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## SPECIALTY SECTION

This article was submitted to  
Marine Affairs and Policy,  
a section of the journal  
Frontiers in Marine Science

RECEIVED 30 January 2023

ACCEPTED 06 April 2023

PUBLISHED 26 April 2023

## CITATION

Wilke M (2023) Public participation in  
marine spatial planning in Iceland.  
*Front. Mar. Sci.* 10:1154645.  
doi: 10.3389/fmars.2023.1154645

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# Public participation in marine spatial planning in Iceland

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**Introduction:** Marine Spatial Planning (MSP) aims at ecosystem-based management of ocean resources that brings different stakeholders and the public together to discuss their conflicts of interest and forge a sustainable path forward. Public participation is a crucial element of MSP to make it democratically legitimate and sustainable in the long-term. MSP was formally introduced by law in Iceland in 2018 and two projects were initiated in the Westfjords and Eastfjords in 2019, with one further planned in Skjálfandi Bay.

**Methods:** To assess the scope and depth of public participation in those MSP projects, data was collected through semi-structured interviews (n=80), conversations, observations and document analysis during the data gathering and proposal stages of the planning processes.

**Results:** The results show that a limited group of people including institutional actors and formal stakeholders had been engaged in the information gathering stages of the process, but in the later phases of decision-making, local community members were notably absent.

**Discussion/Conclusion:** This lack of public participation highlights the need for more in-depth communication about the MSP process and marine issues in the adjacent communities as well as an urgent need for inclusion of the public into marine decision-making and MSP.

## KEYWORDS

marine spatial planning, coastal planning, public participation, community engagement, coastal communities, citizen involvement, marine governance

## 1 Introduction

Marine and coastal planning processes are more sustainable and likely to be accepted by communities when broad public participation is ensured throughout the process (Pomeroy and Douvère, 2008). The terms integrated coastal (zone) planning, marine planning and marine spatial planning (MSP) are used differently by various scholars and practitioner traditions. They all describe the planning and management processes of defined ocean spaces – whereas some include the coastal zone and its activities, others only include off-shore marine spaces. There are various approaches that are used between them,

but they share the core concept of attempting to better plan for complex spaces involving marine ecosystems and their use by humans to support a sustainable future. Wide-ranging participation of citizens is necessary for a joint outcome and to fully reap the benefits of MSP (Dickinson et al., 2010; Quesada-Silva et al., 2019). Broad participation is vital to MSP for generating community buy-in, fostering justice, integrating local knowledge, generating ownership, transparency and trust as well as establishing networks, building capacity and raising awareness of environmental issues (Fletcher et al., 2013; Jarvis et al., 2015; Flannery et al., 2018; Morf et al., 2019; Quesada-Silva et al., 2019). In reality, lack of resources or time on the part of the planning actors often result in limited participation opportunities for communities, and top-down processes of consultation are more common than any two-way communication (Jarvis et al., 2015). Domínguez-Tejo et al. (2016) found that social aspects are not sufficiently considered in planning practice while there is an overriding prevalence of economic values and some ecological consideration that dictate MSP processes. “It appears that social connection to the sea is being limited to preserving some features of our past” (p. 126), implying that people’s complex relationship with the ocean and how they relate to their local coasts are largely ignored by MSP processes – with some notable exceptions like Australia or Norway, where Indigenous communities’ traditions, values and current practices have been embedded in the plans. Even once the MSP process allows a wide range of community members to engage, many challenges to effective and just participation remain: Greenhill et al. (2020) identify underlying power inequalities, lack of trust and ineffective governance as main issues. Flannery et al. (2018) warn of the dangers of exclusion and barriers to participation which can lead to irritation of participants and the public as well as jeopardizing the legitimacy of the entire process. All of these aspects must be carefully managed when introducing coastal and marine planning.

Although MSP is new to Iceland, this study is situated in the broader field of Icelandic marine governance which has heavily focused on fisheries management in the past. Grounded in a desire to fight overfishing and make Icelandic fisheries more sustainable, the fishing quota system was overhauled and basically privatised by making individual quota fully transferrable in the years leading up to 1990 (Chambers and Carothers, 2017; Kokorsch and Benediktsson, 2018). The socio-economic effects of the introduction of the Individually Transferrable Quota (ITQ) system were widely felt and included a consolidation of fishing quota in urban rather than rural areas, leaving many remote coastal communities vulnerable (Kokorsch and Benediktsson, 2018), increasing inequalities between bigger and smaller fisheries and increasing the perceived risk of corruption (Gísladóttir et al., 2021). Kokorsch et al., (2015) studied power dynamics of different stakeholders in Icelandic fisheries policymaking over time and found that the level of power of local communities specifically had decreased after the introduction of the ITQ system. Gísladóttir et al. (2020) studied corruption in natural resource management and found that in the case of Icelandic fisheries, the regulatory legislation was perceived to be lacking in enforcement

mechanisms, leading to transparency issues. Chambers and Carothers (2017) found that small-scale fishermen in remote fishing communities further emphasised their lack of decision-making power in fisheries policy, distrust in institutions and dissatisfaction with decision-making processes. As the long-term impacts of these previous marine policies still affect the remote coastal communities that are the subjects of this study, the advent of MSP and participation should be considered in this context. This research presented the opportunity to observe the MSP process as it developed and how Iceland as a country with one of the oldest democratic traditions adapts to an international standard of public participation in marine governance in a context of often traditional, unwritten rules of decision-making.

In 2018, a new law on MSP was passed that requires the coastal zone and fjords in Iceland to be planned (Alþingi, 2018; Hafskipulag, 2022). Due to the increasing activities of the aquaculture industry in addition to numerous other uses of the marine space (Karbowski et al., 2019), the remote fjords of the East and West were the first areas chosen to undergo the formal MSP (Hafskipulag, 2022) (see Figure 1). In the Skjálfandi Bay area, the municipality of Norðurþing has officially applied for MSP to be conducted (Sveitarstjórn Norðurþings, 2020) as there are increasing ocean and coastal uses including commercial fisheries, shipping, whale watching, cruise shipping and others (Einarsson, 2009; Þekkingarnet Þingeyinga, 2018; Ariza Sole et al. (2022)). Notably, the Icelandic MSP excludes regulations for commercial fisheries as they are separately regulated with the quota system.

As outlined in the law, the responsibility of preparing the marine spatial plans rests with the National Planning Agency (Skipulagstofnun) because a majority of the marine area is outside of municipal jurisdiction, and there is no overarching regional government. In each region, Westfjords and Eastfjords, a regional council with eight members was appointed in November 2019 by a variety of ministries in order to create these plans with the help of data collected by different research institutes and agencies (such as the Marine and Freshwater Research Institute, Land Conservation Agency, Meteorological Institute, Road Administration). A consultative group consisting of representatives of local industries and sectors assisted the regional council (Landsskipulagsstefna, 2016; Lehwald, 2020). Public participation was envisaged through an online mapping tool at the start of the process and public meetings for consultation after a plan proposal had been created. Both methods are referenced on the public website Hafskipulag.is (Hafskipulag, 2022). MSP literature and studies on participation in other places have shown that it can be difficult to engage the public meaningfully in that way. In order for a broad range of community members to take up forms of engagement, they need to be well informed and fully engaged early in the process including even the stage of formulating objectives for the process. As MSP was new in Iceland, there was a unique opportunity to follow the planning process as a whole. This research focused on how public participation methods were perceived by the local population, assessing the scope and depth of public participation as well as documenting barriers to participation in order to find areas of improvement for future planning processes in Iceland.

