Thea Lurås Oftebro

The Norwegian experience with citizen engagement in the process of defining Mission Starfish 2030: Restore our Ocean and Waters

Master's thesis in Globalisation and Sustainable Development
Supervisor: Hilde Nymoen Rørtveit

May 2021

Master's thesis

NTNU
Norwegian University of
Science and Technology

Thea Lurås Oftebro

The Norwegian experience with citizen engagement in the process of defining Mission Starfish 2030: Restore our Ocean and Waters

Master's thesis in Globalisation and Sustainable Development
Supervisor: Hilde Nymoen Rørtveit
May 2021

Norwegian University of Science and Technology
Faculty of Social and Educational Sciences
Department of Geography

NTNU
Kunnskap for en bedre verden

The Norwegian experience with citizen engagement in the process of defining Mission Starfish 2030: Restore our Ocean and Waters

Abstract

Citizen engagement though a mission-oriented approach is a key novelty in Horizon Europe, the European Commission's new framework programme for research and innovation. Missions are the European Union's (EU) commitment to solve some of the major challenges facing the world today. They can be found within five mission areas identified within the framework programme. This thesis explores the Norwegian experience with citizen engagement in the process of defining *Mission Starfish 2030: Restore our Ocean and Waters*. This mission is found within the mission area: *Healthy oceans, seas, coastal and inland waters*.

This thesis relies on document analysis and interviews with key informants to answer the following research questions: 1) What has been done to include the views and opinions of Norwegian citizens in the definition of Mission Starfish and what are the experiences of those involved in organizing these activities? 2) How does those involved in organizing the citizen engagement activities in Norway interpret the purpose of these activities? 3) What does the European Commission want to achieve with citizen engagement in Horizon Europe? 4) What are the areas of improvements in order to make citizen engagement more efficient and influential in the future?

There have been many citizen engagement activities taking place on both national and EU level in relation to the definition of the EU missions. Although the process of defining Mission Starfish was largely affected by the outbreak of the COVID-19 pandemic, there were two citizen engagement events taking place in Norway. There was an online survey followed by an online workshop. The organizers of the event highlight three key reasons for why it is important to have citizen engagement: to legitimate the process, mobilize citizens and create better outcomes. This thesis explores how citizens have gained greater role within the framework programmes throughout the years. Despite this, it is not always clear what the European Commission want to achieve or what role citizen engagement is supposed to serve. This thesis highlights four areas of improvement to make citizen engagement more efficient and influential, these can be summarized as: Use of available expertise, early engagement, better communication and a broader range of participants.

Acknowledgements

Content

List of figures:

List of Tables:

List of abbreviations

DITOs	Doing It Together science
DIY	Do It Yourself
ERA	European Research Area
EU	European Union
MMF	Multiannual Financial Framework
NGOs	Non- Governmental Organization
PUS	Public understanding of science
RRI	Responsible Research and Innovation
SaS	Science and Society
SDGs	Sustainable Development Goals
SEA	Single European Act
SiS	Science in Society
SME	Small and medium sized enterprises
Swafs	Science with and for society

Chapter 1: Introduction

This thesis will examine the Norwegian experience with citizen engagement in the process of defining '*Mission Starfish 2030: Restore our Ocean and Waters'* (henceforth Mission Starfish). Mission Starfish is part of Horizon Europe, the European Commission's new framework programme for research and innovation. Missions are the European Union's (EU) commitment to solve some of the major challenges facing the world today. They can be found within the five mission areas identified within Horizon Europe. Mission Starfish is found within the mission area: *Healthy oceans, seas, coastal and inland waters* and seek to restore our ocean and waters. The framework programme is open to member states of the EU, but also for associated countries such as Norway through bilateral agreements (Forskrningsrådet, undated).

The idea of involving citizens in decision-making has throughout the years gotten increased attention in the EU. A review of this development shows that it can be divided into three phases. First, it was given greater attention to inform citizens of research activities and achievements. Second, it was a two-way dialogue between science actors and society. Today we are in the third and final phase: engagement (Oftebro, 2020). In the process of defining Mission Starfish, citizen engagement activities were organized on both national level in member states and associated countries and on the European level by the EU itself. This thesis will through document analysis and interviews with key informants (see table 3) examine the opportunity for Norwegian citizens to influence the mission and the experience of those facilitating this. Three of the informants were directly involved in organizing the citizen engagement activities in Norway in relation to the definition of Mission Starfish.

This thesis builds upon work I did during my internship at the NTNU Brussels Office in the fall of 2020. The NTNU Brussels Office can be seen as the bridge between NTNU and Europe, it facilitates international cooperation in the field of research and innovation. During the internship I learned about Horizon Europe and became fascinated with the missions and the important role citizen engagement is said to have within them. As a result of this I wrote an internship report about how the role of citizens in the framework programme has developed since framework programme 1 was adopted in 1984 (Oftebro, 2020). Chapter 4 will go more in- dept into this analysis.

1.1 Citizen Engagement as a tool of European decision-making

Governments and parliaments at all levels have since the early 1980s given increased attention to citizens. In an attempt to make higher quality and more transparent decisions, citizens have been involved in decision-making. The shift towards a more participatory deliberative democracy is found on the European level as well. The union is attempting to make the EU more democratic and transparent (European Committee of the Regions, 2019).

There are many terms used to explain citizens being included and having an influence in decision-making. Chapter 2 shows that some scholars in the field of development and planning use citizen participation, while others refer to participation. Similarly, the EU has throughout the years used a lot of different terms such as responsible research and innovation (RRI), citizen science and citizen engagement – to name some. It is a tendency that with new framework programmes comes new terms. To avoid confusion, in this research I have chosen to use the term citizen engagement. Citizen engagement is the current term used by the European Commission in relation to Horizon Europe.

1.2 Horizon Europe and the Mission Starfish

The European Commission's framework programme for research and innovation is a strategic as well as an economic tool used by the EU to implement its related policies. It is viewed as a necessary tool for boosting EU's excellence in research and innovation and has proved very impactful for facilitating collaboration and alignment on European level. The framework programme has since 1984 when the first programme was adopted developed a lot. The first few framework programmes had a shorter duration than the more recent programmes and focused on industry rather than society and citizens. Horizon Europe is the ninth framework programme and was launched in 2021. Similarly, to the previous programme Horizon 2020, Horizon Europe will in order to match that of the multiannual financial framework (MFF) have a duration of 7 years (Rellion, 2017, p. 19). MFF is the EUs long-term budget. The framework programme is the world's largest programme of its kind (Forskrningsrådet, undated).
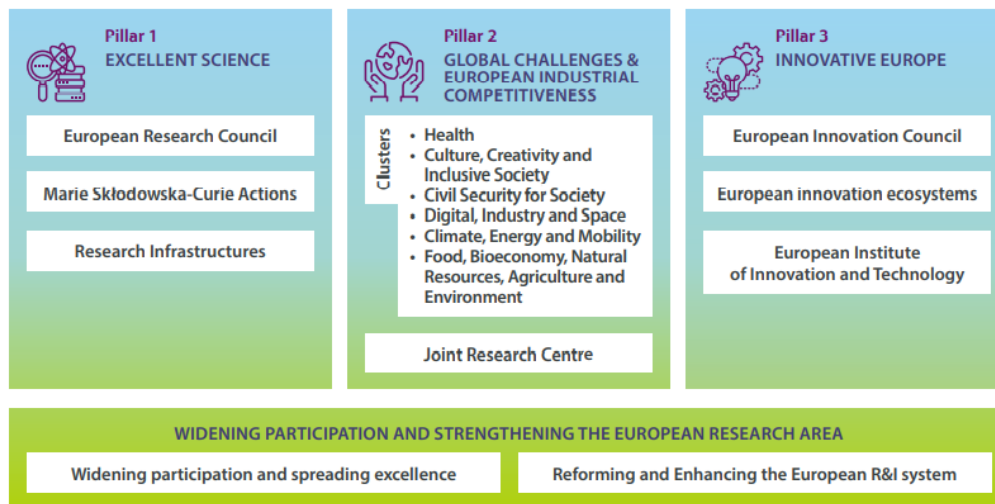
Figure 1 The Structure of Horizon Europe (European Commission, 2020a)

The EU institutions reached a political agreement on Horizon Europe in December 2020. Compared to the previous framework programmes, it is larger in terms of budget, scope and ambition. Through Horizon Europe, the European Commission seek to "maximise the impact on EU strategic priorities, strengthen EU excellence in science and technology, foster industrial competitiveness and innovation performance and enhance access to excellence for researchers across Europe" (European Commission, 2020a). The programme has three pillars for implementation (see figure 1). The widening participation and strengthening the European Research Area (ERA) are activities that will be included across all three pillars.

Horizon Europe includes a range of novelties including citizen engagement though a mission-oriented approach. The missions are identified within one of the five mission areas and will include a wide range of actions, such as research projects, new policies and other initiatives (European Commission, undated a). The mission areas are 'Adoption to climate change including societal transformation', 'cancer', 'climate- neutral and smart cities', 'Healthy Oceans, seas, coastal and inland waters' and 'soil health and food' (European Commission, undated a). Each of the mission areas has a mission board which consists of up to 15 experts representing business, science, innovation, civil society, communication and media (European Commission, undated a). In addition, each mission area has an assembly with additional high-level experts.

The Research and Innovation days (R&I Days), an annual event organized by the European Commission to bring stakeholders together to shape research and innovation policies, were in 2020 held virtually due to the COVID19 pandemic. During the event, the five mission boards presented their proposals for possible missions to the European Commission. Pascal Lamy, the chair of the mission board on healthy oceans, seas coastal and inland waters (henceforth

Mission Board Ocean) handed over the *Proposed mission: Mission Starfish 2030: restore our ocean and waters* report (henceforth *Mission* Report). The proposal as he said, is a product of input from high-level experts in the mission board and a wide range of citizen engagement activities.

The importance of healthy ocean and waters are clear. On the Horizon Europe website, the European Commission states "Healthy oceans, seas, coastal and inland waters are vital for our societies and the future of our planet" (European Commission, undated b). They produce a lot of the oxygen we breath, are an important food source and are vital for the biodiversity on our planet. As well as being vital for life on earth, ocean, seas, coastal and inland waters provide benefits to our well-being, cultural values, trade, transport and renewable energy. The aim of Mission Starfish is to develop solutions to tackle a long list of issues. For example, "transition to the circular and blue economy, adoption to and mitigation of pollution and climate change in the ocean, ocean governance and sustainable use and management of ocean resources" (European Commission, undated b).
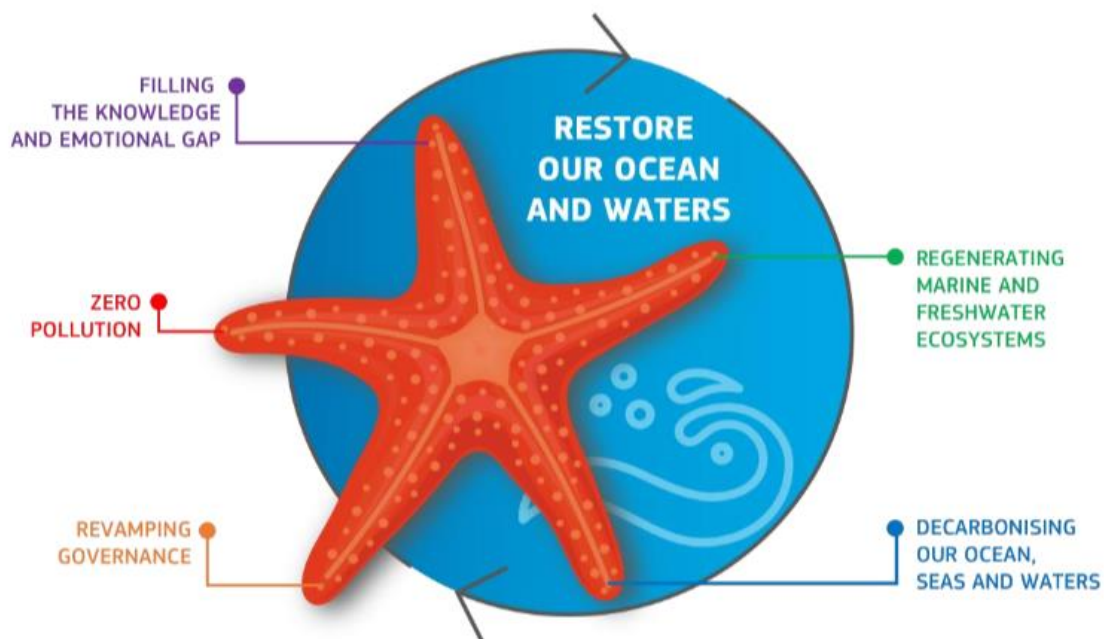
Figure 2 Mission Starfish 2030 (Lamy, et al., 2020a, p. 24)

The proposed mission, inspired by the shape of a starfish include five overarching objectives (see figure 2). To each of these objectives there is attached a set of ambitious targets through which the progress of the mission can be measured.

The EU recognized the importance of sustainable development and the missions is a tool for contributing to achieving the UN Sustainable Development Goals (SDG). Mission Starfish will directly contribute to SDG 6 – Clean water and sanitation and SDG 14 – Life below water (Lamy, et al., 2020b, p. 53). However, the mission will interact with most of the other SDGs (see figure 3). The mission will also contribute towards the European Green Deal which is the EUs pledge to becoming the first climate-neutral continent by 2050.
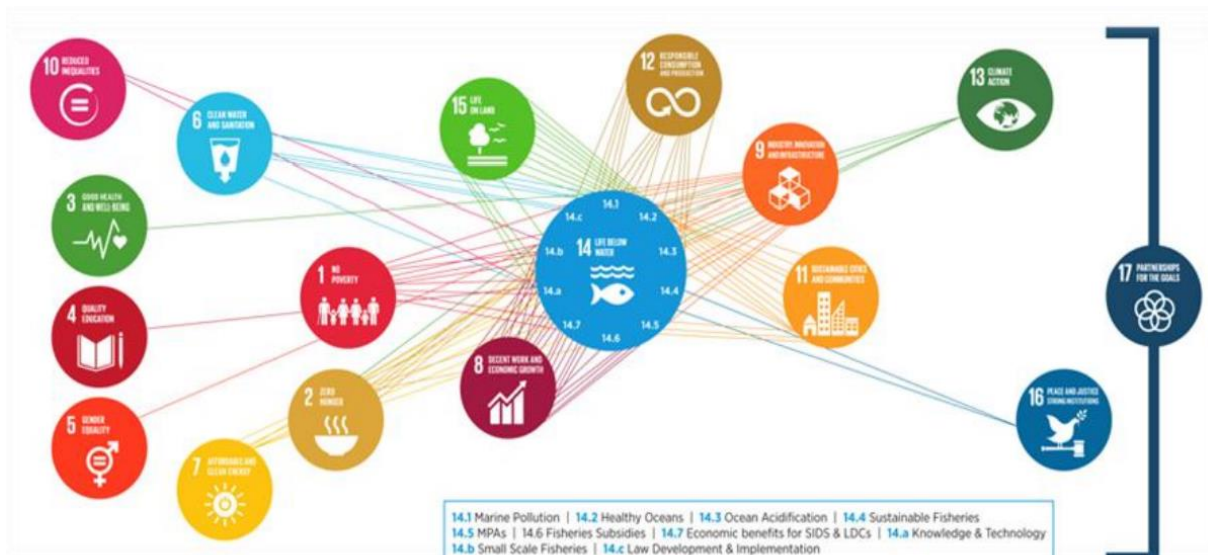
Figure 3 Interaction with other SDGs (Lamy, et al., 2020 b, p. 54)

1.3 Purpose and research questions

The idea of having citizens engaged in shaping research and innovation agendas are relatively new and is an unexplored field. Through the missions, the European Commission seek to engage citizens in shaping the European research and innovation agenda. For the first time, citizens will get a role in defining, implementing, monitoring and assessing missions. Consequently, there is very limited studies exploring the role of citizens in research and innovation efforts and citizen engagement in the definition of missions. Mission Starfish and the other missions in Horizon Europe were presented in September 2020 and the European Commission has yet to present the implementation plan. Thus, it is too early to examine the role of citizens in the implementation, monitoring and evaluation of the missions. Therefore, the purpose of this thesis is to explore the Norwegian experience with citizen engagement in the process of defining Mission Starfish. In order to explore this, the thesis seeks to answer the following questions:

1. What has been done to include the views and opinions of Norwegian citizens in the definition of the mission Starfish and what are the experiences of those involved in organizing these activities?

2. How does those involved in organizing the citizen engagement activities in Norway interpret the purpose of these activities?

3. What does the European Commission want to achieve with citizen engagement in Horizon Europe?

4. What are the areas of improvements in order to make citizen engagement more efficient and influential in the future?

1.4   Roadmap of the thesis

This thesis has 7 chapters. Following the introduction, chapter 2 will discuss the theoretical concepts relevant for this study: participation, mission-oriented innovation and citizen engagement. The chapter will further elaborate on the reasoning behind the choice of the term citizen engagement and provide a literature review focusing on both the global and European level. Chapter 3 *methodology* cover the methodology used in this study and will begin by exploring how this research came about before providing a justification of the methods used. It will consider the methods used both in terms of data collection and analysis. Furthermore, the chapter will include a discussion about the possible ethical issues related to this study. Chapter 4 *Citizen engagement in a European context* is based on the findings from my internship report and is an analysis of how the role of citizens have developed since the first framework programme for research was adopted. It will further elaborate on the drivers for citizen engagement within the EU. Chapter 5 *Citizen engagement in the process of defining Mission Starfish* provides the findings from the analysis of the documents and the interviews. In chapter 6 *Discussion*, I will discuss the findings from the analysis and link it to the theories and concepts from chapter 2. Chapter 7 will conclude the research by summarising the answers for the research questions. In addition, I propose some possible topics for future study.

Chapter 2: Theoretical debates on participation, mission-oriented innovation and citizen engagement

Ideas surrounding the inclusion of citizens in decision- making has been around for a very long time. This chapter will draw on theories and concepts from both development literature from the Global South and planning literature from the Global North. It will define the concepts and review the existing literature. This chapter will begin by looking at the key debates of participation from the 1950s until today. Moving on the chapter will dig deeper into the concept of missions and mission-oriented innovation. This chapter will finish by exploring some possible definition of citizen engagement and related concepts.

2.1 The ongoing debate on citizens participating in decision-making

Participation has a long history within different academic fields (such as urban governance, development and planning literature) and governmental practices. Since the 1950s, citizens participation programmes have been launched at all levels of government (Day, 1997). Burke states in 1968 that "the participation of citizens in community planning […] has increased rapidly in the past few years to the point where it is now fairly common and frequently praised practice" (Burke, 1968, p. 287). A key driver behind this development was the political changes happening between 1950s and the 1970s. This was a period characterized by great social, cultural and political changes in the global north. In the United States for example, the period was characterized by the fight for civil and social rights, equality, and justice (University of California, undated). The political culture at the time "encouraged people to participate: Americans were active in voluntary associations, engaged in political discussion and involved in political affairs" (Dalton, 2008, p. 76). There were similar tendencies in Europe, for example this period saw the introduction of the radical feminist movement and the student movements. Simultaneously, in other parts of the world there were significant political changes taking place as states was gaining their independence from their European colonial rulers.

