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Title: Governing the oceans: A study into Norway's ocean governance regime in the wake of United Nations Sustainable Development Goals

ABSTRACT

Increasing use of ocean space, through land or sea industries, has over time caused aggregated ecological problems as well as state jurisdictional issues thus leading to the development of regimes for regulating and reversing such effects and disputes. In this context, the United Nations Convention on the Law of the Sea (UNCLOS) constitutes a fundamental instrument for the governance of the marine environment and its resources. Currently, the urgent need to resolve depletion of ocean resources has led us to gradually include the principles of sustainable development in the ocean governance spectrum. Amid growing international efforts to preserve oceans, the United Nations (UNs) Sustainable Development Goals (SDGs) introduced a new form of ocean governance by integrating reasonable sustainability perspectives to the hitherto established ocean governance status quo. This paper aims to explore Norway's ocean governance regime contributing thus to the discourse of country's transition and shaping to address latest sustainability challenges. To do so, a socio-legal scholarship is adopted. Drawing on assumptions from extensive review and contextual analysis of the Norwegian Government regulatory sources and literature the article identified significant adaptations of Norway's ocean governance model as well as weaknesses that need further intervention.

Keywords; Sustainable Development Goals, ocean governance, global shipping, maritime regulation, marine environmental law and policy

1. Introduction

The oceans and the marine environment, in general, have an admittedly invaluable contribution to the ecosystem stability but also to the economy and society, as they foster development of world trade and various other cultural and recreational activities (Chakraborty et al 2020). Their use, however, raises a number of issues that fall within the realm of marine ecosystem protection as well as the settlement and resolution of conflicting interests by their users (Rilov et al 2020). Governance is a broad term and literature lacks to provide a consensus on a single agreed definition of it (Williams and Young 1994, Santiso 2001). However, reviewing and contrasting its various approaches and contextual approximations we conclude that governance is better described as the process and regimes through which governmental and non-governmental actors and stakeholders design and implement policies in a given economic, social and environmental setting (Kaufmann et al 1999, Folami 2017). Giving the term governance a specific object, that of the ocean, we can say that ocean governance refers to a multifaceted term that has been established to underpin all those local, regional, and international efforts, policies and legal frameworks aiming to establish a regime of national and international seas so as to reverse the depletion of the marine environment (Humphries et al 2020, Folami 2017). In addition, it forms the basis for the development of a homogeneous pattern of cooperation among contrasting parties for a transparent, legally guaranteed and sustainable usage of ocean space (Rudolph et al 2020, Pyć 2016).

In that context, the United Nations Convention on the Law of the Sea (UNCLOS), adopted by the United Nations, in 1982, has considerably contributed to the foundation and allocation of fundamental principles and responsibilities related to the obligations and jurisdiction of states over sea matters such as, the right of passage in the territorial sea, delimitation of exclusive economic zone (EEZ), preservation of the marine environment etc. (Bente and Robert 2018). An important contribution of UNCLOS is that it cultivated and diffused a mind-set of integrating the concept of sustainability in developed ocean governance regimes (Yu 2020, POLEJACK 2021). Though, along with UNCLOS, and within the field of sustainable ocean development, the declaration of the Brundtland report, 1987, and the World Summit on Sustainable Development (WSSD) in

Johannesburg, 2002, have significantly reshaped world's mentality and subsequent legal and policy frameworks towards the protection of the marine environment and, furthermore, highlighted the necessity to use ocean resources sustainably for future generations ([IOC/UNESCO](#), [IMO](#), [FAO](#), [UNDP 2011](#)). Following world-historical developments, the adoption, by United Nations, of the 2030 Agenda, and its wide-ranging set of 17 intertwining Sustainable Development Goals, in September 2015, referred to a latest vital event that validated a new perspective to the global approach for sustainable ocean governance ([Bornemann and Weiland 2021](#)).

In the midst of these international developments the case of Norway is of particular interest. Norway is a naval nation and inextricably linked and dependent on the sea ([Øseth and Korneev 2020](#), [Ottersen et al 2011](#)). More than 80% of Norway's population lives by the coast or at a distance of less than 20 kilometres from the coastline ([Norwegian Government 2017](#)). Over time, the existence of the Norwegians, but also the foundations of their economy, are significantly linked to marine resources. For example the offshore petroleum sector accounts 21% of Norway's national GDP. In addition, fisheries and shipping are also important pillars of the Norwegian economy with the first making Norway the third largest fish exporter globally ([Johnsen 2020](#), [Olsen et al 2016](#)). Hence, Norway is a nation with a long tradition in regulating ocean and marine matters showing also considerable sensitivity in maritime environmental protection issues ([Saviolidis et al 2020](#)). However, as for the rest of the world, so for Norway, all past and recent developments in ocean governance pose a complex set of challenges and opportunities for today and for decades to come and worth to be explored ([Haas et al 2021](#)). Against this background, this article explores Norwegian Government ocean governance policy and regulatory framework developed to safeguard and sustainably use the ocean and marine environment. It, furthermore, scrutinizes and presents a systematic review and analysis of Norway's governmental initiatives and stance in an effort to promote achievement of SDG14 (Life Below Water). Thus, the central question of this paper is:

- *What is the regime underlying Norway's ocean governance policy and how it has evolved to address past and latest ocean sustainability trends?*

For this study purposes, we delimited our research scope on the element of ocean governance concerned with ocean sustainability (Haas et al 2020, Stephenson et al 2021). Hence, in an effort to address the best possible way our research question, this paper approaches the topic from a socio-legal perspective motivated by our pursuit to provide knowledge that widens understanding of Norway's ocean governance regime (Irianto 2020, Budianto 2020). Thereby, this contribution builds on relevant theoretical underpinnings and a systematic review from material retrieved by Norway's governmental policies, legal and regulatory processes.

We begin our analysis by providing some background on the subject of ocean governance and how it relates to the concept of sustainability in a global and regional context. Reference is also made to the methodology but also to the sources that will be used in this study. The focus then lies on the mapping and understanding Norway's ocean governance system within its wider geographical and regional setting and insights are provided to corroborate and contrast them with our later interpretations. Therefore, an inclusive review and analysis of the Norwegian establishment is presented. The attention then falls on the Norwegian case by exploring the interactions and implications of regional and international developments to the country's ocean governance system. The paper then continues with discussion and conclusions on identified measures and frameworks established so as to constitute Norway's ocean governance system and enable country respond to UN 2030 Agenda and SDG14.

2. Overarching global ocean governance framework and developments

Global sustainability agenda trends and ocean governance

Our research journey is time-bound by the United Nations World Commission on Environment and Development (WCED) conference, 1987, known also as Brundtland Commission, until today (Keeble 1988). This moment refer to a pivotal event in the delineation of the concept of sustainable development and, thus, has been chosen as the starting point for studying global and Norway's ocean governance developments (Borowy 2013). In addition, this cornerstone occurrence for world sustainable development concept and policy framework took place few years later of the enactment of UNCLOS, in 1982, and is regarded by many as the precursor of the later sustainable

ocean governance regimes ([Pandey et al 2021](#)). Further to this setting, this section explores the context and nature of ocean governance, followed by mapping the most important ocean sustainability events from 1987 to this day. Such approximation is essential for the later understanding of Norway's ocean sustainability responses and interactions for the sake of sustainable development goals achievement.

More than 70% of earth's surface is covered by oceans containing approximately 97% of its water. This typical example helps us to immediately realize how much human life is inextricably linked to ocean ecosystems ([NOAA 2018](#)). Furthermore, from an economic point of view, oceans and marine ecosystem play an important role to the well-being of people and societies as they offer numerous commercial uses constituting, thus, a source of nourishment and development for all humanity ([Luz 2014](#)). However, the invaluable economic and ecosystem contribution of the oceans is not entirely unbiased ([Winther et al 2020](#)). Ocean exploitation by civilian and industry entities has increased dramatically over time. Indicatively to mention that the increase in feeding from oceanic sources, marine pollution incidents and evolving ocean jurisdictional conflicts, in combination with the emergence of new ocean-based industries, has intensified the use of ocean resources as well as the extinction pressure exerted on them ([Van Assche et al 2020](#)). Accordingly, has become noticeable nowadays the adverse effects of wider climate change on ocean and marine environment resulting from the cumulative absorption of greenhouse gases (GHG), as a result of human activities such as, offshore oil and gas extraction, international shipping, fishing, tourism and others ([Harris 2019](#)). In such a multidimensional and interconnected relationship between people and the oceans it is imperative to establish rules, procedures and legal frameworks, both at global and regional level, in order to protect them and sustain their use ([Armoškaitė et al 2020](#)).

