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Public participation in marine spatial planning in France: From minimal requirements to minimal achievements

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ABSTRACT

Following the Directive 2014/89/EU, France completed its first round of maritime spatial planning (MSP) in 2022. It was based on participatory processes involving stakeholders as well as the wider public, using a dedicated online platform on three occasions between 2018 and 2021. Publics were consulted successively on the diagnostic, strategic and operational components of each Regional Maritime Spatial Plan, the so-called *Documents Stratégiques de Façade* (DSF). The authorities collected more than 4,300 online contributions. However, the authorities did not explain how the public contributions were integrated into the DSFs and how they were analyzed. This article explores this largely untapped, high-quality material. It seeks to understand who participated in the online consultation, what topics and issues were discussed, and what the outcomes were. Finally, this article draws some broader lessons about the participatory process and its inherent difficulty in transcending sectoral issues, and about the impact of participation on marine planning and the inherent difficulty of involving the wider public without rendering stakeholder consultation meaningless.

1. Introduction

Coastal Member States of the European Union (EU) had until March 31, 2021, to finalize their national maritime spatial plans. Although Belgium, Germany and the Netherlands already had experience in developing and implementing master plans such as these, the exercise was new to most of the countries concerned, including France.[1] All the member states concerned were required to follow the common principles set out in Directive 2014/89/EU establishing a framework for maritime spatial planning (MSP). Article 9.1 in particular requires member states to include stakeholders and the public in the MSP, but does not specify how this should be done. As a result, many different mechanisms were introduced across Europe, involving different audiences and levels of participation, and different geographical scales, and having varying degrees of effectiveness (Tissière and Trouillet 2022). This reflects the diversity of methods adopted to comply with the EU's participation imperative, and the importance that different members states attached to it. The requirement to participate was fulfilled by the various states in different ways, each region drawing on its particular political and democratic history (see van Tatenhove and Leroy 2003).

To briefly describe the approaches to participation, the bottom-up approach refers to "new social movements" for environmental democracy and justice that began in the 1960s. The top-down approach was established by the public information and participation requirements outlined in the Aarhus Convention (1998). In line with this Convention, France's Bouchardeau Law (1983) created a legal framework which was subsequently reinforced by the Grenelle de l'environnement (2007), and then the MSP Directive (Mazeaud 2021). In France, therefore, participation in MSP took two main complementary forms: dialogue with organized stakeholders, and public consultation. For the stakeholder segment, maritime stakeholder representatives were involved in institutional councils to develop a national planning strategy and regional maritime spatial plans - the Documents Stratégiques de Façades (DSFs); for the public segment, consultations were organized to collect opinions from the general public on the diagnostics, objectives and action plan for the maritime spatial plan. In addition to in-person meetings, an online platform was set up and people were invited to answer specific questions and react to the proposals put forward.

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[1] A second generation of plans is now under discussion in France. The method still separates the stakeholder debate from the public participation but uses a more ambitious set of tools (world café, touring debate, TV shows, etc.). However, it would be premature to include any lessons learned in this article.

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According to Tissière and Trouillet (2022) and the national documents available on the European Maritime Spatial Planning Platform,[2] France appeared to have higher ambitions than most other Member States, at least on paper (see Fig. 1). In practice, however, these participatory processes do not appear to have altered the content of the policy significantly. This is due to the objectives of involving public participation in the overall process of marine planning being unclear, and the lack of explanation as to how policy-makers were to interpret public and stakeholder input and incorporate it in the final policy. The results of the public consultation, therefore, have not yet been properly considered, even by the public authorities in charge of the processes; the outcomes of the online consultation, for instance, were limited to basic information and the general conclusions of reports published after each planning stage.

The issue of participation in MSP has already been the focus of a few studies. It has been considered both from an ex ante programmatic perspective (e.g. Qesada-Silva et al., 2019), and through a critical, ex post lens (e.g. Flannery et al., 2018). A great deal of feedback, in particular, has been published on the Baltic Sea (Morf et al., 2019a; Saunders et al., 2017) and to a lesser extent on France (Legé 2021; Tissière and Trouillet 2022), although most of these studies are based on qualitative approaches that are limited because the material is too extensive. The link between digitization and the politicization of the sea therefore remains largely absent from any research into MSP.[3] In this paper, we address this from the perspectives of both public authorities and social organizations. An analysis of the material provides insights into the public authorities' conception of virtual space for democratic expression, and how the general public perceive the content of maritime spatial plans. It also contributes to extending knowledge on the role of participation in MSP, for which our focus is on the online public participation implemented as part of the first MSP cycle in France. In this article we assess the content of the corpus of 4300 contributions submitted via the government's online platform. With such a large number of texts to analyze, computer-assisted textual-content methods are required; the contributions were consequently processed using IRaMuTeQ, an open-source software package using lexicometric tools to explore and map arguments. The results provide evidence to address three main research questions.

(1) Who participated in the online consultation during the first MSP cycle in France?
(2) What topics and issues were discussed by the general public?
(3) What was achieved by the online consultation?

The remainder of the article is divided into three parts. Part 2 is a review of the public consultation on the DSFs in light of public participation in MSP in Europe. The corpus of contributions submitted online is presented, along with the methods and tools used to analyze the content. Part 3 presents the most relevant results to demonstrate the nature and structure of the online participation lexicon. Finally, Part 4 organizes the findings into two strands: (i) the difficulty of overriding sectoral concerns in implementing the participation, (ii) the challenges of involving the public in the MSP approach despite the use of web-based tools.

2. Materials and methods

2.1. The role of participation in marine spatial planning policy-making: A largely overlooked research device

In view of the increasing competition for access to marine space for different types of use, MSP has emerged over the past 15 years as a way of preserving marine ecosystems and their resources as human activities continue to develop. It is based on an integrative logic of MSP, which is expected to surpass the sectoral approaches that have long prevailed (Smith and Lalwani 1992; Cicin-Sain and Knecht 1998). The aim of MSP is to establish a common strategy between stakeholders to ensure that increasingly diverse marine operations, including protected areas, offshore renewable energy, etc., continue to co-exist and that common objectives are achieved (Jay 2010; Zaucha and Kreiner 2021). The expected outcome is that an increase in public participation will consolidate the quality and acceptability of marine policies (Pomeroy and Douvere 2008; Taylor and Eberhard 2020). In addition, because the participatory approach to MSP engages the whole spectrum of interests, it provides a means of responding to democratic and environmental imperatives without challenging the dominant logic of economic development. In this respect, participation in MSP responds to two key principles: rationality and sustainability (Flannery and McAteer 2020; Saunders et al., 2019; Vince et al., 2013). In addition to some other thorny, unresolved issues raised by MSP - in particular, political issues such as the balance of power and effective greening (Flannery et al., 2019; Tafon 2018), spatial issues such as zoning and geographic information (Davret et al., 2024; Jay 2013; Trouillet 2019) and social issues (blue justice, work and employment at sea: Fairbanks et al., 2019; Saunders et al., 2020; Zaucha and Gee 2019) - the concerns raised through participation are undoubtedly among the most recurrent (Pomeroy and Douvere 2008; Tissière and Trouillet 2022).

Participation in the policy-making process has gradually become established as the ideal approach to planning in the maritime environment, and a process to which MSP is committed, but it has only begun to attract attention from researchers in recent years (e.g. Flannery et al., 2018; Tafon 2019). To overcome the "round table illusion" (Billé 2006), i.e. the conviction that all that's required to solve a problem is to bring together all the stakeholders in a discussion, and to capitalize on the completion of the first cycle of marine planning in Europe, it would appear essential to conduct an analysis of the different forms of participation in MSP and the issues raised, not least because specific challenges exist - the broad scope, the diversity of stakeholders, the combination of land, coastal and marine issues, etc. (Tissière 2020).