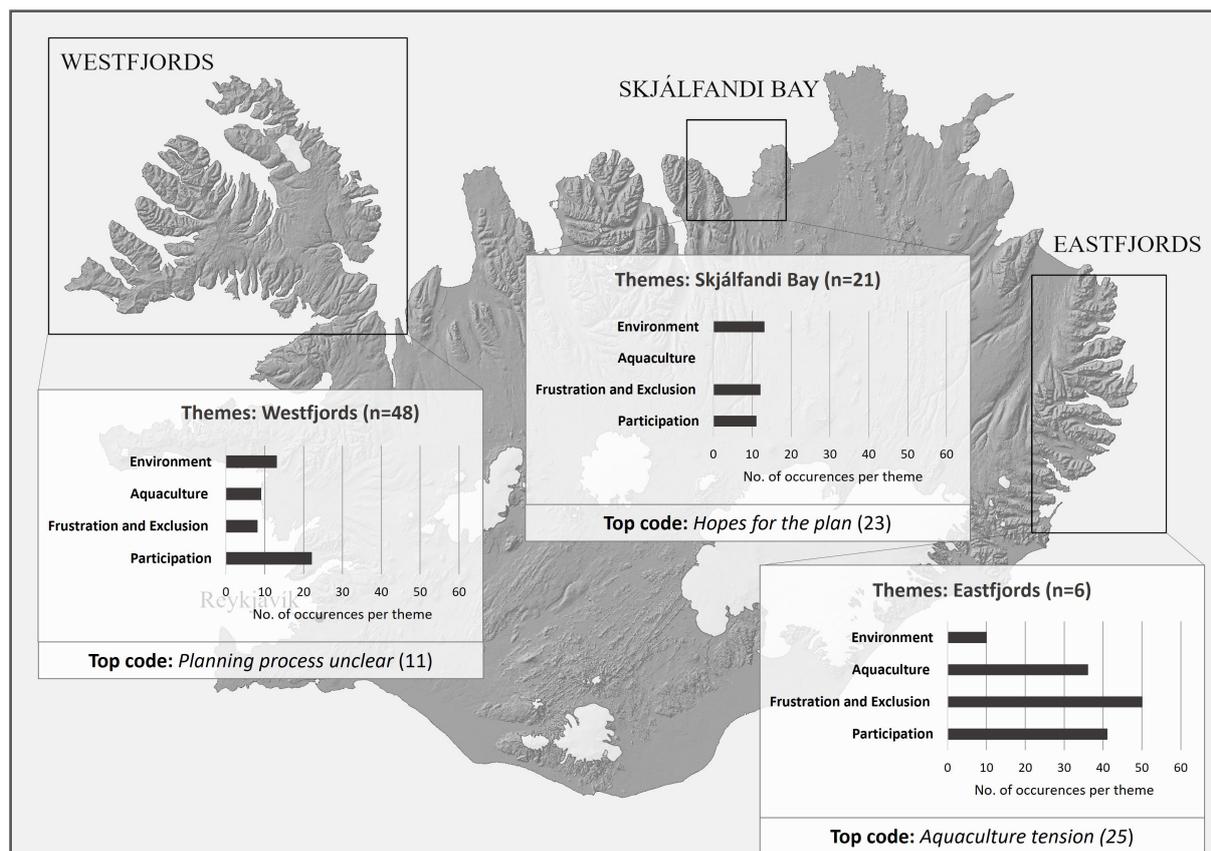


FIGURE 1

Map of the case study areas in Iceland. Marine spatial planning has recently been undertaken in the Westfjords and Eastfjords regions and envisaged for the near future in Skjálfandi Bay. The map further shows some of the main results in each case study. From the six identified themes in total, the map shows the four themes that illustrate the different narratives in the three case studies. (n= total number of interviewees per case study). (The additional themes of Iceland and Planning and Marine Planning Process, as stipulated by the interview questions, permeated all case studies and are further detailed in section 3.3 and 3.4.) In addition, the top code that was allocated in each case study is also marked and illustrates central concerns.

## 2 Materials and methods

To assess public participation in the pilot MSP process in Iceland, the study consisted of an analysis of documents relating to the official process led by the National Planning Agency, as well as participant observation, interviews and workshops with key informants in the three case study sites of the Westfjords, Eastfjords and Skjálfandi Bay. A non-probability sampling method was used to choose informants (Bernard, 2018). The key informants of this study consisted of individuals directly involved in the ongoing planning process and individuals who have local knowledge or knowledge in coastal and marine issues including the following stakeholder groups: industry (namely aquaculture, fisheries, tourism, consulting, food and shipping), local business, academia/research institute, not-for-profit organisation (NGO), local government/municipality, regional governmental agency, national government or agency, local community member, tourist. Although these categories describe and group the interviewees, it has to be noted that many of these individuals could be categorized in several stakeholder groups at the same time, i.e. academics that are also community members and involved in politics, etc. Fieldwork was conducted from October 2020 to

May 2021 in the Westfjords, in May and June 2021 in Skjálfandi Bay and in April 2022 in the Eastfjords. In total, this study includes accounts of 80 informants who reported their experience either in casual conversation, in scheduled individual interviews or group interviews.

The Westfjords case study is the principal case study which received the majority of the funding, and therefore yielded the most interviews (48 interviewees). The researcher had previously spent a year studying and conducting interviews in the community of Ísafjörður and was able to re-connect to an already established network of local inhabitants and marine experts. Therefore, the Westfjords were chosen as the base for the research.

The Skjálfandi Bay case study was conducted in coordination with the JUSTNORTH project and yielded 21 interviews in two weeks' field work. The Eastfjords case study is the smallest, with six interviews. Due to time restrictions and logistics, the Eastfjords could only be visited for five days. There are five additional interviews which were held with individuals knowledgeable of planning procedures in Iceland. These interviews are categorized as "Iceland in general" as they do not pertain to either case study but shed light on general trends and perceptions about planning and participation in Iceland. Interviews and workshops were conducted

in person whenever possible, but some had to be conducted online due to COVID-19 restrictions during the time of research.

Data was documented in field notes from participant observation, interview recordings and their transcripts, workshop transcripts and notes on documents relating to the planning process. The participants were anonymised with unique ID codes that include letters and numbers pertaining to when and where the interview was taken, and a running number. The audio-recorded interviews were transcribed with the help of the software Otter.ai. The transcribed interviews were then inductively coded and codes grouped together into different themes with MaxQDA software.

## 3 Results

### 3.1 Themes and codes

Originally, 54 codes were established in the analysis phase, some of which were merged during the process, and various sub-codes were created. Six prevalent themes emerged from grouping together the 46 assigned codes. These themes serve as umbrella terms to gather the codes they contain and may help understand prevailing issues and topics within and between the case studies. The results are anonymised but exemplar quotes are used to aid in the presentation of the themes.

The following themes were established: *Iceland and Planning* includes twelve codes that describe planning practices in Iceland in general, and where respondents have mentioned how planning relates to political processes in Iceland, corruption and power hierarchies. The theme *Marine Planning Process* includes codes that describe the process of the ongoing marine planning process in Iceland as well as reactions to and thoughts about this process, for example selection of stakeholders, the role of the Planning Agency, how involved the interviewees were in the process and the novelty of this marine planning endeavour. *Participation* emerged as its own theme as respondents did not only elaborate on their current active participation in the marine planning process but also reflected on participation processes in general and how these are carried out in Iceland, as well as on Icelanders' disposition towards participating. *Frustration and Exclusion* was established as a theme including various kinds of declarations of disappointment, irritation, anger or confusion about the marine planning process, governance in general and towards marine or environmental issues. *Aquaculture* specifically emerged as its own theme as there were numerous mentions of this specific industry, including its relation to other marine industries, governance and law. The theme of *Environment* came about as respondents voiced concerns over predominantly coastal and marine environments in relation to human activities.

The following data will show codes as they pertain to the six themes and how far they were present in each case study, the Eastfjords, Westfjords and Skjálfandi Bay. In the MaxQDA programme, all transcripts were arranged in document groups with these case study names, so as to facilitate understanding of which codes and themes were prevalent in which case study.

