

# Involving the public in the impact assessment of offshore renewable energy facilities

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## ABSTRACT

Public participation in decision-making about development has many benefits especially in the coastal zone and in the near-shore marine environment. This research expands the discussion of public involvement in decisions about marine resource use by examining public participation in environmental impact assessment as relevant for offshore renewable energy facilities. A review of empirical and theoretical research supports the development of a framework for further analysis. The framework consists of five main features: (1) effective communication, (2) broad-based inclusion, (3) prioritization, (4) early three-way learning, and (5) alternatives analysis. The paper's concluding sections explore the relevance of such a framework and indicate possible applications.

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## 1. Introduction

In most Western countries, the public participates in decision-making regarding offshore energy development, albeit to varying extents. Usually, participation is guaranteed at least as part of the environmental impact assessment (EIA) process. Improved decision-making through EIA of proposed energy facilities is particularly critical in the coastal zone, especially in near-shore marine areas where there are multiple jurisdictions and a myriad of stakeholder groups who traditionally have had open access to resources. Also, any exclusionary development will result in a loss of public trust rights [1,2], so in democratic societies policy makers have an obligation to involve the public in decisions.

How public participation shapes EIA in the offshore environment is important. Although assessing impacts to the physical environment is one phase of the overall decision-making process, given the precarious state of the oceans worldwide [3], environmental concerns are front and center. In the case of offshore renewable energy development, policy makers must avoid creating new impacts in the rush to solve primary concerns such as climate change and energy independence. Furthermore, EIA has expanded over the years to include assessment of numerous types of impacts, not only those to the physical environment (e.g., issues of equity, job creation, and socio-cultural impacts). So EIA can and

should play a greater role in decision-making and planning for the marine environment.

Literature on public participation in conservation and resource management points out that the marine environment poses some unique challenges. A recent research focus is public participation in the decision-making process for marine resource management such as for protected areas planning [4], fisheries management [5,6], and integrated coastal zone management [7,8]. Some studies focus on applying a particular method for the process [e.g., 9] and others in refining best practices for particular applications [e.g., 10].

Public participation has been an integral part of EIA since its inception and it is the focus of many case studies. These have for the most part been in Europe [e.g., 11–13] where EIA is primarily part of the development consent procedure and not a requirement separate from other legal provisions as in the US and Canada [14]. Many studies stress the need for more theoretical and empirical research to understand participants' behavior in EIA processes that are of high public interest. Offshore energy projects in the near-shore environment tend to be high profile because they employ new technologies, impact sensitive areas, use resources held in public trust, and engender conflicts with other uses such as tourism, shipping, and fishing [15].

More research on public participation and EIA of projects proposed offshore is necessary but as of yet, limited [10]. The marine environment is distant from stakeholders and unfamiliar. Resource ownership in the marine environment is vague and ambiguous. These points raise questions about the unique

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characteristics of public participation in EIA of offshore projects—for example, regarding the willingness or capacity of the public to take part. Is the distance of projects from shore related to the level of public interest? Are priorities placed on marine environmental impacts different from those on land? Are stakeholders familiar enough with the marine environment for them to contribute to the EIA process?

This paper expands the academic discussion of public involvement in decision-making for marine resource use by examining characteristics of public participation in EIA as these are relevant for offshore renewable energy development. The first part of the paper provides a general introduction to public participation in EIA and then to public participation in scoping, the initial phase of EIA. The next part presents a framework for further analysis based on a review of empirical and theoretical research. The discussion and conclusion sections explore the relevance of such a framework and some possible applications.

## 2. Public participation

### 2.1. Environmental impact assessment

By law in most countries, the completed EIA is a public document. However, its accessibility to the public, and the extent to which the public shapes the document from its initial stages, provides feedback on it, and supplies information contained within, is quite variable. In the US, public participation is a major component of EIA. In most European countries, public participation in EIA starts with review of a draft EIA report. In many other countries, the public has little or no influence over the topics covered in EIA, the draft or final versions, or how EIA findings are used.

Some EIA policies have evolved to include greater public participation over time. The European Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (hereinafter EC EIA Directive) strengthened its public participation component twice subsequent to its original adoption in 1985. The second amendment (Directive 2003/35/EC) was approved in 2003 to ensure full consistency with the UN/ECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention of 1998). This resulted in enhanced public notification and disclosure of EIA information, added requirements for member states to arrange for public consultations about the EIA, and mandated consideration of public comment received during the EIA process [16].