The United Nations Convention on the Law of the Sea rests at the heart of global ocean governance. It constitutes a comprehensive instrument that underpins the universal rule setting process and seeks to govern the use of marine environment and its resources ([Humphries et al 2020](#), [Pyc 2016](#)). Rightly so is considered a cornerstone for the foundation of the basic principles of sustainable ocean governance framework ([Yuan and Chang 2021](#)). In that sense, UNCLOS refers to an act that went beyond the Geneva

Conventions on the Law of the Sea, April 1958, as it replaced its relevant provisions on the territorial sea and the contiguous zone, the continental shelf, the high seas, fishing and conservation of living resources on the high seas (Nandan 1995, Boyle 2005). This important regulation of the law of the sea was followed by another significant undertaking of the world community. Specifically, in 1987, the United Nations, through the report '*Our Common Future*', known also as the *Brundtland Commission*, created a new reality and foundation for global sustainable development that was to affect future ocean governance systems (Burton 1987). However, although it was not an ocean-focused report, as it set a wide range of goals and a framework for planet sustainability, it did make a specific reference to the need to protect the oceans and use their resources sustainably (Haward and Vince 2008). In that way, this important United Nations report highlighted the problems facing the oceans from overexploitation, pollution and land development and highlighted UNCLOS role as the cornerstone for the establishment of national laws and regulations to prevent, reduce and control pollution of the marine environment (Witherington 2014).

The beginning of United Nations strategy for marine ecosystems conservation

In the continuation of our study, it is worth mentioning two very important regulatory treaties that preceded Brundtland report. In the 1970s, the United Nations, through its body responsible for producing the marine environmental regulations, the International Maritime Organization (IMO), generated (ARSLAN et al 2018) the International Convention for the Safety of Life at Sea (SOLAS), 1974 and the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL 73/78) which were intended at strengthening regulation of marine pollution at global level (Canyon 1978). In that direction, the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, refers to another important IMO treaty aiming to prevent the spread of harmful aquatic organisms from one region to another (Soler-Figueroa et al 2020). After that, the Food and Agriculture Organization of the United Nations (FAO) turned its interest in fishing activities. Particularly, through the International Conservation and Management Measures by Fishing Vessels on the High Seas (1993 FAO Compliance Agreement) and the Code of Conduct for Responsible

Fisheries (CCRF), 1995, it sought to set principles, international standards, along with Flag States responsibilities in order to ensure the effective conservation, management and development of living aquatic resources ([Edwin et al 2020](#), [Folami 2017](#)). However, it was at the 1992 Earth Summit, in Rio de Janeiro, Brazil, and the adopted Agenda 21, when United Nations opened a new chapter in sustainable ocean governance ([Sitarz 1993](#)). Henceforth, global community started building on the foundations of sustainable development principles and committed to protect oceans through specific management related activities of coastal states that include, but not limited to, ocean education, awareness and information programmes, implementation of integrated coastal and marine management and sustainable development plans and programmes, promoting environmentally sound technology and development of ocean contingency plans for human induced and natural disasters ([United Nations 1992](#), [Sand 1993](#)).

Shortly after that event, in 1995, UN in an effort to tackle new challenges and protect coastal and marine environment from land-based activities, returned with the establishment of the United Nations Environment Programme (UNEP) and introduction of the Global Programme of Action (GPA). Such programme incorporated various regional governing bodies and working groups for the efficient implementation ocean governance regimes (such as the Regional Seas Conventions and Action Plans) ([Williams and Davis 1995](#)). In 2000 came in with new challenges and September of that year UN Member States signed the United Nations Millennium Declaration, known as Millennium Development Goals (MDGs), consisting of 8 global goals ([World Bank 1995](#)). However, it should be observed that despite the recognized role of the oceans and marine environment so far, they were given a marginal role and attention in MDGs relevant requirements ([Mavroeidis et al 2017](#), [United Nations 2013](#)). Nevertheless, in 2001, the first world conference on the oceans and coasts was held, acting thereby as was a precursor to the Johannesburg 2002 World Summit on Sustainable Development (Rio + 10), reheating and re-giving ocean governance due importance ([Smith 2002](#)). As result, participants reviewed and analysed the status and progress of all major world policies and treaties so far and highlighted the need for a targeted focus of the WSSD in further strengthening compliance with international ocean agreements, increased capacity building for good ocean governance and protecting biodiversity of coastal and marine

areas ([Bernal 2002](#), [Billé 2007](#)). Thereafter, and taking into account the decisions of the World Summit on Sustainable Development on ocean and marine protection, the United Nations founded the UN-Oceans, an inter-agency mechanism, which has been meeting annually since 2005 seeking thus to further promote and coordinate United Nations activities on oceans and coastal issues ([Sheavly 2005](#), [Ryabinin et al 2019](#)).

Ocean governance in its aftermath of Rio+20 Conference

Following the discussed global ocean governance events so far, United Nations Rio+20 Conference, in 2012, acted as a catalyst for shaping global policy and regime of ocean governance ([Barbier 2012](#)). Specifically, in Rio+20 Conference, entitled ‘The Future we Want’, which furthermore built upon the Millennium Development Goals achievements, it was launched a process develop specific and measurable goals for sustainable development that would drive our planet until 2030 ([Horner 2012](#)). In these decisions, which paved the way for the creation of the upcoming UN 2030 Agenda, it was explicitly stressed the need to treat ocean and seas as an integral component of the whole ecosystem and an vital factor for the success of the rest UN commitments such as, poverty eradication, sustained economic growth, food security and creation of sustainable livelihoods and decent work ([Leggett and Carter 2012](#)). As a consequence, few years later, UN Member States agreed on specific objectives aimed at achieving sustainable development as a whole by combining its economic, social and environmental dimensions ([Tsalis et al 2020](#)). The 2030 Agenda, and incorporated 17 SDGs, amongst other requirements related to poverty eradication, gender equality, quality education, affordable energy, combatting climate change etc., included a specific ocean goal (Goal 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development) ([Weiland et al 2021](#)). Thus, known ocean threats, such as overfishing, ocean acidification and coastal eutrophication, necessitated to sustainably manage and protect marine and coastal ecosystems and create a reformed regime for sustainable use of the oceans ([Unger et al 2017](#), [Takei 2020](#)). However, the pioneering element with SDGs lies on the fact that success of the ocean goal 14 is combined and depends on the success of the other objectives and, thus, cannot be dealt with individually ([Le Blanc 2017](#)).

Concluding the exploration of the ocean governance framework, it is worth stopping on the reforms caused at regional ocean governance frameworks, as a result of the introduction of UN SDG14. Thence, but also before the creation of the 2030 Agenda, and in the wake of the aforementioned sustainability developments, several regional ocean governance initiatives and policies were formatted, as well as quite a few other legal and regulatory frameworks aiming at normalizing human-ocean interactions ([Haas et al 2021](#), [Dupont and Fauville 2017](#)). The European Commission (EC) is therefore a prime example of a regional ocean of governance policy. Indicatively, we mention the reaction of the European Union (EU) to the SDGs, which, through the Framework Directive for the Maritime Strategy, in 2016, laid the foundations for the development of an integrated maritime policy to serve a sustainable system of ocean governance ([Prado 2020](#), [Abramic et al 2020](#)). In so doing, the EU Blue Growth strategy encompassed European Union latest ocean governance vision to support sustainable growth in the various maritime sectors (i.e. tourism, fishing, energy, seabed mining etc.) and assist the global community achieving 2030 Agenda goals ([Ehlers 2016](#)). The following table 1 summarizes the described changes throughout the course of ocean governance.

