



# **Assessment of the existing EU policy tools in the field of Sustainable Development Goal (SDG) 14 and other ocean- related Agenda 2030 targets**

Final report

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## Glossary

Acronym	Definition
ABNJ	Areas Beyond National Jurisdiction
Barcelona Convention	Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean
BBNJ	[Marine] biodiversity beyond national jurisdiction
BSC	Black Sea Commission
Bucharest Convention	Convention on the Protection of the Black Sea against Pollution
BWD	Bathing Water Directive
CBD	United Nations Convention on Biological Diversity
CFP	Common Fisheries Policy
CITES	Convention on International Trade in Endangered Species
COVID-19	Coronavirus disease 2019
DG	Directorate-General
EBCD	European bureau for Conservation and Development
EEA	European Environment Agency
EEZ	Exclusive Economic Zone
EFCA	European Fisheries Control Agency
EMFF	European Maritime and Fisheries Fund
EQSD	Directive on Environmental Quality Standards
EU	European Union
FAO	Food and Agriculture Organization
FPDD	Floating plastic debris density
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean
GHG	Greenhouse Gases
HELCOM	Baltic Marine Environment Protection Commission (Helsinki Commission)
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICEP	Index of Coastal Eutrophication
ILO	International Labour Organization
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IUU fishing	Illegal, unreported and unregulated fishing
LDAC	Long Distance Advisory Council
LDCs	Least Developed Countries
MPA	Marine Protected Area
MSFD	Marine Strategy Framework Directive
MSP	Maritime Spatial Planning Directive
NASCO	North Atlantic Salmon Conservation Organization
NEAFC	North-East Atlantic Fisheries Commission
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic



Assessment of the existing EU policy tools in the field of Sustainable Development Goal (SDG) 14 and other ocean-related Agenda 2030 targets

Acronym	Definition
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RFMOs	Regional Fisheries Management Organisations
RSCs	Regional Sea Conventions
SDG	Sustainable Development Goal
SFPAs	Sustainable Fisheries Partnership Agreements
SIDS	Small Island Developing States
TFEU	Treaty on the Functioning of the European Union
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNSD	United Nations Statistics Division
WFD	Water Framework Directive
WTO	World Trade Organization
WWF	World Wildlife Fund

## Abstract

This study assesses whether the policy instruments put in place by the European Union (EU) and its Member States have helped achieve progress in the implementation of SDG14 and other ocean-related targets of the 2030 Agenda. It identifies potential policy gaps and explores concrete actions that could support the path towards conserving and sustainably using the oceans, seas and marine resources.

The evidence collected shows that the EU policy framework contributing to the achievement of SDG14 and other ocean-related targets is largely relevant and coherent, as well as strongly linked to the ocean-related targets. The EU and its Member States are taking strong action to improve the status of the marine environment. They can look back on a number of achievements, for instance the restoration of some fish stocks and the establishment of marine protected areas. However, they are far from reversing negative trends, for example on ocean acidification, where tangible results and impacts are yet to materialise.

While no significant gaps in the policy framework were identified, qualitative and quantitative results show that most SDG14 targets are unlikely to be met by the stipulated timelines. There is therefore clear added value in the continuation and even strengthening of EU action.



## Résumé

Cette étude évalue dans quelle mesure les instruments politiques mis en œuvre par l'Union européenne et ses États membres ont permis de réaliser des progrès dans la mise en œuvre de l'ODD14 et celle des autres objectifs contenus dans l'Agenda 2030 ayant un lien avec les océans. L'étude identifie les lacunes potentielles de ces politiques et explore les actions concrètes qui pourraient faciliter la voie vers la conservation et l'utilisation durable des océans, des mers et des ressources marines.

Les données recueillies montrent que le cadre politique de l'UE contribuant à la réalisation de l'ODD14 et des autres objectifs liés aux océans est largement pertinent et cohérent, et qu'il est fortement lié aux objectifs spécifiques aux océans.

L'Union européenne et ses États membres prennent des mesures d'envergure pour améliorer l'état du milieu marin. Ils peuvent se prévaloir d'un certain nombre de réalisations, comme la restauration de certains stocks de poissons et la création de zones marines protégées. Cependant, ils sont loin d'avoir inversé les tendances négatives, par exemple en ce qui concerne l'acidification des océans, où les résultats et les impacts tangibles se font encore attendre.

Bien qu'aucune lacune importante dans le cadre politique n'ait été identifiée, les résultats qualitatifs et quantitatifs montrent que la plupart des cibles de l'ODD14 ne seront probablement pas atteints dans les délais prévus. La poursuite, voire le renforcement, de l'action de l'UE présente donc une valeur ajoutée évidente.

## Executive summary

### About the study

This study was launched as a part of the preparations for the 2020 UN Ocean Conference (subsequently postponed due to COVID-19 outbreak). The intention of the study is to take stock of the developments in the European Union and make a high-level assessment of the contributions made by the EU and its Member States' policy tools towards achieving SDG14 and other 2030 Agenda ocean-related targets. This study focuses specifically on SDG14 and presents an analysis of each of the 10 targets making up that goal. In contrast to other measurements, it takes a hybrid approach that looks at quantitative indicators but also assesses progress qualitatively.

A detailed mapping and categorisation of policies supporting SDG14 were undertaken at EU and Member State level. In total, 170 EU policy tools and 417 Member State policy tools were identified.

It is challenging to assess progress towards meeting SDG14 targets and the other goals of the 2030 Agenda, due to their complexity and gaps in data. There are different reporting initiatives that try to measure progress towards achievement of 2030 Agenda, each of which uses their own methodology for calculating aggregated scores for each SDG. This includes the annual Eurostat Report on 'Sustainable development in the European Union – Overview of progress towards the SDGs in an EU context', and the annual 'Sustainable Development Reports', which include an SDG Index and Dashboards. The reports use different quantitative indicators to assess progress towards achieving the SDGs. They show that, compared to the rest of the world, the EU generally performs well in implementing the 2030 Agenda as a whole, while there are differences between the delivery of individual goals.

Looking qualitatively beyond the indicators is considered crucial in the study, since there are several complexities relating to each target. The main findings resulting from this approach are presented below.

### SDG14.1 – Marine pollution

By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

Data collection for the indicators proposed by the UN to measure SDG 14.1 will be launched in 2021, and the indicator currently used in the EU for this target is bathing water quality. In recent years, the proportion of coastal bathing sites with excellent water quality has increased in some Member States (e.g. Belgium and Denmark), while it has decreased in others (e.g. Ireland and Poland).

The EU has one of the most advanced environmental policy frameworks in the world for minimising contaminants, pollution-causing eutrophication, and avoiding marine litter. The target draws on a very complex policy framework, since 'pollution of all kinds' entails a wide range of chemical and physical sources and factors. A total of 59 EU policy tools or groups of policy tools have been identified that directly influence the achievement of this

target. The policy framework will, in the near future, also be further enhanced through the European Green Deal and the zero pollution action plan to address the cumulative impacts of pollution in air, water and soil.

However, despite the elaborate policy framework, further efforts will be needed from the EU to achieve SDG14.1 by its deadline in 2025. Challenges include the presence of old deposits of pollutants, but also new entries, including the sheer number of different synthetic chemical substances. Notably, only a fraction of these pollutants is regularly monitored and new substances are being discovered extremely rapidly. Eutrophication, together with marine litter and noise pollution, remain major challenges in some sea basins.

Coherent policy implementation across different policies is key to achieving this target when also taking into account the cumulative effects of different pollutants. The zero pollution action plan represents a major step in tackling this challenge by looking more systematically at all relevant policies and regulations and addressing interlinked challenges.

For marine litter, the EU has put in place an ambitious programme of actions and will now focus on its implementation and on developing further cooperation with third countries, Regional Sea Conventions (RSCs) and other international organisations to tackle the global problem of marine litter.

Coherent policy implementation is crucial for the achievement of SDG14.1, to ensure there are no gaps in the policy framework and that both land-based and sea-based policies jointly contribute to reducing marine pollution. Increased cooperation among the different authorities in charge of implementing this policy framework would be welcome, together with additional guidance from the EU on how to improve this cooperation in practice. In addition to this, more coherent monitoring of marine pollution and better knowledge of the cumulative effects of different pollutants would support the development of accurate assessments of the current status of the ocean, as well as appropriate measures and targets set under relevant policy instruments. The Commission's forthcoming zero pollution action plan could represent an opportunity to address these challenges.

### **SDG14.2 – Marine and coastal ecosystems**

By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.

Data collection for the global SDG14.2 indicator (as developed by the UN Statistical Office, the proportion of national Exclusive Economic Zones managed using ecosystem-based approaches) has not yet begun. However, the ecosystem-based approach is at the heart of EU marine environmental policy. Through the Marine Strategy Framework Directive (MSFD), this became a legally binding and operational principle for managing the EU's marine environment. It has also been incorporated into other EU legislation, including the Common Fisheries Policy and the directive on maritime spatial planning.

The MSFD is the environmental pillar of the Integrated Maritime Policy (IMP). It requires EU Member States to achieve Good Environmental Status in all the EU's marine waters by identifying the main pressures and impacts on the marine environment and assessing the health and status of the ecosystems. Other important pieces of European legislation for the management and protection of marine and coastal ecosystems come under EU environmental policy, and the Birds and Habitats Directives. A recent implementation report on the MSFD established that despite good progress under the directive, it is 'doubtful that both the measures taken and the knowledge available are sufficient' (European Commission, 2020). The report also mentions that loss of biodiversity could not be halted in Europe's seas over the past few years and that the main pressures include non-indigenous species, overfishing, eutrophication, contaminants and litter.

Although the ecosystem-based approach is at the heart of EU marine and maritime policy, there seems to be a lack of clarity in Member States about how the concept translates into coherent policy implementation across different policies. A way forward could include, for example, more guidance by the European Commission for policies for which no concrete guidance yet exists for implementing an ecosystem-based approach.

### **SDG14.3 – Ocean acidification**

Minimise and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.

The indicator for measuring this target is average marine acidity (pH) measured at an agreed set of representative sampling stations. This data shows a continued trend of increasing acidification. In addition to minimising the impacts of ocean acidification, SDG14.3 also requires measures to minimise and address the impacts. The current indicator does not provide insight into local effects and potential adaptation measures.

Because ocean acidification is a result of the higher CO<sub>2</sub> concentration in the atmosphere, minimising ocean acidification requires successful global climate policies on mitigation and adaptation. The EU policy framework consists of a broad set of policies that aim to reduce GHGs in the atmosphere from different sources. The EU is where the world's most ambitious climate policies have been implemented at the fastest pace over the last few decades.

However, while being at the forefront in addressing the causes and challenges of climate change and strengthening a concerted global response, the EU is still the third-biggest emitter of GHGs worldwide, behind China and the USA. In addition to this, the impact of pH changes on organisms and at ecosystem level is not monitored sufficiently nor consistently across EU regions, and these still represent crucial challenges for the achievement of SDG14.3. Overall, the EU framework for understanding and addressing the impacts of ocean acidification needs to be strengthened.

### **SDG14.4 – Fisheries**

By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.

The official global indicator for measuring SDG 14.4 relates to the proportion of fish stocks within biologically sustainable levels. Across different sea basins in the EU, the trends in fish stocks are two-fold. In the north-east Atlantic, North Sea and the Baltic, analysis of long-time data series shows clear signs of improvement. In contrast, in the Mediterranean Sea and the Black Sea, the situation remains critical, with a high percentage of the assessed stocks being overfished and a lack of solid knowledge about fishing pressure and reproductive capacity.

Within the EU, the Common Fisheries Policy aims to ensure that fishing and aquaculture are environmentally, economically and socially sustainable. Between 2015 and 2020, sustainable catch limits were set to maintain fish stocks in the long term. The most recent reform of the Common Fisheries Policy has brought important governance improvements, including the introduction of maximum sustainable yield as a management objective, regionalisation and the landing obligation.

In addition to the overfishing mentioned above, destructive fishing practices continue to significantly disturb EU marine ecosystems, and this is recognised in the EU's biodiversity strategy for 2030. Other notable challenges include the availability of scientific knowledge and its use in policy-making, as well as the implementation and enforcement of the policy framework.

### **SDG14.5 – Marine protected areas**

By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.

The official indicator for measuring the achievement of SDG14.5 is the coverage of protected areas in relation to marine areas. In 2016, the spatial coverage of marine protected areas (MPAs) in the EU was 10.8% of the total marine and coastal surface area.

Different policy tools support the development of MPAs in Europe, including the Birds and Habitats Directives. MPAs are also designated under national and regional programmes undertaken to meet the objectives set by the MSFD. Other influential policies in this context include the Common Fisheries Policy and the EU's biodiversity strategy for 2030.

While the EU as a whole achieved the target for spatial extent of marine protected areas ahead of schedule, not all regional seas have reached the target of 10% coverage of MPAs. The achievement of SDG14.5 requires that MPAs are managed effectively and that their conservation objectives are established based on the best available scientific information. Additional efforts are needed to establish and effectively implement MPA management

measures, to ensure the EU MPA network is coherent, as well as to gather information on actual conservation achieved within these areas.