In the US, the National Environmental Policy Act (NEPA) of 1969 (42 US Code Section 4321) provides the framework under which Federal agencies perform environmental review of projects that they will be authorizing, funding, or undertaking on their own behalf. After the lead agency has made a decision to prepare an environmental impact statement<sup>1</sup> and before the scoping process, it must publish a notice of intent (Sec. 1508.22) “invit[ing] the participation of affected Federal, State, and local agencies, any affected Indian tribe, the proponent of the action, and other interested persons (including those who might

not be in accord with the action on environmental grounds)”. NEPA requires the lead agency to invite comments from the public after preparing a draft environmental impact statement and before preparing a final environmental impact statement (Sec. 1503.1(a)).

The advantages to having the public participate in the EIA process are many. Involvement of stakeholders and interested parties ensures that important aspects of a project are not overlooked [17]. An exchange of information takes place in which members of the public find out about the project and air their concerns, while project proponents learn from local knowledge. Social learning about policy development and objectives of sustainability also takes place [18]. Proponents and public officials are alerted to the controversial elements of a project. This has the potential to reduce conflicts by “transformative learning” on the part of all stakeholders and by enabling developers to address contentious issues early on [19]. Early in planning proponents can make changes to the project, consider other alternatives, or develop mitigation strategies. Public involvement increases public confidence in the EIA process and promotes democratic principles [18].

Public participation takes different forms including public hearings, surveys, workshops, advisory committees, and commenting on written documents [4,14,20]. These support varying degrees of empowerment that can be conceptualized in stepwise ladder formation. Degrees of empowerment are on a scale from manipulation to consultation to total citizen control of decision-making [21]. Generally, EIA processes have supported the middle steps of this gradient—participation, consultation, and information gathering—stopping short of allowing complete public power or control [14]. Participation is an interactive process that engages the public, establishes areas of agreement and disagreement, and enlists contributions to the decision process. Consultation refers to the process of asking for information and comments about proposals often focusing more on the need of an authority to consult other bodies and named individuals than the broader public. Information gathering is one-way communication with those affected by a proposal, which then requires the receiver to acquire further information, to comment, and to become involved in decision-making [1,14]. Under the European system public involvement in EIA is generally through consultation. The US system is more interactive and therefore closer to participation as defined by this hierarchy.

### 2.2. Scoping

Scoping is the process of identifying and assigning priority to the issues associated with a project for the purposes of focusing the impact assessment to be conducted [22]. Usually the earliest stage of EIA, scoping is a process that determines what significant issues the EIA will cover, including the nature and extent of ecological data to be collected and assessed [14]. It is frequently viewed as the most important stage in determining the quality of the assessment [23–25] but it has also been identified as EIA’s most problematic phase [26] and has been under-researched [27].

There are some advantages to public involvement in the earliest stage of EIA, most notably tapping into local knowledge [e.g., 24] and identifying conflicts early on [e.g., 28]. But public participation is frequently not part of scoping [e.g., 29]. Despite potential benefits, many regulations for EIA such as those in Brazil [30], Israel [25], Greece [1], and Asia [31], require assessment according to guidelines that are either applied according to project type or on the basis of consultation with an appointed group of experts.

<sup>1</sup> According to NEPA, an environmental impact statement (EIS) “...provide(s) full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment” (Sec. 1502.1). In contrast, the environmental assessment (EA) is a document that provides sufficient evidence and analysis for determining whether to prepare an EIS (Sec. 1502.3). In this paper, which is relevant to various countries’ systems, I use the term EIA to refer to the process resulting in preparation an EIS and not an EA.

Researchers classify scoping according to two orthogonal aspects: (1) expert opinion or public participation, and (2) who has the leading role in the process—a regulatory authority or the proponent [32]. In the US, the public participates in scoping although in some European Union (EU) member states—notably Austria, Ireland, Germany, and the UK—it is up to the competent authority to decide if the public should be consulted [26]. McCauley [31] criticizes EIA policies in the Asia-Pacific region that uses a checklist approach for scoping based on a pre-set range of potentially negative environmental impacts—sometimes modified according to the sector involved. This approach rarely succeeds in fully quantifying the effect of project-induced change [31].

Problems with scoping stem from it being expected to support both the precautionary principle and efficiency despite strong tensions between these two goals [28]. On one hand, precaution is supported by extending opportunities for public deliberation that usually lengthen and expand deliberations. On the other hand, by reaching agreement with the parties about what information is required and “scoping” some subjects out of the assessment, decision-making is also focused and streamlined, promoting greater efficiency. However, Snell and Cowell [28] found that the tendency to scope issues in rather than exclude them reflects a pervasive concern for legal challenge, rather than precaution. This reinforces the use of standard lists of environmental considerations rather than the investigation of novel, cumulative, or indirect risks [28].