Table 1 Global acts related to worldwide ocean governance evolution

Year	Activities	Brief description
1970s	IMO SOLAS and MARPOL Conventions	Safeguarded marine environment from all kinds of pollutions
1982	United Nations Convention on the Law of the Sea (UNCLOS)	Defines the rights and responsibilities of nations with respect to their use of oceans
1987	UN Brundtland Commission - Our Common Future	It founded guiding principles for sustainable development as it is understood today
1992	UN Rio Earth Summit - Agenda 21	Various agreements of UN Member States on radioactive chemicals use, vehicle emissions, water supply and climate change issues
1993	UN FAO Compliance Agreement and Code of Conduct for Responsible Fisheries	Set out principles for the effective conservation, management and development of living aquatic resources
1995	UN Regional Seas Conventions and Action Plans	Connected regional activities with global processes aimed at the Ocean protection
2000	Millennium Development Goals (MDG)	World leaders committed to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women
2002	World Summit, Johannesburg (Rio+10)	Sustainable development discussed 10 years after the first Earth Summit in Rio de Janeiro and new agreements on environment followed
2005	UN-Oceans inter-agency mechanism	Formed to foster coordination, coherence and effectiveness of ocean and marine related competent organizations
2012	UN conference Rio +20, Brazil	Reconciled the economic and environmental goals of the global community
2015	UN 2030 Agenda 2015, New York	17 SDGs build on the eight MDGs and set specific targets for ocean protection (SDG14)
2016	EU Framework Directive for the Maritime Strategy	EU developed a new sustainable approach to ocean management and SDG14

Source: Authors' elaboration.

3. Material and methods

This article draws on documentary data produced by Norwegian Government in an effort to establish an ocean governance framework that enables its ocean and marine segments, including offshore, deep sea and short sea shipping, fisheries and aquaculture and passenger transport, to comply with sustainability mandates. In keeping with this purpose, and as study progressed, data collection and analysis were also informed by relevant literature substantiating thus our inductive reasoning ([Hayes et al 2010](#), [Thomas 2003](#)). Thence, and due to the reason that such attempt was framed by our will to comprehend how identified legal and regulatory components are functioning within a social context, this study is backed by a socio-legal methodological approach ([Irianto 2020](#), [Budianto 2020](#)). Therefore, while laws and regulations shaping Norway's ocean governance policy are the main object of this study, however, it was deemed necessary to understand and contrast them within the social system intended to be implemented. This approach embraces a key feature of the so-called 'socio-legal studies', which customarily combine the investigation and analysis of legal sources, though, using methods taken from social sciences disciplines ([Banakar and Travers 2005](#)). In this case, this study employed documentary research review and analysis methods in examining above defined sources ([Ahmed 2010](#)). According to this methodological approach we sought to overcome the weaknesses of pure doctrinal research methodology thus giving our study a nuance of critical thinking by integrating and conclusions our findings into the wider societal context ([Ali et al 2017](#)). To that end, our research methodology was set so as to explore Norway's ocean governance regime, as envisaged through literature and official governmental documents, including consultations, resolutions, reports, guidelines, letters, acts and regulations published by the Office of the Prime Minister and the Ministries. Keywords and terms linked to ocean governance and sustainability subject were employed in order to identify these documents. Thereafter, the content of these documents was content analyzed and summarized in chronological order, though, without coding, but through keeping notes and a continuous systematic review and contextual analysis guided by the keywords and phrases already mentioned. A summary of the relevant literature investigated is presented in figure 1 below.

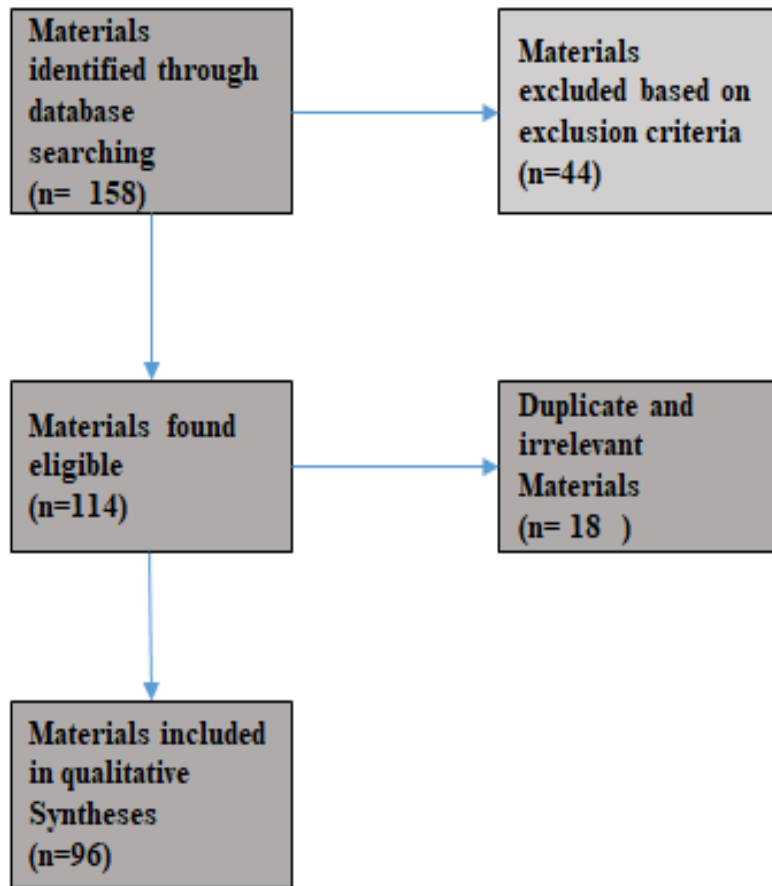


Figure 1 Material selection and analysis process

4. Beholding Norwegian ocean interests: geography, sectors, regional cooperation and agreements

As mentioned earlier, the United Nations Convention on the Law of the Sea laid the foundations for international ocean governance. Among other provisions it established the jurisdiction of coastal states over the 200-mile Exclusive Economic Zones (EEZs) extending from their coast thus lending them the authority to develop laws and manage the natural resources located within their zone (Hoel et al 2005, Proelss 2018). It is notable that Norway's ocean area is six times the size of its land area. Hence, oceans and coasts play a critical role in Norway's cultural, social and economic life (www.theexplorer.no 2021). More than 200,000 Norwegians work in ocean related industries such as, fisheries, tourism, shipping and offshore sector generating approximately NOK 680 billion in value, as estimated in 2017 (Norwegian Government

2019). In the area of fishing and aquaculture, Norway is the second world's largest exporter of seafood after China with seafood exports amounting to approximately 2.7 metric tonnes per year. Norway has been also a pioneer in offshore wind farm construction and operation. In 2017, it opened the Hywind Scotland, the world's first floating offshore wind farm. In addition, with regard to the offshore ocean sector, Norway is one of the world's largest oil and gas producers (www.theexplorer.no 2021). Since 1963, exports of oil and gas refer to a pertinent feature of the Norwegian economy with oil and gas activities spreading over the North and Barents Sea region ([Wikipedia 2021](#)). Besides, the shipping sector forms another great ocean asset of the Norwegian economy. Norwegian shipping companies have assumed a great global presence in world maritime transport sector and thus being positioned in the top ten merchant fleets in the world placing Norway in the top five maritime nations globally ([Norwegian Shipowners' Association 2019](#)).

Remarkably, visiting Norwegian ocean and marine industries we find out that involvement of Norwegians with the marine environment made them to gradually cultivate an excellent knowhow and technical expertise in developing and handling marine equipment, along with management skills connected to running their ocean industries ([Damlien 2016](#)). In this way, many of the Norwegian achievements and techniques, mainly in oil and gas field, have resulted to pioneering models and been used all over the world ([Tenold 2019](#)). As regards the coastal area and the activities described therein, Norwegian maritime jurisdiction is exercised in three major maritime areas, namely, the Barents Sea-Lofoten to the north, the Norwegian Sea and the North Sea to the south, in which there is a strong and ever-increasing economic and commercial activity ([Olsen et al 2016](#)). However, although the overall state of marine environment and resources is in relatively good condition, there are significant environmental challenges and potential impacts deriving from human activities such as, emissions to air and sea of nitrogen oxides, volatile organic compounds and carbon dioxide (NO_x, VOCs and CO₂) causing climate change and ocean acidification, fish extinction from overfishing of certain fish stocks, cumulative impact from pollutants and oil spills etc., which altogether threaten the rich and varied natural environment of Norwegian Sea and coast ([Norwegian Government 2009](#), [Whyte and Paterson 2018](#), [Hoel and Olsen 2012](#)).