To promote compliance with existing provisions on MPA designation and management, as well as provisions on ecological coherence, several options can be envisaged, including increasing public knowledge on the benefits of MPAs, improving follow-up and monitoring on MPAs, increasing the science base and other means.

### **SDG14.6 – Fisheries subsidies**

By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognising that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

The indicator for SDG 14.6 measures progress in the implementation of international instruments aimed at combating illegal, unreported and unregulated fishing. The data collected for this indicator show that all EU Member States have a 'very high' level of achievement. It is important to note that the indicator for SDG14.6 has spurred some criticism, as it presents no direct link with the overall level of harmful subsidies that contribute to overcapacity and overfishing, and is considered inadequate for measuring achievement of the target.

Trade policy is an exclusive competence of the EU, which is tasked with negotiating on fisheries subsidies on behalf of Member States in international fora such as in the current negotiations on the prohibition of harmful fisheries subsidies in the framework of the World Trade Organization (WTO), where the EU plays an active role. In 2017, following the new impetus in negotiations provided by the adoption of 2030 Agenda, the EU revised its proposal on the prohibition of certain fisheries subsidies by adding provisions on strengthening transparency and providing guidelines on differential treatment for developing and least developed countries. Within its borders, the EU banned one of the most harmful types of fisheries subsidies as early in 2004, by phasing out public subsidies for the construction of new vessels and for increasing fishing capacity.

Despite the good progress achieved, overfishing is still happening for certain fish stocks in parts of Europe, and this can also be a consequence of fleet overcapacity. No agreement has been reached at international level with regard to the prohibition of harmful fisheries subsidies yet, and the deadline for the achievement of SDG14.6 expired in 2020. While WTO members confirm their commitment to continuing negotiations despite the impediments related to the COVID-19 outbreak, it remains uncertain whether it will be possible to reach an agreement in the near future.



**SDG14.7 – Economic benefits from sustainable use of marine resources to small island developing states (SIDS) and least developed countries (LDC).**

By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.

Target 14.7 aims to increase the economic benefits to SIDS and LDC from the sustainable use of marine resources through fisheries, aquaculture and tourism. However, the indicator for measuring progress towards the achievement of SDG14.7 only measures the 'fisheries aspect' of the target. It is not currently possible to draw conclusions on the achievement of SDG14.7 due to a lack of holistic data.

Since none of the EU Member States are SIDS or LDCs, its contribution to the achievement of SDG14.7 can be assessed by looking at different aspects of its relationship with SIDS and LDCs: trade relations, the EU's fishing activity abroad (e.g. Sustainable Fisheries Partnership Agreements), and the partnership and cooperation activities it engages in with these countries, including development aid activities (e.g. activities undertaken in a post-Cotonou Agreement context).

Trade in fish and seafood is a key aspect when it comes to increasing the economic benefits to SIDS and LDCs from marine resources. Access to global trade routes can generate significant value and create employment opportunities along the fisheries and seafood value chains for local communities. The EU is the largest importer of seafood in the world, and import conditions have an influence on the economic benefits garnered by these countries through their export activities. Imports of fishery products into the EU are subject to official certification based on meeting predefined conditions in the exporting country. The EU regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing ensures that only marine fisheries products validated as legal by the competent flag state can be imported into the EU. Within the scope of this regulation, the EU has entered into dialogue with several countries, including SIDS and LDCs, and supported the improvement of their systems to combat illegal, unreported and unregulated fishing (IUU) fishing. In addition to this, the EU provides training and technical assistance to help developing countries comply with overall EU rules regarding market access. The EU has also put in place a set of rules to ensure the sustainability of its fishing activity abroad.

Transparency regarding fishing and other activities undertaken within SIDS and LDCs' waters is often an issue when it comes to the sustainable management of their marine resources. The EU could increasingly use its leverage and build on existing ongoing cooperation to ensure the activities of different fishing players, both EU and non-EU, do not hinder the achievement of SDG14.7. In addition to this, the EU could further strengthen and streamline the support it already provides via different channels to SIDS and LDCs to improve their capacity to sustainably manage their marine resources.

### **SDG14.a – Scientific knowledge, research and technology for ocean health**

Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular SIDS and LDC.

The indicator for measuring SDG 14.a is the annual national research budget allocated by governments in the field of marine technology, relative to the overall national governmental research and development budget in general. To date, data for this indicator is only available for the years 2009 to 2013, and for 25 countries only. Over this period, the marine technology research budget in the five EU countries for which data is available increased from 0.35% (2009) to 0.56% (2013) of the total research budget.

When looking at other indicators, the EU is at the forefront of efforts to support ocean science globally. EU Member States are among the top producers of ocean science publications, and their research outputs are also making substantial impact, as indicated by the number of citations they receive.

Several EU policies support the development of marine knowledge and research capacity, and the importance of research and innovation was further underscored with the adoption of the European Green Deal and the new Horizon Europe.

Ocean science has evolved rapidly in recent years, but the challenges our oceans face are also growing exponentially. In light of this, and despite the notable efforts made, knowledge and research capacity gaps still persist in this field, both in the EU and globally, and the potential for improvement in the EU and Member States actions to achieve SDG14.a is virtually endless. In this context, the UN Decade of Ocean Science for Sustainable Development, to be launched in 2021, could represent an opportunity for the EU to promote a coordinated, strategic and holistic approach to ocean research worldwide.

### **SDG14.b – Small-scale fisheries**

Provide access for small-scale artisanal fishers to marine resources and markets.

The indicator for measuring SDG 14.b is progress by countries in the degree of application of an institutional framework that recognises and protects access rights for small-scale fisheries. All EU Member States score highly in the official data.

The Common Fisheries Policy is the main EU policy governing small-scale fisheries. It recognises the importance of ensuring a fair standard of living for small-scale fisheries, and it includes general considerations and guiding principles that are relevant for these actors. Financial support is provided to small-scale fishers through the European Maritime and Fisheries Fund.

During the course of this study, sufficient information was not identified for making an assessment of remaining challenges and possible ways forward.

### SDG14.C – International law of the sea

Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of 'The future we want'.

The indicator for measuring SDG 14.c is defined as the number of countries adopting international legal instruments for ocean conservation as reflected in the United Nations Convention on the Law of the Sea (UNCLOS). The EU and all EU Member States have ratified UNCLOS and its two implementing agreements. This treaty forms part of the EU *acquis* and all EU Member States have therefore committed to the obligations under UNCLOS.

Ahead of the adoption of 2030 Agenda, the EU had already put in place a comprehensive policy framework for implementing UNCLOS provisions, e.g. through the MSFD and other policy instruments, as well as its participation in different bodies such as RFMOs, the FAO, IMO and RSCs. The EU also plays an instrumental role in filling existing gaps in the international legal framework. For instance, the EU signed the Agreement to prevent unregulated high seas fisheries in the Central Arctic Ocean in 2018, and it is currently very active in negotiations on a legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ).

### Overall conclusions

The high-level assessment is structured around the evaluation criteria set out in the Better Regulation guidelines, to provide a summarised overview of the contribution of EU policies towards achieving SDG14.

- **Relevance:** Although most major policies predate the 2030 Agenda, the analysis shows a strong link between EU policies and ocean-related targets. Since the adoption of 2030 Agenda, policies have further evolved or been adapted to better address the issues facing the oceans. No significant policy gaps have been identified and the remaining challenges relate more to the correct and effective implementation of existing policies.
- **Effectiveness:** Important data gaps persist for several SDG14 indicators, and measuring progress on achievement of the targets is challenging. If the assessment is based on the agreed indicators for SDG14 targets, most appear unlikely to be met by the stipulated timelines, indicating that the contribution of EU policies to SDG14 achievement is moderate. When looking beyond the indicators, it can be concluded that the EU and its Member States are taking strong action, with tangible results in some areas. However, we are still far from reversing some negative trends. Continued strong and urgent efforts, including increased international cooperation, will be necessary to address pressures from human activities, as well as their cumulative impacts, and therefore to protect the oceans within the EU and beyond.

- **Efficiency:** Considerable investments are being made from the EU and Member States' budgets. No clear funding gaps have been identified in the study, and thus lack of funding is not considered a major issue.
- **Coherence:** No major gaps were identified in the policy framework that could hamper the achievement of the SDG14 targets. The study found that coherence is sometimes lacking in policy implementation between the different policy areas and governance levels.
- **EU added value:** Effective action to achieve SDG14 requires concerted global effort, since oceans are a shared resource and suffer the impacts of global activities, including on land. In this context, unilateral action at Member State level would likely be ineffective towards achieving SDG14. Hence, there is a clear added value of EU policies to guide and lead the process.

Supporting materials for this study are available in a separate publication via the publications office of the EU.

## Synthèse

### À propos de l'étude

La présente étude a été lancée dans le cadre des préparatifs de la conférence des Nations unies sur les océans prévue en 2020 (ensuite reportée en raison de l'épidémie de COVID-19). L'étude vise à faire le point sur l'évolution de la situation dans l'Union européenne et à procéder à une évaluation générale des contributions apportées par l'UE et les outils politiques de ses États membres à la réalisation de l'ODD 14 et des autres cibles du Programme de développement durable à l'horizon 2030 liées aux océans. Cette étude se concentre spécifiquement sur l'ODD 14 et présente une analyse de chacune des 10 cibles qui composent cet objectif. Contrairement à d'autres travaux, elle adopte une approche hybride qui examine les indicateurs quantitatifs mais évalue également les progrès de manière qualitative.

Une cartographie et une catégorisation détaillées des politiques soutenant l'ODD 14 ont été entreprises au niveau de l'UE et des États membres. Au total, 170 instruments politiques de l'UE et 417 instruments politiques des États membres ont été recensés.

Il est difficile d'évaluer les progrès accomplis dans la réalisation des cibles de l'ODD 14 et des autres objectifs du Programme à l'horizon 2030, en raison de leur complexité et des lacunes dans les données. Différentes initiatives d'établissement de rapports tentent de mesurer les progrès accomplis dans la réalisation du Programme à l'horizon 2030, chacune d'entre elles utilisant sa propre méthodologie pour calculer les scores agrégés pour chaque ODD. Il s'agit notamment du rapport annuel d'Eurostat intitulé «Développement durable dans l'Union européenne – Aperçu des progrès vers la réalisation des ODD dans un contexte européen» et des «rapports sur le développement durable», publiés chaque année, qui comprennent un index et un tableau de bord des ODD. Ces rapports utilisent différents indicateurs quantitatifs pour évaluer les progrès accomplis dans la réalisation des ODD. Ils montrent que, par rapport au reste du monde, l'UE obtient généralement de bons résultats dans la mise en œuvre du Programme à l'horizon 2030, mais qu'il existe des différences dans la réalisation des différents objectifs.

L'étude considère qu'il est crucial d'examiner la qualité au-delà des indicateurs, car chaque cible présente plusieurs complexités. Les principales conclusions résultant de cette approche sont présentées ci-après.

#### ODD 14.1 - Pollution marine

D'ici à 2025, prévenir et réduire nettement la pollution marine de tous types, en particulier celle résultant des activités terrestres, y compris les déchets en mer et la pollution par les nutriments.

La collecte de données pour les indicateurs proposés par les Nations unies afin de mesurer l'ODD 14.1 sera lancée en 2021, et l'indicateur actuellement utilisé dans l'UE pour cet objectif est la qualité des eaux de baignade. Ces dernières années, la proportion de sites de baignade côtiers présentant une excellente qualité de l'eau a augmenté dans certains

États membres (par exemple, en Belgique et au Danemark), tandis qu'elle a diminué dans d'autres (par exemple, en Irlande et en Pologne).

L'UE dispose de l'un des cadres de politique environnementale les plus avancés au monde pour réduire au maximum les contaminants, l'eutrophisation polluante et éviter les déchets marins. La cible 14.1 s'appuie sur un cadre politique très complexe, car la «pollution de tous types» englobe toute une série de sources et de facteurs chimiques et physiques. Au total, 59 instruments politiques ou groupes d'instruments politiques de l'UE ont été recensés comme ayant une influence directe sur la réalisation de cette cible. Dans un avenir proche, le cadre politique sera également renforcé par le pacte vert pour l'Europe et le plan d'action «zéro pollution», afin de traiter les effets cumulatifs de la pollution de l'air, de l'eau et du sol.

Cependant, malgré le cadre politique élaboré, l'UE devra fournir des efforts supplémentaires pour atteindre l'ODD 14.1 avant l'échéance de 2025. Les défis à relever comprennent la présence d'anciens dépôts de polluants, mais aussi de nouvelles entrées, notamment le nombre considérable de substances chimiques synthétiques différentes. Plus particulièrement, seule une fraction de ces polluants est régulièrement surveillée et de nouvelles substances sont découvertes extrêmement rapidement. L'eutrophisation, ainsi que les déchets marins et la pollution sonore, restent des défis majeurs dans certains bassins maritimes.