Participation in planning and other decision-making processes was a relatively new practice in the 1950s and was often the source of confusion and conflict. Burke points out how the effectiveness of citizen participation depends upon many conditions and assumptions, which makes it hard to achieve (Burke, 1968, p. 287). To this day, the ineffectiveness of including participation processes in decision making is still one of the larges criticisms of having citizens participate. It was in the late 1960s that Arnstein argued citizen participation as a method of

redistributing power, allowing influence to 'have not' citizens who tended to be excluded from political processes (Arnstein, 1969, p. 216).
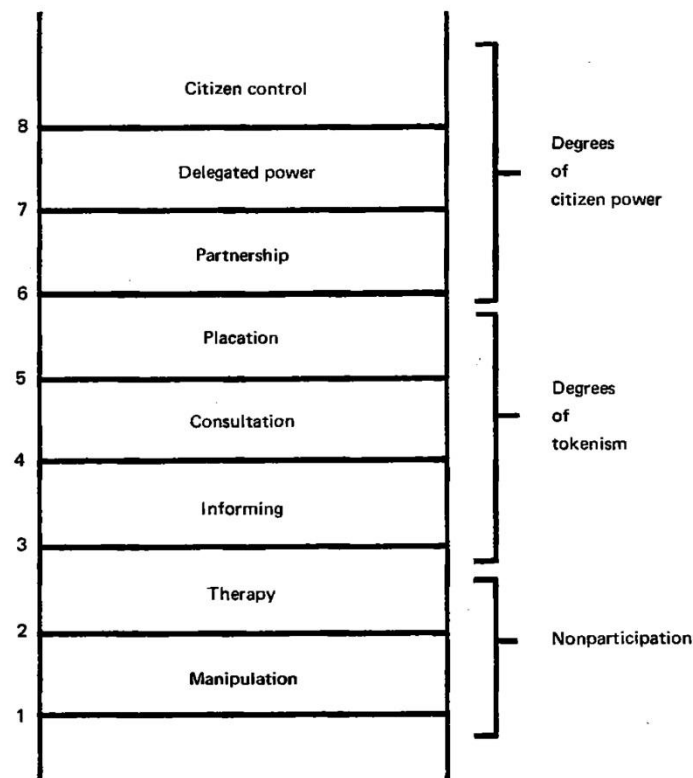
Arnstein's ladder of participation (see figure 4) has throughout the decades been very influential in participation literature. The ladder of participation includes eight rungs or levels of participation. The two bottom rungs *manipulation* and *therapy* enable the powerholders to "educate" and "cure" the participants. Arnstein argues that on this level of participation, the participants have no influence. On the two next rungs *informing* and *consultation*, the opinions and views of the participants are heard. However, the participants lack power to ensure that their views are being taken notice of. Similarly, to the first two rungs, are there no reassurance that the views of the participants are influencing the outcomes of the process (Arnstein, 1969). While Arnstein dismisses consultation as tokenism and argues there is little real power, does Lane point to how decision-making agencies often refer to a practice that they call consultation (2005, p. 285). Consultation is used to describe the process in which relevant stakeholders in the public are offered an opportunity to advice or being involved in decision-making. For government agencies, consultations have been the dominant approach for gathering advice from the public on draft proposals. For example, a draft proposal for upgrading parts of a city (Lane, 2005, p. 285). The fifth rung, *Placation*, there is ground rules in place to ensure that the have-nots can advise, but the power to decided still lies exclusively with the powerholders. At the

partnership rung, there is a degree of citizen power as it involves negotiations and trade-offs between have-nots and powerholders. At the final two rungs, *delegated power* and *citizen control* the have-nots make up the majority of decision-making seats or have full managerial power (Arnstein, 1969, p. 217). Arnstein states "there is a critical difference between going through the empty ritual of participation and having the real power needed to affect the outcomes of the process" (Arnstein, 1969, p. 216). The ladder shows that the higher you are on the ladder, the more influence citizens have in the decision-making process. However, it is important to note that the ladder is a simplification of the reality. While the ladder has only eight rungs, Arnstein argues that in reality it might be more than 150 (Arnstein, 1969).

2.1.1   1970s

In the literature there is throughout the 1970s a growing concern about "giving a voice to the voiceless" (Kelly, 2001, p. 17), something which resulted in increased attention to what Kelly called community participation. It was especially the fields of development (including rural development, sustainable development, and community development) and national governments that promoted participation (Kelly, 2001, p. viii). However, participation was also given attention on the international stage. For example, the President of the World Bank Robert Strange McNamara brought global attention to participation, in 1973. This resulted in increased credibility to participatory processes (White et al., 1994, p. 21). In the beginning the focus was predominantly on giving a voice to poor people in developing countries (Freire, 1972). Fals Borda argued that participation was "radically conceived as a struggle against political and economic exclusion from exercise control over public resources" (Fals Borda, 1998, p. 161). Similarly, Friedmann defined participation as a way of "transform(ing) the claims of these discarded citizens into rights" (Friedmann 1996, 171 in Mohan and Hickey, 2004, p. 61). During the 1970s the idea that participation occurs within several and overlapping "political communities from the local to the global level", was particularly innovative (Friedmann, 1992, in Mohan and Hickey, 2004, 61). Since its emergence it was an underlying assumption that participation would contribute to a more effective and democratic government   (Irvin & Stansbury, 2004).

2.1.2 1980s

Kelly described the 1980s as the 'Participation boom' (Kelly, 2001, p. 17). It was during this decade that the idea of citizen participation was mainstreamed in the field of development and planning. For example, in Norway, the 1965 building act was in 1985 replaced by a planning and building act. The planning and building act included requirements for participation in all planning processes (Regjeringen, 2008). During the 1980s there was a shift away from the top-down approach criticised during the 1970s. The shift towards a bottom-up approach was partly driven by Non-governmental organisations (NGOs) which sought to find alternatives to the top-down approach to development (Kelly, 2001, p. 17).

It was in the 1980s that there was a global consensus regarding the value of local indigenous knowledge. One example of this is the 1980 *world conservation strategy: Living Resources convention for sustainable development* which recognized the important role local people can play in identifying the local needs, most pressing issues, previous experiences and capabilities. Furthermore, they pointed to the importance of participation by arguing that such action offers a great opportunity for creating resource saving societies (International Union for the Conservation of Nature and Natural Recourses, 1980, p. 70). Another example is the 1987 report *Our Common Future* by the World commission on Environment and Development, commonly referred to as the *Brundtland* report. The report lists effective citizen participation in decision-making as one of the first requirements needed to be fulfilled in order to achieve sustainable development (World Commission on Environment and Development, 1987, p. 65). The *Brundtland* report further emphasise how local knowledge and support through public participation is vital in decisions concerning the environment (World Commission on Environment and Development, 1987, p. 63).

2.1.3 1990s

During the 1990s, participatory approaches was seen as something very positive. Funding bodies began making the inclusion of participatory processes a requirement to get funding (Kelly, 2001). As the notion of sustainable development gained greater attention internationally, so did that of participation. Having citizens participating in decision-making and other political processes was considered desirable and seen as "good" and "sustainable" (Guijt and Shah, 1998 in Kelly 2001). Throughout the decade there were developed a vast range of participation guidebooks. White stated that it did not seem like any development projects did not have some element of participation (White, 1996). At the same time, there was not given much attention to the challenges and issues related to participation. The critical debate about

participation has in large part been more influential in development literature from the Global South (see Mohan and Hickey, 2004) than planning literature from the Global North. Several scholars such as White (1996) and Jackson (1997) called for greater critics of the participation processes. White states:

> "The status of participation as a 'Hurrah' word, bringing a warm glow to its users and hearers, blocks its detailed examination. Its seeming transparency – appealing to 'the people' – masks the fact that participation can take on multiple forms and serve many different interests" (White, 1996, p. 7).

Furthermore, she explores the dangers of seeing participation as purely positive and inclusive. A key issue she addresses is that of power, and how participation does not necessarily result in the sharing of power (White, 1996, p. 6). Another key issue addressed by several scholars during the 1990s was diversity (Guijt and Shah 1998, p. 10 in Kelly, 2001, p. 23). Concerns about *who* participates in participatory processes, got a great deal of attention in the literature. Scholars recognized that people were not homogenous and that having 'people' participate was not sufficient. They saw a need to have mechanisms in place to bring those relatively disadvantaged groups into the participatory processes (White, 1996, p. 7). Guijt and Shah address the issues related to gender (1998), while Hart addresses issues related to youth participation (1992).

Hart notes that many western nations consider "themselves as having achieved democracy fully, though they teach the principles of democracy in a pedantic way in classrooms which are themselves models of autocracy" (Hart, 1992, p. 5). Something he believes not to be the case. Hart argues that it is unrealistic to expect that young adults will become participating citizens when they turn 16, 18 or 21 if they are not exposed to the skills and responsibilities involved prior to this (Hart, 1992, p. 5). Hart borrows the ladder metaphor from Arnstein (1969) and creates his own ladder of participation.
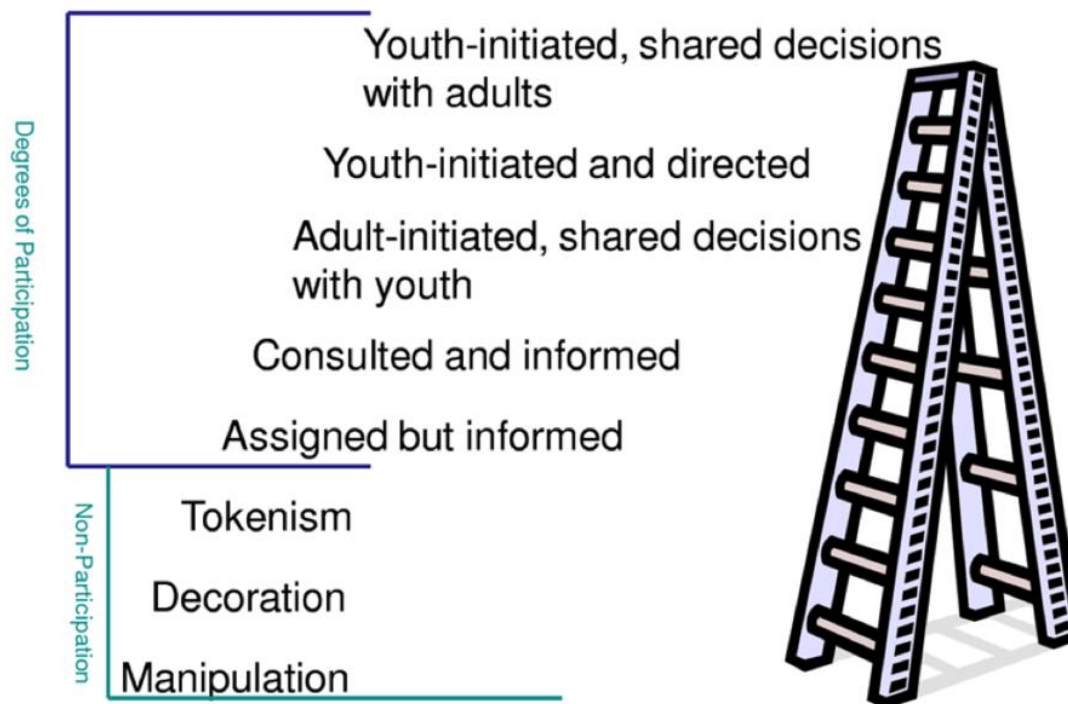
Figure 5 Ladder of youth participation adopted from (Hart, 1992, p. 8)

The ladder of youth participation includes eight rungs (see figure 5). The first three rungs are examples of models of non-participation. *Manipulation* and *Decoration* focus on how adults use children to achieve their goal or to promote their cause (Hart, 1992, p. 9). While *Tokenism* "is used here to describe those instances in which children are apparently given a voice, but in fact have little or no choice about the subject or the style of communicating it, and little or no opportunity to formulate their own opinions" (Hart, 1992, p. 9). The fourth rung *Assigned but Informed* is the first model that Hart identifies as genuine participation. He identifies four important requirements which must be fulfilled for a project to be labelled as participatory:

"1. The children understand the intentions of the project; 2. They know who made the decision concerning their involvement and why; 3. They have a meaningful (rather than 'decorative') role; 4. They volunteer for the project after the project was made clear to them" (Hart, 1992, p. 11).

The fifth rung refers to situations in which young people are consulted and their opinions are taken seriously by the adults who are running the project. While the sixth rung *Adult initiated, Shared Decisions with Children* takes this a step further by including the young people in the decision-making. The seventh rung *children initiated and directed* refers to projects initiated by kids. Hart notes that child-initiated community projects are hard to find, which is usually due to adults not being good at responding to young people's own initiatives. The final run

Child Initiated Shared Decision with Adults refers to project where children incorporate adults into project they have initiated, designed and managed themselves (Hart, 1992, p. 14).

2.1.4   2000s

By the 2000s the norm was to rely on decisions collectively made by governments and civil society (Van Driesche & Lane, 2002, p. 137). Bingham et al. argued that participation had become something of a routine and public policy making was expected to include some sort of participation of the citizens (2005). During the 2000s more attention was given to the challenges of participation in terms of processes and outcomes, as well as how to overcome these. Irvin and Stansbury sought in 2004 to evaluate the effectiveness of the citizen- participation. To do so, they created a list of advantages and disadvantages for the citizens as well as the government. They evaluated these in both the participatory process and the outcome (2004, p. 56). Looking at the advantages of citizen-participation they point out that the education and how the participants and the government learn and inform one another is valuable for both parties. They also point out that participatory processes can be a valuable tool for governments to build trust and create strategic alliances, as well as gain legitimacy of their decisions. For the participants on the other hand, these processes are valuable in persuading and enlighten government. And on a more induvidual level teach participant skills for activist citizenship (Irvin & Stansbury, 2004, p. 56). In terms of the outcomes itself, Irvin and Stansbury argue that having participatory processes helps break gridlock, and thereby achieve outcomes. For the participants, participation processes give them some control over the policy process, that they otherwise would not have. Furthermore, Irvin and Stansbury argue that participation results in better policies and decisions, something that benefits both citizens and governments (Irvin & Stansbury, 2004, pp. 56 -58).

In relation to the disadvantage for the participants, Irving and Stansbury list "time consuming (even dull)" and "pointless if decisions are ignored" (2004, p. 58). For the government on the other hand, they list "time consuming" and "costly". The participatory process is often time-consuming and costly, something which can result in less budget for the actual implementation of the project (Irvin & Stansbury, 2004, pp. 58 - 60). They also note how participation may backfire and create even more hostility towards the government than if they did not include citizens participation. In terms of the outcomes, they note that in cases where opposing interest groups are participating, the policy decision might be worse than if no one was consulted (Irvin & Stansbury, 2004, p. 58). Furthermore, the government lose control of the decision-making, something that might have very negative outcomes. Barnes (2006) highlight some of the other

challenges with participation through two case studies from two different English cities. Barnes focuses specifically on issues related to unequal power and highlight the importance of how a facilitator need to support the participants without taking over and impose their views on those participating in the process (Barnes, 2006).

The methods used for citizen participation in policy and decision-making are today very professionalised compared to the practices used in the 1950s and 1960s. One example is that today there is a large community of practitioners and facilitators of participation (Moore, 2012). Furthermore, learning participation skills has become a common part of manager training (Leighninger, 2010).

2.2   Mission-oriented innovation

The mission-oriented approach is increasingly deployed in relation to research and innovation initiatives. Despite this, there is not a single agreement on how a mission-oriented approach should be implemented, nor a single definition of what a mission really is. Neville Reeve, the head of Missions in the European Commission said in an interview published on the website of the International Science Council that "Mission-oriented research should drive multiple, bottom-up solutions, and have a clear end point: there needs to be a time at which you can say you've done what you set out to do" (International Science Council, 2020). The mission metaphor is taken from the American Apollo project that on orders by President Kennedy in 1961 aimed to send a man to the moon and back home safely by the end of the decade. The mission included a wide range of technological innovations and it is said that the mission was more focused on developing the technological capacity rather than putting a footprint on the moon (Forskningsrådet, 2019).

Mariana Mazzucato is a professor in Economics of innovation and public value at University College London. She has been very influential when it comes to the concept of mission-oriented innovation. Furthermore, her work has the past couple of years influenced the mission- oriented approach in European research and innovation policy. Mazzucato argues that "Innovation has not only a rate but also a direction: the 21st century is becoming increasingly defined by the need to respond to major social, environmental, and economic challenges" (Mazzucato, 2018a, p. 803). These include challenges such as poverty and climate change. Common to these challenges is that they are very complex, interconnected, in need of urgent attention and require insight from many perspectives (Mazzucato, 2018a, p. 803). In the past, mission-oriented policies have been "aimed at achieving specific objectives" such as the moon landing. A mission require input from different actors both public and private, as well as innovation from

different sectors. The Apollo mission, for example, required innovation in aeronautics, robotics, textiles, and nutrition (Mazzucato, 2018a, p. 803). In 2016, Mazzucato and Penna presented a list of criteria's that need to be present for mission-oriented policies to succeed. This list can be summarized as:

> "Mission should be well defined […], A mission does not comprise a single R&D or innovation project, but a portfolio of such projects […], missions should result in investment across different sectors and involve different types of actors […] and missions require joined up policy making" (Mazzucato & Penna, 2016).

In the 2018 *Mission-Oriented Research & Innovation in the European Union* report, Mazzucato identified mission-oriented policy as a key tool for the EU to address and tackling some of the biggest societal challenges such as climate change (Mazzucato, 2018b). She moves on to identify five key criteria for selecting missions (see figure 6).

1) **Be bold, inspirational, with wide societal relevance**
2) **Have a clear direction: Targeted, measurable, and time- bound;**
3) **Be ambitious but realistic research and innovation actions;**
4) **Be cross-disciplinary, cross- sectoral, and cross- actor innovation;**
5) **Drive multiple, bottom- up solutions**

Figure 6 The five criteria for selecting missions (Mazzucato, 2018b, pp. 14- 15)

In the same report, Mazzucato emphasises how crucial it is to engage the public in missions. She argues that the relationship between society and missions are important for two reasons. On the one hand, missions are a straightforward way of explaining to the public how research and innovation contribute to a better society. On the other hand, the impact of a mission is greater when it has widespread support (Mazzucato, 2018b, p. 20). She further identifies three stages in which citizen engagement will be key. First is the definition phase, in which citizens should contribute to the selections of specific missions that matters to the society. Secondly, citizens can play a role in the implementations of the missions, and finally, citizens can be involved in the assessment of the missions, this includes evaluating, reviewing and monitoring the process.

The relationship between society and missions are further explored in a 2019 report, in which Mazzucato explores how missions should be implemented and governed. She seeks to answer three main questions; the first question is "how to engage citizens in co-design, co-creating, co-implementation and co-assessing missions?" and is especially relevant for this thesis. She

argues that missions offer an opportunity for citizens to be involved in solving some of the world's greatest challenges and that in order to harness the full potential of involving citizens participation cannot be top-down. To solve these challenges and to ensure that the outcomes reflect society's expectations, Mazzucato argues that it is crucial to allow as many citizens as possible to engage in the early phases of defining the missions (Mazzucato, 2019, p. 7). Furthermore, she argues that missions need to have legitimacy and acceptance to inspire society at large. Which means that citizens need to be involved in a serious way. She states "It is critical to develop a sound and transparent process to select missions, frame them, and to assess missions along the way so that they have the right checks and balances this requires a strong level of public trust" (Mazzucato, 2019, p. 6). Mazzucato argues that the European Commission is "putting the principle of co-design in practice through the establishment of mission boards, which will include end-user representatives and will be tasked to directly consult citizens on the formulation of the concrete mission proposals" (Mazzucato, 2019, p. 7). In addition, she notes that one need to recognize the diversity of the European population and make efforts to engage underrepresented groups whether by age, class, race or other characteristics (Mazzucato, 2019, p. 7). In the report Mazzucato gives two recommendations related to citizen engagement in the definition of missions. The first is that both formal consultations and direct interaction with citizens are required for successful and meaningful citizen engagement in the development of the missions. Secondly, the public consultations need to be done in a way to avoid vested interests (Mazzucato, 2019, p. 8). The report further highlights two EU funded projects VOICES and CIMULACT that developed and experimented with methods for what at the time was called citizen participation, but that today falls under the category of citizen engagement.

2.3   Citizen engagement

Similarity to that of participation, there is not one agreed definition of citizen engagement or a toolbox with carefully developed methods on how to do it. Nevertheless, citizen engagement is a term increasingly used in the last couple of decades. In the in *Public Service Delivery* report by the United Nations Development Programme (UNDP) citizen engagement is said to be a tool that

> "gives people a voice in the development process and enables them to speak up against injustices and discrimination. By fostering human capabilities and promoting fundamental freedoms, citizen engagement contributes to people's wellbeing and quality of life. From an instrumental perspective, citizen engagement is promoted as a

means to achieving a range of development and governance goals, such as reduced corruption, improved public services, increased social capital, etc." (UNDP, 2016, p. 4).