Although a comparative analysis of terrestrial and maritime planning systems is outside the scope of this paper, many of the issues raised by participation in MSP obviously echo planning issues in general. While there are some similarities, such as the role of technology in participation (e.g. Wilson et al., 2019), researchers have also identified differences between maritime and terrestrial planning systems. Smith (2018, p.7), for example, pointed out the relative absence of governmental control over MSP in Scotland, stating: "*The decentralized nature of land use planning in Scotland means that central authorities intervene in planning processes only as a last resort.*"

2.2. Standards, mechanisms, and tools for participation in MSP in Europe

In the EU, participation is MSP is a regulatory requirement. Although Article 9.1 of Directive 2014/89/EU of the European Parliament and of the Council of July 23, 2014, which establishes a framework for MSP, stipulates that "*Member States shall establish means of public participation* […] *at an early stage*", each member state is free to choose how the participation is implemented, and while the article on minimum requirements states that "*Member States shall* […] *ensure the involvement of stakeholders*" (art. 6.2), there is no further clarification. In practice, most member states appear to have identified two types of participation in MSP: that of the relevant stakeholders and authorities, and that of the public concerned (Tissière 2020). Participatory processes bring together the many stakeholders involved in MSP: economic activities such as shipping, fishing and energy; recreation and heritage; seascape and ecological protection. These processes generally occur at national and regional levels. The "public concerned" is rarely defined, and the people involved vary from one member state to another (Tissière 2020), but

[2] https://maritime-spatial-planning.ec.europa.eu/[Retrieved in April 2024].
[3] With the exception of the informational stakes recently explored by Rossi et al. (2024).

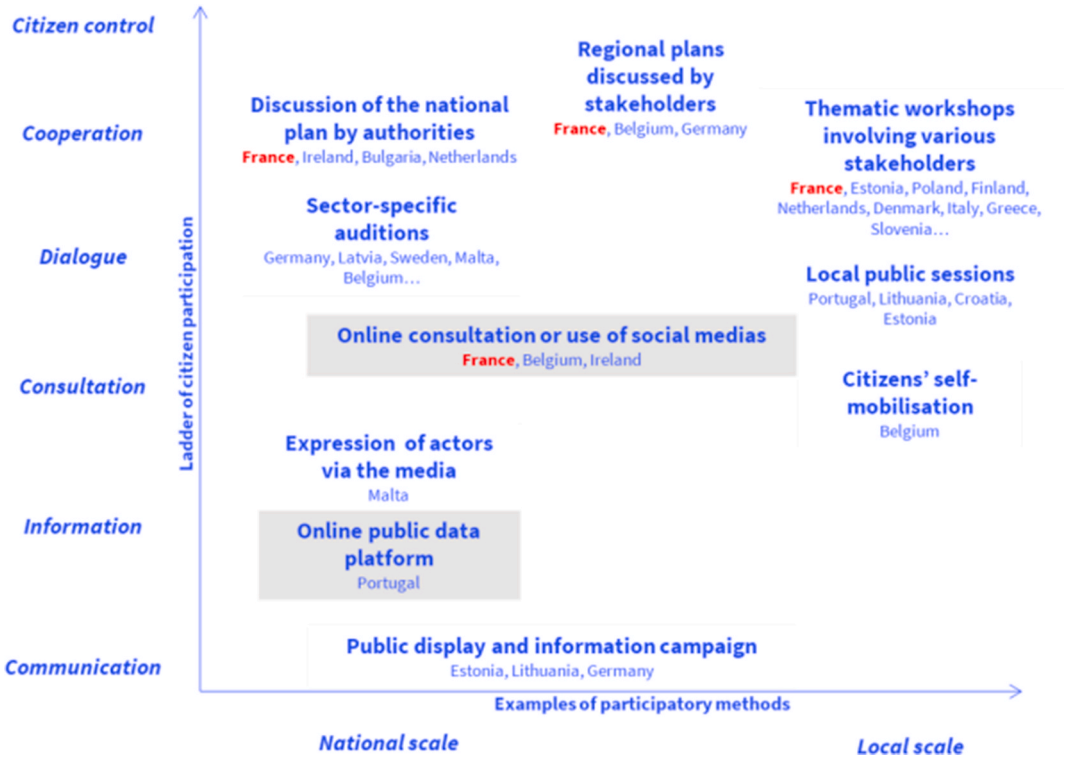


Fig. 1. Examples of participatory approaches in the EU (based on Tissière and Trouillet 2022).

overall it relates to ordinary residents, random non-organized members of the public, etc. Public participation generally takes place at regional or sometimes local level via thematic workshops or public information meetings (Fig. 1). In France, the notion of the "public" is interpreted either as individuals or as society as a whole, linked to a central and acknowledged "universal, non-discriminatory" construction of the French state (Alliès 1980; Verpeaux 2022). It may be a de facto position, but the public concerned is never (and can never be) considered in terms of being 'coastal' or relating to any other specific community, unlike other geographical areas such as Ireland (Flannery and Ó Cinnéide 2008) and Latvia (Tafon et al., 2023).

The means of participation employed by the various Member States are as varied as the types of stakeholders and their levels of participation. They include interactive use of social media in Belgium and Ireland, online consultation and thematic workshops in France, a public data platform in Portugal, public display and information campaigns in Estonia, Germany and Lithuania, public engagement via a digital maritime spatial plan in Denmark, local public meetings in Croatia, Estonia and Portugal, local experimentation in collaborative planning in Estonia, Finland and Poland, and multi-stakeholder thematic workshops in Greece, Italy and Slovenia.[4] This variety of approaches to public participation in the EU, ranging from straightforward provision of information to appeasement, correspond to three levels of tokenism (a superficial and symbolic effort, i.e. a pretense) according to Arnstein's (1969) ladder of citizen participation. This reflects the efforts made to involve maritime stakeholders and a wider cross-section of the public in MSP, in an effort to respond to the requirements of the European institutions. However, it is not clear whether and how the views and contributions of the stakeholders and the public concerned have been considered. In this respect, implementing participatory systems without integrating the input of stakeholders and/or public could generate frustration, inertia, and even conflict. This has been the case in France, where the proliferation of mechanisms and arenas for participation did not translate into the co-construction of MSP policies.

2.3. *Participation in MSP in France: from dialogue with maritime stakeholders to consultations with the "public concerned"*

Legé (2021) and Tissière and Trouillet (2022) describe the MSP process in France and its participatory aspect. Note that MSP is the first national strategy[5] of its kind in mainland France[6] to be organized by the ministry responsible for maritime affairs. The strategy is divided into regional plans: the DSFs, each involving a different socio-economic background (Table 1).

The DSFs are documents that describe sea and coastal policy orientations and actions in a systematic and prescriptive manner for each façade[7] (i.e. subnational maritime territory created within MSP. See map of MTES, 2019, p.5[8]). The DSFs consist of two elements: a strategic section describing the existing situation, priority strategic objectives and associated indicators, and an operational section that deals with monitoring mechanisms and action plans. The DSFs were instituted by the local government authorities in charge of maritime affairs (Directions interrégionales de la mer - DIRM), in close consultation with the maritime stakeholder councils (Conseils Maritimes de Façade - CMF; one for each DSF). There were five CMF forums, each involving discussions at subnational level and involving representatives of a certain group of stakeholders: (i) the State, its services and public institutions (including the DIRM), (ii) local decentralized authorities, (iii) coastal and maritime companies and employers, (iv) employees and trade unions, (v)

[4] See European MSP platform [Retrieved in April 2024].

[5] See: https://mer.gouv.fr/sites/default/files/2023-08/SNML%20DOC%20A4-WEB-PAGE-BD-ok-compressed.pdf

[6] There are a few adaptations of the MSP and participatory processes in French overseas territories; these are not included in this paper.

[7] A "façade" is a maritime subzone in mainland France, from the coastline to the EEZ limit.

[8] See https://www.archive-concertation.merlittoral2030.gouv.fr/file/1610/download?token=zxFFhlfs [Retrieved in April 2024].

Table 1
Main socio-economic characteristics (in early 2018).