La mise en œuvre cohérente des différentes politiques est essentielle pour atteindre cette cible, si l'on tient également compte des effets cumulatifs des différents polluants. Le plan d'action «zéro pollution» représente une étape importante dans la résolution de ce problème en examinant de manière plus systématique toutes les politiques et réglementations pertinentes et en s'attaquant aux problèmes interdépendants.

En ce qui concerne les déchets marins, l'UE a mis en place un programme d'action ambitieux et va maintenant se concentrer sur sa mise en œuvre et sur le développement d'une coopération plus poussée avec les pays tiers, les conventions régionales pour la protection du milieu marin (CMR) et d'autres organisations internationales afin de s'attaquer au problème mondial des déchets marins.

Une mise en œuvre cohérente des politiques est essentielle pour la réalisation de l'ODD 14.1, afin de s'assurer qu'il n'y a pas de lacunes dans le cadre politique et que les politiques terrestres et maritimes contribuent conjointement à la réduction de la pollution marine. Une coopération accrue entre les différentes autorités chargées de la mise en œuvre de ce cadre politique serait la bienvenue, ainsi que des orientations supplémentaires de l'UE quant à la manière d'améliorer cette coopération dans la pratique. En outre, une surveillance plus cohérente de la pollution marine et une meilleure connaissance des effets cumulatifs des différents polluants favoriseraient l'élaboration d'évaluations précises de l'état actuel des océans, ainsi que de mesures et d'objectifs appropriés fixés dans le cadre des instruments politiques pertinents. Le prochain plan d'action «zéro pollution» de la Commission pourrait être l'occasion de relever ces défis.

## ODD 14.2 - Écosystèmes marins et côtiers



D'ici à 2020, gérer et protéger durablement les écosystèmes marins et côtiers, notamment en renforçant leur résilience, afin d'éviter les graves conséquences de leur dégradation et prendre des mesures en faveur de leur restauration pour rétablir la santé et la productivité des océans.

La collecte de données pour l'indicateur mondial de l'ODD 14.2 (tel qu'élaboré par l'Office statistique des Nations unies, la proportion de zones économiques exclusives nationales gérées selon des approches écosystémiques) n'a pas encore commencé. Cependant, l'approche écosystémique est au cœur de la politique environnementale marine de l'UE. À travers la directive-cadre «Stratégie pour le milieu marin» (DCSMM), elle est devenue un principe opérationnel et juridiquement contraignant pour la gestion du milieu marin de l'UE. Elle a également été intégrée dans d'autres actes législatifs de l'UE, notamment la politique commune de la pêche et la directive relative à la planification de l'espace maritime.

La DCSMM est le pilier environnemental de la politique maritime intégrée (PMI). Elle impose aux États membres de l'UE de parvenir à un bon état écologique dans toutes les eaux marines de l'UE en recensant les principales pressions et incidences sur le milieu marin et en évaluant la santé et l'état des écosystèmes. D'autres pans de la législation européenne importants pour la gestion et la protection des écosystèmes marins et côtiers relèvent de la politique environnementale de l'UE et des directives «Oiseaux» et «Habitats». Un récent rapport sur la mise en œuvre de la DCSMM a établi que, malgré les progrès accomplis dans le cadre de cette directive, il est «peu probable que tant les mesures adoptées que les connaissances disponibles soient suffisantes» (Commission européenne, 2020). Le rapport mentionne également que la perte de biodiversité n'a pas pu être arrêtée dans les mers d'Europe au cours des dernières années et que les principales pressions incluent les espèces non indigènes, la surpêche, l'eutrophisation, les contaminants et les déchets.

Bien que l'approche fondée sur les écosystèmes soit au cœur de la politique marine et maritime de l'UE, il semble que les États membres ne sachent pas très bien comment ce concept se traduit pour une mise en œuvre cohérente des différentes politiques. Une voie à suivre pourrait consister, par exemple, à ce que la Commission européenne fournisse davantage d'orientations pour les politiques pour lesquelles il n'existe pas encore d'orientations concrètes pour la mise en œuvre d'une approche fondée sur les écosystèmes.

### **ODD 14.3 - Acidification des océans**

Réduire au maximum l'acidification des océans et lutter contre ses effets, notamment en renforçant la coopération scientifique à tous les niveaux.

L'indicateur de mesure de cette cible est l'acidité moyenne des mers (pH) mesurée à plusieurs points de prélèvement représentatif. Ces données montrent une tendance continue à l'augmentation de l'acidification. Outre la réduction des incidences de l'acidification des océans, l'ODD 14.3 exige également des mesures pour minimiser et

traiter ces incidences. L'indicateur actuel ne permet pas de se faire une idée des effets locaux et des mesures d'adaptation potentielles.

L'acidification des océans étant le résultat de l'augmentation de la concentration de CO<sub>2</sub> dans l'atmosphère, la réduction de l'acidification des océans nécessite des politiques climatiques mondiales efficaces en matière d'atténuation et d'adaptation. Le cadre politique de l'UE consiste en un vaste ensemble de politiques visant à réduire les GES (gaz à effet de serre) dans l'atmosphère provenant de différentes sources. C'est dans l'UE que les politiques climatiques les plus ambitieuses du monde ont été mises en œuvre au rythme le plus rapide au cours des dernières décennies.

Cependant, bien qu'elle soit à l'avant-garde de la lutte contre les causes et les défis du changement climatique et du renforcement d'une réponse mondiale concertée, l'UE reste le troisième plus grand émetteur de GES au monde, derrière la Chine et les États-Unis. En outre, l'incidence des changements de pH sur les organismes et au niveau des écosystèmes n'est pas surveillée de manière suffisante ni cohérente dans les régions de l'UE, ce qui représente toujours des défis cruciaux pour la réalisation de l'ODD 14.3. Dans l'ensemble, le cadre de l'UE pour comprendre et traiter les incidences de l'acidification des océans doit être renforcé.

#### **ODD 14.4 - Pêche**

D'ici à 2020, réglementer efficacement la pêche, mettre un terme à la surpêche, à la pêche illicite, non déclarée et non réglementée et aux pratiques de pêche destructrices et exécuter des plans de gestion fondés sur des données scientifiques, l'objectif étant de rétablir les stocks de poissons le plus rapidement possible, au moins à des niveaux permettant d'obtenir un rendement constant maximal compte tenu des caractéristiques biologiques.

L'indicateur mondial officiel pour mesurer l'ODD 14.4 concerne la proportion de stocks de poissons dont le niveau est biologiquement durable. Dans les différents bassins maritimes de l'UE, les tendances des stocks de poissons sont doubles. Dans l'Atlantique du Nord-Est, la mer du Nord et la mer Baltique, l'analyse des séries de données à long terme montre des signes clairs d'amélioration. En revanche, dans la mer Méditerranée et la mer Noire, la situation reste critique, avec un pourcentage élevé de stocks évalués qui sont surexploités et un manque de connaissances solides sur la pression de pêche et la capacité de reproduction.

Au sein de l'UE, la politique commune de la pêche vise à garantir que la pêche et l'aquaculture sont durables sur le plan environnemental, économique et social. Entre 2015 et 2020, des limites de capture durables ont été fixées pour maintenir les stocks de poissons à long terme. La dernière réforme de la politique commune de la pêche a apporté d'importantes améliorations en matière de gouvernance, notamment l'introduction du rendement maximal durable comme objectif de gestion, la régionalisation et l'obligation de débarquement.

Outre la surpêche mentionnée ci-dessus, les pratiques de pêche destructrices continuent de perturber considérablement les écosystèmes marins de l'UE, ce qui est reconnu dans

la stratégie de l'UE en faveur de la biodiversité à l'horizon 2030. Parmi les autres défis notables, citons la disponibilité des connaissances scientifiques et leur utilisation dans l'élaboration des politiques, ainsi que la mise en œuvre et l'application du cadre politique.

### **ODD 14.5 - Aires marines protégées**

D'ici à 2020, préserver au moins 10 % des zones marines et côtières, conformément au droit national et international et compte tenu des meilleures informations scientifiques disponibles.

L'indicateur officiel pour mesurer la réalisation de l'ODD 14.5 est la surface des aires marines protégées, en proportion de la surface totale. En 2016, la couverture spatiale des aires marines protégées (AMP) dans l'UE était de 10,8 % de la surface marine et côtière totale.

Différents outils politiques soutiennent le développement des AMP en Europe, notamment les directives «Oiseaux» et «Habitats». Les AMP sont également désignées dans le cadre de programmes nationaux et régionaux entrepris pour atteindre les objectifs fixés par la DCSMM. Parmi les autres politiques influentes dans ce contexte figurent la politique commune de la pêche et la stratégie de l'UE en faveur de la biodiversité à l'horizon 2030.

Si l'UE dans son ensemble a atteint l'objectif d'étendue spatiale des aires marines protégées avant la date prévue, toutes les mers régionales n'ont pas atteint l'objectif d'une couverture de 10 % des AMP. La réalisation de l'ODD 14.5 exige que les AMP soient gérées efficacement et que leurs objectifs de conservation soient établis sur la base des meilleures informations scientifiques disponibles. Des efforts supplémentaires sont nécessaires pour établir et mettre en œuvre efficacement des mesures de gestion des AMP, pour assurer la cohérence du réseau européen des AMP, ainsi que pour recueillir des informations sur la conservation effective réalisée dans ces zones.

Pour promouvoir le respect des dispositions existantes en matière de désignation et de gestion des AMP, ainsi que des dispositions relatives à la cohérence écologique, plusieurs options peuvent être envisagées, notamment l'amélioration des connaissances du public sur les avantages des AMP, l'amélioration du suivi et de la surveillance des AMP, le renforcement de la base scientifique et d'autres moyens.

### **ODD 14.6 - Subventions à la pêche**

D'ici à 2020, interdire les subventions à la pêche qui contribuent à la surcapacité et à la surpêche, supprimer celles qui favorisent la pêche illicite, non déclarée et non réglementée et s'abstenir d'en accorder de nouvelles, sachant que l'octroi d'un traitement spécial et différencié efficace et approprié aux pays en développement et aux pays les moins avancés doit faire partie intégrante des négociations sur les subventions à la pêche menées dans le cadre de l'Organisation mondiale du commerce.

L'indicateur relatif à l'ODD 14.6 mesure les progrès réalisés dans la mise en œuvre des instruments internationaux visant à combattre la pêche illicite, non déclarée et non

réglementée. Les données recueillies pour cet indicateur montrent que tous les États membres de l'UE ont un niveau de réalisation «très élevé». Il est important de noter que l'indicateur relatif à l'ODD 14.6 a suscité certaines critiques, car il ne présente aucun lien direct avec le niveau global des subventions néfastes qui contribuent à la surcapacité et à la surpêche, et est considéré comme inadéquat pour mesurer la réalisation de l'objectif.

La politique commerciale est une compétence exclusive de l'UE, qui est chargée de négocier les subventions à la pêche au nom des États membres dans les enceintes internationales, comme dans les négociations actuelles sur l'interdiction des subventions néfastes à la pêche dans le cadre de l'Organisation mondiale du commerce (OMC), où l'UE joue un rôle actif. En 2017, suite au nouvel élan donné aux négociations par l'adoption du Programme à l'horizon 2030, l'UE a révisé sa proposition sur l'interdiction de certaines subventions à la pêche en ajoutant des dispositions sur le renforcement de la transparence et en fournissant des lignes directrices sur le traitement différencié pour les pays en développement et les pays les moins avancés. À l'intérieur de ses frontières, l'UE a interdit dès 2004 l'un des types de subventions à la pêche les plus néfastes, en supprimant progressivement les subventions publiques destinées à la construction de nouveaux navires et à l'augmentation de la capacité de pêche.

Malgré les progrès accomplis, la surpêche se poursuit pour certains stocks de poissons dans certaines régions d'Europe, ce qui peut également être une conséquence de la surcapacité de la flotte. Aucun accord n'a encore été conclu au niveau international en ce qui concerne l'interdiction des subventions néfastes à la pêche, et le délai pour la réalisation de l'ODD 14.6 a expiré en 2020. Si les membres de l'OMC confirment leur volonté de poursuivre les négociations malgré les obstacles liés à l'épidémie de COVID-19, il n'est pas certain qu'il soit possible de parvenir à un accord dans un avenir proche.

#### **ODD 14.7 - Avantages économiques de l'utilisation durable des ressources marines pour les petits États insulaires en développement (PEID) et les pays les moins avancés (PMA).**

D'ici à 2030, faire mieux bénéficier les petits États insulaires en développement et les pays les moins avancés des retombées économiques de l'exploitation durable des ressources marines, notamment grâce à une gestion durable des pêches, de l'aquaculture et du tourisme.

La cible 14.7 vise à accroître les avantages économiques que les PEID et les PMA tirent de l'utilisation durable des ressources marines par la pêche, l'aquaculture et le tourisme. Cependant, l'indicateur permettant de mesurer les progrès vers la réalisation de l'ODD 14.7 ne mesure que l'aspect «pêche» de la cible. Il n'est pas possible actuellement de tirer des conclusions sur la réalisation de l'ODD 14.7 en raison d'un manque de données globales.