The same report highlights the importance of local knowledge and that citizens has a better idea about what issues needs to be addressed and what solutions that might work. Furthermore, it notes that citizen engagement can help create legitimacy and strengthen accountability (UNDP, 2016, p. 6).

The UNDP is not alone in having adopted the citizen engagement term. The World Bank published in 2014 a *Strategic framework for mainstreaming citizen engagement in World Bank Group operations: engaging with citizens for improved results*. In the report they defined citizen engagement as a

> "two-way interaction between citizens and governments or the private sector within the scope of WBG interventions—policy dialogue, programs, projects, and advisory services and analytics—that gives citizens a stake in decision-making with the objective of improving the intermediate and final development outcomes of the intervention." (World Bank Group, 2014, p. 8).

The EU, however, does not provide a definition for the term despite in recent years having put a great deal of attention on the phenomena. It is evident through documents such as the *Citizen Engagement in Science and Policy-Making* and the *Citizen Science and Citizen Engagement Achievements in Horizon 2020 and recommendations on the way forward* report that the EU has a similar understanding of the term to that of the UNDP and the World Bank. In Horizon Europe citizen engagement is often coupled with the term co-creation. The EU does not provide a definition for this concept either. Whereas participation has been centred on rights and empowerment, co-creation is focused on harnessing resources from society and creating innovative solutions to problems. There is not a clear definition of the concept, however, Lund states: "What can be deducted is that co-creation refers mainly to innovation and value creation taking place as a collaborative process involving different types of actors" (Lund, 2018, p. 8). Through co-creation the European Commission seeks to step away from the postmodernist ideas of a top-down approach and towards a bottom-up approach. Co-creation derives from several fields including social innovation, private sector innovation and planning theory (Lund, 2018, p. 5). In the field of private sector innovation, co-creation refers to methods in which users are engaged in developing goods and services and in the process of value creation. In a public context, co-creation is seen as a useful strategy for addressing and solving societal

challenges in the context of a strained and limited budget. It is seen as an effective way of utilizing capabilities of civil society as a way of solving these challenges (Lund, 2018, p. 5). In other words, there has been a shift towards focusing of society as a resource and a benefit when solving problems, rather than thinking about participation or engagement as a method for inclusiveness and empowerment. Now that the relevant theory and concepts are explored, I move on to the methodology chapter which examine the methods used for analysing the Norwegian experience with citizen engagement in the process of defining Mission Starfish.

Chapter 3: Methodology

When examining the Norwegian experience with citizen engagement in the process of defining Mission Starfish, I find it useful to conduct a qualitative study. A qualitative approach is especially useful in a case like this one as it allows for greater understanding of people's thoughts and experiences (Thagaard, 2013, pp. 12- 13). This study examines both how the EU adopt citizen engagement in decision-making and the experience of those who organized the activities in Norway related to the definition of the mission. To capture different perspectives of the research questions, it is useful to conduct both a document analysis and interviews. The document analysis has been very useful for examining how the EU work to include citizen engagement in setting the European research and innovation agenda, while the interviews has allowed for in-depth insights into how the interviewees experienced the citizen engagement process. This methodological triangulation seeks to generate more "accurate, comprehensive and objective representation" of the process (Silverman, 2013, p. 369). The study relies on primary and secondary research material.

During my time at the NTNU Brussels office in the fall of 2020, I wrote an internship report about the development of the role of citizens in the framework programme for research and innovation (Oftebro, 2020). The next chapter of this thesis *Citizen engagement in a European context* is largely based on its findings. In November 2020, the office participated in the organization and conduction of an internal Horizon Europe and Erasmus+ Launch week at the university. During this event there was a lot of webinars that researchers and other staff members at NTNU could participate in. The webinars covered topics relevant to the two programmes such as their novelties. During one of the webinars, a professor from NTNU, had an interesting presentation about her experience with citizen engagement in the process of defining Mission Starfish. I had already worked on citizens and their role in research and innovation activities and found the presentation very interesting. In January 2021 when starting this thesis, I reached out to the professor from NTNU and we had a discussion about possible thesis topics and how I could approach them. She became one of the key informants for this study.

In this chapter of the thesis, I will present the methods used for gathering and analysing the data. The first sub-chapter covers the document analysis conducted in this study by looking at the sources used, the methods of data collection, how it has been analysed and the limitations of doing document analysis. In addition, it will look at how the limitations have been addressed. Moving on, there is a sub-chapter covering the interviews that has been conducted for this study.

This section covers the benefits and limitations of semi-constructed interviews and the choice of participants. Finally, this chapter cover the ethical issues of the methods used, before discussing the limitations of the study.

3.1 Document analysis

Document analysis has been an important method for both the internship report and this thesis. In relation to the next chapter *Citizen engagement in a European context*, a document analysis of EU reports and communications was useful for understanding the development of the role of citizens from the adoption of framework programme 1 and until today. I have read a variety of documents related to the previous framework programmes and analysed them using a qualitative coding method. This is an effective method for identifying key trends and comparing themes in different documents (Bryman, 2016, p. 245). In relation to this thesis, I relied on EU websites, treaties, reports and other documents published by the EU. The document analysis has been especially useful for understanding what the EU means by citizen engagement, the motivation behind the inclusion of it and what contribution it is meant to have. It was especially useful for answering research question 3 and 4 (see 1.3). The findings of the document analysis provided me with an opportunity to compare the interviewees understanding of the citizen engagement process with the intentions of the EU.

3.1.1 Sources

In this study I have relied on sources published by the EU and its related institutions. Obtaining information from the EU is a relatively simple task due to its transparency policy. Article 15 of the Treaty on the Functioning of the European Union states that "In order to promote good governance and ensure the participation of civil society, the Union's institutions, bodies, offices and agencies shall conduct their work as openly as possible.*"* (European Union, 2012). Furthermore, it highlights that all citizens of the union have the rights to access documents and information of the all the EU institutions, bodies, offices and agencies. During the process of writing the internship report I also reached out to the General Secretariat of the Council through their online document request form to get access to documents that I would not find in the online archive.

Regarding the information in the *Citizen engagement in a European context* chapter, the data is collected by searching archived websites found through the EU web archive. In addition to reviewing the extensive information found on the EU websites, I have analysed policy documents, briefing papers and reports related to the previous framework programmes and related initiatives. I have reviewed the EU treaties to better understand how the process of

creating the framework programmes. In addition, I have read journal articles and book chapters focusing on the framework programmes and citizen engagement in an EU context. This literature search has proved useful to uptrain relevant background information and a better understanding of both the framework programmes and citizen engagement. The table below shows the most useful documents for this part of the research (table 1, see appendix 1 for a full list of documents).

Document type	Document Name	Author/ Publisher	Year of publication
A communication	*"Inventing tomorrow" Europe's research at service of its people*	Commission of the European Communities	1996
Report	*Open Innovation Open Science Open to the world – a vision for Europe*	European Commission	2016
Working document	*Interim evaluation of Horizon 2020*	European Commission	2017

Table 1 List of key documents on the development of the framework programme

The *"Inventing tomorrow" Europe's research at service of its people* communication from the commission was published in 1996, during the process of developing framework programme 5. It proved very useful as it goes into detail on how research and innovation up to that date has been concerned with technological achievements and how they at that time work on establishing a new programme that would be more concerned with society and addressing issues faced by citizens. The *Open Innovation Open Science Open to the world – a vision for Europe* report was very useful as it explores how the EU seeks to put citizens at the centre of European research and innovation agenda and because it explores how citizens can contribute to research and innovation projects by undertaking scientific work. This document var particularly useful for gaining an understanding of how the EU at the time strived to include citizens in research and innovation activities. The final document I want to highlight is the *Interim evaluation of Horizon 2020.* This document was published in 2017 and sought to evaluate the first half of Horizon 2020 implementation. Horizon 2020 is the framework programme most similar to Horizon Europe. The document was useful insight into Horizon 2020 as well as giving insight into what to expect of Horizon Europe. It further lists limitations of Horizon 2020 which gave me a pinpoint as to what to pay special attention to in relation to Horizon Europe. It was useful for answering research question 3 and 4.

For the main part of this thesis, citizen engagement in the process of defining Mission Starfish, I have diligently used the Horizon Europe webpage on the European Commission website. There they post the latest information about the development of the programme as well as web-links to the most recent documents. In addition to the content on the webpage I have reviewed the proposed regulations and provisional agreements. These documents were published between 2018 and 2020, in December 2020 the EU institutions reached an agreement on Horizon Europe, but this is subject to a formal approval by the EU parliament and the Council of the EU (European Commission, 2020a). Furthermore, regarding the mission the sources used are reports produced by European Commission and the mission board. The table below (table 2) provide an overview of some of the most useful documents, the full list of documents analysed during this study can be found in appendix 1.

Document type	Document Name	Author/ Publisher	Year of publication
Report	*Mission report (Proposed mission: Mission Starfish 2030: restore our ocean and waters)*	The Mission Board on Healthy oceans, seas, coastal and inland waters	2020
Report	*Interim report (Regenerating our ocean and waters by 2030 Interim report of the mission board healthy oceans, seas, coastal and inland waters)*	The Mission Board on Healthy oceans, seas, coastal and inland waters	2020
Report	*Citizen Science and Citizen Engagement Achievements in Horizon 2020 and recommendations on the way forward,* also published as a separate chapter in *Science with and society in Horizon 2020 Achievements and Recommendations for Horizon Europe*	European Commission	2020

Table 2 Key documents on the Mission Starfish

The two most useful reports were the two reports published by Mission Board Ocean. They were both very useful for answering research question 1 and 3 (see 1.3). First, the M*ission report* written by Mission Board Ocean and was published in September 2020. This is the proposed mission text that was handed over to the European Commission by the chair of the board during the R&I Days 2020. This report has been especially useful as it gives insight into the EUs view of citizen engagement and the role citizens are expected to have within the

mission. Furthermore, as the citizen engagement activities were supposed to feed into this document, it can be viewed as the outcome of the process and it is therefore very significant. Secondly, The *Interim* report was published in June 2020 and was very useful as it gives insight into the ongoing work of the mission board. Furthermore, it lists the citizen engagement events that was supported by the member states and the activities in which the mission board engaged with youth. A third report that was highly relevant was the *Science with and for Society in Horizon 2020 Achievements and Recommendations for Horizon Europe*. This report was also published in June 2020 and explores the achievements in Horizon 2020 related to SwafS. It is especially chapter 7 of the report that is relevant for this thesis. The chapter is also published as a separate report named *Citizen Science and Citizen Engagement Achievements in Horizon 2020 and recommendations on the way forward* report. It focuses on the achievements made in Horizon 2020 in relation to the engagement of citizens and civil society and list recommendations on how to improve this in Horizon Europe and how to deepen the relationship between science and society even further. This report has been essential in answering research question 3 and 4 (see 1.3). It is the list of recommendations that has been especially useful as it gave pinpoints of possible areas of improvements and what to look for when reading the two reports from the mission board.

There are two key limitations I have had to be aware of in this document analysis. First, the bias of the documents. The data collected from the EU websites and reports has a very positive view of research and innovation and generally focus on the positive aspects of citizen engagement. It has through this study been important to remain critical and be aware of the bias of the reports. Second, there is an extensive amount of data analysed in this thesis. This can make it challenging to draw parallels. I have addressed this issue by systematically categorizing and labelling the information found in the different documents. This has allowed me to draw parallels and identify key trends despite the huge amount of data.

3.2 Interview

Interviews are an excellent method in a case like this one where the purpose is to gain knowledge about events, opinions and experiences (Dunn, 2016, p. 150). There are three forms of interviews: Structured, unstructured and semi-structured. A structured interview follows a list of standardised questions and allows no flexibility of the direction of the conversation. In an unstructured interview on the other hand, the informant is directing the interview and there is not a set list of questions. In this thesis I have conducted semi-structured interviews. Semi-structured interviews are a combination of structured and unstructured interviews. They have

some degree of order but maintain the flexibility of unstructured interviews. I have deployed an interview guide that included topics I want the interview to cover along with some carefully worded questions I could ask if needed (see Appendix 2) (Dunn, 2016, p. 158). This gave the interviewees the possibility to decide the direction of the interviews. The interviews have been especially useful when answering research question 1-2 (see 1.3) as these focus on the opinions and experiences of those involved in organizing the citizen engagement activities in Norway. Nevertheless, the interviews have also been useful for answering the other two research questions.

3.2.1   Choice of Interviewees

The Interviewees for this study was chosen based on their contribution to the citizen engagement activities conducted in Norway in relation to the definition of Mission Starfish. During my time at the NTNU Brussels office, I became aware of the role played by Interviewee 1 from NTNU and after talking to her, I was put in contact with interviewee 2 from Ministry of Trade Industry and Fisheries. Interviewee 2 put me contact with interviewee 3 from the Ministry of Research and Education which again put me in contact with interviewee 4 from the Norwegian Board of Technology (see table 3). This is a typical example of snowball sampling or chain-referral sampling and is very useful for a study like this one where one need the participants to have specific knowledge or experience (Stratford & Bradshaw, 2016, p. 124).

Interviewee 1-3 were directly involved in the activities related to Mission Starfish. They were all part of a working group consisting of 5-6 people. Interviewee 4 on the other hand was not involved in these activities but has worked on citizen engagement for a while and was for instance involved in the EU-funded project CIMULACT mentioned in the report by Mazzucato on governing EU missions. CIMULACT or Citizen and Multi-Actor Consultation on Horizon 2020 was funded under Horizon 2020. It engaged citizens along with a variety of other stakeholders in "redefining the European research and innovation agenda and thereby make it relevant and accountable to society" (CIMULACT, undated).

Presented in the text as	Position	Place of work
Interviewee 1	Professor	NTNU
Interviewee 2	executive manager	Ministry of Trade, Industry and Fisheries
Interviewee 3	Senior Advisor	Ministry of Education and Research
Interviewee 4	Project leader	Norwegian Board of Technology

Table 3 Overview of participants

Through this research I have experienced issues in recruiting interviewees. While the interviewees that I did recruited proved very useful and gave me valuable information, it would have added another dimension if I were able to interview someone from the European Commission or the Mission Board Ocean to dig more in-depth into the purpose and aim of citizen engagement. In addition, it would have been very interesting to hear representatives from the European Commission's views on some of the questions raised by the interviewees in relation to the process of defining the mission. There is especially one person that I really wanted to interview, a representative from the Mission Board Oceans. Interviewee 1, 2 and 3 all pointed out that I should get in touch with him. However, despite them reaching out to him on my behalf and several emails on my part, I was not successful in getting in touch with him. Furthermore, Interviewee 2 suggested that I interviewed one representative from Vinnova and reached out to him on my behalf. I had a short email-correspondence with the representative, but we failed to find an appropriate time for the interview. Vinnova has developed the methodology used for the one of the citizen engagement activities in Norway, and it would therefore been valuable to get their insight into how this methodology work and their views of the limitations.

3.2.2   Conduction of interviews

The interview guide that I developed prior to the interviews was a useful tool during the interview (See appendix 2). It had a list of key areas that I wanted the interview to cover as well as a list of carefully worded questions that I could ask if needed. This way I made sure that the interview did not go off track. The same guide was used for all interviews, but due to the participants different backgrounds the interviews went in different directions.

Due to the COVID-19 pandemic and the related restrictions, it was not possible to conduct the interviews in person. During the duration of this study there has been travel restrictions not allowing me to travel to the locations of the Interviewees. Furthermore, there has been

limitations to the number of social contacts that one person can have, this made it impossible to interview people in person despite the participants being in the same city. The interviews have therefore taken place virtually. An online interview is "similar to an in-person interview, since those involved in the exchange are able to see each other" (Bryman, 2016, p. 492). Researchers have slowly started to adopt online interviews the last decade. Bryman argues that online interviews are preferred to that of telephone interviews as the visual element has obvious advantages (2016, p. 492). Furthermore, he lists many advantages of online interviews such as less time and cost consuming, more flexible and people might be more willing to be interviewed. Some of the disadvantages listed is that of potential technological problems and that there is evidence that interviewees are more likely to fail to be present to an online interview than a face-to-face one (Bryman, 2016, p. 292). The interviewees in this thesis are located in different Norwegian cities and having the interviews online therefore had a clear advantage. The interviews were conducted using Microsoft Teams which proved to be a useful tool for conducting interviews. By having the camera turned on I had the feeling of being in the same room as the participants, despite us being in different cities. I did not experience major technological issues during the interviews but did experience that the interview was interrupted and the interviewees commenting on loud background noise caused by fire trucks or the garbage truck passing outside. The interviews were video recorded which further allowed for easy transcription following the interview. The interviews were conducted in Norwegian as this would allow a more natural flow of the conversation considering me and the participants all having Norwegian as a first language. The interviews took about 45 minutes each. This proved to be sufficient time to cover all the aspects in the interview guide. In some of the interviews I used the interview guide actively and asked a lot of questions to get the interviewees to talk. In other interviews the interviewee did all the talking and I simply used the interview guide as a checklist to make sure that all the topics were covered.

Following each interview, I spent a day transcribing it. This was a very time-consuming activity, but vital for analysing the interview later. Bryman estimate that it usually takes about six times the length of the interview to transcribe it (Bryman, 2016, p. 481). When transcribing the interview word for word, I familiarised myself with the data something that helped me greatly when analysing the data. It is these transcriptions that is "the data that is constructed. The dialogue itself is not data until it gets put to paper" (Crang & Cook, 2007, p. 82). Transcribing it allowed me to capture what the interviewee said in addition to how they said it. This was important considering that I was exploring people's thoughts and experiences. Giving

an accurate representing of what the interviewees said in their interviews is important as it is essential to the trustworthiness of this study.

3.3 Ethical Issues

It is important in qualitative research to ensure that no harm is done to the interviewees or the interviewer. This is something one must be aware of throughout the research. This study was granted NSD approval. In the process of applying for NSD, I produced an information letter using their template. This letter was sent out to the interviewees prior to the interview. I began each interview by asking the interviewees if they had read the letter and if they had any questions related to it. The letter contained information about the topic of the thesis, the rights of the interviewees and how the information would be stored and used. It is very important that the interviewees knew these things in order to give informed consent to be interviewed (Dowling, 2016, p. 32). Furthermore, the letter stated how I would do my best to ensure anonymity, but that it might be possible to identify the participants as I would give information about where they work and what they have been working on. I chose to share this information in the thesis as I consider this to be important information to be aware of to fully understand their role in the process. Nevertheless, before each of the interviews I had good dialogues with the informants regarding their anonymity and they have all consented to the approach. Following the interviews, I sent the interviewees the quotes I used so they could approve them. I felt it was especially important to make sure that the quotes were representing what the interviewees stand for as there might be possible for some people to identify them. Furthermore, since the interviews were conducted in Norwegian and the quotes were translated for this thesis, it was especially useful to have the interviewees read through and approve the quotes. This ensured that they are correctly translated.

3.4 Limitations of study

Through this study I had some issues gaining access to interviewees. The four interviews that I did conduct were very useful and gave me good insight into the citizen engagement activities that were conducted in Norway in relation to the definition of Mission Starfish. I got to interview about half of the working group that worked on these activities. Due to the time restrictions on this study, I am satisfied with the number of interviews from the Norwegian organizers. However, I would have liked to have a couple of interviews with people from the Mission Board Ocean or from the European Commission. There is especially a Swedish representative on the mission board that played a central role in initiating the survey and accompanying workshop. As mentioned earlier, I was not successful in getting in touch with

him despite two of the interviewees reaching out to him. Having such an interview would have given great insight into the intentions of the mission board when they initiated the citizen engagement activities and possibly highlight the purpose of these activities. Nevertheless, the European Commission and the mission board publish a lot of information online such as articles and reports. I used these documents diligent to answer research question 2. In addition to this, in the fall of 2020 I attended multiple online citizen events organized by the European Commission such as the R&I Days. In these events people from the Mission Board Ocean were present and addressed some of the topics that this thesis has touched upon. Therefore, I feel like I manage to capture their views regardless of not getting the opportunity to interview them.