### 3.2 Three distinct narratives in three case studies

Each case study yielded markedly different results as different prevalent themes and concerns were identified. [Figure 1](#) shows a map of the three case studies to illustrate their geographical location within Iceland as well as to present some of the main results from each case study.

Although not exhaustive, the selected themes and top code per case study help show the different narratives around MSP in Iceland. The themes of *Iceland and Planning* as well as *Marine Planning Process* were prevalent in all three case studies. This is due to the nature of the semi-structured interviews: interviewees were directly asked about these topics, thus their occurrence in itself does not vary greatly between the case studies. Hence, these two themes do not appear in the map ([Figure 1](#)) as they were the general focus of all interviews. They are described in more detail with their pertaining codes in sections 3.3 and 3.4. On the map, however, the remaining four themes are presented to indicate some of the notable differences between the case studies.

In the Westfjords, interviewees focussed mainly on the theme of *Participation*, elaborating on past experiences with terrestrial planning as well as describing its complexity and barriers to participation. Concern for the *Environment* was mentioned, mostly in connection with a desire to continue protecting nature and wildlife in the Hornstrandir Nature Reserve in the north of the region. Surprisingly, *Aquaculture* was not at the forefront of most people's minds at the time of research, although the Westfjords are one of the areas that have experienced the most rapid and extensive growth of the industry in the last few years, and this trend is expected to continue. There were only a few mentions of *Frustration and Exclusion* relating to the MSP process. In fact, many interviewees – among them the marine experts – were not aware of the ongoing MSP process in their local area and there was little involvement from community members. This is in line with the finding that the top code that was assigned in the Westfjords transcripts was *Planning process unclear*, with many interviewees reporting a lack of information and communication about the MSP process.

In contrast, the Eastfjords data show a clear picture of *Frustration and Exclusion* which was often linked to *Aquaculture* topics, as there was a pre-existing debate among locals whether they supported fish farming in their fjords. Interviewees here were aware of the MSP process and were looking for a way to make their voices heard. Thus, the theme of *Participation* also featured often with respondents reflecting on how they could engage with the process. The theme of *Environment* was one of the smaller topics and seemed to be implied in some of the arguments that were put forward against aquaculture rather than discussed in relation to the marine plan. The top code of *Aquaculture tension* accurately describes the main topic of discussion and contention in the Eastfjords.

Lastly, in Skjálfandi Bay, where MSP has not started yet, the narratives revolve around expectations for the planning process and the desire to create a future vision for the bay that considers all users

and the health of the ecosystem. Interviewees voiced concerns for the *Environment*, specifically whales in this context, and there were some expressions of *Frustration and Exclusion* in relation to decision-making in general. Meaningful *Participation* was hoped for and expected for future MSP, while *Aquaculture* was not mentioned here at all (there are no fish farms in or near Skjálfandi Bay). The top code Hopes for the plan illustrates that interviewees in Skjálfandi Bay are in a different position than the other case studies, as locals here are aware of the MSP to come and have started formulating visions for the bay.

### 3.3 Iceland and planning

Ten codes were assigned the theme of Iceland and Planning during analysis. This theme speaks of how people see the process of planning in Iceland in general (including their experiences with previous terrestrial, mostly urban and municipal planning exercises), and how Icelandic governance and power relates to planning. In general, interviewees spoke of how planning worked in Iceland and characterized *Municipalities responsible for planning*, as well as establishing a *Lack of regional planning* authorities and plans (see Table 1). Jobs and the *Economy* in general were often reported as most important arguments in going ahead with planned development. Some interviewees characterized the Icelandic public as Reactionary in terms of their relation to planning, meaning that in general, there is little involvement in future visioning but reactions to developments when they are already underway; for example, one remarked: “Icelanders, they wake up when the bulldozer is in the backyard”. Another point that was generally made about Icelandic communities in relation to planning was that, specifically in the Skjálfandi Bay case study, interviewees perceived a lot of conflict among Icelandic communities. One interviewee said: “We are chaotic, we have conflicts, and we cannot agree”.

Across all case studies, a code that occurred numerous times was the *Political nature of planning* which was assigned 22 times in total (see Table 1). Interviewees described how planning is conducted and steered by political interests at several levels, including local politics, municipalities, individual political actors, and national government. One interviewee characterized it as: “Planning in Iceland is highly political”. Another interviewee remarked how planning is among the “things [that] get done and pushed through just before elections happen because ministers are busy campaigning. I have seen this happening a lot in the past years”. In fact, parliamentary elections were held in Iceland in 2021 while the planning process and this research was ongoing, and the responsibility of MSP consequently shifted from the Ministry for the Environment and Natural Resources to the Ministry of Infrastructure. This code, *Political nature of planning*, was especially widespread in the Eastfjords case study with 13 allocations, where a common perspective was that marine planning was largely debated on political stages in municipalities and the national government: “It’s already been decided by the government”.

The most frequent code within the theme of *Iceland and Planning* is the code *Corruption* which occurred 31 times across

all the case studies, notably 19 times of those in the Eastfjords. Interviewees have stated that there are instances of corruption within municipal decision-making and leadership as well as in the national government and between industrial and political actors. One interviewee described the money flow in the licencing of aquaculture specifically as corrupt in relation to MSP design: “... they’re buying it [fish farming licences] with the other hand on the stock market. Like, in our pension funds. It’s just moving a lot of money from the public to a few people and to Norway. And it’s pretty obvious [ ... ] there’s money all over it and it’s corruption”.

*Corruption* is a sub-code to the code *Power of the few* which itself occurred 16 times across all case studies, of which seven times in the Westfjords and seven times in the Eastfjords. Other than instances of corruption, this umbrella code also includes the phenomenon of the historic *Icelandic clan system* that was described by several interviewees as a system of power that stems from influential ancient families that still have considerable influence over politics and hold power in Iceland today. One interviewee remarked that, traditionally, “this is how things get decided”, and others mentioned that although this system does not officially exist anymore and has lost a lot of its influence after the financial crisis in 2008, it still holds power which extends to planning.

### 3.4 Marine planning process

The second identified theme based on the codes assigned was Marine Planning Process which refers to this specific ongoing Icelandic MSP process being piloted in the Eastfjords and Westfjords and that has been applied for by the municipal government in Skjálfandi Bay. Some interviewees remarked on the novelty and the challenges of this process (*Challenging/new*) as such a new undertaking would inherently come with issues to be solved (see Table 1). *COVID impacts* on the planning process were also mentioned. In the Westfjords, interviewees were aware that the recently launched MSP endeavours were not in fact the first marine planning process, as there had been a bottom-up community driven marine plan made around Arnarfjörður (*Arnarfjörður base plan*) which was perceived as the basis for this larger, more comprehensive plan.

In terms of characterising the current planning process, some interviewees remarked that the process was conducted from the top down (*Top-down process, coded seven times*), as it was not only led by but also largely executed by the National Planning Agency. In line with these characterisations are the remarks of interviewees both in the Eastfjords and Westfjords that they were *Not involved* in the planning process (coded 12 times, of which six times Eastfjords, six times Westfjords).

Further, and particularly so in the Eastfjords (five out of eight overall times coded), interviewees expressed *concerns* about the process itself. This code is also an umbrella code for the reasons interviewees stated as to why they had concerns, and it includes a further eight codes.

*Lack of transparency* came up eight times, five times out of those in the Eastfjords, with one interviewee stating: “It [the planning process] went totally under the radar”.

TABLE 1 Code and Theme Matrix broken down in document groups.