Geographically, Norway borders seven more countries by sea. Such topographical location as well as growing marine environmental awareness has played an important role in boosting country's ocean governance policy (Tiller and Richards 2018). Thus, this has prompted Norway to strengthen its regional cooperation with other countries, through participation in bilateral or multilateral regional mechanisms and governing bodies (Cicin-Sain et al 2015). In this line, Norway has been an active state in the North Sea basin and, along with the other neighbouring countries bordering it (the United Kingdom, France, Belgium, Netherlands, Germany, Denmark and Sweden), has formed the North Sea Region (NSR) Commission (Flitsch et al 2014). In a latest development of this body, the North Sea Commission Strategy – 2020, adopted in October 2011, was launched with the aim to establish goals that promote the sustainable and innovative exploitation of marine resources in the North Sea (Ducrottoy et al 2000). In addition, the NSR Commission has been working in favour of a more balanced cooperation with the European Union trying thus to harmonize and unify its objectives with Europe's later 2020 Blue Growth Strategy (Ehlers 2016). In that respect, Blue Growth refers to Europe's latest vision and strategic plan to develop and sustain ocean economy and marine resources. This also encompasses Marine Strategy Framework Directive (MSFD, Directive 2008/56/EC) which was prepared in 2012 (Cavallo et al 2019, European Commission 2016).

Still staying in this European Directive, though at a later time, in 2014, the Blue Growth Strategy was broadened to address cross-sectoral approaches, procedures and infrastructures between North Sea and European region for the sustainable resource utilization and job creation in the adjacent ocean and sea area (European Commission 2016, European Commission 2020). Always staying on a regional trajectory, OSPAR Commission refers to another area mechanism in which Norway has been a contracting member. It was formed in 1992 and currently consists of representatives of each of its 15 Contracting Government and Europe as well (Whyte and Paterson 2018). OSPAR's mission was to establish a network of marine protected areas (MPAs) spreading in the North-East Atlantic, including North Sea and Norwegian Sea, and conserve the ecological health of affected marine and coastal areas (Molenaar and Elferink 2009, Whyte and Paterson 2018). Moreover, Norway has been member of the Arctic Council,

another regional intergovernmental formation among the Arctic States. The country's Arctic maritime area is approximately 1,500,000 square kilometres and thus making Norway a particularly sensitive stakeholder of the Arctic Ocean and its wider marine region ([Council 2007](#), [Graczyk and Koivurova 2015](#)). This forum was created in 1996 and tasked with the assignment to deal with issues of sustainable development and environmental protection in the Arctic including, biodiversity, climate change, pollution elimination and emergency response in relation to the Arctic marine and ocean environment ([Rottem 2014](#), [Bloom 1999](#)).

5. Mapping the Norwegian ocean governance regime to secure sustainability

An introduction to Norway's ocean governance administration

The policy and work of the Norwegian Government is carried out by the Office of the Prime Minister, who exercises the executive power of the country. The work of the prime minister is further facilitated by 15 ministries, which have often been reorganized since 1814, when the Norwegian constitution was transformed from being an absolute monarchy into a constitutional monarchy ([Wikipedia 2021](#)). The Norwegian Government is highly dedicated in maintaining a healthy and sustainable ocean ecosystem and, as can be also seen in figure 3, the Norwegian ministries that have been responsible for shaping and monitoring the country's ocean and maritime governance policy and affairs are the: Ministry of Climate and Environment, Ministry of Petroleum and Energy, Ministry of Trade, Industry and Fisheries, Ministry of Transport, Ministry of Trade, Industry and Fisheries and Ministry of Foreign Affairs (Figure 2). However, the participation of other ministries is not ruled out since quite often the issues of protection of the seas and ocean resources require the partnership and cooperation of many ministries and agencies ([Norwegian Government 2021](#)). Yet, these ministries, as well as their incorporated departments, agencies and other establishments (such as, The Norwegian Safety Investigation Authority, Department of Coastal Affairs and Environment, Department for Marine Management and Pollution Control, Norwegian centre for oil spill preparedness and marine environment, The Institute of Marine Research and The Norwegian Coastal Administration), through the issuance of regulations and strategies, commonly known as

“white papers”, play a vigorous role in formulating Norway’s ocean governance regime (Norwegian Government 2021).

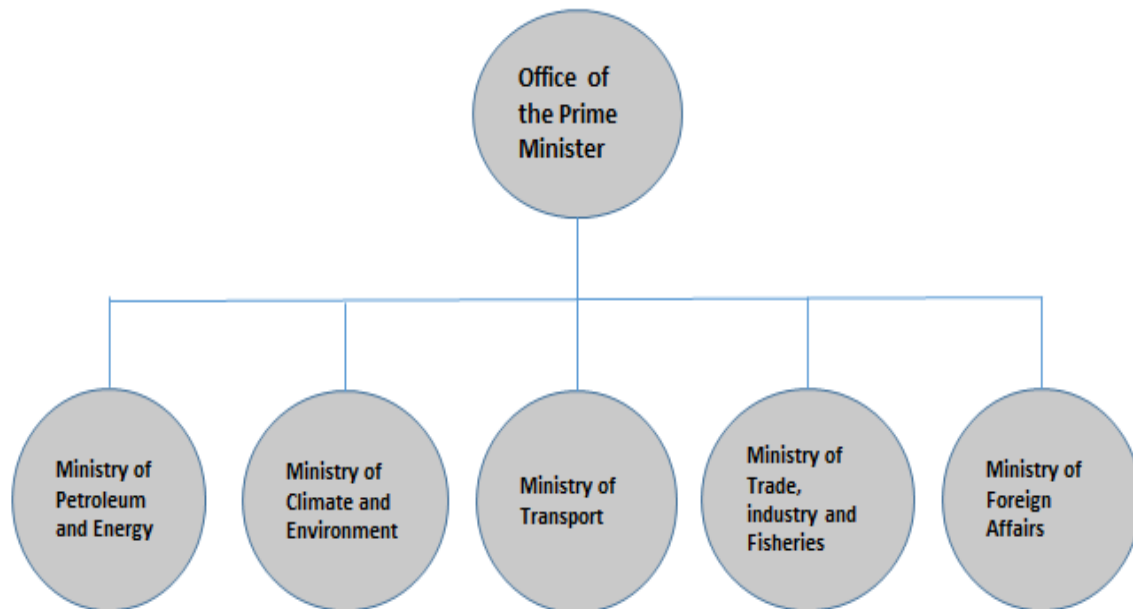


Figure 2 Norway’s ocean affairs institutional frameworks Source: Authors ‘elaboration.

Emerging problems, a promising start and a disproportionate sequel for Norway

After the end of World War II, and in the following decades, our world experienced a significant effort of economic development and reconstruction thanks to technological progress (Arndt 1989). However, a series of accumulated environmental problems, caused either by the industrial revolution or by the rampant consumption of products, combined with the reckless waste of natural resources, made environmental decline rapidly growing in the 1950s and 1960s and the need for action (Balint et al 2011). Recognizing these environmental impacts, Norway hastened to legislate for environmental pollution, regardless of its source and activity. 1973 marks an important legislative phase in Norway for the protection of Nordaust-Svalbard nature by creating the national parks Sør-Spitsbergen, Forlandet and Nordvest-Spitsbergen, thus, aiming at protecting the marine natural environment, habitat and species of this area (Norwegian Government 2014). Further, in 1981, the Norwegian government enacted the Pollution Control Act to eliminate any sources of pollution and waste resulting from activity in Norwegian territory. Along with land, this law also applied to oceans and seas

environmental pollution protection that occurs within the exclusive economic zone of the Norwegian Sea including exploration for and production and utilization of natural subsea resources ([Norwegian Government 1981](#)). In parallel, the United Nations saw it was necessary to limit pollution at international level and make important decisions to secure the future of the earth. At the time, the establishment of the United Nations World Commission on Environment and Development, in 1984, and the subsequent Brundtland Commission statement or "Our Common Future" report, in 1987, were milestones in the fundamental introduction and spread of the concept of sustainable development to in all aspects of life ([Ribberink 2006](#), [WCED 1987](#)). Undeniably, the management of oceans and marine resources was an important part of Brundtland Commission and thus recognized the vital importance of ocean and marine ecosystems but also the fact that living resources of the sea were under threat ([WCED 1987](#)).