Étant donné qu'aucun des États membres de l'UE n'est un PEID ou un PMA, sa contribution à la réalisation de l'ODD 14.7 ne peut être évaluée qu'en examinant différents aspects de sa relation avec les PEID et les PMA: les relations commerciales, l'activité de pêche de l'UE à l'étranger (par exemple, les accords de partenariat pour une pêche durable) et les activités de partenariat et de coopération qu'elle mène avec ces pays, y compris les

activités d'aide au développement (par exemple, les activités entreprises dans un contexte post-Accord de Cotonou).

Le commerce du poisson et des fruits de mer est un aspect essentiel lorsqu'il s'agit d'accroître les avantages économiques des ressources marines pour les PEID et les PMA. L'accès aux routes commerciales mondiales peut générer une valeur importante et créer des opportunités d'emploi le long des chaînes de valeur de la pêche et des fruits de mer pour les communautés locales. L'UE est le plus grand importateur de fruits de mer au monde, et les conditions d'importation ont une influence sur les avantages économiques que ces pays retirent de leurs activités d'exportation. Les importations de produits de la pêche dans l'UE sont soumises à une certification officielle fondée sur le respect de conditions prédéfinies dans le pays exportateur. Le règlement de l'UE visant à prévenir, à décourager et à éliminer la pêche illicite, non déclarée et non réglementée garantit que seuls les produits de la pêche validés comme légaux par l'État du pavillon compétent peuvent être importés dans l'UE. Dans le cadre de ce règlement, l'UE a entamé un dialogue avec plusieurs pays, dont des PEID et des PMA, et a soutenu l'amélioration de leurs systèmes de lutte contre la pêche illicite, non déclarée et non réglementée (INN). En outre, l'UE fournit une formation et une assistance technique pour aider les pays en développement à se conformer aux règles générales de l'UE en matière d'accès au marché. L'UE a également mis en place un ensemble de règles visant à garantir la durabilité de son activité de pêche à l'étranger.

La transparence concernant la pêche et les autres activités entreprises dans les eaux des PEID et des PMA est souvent un problème lorsqu'il s'agit de la gestion durable de leurs ressources marines. L'UE pourrait user de plus en plus de son influence et s'appuyer sur la coopération en cours pour veiller à ce que les activités des différents acteurs de la pêche, qu'ils soient ou non membres de l'UE, n'entravent pas la réalisation de l'ODD 14.7. En outre, l'UE pourrait encore renforcer et rationaliser le soutien qu'elle apporte déjà, par différents canaux, aux PEID et aux PMA pour améliorer leur capacité à gérer durablement leurs ressources marines.

#### **ODD 14.a - Connaissances scientifiques, recherche et technologies pour la santé des océans**

Approfondir les connaissances scientifiques, renforcer les capacités de recherche et transférer les techniques marines, conformément aux Critères et principes directeurs de la Commission océanographique intergouvernementale concernant le transfert de techniques marines, l'objectif étant d'améliorer la santé des océans et de renforcer la contribution de la biodiversité marine au développement des pays en développement, en particulier des petits États insulaires en développement et des pays les moins avancés.

L'indicateur de mesure de l'ODD 14.a est le budget national annuel de recherche alloué par les gouvernements dans le domaine des technologies marines, par rapport au budget national global de recherche et développement des gouvernements en général. À ce jour, les données pour cet indicateur ne sont disponibles que pour les années 2009 à 2013, et pour 25 pays seulement. Au cours de cette période, le budget de la recherche sur les

technologies marines dans les cinq pays de l'UE pour lesquels des données sont disponibles est passé de 0,35 % (2009) à 0,56 % (2013) du budget total de la recherche.

Si l'on examine d'autres indicateurs, l'UE est à l'avant-garde des efforts déployés pour soutenir l'océanographie au niveau mondial. Les États membres de l'UE figurent parmi les principaux producteurs de publications en sciences océaniques, et les résultats de leurs recherches ont également une incidence considérable, comme l'indique le nombre de citations qu'ils reçoivent.

Plusieurs politiques de l'UE soutiennent le développement des connaissances marines et des capacités de recherche, et l'importance de la recherche et de l'innovation a encore été soulignée avec l'adoption du pacte vert pour l'Europe et de la nouvelle stratégie Horizon Europe.

La science océanique a évolué rapidement ces dernières années, mais les défis auxquels nos océans sont confrontés connaissent également une croissance exponentielle. Dans ce contexte, et malgré les efforts notables déployés, des lacunes en matière de connaissances et de capacités de recherche persistent, tant dans l'UE qu'au niveau mondial, et le potentiel d'amélioration des actions de l'UE et des États membres pour atteindre l'ODD 14.a est pratiquement infini. Dans ce contexte, la Décennie des Nations unies pour les sciences océaniques au service du développement durable, qui doit être lancée en 2021, pourrait représenter une occasion pour l'UE de promouvoir une approche coordonnée, stratégique et globale de la recherche océanique dans le monde entier.

#### **ODD 14.b - Pêche artisanale**

Garantir aux petits pêcheurs l'accès aux ressources marines et aux marchés.

L'indicateur de mesure de l'ODD 14.b est le progrès des pays dans le degré d'application d'un cadre institutionnel qui reconnaît et protège les droits d'accès des petits pêcheurs. Tous les États membres de l'UE obtiennent un score élevé dans les données officielles.

La politique commune de la pêche est la principale politique de l'UE régissant la pêche artisanale. Elle reconnaît l'importance de garantir un niveau de vie équitable aux petits pêcheurs et comprend des considérations générales et des principes directeurs pertinents pour ces acteurs. Un soutien financier est apporté aux petits pêcheurs au moyen du Fonds européen pour les affaires maritimes et la pêche.

Au cours de la présente étude, il n'a pas été possible de recenser suffisamment d'informations pour évaluer les défis restants et les moyens possibles d'aller de l'avant.

#### **ODD 14.C - Droit international de la mer**

Améliorer la conservation des océans et de leurs ressources et les exploiter de manière plus durable en application des dispositions du droit international, énoncées dans la Convention des Nations Unies sur le droit de la mer, qui fournit le cadre juridique requis



pour la conservation et l'exploitation durable des océans et de leurs ressources, comme il est rappelé au paragraphe 158 de «L'avenir que nous voulons».

L'indicateur de mesure de l'ODD 14.c est défini comme le nombre de pays qui adoptent des instruments juridiques internationaux pour la conservation des océans, comme le reflète la convention des Nations unies sur le droit de la mer (CNUDM). L'UE et tous ses États membres ont ratifié la CNUDM et ses deux accords d'application. Ce traité fait partie de l'acquis communautaire et tous les États membres de l'UE se sont donc engagés à respecter les obligations découlant de la CNUDM.

Avant l'adoption du Programme à l'horizon 2030, l'UE avait déjà mis en place un cadre politique complet pour la mise en œuvre des dispositions de la CNUDM, par exemple au moyen de la DCSMM et d'autres instruments politiques, ainsi que par sa participation à différents organismes tels que les ORGP, la FAO, l'OMI et les CMR. L'UE joue également un rôle déterminant en comblant les lacunes existantes dans le cadre juridique international. Par exemple, l'UE a signé en 2018 l'accord visant à prévenir la pêche non réglementée en haute mer dans l'océan Arctique central, et elle est actuellement très active dans les négociations sur un instrument juridiquement contraignant au titre de la CNUDM sur la conservation et l'utilisation durable de la biodiversité marine des zones situées au-delà des limites de la juridiction nationale.

## Conclusions générales

L'évaluation générale s'articule autour des critères d'évaluation définis dans les lignes directrices pour une meilleure réglementation, afin de fournir une vue d'ensemble résumée de la contribution des politiques de l'UE à la réalisation de l'ODD 14.

- **Pertinence:** Bien que la plupart des grandes politiques soient antérieures au Programme à l'horizon 2030, l'analyse montre un lien étroit entre les politiques de l'UE et les objectifs liés aux océans. Depuis l'adoption du Programme à l'horizon 2030, les politiques ont encore évolué ou ont été adaptées pour mieux répondre aux problèmes auxquels sont confrontés les océans. Aucune lacune politique importante n'a été recensée et les défis restants concernent davantage la mise en œuvre correcte et efficace des politiques existantes.
- **Efficacité:** D'importantes lacunes dans les données persistent pour plusieurs indicateurs de l'ODD 14, et il est difficile de mesurer les progrès accomplis dans la réalisation des cibles. Si l'évaluation se fonde sur les indicateurs convenus pour les cibles de l'ODD 14, il semble peu probable que la plupart d'entre eux soient atteints dans les délais impartis, ce qui indique que la contribution des politiques de l'UE à la réalisation de l'ODD 14 est modérée. Si l'on regarde au-delà des indicateurs, on peut conclure que l'UE et ses États membres prennent des mesures énergiques, avec des résultats tangibles dans certains domaines. Toutefois, nous sommes encore loin d'inverser certaines tendances négatives. Des efforts continus, vigoureux et urgents, y compris une coopération internationale accrue, seront nécessaires pour faire face aux pressions exercées par les activités humaines, ainsi qu'à leurs effets cumulatifs, et donc pour protéger les océans dans l'UE et au-delà.
- **Efficience:** Des investissements considérables sont réalisés sur les budgets de l'UE et des États membres. Aucun déficit de financement n'a été clairement recensé dans

l'étude, et le manque de financement n'est donc pas considéré comme un problème majeur.

- **Cohérence:** Aucune lacune majeure n'a été établie dans le cadre politique qui pourrait entraver la réalisation des cibles de l'ODD 14. L'étude a révélé que la cohérence fait parfois défaut dans la mise en œuvre des politiques entre les différents domaines politiques et niveaux de gouvernance.
- **Valeur ajoutée de l'UE:** Une action efficace pour atteindre l'ODD 14 nécessite un effort mondial concerté, car les océans sont une ressource partagée et subissent les effets des activités mondiales, y compris sur terre. Dans ce contexte, une action unilatérale au niveau des États membres serait probablement inefficace pour atteindre l'ODD 14. Les politiques de l'UE présentent donc une valeur ajoutée évidente pour guider et diriger le processus.

Les supports de cette étude sont disponibles dans une publication distincte via le office des publications de l'Union européen.

## 1. About this report

This study was launched as a part of the preparations for the 2020 UN Ocean Conference (subsequently postponed due to COVID-19 outbreak). The intention of the study was to take stock of the developments in the European Union and make a high-level assessment of the contributions made by the EU and its Member States' policy tools towards achieving SDG14 and other 2030 Agenda ocean-related targets.

Even a high-level assessment of the extent to which and how EU policies contribute to achieving SDG14 is a daunting task. The approach taken to assessing progress towards targets has been to use robust data and facts on the status to date, taking into account the SDG14 indicators whenever possible.

In the assignment, a comprehensive mapping and categorisation of policies was undertaken at EU (see the high-level assessment in Appendix 2 in the Supporting Materials document) and Member State level (see the high-level assessment in Appendix 3 in the Supporting Materials document). The sheer number of policies involved, and the complexity of the field, makes it impossible to conduct an in-depth assessment of how each policy contributes to the ocean-related targets.

The aim of this report is therefore not to evaluate each policy tool per se, but rather to take a 'birds' eye' perspective on what the EU and its Member States are doing to conserve and improve the status of the ocean and seas and their sustainable use, as well as on the achievements made so far. To this end, the study team has used available evidence combined with consultations with a wide range of stakeholders.

In the report, the analysis is presented by SDG14 target, providing the following for each target:

1. State of play in achieving the target;
2. Remaining challenges;
3. Possible ways forward.

Finally, the study provides a set of more horizontal findings and recommendations, together with a synthesised high-level assessment of the current policy framework in place.

## 2. Point of departure

### 2.1 Global ocean challenges

Oceans account for approximately 71% of the Earth's surface. They are home to the largest continuous ecosystem and provide habitats for rich marine biodiversity<sup>1</sup>. Oceans provide invaluable services; they provide half the oxygen we breathe, store excess carbon dioxide, and are an essential source of food. They perform a vital regulatory function in the global weather and climate systems.

Oceans also contribute to our lives in countless other ways, for example by providing jobs, transport and trade, tourism, renewable energy and others.

However, ocean biodiversity and services are under threat from numerous human-induced stressors including overfishing, increasing events of eutrophication, pollution from land-based and marine sources including plastics and microplastics, growing ocean acidification and ocean warming.

Marine environments have been impacted by human activities for centuries. Historical acts of overfishing, waste disposal, pollution and shipping have all left a mark beneath the waves. Today, such uses are multiplying and expanding to previously untouched areas, further out and deeper than previously explored. Emerging activities such as marine renewable energies, desalinisation and blue biotechnology are demanding more from the oceans alongside traditional activities like shipping, coastal tourism and fishing. Some of those emerging activities currently fall outside current global frameworks and agreements.

As humans increasingly turn to the ocean for food, energy and raw materials, as well as recreational activities, the impacts of such uses are also expanding and introducing new threats such as nutrient and plastic pollution, invasive alien species and climate change. At the same time, some human activities such as developing offshore renewable energy also have great potential to benefit humanity and the oceans in the long run.