Shades of grey correspond to the stake's level (with 3 levels): very strong (dark grey), important (grey), moderate (light grey)

	Demographic growth	Fisheries	Shellfish farming	Coastal agriculture	Shipping	Sand extraction	OWF	Coastal tourism	Yachting	Ship building	Military
MEMN											
	Shallow waters (generally less than 100m) with gently sloping bottoms; High tidal range and strong currents; High pressures (noise, chemicals, alien species...); Major technological risks; High maritime safety issues; Narrow maritime space; Coastal water quality heavily impacted by the poor state of continental waters										
NAMO											
	Large continental shelf (south); Rich and varied marine and coastal ecosystems and landscapes; Coastal ecosystems under multiple pressures; Coastal water quality heavily impacted by the poor state of continental waters										
SA											
	Wealth of marine and coastal habitats (e.g., the largest eelgrass beds in France, hermella reefs, the largest estuary in Europe, important wintering sites for birdlife); Coastal water quality heavily impacted by the poor state of continental waters										
MED											
	World-class biodiversity hotspot; Degraded status of marine and lagoon waters; Very high pressure levels, especially in summer; Monitoring, conservation and enhancement of heritage sites, landscapes and environments; Virtually no continental shelf										

Source: Authors. Based on consultation documents (December 2017), drawn up for the preliminary consultation from 25 Jan. 2018 to 25 March 2018 (https://www.archives.debatpublic.fr/documents-strategiques-facade) [Retrieved in April 2024]

associations of sea and coastline users and environmental protection associations.

Now that the guidelines for the MSP process have been established, we can focus on the participation involved in the process. First of all, it is important to clarify that participation concerned only the above-mentioned elements (strategic and operational) and that the French authorities do not seem to expect clear results from any participation outside the means actually deployed.

In parallel with the participation of organized stakeholders via discussion forums (i.e. CMFs), there were three stages involving wider consultation (Fig. 2), hereafter called the "general public". This process is sometimes also referred to as "dialogue" and is a consultative procedure. At each of the three stages, participation took the form of regional thematic workshops and online contributions, where limited interactivity took place since the participants were required only to indicate 'like' or 'dislike' of the proposals submitted or enter a comment themselves. At each stage, participants were invited to answer open-ended questions set by the public authorities on the status of marine environments, uses, risks, strategic and planning objectives, proposed actions, and monitoring mechanisms. In the first stage, for example, there were numerous questions (over 30), sometimes with unexplained differences between façades. To give two examples, one asked how ecological protection could be reinforced, and another asked about the identity of the façade.[9]

The French approach has differed from that of other European countries in setting up a systemized, multi-tool participation process on several levels. The process is also designed to involve members of the general public and various sectoral stakeholders. However, due to the newness of MSP, the weakness of the public debate statements, and hesitation and adjustments along the way, the participatory approach can only be a superficial exercise based on trial and error. It reveals how difficult it is to overcome procedural procrastination to achieve a level of participation involving anyone but the principle, visible actors and stakeholders, that can have any real democratic influence on decisions. The Commission Nationale du Débat Public (CNDP) is the independent authority that guarantees the right of the general public in France to information and participation concerning environmental matters. Its purposes are (i) to ensure the constitutional right to information and public participation, (ii) to organize public debates and guarantee consultation, (iii) to report on the results of debates, and (iv) to develop a general culture of consultation. In terms of MSP, the CNDP (2021) explains how the public debate was organized. An initial consultation was held in 2018 (stage 1 in Fig. 2), with two aims: to share with the public the current status and issues identified by both the French government and stakeholders early on, and to gather contributions from the public on the scheme proposed by the French government for the future of the four façades. Following this, as the drafting of the DSFs continued, the French government itself decided to consult the public on each of the two parts of the DSFs: strategic in 2019 (stage 2), and operational in 2021 (stage 3). Accordingly, the CNDP appointed a guarantor to ensure that the public was adequately informed and there were opportunities for people to express their views at stages 2 and 3 Legé (2021) speaks of a "loss of momentum of public consultation as the planning process progresses"; stages 2 and 3 of the public consultation were in fact simpler in terms of both mechanism and analysis.

In stage 1, the public had access to the following documents for each façade: a general report by the CNDP; a report on the ecological challenges including two summary maps; a summary map of the socio-economic challenges; a dynamic map accessible from a geoportal; a press kit; a video presentation; posters for public meetings; a summary of the questions raised by each issue (CNDP, 2018, p.7-8). The purpose of this initial consultation was to gather input from the general public on the government's proposed vision for the future of the four façades. In stage 2, a dossier for each façade was made available to the public, comprising the strategic part of the DSF, and appendices including an environmental report, the opinion of the Environmental Authority, the report from the public debate guarantors (stage 1, i.e. CNDP, 2018), and the results of the consultation (i.e. MTES, 2018). This time, the aim was to gather the opinions of the general public on the content of the strategic section of each DSF. Finally, in stage 3 the documents presented to the public related to the operational part of the DSF, i.e. the action plan, the monitoring system, and the strategic environmental assessment for each façade. The aim was to obtain the views of the general public on the content of the operational section of each DSF. The public was invited to contribute by liking or responding to comments made by others, or entering comments of their own.

CNDP produced a synthesis of the initial consultation (CNDP, 2018). In 2021, the administration requested an *"assessment of the period preceding the post-dialogue consultation"* (CNDP, 2021) at stage 1. The Ministry of Ecological and Solidarity Transition (MTES) also produced two syntheses at the end of the preliminary dialogue (MTES 2018, 2019). The redundancy of these documents, and the insufficiency of feedback at stages 2 and 3 and the consultation as a whole, reflect a lack of resources, even a lack of will, to achieve the objective of public participation. In its defense, the French government had no prior experience in this area, and the difficulty of integrating public views reflects the complexity of a participatory process set up in a progressive and empirical way. The CNDP (2021, p.5-11) has clearly explained how the French government adjusted its timetable and improvised the consultation as it went along; for example, *"The guarantors expressed their concerns about the organization of the 'post' consultation, in the complete absence of any feedback to the public since the end of prior consultation* […]*, with only the* Conseils Maritimes de Façade *being consulted*" (p.10), and "[the Ministry] *wondered about the possibility of referring the matter to the CNDP for consultation on the operational aspect of drawing up the DSFs (assessment procedures and action plans), following the electronic consultation on the strategic aspect (at the end of stage 2)*" (p.11, translation by the authors). In addition, the outcome of the public consultation was not completely negative because more than 4,300 responses were submitted via the online platform. By comparison, the online platform created to encourage a recent public debate about an offshore wind farm (OWF) near the island of Oléron (Nouvelle-Aquitaine), which is one of the most active platforms for projects such as this in France, received only 1,574 responses[10], and the corresponding MSP public consultation process in the Netherlands attracted only 110 responses.[11] These results, however, must be considered with caution in light of the public consultation in Belgium, which attracted no fewer than 40,000 responses.[12] In countries committed to involving the public in the process, such as France, it appears that a diversity of modes of expression results in higher levels of contribution.

2.4. Online contribution by the public: a largely untapped, high-value resource

Although initial short analyses of the online contributions were carried out (see CNDP 2018; MTES 2018, 2019), this resource was clearly not fully exploited. First, these syntheses provide no clues as to who submitted the online contributions (with some exceptions), so it is impossible to capture the identity, profile (age, gender, location, occupation, etc.), or motivation of the participants, thus limiting the possibility of comparing different groups of stakeholders (members of

[9] For more information, see: https://concertation.merlittoral2030.gouv.fr/nord-atlantique-manche-ouest/les-themes-en-debat-nord-atlantique-manche-ouest.html.

[10] https://www.debatpublic.fr/sites/default/files/2022-07/DECISION_MO_EOLIEN_OLERON.pdf [Retrieved in April 2024].

[11] See European MSP Platform. [Retrieved in April 2024].

[12] Ibid.

Fig. 2. The three phases of public participation in MSP in France.

institutions, representatives of environmentalist movements, fishers, members of the public, etc.). The exceptions referred to were comments from organized stakeholders who chose to sign their contributions. Second, factual information on the objectives, milestones and process of public participation left little room in the syntheses for general reflection on the value and limitations of this kind of public consultation. Third, the reports published by the CNDP and the MTES simply list the main lessons learned from the consultations without explaining how these conclusions were arrived at. Although excerpts from the contributions are used to illustrate the results, no information is given on how these contributions were selected. Finally, although the CNDP and the MTES ensured that certain conclusions were used to adjust and improve the content of the DSFs, the information provided on this subject is scant. As such, questions concerning the manner in which the online contributions were integrated into the DSFs are all the more significant because they were addressed in the same way as face-to-face workshops (i.e. empirically and qualitatively). However, computer-assisted content analysis methods would be a valuable resource for analyzing and consequently taking on board large numbers of online contributions submitted by the public.