Norway took the lead in this event and through Prime Minister Grohl Harlem Brundtland presented this proclamation of the United Nations that went down in history. With time, however, it was gradually obvious that by the end of 1990s the Norwegian policy was concerned to mitigate climate changes and reduce emissions causing climate change and oceans warm up. Reduction of the ocean threats (including changes in ocean circulation and ocean temperatures) associated with the rise in greenhouse gasses effect such as, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and perfluorocarbons (PFCs), was thus an important concern of the Norwegian policy and was embodied through report nr. 41 (1994-95) to the Storting (Parliament) ([Norwegian Government 1995](#)). It is worth mentioning also that since 1991 Norway had introduced a CO₂ tax system thereby taxing its CO₂ gasses deriving from ocean transport and petroleum extraction activities ([Norwegian Government 1997](#), [Holten and Carey 1992](#)). On the issue of overfishing, in 1997 the responsible Norwegian ministers recognized the problem and agreed on the need for action. In all this it is worth saying that an important factor that facilitated such Norway's transition at that time was the rising international commitment to ocean and marine climate change problems as encompassed by the outcome of the United Nations Conference on Environment and Development (Earth Summit or Rio Conference), 1992, the United Nations Framework Convention on Climate Change, 1994, and the Kyoto Climate Change Conference, 1997 ([Declaration](#)

1992, Bodansky 1993, Breidenich et al 1998). Despite these reactions, however, we can say that the 1990s ended with a relatively weak political action in ocean governance. This is also attributed to the lack of a national strategy for sustainable development until then, which would probably consider the country's marine and ocean governance challenges (Ruud 2009, Langhelle and Ruud 2012).

Norwegian ocean policy in the second millennium

2000s starts for Norway with another regulation related to the protection of its marine ecosystem. The preservation of the natural environment and cultural heritage of the Svalbard area was further reinforced by the Svalbard Environmental Protection Act, 2001. The intention of this Act was to further preserve and set stricter rules that would leave untouched the sea areas and included wilderness, landscape, flora, fauna and cultural heritage of Svalbard (Norwegian Government 2001). Thereafter, further initiatives and changes in Norway's ocean policy and objectives occurred gradually. A combination of issues taking place at Norway's ocean and land territory such as, the failure to meet initially set targets for nitrogen dumping into the sea, the need to phase out and review obsolete regulations regarding the discharge of chemicals constituting a threat to health and the environment by 2020, increasing oil pollution from refineries and oil from drilling activities, ocean eutrophication, overfishing and collapse risk of the benthic, cod fish and spawning stocks and high levels of organic toxins found in the Norwegian Sea, North Sea and Barrents Sea, gave impetus to the report No. 12 to the Storting, 'Protecting the Riches of the Seas', in 2002. With this report the Government introduced for the first time the ecosystem approach to management of the seas and marine ecosystems (Norwegian Government 2002, Hoel 2009). In this line, rising global marine pollution accidents such as, the sinking of the tanker the «Erika» off Brittany in France, in 1999 that led to 20,000 tons of oil leaking into the sea, were also seen as an important factor that facilitated such Norway's move (Lamy et al 2001).

In addition, during that period Norway paved the way and established the principles for the creation of the later integrated management plan for the Norwegian Sea, North Sea and Barents Sea and harmonizing its ocean governance regime pursuant to the EU water framework directive (Norwegian Government 2002). In 2002, the Fifth

International Conference on the Protection of the North Sea, held at Bergen, was the culmination of this effort ([Van Franeker et al 2005](#)). The Conference built on previous laws, declarations, Conventions and international agreements and, thus, responsible Ministers, the European Commission and several other governmental and non-governmental organizations concluded to the Bergen Declaration, which aimed at protecting North Sea ecosystems. Strengthening cooperation with OSPAR and European Union on matters such as, sustainable fisheries, reducing shipping environmental impact, prevention of pollution from marine litter, prevent eutrophication, hazardous chemicals, offshore installations and radioactive substances were among the conference outcomes ([Bergen Declaration 2002](#)). Afterwards and until the end of 2005, Norway's interest shifted to its offshore energy sector and the governance and environmental shielding of this important industry for the country ([Norwegian Government 2005](#)). The stimulus of the World Summit on Sustainable Development, Johannesburg, 2002, which continued and reinforced the work of later United Nations Ocean and Marine governance framework, played a catalytic role in stimulating those regional ocean initiatives ([Von Frantzius 2004](#)). Besides, Norway's participation to the new EEA-agreement (European Economic Area) and European Multiannual Framework programme is believed to have given a new impetus and motivation to Norway's regional and international efforts in reaching agreements on the sharing of resources, introduction of sustainable long-term ocean management plans and strengthening cooperation on research and technological development activities ([Norwegian Government 2010](#), [Gullestad et al 2014](#)). In addition, the formulation of a national strategy on sustainable development, in 2003, is contributed significantly to the resurgence of government interest in the issues of sustainable ocean governance ([Ruund 2009](#), [Langhelle and Ruud 2012](#)).

The introduction of the integrated management plans approach for Norwegian seas

Norway is a country that has undertaken several initiatives at local and regional level in regulating its ocean space. However, described trends that developed in the early 2000s justify the subsequent developments that took place from the second half to the end of that decade ([Jakobsen 2018](#)). Specifically, policy planning and proposal for an integrated management plan for the Lofoten–Barents Sea, in 2002, due to the reason that this area

was appreciated as a considerable promising zone in terms of oil exploitation, transformed into the final sanction by the Storting in June 2006 ([Norwegian Government 2006](#), [Hoel and Olsen 2012](#), [Olsen et al 2016](#), [Knol 2011](#)). The purpose of regulation was to provide a framework for the sustainable use of natural resources and goods by economic activity and commercial activity (shipping, fishing, oil and gas etc.) taking place in this area ([Norwegian Government 2006](#)). The commitments and policy adopted by the Bergen Conference resulted in a White Paper in 2006 reflecting Norway's new policy on the use of chemicals and limiting their exposure to the ocean ecosystem ([Norwegian Governemnt 2007](#)). In 2007, we have another result of Norway's climate policy initiated in the late 1990s. In particular, we have the first signs of implementation of a project agreed to set up a North Sea Basin Task Force on CO₂ storage of the North Sea. With this project would be achieved a massive reduction in CO₂ emissions through geological storage ([Norwegian Government 2007](#)). In 2009, and as in the case of the Lofoten–Barents Sea, the Norwegian Government presented a similar ecosystem management approach for the development of an integrated, ecosystem-based management plan for the Norwegian Sea and the North Sea considering thus the cumulative effects of all human activities on the coastal areas and ocean ecosystem resources (Figure 3) ([Norwegian Government 2009](#), [Ottersen et al 2011](#), [Olsen et al 2007](#)).