Theme	Code	Iceland	Eastfjords	Westfjords	Skjálfandi Bay	Sum
<b>Iceland and Planning</b>	Municipalities responsible for planning	1		2	2	5
	Lack of regional planning			3		3
	Economy		1		2	3
	Jobs		3	1		4
	Reactionary			2		2
	Conflict within communities				3	3
	Political nature of planning	2	13	4	3	22
	Power of the few		7	7	2	16
	a) Corruption		19	8	4	31
	b) Icelandic Clan System	2		1		3
<b>Marine Planning Process</b>	Challenging/new		3	1	1	5
	Hopes for the plan				23	23
	Covid impacts	1	1			2
	Arnafjörður base plan			5	1	6
	Top-down process	2	3	2		7
	Not involved		6	6		12
	Concerns	5	3			8
	a) Lack of transparency		5	2	1	8
	b) Lack of information		2	6	3	11
	c) Planning process unclear		6	11	1	18
	d) Role of Planning Agency			4	1	5
	e) Power of the Planning Agency	1	5	2		8
	f) Selection of consulting committees		11			11
	g) Stakeholder engagement	2	1	4		7
h) Selection of stakeholders			4	1	5	
<b>Participation</b>	Debating participation	1		1		2
	a) Public participation challenging	4	2	2	5	13
	b) Historical lack of participation	1	1	1	1	4
	c) Passive participation strategy	1	4	9	2	16
	d) Lack of participation	1	7	3		11
	e) Participation fatigue/nonsensical		8	1		9
	f) No impact		5	1	1	7
	g) Success of participation	4			1	5
	h) Lack of discussion		9	6	2	17
	i) Information but no empowerment	1		2		3
<b>Frustration and Exclusion</b>	Frustration & Exclusion		16	6	1	23
	a) Planning status quo		12		1	13
	b) Resistance mobilising		18	2	3	23
	c) Exclusion				7	7
	d) Polarising		5			5
<b>Aquaculture</b>	Aquaculture tension		25	9		34
	a) Shipping routes & sea cables		9			9
	b) Legality of AC licenses		2			2
<b>Environment</b>	Environmental concerns		10	9	11	30
	a) Whales				4	4
	b) Climate change in Iceland	1			1	2

This table shows which codes and themes occurred in which case studies and how often. Themes are presented with their pertaining codes and numbers indicate how many times within a document group (case study) a specific code was allocated. The colour highlights illustrate the number of code occurrences visually and are arranged on a scale from low (blue) to high (red) with the extremes of the scale being the lowest and highest numbers that occurred (1 and 25 respectively).

*Lack of information* on the planning process was declared across all case studies (11 times), and most frequently (six times out of 11) in the Westfjords, with a sub-code of Planning process unclear occurring especially often in the Westfjords also (11 out of 18 occurrences overall). Some of these manifested as questions as to who is making decisions actually, how the public is supposed to be involved and how the process is envisaged – these were not widely known in any of the case study communities. Some had heard about the ongoing planning but were not informed in detail, as this interviewee stated: “I know about the coastal planning, yes, but not any specifics”; whereas some stated having had no official information at all, such as this interviewee: “I live in one of those coastal areas. And I kind of heard nothing since the law, the bill was passed in 2018 [the Coastal and Marine Planning Act]. The whole process kind of just disappeared, and has just recently surfaced, because of some debates in the Eastfjords”.

Another aspect of concerns was expressed with the *Role of the Planning Agency* as unclear (five occurrences) and expressing scepticism towards the amount of Power of the Planning Agency in overall political decision-making (occurred eight times). Other than the leading agency, interviewees also voiced concerns over the other involved parties in the planning process, or their selection. The coded of Selection of consulting committees occurred 11 times, and uniquely in the Eastfjords, whereas concerns over *Stakeholder engagement* occurred both in the East- and Westfjords and concerns over the *Selection of stakeholders* occurred in the Westfjords and Skjálfandi Bay.

One striking result is the occurrence of the code *Hopes for the plan* 23 times in the Skjálfandi Bay case study. This can be explained by the situation that the area is currently in, having applied and being accepted for official MSP in the near future, rather than experiencing the planning process for the time being. Interviewees here shared their expectations of the planning process which included a holistic approach on ecosystem services, regulation on shipping (cruise, cargo, recreational and whale watching), regulation of other marine activities like kelp harvesting and fisheries for a sustainable future use of the bay, “a big picture view”. One interviewee elaborated: “We could organise and have a clear vision of what we truly want for the Bay in the future, I think also we can do a better job of choosing which route we take, in terms of the local development of industries”.

### 3.5 Participation

Participation was discussed in depth by many interviewees across all case studies, in terms of general observations, such as *Public participation being challenging* (code occurred 13 times across all case studies, see Table 1). Interviewees identified a *Historical lack of participation* in Iceland as previous experiences with planning showed a rather top-down approach of the planning authorities. This MSP process in particular was characterised by interviewees by its *Passive participation strategy* (occurred 16 times overall), as this interviewee remarked: “Simply relying on a website and assuming people will check it on their own is a passive

approach to communication” – or by a *Lack of participation* (occurred 11 times), with one interviewee stating: “The word for this [is] ... lip service”.

Some interviewees, particularly in the Eastfjords (eight occurrences) and one in the Westfjords, described a participation fatigue among the community members, or that participation itself was viewed as nonsensical (code name *Participation fatigue/nonsensical*), such as: “I live in a community of [x] people, and then we [are] supposed to participate in all the nuances of modern society with all the stakeholder involvement, and you know, all of those things, and it can cause you to just start ignoring things.”

Interviewees also questioned the impact their voices would have (code *No impact*, occurred seven times) if they were to participate more or if there was more wide-spread public participation: “Public participation will just lead very, very quick into public frustration, I will say, so if you do public participation, just for, you know, for the show and a set, so is there any actual veto power for the people involved or not?”, “It looks like it doesn’t matter what we say.”

Further, there were 17 instances of interviewees criticising *Lack of discussion* in relation to the marine planning process. The code *Information but no empowerment* occurred three times overall. In sum, the codes within this theme indicate a low participation rate and depth among the public in the case study areas and a significant lack of information and communication between the parties involved in the planning process.

In contrast, there were also interviewees who described the *Success of participation* in this specific process (five occurrences). It is noteworthy that those instances occurred solely in the Iceland general group of interviews and in Skjálfandi Bay, and thus exclusively came from interviews that were held outside of the areas currently undergoing MSP.

### 3.6 Frustration and exclusion

In addition to the frustrations already permeating other themes, the data suggested that a theme of *Frustration and Exclusion* was necessary to gather outright statements of disappointment or anger. Whereas *Frustration & Exclusion* items were voiced in all case studies, they are particularly prominent in the Eastfjords (16 out of 23 occurrences, see Table 1), where one interviewee expressed their resistance to the proposed plan based on the lack of discussion with the communities: “That’s why we, as the people here, we cannot accept it. No. One of the things was also with this committee that it should be in contact with people about this. But nothing”.

One critique that occurred multiple times (12 times out of 13 in the Eastfjords) was that the plan was not actually visioning a future for the marine space, but rather documenting what was already established in the space: “This is my experience that we are kind of planning what is already there. It has been a lot of data gathering”. Some also critiqued that this included fish farming sites that had been applied for but that didn’t have licenses yet – making it almost certain that those would be granted (code *Planning status quo*).

As a result, there has been *Resistance mobilising*, particularly in the Eastfjords (coded 23 times, of which 18 times in the Eastfjords)

with citizens seeking for ways to make their voices heard in the planning process.

Additional critiques expressed that some groups felt particularly excluded (*Exclusion*, coded seven times in Skjálfandi Bay) from marine decision-making – specifically women and foreigners. While women stated that they were traditionally rather excluded from most maritime industries and decision-making and expected to still largely take on household and child caring responsibilities as well as their profession, foreigners voiced that they were structurally excluded from governance in general, including marine affairs.