Another challenge faced during the conduction of this thesis is that Horizon Europe is a very new programme. Horizon Europe and its missions has barely entered into force and it would perhaps be easier to investigate the role citizen engagement played in the process of defining the missions at a later stage in the process. With the four and a half months available for this study it was limited how much development I got to experience. If I had more time available for this study, I would have investigated closer how the input of the citizen engagement activities was taken into the *Mission* report. The next chapter will be based on the document analysis examine how the role of citizens in research and innovation have developed since framework programme 1 was adopted.

Chapter 4: Citizen engagement in a European context

Citizen engagement through a mission-oriented approach is said to be one of the main novelties of Horizon Europe. However, neither the concept of citizen engagement nor addressing citizens in the framework programme are new ideas in the EU. This chapter will begin by looking at the history of citizen engagement in the EU. This will be done by reviewing some key literature. Moving on, the chapter will look at how the role of citizens have developed during the eight previous framework programmes. Finally, the chapter will cover the key driver for this development.

4.1 Citizen engagement in the European Union

While there is a lot of talk about the importance of citizen engagement and the methods used, the EU does not provide a definition of citizen engagement. The Institute of Development Studies, a UK based think tank who delivers research and teaching in the field of development studies, define citizen engagement as "a form of interaction between citizens and their governments" (Institute of development studies, undated), a definition I see rather fitting.

Before moving into how the role of citizens within the framework programmes has developed over time, there is important to have some background about the concept of citizen engagement and how it relates to other concepts used in the EU. The former commissioner Carlos Moedas played a key role in putting citizens in the centre of European research and innovation policy. In 2015 he developed the "three O's Strategy" in the *open innovation, open science, open to the world – a vision for Europe* report. In the introduction of this report, he states that it "became apparent to me that the way that science works is fundamentally changing and an equally important transformation is taking place in how companies and societies innovate" (European Commission, 2016, p. 6). This transformation led him to identify three goals for future European research and innovation policy, summarized as the three O's strategy. The three O's stand for 'Open innovation', 'Open Science' and 'Open to the world'.
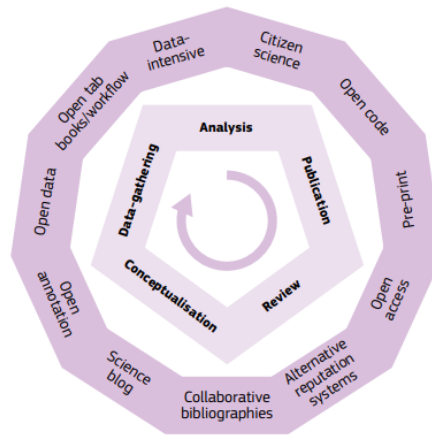
Figure 7 Open Science (European Commission, 2016, p.36)

Most relevant for the focus of this thesis is the second O – Open Science (see figure 7). A key element of open science is that of citizens science, as indicated by the figure above. With the aim of encouraging the inclusion of non-institutional participants into science, open science engages with the general public (European Commission, 2016, p. 55). The report uses the Oxford English dictionary's definition for citizen science: "scientific work undertaken by members of the general public, often in collaboration with or under the direction of professional scientists and scientific institutions." (European Commission, 2016, p. 55). During framework programme 7, citizen science tended to be linked to science education (educating the general public about science) and other engagement activities used to promote responsible research and innovation (RRI). RRI is a term used to describe the process in which researchers, society, NGOs, businesses and other actors come together during a research or innovation process in order to align the process and ensure that it meets the expectations and needs of the society (European Commission, undated c).

In a policy report published by the European commission in 2016, it was argued that citizen engagement in science and policymaking could range from 'public participation' to 'Do-It-Yourself practices' (Figueiredo Nascimento et al., 2016). Funded under Horizon 2020, the Doing It Together science (DITOs) project developed a framework for citizen engagement. They started with the idea of a citizen engagement escalator, a framework that since has been referred to in a lot of different project proposals. While it is not explicitly expressed, it is inspired by the ladder of participation that was explored in chapter 2 (see figure 8).
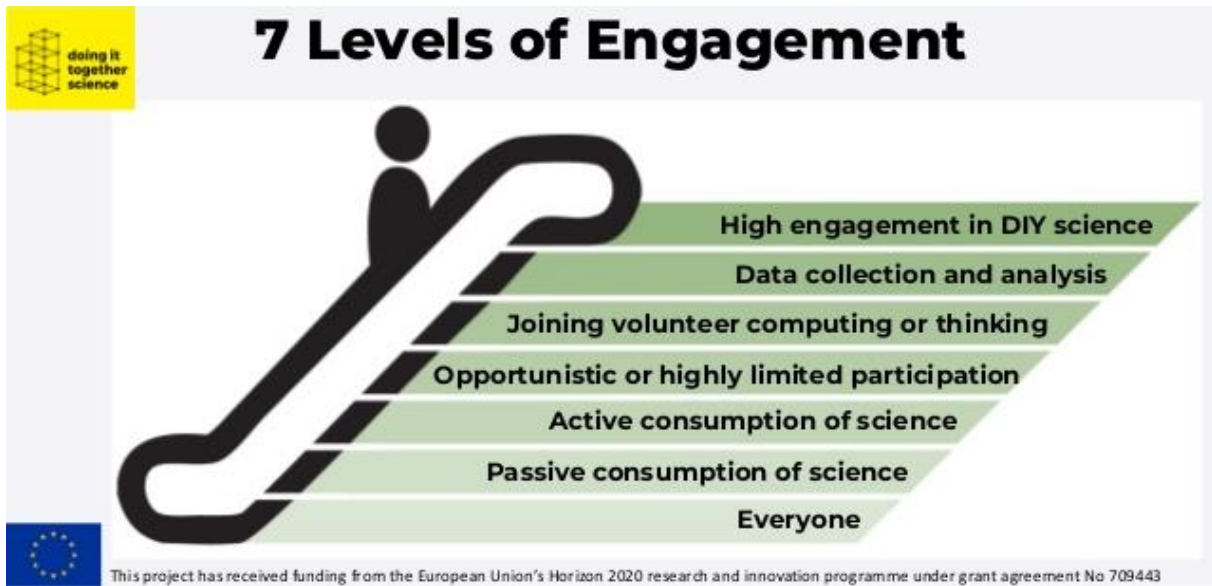
Figure 8 Engagement Escalator (Regalado at al., 2019, p. 36)

The escalator focuses on citizens and how they can move from being passive consumers of science on the bottom of the escalator to the top of the escalator where they are fully engaged in what is called Do it yourself (DIY) science (Regalado et al., 2019, p. 64). In the *From Citizen Science to Do It Yourself Science* report published by the European Commission, DIY science is defined as:

> "non-specialists, hobbyists and amateurs, but also an increasing number of professional scientists, doing science outside conventional university or lab settings, and instead in Makerspaces, FabLabs, Hackerspaces, Techshops, innovation and community-based labs, or even in their homes, garages or schools" (Nascimento et al., 2014, p. 30).

4.2 The development of the role of citizens in the framework programme

Since the European Community adopted framework programme 1 in 1984, the programmes have developed significantly in terms of the size, scope and ambitions. The transformations are said to match that of the EU as a whole. The budget stems from public funding, therefore alongside the programmes growing budget, there has been growing concerns about the returns to citizens. We find evidence of this in documents such as Carlos Moedas' 3Os strategy (European Commission, 2016).
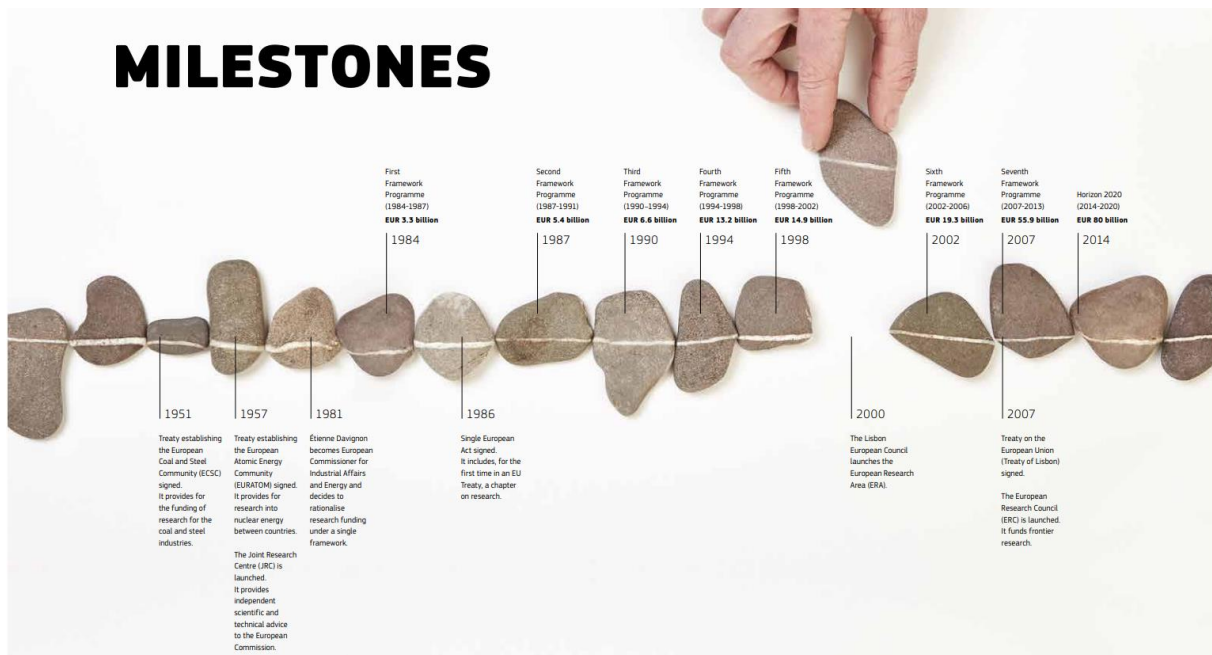
Figure 9 Milestones in the Framework programmes (European Union, 2015, pp. 6-7)

4.2.1 Framework programme 1 – 4 (1984 – 1998)

1984 marked the start of the first framework programme which lasted until 1987 (see figure 9). The framework programme served as a strategic tool for adopting research policies more coherently across Europe. Neither of the treaties provided any legal basis for establishing such a programme, despite this, framework programme 1 was adopted and entered into force in 1984 (Rellion, 2017, p. 1). The Single European Act (SEA) entered into force in 1987 and provided a firm legal basis for adopting future framework programmes (see figure 9). The SEA revised the Treaties of Rome and established the European Economic Community. Furthermore, the SEA introduced new policy priorities including that of research and development. Article 130f of the SEA stated: "The Community's aim shall be to strengthen the scientific and technological basis of European industry and to encourage it to become more competitive at international level" (The European Community, 1987).

Framework programme 2 was adopted in 1987 and lasted until 1991. It had an increased budget from the previous programme with a total of EUR 5.4 billion (see figure 9). This programme focused on access to research infrastructure mobility of researchers and innovation processes. In this programme, medium-sized enterprises (SMEs) and European non-member states were included (Rellion, 2017, p. 10). Framework programme 3 adopted for the duration of 1990 to 1994 further broaden the scope of the programme by covering key issues such as "balancing support between basic and applied research; links between universities and industry; and

incentives for private sector investment" (Rellion, 2017, p. 11). In 1992, During framework programme 3 the Maastricht treaty elaborated on the SEA article by adding the following text to the 1968 article "while promoting all the research activities deemed necessary by virtue of other chapters of this Treaty" (The European Community, 1992). Framework programme 4, which lasted from 1994 to 1998 (see figure 9), continued the trend of enlarging the scope of the programme and identified thirteen areas of concerns. Whereas the majority of these topics were similar to those of the previous programmes, the big novelty was the inclusion of socio-economic research (Rellion, 2017, p. 14).

4.2.2   Framework programme 5 (1998 – 2002)

Rather than focusing on industries and enterprises, there was from framework programme 5 and onwards a shift towards focusing on the needs of the communities and its citizens. The European Commission's communication on framework programme 5 stated:

> "Hitherto research has been based largely on technical achievement. The aim now is to make research more efficient and increasingly directed towards meeting basic social and economic needs by bringing about the changes which each individual citizen desires" (Commission of the European Communities, 1996, p. 2).

Framework programme 5 was called *Inventing Tomorrow-Europe's research at the service of its people* and was adopted in July 1996. The programme lasted from 1998 to 2002 (see figure 9). While there was no focus on citizen engagement, one of the key aims of the programme was to meet the expectations of the citizens of Europe (Commission of the European Communities, 1996, p. 7). The shift towards focusing on the citizens in the late 1990s and early 2000s were not unique for the framework programme, it was evident across the whole of the EU. Some citizen focused initiatives were directly linked to the framework programme, others worked in parallel. Some of the European Commission initiatives worth mentioning are the launch of the European Research Area (ERA) in January 2000. The ERA sought "to create a single borderless marked for research, innovation and technology across the EU" (Lamy, et al., 2020b). In November 2000, the *Science, Society and the citizens in Europe* working paper by the European Commission lead to discussions on the relationship between science and society emerged (Warin & Delaney, 2020, p. 6). The following year, in the process of establishing the ERA, the *Science and Society Action Plan* was adopted by the commission (European Commision, 2002, p. 6). The action plan sought to encourage scientific culture and education across Europe, bring "science policy closer to citizens and put responsible science at the heart of policy making" (European Commision, 2002, p. 8).

4.2.3 Framework programme 6 and 7 (2002 – 2013)

Framework programme 6 lasted from 2002 until 2006 (see figure 9) and was tool for strengthening the ERA. As a consequence of the adoption of the Science and Society Action Plan in 2001, science and society (SaS) became a key theme in both in the ERA and the framework programme in general. The SaS programme and its budget of EUR 88 million were dedicated to the achievements of increased societal engagement and to improve gender imbalances in research (Warin & Delaney, 2020, p. 6). Framework programme 7 lasted from 2007 to 2013 (see figure 9). During the establishment of this programme there were made multiple structural changes to the framework programme. These changes largely influenced the framework programmes to come. First, from there on the framework programme would include both research and innovation activities. Second, there was the introduction of partnerships. This includes thirteen public-private partnerships and the partnerships embedded under article 169 of the Treaty establishing the European Community. Today it is under article 185 of the Treaty of the Functioning of the European Union (European Parliament, 2016). Finally, it was decided that the duration of the framework programme should match that of the MFF (European Commission, 2007). In framework programme 7 there was a strengthening of the SaS programme that was established in framework programme 6. However, the name was changed to Science in Society (SiS). This programme was yet another initiative for facilitating a relationship between science and society. The SiS budget were increased significantly from that of SaS, with a total of EUR 280 million (Warin & Delaney, 2020, p. 6). Hundreds of projects and initiatives were launched under the SiS programme. These include research projects, actions, events, expert groups and coordination of initiatives across Europe. Universities, R&I organisations, NGOs, businesses, policymakers and professors were among those involved in these activities. Something that is considered one of the greatest successes of the SaS and SiS programmes (EU Science & Innovation, 2014). Towards the end of the duration of framework programme 7, there was the introduction of the RRI approach. The Italian Presidency of the Council of the EU states in 2014:

> "The benefits of Responsible Research and Innovation go beyond alignment with society: it ensures that research and innovation deliver on the promise of smart, inclusive and sustainable solutions to our societal challenges; it engages new perspectives, new innovators and new talent from across our diverse European society, allowing to identify solutions which would otherwise go unnoticed; it builds trust between citizens, and public and private institutions in supporting research and innovation; and it reassures

society about embracing innovative products and services; it assesses the risks and the way these risks should be managed" (Italian Precidency of the Council of the European Union, 2014)

4.2.4 Horizon 2020 (2014 – 2020)

Horizon 2020 is the name of framework programme 8 that entered into force in 2014 and lasted until the launch of Horizon Europe. There was an agreement among the leaders of the member states and the members of the European Parliament that investment in research and innovation would be essential for the future of Europe. With almost €80 billion in funding, Horizon 2020 was the biggest framework programme thus far (see figure 9). The programme was put at the centre of the Europe 2020 strategy for smart, sustainable and inclusive growth (European Commission, 2014, p. 5). Horizon 2020 had three overall areas of focus: Excellent science, industrial leadership and societal challenges. According to the European Commission the goal was to "ensure Europe produces world-class science and technology that drives economic growth" (European Commission, 2014, p. 5). The framework programme drew upon the evaluations of the SaS, SiS and the Science and Society Action plan. In Horizon 2020, citizens gained their greatest role yet in EU research and innovation activities. For the first time there were multi-actor dialogues where representatives form society whether it be businesses, academia, civil society organisations could come together to co-create research and innovation outcomes and discuss policy priorities (European Commission, undated d). The concept of RRI was a key area of focus throughout the duration of Horizon 2020.

In the *interim evaluation of Horizon 2020* report, the European Commission state that the EU does not spend enough on research and innovation and refer to the commitment that member states should spend 3% of their GDP and that this is not met. In addition, they note that there is still an innovation gap between the EU and key competitors (European Commission, 2017, p. 10). Nevertheless, Horizon 2020 saw a significant increase in research and innovation proposals and a lot of these were from newcomers. The European Commission argue that this is a result of having brough research and innovation closer to the public. However, they note that stakeholders are not convinced that Horizon 2020 is solving societal challenges. Therefore they argue that there is a need for a better involvement of citizens in the next framework programme (European Commission, 2017, p. 161).

4.3   Drivers of Citizen engagement

It is evident that citizens have gained a greater role within the framework programmes throughout the years. During framework programme 5, we saw a shift away from an industrial oriented to a society-oriented approach, in which science would address societal challenges and improve citizens quality of life. During framework programme 6 and 7, there was the introduction of the SaS and SiS programmes in which universities, research and innovation organisations, NGOs, businesses and policymakers were partners in research and innovation activities. And finally, during Horizon 2020 and now Horizon Europe citizens have become key stakeholders in research and innovation activities by having the opportunity to voice their opinion and take part in decision-making. Citizen engagement is enshrined in the legal basis of Horizon Europe and the commission are therefore obliged to include it. While there are distinct trends in the development of citizens role in the framework programmes and firm legal obligations to include citizens in decision-making, the drivers for this development in not as clearly found in the documents.

In all citizen events I have taken part in during the internship at the NTNU Brussels Office, and while writing this thesis it has been expressed repeatedly that citizen engagement is a tool for bridging the gap between science and society. For example, during the R&I Days in September 2020, the Chair of the Mission Board Ocean emphasized that engaging citizens is a useful tool for policymaker to satisfy the citizens and thereby be re-elected (EU Science & Innovation, 2020a). Similarly, Commissioner Mariya Gabrial argued during the same event that citizen engagement is building trust between science and citizens (EU Science & Innovation, 2020b). The argument that citizen engagement is a useful tool for bridging the distrust between science and society is furthermore expressed in a number of European Commission publications. For example, in the *Taking European knowledge society seriously* and *public engagement in science* reports.

In the first report from 2007, the expert group are investigating 3 topics, including "how to respond to the widely-recognised problem of European public unease with science, especially in relation to new science-based technologies" (Felt, 2007, p. 9). The report clearly recognizes the issue of citizens mistrust in science, however, it concludes that there is not a general fear of science or mistrust in science, but rather a selective resentment in some scientific fields. In other areas the report notes that citizens have a great enthusiasm (Felt, 2007, p. 9). It is difficult to determine exactly what causes societies lack of trust in science. Sutcliffe argued that the distrust stems from previous technological disasters and argue that citizens are sceptical to the

motivations of those involved in the process. If there are businesses involved citizens would think they are just after the money, while by the involvement of governments citizens would wonder if they were just doing it to please the businesses and therefore focus on profit over safety. Furthermore, in regard to researchers and scientist, citizens would wonder if they were doing it "just to prove they can" (Sutcliffe, undated, p. 6).

The *public engagement in science* report published in 2008 argue that there are three key phases in the efforts made to bridge societies distrust in science. The first phase is identified in the report as 'Public understanding of science (PUS)', in which the was an understanding that the solution was to inform society about scientific achievements and developments. It highlights the efforts to inform citizens dated back to the 1970s. In the second phase the report identifies less focus on the one-way stream of informing citizens and more focus on a two-way dialogue between science actors and society at large. This phase builds on a 'deficit' model of the public, in which the assumption was that people who knew more about science would support it. This phase took place in the early 2000s and was the reasoning for the SaS programme under framework programme 6 (European Commission, 2008, p. 16). The third and final phase identified in the report point to that of engagement. As seen in the previous subchapter, from the seventh framework programme and onwards citizens have been involved in earlier stages of the research process allowing more meaningful debate and influence.