### 2.2 Sustainable Development Goal 14

The rise and acknowledgement of multiple threats facing the oceans have demanded action be taken on all fronts, in an effort to safeguard critical marine ecosystems and natural capital, and the services they provide. Driving this tide is the United Nations 2030 Agenda for Sustainable Development and its Sustainable Development Goal (SDG) 14 to 'Conserve and Sustainably Use the Oceans, Seas and Marine Resources for Sustainable Development'.

SDG 14 aims to tackle the conservation of the oceans and seas, as well as some of humanity's interactions with the oceans and to respond to

#### Box 2.1 Agenda 2030

In September 2015, the UN adopted the 2030 Agenda, which came into force on 1 January 2016. Agenda 2030 is a universal framework for achieving sustainable development by 2030. It contains 17 ambitious Sustainable Development Goals and 169 associated targets to be achieved by 2030. The goals and targets are not legally binding, but governments are expected to commit to, take ownership of and create frameworks for implementing the SDGs.

the urgent need for transformative change towards more sustainable practices. It covers a range of issues concerning the conservation and sustainable use of the oceans.

SDG 14 recognises the environmental, economic and social benefits that healthy oceans provide. At the same time, it reflects the human-induced pressures that the oceans are subject to, and which need to be managed to ensure that oceans continue to provide current and future generations with their invaluable ecosystem services.

SDG 14 is divided into 10 targets which are shown in the figure below. Targets A, B and C are so-called 'means of implementation', i.e. means for achieving the other targets.

**Figure 2.1 The 10 targets of SDG14**

SDG 14.1	Marine pollution	SDG 14.6	Fishery subsidies
SDG 14.2	Marine and costal ecosystems	SDG 14.7	Economic benefits from sustainable use of marine resources to SIDS and LDCs
SDG 14.3	Ocean acidification	SDG 14.A	Scientific knowledge, research and technology for ocean health
SDG 14.4	Fisheries	SDG 14.B	Small-scale fisheries
SDG 14.5	Marine protected areas	SDG 14.C	International Law of the Sea

## 2.3 A framework for the integrated implementation of the 17 Sustainable Development Goals

The 2030 Agenda consists of 17 Goals and 169 associated targets which all interact and impact upon each other in different ways.

**Figure 2.2 The 17 Sustainable Development Goals**



SDG 14 inherently relies on the implementation of the other SDGs. To promote the sustainable use and management of the ocean, actions must be taken to address pressures and threats both on land and at sea.

At the same time, the SDG 14 has a cross-cutting role in the 2030 Agenda; implementing and promoting actions relevant to achieving SDG 14 also supports the wider 2030 Agenda goals – the conservation and sustainable use of the ocean is reinforcing and enabling in relation to the other 2030 Agenda goals.

The interlinkages between the respective targets of SDG14 and the other 2030 Agenda goals are complex and manifold. In general, there are two types of interlinkages: those with upstream targets and those with downstream targets.

#### Box 2.2 Definition of upstream and downstream targets

**Upstream targets** are those which, when achieved, will have an impact on SDG14 targets.

**Downstream targets** are those that are impacted by the achievement of SDG14.

All those upstream and downstream targets are 'ocean-related', meaning that they either have an impact on the oceans, are impacted by what is happening in the oceans – or both. This study identified 44 ocean-related targets (other than the SDG14 targets). Of those, 32 are upstream targets and 21 are downstream targets. Nine targets are both upstream and downstream.

The interaction can be positive, negative, or both, as shown in the example below.

#### Box 2.3 Upstream and downstream interactions between SDG 14 and SDG 11

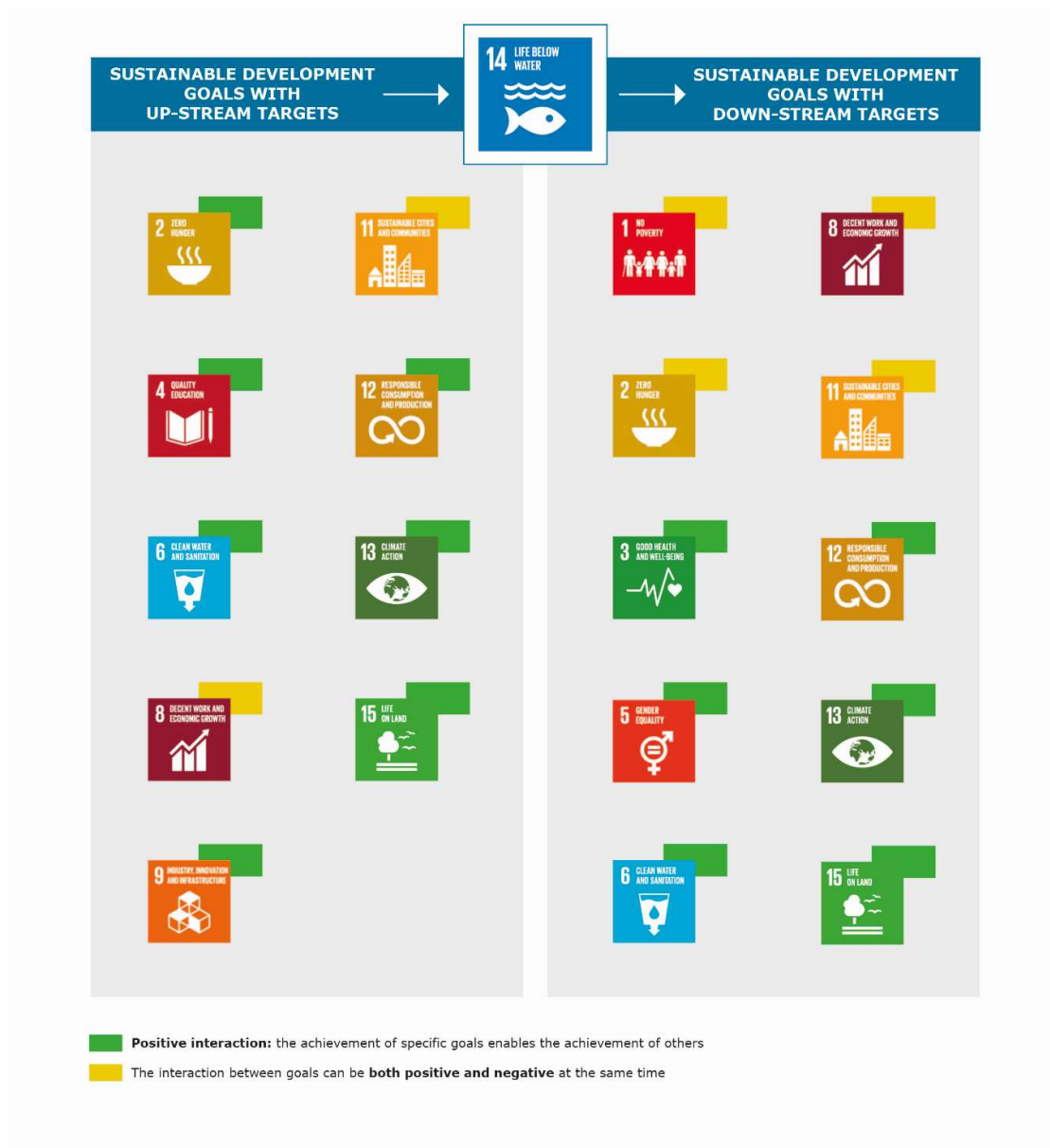
**Upstream:** Cities are an important driver for reducing marine pollution (14.1). About 65% of all megacities worldwide are in coastal areas. Basic public services such as wastewater treatment and waste management are a necessity for reducing discharge from debris and pollutants into the oceans (11.1 and 11.6). Sustainable urbanisation driven by strong planning and management capacities are key to achieving those services (11.3), and therefore achieving SDG11 would positively contribute to the achievement of SDG14.1 (positive interaction).

**Downstream:** This relationship is bi-directional. Efforts to prevent marine pollution (e.g. integrated coastal management, maritime spatial planning, etc.) go hand in hand with the achievement of the above targets and require an integrated planning and management approach between urban areas and the ocean. Actions to tackle marine pollution under target 14.1 reinforce and overlap with actions to ensure safe housing, basic services and to upgrade slums (11.1). It is therefore possible to conclude that progress in the achievement of SDG14.1 could enable progress in the achievement of SDG11 (positive interaction).



The interlinkages identified in this study are shown in the figure below. A more detailed view is included in the Supporting Materials document of this report.

**Figure 2.3 Interlinkages between SDG14 and other ocean-related goals**



The mapping of Member States' policies for SDG14 (see the high-level assessment in Appendix 3 in the Supporting Materials document) also demonstrated that often these policies also jointly address the targets under SDG2, SDG6, SDG8, SDG11, SDG12, SDG15, which further highlights how these goals are closely interlinked in practice.

#### Box 2.4 Recent report by the EC on the Sustainable Development Goals

In November 2020 the European Commission approved and adopted the Staff Working Document 'Delivering on the UN's Sustainable Development Goals – A comprehensive approach', whose purpose is to explain how the European Commission is taking forward its commitment to the 2030 Agenda through its internal and external action policies.

The Staff Working Document:

- Reiterates that the Commission's approach to implementing the SDGs is holistic and focused on delivering concrete actions that will bring tangible progress.
- Highlights that the SDGs are integrated into all Commission proposals, policies and strategies, and that the implementation of the European Green Deal will contribute directly to achieving 12 of the 17 SDGs, including SDG14.
- States that the European Semester will further be refocused to integrate the SDGs.
- Stresses that additional efforts will be made to track the contribution of EU finance to the SDGs and strengthen reporting thereof.
- Underlines how the Commission's approach to domestic and international policy-making contributes to the coherent implementation of the SDGs.
- Confirms the EU's commitment to playing a leading role in the implementation of the 2030 Agenda globally through its external action.

## 2.4 Working together is key

To achieve SDG14 and the other ambitious goals and targets set out in the 2030 Agenda, the international community needs to work together. Countries, regions and continents need to cooperate, but all actors within countries also need to take action.

### The oceans are connected

All oceans are part of a connected system, and achieving the targets of SDG14 therefore requires action across the globe.

Pollution does not stop at borders and it is not enough for one country or region alone to limit it. It instead needs to be prevented worldwide. Furthermore, many marine species are migrant and move across the oceans, where they depend on healthy ecosystems along their routes.

## **The 2030 Agenda connects all dimensions of sustainable development and all sectors**

The 2030 Agenda is integrated and indivisible, and balances the three dimensions of sustainable development: economic, social and environmental. The close interlinkages between all targets and goals have already been illustrated in the previous chapter.

The 2030 Agenda also needs to be implemented as a whole – no goal is more important than the other. This requires close cooperation across all sectors, since an activity benefiting only one dimension of sustainable development cannot be considered ‘sustainable’ when it does significant harm to others.

## **To achieve the 2030 Agenda, all levels of government need to take action**

Actions and policies related to the SDGs need to take place across all levels of government, from global to local levels, including EU institutions, national institutions and ministries, regions, counties, cities and small territories.

Even though the oceans are connected, tackling all aspects of ocean governance and management on a global scale would be slow and unrealistic. Though some elements need to be addressed on this scale, due to the interconnected nature of the oceans, a regional or local approach to ocean management sometimes better reflects the specific challenges and issues faced within oceanic regions.

## **The engagement of stakeholders around the world is key to achieving the 2030 Agenda**

The 2030 Agenda will not be achieved without meaningful action by citizens and businesses around the globe. As the oceans and their biodiversity and services are threatened by numerous human-induced pressures, behaviour change and individual responsibility are essential to addressing the current challenges and implementing the 2030 Agenda. The establishment of transparent and inclusive debates with citizens and businesses, and the reinforcement of citizen engagement activities and educational opportunities on sustainable development will consequently be important to achieving progress on the SDGs.

### 3. Progress towards the 2030 Agenda and SDG14 in the EU

In general, and compared with the rest of the world, the EU performs well in implementing the 2030 Agenda<sup>2</sup>.

Evaluating detailed progress towards meeting SDG14 and the other goals of the 2030 Agenda is challenging, due to their complexity and gaps in data.

There are different reporting initiatives that measure progress towards achievement of the Agenda, each of which uses their own methodology for calculating aggregated scores for each SDG.

This includes the annual Eurostat Report on 'Sustainable development in the European Union — Overview of progress towards the SDGs in an EU context'<sup>3</sup>, and the annual 'Sustainable Development Reports'<sup>4</sup>, which include an SDG Index and Dashboards. The reports use different indicators to assess progress towards meeting SDG14, and this influences the analysis of progress.

#### The Eurostat assessment

The assessment by Eurostat<sup>5</sup> shows that the EU has made progress towards most of the SDGs over the past five years.

Unfortunately, SDG14 (together with SDG6) is one of two goals for which Eurostat was unable to calculate a trend, due to the lack of sufficient data over the past five years<sup>6</sup>.