Poor scoping practices fail to prioritize impacts of significant concern that will actually make a difference in decision-making. Ross [22] attributes this to the tendency for those participating in the scoping process to see their concerns as most important when no one else does, particularly decision-makers. Ross contends that scoping should “identify information pertinent to the subsequent tiers of impact assessment.” A better and realistic understanding of how public participation effects scoping is needed [26]. This is especially true for sensitive and use-laden offshore area areas where knowledge of the physical environment is limited, new technologies are proposed, and conflict is likely.

In the sea, public participation presents special challenges and ambiguities. Much of the ocean is unfamiliar and inaccessible to large portions of the public and distant from communities that may rely on it for livelihood [33]. Further complicating matters is the lack of available data on the marine environment, and the expense and effort necessary to collect it; renewable energy technologies are for the most part new and unfamiliar. These issues give rise to further questions: who are project stakeholders and what rights to resources do they have? Do stakeholders have the capacity (competence) to participate in environmental decisions affecting the distant offshore environment?

The next section of this paper presents an evaluative framework to assist in the development of best practices for public participation in scoping for EIA for offshore energy projects. While public participation for these projects depends on existing regulation, the proposed framework can be used to evaluate processes that have occurred, to modify existing practices, and to help devise recommendations for EIA regulations. This is especially relevant as new EU Member States come into compliance with EU Directives and as policy makers around the world include offshore energy projects among those that trigger EIA.

### 3. A framework for analysis

Studies of public participation in EIA elucidate process elements that influence the success of participation in scoping processes. Much of this work consists of empirical studies that use survey methods or case studies within various national regulatory

contexts. Researchers have evaluated participation in EIA from different theoretical perspectives (i.e., transformative learning, Habermas’ communicative discourse, capacity, democracy, and equity), which provide a broad foundation for determining best practices. The proposed framework draws on best practices and evaluative criteria from literature on (1) public participation in EIA; (2) critiques of EIA related to scoping; and (3) public participation in marine spatial planning and coastal zone management.

From this empirically and theoretically based research, process elements emerge. I grouped these elements into features that together provide a framework for involving participants in scoping for EIA in the marine environment: (1) effective communication; (2) broad-based inclusion; (3) prioritization; (4) early three-way learning; and (5) alternatives analysis. This framework lends insight into how to structure or evaluate a public participation process for scoping in EIA (Fig. 1). More importantly, it broadens the discussion of scoping to lay the foundation for practices that can improve the use of EIA for decision-making for offshore renewable energy facilities.

#### 3.1. *Effective communication*

Based on prior research on public participation in EIA, developers or the public agency administering the scoping process should communicate clearly, fully, and on a level that is understood by participants. Four elements related to communication emerge in the literature: process display, transparency, understandability, and accessibility. The second and third elements may be particularly challenging for projects in the marine environment that employ relatively new technologies.

Soliciting information, feedback, and input from stakeholders will depend on them knowing what is expected of them. Therefore mechanisms for communicating structure and displaying of the process as it is expected to unfold is important [34,35] and should occur at this early stage. Roles and objectives of scoping should be defined clearly as part of the process [36].

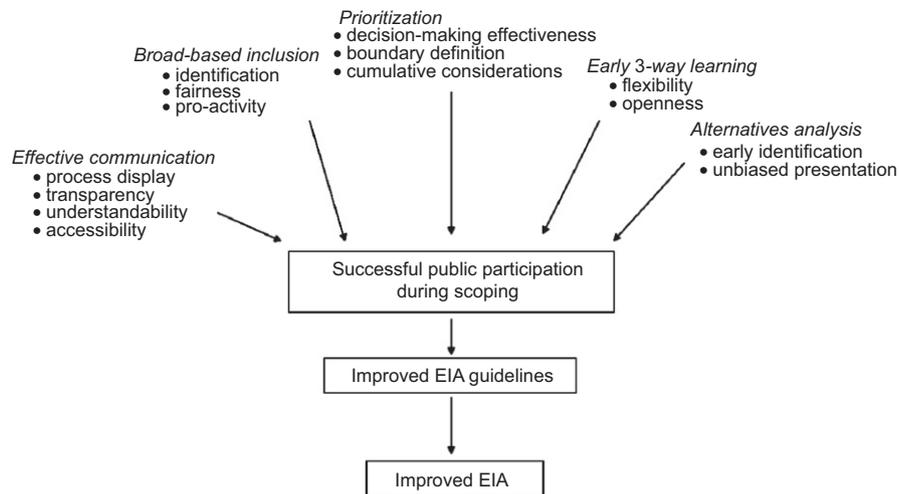
Related to process display is the idea of transparency. Transparency allows participants to know what other stakeholders are communicating and avoids any secrecy [37]. Also, transparency will both promote and depend on unbiased presentation of a development proposal [19,34] a challenge for developers promoting new technologies. Transparency helps build trust among the public, which will be important for maintaining participation throughout the entire EIA process [12,14,18].