### 3.7 Aquaculture

The theme of *Aquaculture* permeated both the Eastfjords and Westfjords case studies (see [Table 1](#)). This finding was not fully unexpected as the fast growth in sea pen aquaculture applications is one of the main drivers of MSP in Iceland. It is the key reason why the planning processes are currently taking place, and specifically targeting the biggest fish farming areas first. However, it is a surprising finding that, although both the Westfjords and the Eastfjords are equally involved in the issues surrounding a rapid expansion of this industry, the code of Aquaculture tension occurred significantly more often in the Eastfjords (25 times out of 34) than in the Westfjords (nine times out of 34). One interviewee voiced some of these concerns: “We are concerned about the fish farming. They were supposed to wait until the plan came out, but they (company) just came anyway and said they will do it. They are so sure that they are going to get licenses for aquaculture like that (snaps fingers) from [the licensing agencies].”

These findings reflect the ongoing resistance that some citizens in the Eastfjords have been voicing against the expansion of aquaculture sites, whereas the topic had not been as publicly debated in the Westfjords.

In the Eastfjords there are additional concerns regarding the delineation of shipping lanes and underwater cables in conjunction with fish farming (code Shipping routes & sea cables, occurred nine times). All these ocean uses have specific area size requirements which are disputed in some of the narrower fjords. Twice, the legality of previously approved fish farming licenses (Legality of AC licenses) has been called into question in this context.

### 3.8 Environment

The theme of the Environment is a prominent one throughout all case study areas. This is not an unexpected finding as the nature of marine planning builds on the concept of ecosystem-based management and communities in all case study areas are dependent on marine resources.

*Environmental concerns* (30 occurrences total, see [Table 1](#)) were voiced almost equally across the case studies (10 times Eastfjords, nine times Westfjords, 11 times Skjálfandi Bay) and included any concerns on harm done to the natural state of the marine environment by pollution, shipping, illegal fishing, fish farming and other human activities. Regulation was often described as

insufficient and the need for marine planning was often explained with the need to protect the environment from unchecked over-use by humans.

*Climate change in Iceland* was, rather unexpectedly, mentioned only twice. The data suggests that the main issues seem to be perceived around ongoing human activities and their impacts on the environment locally rather than long-term, abstract climate change related issues. Concern for *Whales* specifically was, as expected, discussed in the context of Skjálfandi Bay which is a well-known feeding spot for whales and an exceptionally popular whale watching destination for tourists in Iceland.

## 4 Discussion

Similar to studies on participation in marine planning elsewhere ([Pomeroy and Douvere, 2008](#); [Jarvis et al., 2015](#); [Flannery et al., 2018](#); [Quesada-Silva et al., 2019](#)), the results of this research show a clear need for broader inclusion of community members as well as for a deepening of meaningful participation channels and transparent communication. In the Westfjords and Eastfjords MSP processes (with Skjálfandi Bay not yet undergoing official planning), consultation takes place in a limited form, hampering community empowerment and raising questions as to what public participation means to the leading agency. [Flannery et al. \(2018\)](#) found that consulting the public after the objectives have been determined by the planners can be described as tokenistic. This tokenistic approach has been criticised by community members and stakeholders alike in this case. [Flannery et al. \(2018\)](#) also question the legitimacy of the whole MSP process when insufficient participation takes place, as has been implied by some informants in this study. The data further shows that there are a multitude of barriers in play in the case studies, both top-down barriers such as how the process is envisaged by the planning actors, and bottom-up barriers, such as the perception of citizens that their input will have little impact.

The results also echo the findings of studies into previous marine governance issues in Iceland such as the lack of agency of local community members and small-scale fishermen in fisheries management after the introduction of the ITQ system ([Kokorsch et al., 2015](#); [Chambers and Carothers, 2017](#)) as well as a stated perceived risk of corruption in decision-making processes ([Gísladóttir et al., 2021](#)).

The theme of *Frustration and Exclusion*, which was most dominant in the Eastfjords, and the ensuing resistance against the decisions that have been made, mirrors what [Rodríguez-Pose \(2018\)](#) describes as a “subtle revenge” (p. 11) of remote places, usually in decline, where people constantly feel overlooked by governments and start to actively dismantle the system of power. In the Eastfjords case, community members have started petitioning as well as attempting to sue different agencies in order to get the plan and aquaculture licences revoked.

Although Iceland’s MSP process is new, there have been studies focussing on aspects of participation in related fields. [Welling et al. \(2019\)](#) tested the method of participatory scenario planning in the context of nature tourism in glaciated areas of South-Eastern

Iceland which are likely to be impacted as a result of climate change. They found that workshops with a small, already pre-existing group of main stakeholders worked well and provided the necessary trust for open discussion. All participants had a stake in the process as they created future scenarios themselves, and thus developed ownership over the process. [Welling et al. \(2019\)](#) conclude that this process had created synergistic knowledge which empowered participants and strengthened their responsibility to act. However, the authors add that it would be difficult to roll out similar processes to a larger scale in the current Icelandic planning landscape, as rigid institutionalised planning processes are seen as lacking transparency, communication between planners and those affected, as well as an overall policy for adaptation planning. Findings from the MSP case as well as [Welling's study \(2019\)](#) indicate a need for revision of planning processes and institutions in Iceland to address some of these ongoing issues.

In another Icelandic study, [Berglund et al. \(2013\)](#) investigated the process of participation in land restoration projects involving the Soil Conservation Service of Iceland as the main agency and farmers as the main stakeholder group. The authors recognize that traditional, top-down approaches to planning are not adequate for the wicked problems encountered in environmental issues, and they call for sharing of decision-making power by the leading agency, which has to go hand in hand with a commitment to an uncertain outcome. However, they also concede that the personnel tasked with such change in approach will not be trained in new ways of inclusive participatory methods, and that these approaches will often stand in “radical contrast” (p. 1) to how things were done previously. Ten years on from their study in present day Icelandic MSP, this does not seem to have notably changed. [Berglund et al. \(2013\)](#) make a number of relevant observations that are easily transferrable to the MSP case, in fact. For example, they identify a form of functional participation meaning that participation is seen as a tool to fulfill the leading agency's task to produce an outcome, and where those with other goals are not particularly focused on. Only minor decisions are taken in participatory forums while main decisions are made centrally. This is still the case in today's MSP as present data has shown. Lastly, [Berglund et al. \(2013\)](#) observe that participants were more likely to engage with predictable, face-to-face interactions, and were reducing their engagement when this in-person time was reduced or became unpredictable. This, they suggest, “highlights the need to view participation not only as a means to an end but also as a process” (p. 10).

There are various examples of MSP (or similar marine or coastal planning processes) that Iceland could learn from, including lessons from those that echo pitfalls encountered here as well as positive examples and best practice.

Many of the interviewees in all case studies talked about participation fatigue and negative previous experiences with participating in planning. Although this seems to be a generally well-known attitude in Iceland, this was not addressed by the MSP process. In their article “Consulted to death”, [Young et al. \(2020\)](#) examine this phenomenon and explain that long-term participation is often felt as a burden and can lead to personal stress and subsequent non-participation. [Young et al. \(2020\)](#) call for a recognition of these aspects in planning, and for the inclusion of

emotional support into the planning strategy. Relatedly, the coastal planning processes in Queensland, Australia, have been fraught with conflict between interest groups that were not adequately dealt with, leading [Zafrin et al., \(2014\)](#) to point out a noted lack of conflict resolution experts or techniques which could have supported the process in a positive direction.

Similar to the Icelandic MSP case, the Queensland coastal planning has been characterised as a top-down, “centralized and politicized” ([Zafrin et al., 2014](#), p. 13) process where trust was not built by common visioning, but objectives had been centrally defined before consulting any other parties. Communities were not meaningfully engaged in the process, only being able to comment on already created drafts in the later stages. As in Iceland, this process has been critiqued for sharing little power in decision-making. The authors conclude that despite a clear call for broader and more effective participation in academia, “the reality is that appropriate participation takes skill and courage to implement in practice” (p. 16). Thus, they call for an earlier broad engagement coupled with a solid education programme as an integral part of any marine plan.