Chapter 5: Citizen Engagement in the process of defining Mission Starfish

This study is exploring the Norwegian experience with citizen engagement in the process of designing Mission Starfish and seek to answer four research questions presented in 1.3. This chapter presents the findings from the document analysis and the interviews.

5.1 Horizon Europe

The European Commission proposed in 2018 Horizon Europe as the new framework programme for research and innovation. The proposal was shaped by reports such as the *Interim evaluation of Horizon 2020* and the *LAB – FAB – APP*. Furthermore, it was largely influenced by the mission-oriented policy approach and journal articles, reports and books written by Mariana Mazzucato (see 2.2). In the proposal the commission proposed a budget of €100 billion (European Commission, undated e). The EU institutions reached a political agreement on Horizon Europe on December 11th 2020. The agreed budget for the new framework programme was €95.5 billion. €5.4 billion of these stems from the NextGenerationEU – Recovery fund (European Commission, undated e). The NextGenerationEU is a temporary recovery instrument in which the EU will use €750 billion to repair the damages resulting from the COVID-19 pandemic (Council of the EU, 2021).

Horizon Europe seeks to tackle climate change and to contribute towards the SDGs, while at the same time boosts the EU's competitiveness and growth (European Commission, undated f). The program will facilitate "collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges" (European Commission, undated f). One of the novelties in the programme is the missions (see 1.2) which are identified within one of the five mission areas. The missions will include a wide range of actions, such as research projects, new policies and other initiatives (European Commission, undated a). Through the interviews it has become clear that the interviewees view Horizon Europe and the idea about missions as very ambitious.

5.1.1   Mission Area Healthy Ocean

Mission Starfish is the proposed mission within the mission area of healthy oceans, seas, coastal and inland waters. The Mission Board Ocean states in the *mission* report:

> "The Mission "Healthy oceans, seas, coastal and inland waters" aims to know, restore and protect our ocean and waters by 2030, by reducing human pressures on marine and freshwater environments, restoring degraded ecosystems and sustainably harnessing the essential goods and services they provide." (Lamy, et al., 2020b, p. 6)

Mission starfish has five key aims (see figure 2) that together will contribute to resorting our oceans and waters.

1) Filling the knowledge and emotional gap
2) Regenerating marine and water ecosystems
3) Zero pollution
4) Decarbonising our waters, ocean, and seas and waters
5) Revamping governance

(Lamy, et al., 2020b, p. 24)

In the designing phase of the mission, citizens have been engaged through different activities, such as the ones in Norway that this thesis investigates. Furthermore, the citizens are planned to play a role in the implementation and eventually the assessment of the framework programme. Interviewee 3 argues that the thought behind the inclusion of citizen engagement is ambitious and states "I think it is very ambitious, and the whole Mission idea is very ambitious. But I think it is good that they do it".

5.1.2 The different citizen engagement activities

While this thesis is focusing on the activities that took place in Norway in relation to the definition of Mission Starfish, it is important to keep in mind that there have been a wide range of activities taking place across Europe. There have been events taking place both on EU and national level. Among the activities on EU level was the R&I Days in 2019 and 2020, an event in the youth parliament and an event in the European Youth forum.

Leading up to the R&I Days in 2019 there was a web-based consultation in which citizens could do an online survey of 20 questions related to Horizon Europe. There was a total number of 6806 submissions. The majority of the participants was from one of the EU members states, and according to a breakdown of the participants presented by the commission in a report, the majority had a vested interest in research and Innovation (European Commission, 2019). During the R&I Days in 2019 there were a series of citizen engagement activities taking place in Brussels. The commission had created a "village" in which there was a "house" dedicated to the different mission areas, each house was inhabited by members from the different mission boards. In the houses people had the opportunity to talk to members of the different mission boards, and to discuss three main questions; 1) What would be a major challenge that a mission could solve? 2) Why is the mission so far from public perception and how to best engage citizens? 3)How to make the mission a European Public Good? In addition to the village there

was specific co-design sessions in which a capped number of people were allowed access to the discussions. Nevertheless, people were welcome to follow the livestream and post comments as the discussions went along.

There were two events taking place on EU level in which the European Commission gave especial attention to youth. In April 2020 there was an online session of the European Youth Parliament. The participants were between fifteen and eighteen years old. They were delegates from several European member states plus Armenia and Turkey (European Commission, 2020c). They spoke with François Galgani from the Mission Board Ocean about marine pollution (European Youth Parliament, 2020). The second event, the European Youth forum also took place online. During this event young people from across Europe and beyond (European Commission, 2020d) discussed main challenges the mission should tackle. Barroca highlights that there were additional youth engagement activities taking place, for instance the All-Atlantic Ocean Youth Ambassadors Programme and the Sustainable Ocean Alliance (Barroca, 2020).

There was also a lot of citizen engagement activities taking place on national level within the different member states. During these activities there were members of the mission boards present. Having mission board representatives present, the participants had a chance to directly engage with those responsible for writing the *Mission* report. In December 2019, Spain organized a session dedicated to missions during COP25 (Secretaría General De Investigación, 2019). In January 2020, Italy hosted a workshop in which stakeholders from civil society, NGOs, Industry and others got together (United Nations , 2020). In June, there were 52 participants taking part in an online session focusing on mission area ocean in Romania (Vulturescu, 2020). While in Ireland, more than 1000 people responded to an online survey, 50 people participated in a citizen webinar and 30 young people participated in a youth event (Heffernan, 2020).

5.2 Citizen engagement activities in Norway

In addition to the activities conducted by the EU institutions and the different member states across Europe, there was a couple of activities taking place in Norway. These events were planned for the spring of 2020 and were naturally largely affected by the outbreak of the COVID-19 pandemic. Despite the pandemic and everything it brought with it; two different citizen engagement activities took place. In the spring/early summer of 2020 Norwegian citizens could participate in an online survey and in the summer of 2020, there were an online

workshop in which the participants were discussing different scenarios related to the future of our oceans and waters.

5.2.1 How the activities came about

Interviewee 1 marks the NTNU European Conference in November 2019 as the starting point for the activities. This was an event taking place in Brussels and had two different sessions, one of which were directly related to oceans. Representatives from the European Commission and the Mission Board Ocean were some of those participating to the session (NTNU, undated a). Following the event, Interviewee 1 contributed to a position paper on behalf of NTNU and some European partner institutions including universities, research institutes and national research councils (NTNU, Undated b). To accompany this, Interviewee 1 stated: "as a part of this engagement, and because citizen engagement is so important in the mission approach, I thought it was important also to arrange for some kind of public meeting in Trondheim and try to engage people in an exchange". To follow up on this, they planned an in-person event in Trondheim in May 2020. Gesine Meißner from Mission Board Oceans were planned to be one of the speakers. Furthermore, Interviewee 1 says that they planned to invite the board of the Norwegian Marine University Consortium (NMU) which "is an institutional cooperation agreement among Norwegian universities with considerable marine and maritime profile" (Norsk Marint universitetskonsortium, undated). Nevertheless, due to the outbreak of the COVID-19 pandemic. This event was cancelled.

The idea to conduct an online survey in Norway was according to Interviewee 1 initiated by Darko Manakovski, a Swedish representative in the Mission Board Oceans. The survey was launched online in the end of May 2020 and were according to the *interim* report of the mission board followed by 'co-design' sessions in some of the countries in June that same year (Lamy, et al., 2020b, p. 27). Interviewees 1, 2 and 3 are referring to the session in June as an online workshop.

5.2.2 The online survey

The survey was made through collaboration with representatives in a range of countries including Norway, Denmark, Estonia, Finland, Poland and Sweden (Lamy, et al., 2020b, p. 27). Interviewees 1 and 2 were both part of the Norwegian working group which consisted of 5-6 Norwegians representing Ministry of Education and Research, Ministry of Trade, Industry and Fisheries, NTNU, Innovation Norway and The Research Council of Norway. Interviewee 1 had the overall responsibility for coordination and was the one to participate in the meetings with the representatives from the other countries. The survey which aimed to give citizens an arena

where they could describe the role and importance oceans and waters played in their lives, were launched in all six countries in their respective national language (European Commission, 2020e). Interviewee 1 expresses some dissatisfaction related to the content of the survey:

> "The idea behind the survey was to be comparable across all countries, the questions should be relatively similar. It was a lot back and forth. I don't think the survey turned out the way I wanted it to, as there were many questions that was less relevant for Norwegians. And the questions were very open" (Interviewee 1).

Interviewee 1 notes that in the group of representatives there were also discussions related to how much information you should give the participants before they were asked to answer.

5.2.3   The online workshop

The method used in the online workshop was developed by Vinnova, which is the Swedish equivalent to Innovation Norway. There is different version of this methods, but the one used in these activities entailed that the citizens discussed different scenarios. Interviewees 1 and 2 drew up these scenarios before the workshop:

> "we used the methodology developed by Vinnova which is based on scenarios, which is much used in these kinds of citizen engagement activities. There are different versions, the scenarios we presented were positive ones. The participants were asked to envision a certain number of years into the future, to a situation where… We made scenarios in which we had reached the goals set by the mission, or what at the time were thought to be the goals. And then the discussion was about what we would have to do to get to that point. We had relatively open conversations around the different scenarios" (Interviewee 1).

Interviewee 2 stated "when the different scenarios are accepted and defined, and one agrees that this is a desirable future. The next step is to find out how to get there. And what does that mean for you?". Interviewee 2 gives an example: "if you live on an island and you commute into the city, how can this be done in a way that does not generate emissions?".

The citizens were given a positive scenario about how the world would look in the future if the mission reached its goals. And then they discussed what measures one needed to take for this to happen (Interviewee 1). There was a hope that this workshop could take place in-person, but after putting it on hold for a while, Interviewee 1 decided that they had to do a digital version

if they wanted to give input to the mission board in time for the development of the *Mission* report. Interviewee 3 expresses disappointment that the event had to take place virtually:

> "on the one hand, I was impressed of how well the workshop turned out. Because it was a big disappointment when we were unable to conduct the workshop face to face. This, I think, would have given a whole other dimension and learning to those who were present, both the organizers and the participants. At the same time, is it exciting to see that the virtual workshop worked out well".

The Interviewees as will be discussed later were uncertain about the outcome the workshop generated. However, there is an overall positivity among the participants on how it worked out.

5.2.4 The effect of COVID-19

The interviews and both reports from Mission Board Ocean highlights how the COVID-19 pandemic effected the process. The *Mission* report that was published in September 2020 defines the pandemic as a wake-up call and notes that following the pandemic we need to "reorient our economies and societies towards our long-term objectives, with a changed frame of mind about our relationships with nature and economic growth, to create the future we want for our ocean and waters" (Lamy, et al., 2020a, p. 5). Furthermore, the report states that the mission will be a "powerful element in the post-Covid-19 recovery and the transformation towards a more healthy and resilient society" (Lamy, et al., 2020a, p. 6). The *interim* report by Mission Board Ocean which was published in June 2020 draws attention to how the pandemic resulted in some events being cancelled and others organised virtually (Lamy, et al., 2020b, p. 28). The Research Council of Norway also recognize the effects of the pandemic and calls for Norway to

> "take the next step by using its current thematic and challenge-oriented approach to research and innovation policy and deploy missions as part of a transformative policy agenda-a transformation that is required in the wake of covid-19 and in light of pressing challenges such as the climate crisis" (The Research Council of Norway, 2020, p. 1)

The interviewees highlight how the COVID-19 pandemic had both positive and negative impacts on the process of defining Mission Starfish. Interviewee 1 states that:

> "due to the pandemic, by the time we managed to start up the digital version of the public meeting, it was already summer […] it was very important to get all of this sorted

before the end of August when the mission board were having their meeting." (Interviewee 1).

Interviewee 1 further notes how this felt like a last chance to have citizen engagement activities before it was too late. Similarly, Interviewee 2 says that the activities came about at a late stage in the preparation for the mission.

The survey and workshop were initiated by the European Commission and had to take place online, as the pandemic would not allow for in-person events (Interviewee 1). Instead of having the event in-person, it took form as an online webinar in which the participants sat at home and participating through their computers. Interviewee 3 had a pessimistic view on having the event online. She notes that it was very unfortunate that the pandemic broke out when it did. She explains how she participated in a workshop organized by the European Commission on how to do citizen engagement in February 2020. During this workshop, the European Commission presented different methods of how to do citizen engagement. She notes that due to COVID-19, things did not go the way they envisioned. And further questions whether having the event online might not have had the same quality as it would have if it were an in-person event as originally planned.

Interviewee 4 did not participate in the activities related to Mission Starfish but has experience with citizen engagement from the CIMULACT project funded under Horizon 2020. She says:

> "it costs a lot both financially and time-wise. Because if one wants to have proper involvement it has to be broad. Norway is an elongated country, and you need money to fly people in. You need money to do get a proper selection of people, you need people to moderate the sessions, you have to rent a location and you need lunch".

When asked if the pandemic might have had a positive effect on the process interviewee 4 argue:

> "absolutely, I think it is easier as people are more used to that things are digital. At the same time, it is something special about seeing people meet. Especially if they have different perspectives on things. […] there are somethings that disappears through video. But at the same time, it is a benefit that it makes it easier to get people to participate. However, it can be challenging to engage the elderly".

5.2.5   The outcomes

The interviewees all highlight how it is difficult to determine exactly how much impact the activities and the input it generated had on the *Mission* report. Interviewee 3 notes that during the activities citizens came up with concrete input, but she cannot comment on whether this was taken into consideration or not. The difficulty of measuring the outcomes of the citizen engagement is also expressed in the documents. The *Citizen Science and Citizen Engagement* report evaluating the achievements of Horizon 2020, states "one of the main challenges for citizen science is to measure the impact and devise indicators that are meaningful for stakeholders" (Warin & Delaney, 2020, p. 26). Furthermore, the report notes that there have been steps taking during the Horizon 2020 "to develop metrics and instruments to evaluate citizen science impacts" and that these efforts should continue during Horizon Europe.

Both interviewees 1 and 2 notes that the process of defining Mission Starfish was a very complex process in which stakeholders such as researchers, organisations, businesses and others have been giving input at various stages. For instance, Interviewee 1 states: "I have given input on behalf of NTNU Ocean on several occasions prior to this. […] it is therefore difficult to determine exactly where the different ideas originate from".

5.3 The Norwegian citizens

In relation to the citizen engagement activities, we need to consider who these citizens are supposed to be and how they were recruited. The decision to include citizens in the process of defining the missions is enshrined in the regulation *on the establishment of Horizon Europe – The framework programme for research and innovation, laying down its rules for participation and dissemination* which is the legal basis of the Horizon Europe. Article 6.6. reads: "the Commission shall ensure early involvement of the Member States and extensive exchanges with the European Parliament, complemented by consultation with stakeholders and the public at large" (Council of the European Union, 2020). And article 7.3 reads:

> "Missions shall: (aa) cover areas of common European relevance, be inclusive, encourage broad engagement and active participation of various types of stakeholders from public and private sectors, including citizens and end-users, and deliver R&I results that could benefit all Member States;" (Council of the European Union, 2020).

Nevertheless, the document does not define *who* these citizens, end-users or public at large really are or how many of the so-called 'citizens' are needed in these processes.

Interviewee 3 mention the lack of young people participating and note that she understood the majority of those participating in the workshop to be more than 50 years old. Similarly, interviewee 2 notes that there were more observers than citizens present at the workshop and that this comes down to this being somewhat "new" and experimental. Furthermore, interviewee 2 notes that there are not systems in place for involving hundreds of citizens yet. As interviewee 1 states: "it is an illusion that five million Norwegians were to say their opinion about the mission, not to mention the rest of Europe. It does not happen. […] it is important that those who are interested in being heard, gets heard".

5.3.1   Citizens vs. Experts

As explored earlier, the documents do not go into detail on who should participate in the activities. Nevertheless, the interviewees expressed an understating that the mission board was focused on going beyond scientists and the so-called experts and getting the "common man" engaged. Interviewee 2 stated:

> "I got the impression that the commission was concerned about only getting stakeholder input. In Norway, we are very good at consulting with stakeholders and collecting their input. Use reference groups, gathering the expert on the topic, right. […] we experienced that the Mission Board wanted more engagement from normal citizens".

Interviewee 2 further argued that part of the point of these activities were to engage "normal" citizens and not those with vested interests. Similarly, interviewee 1 emphasise that they could have had a lot more respondents to the survey if they promoted it more at NTNU or in the ministries. Nevertheless, "it was part of the point, we were not supposed to have experts, but rather the opposite. We should have citizens. Citizens with big C. So, we tried to avoid pushing it very much against colleagues and such". Interviewee 3 says that some of the participants in the workshop were "maybe a little in the intersection between being normal citizens and being an activist". Interviewee 3 further says that it will be interesting to see how the European Commission are able to involve 'normal citizens' and notes that one of the pitfalls is that the same people are giving their input as part of an interest group and as a citizen in the engagement activities. In addition, she highlights that it will be challenging and expensive to put together these panels.

Interviewee 4 was not part of the activities in this process. However, in the interview she notes that during the CIMULACT project, following a workshop in Norway, she and one of the

citizens who participated travelled to Milano to participate in a co-creation workshop. The Interviewee notes that there was a mix of citizens and experts present at the workshop which gave citizens an opportunity to interact with the experts on topics they were interested in. She says "citizens that was for instance interested in farming or producing their own electricity would sit together with experts that could tell them how this would work in practice. It actually became co-creation". Interviewee 4 said this mix of experts and "normal" citizens were very useful and is confident that the input made by the citizens in this event was taken into consideration.

5.3.2   How were citizens recruited?

When the survey was developed and agreed on, it was launched online. The survey was promoted using both social and traditional media. Both Interviewee 1 and 3 say they used Facebook as a platform for promoting the survey. Furthermore, Interviewee 1 wrote a chronicle in Adressavisa, the local newspaper in Trondheim. Following the survey, the respondents were invited to leave their e-mail address to get an invitation to the workshop.

Interviewee 1 states:

> "we did not get an enormously number of respondents, but we got people with all types of backgrounds. The respondents were of different ages, had different backgrounds and different occupations. It was a little too few young people. It was part of the point having people with different backgrounds, and something we were conscious about."

It was on the basis of this that they did not promote the survey at NTNU or at the ministries. Nevertheless, the interviewee further tells that there was a predominance of respondents from the Trondheim region. Participant 4 notes that in CIMULACT, they experienced difficulties with recruiting citizens to online surveys. The interviewee notes that it was hard to get people to commit compared to when you have national samples and had the possibility to directly contacting people. The concerns regarding the number of participants and their age are also found in relation to the online workshop.

5.4 The purpose and importance of citizen engagement in the process

In the *Citizen Science and Citizen Engagement* report it is stated "Citizen science is an ideal mode of R&I to democratise science, build trust in science, and leverage societal intelligence and capabilities in R&I." (Warin & Delaney, 2020, pp. 26-27). The documents and the interviews list several reasons for why citizen engagement is so important in the process of defining the mission. The *Mission* report emphasise that the targets of Mission Starfish is very

ambitious and that it will not be possible to reach these without the full support of people and science (Lamy, et al., 2020a, p. 27). It states, "it is fundamental that every citizen in Europe becomes co-owner but also co-responsible for the success of the Mission" (Lamy, et al., 2020a, p. 27) . Furthermore, it states: "Our Ocean and waters are public goods. We are all responsible, individually and collectively, for their protection and health" (Lamy, et al., 2020a, p. 3).

Regarding the purpose of the citizen engagement activities, Interviewee 3 states "I think citizen engagement is crucial. It is important for much more than having the missions succeed. To include and create engagement around important topics is ambitious but important". She argues that citizen engagement is important for citizens to accept the result of the research. Furthermore, the interviewees were relatively in agreement that there were three key purposes of citizen engagement. They can be summarized as legitimation, mobilization of citizens and better outcomes.