The CNDP and MTES reports do not capture the potential value of online public participation, which could help to shed light on the public perception of the DSFs and the first MSP cycle in France in general. Textual analysis tools can also facilitate a comprehensive, systematic analysis of what the online contributions say about MSP in France, and an evaluation of the issues specific to the three consultation stages for each of the four façades. It is our belief, therefore, that a textual analysis of the online contributions can provide a complementary and rigorous perspective on participation, in terms of what the contributions say and how they have been used by the public authorities. However, we are also aware that textual analysis alone cannot answer all the questions. The corpus of comments represents a standalone body of material since there is no information on who submitted the online contributions, so it is impossible to draw any firm conclusions regarding the participation process as such, and only hypotheses from a textual analysis. Nevertheless, the approach can certainly contribute to reflections on participation in MSP in France, and other issues going forward.

2.5. Using IRaMuTeQ to analyze the content of online participation

Recourse to computer-assisted discourse analysis is essential to automate the processing of thousands of online contributions submitted by the public in order to understand and analyze them. With our training in the free, open-source software IRaMuTeQ (Interface of R for Analysis of Multi-Dimensional Text and Questionnaires; Ratinaud 2008), and successful experience using it in previous studies (e.g. Guyot-Téphany 2019), we concluded that this was the most appropriate tool for the present study. It is also suitable for processing corpora consisting of large numbers of short texts, as in the present case; it has been used on several occasions, for example, to analyze tweets (e.g. Leveneur-Martel 2021; Longhi et al., 2019), which are in the same format as the online contributions under consideration here. IRaMuTeQ has classic functionalities in lexicometric analysis (descriptive statistics, similarity and factor analysis, etc.), but is distinctive in that it can apply Alceste methodology (Kalampalikis 2003; Reinert 1990). For this study, this facility helped to identify the topics and issues that motivated online contributors to participate.

The corpus of texts was processed in three ways.

- Similarity analysis: an automated data analysis approach designed to construct groups of objects, in this case textual objects (or "lemmas" following preparation for lexicometric tests). The categorization criterion is therefore the co-occurrence of all nouns, verbs and substantives in the same text segment that carry meaning ("full forms" as opposed to "banal forms", strictly syntactic and "non-contextual"). Following the IRaMuTeQ processing, the similarity analysis takes the form of a graphical representation of the lexical group network, known as a similarity tree.
- Alceste method (Reinert, 1990): a top-down hierarchical classification of lemmas based on a vocabulary distribution criterion (i.e. lexical organization). The final product to be interpreted is a dendrogram representing "lexical worlds" (i.e. Alcest classes).
- Correspondence factor analysis: a multivariate statistical method that tries to explain the lexical organization using qualitative criteria. In this study, this is the "analysis of specificities" and is a way of testing both the effect of stages and façades on the lexicon, and the effect of the lexicon on the participants' comments (likes/dislikes).

In summary, the lexicometric analysis proposed by IRaMuTeQ is iterative and based on the three quantitative methods described above.

2.6. Corpus

Analyzing the contributions submitted to the online platform required a specific corpus to be created and formatted for processing (see Supplementary Material). The corpus consisted of 4,283 texts (Fig. S1, Suppl. Mat.). It appeared to be fairly heterogeneous considering there were three consultation stages, four façades and two types of posts. Stage 1 alone (2018) accounted for 72% of the contributions, compared to only 8% for stage 2 (2019) and 20% for stage 3 (2021). This confirms the loss of momentum with online participation (Legé 2021), although a slight recovery was observed in the last stage. The Nord Atlantique-Manche Ouest façade (NAMO; North Atlantic-West English Channel) contributed the greatest number of texts (40%), followed by the Méditerranée (MED; Mediterranean [25%]), the Sud-Atlantique (SA; South Atlantic [19%]), and the Manche Est-Mer du Nord (MEMN; East English Channel-North Sea (16%)]. The order of the façades remained

the same for stages 1 and 3, but differed significantly for stage 2, although NAMO remained in first place. For the contributions stricto sensu, they represented nearly two thirds of the entire corpus, the other third corresponding to the comments on these contributions. An overwhelming majority of comments (94%) was from the first consultation stage. Participants were unable to enter comments in the second stage and this method of participation was rarely used in the last stage. It is important to bear in mind the high level of heterogeneity in the corpus and the considerable volume of texts from stage 1. Note also that specific sub-corpora were created for each consultation stage and were subjected to additional lexicometric analysis.

3. Results

Four principal findings resulted from an analysis of the material. First, the contributions revealed a rich and diverse lexicon with comments on technical points in the documents. The answers to research question (1) suggest that the comments were not entered by ordinary members of the public or random, non-organized individuals. Second, the comments to research question (2) were polarized around two issues: offshore wind power and fishing. These activities respectively reflect the issues of climate and biodiversity crisis in the marine context, and also symbolize the balance of power between historical and new marine uses. They consequently provoked a great deal of public and stakeholder participation and became the focus of most of the contributions. Third, the comments were closely related to the objectives of each stage (revealing a level of appropriation of the participatory process by the public), and to the issues for each façade (which was not obvious given the national scope of the consultation). These results emphasize a part of what was achieved through the consultation (research question 3). Finally, the comments in respect of research question (3), designed to broaden our understanding of the achievement, highlighted three major DSF issues: offshore wind development, environmental protection, and the participation methodology itself.

3.1. Rich, specialized lexicon demonstrating impassive participation without reference to place

This section addresses research question (1), demonstrating the rich lexicon of the online contributions in contrast to their brevity and the objectives of the online consultation. IRaMuTeQ detected 13,127 different forms, 42% of which appeared only once in the entire corpus. Individual scrutiny of the texts submitted online revealed that most were well-structured and well-argued, and expressed using a precise, detailed vocabulary. This shows that the contributors had a good understanding of the online consultation, the questions asked, and the documents provided. It also suggests that most contributors were already familiar with MSP and its issues. This observation is empirically supported by the fact that some contributions were signed by institutional stakeholders, in particular representatives of environmental associations. The nature of the lexicon therefore appears paradoxical; on the one hand, there were several technical and scientific terms[13] (see below for details), reinforcing the observation that the participants were people familiar with MSP; on the other, most of the commonly-used terms were very broad. This is probably due, in part, to the method: the most frequently-used words (within a particular contribution and by different contributors) are by definition those with the broadest meaning. Nevertheless, the generality of the lexicon suggests two possible, non-exclusive interpretations: effective participation by a wider public; the use of everyday language by organized stakeholders, possibly to make themselves better understood.