**Figure 3.1 Overview of EU Member States' progress towards the SDGs over the past 5 years**



Source: EUROSTAT (2020). Sustainable development in the European Union: overview of progress towards the SDGs in an EU context, 2020 edition

## The UN Sustainable development report

The annual 'Sustainable Development Reports' present an SDG Index and Dashboards for all UN member states. At the end of 2019, a special edition of the report was published, focusing on the EU's progress towards Sustainable Development Goals<sup>7</sup>.

This report found that the European Union leads globally on the implementation of the SDGs, and that according to the SDG Index, all 10 countries closest to achieving the SDGs are EU Member States. At the same time, the report found that despite this remarkable achievement, no European country is on track to fully achieve the SDGs.

The authors found that the greatest challenges in achieving the 2030 Agenda remain in goals 'related to climate, biodiversity, and circular economy', including SDG14.

More specifically for SDG14, the report found that this is the only goal for which moderate improvements took place, and major challenges remain.

**Figure 3.2 Dashboard for the performance of the European Union**



Source: ESDR (2019). *Europe Sustainable Development Report. Towards a strategy for achieving the Sustainable Development Goals in the European Union*

## This report








This report focuses on SDG14 and presents an analysis of each of the 10 targets that form the goal. In contrast to other measurements, it takes a hybrid approach that looks at quantitative indicators, but also assesses progress qualitatively. The table below summarised the evidence from the quantitative indicators used in the study and makes a preliminary assessment of the extent to which the SDG14 targets are likely to be met by their stated deadlines.

Looking beyond the indicators, there are many nuances around each target and the detailed assessments are described in the next chapters.

**Table 3.1 Overview of the EU's progress towards achieving SDG14**

Target	Deadline	Likely to be met
SDG14.1 – Marine pollution	2025	<div style="color: green;">↗</div> The indicator used is data on water quality at bathing sites, based on Member State reporting under the Bathing Water Directive. In general, the indicator shows a positive trend.
SDG14.2 – Marine and coastal ecosystems	2020	<div style="color: green;">↗</div> No data is available yet for this indicator. However, within EU waters in general the ecosystem-based approach is at the heart of marine environmental policy. Under the MSFD it became a legally binding and operational principle for managing the EU's entire marine environment, in complementarity with the Water Framework Directive.

Assessment of the existing EU policy tools in the field of Sustainable Development Goal (SDG) 14 and other ocean-related Agenda 2030 targets

Target	Deadline	Likely to be met
SDG14.3 – Ocean acidification	2030	 <p>The indicator for measuring this target is the average marine acidity (pH) for which a continued decline in pH is observable, i.e. ocean acidification is continuing.</p>
SDG14.4 – Fisheries	2020	 <p>The indicator looks at the proportion of commercially exploited fish stocks within biologically sustainable levels (not overexploited), for which rates are declining globally. Within the EU, the indicator shows a mixed picture, with some regions showing a positive trend and others a rather negative one.</p>
SDG14.5 – Marine protected areas	2020	 <p>The target of designating at least 10% of marine sites as protected has been achieved. Challenges nevertheless persist in terms of ecological coherence and effective management of the EU network of MPAs.</p>
SDG14.6 – Fishery subsidies	2020	 <p>The indicator shows that all EU Member States and the UK had a 'very high' level of implementation of relevant international instruments.</p>
SDG14.7 – Economic benefits from sustainable use of marine resources to SIDS and LDCs	2030	No data for this indicator is available.
SDG14.A – Scientific knowledge, research and technology for ocean health	2030	 <p>This indicator is the annual national research budget allocated by governments to the field of marine technology, relative to the overall national governmental research and development budget in general. To date, data for this indicator is only available for the years 2009 to 2013. Over this period, the EU marine technology research budget increased from 0.35% (2009) to 0.56% (2013) of the total research budget worldwide.</p>
SDG14.B – Small-scale fisheries	2030	 <p>This indicator is progress by countries in the degree of application of a legal/regulatory/policy/institutional framework that recognises and protects access rights for small-scale fisheries.</p>
SDG14.C – International Law of the Sea	2030	 <p>This indicator is defined as the number of countries making progress in ratifying, accepting and implementing ocean-related instruments that implement international law through legal, policy and institutional frameworks, as reflected in UNCLOS, for the conservation and sustainable use of the oceans and their resources.</p> <p>The EU and its Member States ratified the United Nations Convention on the Law of the Sea and its two implementing agreements.</p>



## 4. SDG14.1 – Marine pollution



**By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution**

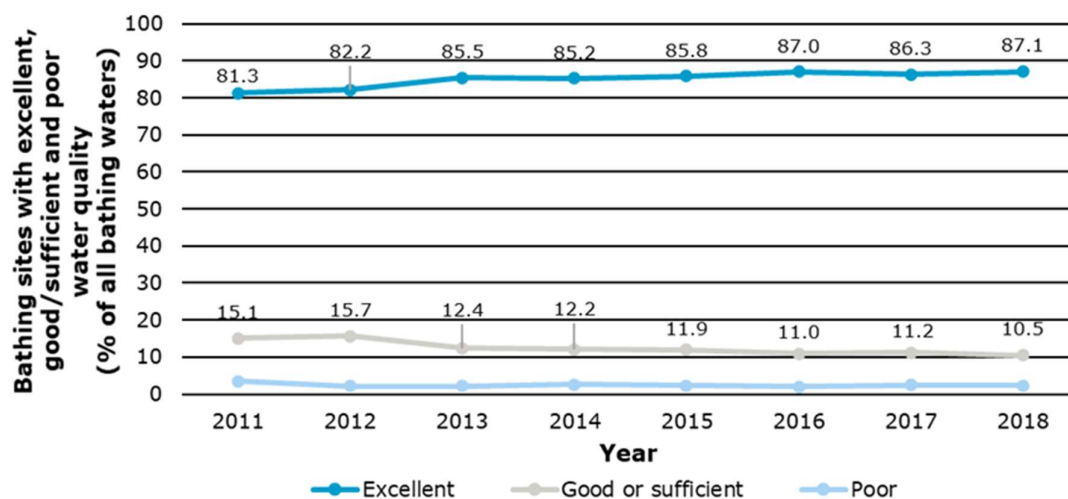
The SDG14.1 target is to be reached by 2025 and focuses on preventing and reducing pollution. It does not aim to achieve specific target values but instead promotes a continuous pollution reduction and prevention effort.

### 4.1 State of play in achieving the target

#### 4.1.1 What the indicators say

The indicators proposed by the UN for measuring SDG 14.1 are the Index of Coastal Eutrophication and Floating Plastic Debris Density<sup>8</sup>. Data collection for both will begin in 2021 and the European Environmental Agency (EEA) for the time being uses bathing water quality<sup>9</sup> as a proxy. The figure below shows the trend for this indicator between 2011 and 2018 at EU level.

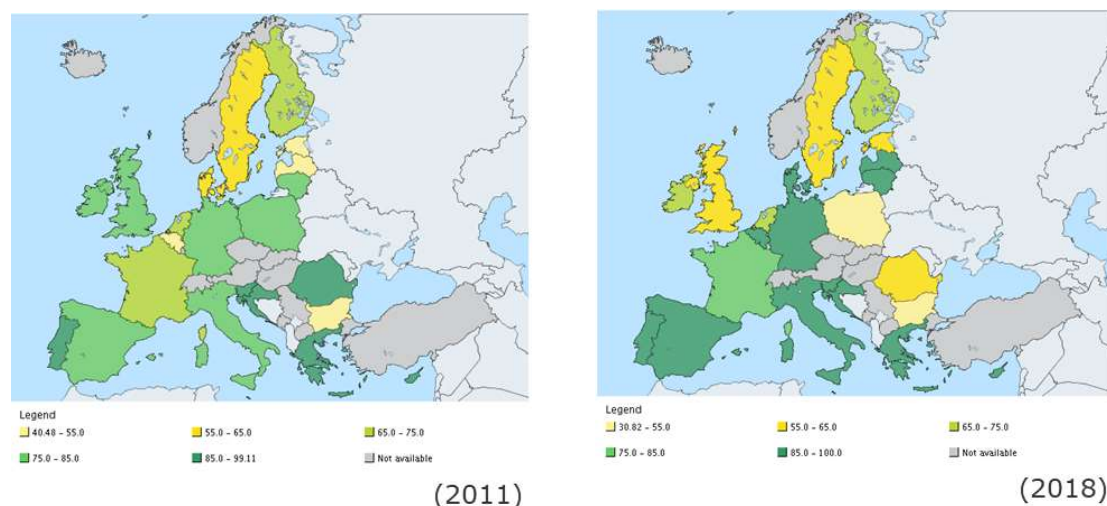
**Figure 4.1. Proportion of coastal bathing sites with 'Excellent', 'Good/sufficient' and 'Poor' water quality for the EU Member States over the 2011 to 2018 period<sup>10</sup>**



The indicators proposed by the UN for measuring SDG 14.1 are the Index of Coastal Eutrophication and Floating Plastic Debris Density. Data collection for both will begin in 2021 and the European Environmental Agency (EEA) for the time being uses bathing water quality as a proxy. The figure below shows the trend for this indicator between 2011 and 2018 at EU level.

Figure 4.1), between 2011 and 2018, the proportion of coastal bathing sites with excellent water quality has increased in some Member States (e.g. Belgium or Denmark), while it has decreased in others (e.g. Ireland or Poland).

**Figure 4.2 Proportion of coastal bathing sites with 'Excellent' water quality by locality in 2011 and 2018 (source: Eurostat, 2020)**



#### 4.1.2 Beyond the indicators

##### What is the EU doing?

The EU has one of the most advanced environmental policy frameworks in the world in place to minimise contaminants<sup>11</sup>, pollution-causing eutrophication, and to avoid marine litter<sup>12</sup>.

Of all SDG14 targets, it draws on one of the most complex policy frameworks, since 'pollution of all kinds' entails a wide range of chemical and physical sources and factors. A total of 59 EU policy tools or groups of policy tools have been identified that directly influence the achievement of this target.

Below is an overview of the most significant policies and how they have developed over the last years. The policy framework will also be strengthened in the near future through the **European Green Deal** and the **zero pollution action plan**<sup>13</sup> to address the cumulative impacts of pollution in air, water and soil.

##### Contaminants and eutrophication

In addition to addressing cumulative pressures and impacts, the **Marine Strategy Framework Directive**<sup>14</sup> (MSFD) has specific components that focus on contaminants: its descriptor 8 aims to keep concentrations of contaminants at levels that do not give rise to pollution effects; descriptor 9 focuses on making sure that contaminants in fish and other seafood for human consumption do not exceed levels established by EU

legislation or other relevant standards. In addition, descriptor 5 looks specifically at minimising eutrophication.

The central objective of the **Water Framework Directive (WFD)**<sup>15</sup> is to achieve 'good ecological status' in all water bodies. This includes achieving 'good chemical status' in coastal waters by 2015. In general, the WFD is considered to be an efficient instrument to address pressures related to inputs of nutrients and chemicals in EU water bodies. The WFD covers surface water pollutants in two ways – by identifying and regulating those of greatest concern across the EU (the priority substances) and by requiring Member States to identify substances of concern at national level or for specific river basins. To support the achievement of 'good chemical status', the 2008 **Directive on Environmental Quality Standards (EQSD)**<sup>16</sup> sets out environmental quality standards for priority substances and other pollutants.

Another specific directive supporting implementation of the WFD is the **Urban Wastewater Treatment Directive**<sup>17</sup>, which has been successful in reducing the loads of the targeted pollutants from urban point sources, as found in a recent evaluation of the directive.<sup>18</sup> This has clearly improved the quality of EU water bodies (freshwater bodies and subsequently marine waters). The directive is also the main factor in ensuring that the EU's bathing water sites are safe. In addition, the required treatment also reduces several non-targeted chemicals, thus also reducing the influx of contaminants into the environment.

The **Nitrates Directive**<sup>19</sup> has the objective of preventing nitrates applied for agricultural purposes from causing harm to (drinking) waters and of inhibiting damage from eutrophication. It regulates Member States' reporting on nitrates, outlines good agricultural practices, defines nitrate vulnerable zones, and provides standards for water monitoring and for the establishment of action programmes. The **Common Agricultural Policy (CAP)**<sup>20</sup> has an important role to play in regulating inputs of nutrients and chemicals in the inland waters.

Industrial production processes account for a considerable share of overall pollution in Europe due to their emissions of air pollutants, discharges of wastewater and the generation of waste. The **Industrial Emissions Directive**<sup>21</sup>, adopted in 2010, is the main EU instrument regulating pollutant emissions from industrial installations (this includes contaminants and substances causing eutrophication). The directive aims to achieve a high level of protection of human health and the environment as a whole by reducing harmful industrial emissions across the EU, in particular through better application of Best Available Techniques.

The **7th Environment Action Programme (EAP)**<sup>22</sup> guided EU environmental policy until 2020, though it has operated with a long-term vision for the EU for 2050. As part of achieving EU policy goals and visions, it has also set a few more specific targets for chemicals, e.g. the preparation of a strategy for a non-toxic environment.