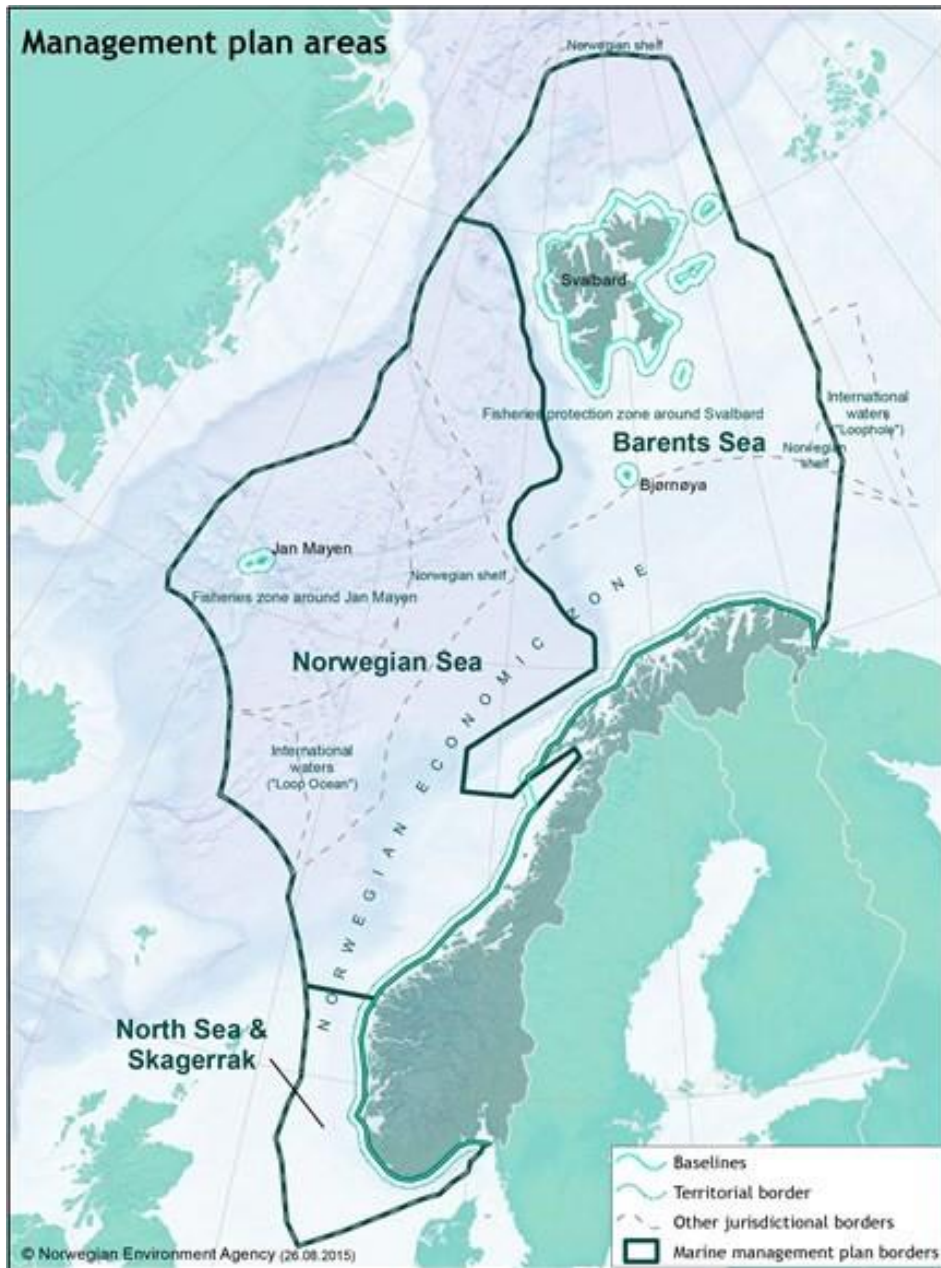


Figure 3 Norway's coastal and sea areas

Source: UNESCO

Several provisions laid in the Norwegian Water Management Regulations and the white paper 'Protecting the Riches of the Sea' contributed to the formation of the ecosystem management plans for Norway's Seas and coastal areas (Norwegian Government 2007). In achieving a more comprehensive and multifaceted development of those marine and ocean plans the Government involved many more local bodies, institutions and organizations (i.e. Norwegian Oil and Gas Association, Norwegian Fishermen's Association, Norwegian Coastal Fishermen's Association, The Fishing

Vessel Owners Association) ([Norwegian Government 2009](#), [Olsen et al 2016](#), [Platjouw 2018](#)). It is believed that the UN 2002 World Summit on Sustainable Development, and associated ocean provisions, played a significant role in guiding Norway's precautionary approach and development of integrated ecosystem management plans ([Dale 2016](#), [Olsen et al 2016](#), [Ottersen et al 2011](#)). The i-Nord project, launched in 2009, was another special endeavour, in the midst of many of the Norwegian government, for sustainable ocean management. It was about establishing a multidisciplinary ocean surveillance project seeking to provide a monitoring, prediction and information system of the Barents Sea and Arctic Ocean ([Norwegian Government 2009](#)). Norway's ocean governance transformation was continued with the Marine Resources Act, adopted in 2010, and referred to another Norwegian legislative development related to the protection of living marine resources, and the latest of that decade. By extension, this Act sought to secure the biodiversity through the sustainable and economically profitable management of all living marine resources (fish, marine mammals, and marine organisms) and genetic material derived from them. It also applies to harvesting and utilization of catches within Norwegian territorial sea and internal waters ([Norwegian Government 2010](#)). With its broad scope, it managed to fill some existing gaps in fishing legislation and also referred to a significant development and regime shift in fisheries management and the detrimental effects of chronic overfishing ([Norwegian Government 2010](#), [Gullestad 2014](#)). This awareness of the legitimacy of its seas has been significantly influenced by the fact that, in 2007, we had a new drawing up and revision of the country's sustainable development strategy, which it built on the earlier 2003 strategy, and further focused on sustainable ocean issues ([Ruud 2009](#), [Langhelle and Ruud 2012](#)).

Norway's ocean policy on the trajectory of global sustainable development goals

The declared sovereignty in its continental shelf, in 1963, and the subsequent progressive development of a Norwegian industrial environment around the offshore petroleum industry, along with the prospects and value for both oil and gas markets to the Norwegian economy, led to the creation of the Storting White Paper No. 28, in 2011. This legislative act generated in view of the impending prospects for oil and gas extraction in the North Sea, the Norwegian Sea and the Barents Sea, and encompassed Norway's will to further preserve its ocean and marine ecosystem through comprehensive

environmental impact assessment as part of the petroleum licencing process ([Norwegian Government 2011](#)). In September 2012, the Government presented the Meld. St. 33 (2011–2012) Storting report (White Paper) through which it sought to prepare the ground for further updating, reinforcing and establishing rules and prescribed objectives for all maritime and ocean activity ([Norwegian Government 2012](#)). In particular, such Norway's regulatory development launched a new process and vision for the development of prescriptive sets of sustainable development goals, including ocean sustainability, and came in light of its increasing strengthened cooperation with the United Nations ([Norwegian Government 2012](#), [Ivanova 2012](#)). Comprehensive efforts have been made afterwards in updating Norway's visions, objectives and policy instruments. The fresh vision and strategy, termed the "High North", presented in 2012, through Meld. St. 7 (2011–2012) report in Storting (White Paper), referred to another well-documented policy aimed at reviewing and repositioning Norway's ocean governance policy and objectives for the future ([Jensen and Hønneland 2011](#), [Norwegian Government 2012](#)). As a result, 15 strategic priority areas were identified and included aspects of integrated maritime management, maritime safety, fisheries management, sustainable aquaculture and oil activities with a view to the protection of the natural environment and cultural heritage in the North Sea ([Norwegian Government 2012](#)).

Afterwards, climate change and the prevention of its effects on the ocean ecosystem, and by extension on Norwegian society, returned to the forefront. In particular, in 2013, through Meld. St. 33 (2012–2013) reference to Storting (White Paper), amongst other observations, it was recognized the importance of providing better geographic information and efficient mapping and spatial planning as important elements of an enhanced climate change adaptation in Norway ([Norwegian Government 2013](#), [Stokke 2014](#)). Furthermore, the subject of St. 37 (2012–2013) reference to Storting (White Paper) was closely intertwined with the spatial element of the management plans and international developments in spatial policies ([Van der Meeren et al 2017](#)). Specifically, the sustainable use of the natural resources in the North Sea and Skagerrak was the focal point of this regulation inasmuch these two areas refer to Norway's most intensively used and economically important marine spaces (due to the high marine traffic and mass oil and gas production) ([Thorsnes et al 2020](#)). Thereby, the management plan regulation for

the North Sea and Skagerrak intended to reflect relevant national and international goals for the environment and reduce the marine ecosystem impact from human activities (fishing, oil and gas, shipping aquaculture) (Norwegian Government 2013). Seeing now the complete evolution of Norway's ocean regime in the five years 2010-2015, we could infer that this massive legislative effort by the Norwegian Government to promote the concept of integrated and ecosystem based ocean management plans was the result of the influence it received from EU adopted the Marine Strategy Framework Directive (2008/56/EC) and Norway's ocean Agreement on the European Economic Area (EEA Agreement) (Norwegian Government 2013, Diesing et al 2020). In addition we should not overlook that, as in 2002 so now, Norwegian ocean governance policy was undoubtedly influenced by the outcome of the United Nations Conference on Sustainable Development (Rio + 20), in 2012, which ended the Millennium Development Goals, and opened the door to create national ocean strategies based on the upcoming model of sustainable development goals (Horn 2013). Figure 4 summarizes Norway's governance ocean governance timeline from the 1980s until 2015.