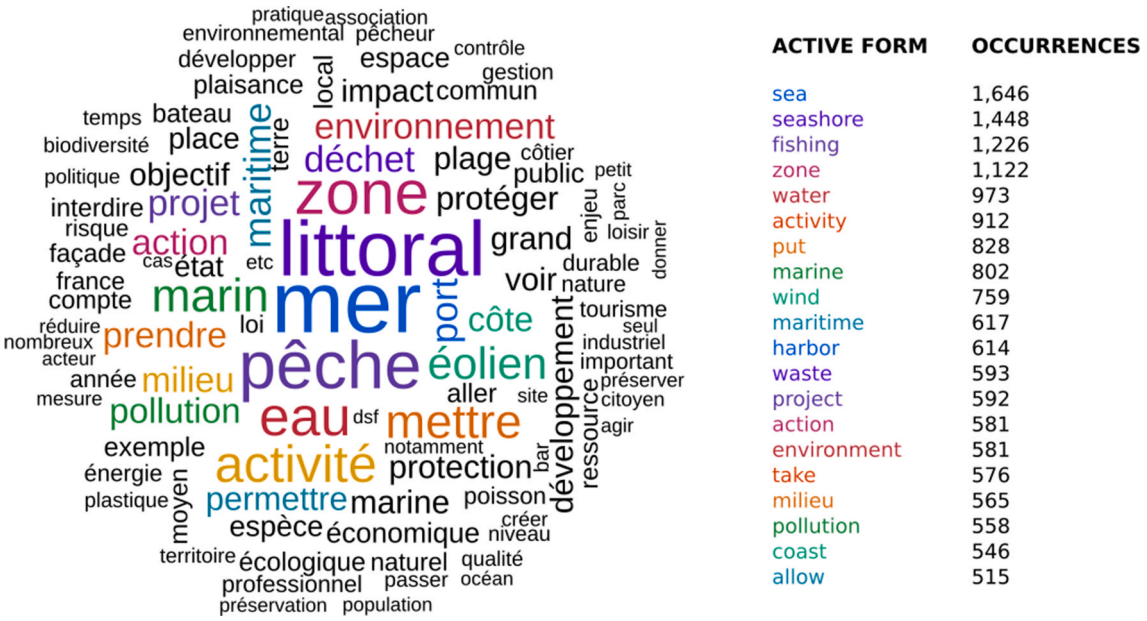
An initial look at the corpus simply in terms of occurrence of words, as represented in a word cloud (Fig. 3), unsurprising reveals that the most common words relate to the very object of DSF: the sea and its physical, environmental, and geographical dimensions. In addition, three other types of lexicon emerge, the first related to the uses of maritime areas and their resources with the generic term “activity”, as well as mentions of “fishing” and “wind power” in particular. Other uses are also mentioned but they are relatively infrequent, which contrasts with one of the challenges for MSP: to support the increasing diversification of human activities at sea. The second type of lexicon is that associated with planning, management and specific actions: it appears that contributors conceive planning as being both a normative and a performative tool that leaves little room for debate with sea users and the public. In other words, MSP is more about policy than politics in the minds of the contributors (and possibly in the minds of the authorities and debate designers). Although linked to an economic dimension in the comments, the third and last group of common words comprises numerous terms related to the environment. While some of these are based on previous categories, others relate directly to the anthropization of marine ecosystems. In addition, no place names other than “France” appear in the list of most frequent words. This is somewhat surprising, given that the primary goal of the DSF is to plan the spatial development of human activities at sea.

The structure of the lexicon confirms the importance of the four registers identified above (the sea, its uses, planning, the environment), as reflected by the similar tree representing the networks of co-occurrence of the most frequent words (Fig. S2, Suppl. Mat.). The sea-related lexicon, covering maritime and coastal issues, includes many key words closely related to terminology used in reference to environmental issues, stakeholders and activities. Use of the terms is divided between two specific subsets centered on “fishing” and “wind”. The fishing subset occupies a peripheral position and, interestingly, is connected at the center by the term “zone”. It includes the typical lexicon of this activity related to the management of fishing resources, and more general words related to an economic-development-oriented vocabulary, reflecting the importance of “activities”. The wind subset, located on the opposite side of the lexical structure, relates to the operational planning register, suggesting that MSP plays a role in supporting the offshore deployment of wind farms. The environmental vocabulary is also peripheral - not directly linked with fishing or wind - but closer in this context to a diagnostic vocabulary. The term “environment” is linked to several words referring to the ecological status of marine ecosystems. This can most likely be explained by the actual documents submitted for consultation (in particular the operational part of the DSF focusing on environmental issues, as discussed above) and by the decision of the French authorities to include the management plans resulting from the Marine Strategy Framework Directive[14] in the DSF. The environment-related lexicon, however, is fairly disparate, revealing the cross-sectional nature of this topic.

These initial results provide a summary impression of the online public participation, but cannot represent its entire content. As an initial conclusion, however, it is highly likely that the terminology used in contributions mirrored the text in the documents submitted for consultation, averting the focus from concrete, practical concerns and reference to specific places (at overall corpus level), and focusing instead on generalist contributions and observations with a pronounced “technical” slant. The use of technical terms suggests that contributors gave fairly

[13] The exact term to refer to forms analyzed by IRaMuTeQ is “lemma” [see section 2.5. and Supplementary Material]. Nevertheless, to facilitate reading, it was decided here to use “word” and “term” as synonyms.

[14] MSFD, or Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008, establishing a framework for community action in the field of marine environmental policy. The explicit aim of the MSFD was to recover a “good ecological status” of European marine ecosystems with the help of a set of indicators. An extended period of adopting the stakes of managing marine ecosystems has been underway since 2008, which could explain the contributors’ management-oriented approach to the marine environment.



ACTIVE FORM	OCCURRENCES
sea	1,646
seashore	1,448
fishing	1,226
zone	1,122
water	973
activity	912
put	828
marine	802
wind	759
maritime	617
harbor	614
waste	593
project	592
action	581
environment	581
take	576
milieu	565
pollution	558
coast	546
allow	515

Fig. 3. Word cloud of the 100 most frequent active forms.

precise answers to the questions asked and addressed the documents made available, but it also reveals the problems of using simple terminology to describe the issues facing MSP in France, and probably elsewhere. As such, relatively few terms (occurrences) - and associations of terms (co-occurrences) - convey any emotion or considered stance, which gives the impression that technical and rational aspects have removed the substance from debates on the future of maritime areas. Likewise, the generic nature of the most commonly-used terms makes it impossible to draw any conclusions other than the observation that the contributions focus on fishing, wind power, and, to a lesser extent, the environment. It is likely that these results are due in part to the inevitable loss of information when analyzing such a large corpus. However, it seems that the comments made in the online consultation were made on a general level or were not connected with people's practical concerns (insofar as we can understand what those concerns are).

3.2. *Predominance of offshore wind and fishing over planning*

The second analysis of the lexicon is based on the Alcest method and takes the form of a top-down hierarchical classification to produce a dendrogram (Fig. 4), to better understand how the DSFs were received by the public in addressing research question (2) concerning the topics and issues discussed. Different hierarchical word sets were drawn up by the IRaMuTeQ software with a successive, automatic application of lexicon criteria. The overall classification is described schematically below.

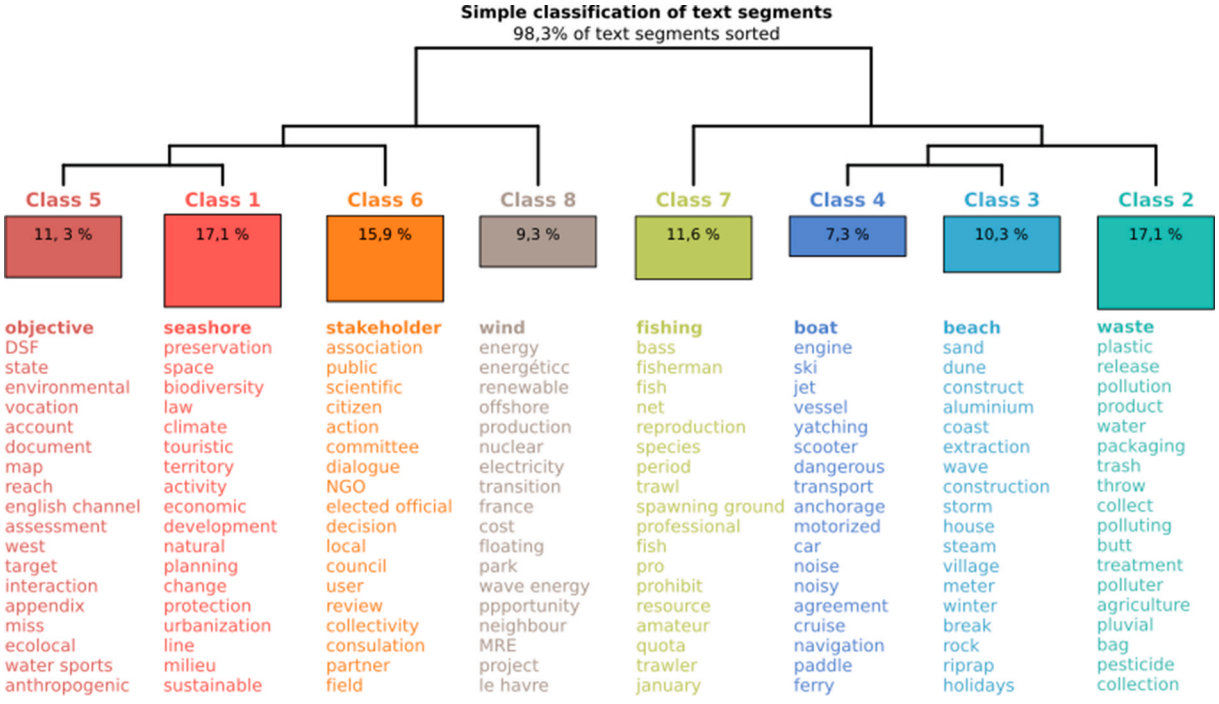


Fig. 4. Classification of the lexicon according to the Reinert textual clustering method.