The **Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)**<sup>23</sup> is the cornerstone of the EU's regulation of chemicals. It aims to improve the protection of both human health and the environment from the adverse effects of contaminants. It encompasses all industries and the entire supply chain, making use of the 'producer pays' principle. REACH has contributed to significant

progress in closing data gaps on the potential hazardous properties of over 100,000 substances in the EU.

In 2019, the Commission adopted a **strategic approach to pharmaceuticals in the environment**<sup>24</sup> that is expected to address the pollution of water by pharmaceutical substances.

## Marine litter

Like other pollutants, plastic litter can originate from land-based and sea-based sources. The EU is addressing the problem of marine litter through the **MSFD**<sup>25</sup> as overarching instrument, with descriptor 10 ('Marine litter does not cause harm') looking specifically at marine litter.

For land-based sources, the EU's waste management legislation has a major influence on the reduction of plastic pollution. The EU's **Waste Management Legislation**<sup>26</sup> was established over 40 years ago and has since led to a considerable number of regulations and directives.

More recently, the policy approach has shifted towards a circular economy. In a circular economy, the value of products and materials is maintained for as long as possible. This can bring major economic benefits, contributing to innovation, growth and job creation.

To this end, in 2015, the European Commission presented the **Circular Economy Action Plan**<sup>27</sup>, which aimed to stimulate the transition towards a circular economy. It included a comprehensive work programme with a detailed time schedule for over 50 actions. All actions had been completed by 2019. Part of the action plan was the revision of the legislative framework, which included ambitious aspects such as an EU target to recycle 65% of municipal waste by 2035; a target to recycle 70% of packaging waste by 2030; and a target to reduce landfill to a maximum of 10% of municipal waste by 2035.

The first ever **European Strategy for Plastics in a Circular Economy**<sup>28</sup> adopted in January 2018 transforms the way plastic products are designed, used, produced and recycled in the EU. The strategy is part of Europe's transition towards a circular economy.

For sea-based sources, the revised **Directive on port reception facilities**<sup>29</sup> goes a long way towards ensuring that ship-generated waste is delivered to suitable port reception facilities, instead of being discharged at sea. The Directive regulates discharges of waste from all ships at sea, including from fishing vessels and recreational craft. The Directive creates the financial incentive for ships to deliver all their waste to shore by providing for a fee to be paid, irrespective of the volumes of waste delivered. Fishers have, in addition, the obligation under the **Control Regulation** to retrieve or report lost gear<sup>30</sup>.

A key additional policy was adopted by the Council and European Parliament in 2019: **The Directive on single-use plastics**<sup>31</sup>. It addresses 70% of marine litter items by targeting the top 10 single-use plastic products most often found on Europe's beaches and in seas, as well as fishing gear containing plastics.

The EU is also currently seeking a ban on the addition of microplastics to certain products sold in Europe as well as putting measures in place that reduce other sources of microplastics, e.g. from spills of pre-production plastic pellets.

### **What other observations can be made?**

Despite the positive picture of the Eurostat indicators and the elaborate policy framework, achieving SDG14.1 by 2025 still requires considerable effort.

In terms of **contaminants**, the same report goes on to say that 'hazardous substances above agreed threshold levels are found across all of Europe's seas [...]', but that 'concentrations of specific substances and/or groups of substances have declined'. The 2018 assessment showed that ecosystems are disturbed by contaminants in almost all parts of European seas. In fact, 95% of the Baltic, 91% of the Black Sea, 87% of the Mediterranean Sea and 75% of the north-east Atlantic have been classified as being 'problem areas'<sup>32</sup>. In addition, based on the 2018 assessment of the WFD<sup>33</sup> river basin management plans, only 38% of EU water bodies have good chemical status<sup>34</sup>.

The recent MSFD implementation report<sup>35</sup> also reports that, regarding seafood, certain fish and fishery products from the Baltic Sea region regularly exceed the maximum limits of several contaminants, which has led to the prohibition of sale of salmon in the area.

In terms of **eutrophication**, a recent pan-European assessment<sup>36</sup> found that, while eutrophication caused by inputs of

nutrients remains a large-scale problem, positive effects from the significant efforts put into nutrient management strategies can be seen in all EU regional seas. However, the report also found that policy targets for reducing nutrient inputs remain unlikely to be met within the agreed timeframe for all of Europe's seas. The assessment found that there are large regional differences; while 7% of the north-east Atlantic and 12% of the Mediterranean Sea are estimated to be a 'problem area'<sup>37</sup> in terms of eutrophication, this number climbs to 53% in the Black Sea and 99% in the Baltic.

Finally, **marine litter** is today still a key pressure for marine waters, of which plastic items, including microplastics, are the most abundant and damaging components because of their persistence, accumulation and toxicity<sup>38</sup>. That being said, the full scale of the impact is hard to gauge since only limited data is available<sup>39</sup>.

## 4.2 Remaining challenges

The SDG14.1 target covers a wide range of topics. While it specifically highlights eutrophication and marine litter, it also aims to reduce 'pollution of all kinds', which entails a wide range of chemical and physical sources and factors – both land-based and sea-based.

### General

Once in the environment, pollutants (including contaminants, litter and substances leading to eutrophication) will in most cases accumulate, react, or trigger impacts, and it takes time for them to disappear. This implies that long timeframes might be needed to see the effects of policies put in place to achieve SDG14.1.

A large part of the relevant EU policy tools for fighting pollution were in place well before 2015, and the targets are to a large extent 'being delivered through a series of EU policies and legislation pre-dating the adoption of SDG 14'<sup>40</sup>. Consequently, while time still might be a factor in seeing the full success of environmental policies (which, as shown earlier, clearly address sources of pollution), the presence of pollutants across all European seas also suggests that pollutants continue to be deposited. With this in mind, the EU also updated and improved the policy framework several times after 2015, with new measures that tackle current and upcoming challenges. These measures include the European Strategy for Plastics in a Circular Economy (2018) and the Single-use Plastics Directive (2019), which address plastics leakage into the environment, and the Port Reception Facilities Directive (2018), which regulates discharges of waste from all ships at sea. The effects of these newly adopted policies on SDG14.1 are likely to be seen in the future.

As shown, the policy framework is highly complex and includes a mix of sea-based and land-based policies, making coherent policy application across Member States and institutions a challenge. This criticality is also reflected in the results of the self-assessment by Member States (Appendix 5 in the Supporting Materials document), which indicate that SDG14.1 is the target towards which least progress has been made, despite the fact that most of the policies identified in the course of the policy mapping (see the high-level assessment in Appendix 3 in the Supporting Materials document) address this target directly.



## Contamination

As stated, it is very likely that at least part of the reason why some known hazardous substances have yet to reach the agreed thresholds or concentration levels is explained by the 'persistent properties of some of these substances and also because emissions and discharges still occur in some instances'<sup>41</sup>, i.e. contaminants in the environment are a mix of old deposits and new entries.

For old deposits, the accumulated hazardous substances and heavy metals are impacting marine ecosystems and will continue to do so in the future<sup>42</sup>, since the removal and remediation of contaminated sediments on a large scale is regarded as technically infeasible<sup>43</sup>.

For new entries into the seas, there is an array of pathways that the contaminants can take. This includes sea-based point sources (e.g. aquaculture), inputs from land-based sources (e.g. wastewater treatment plants and run-off from land areas), atmospheric deposits from sea-based sources (e.g. combustion of fuels from ships) and land-based sources (e.g. cars with combustion engines). Blocking these pathways is a major undertaking already reflected in the complex policy framework.

One important issue highlighted by the EEA<sup>44</sup> is the stunningly high number of synthetic chemical substances. There are currently over 150,000 of those substances in commercial use. It is stated that the 'extremely fast discovery of new substances, followed by an ever-increasing production and consumption of chemicals [...] have reached such a scale that scientists have become concerned about whether we are at risk of breaching a planetary boundary for "novel entities"'.

Of those over 150,000 substances, it is estimated that less than 1,000 are regularly monitored. While REACH<sup>45</sup> has contributed significantly to closing data gaps on the potential hazardous properties of over 100,000 substances on the market, unfortunately there are no environmental monitoring requirements under REACH<sup>46</sup>, meaning that under the regulation no information is provided on contaminants in the environment.

This is in line with the findings in the last MSFD implementation report<sup>47</sup>, which points out that across all EU waters little information is available for non-regulated contaminants or substances with the potential for accumulating in fish and seafood used for human consumption.

Stakeholders have pointed out that the WFD might not be flexible enough because it lacks an easy process (including the consent of the qualified majority of Member States) for including new contaminants on its list of main pollutants of water bodies. This is in line with more general findings by the EEA which state that 'the root of most problems suffered by European seas in regard to contaminants is the low rate and speed of policy implementation'<sup>48</sup> and that 'new substances are being developed and marketed faster than before. These may or may not pose a future threat'<sup>49</sup>.

## Eutrophication

Despite a strong policy framework targeted at limiting eutrophication, this remains a widespread problem in some marine regions of the EU.



As stated by the EEA, the challenge is 'to identify relevant measures, because many measures have already been implemented, especially to reduce emissions from point sources<sup>50</sup>, while the emissions from diffuse sources (e.g. agriculture and urban areas) are more challenging to tackle'<sup>51</sup>. As highlighted earlier, eutrophication problem areas were assessed<sup>52</sup> as being 'found near densely populated areas or catchments downstream from agricultural activities'. Indeed, in Europe, agriculture continues to be an essential source of discharge into the environment<sup>53</sup>.

## **Marine litter**

Although known for a long time, the complex problems surrounding plastics in the environment, and more specifically the accumulation in the seas and oceans, have recently found fresh impetus in the international policy arena as their negative impacts have become increasingly visible to the wider public.

Two key pieces of legislation have only very recently been revised (the Directive on port reception facilities<sup>54</sup>) or newly introduced (the Single-use Plastics Directive<sup>55</sup>), and Member States are required to transpose them into national law by 2021. The new single-use plastics legislation will address 70% of marine litter items, including land-based and sea-based ones. The Directive on port reception facilities<sup>56</sup> will specifically target sea-based litter.

## **4.3 Possible ways forward**

### **General options**

The policy framework for reducing marine pollution is complex, since it spans countless pollutants from different sources. At the same time, coherent policy implementation is crucial to ensuring there are no gaps. This includes land-based and sea-based policies that are often implemented by different authorities at Member State level, local level or at both levels. A good understanding among the stakeholders involved in these different levels of policy-making about the wider policy framework they operate in could lead to more coherent implementation of the different policies (e.g. through better cooperation). To achieve this, guidance could be provided by the EU or other actors on how to achieve better cooperation and more coherence across different policy fields. This could lead to more efficiency and effectiveness in policy implementation and could also benefit other issues outlined below (e.g. more coherent monitoring of pollution).

As highlighted the latest MSFD implementation report<sup>57</sup>, the monitoring of pollution could be addressed through more effective data mining and joint monitoring networks (especially in the Mediterranean and Black Sea), as well as harmonised methodological approaches on a regional scale.

The complexity of the policy framework could also challenge policy-making to effectively address cumulative effects. The zero pollution action plan could represent a major step forward in tackling this challenge by looking more systematically at all relevant policies and regulations and addressing interlinked challenges.

In general, it will be important to ensure that effective implementation of past and newly adopted measures for addressing the discharge of pollutants in the marine environment delivers on the targets set.

First attempts at developing quantitative tools to measure the current cumulative effects of different pollutants on EU waters have already been made<sup>58</sup>. They should be used more stringently when further developing the policy framework impacting the marine environment, to provide quantitative information to the public and to policy-makers. Such an assessment of cumulative effects in the forthcoming zero pollution action plan could also be used for future projections (in addition to the assessment of current status), to provide a clearer picture of the expected pathway towards achieving SDG14.1 while also providing a valuable tool for steering policy ambition, including targets set under different policy instruments.

### **Options regarding contamination**

As shown, the sheer number of different chemical substances creates huge challenges for policy-making. As suggested by the EEA, 'The simple solution for addressing these complex, intertwined scientific and policy challenges may be to focus on precautionary and preventive actions'<sup>59</sup>. The report goes on to say that a major step towards informing 'actions regarding contaminants in Europe's seas is to understand the extent of the challenge we face across our marine regions'. This ties in with the suggestion above that more comprehensive assessments of the challenges arising from different pollutants are needed, combining information from several sources and providing policy-makers with comparable data throughout the EU.

### **Options regarding eutrophication**

Regarding the potential impact of agriculture on eutrophication, an evaluation of the impact of the **Common Agricultural Policy**<sup>60</sup> on water<sup>61</sup> was recently conducted. Among other things, it was found 'that the Member States' implementation choices determine the extent to which the CAP measures and instruments meet the EU objective of sustainable management of water' and that 'a considerable amount of the CAP<sup>62</sup> budget is granted to holdings independently of their agricultural pressures on water'. Both of these points, when addressed, provide impetus for reduced eutrophication.

### **Options regarding marine litter**

With an ambitious programme of actions already being put in place by the EU (the European Strategy for Plastics in a Circular Economy), the focus should be placed on effective implementation and on developing further cooperation with third countries and other international organisations to tackle this global problem.