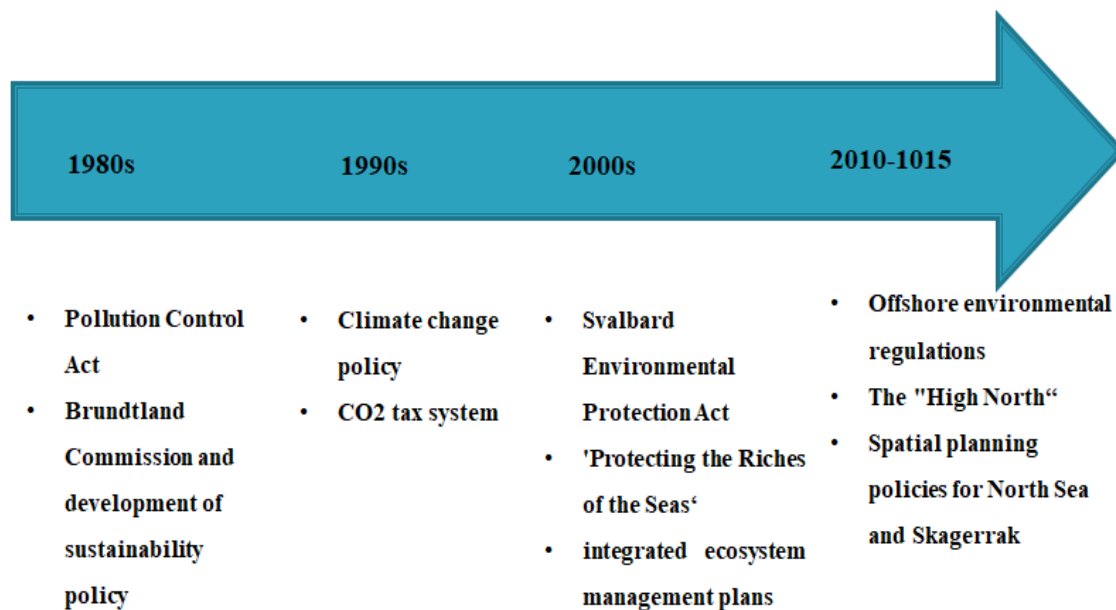


Figure 4 Timeline of Norway's ocean governance 1980-2015

6. UN 2030 Agenda and Norway's reformed approach to sustainable ocean governance

The adoption of the United Nations Agenda 2030 in September 2015 marked an important milestone in transforming Norway's ocean governance policy. Among the 17 Sustainable Development Goals and, specifically, Goal 14 (Conservation and sustainable use of the oceans, seas and marine resources for sustainable development), Norway committed to adapt its ocean regime in order to contribute to specific measurable goals regarding the sustainable use of ocean resources ([Norwegian Government 2016](#)). Consequently, in 2017, Norway hastened to review again its ocean strategy providing that the Government would ensure a national implementation plan for UN Goal 14. The main aspect of the revision of the ocean strategy was the promise to further foster international and regional partnerships, research in new technologies for the maritime industries and updating the ecosystem management plans for the Norwegian Sea and coastal areas ([Norwegian Government 2017](#)). As result, in April 2017, the Government renewed the provisions for the integrated, ecosystem-based management of Norway's sea areas (as laid by the white paper 'Protecting the Riches of the Sea' (Report No. 12 (2001–2002)) by updating and enriching the indicators for assessing environmental status and impacts in the Norwegian marine environment ([Norwegian Government 2017](#)). However, it is worth noting, that the preparation made in previous years, and especially after 2005, found Norway somewhat prepared in the sense that it had already in place policies and regulations to renovate its sustainable ocean governance framework through the development of integrated ecosystem-based management plans for its sea areas, establishment of marine protected areas (MPAs) and regulations for pollution control and management of living marine resources ([Norwegian Government 2016](#)).

Furthermore, in 2018, the Government increased the allocation of funds for marine aquaculture (NOK 14 million) and fisheries (NOK 11 million) research, along with foundation of a new center in Tromsø devoted to maritime and Arctic issues (NOK 5 million), and further invested in infrastructure for the development of a sustainable National transport plan over 2018–2029 ([Norwegian Government 2017](#)). Another decisive element was the publication, in 2018, of a Government Circular (CIRCULAR H-

6/18) summarizing laws and guidelines for the planning and resource utilization regulations related to Norway's coastal marine areas. In this circular, the Ministry of Local Government and Modernization clarified how regulations incorporated in the Planning and Building Act of 2008 are extended so as to embrace the sea area to one nautical mile from the baseline ([Norwegian Government 2018](#)). This was done to provide a better knowledge base and elucidate the so far fragmented marine regulatory framework to the municipalities, so that they could protect and achieve a better management and resource utilization in their coastal and marine areas ([Norwegian Government 2018](#)). With regard to the shipping industry, the Government conducted a self-assessment of the Norwegian Flag State performance, coordinated by a dedicated Working Group, and measured its effectiveness to implement and enforce of flag State responsibilities (i.e. laws and regulations, policy-making and decision process, marine research, surveillance services etc.) ([Norwegian Government 2018](#)). Results of this evaluation fueled Government's later action plan for green shipping, published in 2019, and encompassed its vision to be emission-free by 2030, by cutting domestic greenhouse gas emissions and promoting technological innovations. Existing regulatory measures and laws, promotion of the use of biofuel, environmental requirements in public procurement processes, emission taxation and technological innovation and restructuring activities were some of the launched instruments to achieve this purpose ([Norwegian Government 2019](#)).

Still, 2019 was a year in which Norway further reviewed its ocean strategy once more. Its traditional ocean and marine objectives, included in the previous 2017 Ocean Strategy, remained unchanged. However, we can say that the 2019 ocean strategy was broadened and included even more sustainable development goals, and not just SDG14 (Sea and Ocean conservation). Thus, certain commitments towards achievement of SDG7 (renewable energy), SDG8 (job creation), SDG 9 (innovation and infrastructure), SDG 12 (responsible consumption) and SDG 13 (climate action) were also seen as integral part of a thorough sustainable ocean governance policy ([Norwegian Government 2019](#)). Moreover, Norway's relationship with the EU remained inextricably linked and strengthened in 2019 through the announcement of another strategy for cooperation under the EEA Agreement. Oceans preservation, carbon sequestration and storage continued to form such cooperation basis with priorities still remaining in the areas of preservation of

clean oceans, sustainable fisheries, knowledge exchange, partnership programmes and technological innovation ([Norwegian Government 2019](#)). Norway pioneered another international act in the field of sustainable ocean governance. In 2018, at the initiative of the Prime Minister of Norway Ms. Solberg, it was established the Ocean Panel consisting of 14 countries ([Norwegian Government 2021](#)). Afterwards, in December 2020, the Panel met and presented new ocean action agenda highlighting the need to develop Sustainable Ocean Plans, which should be in line with the 2030 Agenda, and based on integrated ocean management and ecosystem knowledge ([Norwegian Government 2020](#)). Such a fact was not something new to Norway, as Government had already put in place since 2005 ecosystem management plans to manage its coasts and oceans. Hence, Norway's expertise on ocean-related issues and thus contribution to the development of Panel's outcomes was particularly sought ([Norwegian Government 2020](#)).

A revision of Norway's marine management plans though was followed in 2020 so as to incorporate the Ocean Panel developments, further support the implementation of sustainable development goals and address new challenges in its ocean territory (i.e. increasing climate change and ocean acidification, rising sea temperatures, increasing numbers of southern krill species and loss of sea ice both summer and winter in the Barents Sea and Norwegian Sea) ([Norwegian Government 2020](#)). Further to that, the Government launched a new project to combat marine litter and micro plastics pollution at sea. Therefore, in 2019, about NOK 236 mill. (26 mill. USD) were distributed to support related initiatives such as, partnerships, training, knowledge exchange and technology transfer to stakeholders and foreign countries so as to reduce plastic waste and marine litter ([Norwegian Government 2020](#)). In 2020, additional regulations aimed at strengthening the legislative framework and relating to pollution and waste in Svalbard area were introduced, seeking thereby to lift some remaining limitations of international and regional law for the preservation of the land and water territory of Svalbard ([Norwegian Government 2020](#)). However, the most recent and comprehensive act of ocean governance in Norway concerns the proclamation of its new policy for northern Norway and the Arctic. Thus, in 2021, the continuous harmonization efforts of the country with the goals of sustainable development, but also the recognition of the vital importance of these areas to the economy and environment, since North Norway accounts

for 35 % of Norway's mainland territory, and 9 % of Norway's population lives north of the Arctic Circle, resulted to a White Paper encompassing Norway's recent Arctic Policy. In this Arctic Policy, Norway stressed the need for international cooperation, such as the EEA Agreement, the involvement of the business sector and the development of integrated ecosystem management plans in supporting job creation and the establishment of Northern Norway and the Arctic as an attractive and secure place to live (Norwegian Government 2021). Ending, the Norwegian path taken so far to attain the Sustainable Development Goals shows a good percentage of achievement with a scoring 80.76/100 (where 100 indicates that all SDGs have been achieved). Figure 5 depicts how Norway's score is distributed per SDG.