Proposals need to be understandable [1,12,38]. New technologies, such as acoustically sensitive pile-driving for offshore turbine installations, may be particularly challenging. This and other offshore renewable energy technologies themselves are developing and are rapidly changing. Technical subjects must be simplified and explained in laymen’s terms in a manner that considers stakeholders characteristics such as cultural, generational, and professional backgrounds [11,17].

Finally, accessibility is essential to successful communication of a project proposal. Documents and other presentation materials should be available to participants [39]. Accessibility also refers to providing participants with adequate resources during the process including material, time, and even human (professional) resources [34].

#### 3.2. *Broad-based inclusion*

Another feature that emerges from the literature relates to how stakeholders and the public are included in scoping and who the stakeholders are. Any use of the ocean involves a loss of public



**Fig. 1.** Process features that contribute to improved scoping and higher quality EIA and decision-making. Features are grouped into five categories: effective communication, broad-based inclusion, prioritization, early three-way learning, and alternatives analysis.

trust rights [15], so public participation in scoping for marine renewable energy project should be as broad-based as possible. Being inclusive can be challenging especially for projects far from shore because it is not always clear at the outset who the stakeholders are or how to reach them. Particular elements associated with broad-based inclusion are identification, fairness, and pro-activity.

Identification of all members of the public who may have concern about a proposal or knowledge of the environment at the proposed site is an important step that should take place as early as possible [12,35]. Broad inclusion will help ensure that socio-economic impacts will also be considered in the EIA, even if indirectly [13].

A fair process will offer to all those participants identified the same opportunities for communicating and for influencing the decision-making process [4,19,40]. Such an approach builds trust between developers, sponsoring agencies, and the public. As for other elements of public participation that contribute to a positive relationship between stakeholders, this leads to acceptance of the final decision and support for compliance of any conditions imposed [41].

Once stakeholders are identified they should be actively recruited to take part in the scoping process [42]. Pro-actively seeking stakeholder participation will require an investment of time and resources. Effectiveness will depend on the mechanisms used to encourage stakeholders to take part in scoping. Framework laws for EIA often prescribe methods such as notification and public hearings [11]. Again, pro-activity is especially critical because public trust resources are at stake in the marine environment.

### 3.3. Prioritization

One of the most common critiques of scoping has to do with this feature of the process [22,26] and most literature on the topic of public participation in EIA emphasizes the role that the public can play in identifying priorities, a step conducted during scoping [14,23]. Three essential elements of prioritization are decision-making effectiveness, boundary definition, and cumulative impact consideration.

Focus on key issues keeps EIAs manageable and understandable by limiting the extent of topics covered [22]. While all stakeholder concerns should be addressed on some level, some researchers propose that most effort should go towards assessing

those impacts that will be relevant to decision-making as it is structured by regulation [17,26]. For example, if certain impacts to the environment would be unacceptable and would cause a project to be denied, then it is most effective to determine whether those impacts exist and to what extent. Furthermore, if participants feel that their input on impacts is not influencing decision-making, trust and motivation will be lost [18,36] and they will feel alienated [14]. Decision-making effectiveness is sometimes a feature of EIA regulation. As an example, in Europe the Aarhus Convention mandates that public participation processes influence decision-making [43].

The second element of prioritization is boundary definition [23]. Boundaries are subject to available monetary, time, and human resources [44]. This feature is especially critical for EIA conducted for new technologies in the marine environment. There is a high cost associated with obtaining information about marine project impacts due to the dynamic nature of the sea, its fragility and sensitivity, less data being available in comparison with that available for terrestrial environments, and additional time and expense needed to acquire it [10]. Assessment should be appropriate to the context and scale of a project and its surrounding environment [45]. Constraints or limitations can help determine priorities. For example, when budgets are constrained, a developer cannot be expected to put emphasis on visual impacts for a wind farm not visible at all from the shore.