5.4.1   Legitimation

Interviewee 1 and 2 both list legitimation as one of the key purposes to have citizen engagement in Mission Starfish. Interviewee 1 states:

> "one must take in account the views of those whose lives will be affected. And when you are seeking to make major societal changes such as de-carbonising Europe and the rest of the Green Deal idea which is very ambitions. It cannot be achieved without having society involved."

Interviewee 1 further list legitimation as a motivation for participating in the organisation of these events. She states:

> "I find it interesting. There are huge sums of money going into it. Enormous amounts of European money are invested in research and innovation. From a researcher's perspective I am concerned with organizations legitimacy and social responsibility. The European Commission manages enormous values on behalf of society".

Interviewee 2 also argues that citizen engagement is about legitimacy he states: "it is about making sure that the decisions made are actually safeguarding the interests of society and that I am a member of that society. That is perhaps the most important". Furthermore, Interviewee 2 says that his first experience working a lot on citizen engagement was in his previous job in which the focus was upon the relationship between city and regional politics. He emphasis that to have legitimation one needed to have a close boundary. He states:

"the horror scenario is that people do not feel connected to how the society is shaped and then you get conspiracy theories and powerlessness. It is therefore important to involve citizens and that is something Norway, along with a lot of other countries, has been working on. For instance, through participatory budgeting."

Interviewee 2 further says "what we do know is that the less participation we have, the more alienated people get. And the more alienated people get the more we get phenomena such as the yellow vest movement". Similarly, interviewee 4 notes that citizen engagement is becoming increasingly important as society is becoming more polarized. She uses USA as an example but notes that this is happening many places.

5.4.2   Mobilization

In relation to mobilization, the *Mission* report states:

"Reaching the ambitious targets set for this Mission will not be possible without the full support of people and science. It is fundamental that every citizen in Europe becomes co-owner but also co-responsible for the success of the Mission. Empowering citizens to better value and safeguard their ocean and waters leading them to "love the unknown" and to discover the full extent of the interconnection between human and marine life and water resources is a key enabling intervention to underpin major economic and social transformations." (Lamy, et al., 2020a, p. 27).

Interviewee 1 says that the thought behind the citizen engagement activities is very interesting, and it is interesting that we cannot reach the targets if citizens are not included. Interviewee 1 states "we all need to pull our weight". The *Mission* report lists "powerful engagement with society" as a key condition for success of the mission. It states:

"Knowing, restoring and protecting our ocean and waters is a shared responsibility, individually and collectively. The proposed targets address variable audiences, depending on their specificity, but overall, they engage a wide range of actors: public authorities at all levels (local, regional national, European), all sectors of the blue economy, civil society organisations, scientific and cultural entities. They should all feel responsible for its success, and crucially, be supported by citizens" (Lamy, et al., 2020a, p. 48).

Additionally, it highlights the importance of a strong communication strategy. Arguing that such a strategy will "breathe life into the idea of system change, normalise action and the need for change (rather inaction and the status quo), emphasise our shared responsibility for a healthy water cycle" (Lamy, et al., 2020a, p. 49).

Interviewee 2 also lists mobilization as a key reason for citizen engagement and says that the missions are "supposed to go further than a researcher at institution X thinks something is interesting and therefore research it. It should be about mobilization around societal aims and the measures should go far beyond research". The Interviewee further points out that citizen engagement should not always be coordinated, it should be a room where citizens are mobilized, and they can come up with their own activities that make sense.

5.4.3 Better outcomes

Through the documents and the interviews, it is a general understanding that including citizens in the process will lead to better outcomes. Interviewee 1 highlights how citizen engagement provides an opportunity for the citizens to highlight things that are "missing in the picture", things that the experts have not thought of. In addition, the idea is that down the line citizens can participate in doing research for instance though measuring the salt levels in the ocean (Interviewee 2).

Interviewee 4 also highlights how citizens can bring perspectives and local knowledge that will help generate better outcomes. She states: "Citizens are not bound by the same commitments as the experts and might therefore come up with more radical ideas. While experts are bound by money and commitments and might also be worried about coming up with silly suggestions". Interview 4 further argues that "Silly suggestions might not be that silly after all". These arguments are supported by the documents. For example, in the *Mission* report which states that:

> "Citizen's science with larger public engagement will help gather empirical data and foster public participation and cooperation in scientific endeavours. Promoting exchanges between society and science and broadening access to knowledge, citizen science will help build confidence and provides learning experiences for participants as well as draw on citizens' knowledge to develop the solutions for regenerating the ocean and waters*"* (Lamy, et al., 2020a, p. 29).

5.5 What are the areas of improvements?

The EU documents analysed for this study has a very positive outlook on citizen engagement. Neither the M*ission* report nor the *inter-rim* report by Mission Board Ocean list areas of improvements. But these activities happened very recently, and it is probably considered too early to make any conclusion yet. In relations to Horizon 2020 which lasted from 2014 to 2020, the *Citizen Science and Citizen Engagement* report which highlighted the achievement in Horizon 2020 and recommendations for the Horizon Europe were published in June 2020. So, we could expect that the European Commission will evaluate and possibly present a document listing the areas of improvements later in the duration of the programme. Interviewee 2 notes that the biggest pitfall in the current state is that we do not try out different methods. He explains that if the goal is to include citizen engagement and the specific case is suitable for that, it is very important to try out a good number of methods and share the experiences. Interviewee 4 notes that one area of improvement is to include citizen engagement in other areas of society besides research and innovation.

5.5.1 Use of the available expertise

Interviewee 1 and 2 both refer to the methodology developed by Vinnova. While they used Vinnova's methodology for the workshop, Interviewee 1 states that she finds it a bit strange that the European Commission did not use the expertise available, questioning why she and Interviewee 2 were set to organize and conduct these events. She notes that they are not without experience with these things, but that through Horizon 2020 there has been a lot of activities related to the RRI and Swafs programmes and that they to a large extent focused on different types of participatory activities. While they used the methodology developed by Vinnova and the result was satisfactory, she thinks it could have been professionalised more. Nevertheless, she wishes not to be too strict as this can be a result of the COVID-19 pandemic. Interviewee 4 had a very different experience when she was organizing workshops related to the CIMULACT Project. CIMULACT and its co-creation of the research agenda is listed as one of the achievements of Horizon 2020 in the *Citizen Science and Citizen Engagement Achievements in Horizon 2020 and recommendations on the way forward* report. During this project, thousands of citizens, stakeholders, scientists and policy makers came together during this project to produce suggestions for research and innovation policies and topics (2020, p. 21). In CIMULACT they relied on methods made by the Danish equivalent of the Norwegian Board of Technology which she says is leading in Europe when it comes to citizen engagement.

Interviewee 4 explains how they tried out the different methodologies in the preparation for the workshop in Norway and went to Denmark to do try-runs.

5.5.2 Early engagement

Through the interviews it became evident that several interviewees were concerned about when the engagement were to take place in the process of defining the mission. For example, Interviewee 2 highlight the importance of early engagement: "early phase is always a rule for good engagement". In his experience, the commission was not very reflected on the relationship between the time of engagement and the possible outcomes. He states:

> "it is always a challenge when one has thought a lot and written a lot and then add engagement at the end. We have seen this in other contexts such as the more traditional stakeholder hearings, which we do a lot of and have clear routines for. If engagement happens too late the possibility of influencing declines. Or the function of the consultation will be very different".

Interviewee 2 further argues that in such case, the engagement will primarily serve as a tool to confirm or verify that the decision made are not completely wrong. It will be more of a verification than a chance for new input. Interviewee 2 felt that the European Commission was very concerned with having citizen engagement but not very concerned on when it was to happen.

5.5.3 Communications

It has become apparent that there are improvements to be made on the European Commission's external communication. Interviewee 3 says "there are many uncertainties here right". In the statement above from Interviewee 2 it is apparent that that the commission is sending mixed messages about the purpose of the activities. Is it meant to be a tool to verify that the decisions or priorities made are good, or is it meant to be an opportunity for citizens to participate in making these decisions? In addition to poor communication of the purpose of citizen engagement, the interviewees highlight how there was poor communication as to how these activities were to be conducted and the actual impact the input generated made on the *Mission* report.

Interviewee 3 calls for more information and guidelines from the commission, she states:" […] I think we need some good examples […]. There should maybe be some more information and guidelines from the commission on what they are actually thinking. There has been some. But it has not been a lot of information". Interviewee 2 notes that "What is interesting is that they plan to make a form of crosscutting facility that will give advice and input on how it can be done". If we look at citizen engagement in the process of defining Mission Starfish as an experiment like Interviewee 2 focused on, it could explain the lack of information about how to do it. The interviewees further says that they are not sure about how the input generated from the activities fed into the *Mission* report. Interviewee 3 states "At least I think I has". Nevertheless, it is apparent that the commission appreciated the work that was done to include the views of Norwegian citizens. Interviewee 1 states "it is apparent that it was very important for the commission that we did organize the activities. We got personal thank you notes".

5.5.4 Broader range of citizens

The Interviewees all highlight how it is important to have a broad range of citizens participating in these events. Both interviewee 1 and 3 says it was difficult to get young people engaged and points out that there was a limited number of young people involved in the activities. Interviewee 2 emphasize that a problem that reoccur in Norwegian politic in general is that through some life stages it is difficult for people to get involved. The Interviewee use young couples with children as an example of this. They do not have the capacity or time to participate. Interviewee 3 states that it is important to have a wide range of citizens that differs in age, gender and ethnicity, in addition to come from different parts of the country. Furthermore, as emphasized by Interviewee 3, one can question whether some of the so-called citizens participating to the online workshop were actually 'citizens' and could be categorized as the common man or if they had vested interests.

This chapter has presented the findings from the document analysis and the interviews. The process was largely affected by the COVID-19 pandemic. Nevertheless, there were two citizen engagement activities taking place in Norway in the process of defining Mission Starfish: an online survey and an online workshop. The interviewees were unsure about how the input generated in these events fed into the *Mission* report. However, they list legitimation, mobilization and better outcomes as the key purposes of having citizen engagement. Finally, the data presents four key areas of improvement: Use the available expertise, early engagement, better communication and a broader range of citizens.

Chapter 6: Discussion

As shown in chapter 2 of this thesis, there has since the 1950s been a shift towards a more deliberate democracy in which citizens are continuously gaining a greater role in decision-making. Since 1984 the framework programmes for research and innovation have shaped the EUs research and innovation agenda and as chapter 4 highlights, citizens are given increased influence in shaping it. While scholars such as Burk (1968) and Day (1997) argued that participation programmes were launched at all levels of government and was fairly common by the 1970s, it has become evident that citizens were not given a significant role in the framework programmes until much later (during the adoption of framework programme 5 in 1998). However, the EU has since welcomed this shift with open arms and has for instance invited European citizens from all over the union to participate in shaping the future of research and innovation policies.

Participation was in the beginning predominantly focused on giving a voice to poor people in developing countries (Freire, 1972) or marginalized groups in planning. This might be one of the reasons for why the EU did not adopt participation earlier. Another reason might be that science and research was during the 1970s predominantly seen as an something for experts. Furthermore, the idea of participation happening on several and overlapping levels such as the national and the European was at the time very innovative (Friedmann, 1992).

As highlighted in chapter 4, one of the main drivers of citizen engagement in the framework programme is that of bridging the distrust between science and society. The EU has for decades experienced that citizens has a rather selective resentment to some scientific fields. Something which Felt (2007) argue might stem from previous technological disasters. Despite this long-lasting distrust between science and society, there was not until 2020 and the process of developing Horizon Europe that citizens were invited to engage in setting the research and innovation agenda through for instance the identification of specific EU missions. Nevertheless, as stated in chapter 4, the *public engagement in science* report published in 2008 lists three phases in the efforts made to bridge societies distrust in science. The first phase which is identified as PUS dates back to the 1970s. If we recall the theory chapter, in the 1970s participation was given global attention and there was a concern about "giving a voice to the voiceless" (Kelly, 2001, p.17). On the European level on the other hand, they had not come as far. The focus was not on giving a voice or to include citizens in the decision- making, the focus was simply on informing the citizens of what they were doing. This first phase would fall under the first two rungs of Arnstein's ladder of participation (see figure 4) in which there was a one-

way communication, and the aim was simply to inform the citizens about the scientific achievements and developments. In other words, the citizens had no influence on the matter.

During the next phase, there was a focus on a two-way dialogue between science actors and the society at large. It built on a 'deficit' model of the public in which one believe that the more society knew about science the more they would support it. This phase took place in the early 2000s and were the reasoning behind the SaS programme under framework programme 6. These efforts would fall under rung 3-4 on the ladder of participation as there were no reassurance that the views of the citizens are influencing the outcomes. The final phase of efforts to bridge the distrust between science and society is that of engagement. This is the phase that we find ourselves in right now. Citizens has during this phase been involved in earlier stages of the process which has allowed more meaningful debate and influence. However, it is too early to place these efforts on the ladder of participation. Based on this study it might seem like it does not move up the ladder as it in order to do so, there must be evidence of citizen power through negotiations and trade-offs between powerholder and citizens. Nevertheless, citizen engagement is still a relatively new process and we have still not seen its full potential.

6.1 What has been done to include the views and opinions of Norwegian citizens in the definition of Mission Starfish and what are the experiences of those organizing it?

The M*ission* report as highlighted earlier in the thesis were to be handed over to the European Commission by the mission board at the R&I Days in September 2020. The mission was to be discussed by the mission board in August that same year. Therefore, the input generated by the citizen engagement activities had to be delivered to the mission board before the August-meeting. With the outbreak of the pandemic in March 2020, the process was sat on hold for a while which left limited time for organizing the events. Nevertheless, the organizers managed to conduct two citizen engagement events in Norway in the spring/ summer of 2020. It was an online survey accompanied by an online workshop. The survey was a part of a collaboration between several states in which members from the different countries collaborated on creating a survey with open questions about oceans. The survey was published in all the counties in their respective languages.

When it comes to the experience of those organizing the citizen engagement events in Norway related to the definition of what became Mission Starfish, there are especially three things we should have a closer look at. Firstly, why did they not use the expertise available? Secondly, the issues related to who participated in the events, and finally, how covid-19 effected the process. Interviewee 1 questions why the European Commission did not use the expertise

available and highlights that Vinnova has a lot of experience and expertise. And while they used one of the methods developed by Vinnova, this Swedish governmental agency was not responsible for the organization and conduction of these events. One can only speculate on why that is. As Barnes (2006) highlights it is important that the facilitator of participation sessions support the participants without taking over and imposing their own views on those participation. How are the EU making sure that the engagement on national level is true, real and good? And how can they make sure that the facilitators are not influencing the views of the citizens? This is relevant questions regardless of the facilitator having experience and expertise but might be especially relevant when those facilitating are people with vested interests representing different organisations or institutions.

Regarding the second point, issues related to the participants, the interviewee has two main concerns. Firstly, the interviewees highlight that they did not get that many respondents to the online survey and that there was even fewer participating in the workshop. However, Interviewee 2 emphasise that there is not a good enough system in place for engaging huge amounts of people just yet. For this qualitative survey where people were asked to describe what the oceans and waters meant for them, having hundreds and hundreds of people participate would generate a lot of data. This would make it very challenging to identify key trends and generate concrete input in the limited time available. Furthermore, in a workshop hundreds of people would require many parallel sessions and many moderators. Such resources were not available in this particular case. Having the survey as a quantitative one in which the participant got a lot of different answers to choose from and then had to pick the one that applied to them would make it easier to have a huge amount of people engaged. Nevertheless, the input from such a survey would not be nearly as valuable as the answers provided by the organizers might not reflect how the participants think and feel. Therefore, at the current stage it might be more reasonable to think quality over quantity, making sure to have a wide range of views rather than a huge number of participants. Secondly, they had some reflections as to who participated. It became evident through the interviews that young people were underrepresented in both the survey and the workshop this will be discussed more in-depth in sub-chapter 6.4 related to the areas of improvements.

Finally, the effects of the COVID-19 pandemic need to be taken into consideration when evaluating the process of including the views of Norwegian citizens in the definition of Mission Starfish. The mission-oriented approach in which citizens were planned to play a role in solving some of the biggest challenges facing the world today are new and experimental and would

have been challenging enough in itself. The pandemic and the restrictions it brought with it made it challenging as the original events planned for the spring/ summer of 2020 had to be cancelled or adopted to a virtual format. Furthermore, the pandemic put the whole process on hold for a while leaving limited time to generate input that would feed into the *Mission* report. Nevertheless, as chapter 2 highlights, some of the biggest disadvantages and limitations of engaging citizens are that it is time consuming and costly. While the pandemic brought with it a lot of challenging, when it comes to these two limitations it might have brough with it a solution. While the pandemic did not bring with it time saving tools for processing the input from a qualitative survey it has resulted in a lot of citizens having better technological skills and becoming more comfortable with participating to online events. If workshops are happening online the only thing the participants have to do is to log onto their computer from their home. The organizers do not have to spend time finding and renting a venue, flying in participants from all over the country, ordering lunch and doing other organizational tasks. This will make the process less time-consuming and costly for the organizers. Furthermore, it will be less time-consuming for the participants as they do not have to travel across the country to take part. This might also make it both easier and more appealing for people from all over the country to participate. However, one need to be aware that moving the engagement process online might have a negative effect on the outcomes of the process. This is a concerned voiced by interviewee 3. It is impossible to know how the discussion would have developed if it was an in-person event rather than an online one. Therefore, it is impossible to comparing the quality of the two.

6.2 How does those involved in organizing the citizen engagement activities in Norway interpret the purpose of these activities?

Through the interviews conducted for this thesis it was a lot of talk on why citizen engagement is important and the purpose of having such activities. The findings can be summarized in three categories: legitimation, mobilization and better outcomes.

In the interviews there was a consensus that legitimisation is one of the key purposes of citizen engagement activities in decision-making and especially in this case. Interviewee 1 says it will be important to include the views of those whose lives will be affected by the research, while interviewee 2 says citizen engagement is partly about making sure that decisions are safeguarding the interests of the society. In addition to this, interviewee 1 says legitimation is one of her motivations for organizing these events "From a researcher's perspective I am concerned with organizations legitimacy and social responsibility. The EU manages enormous

values on behalf of society". This corelates with the theory explored in Chapter 2. Irvin and Stansbury argued in 2004 that a participatory process can be a valuable tool for governments to build trust and create strategic alliances, as well as gain legitimacy of their decisions. In relation to the mobilization argument, it seems to be a consensus between the interviewees that citizen engagement will increase the chance for the mission to succeed as it will lead to the mobilization of citizens. Mazzucato argues that engaging citizens in the definition phase of missions will give citizens and the society at large ownership of the mission. Thus, ensuring that the mission will live on even after 2030, when Mission Starfish is set to finishe (2019).

Finally, as the literature highlights, it was in the 1980s that there became a global consensus about the value of local knowledges. One example is the 1980s *world conversation strategy: living resources convention for sustainable development*. From that point on, the important role local people can play in identifying local needs, most pressing issues, precious experiences and capabilities were recognized. In this study it has become apparent that there is a consensus that citizen engagement can lead to better outcomes due to the local knowledge of citizens. Interviewee 1 says the citizen engagement activities is an opportunity for citizens to highlight what is "mission in the picture". Similarly, interviewee 4 states "Citizens are not bound by the same commitments as the experts and might therefore come up with more radical ideas and because they are not experts they come in with fresh eyes". These arguments are supported by the theory discussed in chapter 2. For example, the *Brundtland* report from 1987 argue that local knowledge and support through participation of citizens is especially important in a case like this as it is concerning the environment. In addition, Irvin and Stansbury (2004) argues that participation will result in better policies and decisions, something that will benefit both the citizens and those in power.

6.3 What does the European Commission want to achieve with citizen engagement in Horizon Europe?

The European commission's strong commitment for citizen engagement is as explored in chapter 4 evident for instance through the increased amount of money spend on citizen related programmes, the number of publications on the topic and the efforts put into events such as the R&I Days. In relation to Horizon Europe, the EU has launched the idea that citizens would participate in the design, implementation and assessment of the programme. Mazzucato highlights the importance of citizens being engaged at the three phases of a mission in her 2018 report (2018b). As the programme only recently entered into force, it is not possible to

determine or evaluate the role of citizens in the implementation and the evaluation of the programme, but it is however, possible to some extent to evaluate the role of citizens in designing the missions.