In French MSP ([Tissière and Trouillet, 2022](#)), participation is mandated through EU guidelines, but still in practice regarded as optional rather than a central aspect of MSP. Similarly, in a recent study on the MSP process in Poland, [Tafon et al. \(2023\)](#) found barriers and issues that are similar to the Icelandic case, where MSP on paper promises to be just and inclusive but in practice actually enhances the power of already powerful actors. The authors call out the reduction of participation to the legal requirements in each country and demand a more prominent place for it at the forefront of planners' agenda.

Thus, it is evident that the issues encountered by the planning agency and communities in Iceland are not entirely unique to its novelty here, and are indeed also prevalent in other countries and systems. However, there are examples of best practice and positive experiences that have been achieved in MSP that the Icelandic process can learn from.

In a Scottish example of a Shoreline Management Plan ([Murdy, 2019](#)), a specific engagement plan was created that clearly defines the role of engagement with stakeholders and the public, the objectives of communication, the audience and who the stakeholders are. It lays out the strategy of the planned engagement including recognizing its complexity, suggesting methods, dates and considering accessibility. The planning department of the local council had clearly spent time and effort on creating this engagement policy because here, it is seen as a central aspect of the planning process.

Another positive example of an MSP process that could be emulated is the marine plan partnership of British Columbia in Canada ([Diggon et al., 2021](#)) which emphasized the importance of Indigenous and traditional ecological knowledge (TEK) integration into MSP. The local level First Nations' plans were developed before the collaborative regional plans further up the governmental scale were started, allowing First Nations' values and knowledge to drive the discussions. This case study illustrates how successful participation can be managed, but also that considerable strategic planning is needed in order to facilitate it. This nested approach could be adopted in Iceland and elsewhere. Local level planning

comes first ensuring that local knowledge and values drive the entire process that can then be rolled out to regional and national scales.

In Norway, like in many other countries, public participation in MSP is mandated by law but municipalities carrying out the planning processes decide on how to put it into practice. [Buanes et al. \(2005\)](#) studied participation in Norwegian Coastal Zone (CZ) Planning and found that, although participation rates were high in total, the channel of engagement mattered. Whereas formal participation channels like working groups, veto powers and responding in the hearing phase were used more by institutional stakeholders, informal participation channels like public meetings, media and in-person contact with planners were favoured by local interest groups like fishers, landowners, farmers and community members. Directly contacting the planners was the preferred way of participating by all groups. This suggests two important aspects that MSP practitioners can learn from: a) it is important to establish a variety of formal and informal engagement channels in order to attract a wide variety of participants from different groups, and b) personal, face-to-face contact is a vital part of engagement, and should be emphasized – an aspect that [Berglund et al. \(2013\)](#) had also found in their Icelandic study.

The present study investigated the process of MSP rather than its outcome. However, it became evident from the responses in all three case studies that the objectives of MSP in Iceland are not focused on the process, but rather on the product of a finished marine spatial plan. The process itself has not been at the forefront of any of the documentation or information to the public. This importance of process- rather than product-orientation has been emphasized by other studies as well ([Wescott, 2004](#); [Craig, 2019](#); [Diggon et al., 2021](#)). [Fletcher et al. \(2013\)](#) presents two case studies from MSP in Southern England (Solent and Dorset coasts) where pre-existing coastal partnerships of stakeholders were utilized as engagement channels. Although conflicts of interest were present, this did not become an unsurmountable obstacle. Rather, participants enjoyed the opportunity to discuss their concerns and conflicts, illustrating a successful example of MSP as a process, and as a forum for discussion. [Fletcher et al. \(2013\)](#) thus suggests that the focus on process is important, not just the outcome.

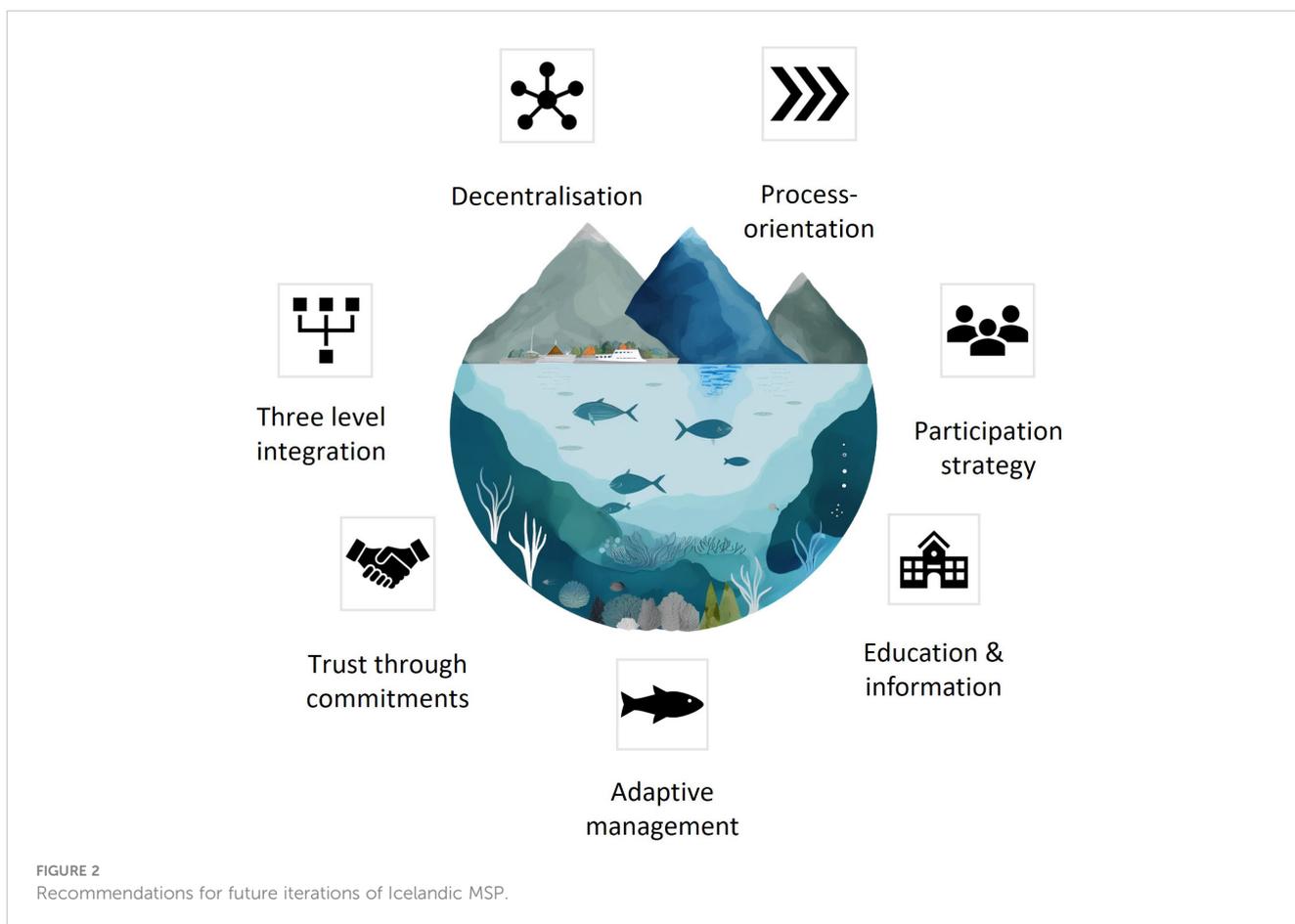
One of the central underlying issues in the Icelandic MSP process running through many themes and codes was the lack of information and education in the affected communities, and the public in general. If the public does not know about the importance of the MSP process, its benefits and what is at stake, it is next to impossible to engage them in a meaningful way. In the Icelandic data, not only top-down barriers were identified but also bottom-up barriers were found that described why community members might not tend to participate even if given a chance. One way of fostering community engagement early and continuously through the process ([Zafrin et al., 2014](#)) whilst acknowledging limited resources could be taking an example from New Zealand where citizen science was used as part of MSP ([Jarvis et al., 2015](#)). Augmented knowledge about their local marine area did not only translate into interest in MSP but also helped engender informed citizens taking ownership of their local ocean space and accept agency.