Lastly, the public should weigh in on consideration of cumulative impacts, both to identify and prioritize them [27]. Failure to appropriately assess cumulative impacts is another one of the most common critiques of EIA [28,42]. Those affected by cluster developments, competing uses, and anticipated changes in baseline conditions of the marine environment over time may be in the best position to alert project proponents to the importance of these concerns.

### 3.4. Early three-way learning

Quality stakeholder involvement processes promote informative communication and learning [40]. Three types of knowledge can be gained through participation that can be used to improve EIA: local (stakeholder) knowledge, expert knowledge, and knowledge from previous or parallel EIA experience. These processes should also be flexible and open enough to enable incorporation of new knowledge [37,46].

Collection of local knowledge from the public is considered part of a good public participation process [37]. It is especially hard to come by and important for the marine environment [10]. Expert knowledge is often scientific or derived from intimate knowledge of technology. This should be shared with public participants. Finally, knowledge rooted in public participation of other parallel and previous processes should be made available to the public and experts in order to help build consensus about the scope of specific EIAs [27,29]. EIA clearinghouses, training, and accumulated knowledge centers can help organize and disseminate such knowledge [13,46].

To take advantage of such learning opportunities the EIA process must be flexible to change as new information becomes available beyond the scoping phase [46]. The process should also be able to adapt in ways that will include important impacts as these are discovered through public involvement, monitoring, and assessment of alternatives [37]. And finally, sharing of information and learning that will contribute to building consensus about the scope of EIA must take place early-on [47].

### 3.5. Alternatives analysis

Another important feature of the process should be consideration of alternatives during scoping. Alternatives should be identified and described as part of an iterative process. Two elements are important here: early identification and unbiased presentation. These two elements are inter-related.

When developers and government entities consider alternatives early on, there is less chance that they will be biased in their consideration because there has been less time for the developer to “lock in” on the project [47,48]. Also, developers' expenditures are relatively small at the beginning stages of a project, thus facilitating the consideration of alternatives. In any case, alternatives must be presented in an unbiased, non-coercive manner for the public to feel they can still weigh in on their consideration [41].

Involvement of agencies and the public in consideration of alternatives has been thought to create alarm [49] and the ability of stakeholders to judge technical issues has been questioned [20,28]. But these risks outweigh many benefits, including the opportunity to develop criteria relevant to site selection and to establish trust and transparency [14]. The consideration of alternatives, particularly the “null” alternative, refutes the idea that EIA strives to combine two opposite positions—namely that a project contains risk, yet is also risk free [50]. To be credible, elicit trust of participants, and to avoid being simply a rhetorical exercise, the possibility that risk will be too great for the environment to bear must be considered with adequate assessment of the impacts of such an alternative. For renewable energy facilities, the null alternative engenders impacts resulting from the failure to reduce CO<sub>2</sub> emission and the need to generate power by other, possibly conventional means [51].

These five different features are inter-related and there is some overlap. For example three-way learning is supported by good communication and vice versa. The next section briefly describes some characteristics of offshore renewable energy development and how the framework can be applied.

## 4. Discussion

### 4.1. The framework and offshore renewable energy

Modes of energy production based on harnessing ocean wind, wave, current, and solar power are being promoted as a way to relieve, if not solve, many developed countries energy woes and to

stop or reduce CO<sub>2</sub> emissions. Offshore energy development has advantages over land-based renewable sources, namely that the oceans are of the public domain. Generally speaking, private parties have not laid claim to them. Also, wind resources are stronger and more available at sea [52].

European energy companies are moving fast into the marine environment to meet ambitious renewable energy goals. The offshore wind energy development sector is taking advantage of onshore wind's successful regulatory revisions.<sup>2</sup> In addition to significant wind energy capacity installed offshore of Denmark and the UK, some EU member states are proposing new current, tidal, and wave technology projects [e.g., 54]. There will increasingly be greater numbers of EIAs for these types of projects.

Yet, there are some factors that have hindered development. One of the most frequently cited challenges for development and for EIA in the marine environment is the inter-dependency of offshore activities [1] and multi-jurisdictional, multi-sectoral regulatory regimes [10,15]. By some accounts these issues have hindered both the approval process and EIA for offshore wind in the US [35].

