability of territorial measures and the social acceptability of the park is strong. Indeed, each party anticipating a negative impact from a wind farm project is likely to oppose it, and the territorial measures aim to propose welfare compensation likely to redistribute the costs and benefits (real or perceived) among the actors. Moreover, the involvement of a diversity of actors in the definition and implementation of measures can help improve the legitimacy of the developer and limit opposition. Thus, it is necessary to better understand the determinants of the acceptability of territorial measures and to identify the most effective governance modalities for their emergence, their organization and from the point of view of environmental and social justice.

2 Description of the PhD project

2.1 Scientific objectives

The central question of the thesis concerns the effectiveness of the governance modes chosen to coordinate the emergence of a new economic actor with the pre-existing industrial and traditional activities on the territory in a context of societal debate at the energy-biodiversity interface and of increasing social demand for participatory democracy. The work will be applied to the case of the development of offshore wind energy, which will be used to address this question. The interest of this case study is twofold:

- given the European and French ambitions for the development of offshore wind power and the intensification of human activities in coastal areas, offshore wind power is a particularly relevant case to address this issue. Indeed, it comes as an addition to the existing economic and recreational uses at sea and on the coast while cohabiting with a variety of marine protected areas (marine parks, Natura 2000).
- the timing of thesis project fits well that of the development of offshore wind farms in France as the first ones are under construction and will soon be in operation. The international comparison is also possible because many countries are in a similar context and temporality.

Potential research questions to be investigated include:

- What are the stakeholder interplay and institutional mechanisms that underlie the development of territorial measures?
- What are the appropriate governance mechanisms (current or to be developed), and at what scale, for the implementation of different types of territorial measures?
- What are the associated social and environmental justice issues?
- What are the determinants of the acceptability of the different types of territorial measures that can be implemented?

2.2 Methodological approaches envisaged

The thesis project may be structured around the following lines of work:

- Detailed review of the literature on (i) the different territorial measures (e.g. ecological compensation, economic compensation, etc.) that can be put in place by project developers and other stakeholders; (ii) the processes of negotiation and elaboration of these measures in relation to social and environmental justice issues
- Construction of a typology of all the territorial measures according to their nature, their purpose, their initiators and their interactions with other measures
- Elaboration of an analytical framework for monitoring the evolution of stakeholder interplay and territorial measures
- Analysis of stakeholders' views (and their evolution) on the different types of measures
- Identification of the bases for discussion between stakeholders (ecological and/or socio-economic assessment, scenario evaluation) and of the negotiation arenas

- Characterization of social mobilizations, their form and their weight in the negotiations
- Descriptive analysis of the interplay of actors through interviews with a panel of key actors and observations of consultation meetings
- Analysis of the determinants of the acceptability of different types of territorial measures (incl. social, distributive, procedural, environmental justice)
- Characterization of the governance modes associated with the different types of measures and analysis in terms of transaction costs to evaluate their relative effectiveness
- International comparison of the organizational arrangements chosen for the implementation of territorial measures
- Exploratory study of the implications for the social acceptability of a wind farm project — e.g., citizens' perceptions, links with demands in social mobilizations

3 Candidate's qualification requirements

Minimum qualification: Master's degree or equivalent academic degree in a relevant field of study (political sciences, environmental/territorial/geographic/public economics, energy/environmental public policy, etc.)

Desired qualifications: analysis of public policies, institutional analysis, experience in conducting interviews, scientific writing, proficiency in French and English

4 Contacts

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