The European Commission has a very positive outlook on citizen engagement and one can draw parallels to the situation 1990s when the international community had very positive outlook on the concept of participation. As discussed in Chapter 2, scholars such as White called for greater criticism about the participation process. White stated that the concept sounds appealing to people but can "masks the fact that participation can take on multiple forms and serve many different interests" (White, 1996, p. 7). Based on this, it is important the commission clearly communicates why they want to have citizen engagement and the functions it is supposed to serve. Nevertheless, this is not the case. The interviewees did not experience that the commission had a clear communication. This will be discussed more as a possible area of improvement in the next sub-chapter.

In addition to there being uncertainties with what function citizen engagement is supposed to fill, it is also worth discussing *who* these citizens really are. The legal basis of the framework states that the commission should engage citizens and that missions needs to be inclusive and encourage engagement of citizens. However, there is no definition or guidelines to *who* these citizens are supposed to be. The interviewees express that they were under the impression that there were "normal citizens" and not so-called 'experts' and people with vested interests that were supposed to participate. However, we might ask ourselves where should we draw the line between citizens and experts? And what characterise the "normal" citizen?

As this thesis has showed, mobilization is one of the key purposes of citizen engagement and also a key element in order to achieve the ambitious goals put forward by Mission Starfish. Not engaging experts and others with vested interests might limit the chance for the mission to succeed as it excludes a lot of people that could have been valuable for a mobilization perspective. In Mission Starfish where the EU seek to restore ocean and waters and where citizen initiatives such as beach clean-ups are considered a useful tool, would it be so bad if a broader range of citizens were engaged? A lot of experts are consulted on the basis of their work position, for example Interviewee 1 has given input to the mission on behalf of NTNU Ocean and Interviewee 3 have contributed to conversations on the basis of her position in Ministry of Education and Research. But what about those so-called experts or citizens with vested interests that does not have this opportunity. Or what about students? Are they

considered to be experts or are they "normal citizens" and if they are considered to be "normal citizens" where are we drawing the line between "normal citizens" and experts?

In the absence of clear communication and guidelines form the EU as to *who* are supposed to participate and for what purpose, there is a lot of uncertainties and room for speculation. Nevertheless, through citizen engagement there is a huge potential for researchers to learn from citizens and vice versa. As Irvin and Stansbury argued in 2004, a clear benefit for both governments and participants is that through engagement they can learn from and inform one another. Similarly, Mazzucato argue that missions are a straightforward way of explaining to the public how research and innovation contributed to a better society and that engagement will lead to greater support of the mission. Additionally, citizen engagement has the potential to raise awareness and build trust between citizens and researchers. However, for citizen engagement to fulfil its potential it cannot be viewed as a box that needs to be ticked in order to get EU funding, but rather as an important resource. As Hart (1992) argue, there must be genuine engagement. With genuine engagement, the potential of citizen engagement is endless.

6.4 What are the areas of improvements in order to make citizen engagement more efficient and influential in the future?

Burk argues that one of the main criticisms of the inclusion of citizens in decision making to this day is that of its ineffectiveness (Burke, 1968). He further argues that the effectiveness of engaging citizens depends upon many conditions which makes it hard to achieve. The findings of this thesis related to the citizen engagement activities and the areas of improvements can be summarized into four categories; use the available expertise, earlier engagement, better communication and broader range of citizens.

As discussed in sub-chapter 6.1 related to the experiences of those involved in organizing the citizen engagement activities, Interviewee 1 questioned why the mission board did not use the expertise available. As the literature highlights, the methods for the engagements of citizens are today very professionalised compared to the practices used in the 1950s and -60s. Moore (2012) argues that there is a large community of practitioners and facilitators of participation, while Leighninger (2010) point out that participation skills have become a common part of manager training. Nevertheless, interviewee 1 express that while they were not without experience there are other people who has more experience than the people who ended up working on these activities. She refers to projects and activities that has been funded under Horizon 2020. Through this study is has become evident that there are people within Norway that do have

experience with citizen engagement activities in the framework programme. Interviewee 4 for instance has organized a citizen engagement workshop in relation to the CIMULACT project. The citizen engagement methods tried out in the CIMLUACT project are listed a success by Mazzucato in her report *Governing missions in the European Union* a report published by no other than the European Commission itself. It is therefore surprising that people from this project were not approached by the commission and included in the process. Documents such as the two reports by the Mission Board Oceans emphasise that citizen engagement is a novelty in this newest framework programme and that there has never been given greater attention to citizens. However, when interviewee 4 were responsible for a workshop in Norway as a part of the CIMULACT project, she was sent to Denmark to do practice-runs prior to the actual workshop. The process of defining Mission Starfish did not have this. It is therefore worth reflecting on the fact that CIMULACT funded under Horizon 2020 had a more professionalized approach to citizen engagement than the process of defining the missions in Horizon Europe. While it is important for me to emphasise that the organizers did well in organizing and conducting events with the limited time and resources available and in the midst of a pandemic, it is worth reflecting on whether use of the available expertise would lead to a better outcome. But regardless of it resulting in better outcomes of not, it seems like a waste to invest a lot of time and money into the Horizon 2020 projects if their outcomes are not brought forward.

The second possible area of improvement is to have earlier engagement of citizens. Interviewee 2 argues that early engagement is a necessary condition for good engagement. Engagement at a late stage in the process can be seen as the commission informing citizens on what they are doing or consulting citizens on the decisions already made. This would on Arnstein's ladder of participation be categorized as tokenism and lack of citizen power (1969). The citizens lack power to ensure that their views are being taken notice of. Citizen engagement is as explored in chapter 2 supposed to be a two-way interaction between the citizens and those in charge of the decision-making process. As explored in chapter 2, Mazzucato argues that it is critical to include citizen engagement in early stages of the definition phase. In order for the European Commission to take a step away from the traditional top-down approach and towards a bottom-up approach in which the programme and the related missions were fully co-design, citizen engagement should have happened at an earlier stage and not been added last minute. The Commission did of course not plan for a pandemic to break out during the process, and it is impossible to say if it would have been a higher degree of citizen power if COVID-19 did not occur.

This thesis identifies the European Commission's external communication as the third area of improvement. As the previous chapter explored, some interviewees express a need for more information and guidelines on the purpose of citizen engagement, how to conduct these activities and how the input generated fed into the *Mission* report. If citizen engagement in the process of defining the mission is thought of as an experiment like Interviewee 2 said, it is perhaps not surprising that there was not more information and guidance. Putting to many guidelines might lead to the organizers of these event not trying out different methods. Thereby not testing out different methods to find the best one. Not trying out different methods was argued by Interviewee 2 as one of the biggest pitfalls at the current stage.

Irvin and Stansbury (2004) argued that participation can for the participants be seen as time-consuming, dull and pointless if the decisions are ignored. When the decision is made to involve normal citizens that does not have any vested interests can one not expect them to read the *Mission report* to find out if their input has been taken into consideration. And even if they did read the report, it is not stated whether decisions are made on the basis of input from stakeholder consultations, citizen engagement activities or made by the experts. Furthermore, Irvin and Stansbury argue that participation can backfire and create even more hostility to those in power (2004). To prevent hostility and to ensure that citizens are not left with the feeling that it was a waste of time, I propose that the European Commission clearly communicate to the citizens their contribution.

In chapter 2, this thesis explored Hart's ladder of youth participation. while Hart refers specifically to that of youth participation, his list of requirements for labelling a project participatory is very interesting. The process of define Mission Starfish might to some extent meet the first requirement: "The children (or in this case everyone) understand the intentions of the project" (Hart, 1992, p. 11). However, while they are informed that the survey and workshop will feed into the *Mission* report, they might not be aware that citizen engagement is a way for the EU to bridge the gap between science and society or for legitimating the spending of public money. In relation to the second requirement "They know who made the decision concerning their involvement and why" (Hart, 1992, p. 11), it would be impossible for the participants to know the purpose of the involvement. This has been poorly communicated from the European Commission and even the people organizing the activities seek more information on this. And in relation to the third requirement: "They have a meaningful (rather than 'decorative') role" (Hart, 1992, p. 11), it is hard to determine exactly what role citizens have had in this process. The Commission has not communicated what part of the *Mission* report were made on the basis

of input generated from citizen engagement or what part were generated from experts or other stakeholders.

Mazzucato argued in 2019 the importance of involving as many citizens as possible in the early phase of the missions. She argued that it is important to recognize the diversity of the European population and therefore make efforts to engage underrepresented groups whether it be by age, class, race or other characteristics. As seen in chapter 2 regarding to the ongoing debate of participation, it was in the 1990s that scholars called for greater criticisms surrounding who are participating. White argued that there needed to be mechanisms in place to bring those relatively disadvantaged groups into the participatory process (1996). I have not seen the lists of who participated to the event, but I take the interviewees word for it when they say that the participant represented a range of different backgrounds. However, both interviewee 1 and 3 says that there were a lack of young people participating in the activities. This is surprising as the climate activism by young people especially in 2019 and onwards would suggest that young people are interested in saving the climate. As the framework programme is one of the EUs main tool to reach the European Green Deal and det UN Sustainable Development Goals, one would assume that young people would participate to the framework programme if they were aware of the opportunity.

The engagement of young people is important for the same reason as engaging any citizens, it leads to mobilization and better outcomes. In addition to this, as Hart argues, we cannot expect young adults to be participating citizens when they turn 16, 18 or 21 if they are not exposed to the skills and responsibilities involved prior to this (1992). In other words, it is important to engage youth in citizen engagement activities such as the ones related to the definition of Mission Starfish, for them to continue to be engaged when they are older. In this case, young people have been welcomed to participate on the same basis as adults, however, they did still not participate. The reason why there was a lack of young people engaged in the activities might come down to the way the activities were promoted and the fact that the youth might not have known about them. Interviewees 1 and 3 said that they used Facebook to promote the survey and that there was written a chronicle in the local newspaper in Trondheim. This might not be the best arenas for reaching out to young people and for the next citizen engagement activities there might be an idea to try reaching out using other social media platforms such as Instagram, snapchat or TikTok. Alternatively, one could go to the schools.

If done properly, the potential of citizen engagement is great. As chapter 4 explored, the European Commission view citizen engagement as a method for bridging the distrust between science and society. In an ambitious programme such as Horizon Europe, having citizens onboard and in support of the mission is vital for reaching the set goals. Furthermore, as the interviewees highlight engaging citizens in shaping the research and innovation agenda though the identification of missions can amongst other things lead to the mobilization of citizens. Mobilization of citizens is very positive especially in a case like this, which seeks to tackle climate change and creating a more sustainable future. If people feel ownership to the mission and the accompanied targets, citizens might come up with their own actions for contributing to the mission. Furthermore, as the interviewees highlight, citizen engagement might lead to better outcomes. Citizens with their local knowledge might be able to tell researchers about what challenges and issues that needs to be addressed. In addition, citizens have better knowledge about local values and capabilities, which is valuable information for researchers.

This thesis has examined the Norwegian experience with citizen engagement in the process of defining Mission Starfish in European Commissions framework programme for research and innovation. Based on the data generated through document analysis and semi-structured interviews with people who organized the citizen engagement activities in Norway, and existing literature on the relevant concepts, the thesis has answered four research questions.

First, *what has been done to include the views and opinions of Norwegian citizens in the definition of the mission Starfish and what are the experiences of those involved in organizing these activities?* Through the EU documents it became evident that citizen engagement events took place on both the national and European level. The EU has organized a range of citizen engagement events where Norwegian citizens has been welcome to participate on the same basis as other nationals. In addition, two events took place in Norway. There was one online survey and one online workshop. Based on interviews with some of the organizers, this thesis explored their experiences with the process. There were especially three things that came up in the interviews related to their experience. There was a question raised regarding why the commission did not involve people who has more expertise on citizen engagement. The next concern was related to the participants in these events and why it is important to engage normal citizens and not experts. And finally, it was how the COVID-19 pandemic affected the process.

Second, *how does those involved in organizing the citizen engagement activities in Norway interpret the purpose of these activities?* Through the interviews it became evident that the interviewees had similar thoughts as to what was the purpose of these activities. It can be summarized into giving the process legitimacy, mobilizing citizens to act and to generate better outcomes in the decision-making process.

Third, w*hat does the European Commission want to achieve with citizen engagement in Horizon Europe?* It is evident that citizens have gained a greater role within the framework programmes throughout the years. During framework programme 5, we saw a shift away from an industrial-oriented to a society-oriented approach, in which science would address societal challenges and improve citizens quality of life. During framework programme 6 and 7, there was introduction of society programmes and civil society became stakeholders of the programme. And finally, during Horizon 2020 and now Horizon Europe citizens have become key stakeholders in research and innovation activities by having the opportunity to voice their opinion and take part in decision-making. While the European Commission has a strong commitment for citizen engagement, is it not very clear what they want to achieve with citizen

engagement in this framework programme. It can be to bridge the growing gap between science and society, mobilize citizens to reach the ambitious targets of Horizon Europe or to draw upon the local knowledge held by citizens in order to make better decision.

Fourth, w*hat are the areas of improvements in order to make citizen engagement more efficient and influential in the future?* In this study there has been a lot of focus on what would improve the citizen engagement activities going forward. This thesis shows that there are especially three areas in which there can be made improvements. First, the EU should use the available expertise when they initiate citizen engagement activities. Second, it is important to ensure that the engagement activities happen at an early phase of the process. However, it is important to note that no one could have foreseen the outbreak of the COVID-19 pandemic and that the world would go into lockdown in the spring of 2020, so it is not possible to conclude whether there would have been more timely engagement if the pandemic did not happen. Thirdly, The European Commission need to improve their communication of what the aim of the process really are. Finally, there need to be a discussion about *who* is supposed to be engaged in these activities.

This thesis has explored the Norwegian experience with citizen engagement in the process of defining Mission Starfish. The COVID-19 pandemic largely effected the process. Nevertheless, the organizers succeeded in conducting two different activities: a survey and workshop. Through document analysis and interviews this thesis has identified three key reasons for why citizen engagement is important: it creates legitimation, it mobilizes citizens and when done correctly it results in better outcomes. Furthermore, there is three key areas of improvement to make citizen engagement more efficient and influential, these can be summarized as: Use of available expertise, early engagement, better communication and a broader range of participants.

Through this study I have uncovered unexplored areas in relation to citizen engagement. Therefore, I will propose some areas for future study. First, I suggest investigating other countries experiences with citizen engagement in the process of defining Mission Starfish to see if there are any trends in the experiences. Second, it would be interesting to explore the experience of the citizens who participated in the citizen engagement activities, including how their views on research has been affected by their participation. Third, as the mission develop it would be interesting to study how citizens play a role in implementing the mission and later how citizens play a role in monitoring and evaluating the process. Fourth, it would be useful to study how good practices of citizen engagement travels. There has been developed a lot of

different methods for developing citizens through projects funded under Horizon 2020, to find out how these can be taught to organisers across borders would be an important area for further studies. A final topic possible for future study is to examine whether engagement actually bridge the gap between science and society.

Bibliography

Arnstein, S. R. (1969). A ladder of Citizen Participation. *journal of the American Institute of Planners, 35*(4), pp. 216- 224.

Barnes, M. (2006). Whose spaces? Contestations and negotiations in health and community regeneration forums in England. .

Barroca, E. (2020, Sepmteber 22). *European Research & Innovation Days: Session on Mission Healthy Oceans, Seas, Costal and Inland Waters.* https://ec.europa.eu/info/sites/info/files/research_and_innovation/events/presentations/eugenia_barocca_-_youth_initiatives.pdf

Bingham, L. B., Nabatchi, T., & O'Leary, R. (2005). The new governance: Practices and processes for stakeholder and citizen participation in the work of government. *Public Administration Review, 65*(5), pp. 547–558.

Bryman, A. (2016). *Social Research Methods* (5th ed.). Oxford: Oxford University Press.

Burke, E. M. (1968). Citizen participation strategies. *American Institute of Planning Journal, 34*(5), pp. 287-294.

CIMULACT. (undated). *CIMULACT*. Retrived February 15, 2021 from http://www.cimulact.eu/

Commission of the European Communities. (1996). *"Inventing Tomorrow" Europe's research at the service of its people.* Retrieved November 2, 2020, from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:51996DC0332&qid=1605775177889&from=EN

Council of the Europen Union. (2021, February 11). *EU recovery package: Council adopts Recovery and Resilience Facility.* European Council Council of the European Union. Retrieved March 20, 2021 from https://www.consilium.europa.eu/en/press/press-releases/2021/02/11/eu-recovery-package-council-adopts-recovery-and-resilience-facility/

Council of the European Union. (2020, September 29). *Proposal for a Regulation of the European Parliament and of the council establishing Horizon Europe- the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination.* Retrieved October 15, 2020, from https://data.consilium.europa.eu/doc/document/ST-11251-2020-REV-1/EN/pdf

Crang, M., & Cook, I. (2007). *Doing Ethnopraphies.* London: SAGE Publications.

Dalton, R. J. (2008). Citizenship Norms and the Expansion of Political Participation. *Political Studies, 56*(1), pp. 76- 98.

Day, D. (1997). Citizen Participation in the Planning Process: An essentially contested concept? *Journal of Planning Literature, 11*(3), pp. 421- 434.

Dowling, R. (2016). Power, Subjectivity, and Ethics in Qulaitative Research. In I. Hay (ed.), *Qualitative Research Methods in Human Geography* (pp. 29- 44). Oxford: Oxford university press.

Dunn, K. (2016). Interviewing. In I. Hay (ed.), *Qualitative Research Methods in Human Geography* (pp. 149 - 188). Oxford: Oxford Univeristy Press.