For the Cape Wind project proposed for Nantucket Sound off the coast of Massachusetts in the US, two multi-volume environmental impact statements have been prepared each with an extensive public participation component as required by the US National Environmental Policy Act. Although public participation is frequently cited as a means of reducing conflicts and engendering support for final decisions [34,55] and despite the urgency for renewable energy development, controversy and conflict has characterized this decision-making process. Controversy and blatant opposition to the project has taken the form of concerns expressed during periods of public comment on the EIA [56] indicating the importance of these stages in the process.

### 4.2. Testing and modifying the framework

It would be helpful to test this model framework among participants in an EIA scoping process for offshore renewable energy. The framework can also serve as the basis for designing evaluative criteria for the analysis of a relevant public participation process. To some extent, EIA laws and regulations determine the quality of the public participation in scoping and in EIA in general so it may be necessary to modify features of the framework according to varying regulatory types and situations (i.e., mandatory vs. voluntary scoping, mandated mechanisms such as public hearings or surveys, and little or no connection between EIA and project approval).

Field studies based on the framework would extend existing research. Although case studies have been a popular method for conducting research on various mechanisms for public participation and for EIA, comparative analysis would be a useful way to test such a framework under different regulatory frameworks. Data for comparative analysis could be obtained from personal observations, EIA documents and records, or participant surveys and interviews [e.g., 57]. Regarding the last, several researchers have explored how participants rank the importance of various elements of public participation usually in a planning context [37,41]. Further analysis could clarify these perspectives for EIA in the marine context.

As part of a larger research project, the author analyzed the public participation process in EIA for offshore renewable energy development in the German North and Baltic Seas. Preliminary

<sup>2</sup> For example, a recent German law charges the grid connection costs to the transmission system operators, giving them the right to pass the costs to the end consumers, and therefore reducing by at least 10–15% the costs for developers [53].

findings illustrate some particular challenges. For example, NGOs represent the public for rounds of public consultation conducted for EIAs. Due to the large number of proposals for offshore wind farms made by developers in a short time, NGOs have a difficult time participating in the consultation for every single EIA process. With these public surrogates unavailable, public participation in scoping is limited [58]. Furthermore, the German EIAs for offshore wind farms are so focused on the decision-making process, topics assumed to be irrelevant as grounds for rejection can be mistakenly neglected if confirmed in the scoping phase. According to Köller et al. [59] this can include: “human beings, growth on structures, macro-phytobenthos, seabed/sediment structure, air, climate, material assets, and cultural heritage.”

Another instructive example involves the Cape Wind public participation process. A year after developers proposed the project and in response to an increasingly unproductive debate, the Massachusetts Technology Collaborative, a quasi-state agency, developed a stakeholder process for analyzing the proposed wind farm. Although not an official step in the soon-to-commence EIA process, many of the features of this framework were present (e.g., identification of stakeholders, establishment of clear objectives, and set time boundaries). Experience gained in this process had far-reaching implications beyond the specific project debate because (1) Cape Wind is the first large-scale US wind farm project; (2) it posed challenges for the regulatory structure to consider non-oil and gas energy projects in public waters on the Outer Continental Shelf; and (3) it challenged this progressive community's commitment to large-scale renewable energy development [35].

## 5. Conclusions

The expanding interest in offshore renewable energy coincides with growing awareness about the importance of involving the public in decision-making processes, even for the distant marine environment. Public involvement in decision-making through EIA is especially important in the coastal zone and the marine environment because the inter-dependency of activities raises the potential for contradicting uses, for conflicts with environmental protection, and for the loss of public trust rights. It is precisely for these types of projects, such as those mentioned in the two preceding sections, located in complicated physical contexts and governed by complex regulatory mechanisms and at multiple levels, that this framework is useful.

In its response to the European Commission's report “Towards a future Maritime Policy for the Union: A European vision for the oceans and seas” the European Wind Energy Association (EWEA) states that “Public acceptance [of offshore wind farms] will depend on the existence of a credible regulatory process that recognizes and protects important marine ecosystem values and ensures public benefit from the use of ocean resources. Such a process requires...a wide consultation of all stakeholders.” [60]. In 2003, the EWEA identified best practices to enable development of offshore wind energy policy. Its recommendations included communication and public involvement beyond minimum EIA standards [61].

Beyond the framework presented here, supportive legislation can do a lot to improve public participation in the scoping phase of EIA. In many countries, especially in the EU, the flexibility of non-mandatory scoping allows a confusing range of scoping practices to be undertaken. Ideally, EIA regulations should be clear and unambiguous, while at the same time providing enough flexibility for responsible agencies to use public participation mechanisms for scoping in ways that truly support better environmental decision-making.

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