Eight different classes can be grouped schematically into three sets: MSP, the challenges of MSP, and sea uses. The first set appears at the far left of the graph and corresponds to Class 5 and Classes 1 and 6, which together comprise just over 44% of the total text segments.[15] Class 6 centers on stakeholders and covers a wide range of institutions. It also includes two terms associated with the participation of these stakeholders in planning: "dialogue" and "consultation". The lexicon used in Classes 5 and 1, which represent the group's branching out into planning, focuses respectively on goals and the coastline. Class 5 includes terminology associated with the development of the DSFs, particularly the spatial component, while Class 1 deals with the development of coastal areas, from protection to development. The second lexical set - on the opposite side of the graph - focuses on planning issues, with Classes 4, 3, and 2 (approximately 34% of the total). Class 2 groups together a little under 17% of the text segments, focusing on waste and discharges. Class 3 deals with the environmental challenges facing beaches, ranging from anthropogenic impacts to exposure to natural hazards. Class 4 relates to navigation and reflects the conflict between different modes of transport. Finally, a third and middle set, although related to the two groups above, comprises Classes 7 and 8 (approximately 20% of the total) and stands out clearly from the others in that it has an upstream position within the tree structure. Class 7 includes specific fishing terms, e.g. equipment used, species fished, management of fishing resources, and Class 8 is based on wind power, with a lexicon related specifically to OWF and the energy transition in general.

The first set demonstrates that there is good understanding, among institutions and the general public, of the system implemented by the public authorities, with regard both to the role of the DSF as a planning tool and to the participation of the various stakeholders. The singularity of the Class 6 lexicon also suggests that the participation of stakeholders generated a great deal of discussion. However, there are few place names in Class 5, indicating once again a lack of spatial roots to MSP. The second set shows that pollution, the anthropization of coastlines, and the co-existence of different modes of navigation in coastal areas, are the issues that mainly provoked public participation. Lastly, with regard to the third group, the specificity and predominance of the lexicon relating to fishing and OWF shows that online participants perceived these two activities as specific sea uses, the regulation and development of which are key planning issues.

Finally, while the dendrogram assumes a hierarchical perspective of the word sets, it is particularly important to look at the relative position of each class. In this respect, Classes 8 and 7 are located upstream compared to the others, suggesting that OWF and fishing were the principal topics discussed by online participants, forming the answer to research question (2).

3.3. Continuity of stages and differentiation by façades

Initial analyses of the corpus as a whole revealed no differences between the different consultation stages and façades, and no indication of the public's position on planning, the issues involved, or even the two main uses under debate, i.e. fishing and OWF. The consultation stages, façades, and number and nature of reactions in the online participation lexicon were therefore subjected to a more detailed analysis in order to document research question (3). To this end, an analysis of the specificities (based on a correspondence factor analysis; see Fig. S3, Suppl. Mat.) was carried out to measure the influence of the stage and the façade.

The "stage" criterion clearly has the greatest potential to provide an explanation since a two-factor design makes up 100%. Stage 1 has little influence on representations and includes few specific words, compared to the other two stages, to which it is opposed on the horizontal axis (64%). However, there are numerous words related to pollution and beach and coastal anthropization, which could be explained by the objective of this stage: to provide a diagnosis that defines the challenges facing planning. The results are much easier to interpret for stages 2 and 3, which stand out on the vertical axis (36%). The stage 2 lexicon reflects the objective of this sequence: to define the planning objectives and spatialize them (in particular through the "maps of vocations" which are the keystone of the strategic component of DSF).[16] The stage 3 lexicon also reflects the stated objective: to consult the public about the operational component, the action plan in particular.

While the "façade" criterion has a less significant impact on the lexical structure of the corpus (71%), the distribution of word variation within the same thematic field (i.e. active forms) provides more meaningful information. On the horizontal axis (39%), the Mediterranean is opposite the Channel and Atlantic façades. The Mediterranean façade contains a relatively eclectic vocabulary that includes a series of activities located in the coastal area. The lexicon of the other façades is much more specific and relates to the two major environmental issues in the maritime domain: the management of fishing resources in NAMO and SA, and the production of renewable energy in MEMN. This distribution, in which a number of place names are highlighted (at sub-corpora level), generally relates to the maritime geography of France. MEMN is viewed in the light of the industrialization of uses of the sea and its resources, driven by the advent of offshore wind power, and thus resembles the maritime spaces of northern Europe. The Mediterranean façade, conversely, is perceived as a territory marked by conflicts of use and coastal anthropization, a characteristic common to the countries bordering this sea basin. Both NAMO and SA are in an intermediate situation, with fishing forming the nucleus of most arguments.

Online contributions appear to be sensitive to the different stages of consultation, the different objectives in particular, which provides an answer to research question (3). Another element of the answer, however, lies in the perception of major development issues, which differs greatly depending on the façade.

3.4. Hot topics: participation, offshore wind, environment

To redress the problem of the imbalance in the number of contributions to the various consultation stages and façades, and to consider the reactions (number of comments, likes and dislikes) that do not apply to the entire online consultation (stages 1 and 3 only, with differences), the whole lexicometric analysis was then repeated for each consultation stage to give a more complete understanding of what had been achieved as a result of the process. This confirmed and refined the results achieved so far (research question 3 - see also Supplementary Material).

The lexical characteristics of the sub-corpora (Fig. S5, Suppl. Mat.) are fairly similar to those of the general corpus: they are both general and very specific. The wide range of vocabulary is therefore a consistent feature of the online contributions. Although the word clouds highlight the objectives and specificities of stages 2 and 3, it is nevertheless clear that each lexicon is characterized by both its technicality and the generality of the most common active forms. The classified lexicon for each stage confirms the predominance of fishing and OWF over planning, and reveals topics or issues specific to each planning step.

Regarding the role of contributions submitted online, consideration was given to how lexicon items affected the likes, dislikes and comments posted. It was difficult to make comparisons since participants were guided to react to different stages in different ways, as mentioned above (section 2.3). In addition, the results are not always easy to interpret; e.g. although statistical tests concerning the number of comments for stages 1 and 3 were statistically significant, it was difficult to interpret the distribution of the active forms. The same was true for the number of dislikes in the first stage. Accordingly, this study focuses on the results

[15] As mentioned in section 2.5, text segments are textual units and constitute the material for IRaMuTeQ analysis.

[16] See the CEREMA's website [Retrieved in April 2024].

that could be interpreted: the number of likes attributed to contributions in stages 1 and 3 (see Fig. S6, Suppl. Mat.).

In stage 1, the lexicon of contributions that generated few or no reactions reflects the consensus register, several place names, and activities such as aggregate mining and wind power. The terms that accrued a moderate number of likes related primarily to fishing and the management of fishing resources, demonstrating that contributions for or against this use generated positive reactions. The active-form characteristics of many "likes" appear relatively heterogeneous, grouping together terms related to planning and participation. This suggests that the public is interested in being involved in the development of MSP. The influence of the number of likes is comparable to that for stage 3. In stage 3, the words that elicited positive reactions are those associated with an average number of likes, and reflect a combination of the issues of science, stakeholders and the environment. For instance, use of the terms "wind" (energy), "scientists", "biology" and "advice" suggests a tendency among contributors to use scientific data to characterize the ecological impacts of offshore wind farms. The active-form characteristics of a high number of likes also constitute a heterogeneous category ranging from participation to ecology. Within the operational component of the DSF, there appears to be a desire to partner with environmental stakeholders to consider the ecological challenges of MSP. In other words, environmental issues seem to have crystallized the reactions of contributors in the final stage of consultation. Between 2018 (stage 1) and 2021 (stage 3), offshore wind power clearly gained in importance and now appears to be an absolute priority, mechanically shifting the question of whether to develop this use to that of how to do so while minimizing its environmental impact.