EU Science & Innovation. (2014, April 24). *The rationale and history of Science with and for Society*. [video] Youtube: https://www.youtube.com/watch?v=VYXnvpj15cE&feature=youtu.be

EU Science & Innovation. (2020a, November 13). *Mission Area Ocean*. [video] Youtube:
https://www.youtube.com/watch?v=FeKg4HgaSdU

EU Science & Innovation. (2020b, November 13). *Mission area: Citizen engagement*. [video] Youtube:
https://www.youtube.com/watch?v=gN1Uy3nw4kk&t=18s

European Commision. (2002). *Science and Society Action Plan.* European Commission.
https://op.europa.eu/en/publication-detail/-/publication/67643e5e-7dde-46f5-8aaf-
f7c6fac4e2b7/language-en/format-PDF/source-203888845

European Commission. (2007). *The Seventh Framework Programme (FP) Taking European Research
to the forefront.* European Commission Research Director General. https://wayback.archive-
it.org/12090/20170128231953/http:/ec.europa.eu/research/fp7/pdf/fp7-brochure_en.pdf

European Commission. (2008). *Public engagement in science.* European Commission.
https://op.europa.eu/en/publication-detail/-/publication/2d7d42ad-d69e-46ab-94bd-
035b068ae676/language-en

European Commission. (2014). *Horizon 2020 in brief The EU Framework Programme for Research &
Innovation.* European Commission.
https://ec.europa.eu/programmes/horizon2020/sites/default/files/H2020_inBrief_EN_FinalB
AT.pdf

European Commission. (2016). *Open Innovation Open Science Open to the world - a vision of Europe.*
Brussels: European Commission. Retrieved from https://ec.europa.eu/digital-single-
market/en/news/open-innovation-open-science-open-world

European Commission. (2017). *Interim Evaluation of Horizon 2020.* European Commission.
https://op.europa.eu/en/publication-detail/-/publication/fad8c173-7e42-11e7-b5c6-
01aa75ed71a1/language-en/format-PDF/source-77918455

European Commission. (2020a, December 30). *Horizon Europe The EU research and innovation
programme (2021-27).* Publications Office of the European Union.
https://op.europa.eu/en/publication-detail/-/publication/eef524e8-509e-11eb-b59f-
01aa75ed71a1/

European Commission. (2020c, April 20). *Ocean mission engages digitally with European youth
Parliament*. European Commission. https://ec.europa.eu/info/news/ocean-mission-engages-
digitally-european-youth-parliament-2020-apr-20_en

European Commission. (2020d, July 7). *Young people share their views on how to renegate our Ocean
& Waters*. European Commission. https://ec.europa.eu/info/news/young-people-share-
their-views-how-regenerate-our-ocean-waters-2020-jul-07_en

European Commission. (2020e, June 18). *Northern countries launch survey on the Healthy Oceans,
Seas, Coastal and Inland Waters Mission*. European Commission.
https://ec.europa.eu/info/news/northern-countries-launch-survey-healthy-oceans-seas-
coastal-and-inland-waters-mission-2020-jun-18_en

European Commission. (undated a). *Missions in Horizon Europe*. Retrieved October 11, 2020, from
https://ec.europa.eu/info/horizon-europe/missions-horizon-europe_en

European Commission. (undated b). *Mission area: Healthy oceans, seas, costal and inland waters*. Retrieved from https://ec.europa.eu/info/horizon-europe/missions-horizon-europe/healthy-oceans-seas-coastal-and-inland-waters_en

European Commission. (undated c). Responsible research & innovation. Retrieved 02 10, 2021, from: https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation

European Commission. (undated d). *Public Engagement and responsible research and innovation*. Horizon 2020. https://ec.europa.eu/programmes/horizon2020/en/h2020-section/public-engagement-responsible-research-and-innovation

European Commission. (undated e). How Horizon Europe was developed. Retrieved April 27, 2021, from https://ec.europa.eu/info/horizon-europe/how-horizon-europe-was-developed_en

European Commission. (undated f). *Horizon Europe.* Retrieved April 22, 2021, from https://ec.europa.eu/info/horizon-europe_en

European Committee of the Regions. (2019). *From local to European: Putting citizens at the centre of the EU agenda.* European Union. https://www.cor.europa.eu/en/engage/brochures/Documents/From%20local%20to%20European/4082_Citizens%20Consult_brochure_N_FINAL.pdf

European Parliament. (2016, October). *Article 185 Initiatives.* Retrieved December 11, 2020, from https://www.europarl.europa.eu/RegData/etudes/ATAG/2016/593476/EPRS_ATA(2016)593476_EN.pdf

European Union. (2012). *Consolidated version of the Treaty on the Functioning of the European Union.* https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT

European Union. (2015). Special Issue 30 Years . *Horizon Magazine.* https://op.europa.eu/en/publication-detail/-/publication/d1adf2e8-0d63-42fa-bcfb-5a9a43417b5e

European Youth Parliament. (2020). *1st Digital Session of the European Youth Parliament successfully concluded*. Retrieved December 2, 2020, from https://eyp.org/1st-digital-session-of-the-european-youth-parliament-successfully-concluded/

Fals Borda, O. (1998). *People's Participation: Challenges Ahead. A synthesis of the World Congress of Participatory Convergence, held at Cartagena, Columbia, 1997.* London: Intermediate Technology Publications.

Felt, U. (2007). *Taking European Knowledge Society Seriously Report of the Expert Group in Science and Governance to the Science, Economy and Society Directorate, Directorate- General for Research.* European Commission. https://ec.europa.eu/research/science-society/document_library/pdf_06/european-knowledge-society_en.pdf

Figueiredo Nascimento, S., Cuccillato, E., Schade, S., & Guimarães Pereira, A. (2016). *Citizen Engagement in Science and Policy- Making.* European Commission. https://ec.europa.eu/jrc/communities/sites/jrccties/files/mc10_rio_sio-lopez_mobility_reading.pdf

Forskningsrådet. (2019, 11 01). *Missionorienterte satsinger: Et svar på dagens utfordringer?* Retrieved April 16, 2021, from https://www.forskningsradet.no/indikatorrapporten/les-mer/missionorienterte-satsinger-et-svar-pa-dagens-utfordringer/

Forskrningsrådet. (undated). *International funding*. Retrieved 11 28, 2020, from https://www.forskningsradet.no/en/apply-for-funding/international-funding/

Freire, P. (1972). *Cultural Action for freedom.* Harmondsworth: Penguin.

Guijt, I., & Kaul Shah, M. (1998). The myth of community: Gender issues in participatory development. In I. Guijt, & M. Kaul Shah. London: Intermediate Technology Publications Ltd.

Hart, R. A. (1992). *Children's Participation from Tokenism to Citizenship.* Italy: UNICEF International Child Development Centre.

Heffernan, P. (2020, September 23). *European Research & Innovation Days: Citizen engagement Mission for Oceans, Healthy Seas, Costal and Inland Waters.* Retrieved December 7, 2020, from https://ec.europa.eu/info/sites/info/files/research_and_innovation/events/presentations/peter_heffernan_-_citizen_engagement_in_ireland.pdf

Institute of development studies. (undated). *Citizen engagement.* Retrieved February 10, 2021, from https://www.participatorymethods.org/glossary/citizen-engagement

International Science Council. (2020, 02 24). 'Missions' aim to provide integrated approach to research and innovation in Europe. *International Science Council*. Retrieved 04 16, 2021, from 'Missions' aim to provide integrated approach to research and innovation in Europe: https://council.science/current/news/missions-aim-to-provide-integrated-approach-to-research-and-innovation-in-europe/

International Union for the Conservation of Nature and Natural Recourses. (1980). *World Conservation Strategy.* https://portals.iucn.org/library/efiles/documents/wcs-004.pdf

Irvin, R. A., & Stansbury, J. (2004). Citizen Participation in Decision making: Is It Worth the Effort? *Public Administration Review, 64*(1), pp. 55-65.

Italian Precidency of the Council of the European Union. (2014, November 21). *Rome Declaration on Responsible Research and Innovation in Europe*. European Commission. https://digital-strategy.ec.europa.eu/en/library/rome-declaration-responsible-research-and-innovation-europe

Jackson, C. (1997). Sustainable Development at the Sharp End: Field-worker Agency in a Participatory Project. *Development in Practice, 7*(3), pp. 237- 247.

Kelly, D. (2001). *Community participation in rangeland management.* Queensland: Rural Industries Research and Development Corporation.

Lamy, P., Heffernan, P., Ramm, K., Slat, B., Citores, A., Manakovski, D., Pitta e Cunha, T., Moldoveanu, V., Evans, L., Karageoris, A., Deidun, A., Meissner, G., Kauppi, L., Galgani, F., Pedicchio, M. C., Pons, G. (2020a). *Proposed mission: Mission Starfish 2030 Restore our ocean and waters.* European Commission. Retrieved from https://op.europa.eu/en/web/eu-law-and-publications/publication-detail/-/publication/672ddc53-fc85-11ea-b44f-01aa75ed71a1

Lamy, P., Heffernan, P., Ramm, K., Slat, B., Citores, A., Manakovski, D., Pitta e Cunha, T., Moldoveanu, V., Evans, L., Karageoris, A., Deidun, A., Meissner, G., Kauppi, L., Galgani, F., Pedicchio, M. C., Pons, G. (2020b). *Regenerating our ocean and waters by 2030, Interim report of the mission board healthy oceans, seas, costal and inland water.* European Commission. https://op.europa.eu/en/web/eu-law-and-publications/publication-detail/-/publication/d0246783-b68a-11ea-bb7a-01aa75ed71a1

Lane, M. B. (2005). Public Participation in Planning: an intellectual. *Australian Geographer, 36*(3), pp. 283- 299.

Leighninger, M. (2010). Teaching democracy in public administration: Trends and future prospects. *Journal of Public Deliberation, 6*(1).

Lund, D. H. (2018). Co-creation in Urban Governance: From Inclusion to Innovation. *Scandinavian Journal of Public Administration, 22*(2), pp. 27- 41.

Lund, D. H. (2018). Co-creation in Urban Governance: From Inclusion to Innovation. *Scandinavian Journal of Public Administration, 22*(2), pp. 3-17.

Mazzucato, M. (2018a). Mission- oriented innovation polivies: challenges and opportunities. *Industrial and Corporate Change, 5*(27), pp. 803- 815.

Mazzucato, M. (2018b). *Mission- Oriented Research & Innovation in the European Union a problem-solving approach to fuel innovation- led growth.* European Commission. https://ec.europa.eu/info/sites/info/files/mazzucato_report_2018.pdf

Mazzucato, M. (2019). *Governing Missions in the European Union.* European Commission. https://ec.europa.eu/info/publications/governing-missions-governing-missions-european-union_en

Mazzucato, M., & Penna, C. (2016). *The Brazilian Innovation System: A Mission- Oriented Policy Proposal.* Brazilian Ministry for Science, Technology and innovation.

Mohan, G., & Hickey, S. (2004). Relocating participation within a radical politics of development: critical modernism and citizenship. In G. Mohan, & S. H. (eds.), *Participation: From Tyranny to Transformation: Exploring New Approaches to Participation* (pp. 59 - 74). New York: Zedbooks.

Moore, A. (2012). Following from the front: Theorizing deliberative facilitation. *Critical Policy Studies, 6*(2), pp. 146–162.

Nascimento, S., Pereira, Â. G., & Ghezzi, A. (2014). *From Citizen Science to Do It Yourself Science.* European Commission. https://publications.jrc.ec.europa.eu/repository/bitstream/JRC93942/ldna27095enn.pdf

Norsk Marint universitetskonsortium. (undated). *About*. Norsk Marint universitetskonsortium. Retrieved February 10, 2021, from https://nmu.marint.info/ABOUT

NTNU. (undated a). *NTNU European Conference 2019*. Retrieved February 10, 2021, from https://www.ntnu.edu/ntnu-european-conference-2019/full-programme

NTNU. (Undated b). *Reflection points about the Implementation of a Healthy Ocean, Seas, Coastal and Inland Waters Mission.*

https://www.ntnu.edu/documents/1266654386/0/reflection_points.pdf/264f446f-a401-7792-03bd-fa6e60a82d9c?t=1576500303077

Oftebro, T. L. (2020, December). *How is citizen Engagement included in Horizon Europe, the European Commission's upcoming framework programme for Research and Innovation?* [Internship report*]*

Regalado, C., Miedzinski, P., Melzer-Venturi, G., & Nold, C. (2019). *DITOs Doing It Together science Final evaluation report.* European Commission. https://cordis.europa.eu/project/id/709443/results

Regjeringen. (2008, 27 June). *Planning and Building Act (2008).* https://www.regjeringen.no/en/dokumenter/planning-building-act/id570450/

Rellion, V. (2017). *EU framework programmes for research and innovation Evolution and key data from FP1 to Horizon 2020 iin view of FP9.* European Union. https://op.europa.eu/en/publication-detail/-/publication/7857e8f0-a4c1-11e7-837e-01aa75ed71a1/language-en

Secretaría General De Investigación. (2019). *Towards the Spanish Contribution to the Horizon Europe missions´codesign: early report on methodology and first outcomes.* https://www.ciencia.gob.es/stfls/MICINN/Ciencia/Ficheros/COP25ReportonES_contributionTowardsHEMissions.pdf

Silverman, D. (2013). *Interpreting Qualitative Data* (4th ed.). London: SAFE Publications Ltd.

Stratford, E., & Bradshaw, M. (2016). Qualitative Research Design and Rigour. In I. Hay (ed.), *Qualitative Research Methods in Human Geography* (pp. 117 - 129). Oxford: Oxford University Press.

Sutcliffe, H. (undated). *A report on Responsible Research & Innovation.* Matter. Retrieved from http://nanofutures.info/sites/default/files/rri-report-hilary-sutcliffe_en.pdf

Thagaard, T. (2013). *Systematikk og innlevelse en innføring i kvalitativ metode.* Bergen: Fagbokforlaget.

The European Community. (1987, June 19). *Single European Act.* Retrieved November 20, 2020, from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:11986U/TXT&from=EN

The European Community. (1992, August 31). *Treaty establishing the European Community.* Retrieved November 13, 2020, from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A11992E%2FTXT

The Research Council of Norway. (2020). *Addressing global challenges through mission- oriente policy.* https://www.forskningsradet.no/contentassets/5358f3a91d2046818ca271c3f9209cf3/adressing-global-challenges-through-mission-oriented-policy-policy-brief-from-rcn-international-advisory-board-2020.pdf

UNDP. (2016). *Citizen Engagement in Public Service Delivery The critical role of public officials.* UNDP Global Centre for Public Service Excellence. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjLjeq5mcfwAhVwpIsKHb-cD0EQFjAAegQIBBAD&url=https%3A%2F%2Fwww.undp.org%2Fcontent%2Fdam%2Fundp%2

Flibrary%2Fcapacity-development%2FEnglish%2FSingapore%2520Centre%2FGCPSE_CitizenEngagement_2016.pdf&usg=AOvVaw3EuUDI8sUOZNXfd-eqZyR2

United Nations . (2020). *Take Action for the Sustainable Development Goals*. Retrieved December 4, 2020, from https://www.un.org/sustainabledevelopment/sustainable-development-goals/

University of California. (undated). *Social reform, 1950s - 1970s.* Calisphere. Retrieved February 16, 2021, from: https://calisphere.org/exhibitions/t12/social-reform-1950s-1970s/

Van Driesche, J., & Lane, M. (2002). Conversvation through Conversation: Collaboartive Planning for Reuse of a Former Military Propoerty in Sauk County, Wisconsin, USA. *Plnanning Theory & Practice, 3*(2), pp. 133- 153.

Vulturescu, V. (2020, September 23). *European Research & Innovation Days: Citizen's engagement event in Romania.* Retrieved December 7, 2020, from https://ec.europa.eu/info/sites/info/files/research_and_innovation/events/presentations/viorel_vulturescu_-_citizen_engagement_event_in_romania.pdf

Warin, C., & Delaney, N. (2020). *Citizen Science and Citizen Engagement Achivements in Horizon 2020 and recommendations on the way forward.* European Commission Directorate-General for Research and Innovation. https://ec.europa.eu/info/sites/info/files/research_and_innovation/research_by_area/documents/ec_rtd_swafs_report-citizen_science.pdf

White. (1996). Depoliticising Development: The Uses and Abuses of Participation. *Development in Practice, 6*(1), pp. 6-15.

White, S. A., Sadanan dan Nair, K., & Ashcroft, J. (1994). *Participatory communication: Working for change and development.* New Delhi: Sage.

World Bank Group. (2014). *Strategic framework for mainstreaming citizen engagement in World Bank group operations.* https://consultations.worldbank.org/sites/default/files/materials/consultation-template/engaging-citizens-improved-resultsopenconsultationtemplate/materials/finalstrategicframeworkforce_4.pdf

World Commission on Environment and Development. (1987). *Our common future: Report of the Brundtland Commission.* Oxford University Press: Oxford.

Type of document	Name	Author	Year of publication
Documents for the first part of the research			
Treaty	Single European Act	European Communities	1987
Treaty	Treaty establishing the European Community	European Communities	1992
A Communication	"Inventing tomorrow" Europe's research at service of its people	Commission of the European Communities	1996
Working paper	the Commission Staff Working Paper SEC (2000) 1973 Science, society and the citizen in Europe	The Economic and Social Committee	2000
Resolution	Council Resolution of 26 June 2001 on science and society and on women in science	The Council of the European Union	2001
	Science and Society Action Plan	European Communities	2002
Treaty	Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community	European Union	2007
Report	The Seventh Framework Programme (FP7) Taking European Research to the forefront	European Commission	2007
Report	Taking European Knowledge society seriously	Ulrike Felt (Rapporteur) from the Expert Group on Science and Governance to the Science, Economy and Society Directorate	2007
Report	Public engagement in Science	European Commission	2008
Report	Horizon 2020 in brief The EU Framework Programme for Research & Innovation	European Commission	2014
Report	Ex- Post Evaluation of Science in Society in FP7 final report	European Commission	2016
Report	Open Innovation Open Science Open to the world – a vision for Europe	European Commission	2016
Policy report	Citizen Engagement in Science and Policy-Making	Figueiredo Nascimento, S. Cuccillato, E. Schade, S. Guimarães Pereira, A.	2016
Report	LAB – FAB – APP investing in the European future we want	European Commission	2017
Working document	Interim evaluation of Horizon 2020	European Commission	2017
Report	A report on Responsible Research & Innovation	Hilary Sutcliffe	Undated
Policy Brief	DITOs Doing It Together Science Coordination & Support Action	Regalado, Cindy; Miedzinski, Pawel; Melzer-Venturi, Georg; Nold, Christian	2019
Report	Co- design towards the first strategic plan for Horizon Europe A report on the web- based consultations and on the European Research and Innovation Days	European Commission	2019
Report	Horizon 2020 Work Programme 2018- 2020	European Commission	2020

	Documents for the second part of the research		
	Citizens' participation and transparency closing the gap	European Movement international	2015
	Orientations towards the first strategic Plan for Horizon Europe	European Commission	2019
Briefing paper	Horizon Europe – Specific Programme Implementing the framework programme	European Parliament	2019
Proposed regulation	Proposal for a regulation of the European Parliament and of the council establishing Horizon Europe – the framework programme for research and innovation, laying down its rules for participation and dissemination	Council of the European Union	2020
Report	Citizen Science and Citizen Engagement Achievements in Horizon 2020 and recommendations on the way forward	European Commission	2020
Report	*Science with and society in Horizon 2020 Achievements and Recommendations for Horizon Europe*	European Commission	2020
Report	Regenerating our Ocean and Waters by 2030 interim report of the Mission Board Healthy Ocean, Seas, Costal and Inland Waters	Mission Board on healthy ocean and…	2020
Report	Proposed Mission: Mission Starfish 2030: Restore our Ocean and Waters a report of the Mission Board Healthy Ocean, Seas, Costal and Inland Waters	Mission Board on healthy ocean and…	2020

APPENDIX 2:

Introduction:

Information about the project – topic, purpose etc.

Confirm that it is okey to record, and questions about anonymity.

Ask if they have any questions before we start.

Personalia:

1. utdannelse og kort om bakgrunnen deres
2. arbeidsplass og rollen de har

Har du vært involvert i EU finansierte forsknings prosjekter eller liknende? Kan du fortelle meg litt om det?

Mitt prosjekt fokuserer på EUs rammeverks Program for forskning og innovasjon – kan du fortelle meg om din rolle/hva du har gjort i forbindelse med dette programmet?

- Hvilke aktiviteter har du vært en del av?
- Motivasjonen for dette

Jeg er spesielt interessert i å forstå rollen innbygger medvirkning har hatt i Horisont Europa, og spesielt da med tanke på defineringen av Mission Starfish. Har do noen tanker rundt dette?

- Hvorfor tror du citizen engagement er viktig i denne prosessen? Eller hvorfor tenker du at citizen engagement ikke er så viktig i denne prosessen?
- Vi ser et økende fokus på innbyggermedvirkinig i EU sine forsking og innovasjons aktivitieter. etter din oppfatning, hva er det som er drivkraften bak tanken om at det er viktig med innbygger medvirkning?

Hvilke innbyggermedvirknings aktiviteter har vært gjennomfør I Norge i forbindelse med Mission Starfish?

- Kan du beskrive disse for meg?

Kan du fortelle meg om din rolle i disse aktivitetene?

- Hvordan endte du opp med å ha denne rollen?
- Hva har motivert deg til å gjøre denne jobben?

Kan du fortelle meg om din erfaring med å organisere citizen engagement aktivitieter i Norge?

- Covid-19
- Utfall av processen

Hva tenker du er hensikten med å ha citizen engagmenent i prosessen med å definerer mission starfish?

- bygge tillit mellom befolkningen og forskning?
- bevissthet rund problematikken å gjøre?
- Eller noe annet?

Hvordan vil du definer citizen engagement?

- Hvor viktig er det å ha citizen engagement i forksing og innovasjons initiativer?
- potensielle fallgruver
- Påvirker det økende fokuset rundt viktigheten med innbygger medvirkning måten du gjør forskning / dine tanker om forskning

Etter din oppfatning, har innbygger medvirkningen i Norge påvirket den foreslåtte Mission Starfish som ble fremlagt på R&I Days 2020?

- Hva tenker du på som områder hvor man kan forbedre for å gjøre innbygger medvirkning mer effektivt og innflytelsesrikt enn det er nå?

Kan du komme på noen andre initiativer og prosesser som kan være relevant for denne studien? Eventuelt andre folk det kan være bra og intervjue?

Er det noe mer du ønsker å legge til?