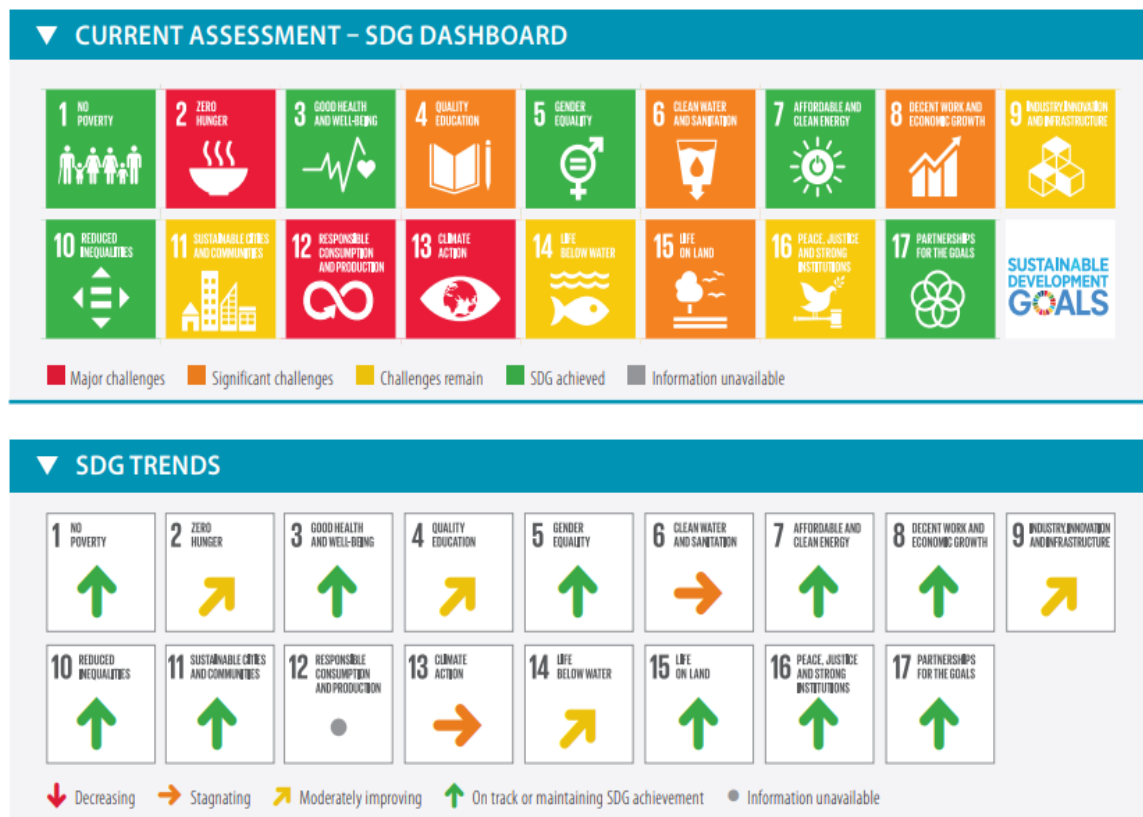


Figure 5 Norway's achievement score per SDG (Sachs et al 2020).

In view of this outline of Norway's progress towards SDGs, and pursuing to appreciate country's progress in the area of sustainable ocean governance, it is worth focusing on SDG 14 (Life below water) (Figure 6).

SDG14 – Life Below Water		Value	Year	Rating	Trend
Mean area that is protected in marine sites important to biodiversity (%)		55.2	2018	●	↑
Ocean Health Index: Clean Waters score (worst 0–100 best)		77.0	2019	●	↑
Fish caught from overexploited or collapsed stocks (% of total catch)		21.2	2014	●	↑
Fish caught by trawling (%)		40.3	2014	●	↓
Marine biodiversity threats embodied in imports (per million population)		0.4	2018	●	●
↓ Decreasing → Stagnating ↗ Moderately improving ↑ On track or maintaining SDG achievement ● Information unavailable					

Figure 6 Timeline of Norway’s ocean governance 1980-2015 (Sachs et al 2020).

What we are seeing from above is that while Norway has generally achieved its ocean aims, however, a slowdown is being identified in the targets related to: fishes caught by trawling and marine biodiversity threats embodied in imports. Thus, despite the regulations and policies that have been developed in recent years on these issues we see how difficult it is for the government to reverse the effects of overfishing in the past decades (1970s and 1980s) but also to conserve of biodiversity from imported marine threats (Norwegian Government 2010, Gullestad 2014). However, overfishing issues and the risk of complete depletion of certain species such as cod remain to this day and Norway is in constant consultation with the European Union to set the limits for sustainable fishing as indicated by scientists (www.europeandatajournalism.eu 2021).

7. Conclusions

The concept of ocean governance refers to a subject that embraces several shades (i.e. institutional, political), actors (i.e. governmental, non-governmental organizations, business and civil society stakeholders and entities), normative layers (i.e. laws, regulations, conventions, institutional frameworks, treaties etc.) and multiple implementation levels (i.e. local, regional and international) (Miles 1999, Juda 2013). The global legal framework of ocean governance is grounded in international law, in which UNCLOS holds a dominant position (Redgwell 2012). Since it was introduced, in 1982, UNCLOS laid the foundations for the development of ocean policies, marine environmental law and regulatory frameworks by States, thus, aiming at the sustainable use of the oceans and marine resources (Spalding and Ycaza 2020). However, the due to

the variable and evolutionary nature of sustainable development context, ocean governance elements found to evolve over time and be closely interlinked to global sustainability transitions.

Reviewing the case of Norway it was affirmed that its ocean policy and the regulatory framework have been influenced by global changes in the field of sustainable development. While Norway introduced itself as an early mover and dynamic actor in leading sustainable development at Brundtland Commission in the 1980s, however, a decline in such initial enthusiasm in the 1990s had been mirrored in country's ocean governance policy agenda (Ruund 2009). Nevertheless, a strengthened ocean policy and regulatory focus reemerged in the 2000s in the form of a new ocean governance policy, institution of an ecosystem and integrated management plan approach for its territorial waters, establishment of cooperative frameworks and agreements with European Union (i.e. EEA Agreement) and a plethora of other regulations seeking to normalize its ocean interests in industries such as, shipping, offshore oil and gas, fishing, aquaculture, along with protection of its sensitive marine and coastal systems (Svalbard area). It is worth noting that the above and many other major interventions by the Norwegian government in reshaping the conditions and systems of ocean governance, which often exceeded the minimum requirements of international regulations, were almost always influenced by global trends in sustainable development and specifically events such as, United Nations conferences such as the UN Rio Earth Summit - Agenda 21, 1992, World Summit, Johannesburg (Rio + 10), 2002 and the UN Rio +20 Conference, Brazil, 2012.

However, despite Norway's upward and ever-improving efforts to reduce its environmental impact on its seas and shield its ocean governance system, the adoption of the 2030 Agenda and its 17 Sustainable Development Goals, 2015, brought about its most radical change and reform. Driven by the new Goals, and in particular by SDG14, Norway has since announced its first ocean strategy, in 2017, which was revised in 2019, and even proceeded with an update of its management plan regulations for Norwegian Sea Barents Sea and North Sea. and has made specific commitments to contribute to identified problem areas such as, emissions reduction, overfishing, sustainable energy, pollution. In addition, Norway has extended and supported the successful reform of its ocean regulatory system to additional sustainable development goals (such as SDG8 - Job

creation, SDG 9 - Innovation and infrastructure, SDG 12 - Responsible consumption), which were treated as integral part of this global success venture. However, Norway is still out of the way for the targets of trawler fish and the threats posed by marine biodiversity, which is in dire need of further investigation into the causes and changes in its ocean regulatory system to get the country closer to the desired goals

Disclosure statement

No potential conflict of interest was reported by the author.

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