Undoubtedly, the development of the aquaculture industry was one of the most debated points made by many interviewees. The rapid expansion of fish farming first prompted the launch of MSP and starts to come more and more into public focus ([Wilke and Kristjánsdóttir, 2023](#), in prep). Along with the multitude of issues, however, are opportunities for the integration of adaptive aquaculture management and MSP in a legal framework: [Craig \(2019\)](#) calls for the reformation of MSP by governments in order to legally connect aquaculture licencing procedures with MSP processes. This lack of legal accountability of licensing by MSP actors was pointed out especially by interviewees in the Eastfjords, so [Craig's](#) suggestion would be highly relevant in Icelandic MSP. [Craig \(2019\)](#) envisages this integration to manifest mandated public participation forums which in turn support adaptive governance. Many MSP processes lack the adaptability needed to deal with constantly changing marine environments, and in the Icelandic example there is no set period for a revision of the plans, and no mentioning of practical monitoring and adaptation measures. [Craig \(2019\)](#) suggests an in-built adaptive management that consists of cycles of set-up phases and iterative phases to assess activities and adjust management measures that would create multiple forums for discussion, raising the plans' legitimacy, maintaining the rule of law and "promoting [ ... ] a perception of overall fairness" (p. 8) all with one integrated strategy. This approach is, again, highly process-focussed, which has become a central idea in addressing many of the shortcomings of MSP processes, in Iceland and beyond.

## 5 Conclusion

This is the first study on public participation in ongoing coastal and marine planning in Iceland. It has revealed its importance for the future of the Westfjords and Eastfjords alike: The first iteration of MSP is recommended to be considerably altered to allow for more active and meaningful participation. In addition, the findings shed light on the larger issue of non-participation that is still prevalent in the marine planning field far beyond Iceland, despite numerous research articles that have for many years emphasised its importance. Further, the interviews brought up larger issues concerning power and decision-making in Iceland, such as issues of trust, power inequalities, corruption, and conflictual, reactionary communities ([Kokorsch et al., 2015](#); [Chambers and Carothers, 2017](#); [Gisladóttir et al., 2021](#); [Wilke and Kristjánsdóttir](#) in prep). All of these point to larger issues that need to be unpicked for successful participation processes. Whereas actors in the MSP process itself can perhaps only do little to change contextual factors and given limitations, they can acknowledge these and attempt ways to mitigate barriers to participation and more. The following are recommendations based on the data found in the three case studies in Iceland as well as experiences from MSP projects abroad (see [Figure 2](#)).

*Integration of a three-level MSP structure:* The National Planning Agency would be responsible for creating an overarching ocean & coastal strategy that sets guidelines and mandates broad and effective participation. A regional agency would be responsible for regional coherence, for example across the vast and differentiated regions of the Westfjords and Eastfjords, and several local level agencies must be



included in the different communities. They would be best placed to foster community engagement and bring localised issues to the table.

**Decentralisation:** Starting from local initiatives, local level actors should spearhead their respective area planning. Such plans can then be nested in regional and even bigger plans. There is an Icelandic precedent for such a local planning initiative in the community driven Arnafjörður plan (Eydal, 2013). These sub-regional networks should be utilised to then embed them into larger, regional plans and beyond.

**Process-orientation:** A re-orientation of the focus on procedure over product would be beneficial, or a balance of procedural and outcome orientation in order to fulfil the promises that MSP holds in terms of just inclusion in decision-making over common goods and local marine ecosystems.

**Creation of a detailed participation & engagement strategy:** There is an urgent need for a detailed participation strategy and engagement plan setting out its objectives, audience, differentiated methods, dates of meetings with long notice periods etc. Early and continuous public engagement is challenging; therefore, a clear and varied plan would help to provide guidance.

**Education and information campaign:** Any MSP project should be accompanied, from the start, by a comprehensive education programme. Education and information opportunities on the benefit of MSP, benefits to participation, the value of local marine resources and complex ocean and coastal processes need to be ongoing. This can take many forms and there are opportunities to

include creative solutions for different groups of the population, as well as citizen science.

**Inclusion of adaptive management:** In order to support long-term management of marine ecosystems that are highly changeable, adaptive forms of governance need to be considered and built into the legal requirements for MSP in Iceland. This would provide the framework for continuous monitoring of the implementation of the plans, and regular built-in cycles of assessment and adaptation. As Craig (2019) suggests: “The key is to reconceive of MSP as an iterative, rather than linear process that mandates multiple ongoing forums for public participation and collaboration regarding the uses of and priorities for marine space” (p. 9).

**Building of trust through commitments:** In the planning documentation, there is a need for written commitments to transparency, accountability and accessibility of leading agencies to create trust in the process. Furthermore, a commitment to the uncertain outcomes of participation, and to an actual sharing of responsibilities and decision-making from the start, i.e. in setting objectives and visions, are necessary. This needs to be accompanied by the appropriate actions and communication style. This process does not start and end with the creation of a plan, so a fundamental commitment to the time and resources needed to build this trust must be made, and the cost and effort involved must be acknowledged.

These suggestions are not exhaustive, nor will they completely solve the issues that have arisen during the first MSP processes in Iceland as documented by the three case studies. Rather, they might

present steps in the right direction. It is high time that community members get to be acknowledged as contributors to planning and that they are heard when asking: Who decides on the future of our fjords, bays and oceans?

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

Ethical review and approval were not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