4. Discussion

These four main findings around a debate which is at times general and at others technical, likely to be dominated by stakeholders who benefit from a certain anonymity (especially in terms of fishing and OWF interests), and has a subtle territorial dimension rather than an explicitly spatial one, highlight the tensions around MSP and the imperative of participation. Although there is a wealth of literature on public policy participation and practical guides for MSP practitioners, few studies have analyzed the challenges encountered when the public is involved (at least theoretically) in the maritime field, particularly in the case of France and the context of online and general public participation. The underlying challenges of our findings will now be addressed in terms of (i) the participation process itself and its inherent difficulties in transcending sectoral issues; (ii) the impact that participation has on marine planning and the intrinsic difficulty of involving the general public without rendering consultation with stakeholders meaningless.

4.1. The participation process: problem of overcoming sector-specific challenges

OWF and fishing clearly stand out from other activities, and above all are at the top of the planning process itself. This is observed at all levels of the analysis, from preliminary observations on occurrences (word cloud) to final correspondence-factor analysis. The words characterizing these activities (e.g. "fishing" and "wind") always appeared in the top 15 words used by the public in online consultations in the above-mentioned analysis, regardless of the stage and façade (Fig. S3, Suppl. Mat.). The results are consistent with the findings of other studies that have analyzed CMFs in France (focusing on institutional and stakeholder levels) and record a polarization of arguments involving these two activities (Legé 2021; Tissière and Trouillet 2022). The same is true in other geographical contexts (e.g. Flannery et al., 2018; Quero García et al., 2019 for cases in the US and Southern Europe).

The explanation for this trend could be the local OWF debates that were going on in France at the time this consultation was rolled out, some having already taken place. In the broader context, MSP is seen as a tool to facilitate the coexistence of OWFs (a new marine activity) and fishing (a traditional activity). These two types of use seem to monopolize the debate on MSP, and few of the issues on which the public was invited to comment directly concerned activity.[17] In other words, where previous studies showed that the aim of MSP is to free up space for OWF with the least possible direct and indirect negative impact on fishing, the present study reinforces and expands this argument and demonstrates that the public debate plays the role of arbiter, in that the questions asked in the public consultation were very general, for instance.

- "Do the objectives outlined for the coastal zone enable us to move toward cleaner, more productive seas and healthy ecosystems?"
- "What do you think of the proposed zones (geographical limits, assigned "vocations")?"
- "Do you feel that the environmental, social, and economic diagnosis presented, and the issues identified, reflect the situation of the façade?"

The trend could also be explained partly by the over-representation of issues associated with OWFs and fishing in the political debate and in the media, Brexit-related issues in particular - which have a significant impact on fishing - took center stage in the media, compared to issues that were less popular at that time (e.g. maritime transport, tourism) or with which the general public were less familiar.

Another factor is the capacity to mobilize fishing and OWF stakeholders, which could also help explain the crystallization of the debate on these two sectors, despite the fact that these two activities had already been discussed independently of the DSFs, first in the context of the debates organized on offshore wind power projects, and subsequently following the decision of the fishing committees that could potentially impact the marine environment.

However, the Mediterranean façade seems to differ from the other three façades in that it highlights the problematic coexistence of uses such as tourism and yachting, and the impact of human activities on marine ecosystems. While the differences between façades partly reflect their specificities, as highlighted in the analysis (Fig. S3, Suppl. Mat.) - i.e. MEMN has the greatest number of wind power projects and Atlantic is the largest fishing area in France - they also reveal that the perception of the planning issues in each façade is simplistic. MSP in France therefore, as for MSP in general at this point (Trouillet 2020), still seems unable to achieve its objective of being cross-sectoral. MSP is apparently subject to strong sectoral logic relating to OWFs in particular, which in turn raises new issues for fishing at the expense of other environmental and social-political concerns (Boucquey et al., 2016; Saunders et al., 2020; Tafon et al., 2023); MSP-related challenges are therefore positioned around these two main activities (Stelzenmüller et al., 2022).

MSP has been the subject of critical studies highlighting its similarity to strategic sectoral planning (Flannery and McAteer 2020; Jones et al., 2016; Spijkerboer et al., 2020; Trouillet 2020) and its shift away from its initial ambitions (Spijkerboer 2021). However, positioning the debate around fishing and OWFs echoes the importance of environmental issues according to the terminology used by the general public in online consultation, especially in relation to the issue of economic development. For instance, Fig. 4 and Fig. S6 (Suppl. Mat.) show that the vocabulary associated with the "seashore" (Class 1), using words such as "preservation", "biodiversity", and "climate", is part of the largest branch (incorporating Classes 1 and 5, and even 6 in Fig. 4). This results partly from the inclusion of marine action plans in the DSF, and the significant number of questions focusing on environmental issues either in the diagnosis (stage 1), the definition of strategic objectives (stage 2), or the action plans (stage 3). The results of this study also reflect profound environmental concerns on the part of contributors, as evidenced

[17] See the archived consultation platform: https://www.archive-concertation.merlittoral2030.gouv.fr/[Retrieved in April 2024].

by the frequency of words associated with this register and with an entire class of words around "waste" and "pollution" (Fig. 4, Class 2). In addition, the final stages of the analysis reveal a desire to involve stakeholders in the assessment of environmental impacts, particularly those resulting from the deployment of wind farms. This result probably reflects the concerted mobilization of environmental stakeholders for the online consultation. This issue is not included in the present analysis as there is no reliable data identifying contributions made by the general public, but a high level of information in the public comments and specific technical vocabulary were observed, clearly indicating that organized interests took advantage of the online public consultation.

The above discussion offers a complementary approach to the analysis of research questions (1) and (2); in general, the results highlight the problems of including economic development and the preservation of marine ecosystems in the MSP framework, as confirmed by Fig. S6 (Suppl. Mat.), with distinct groups for marine ecosystems and economic matters at each stage. This initial purpose of MSP has already been widely discussed in the scientific literature (Collie et al., 2013; Domínguez-Tejo et al., 2016; Douvere and Ehler 2009; Trouillet 2020), and this work on the participation of the public concerned only reinforces the findings of these previous studies. The link between sectoral and ecological debates also shows the supplanting of social and cultural issues with economic and environmental concerns. Thus, public participation reproduces the same sectoral logics as CMFs.

4.2. The participation process: problem of involving the general public

The predominance of the sectoral approach and persistence in separating economic and environmental issues, as confirmed by this study, are in contrast to the geographical location of the contributions made by of the general public. Contributors seem to associate MSP mainly with a with façade-based approach, which is a logical consequence of the French government's decision to divide the MSP into four plans based on the administrative division of the French territory. This study reveals the trends that public comments follow based on the four façades (Figs. S1 and S3, Suppl. Mat.), but rather than focusing on the coastal zone where territorial division may be appropriate, MSP is expected to focus on maritime space. This again raises the problem of understanding maritime issues in all their complexity.

However, an analysis of specificities revealed a link between the façades and uses or issues (Fig. S3, Suppl. Mat.). The MEMN façade remains the archetype of industrialization of the sea (Table 1), the NAMO and SA façades focus on fishing and fishing resources, and although considered essentially in terms of its coastal element, the Mediterranean coast coincides best with the MSP goals, since the public consultation appears to have provoked comments on more diverse uses. The territorialization of MSP nonetheless remains a real issue for contributors who take a very broad strategic view, reinforcing the approach favored by the French government This provides insights into research question (2), insofar as the contributions mirror the maps of vocations mentioned in stage 2 (the finalized version of the marine plan), which have succeeded neither in spatializing activities nor in transcribing ecological, social or cultural issues.

The sectoral and strategic approach of MSP may help explain why the general public finds it difficult to really get involved in the topic. A lack of both awareness of ocean issues and digital literacy and skills could be at the root of this problem, as discussed by Boaventura et al. (2021) and Guerola-Navarro et al. (2023). In this respect, and despite a significant level of participation by organized stakeholders, the experience in France shows that "general public" contributors are no exception to the rule, tipping the balance toward an impoverished corpus. However, the limited involvement of the general public may have the effect of maintaining the balance of power between maritime stakeholders in the contributions, while more effective mobilization could act as a counterweight. Where the general public struggles to understand the proposed approach, individuals and institutions representing sectoral interests find it difficult to move away from their position as stakeholders. This observation is reinforced by the predominance of the use-based approach apparent in the documents submitted for consultation, rather than an approach relating to living spaces, as mentioned above. To better understand the answers to research question (1) again, this reveals the problems associated with involving the general public in the debate; public debate is merely an extension of economic and administrative hegemonic powers (Tafon et al., 2019).

These findings are also reinforced by the significant imbalance between the façades and the stages. They may imply a certain weariness due to repeated mobilization, intensified by changes to the modes of participation at each stage. They also highlight a lack of anticipation, reflection and ambition with regard to soliciting members of the public and collecting and using their responses, all the more so since successive austerity measures have reduced the resources available for public action, including democratic action. The approach taken is undoubtedly too complex and time-consuming to achieve results that are exhaustive or systematic. Although public engagement in policy-making is encouraged by supranational structures, it is nevertheless difficult to implement in the context of MSP on a national scale, and is also underexploited, as shown above.

One of the key findings of this paper in answer to research question (3) is that public participation is real, based on a quantitative approach. However, our analysis of the comments reveals the difficulty experienced by the general public in understanding the main issue of MSP even with multiple forms of public consultation, and the fact that there was no consideration of MSP's cross-sectoral and strategic approach. Since there is no tangible evidence of the results of the public consultation having been analyzed, there is every reason to believe that the French government was ultimately unable to analyze them, and therefore unable to include them in its marine plans.

However, while local communities can help shape MSP (Yet et al., 2022), they need support in the form of a clear explanation of the MSP policy, which remains relatively little-known among members of the public, in order to do so. Raising awareness of the MSP policy is all the more difficult in that the French government, for historical and political reasons, refuses to take into account the local aspect of the social body, in this case the coastal communities. The findings of an exploratory approach are supported by this in-depth analysis of public participation (Tissière and Trouillet 2022), which also confirms the findings by the CNDP (2018) and Legé (2021), i.e. that the government has failed to mobilize any stakeholders and individuals other than those already engaged in other MSP bodies. Yet et al. (2022) and Tissière and Trouillet (2022) outlined the reasons that have led to the lack of public participation in MSP on both sides of the Atlantic, and these seem to be consistent with the results of our own observations: lack of knowledge about the political process; lack of interest due to ineffective past experience; marginalization of the ecological debate; lack of consideration of social and cultural issues.

Morf et al. (2019b) and Pomeroy and Douvere (2008), among others, call for the broad inclusion of stakeholders in the debate on MSP. The emergence of new debates relating to the integration of more targeted communities (e.g. coastal inhabitants and small-scale fishers) and specific debates (Smith and Lalwani 1992; Vince and Day 2020) may help to alleviate the monopolization of discussions by MSP stakeholders and reinforce the counterbalance provided by the public. This study reveals a general trend for robust participation by stakeholders compared to participation by the general public. This observation is consistent with how participation processes are managed in France, where stakeholders have real decision-making power in MSP, but the role of the public is primarily procedural (Tissière and Trouillet 2022), which means there is nothing concrete in the final document on the inclusion of public contributions. The challenge is therefore to find the right balance between encouraging public participation as far as possible and not depriving stakeholders of a key role.

Although several solutions to the issue of engaging the public were

implemented, via online consultation platforms in particular, as detailed in section 2, the findings suggest that the "technological solutionism" (Morozov 2013) made available to promote participation is a myth in terms of facilitating public engagement; it does encourage the involvement of more people, but the comments submitted are disconnected from the human element as a result of the identities of contributors being hidden, which makes the process unsettling. While these technological tools facilitate the exploitation of contributions and extraction of results, they appear unable to facilitate the involvement of the general public. In conclusion, mobilizing members of the public on this issue and fully exploiting the results remains problematic regardless of the means used to engage the public. The role of public participation in MSP is still not clear in terms of what the government has gained from it.

The results of this study confirm some of the findings of Ansong et al. (2022, p.9), who showed that the online consultation documents in Ireland were "*too technical or intangible to ease the workload of addressing several comments and extensive scrutiny by the public*." Even though they serve as a support for consultations with the general public, the planning documents are designed primarily for organized stakeholders, and therefore mainly for the "big sectors" and the government administration itself (Boucquey et al., 2016). This shows that a methodological bias was already in place prior to any engagement with the consultation, and it is not certain that the public authorities really wanted to draw anything from the consultations. The consultation may have been included in the procedure, and therefore something the government departments were obliged to undertake irrespective of the outcomes (and perhaps their utility), rather than a true consultation with real expected outcomes. There was certainly also a structural bias based on a decision made even before the consultation began.

5. Conclusions

Given the paucity of in-depth studies into the public MSP participation process in Europe, France in particular, the aim of this study was to discover the issues involved in consulting the general public and making use of their contributions. The findings show how the people received and understood MSP and what the different levels in the online contributions (façades, stages, types of contributions) reveal in mainland France.

The analysis of public participation shows that MSP has remained firmly anchored in a sector-wide approach, in terms of both the DSF and the outcomes of the public consultation. It reveals the problems of involving the general public in the process and reproducing power relations with regard to MSP and the debates surrounding it. It also reveals how the authorities influence this policy, since public consultation appears to be more an illusion of involvement than any genuine involvement that could generate real change. The lexicon of online participation is both very technical and very general, suggesting that it emanates from an informed public and highlighting the problems associated with organizing public debate. The sectoral approach appears to focus on discussions around two activities and their associated issues, which contrasts with the integrated approach that MSP is expected to convey. The various challenges of the three stages of participation in the first cycle are reflected in the vocabulary used, but the significant differences between the façades reveal, in particular, that environmental issues are territorial.

Despite the automated and proven analysis of the corpus that was carried out using a textual analysis tool, the task remains complex and requires in-depth knowledge and contextualization of the results to make the best use of them; above all, it must distance itself from an undeveloped participatory approach. The analysis of our corpus exposes the challenges of conducting cross-sectoral, ecosystem-based, adaptive, participatory spatial planning. Conversely, the results demonstrate a strategic and sectoral approach to MSP based on public perception. The study also reveals the flaws associated with the use of technical solutions to promote public engagement; despite the comprehensive and diverse measures used to engage people, there remains a fundamental problem: the general public is unable to grasp the challenges of MSP.

In the case of France, the national authorities have clearly sought to promote the participation of both maritime stakeholders and the general public in different forms and using different strategies depending on the circumstances. It has inevitably been a trial-and-error process and a hesitant approach, but an examination of the resulting forms and changes reveals that, between procedural obligations and initial intentions, the forms of participation and the meaning ascribed to the process have failed to respond to the expectations of the participants and the planning challenges. Ultimately, this observation reveals the tensions between "too much democracy" and "too little democracy" in terms of both planning and the "environment" (Tissière and Trouillet 2022). It also reveals that minimal requirements (i.e. the involvement of stakeholders; section 2.2) rarely lead to anything other than minimal achievements. It is to be hoped that the doctrine and practical modalities in this area can be developed, step by step, in line with future planning cycles.

In terms of method, while lexicometric analysis is an effective means of drawing conclusions from public consultation, its scope is more limited in research applications. At the very least, quantitative analysis tools should be used in conjunction with more qualitative methods, such as qualitative analysis of specific elements of the corpus or on-site observations of public consultation meetings. Ultimately, the analytic value of a lexicometric approach, or of any other form of analysis, would certainly be further enhanced if the objectives of these consultations were defined more precisely.

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CRediT authorship contribution statement

Josselin Guyot-Téphany: Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Juliette Davret:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Laurie Tissière:** Writing – review & editing, Writing – original draft. **Brice Trouillet:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization.

Declaration of competing interest

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Data availability

Data will be made available on request.

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Appendix A. Supplementary data

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List of Abbreviations

CNDP	Commission Nationale du Débat Public
DSF	Documents Stratégiques de Façade
EU	European Union
MEMN	Manche Est – Mer du Nord (East English Channel–North Sea)
MSP	Maritime spatial planning
MTES	Ministry of Ecological Transition and Solidarity
NAMO	Nord Atlantique – Manche Ouest (North Atlantic-West English Channel)
OWF	Offshore wind farm
SA	Sud-Atlantique (South Atlantic)

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