## Author contributions

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

## References

- Bekkingarnet Pingeyinga (2018) *Svæðisbundin stýring hafsvæða raundæmið skjálfandi*. Available at: <https://hac.is/wp-content/uploads/2018-12-18-Skj%C3%A1lfandi-hafsv%C3%A6%C3%B0i-SKIL.pdf> (Accessed 13.12.2020).
- Ariza Sole, E., Chambers, C., Einarsson, N., Gómez Mestres, S., Huijbens, E., Smáradóttir, S., et al (2022). D3.3 Set of Case Study Discussion Paper on Stakeholder Ethical Perspectives and Barriers to Sustainable Development. JUSTNORTH (GA 869327).
- Alþingi (2018) *Lög um skipulag haf- og strandsvæða 2018 (ISL) 88/2018*. Available at: <https://www.althingi.is/altxt/stjt/2018.088.html> (Accessed 08.12.2021).
- Berglund, B., Hallgren, L., and Aradóttir, Á.L. (2013). Cultivating communication: participatory approaches in land restoration in Iceland. *Ecol. Soc.* 18 (2). doi: 10.5751/ES-05516-180235
- Bernard, H. R. (2018). *Research methods in anthropology: qualitative and quantitative approaches*. 6th ed (New York: Rowman & Littlefield).
- Buanes, A., Jentoft, S., Maurstad, A., Søreng, S. U., and Karlsen, G. R. (2005). Stakeholder participation in Norwegian coastal zone planning. *Ocean Coast. Manage.* 48 (9–10), 658–669. doi: 10.1016/j.ocecoaman.2005.05.005
- Chambers, C., and Carothers, C. (2017). Thirty years after privatization: a survey of icelandic small-boat fishermen. *Mar. Policy* 80, 69–80. doi: 10.1016/j.marpol.2016.02.026
- Craig, R. K. (2019). Fostering adaptive marine aquaculture through procedural innovation in marine spatial planning. *Mar. Policy* 110, 103555. doi: 10.1016/j.marpol.2019.103555
- Dickinson, M., Rutherford, M., and Gunton, T. (2010). Principles for integrated marine planning: a review of international experience. *Environments J.* 37 (3), 21–46.
- Diggon, S., Butler, C., Heidt, A., Bones, J., Jones, R., and Outhet, C. (2021). The marine plan partnership: indigenous community-based marine spatial planning. *Mar. Policy* 132, 103510. doi: 10.1016/j.marpol.2019.04.014
- Dominguez-Tejo, E., Metternicht, G., Johnston, E., and Hedge, L. (2016). Marine spatial planning advancing the ecosystem-based approach to coastal zone management: a review. *Mar. Policy* 72, 115–130. doi: 10.1016/j.marpol.2016.06.023
- Einarsson, N. (2009). From good to eat to good to watch: whale watching, adaptation and change in icelandic fishing communities. *Polar Res.* 28 (1), 129–138. doi: 10.1111/j.1751-8369.2008.00092.x
- Eydal, G. P. (2013). *Nýtingaráætlun strandsvæða á Vestfjörðum*. Available at: [https://www.stjornarradid.is/media/umhverfisraduneyti-media/media/pdf\\_skrar/gunnar\\_eydal-umhverfishing2013.pdf](https://www.stjornarradid.is/media/umhverfisraduneyti-media/media/pdf_skrar/gunnar_eydal-umhverfishing2013.pdf).
- Flannery, W., Healy, N., and Luna, M. (2018). Exclusion and non-participation in marine spatial planning. *Mar. Policy* 88, 32–40. doi: 10.1016/j.marpol.2017.11.001
- Fletcher, S., McKinley, E., Buchan, K. C., Smith, N., and McHugh, K. (2013). Effective practice in marine spatial planning: a participatory evaluation of experience in southern England. *Mar. Policy* 39, 341–348. doi: 10.1016/j.marpol.2012.09.003
- Gísladóttir, J., Sigurgeirsdóttir, S., Ragnarsdóttir, K. V., and Stjernquist, I. (2021). Economies of scale and perceived corruption in natural resource management: a comparative study between Ukraine, Romania, and Iceland. *Sustainability* 13 (13), 7363. doi: 10.3390/su13137363
- Gísladóttir, J., Sigurgeirsdóttir, S., Stjernquist, I., and Ragnarsdóttir, K. V. (2020). Corruption risks in renewable resource governance: case studies in Iceland and Romania. *Politics Governance* 8 (2), 167–179. doi: 10.17645/pag.v8i2.2713
- Greenhill, L., Stojanovic, T. A., and Tett, P. (2020). Does marine planning enable progress towards adaptive governance in marine systems? lessons from scotland's regional marine planning process. *Maritime Stud.* 19, 299–315. doi: 10.1007/s40152-020-00171-5
- Hafskipulag (2022) *Coastal area planning in the westfjords*. Available at: <https://www.hafskipulag.is/strandsvaedisskipulag/skipulag-ivinnslu/strandsvaedisskipulag-vestfjarda/> (Accessed 02.11.2020).
- Jarvis, R. M., Breen, B. B., Krägeloh, C. U., and Billington, D. R. (2015). Citizen science and the power of public participation in marine spatial planning. *Mar. Policy* 57, 21–26. doi: 10.1016/j.marpol.2015.03.011
- Karbowski, C. M., Finstad, B., Karbowski, N., and Hedger, R. D. (2019). Sea Lice in Iceland: assessing the status and current implications for aquaculture and wild salmonids. *Aquaculture Environ. Interact.* 11, 149–160. doi: 10.3354/aei00302
- Kokorsch, M., and Benediktsson, K. (2018). Prosper or perish? the development of icelandic fishing villages after the privatisation of fishing rights. *Maritime Stud.* 17, 69–83. doi: 10.1007/s40152-018-0089-5
- Kokorsch, M., Karlsdóttir, A., and Benediktsson, K. (2015). Improving or overturning the ITQ system? views of stakeholders in icelandic fisheries. *Maritime Stud.* 14 (1), 15. doi: 10.1186/s40152-015-0033-x
- Landsskipulagsstefna (2016) *Frumvarp til laga um skipulag haf- og strandsvæða*. Available at: <https://www.althingi.is/altxt/pdf/146/s/0539.pdf> (Accessed 12.10.2020).
- Lehwald, M. (2020) *Marine spatial planning in Iceland: the importance of stakeholder engagement during a marine spatial planning process*. (Master thesis). Available at: <https://skemman.is/handle/1946/36296> (Accessed 13.09.2021).

- Morf, A., Kull, M., Piwowarczyk, J., and Gee, K. (2019). "Towards a ladder of marine/maritime spatial planning participation," in *Maritime spatial planning* (Palgrave Macmillan: Cham), 219–243.
- Murdy, J. (2019). "Dumfries And Galloway shoreline management plan," in *Engagement plan*, vol. D03. (Wallingford, UK: RPS Group).
- Pomeroy, R., and Douvère, F. (2008). The engagement of stakeholders in the marine spatial planning process. *Mar. Policy* 32 (5), 816–822. doi: 10.1016/j.marpol.2008.03.017
- Quesada-Silva, M., Iglesias-Campos, A., Turra, A., and Suárez-de Vivero, J. L. (2019). Stakeholder participation assessment framework (SPAF): a theory-based strategy to plan and evaluate marine spatial planning participatory processes. *Mar. Policy* 108, 103619. doi: 10.1016/j.marpol.2019.103619
- Rodríguez-Pose, A. (2018). The revenge of the places that don't matter (and what to do about it). *Cambridge J. regions economy Soc.* 11 (1), 189–209. doi: 10.1093/cjres/rsx024
- Sveitarstjórn Norðurlþings (2020) 108. fundur. 01. desember 2020 kl. 16:15 - 19:50 í stjórnsýsluhúsi norðurlþings. Available at: <https://www.nordurthing.is/is/stjornsysla/skjol-og-utgefid-efni/fundargerdir/sveitarstjorn-nordurthings/1465> (Accessed 16.12.2020).
- Tafon, R., Saunders, F., Zaucha, J., Matczak, M., Stalmokaitė, I., Gilek, M., et al. (2023). Blue justice through and beyond equity and participation: a critical reading of capability-based recognitional justice in Poland's marine spatial planning. *J. Environ. Plann. Manage.*, 1–23. doi: 10.1080/09640568.2023.2183823
- Tissière, L., and Trouillet, B. (2022). What participation means in marine spatial planning systems? lessons from the French case. *Plann. Pract. Res.* 37 (3), 355–376. doi: 10.1080/02697459.2022.2027638
- Welling, J., Ólafsdóttir, R., Árnason, Þ., and Guðmundsson, S. (2019). Participatory planning under scenarios of glacier retreat and tourism growth in southeast Iceland. *Mountain Res. Dev.* 39 (2), D1–D13. doi: 10.1659/MRD-JOURNAL-D-18-00090.1
- Wescott, G. (2004). The theory and practice of coastal area planning: linking strategic planning to local communities. *Coast. Manage.* 32 (1), 95–100. doi: 10.1080/08920750490247535
- Wilke, M., and Kristjánsdóttir, S. (2023). Under the surface: climatic and societal challenges in marine spatial planning in the Westfjords of Iceland. *Manuscript preparation*.
- Young, N., Cooke, S. J., Hinch, S. G., DiGiovanni, C., Corriveau, M., Fortin, S., et al. (2020). "Consulted to death": personal stress as a major barrier to environmental co-management. *J. Environ. Manage.* 254, 109820. doi: 10.1016/j.jenvman.2019.109820
- Zafrin, S., Rosier, J., and Baldwin, C. (2014). Queensland's coastal planning regime: the extent of participation in coastal governance. *Plann. Pract. Res.* 29 (4), 331–349. doi: 10.1080/02697459.2013.872916