## 5. SDG14.2 – Marine and coastal ecosystems



**By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans**

Target 14.2 calls for sustainable management and protection, as well as the restoration of marine and coastal ecosystems by 2020, i.e. by this year.

### 5.1 State of play in achieving the target

#### 5.1.1 What the indicators say

The indicator used to measure SDG 14.2 (Index 14.2.1) is the proportion of national Exclusive Economic Zones managed using ecosystem-based approaches. However, data collection for this indicator has not started yet<sup>63</sup> and no official data is available<sup>64</sup>.

#### Box 4.1 Origin of the 'ecosystem approach'

The '**ecosystem approach**' is a term introduced during the Rio Summit in 1992 and indicates an integrated approach to the management of ecosystems that aims to achieve sustainable development.

However, within EU waters in general, the ecosystem-based approach is at the heart of marine environmental policy. Under the **Marine Strategy Framework Directive**<sup>65</sup> (MSFD), it became a legally binding and operational principle for managing the EU's marine environment, complementary to other legislation.

#### 5.1.2 Beyond the indicators

##### What is the EU doing?

The ecosystem-based approach is central in the **MSFD**<sup>66</sup>. In a nutshell, the Directive helps identify the main pressures and impacts acting on the marine environment, assess the ecosystem health, and act on drivers of change to conserve the marine environment and make sustainable use of the seas possible. Ultimately, it requires EU Member States to achieve Good Environmental Status in all the EU's marine waters by 2020.

#### Box 4.2 Definition of Good Environmental Status

Good Environmental Status is defined as 'the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations' (Article 3)

Article 1 of the Directive<sup>67</sup> requires that 'Marine strategies shall apply an ecosystem-based approach to the management of human activities, ensuring that the collective pressure of such activities is kept within levels compatible with the achievement of Good Environmental Status and that the capacity of marine ecosystems to respond to human-induced changes is not compromised, while enabling the sustainable use of marine goods and services by present and future generations'.

Other important European legislation for the management and protection of marine and coastal ecosystems are the **Habitats<sup>68</sup> and Birds<sup>69</sup> Directives** which, together with the MSFD, form the environmental pillar of the wider Integrated Maritime Policy. The main objective of the **Habitats Directive** is to maintain and restore natural habitats and species of wild fauna and flora of Community interest at a favourable conservation status. The Birds Directive has similar objectives for all wild birds. As the main contribution to reaching these goals, the Directive requires the designation and effective management of Natura 2000 sites and, for some species, the implementation of a strict protection regime.

#### Box 4.3 Definition of favourable conservation status

**Conservation status** is defined as '**favourable**' when 'population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis' (Article 1).

The above directives have proactive and reactive elements, in that they not only address the protection and management of specific elements of biodiversity but also the restoration and recovery of habitats and species where possible. Most of the stakeholders consulted for this study viewed EU policies in the field of marine conservation as very strong and effective in working towards the achievement of the Sustainable Development Goals.

A wide range of different economic sectors compete to use (and thus impact) marine waters, including fisheries and aquaculture, tourism, maritime transportation, energy and raw material extraction, which can cause increasing pollution and degradation of ecosystems. For this reason, **maritime spatial planning** is needed to organise activities at sea, making sure that marine resources are used in a sustainable way and that wealth is produced without jeopardising the long-term sustainability of marine ecosystems. Maritime spatial planning in the EU is regulated by the **Maritime Spatial Planning Directive (MSP)**<sup>70</sup>, which establishes that **by 2021** all Member States need

to prepare maritime spatial plans that take into account land-sea interactions. These plans need to be revised at least every 10 years. Article 5 of the Directive<sup>71</sup> requires that maritime spatial plans are prepared using an **ecosystem-based approach** to promote the coexistence of relevant activities and uses, and to support sustainable development. It is expected that the EU Member States will be gradually advancing in their implementation of the Directive as we move towards 2021. Some Member States have already established their national plans.

The **MSP Directive**<sup>72</sup> is viewed by the consulted stakeholders as a clear tool that aims to support the objectives of the **Common Fisheries Policy**<sup>73</sup> and **MSFD**<sup>74</sup>, and in this regard it is a notable improvement.

Marine spatial planning under the Directive is a complex undertaking. **The MSP platform**, financed by the European Commission, is viewed by stakeholders as a successful tool for supporting processes with the creation of guidelines, the sharing of information and good practices, and for developing meaningful cross-border spatial plans that indirectly benefit marine conservation.

Furthermore, the implementation of an ecosystem-based approach in fisheries management is also enshrined in the EU **Common Fisheries Policy**<sup>75</sup>. The Common Fisheries Policy also provides various tools for the conservation and proper management of fish stocks and the protection of ecosystems that support the implementation of environmental obligations under the directives referred to above.

More recent policy initiatives such as the **European Green Deal**<sup>76</sup> or the **EU biodiversity strategy for 2030**<sup>77</sup> will also play a role in the achievement of SDG14.2 in the future.

EU Member States' action is also crucial for the achievement of SDG14.2. The policy mapping undertaken in the course of the study (see the high-level assessment in Appendix 3 in the Supporting Materials document), shows that this target is addressed by most of the identified policies immediately after SDG14.1.

### **What other observations can be made?**

#### *Policy objectives – Marine Strategy Framework Directive (MSFD)*<sup>78</sup>

The MSFD requires that Member States assess the status of the marine environment, set their objectives and targets, monitor and take measures to reduce pressures on the seas and ensure their protection and proper management to achieve or maintain Good Environmental Status by 2020. The use of the ecosystem-based approach is enshrined in this Directive.

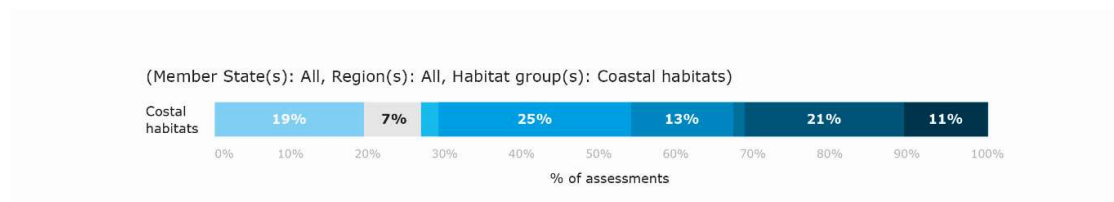
In line with the 2020 deadline, a report was published on the implementation of the MSFD<sup>79</sup>. The report issued in June 2020 revealed that, despite good progress under the Directive, it is 'doubtful that both the measures taken and the knowledge available are sufficient'<sup>80</sup>. The report also mentions that loss of biodiversity could not be halted in Europe's seas in recent years, and that the main pressures include non-indigenous species, overfishing, eutrophication, contaminants and litter.

### Policy objectives – Habitats Directive<sup>81</sup>

Despite the efforts towards sustainable management, protection and restoration, marine and coastal ecosystems are still under pressure today.

According to the latest reporting under the Habitats Directive<sup>82</sup>, only 20% of coastal habitats have achieved favourable conservation status at EU level<sup>83</sup>.

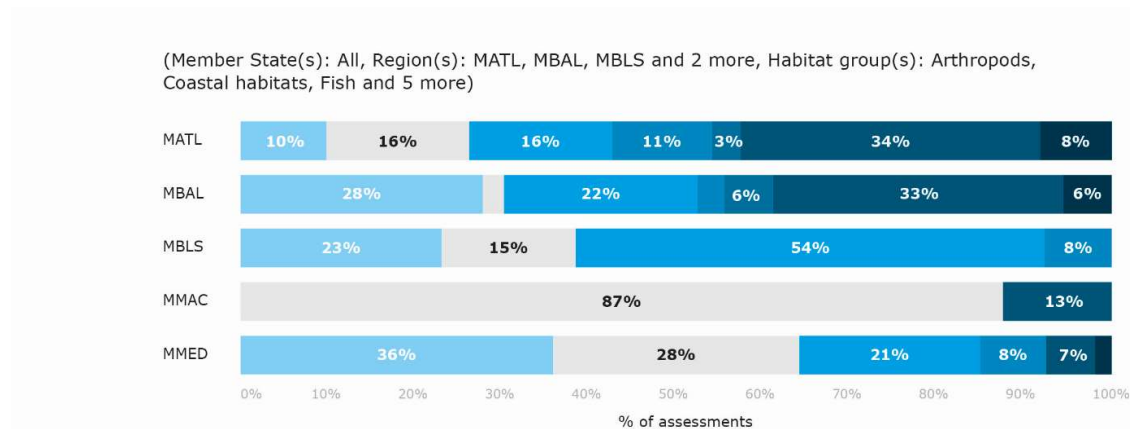
**Figure 4.3 Proportion of assessments in categories of conservation status and conservation status trends by habitat category**



\*Light blue indicates a favourable conservation status, blue indicates a stable/unknown conservation status, dark blue indicates a decreasing conservation status

The conservation status and trends in each marine region are shown in the figure below. As can be seen, only between 10% and 35% of the assessments of habitats protected under the Habitats Directive<sup>84</sup> have favourable conservation status in the five marine regions<sup>85</sup>.

**Figure 4.4 Conservation status and trend in conservation status by marine region**



\*Light blue indicates a favourable conservation status, blue indicates a stable/unknown conservation status, dark blue indicates a decreasing conservation status



Regarding the designation and management of Natura 2000 sites, the marine part of the network still needs improvement, since many sites still lack appropriate management measures, which is preventing the network from reaching its full potential.

#### *Policy objectives – MSP Directive<sup>86</sup>*

EU Member States have until March 2021 to adopt national maritime spatial planning. However, so far, only six Member States have adopted a national maritime spatial plan. Furthermore, the implementation of ecosystem-based approaches in maritime spatial plans is still lacking.

## **5.2 Remaining challenges**

The ecosystem-based approach underpins key EU legislation, and literature on this topic is growing. SWD(2020)62 outlines its relevance in relation to the determination, assessment and achievement of Good Environmental Status under the MSFD. There seems, however, to be a limited understanding of how to apply the ecosystem-based approach in practice for some parts of the EU legislative framework (e.g. how it can be applied under the MSP Directive), according to some of the stakeholders interviewed. In addition, as a directive, the MSP<sup>87</sup> does not specify how the ecosystem-based approach is to be applied in maritime spatial planning, and it leaves the initiative to the Member States.

Member States could therefore benefit from additional evidence-based information on how maritime spatial planning can help them deliver sustainable growth for their maritime economies, and more concretely, how to apply the ecosystem-based approach in maritime spatial planning and other activities. The European Commission is currently carrying out a study on the ecosystem-based approach in maritime spatial planning. Its outcomes will support the Member States in their efforts to better implement the Directive.

### **Environmental pressures**

Despite the policy efforts, there are still a wide range of pressures impacting marine and coastal ecosystems.

Fishing is among the most widespread pressure on the environment. In the Mediterranean and Black Seas, at least 87% of the commercially exploited fish and shellfish species are overfished. In other sea basins, overfishing is a less pronounced pressure, while others such as pollution and eutrophication are pressing issues<sup>88</sup>.

In general, despite partial improvements, extraction and cultivation (aquaculture) of biological living resources is still the second most frequently reported pressure<sup>89</sup> under the Habitats Directive<sup>90</sup> in marine regions<sup>91</sup>. In addition, according to MSFD<sup>92</sup> reporting, fisheries-related impacts have been listed as key pressures in all sea basins<sup>93</sup>.

Seabed habitats are under significant pressure across European seas from the cumulative impacts of bottom trawling, coastal developments and other activities such



as solid waste disposal. In particular, pressure from the energy sector is expected to increase as the growth in extraction of offshore energy fossil fuels is continuing and emerging, notably in Africa. Disturbance to the seabed is also expected from the development of offshore energy technologies in coastal regions. Recent research indicates that about 43% of Europe's shelf/slope area and 79% of the coastal seabed is considered to be physically disturbed, mainly caused by bottom trawling<sup>94</sup>.

As described in the previous chapter, contaminants and eutrophication are still an issue. This is also clear from the reporting under the Habitats Directive<sup>95</sup>, in which almost half of all reported habitats assessments list pollution as a pressure. However, according to the assessments a positive trend is expected in the future<sup>96</sup>.

Marine litter is still a pressure on marine ecosystems and this is expected to continue in future<sup>97</sup>.

Finally, climate change has begun impacting marine ecosystems through changing weather patterns warming the seas, and increasingly acid waters. Those drivers of marine ecosystem degradation appear not to be improving while related pressures are worsening. Reporting under the Habitats Directive<sup>98</sup> shows that while only 30% of habitats assessments reported climate change as a current pressure, this number raises to almost 50% for expected future impacts. For impacts such as ocean warming or ocean acidification, there is currently no coherent policy framework in place for reporting or addressing those effects.

### **Pressures from human activities – the challenges of the blue economy**

Human use of marine resources (the blue economy) causes several pressures on ecosystems as the use of Europe's seas continues to increase, with some established sectors declining or stagnating while new sectors are emerging. For example, emerging activities such as marine renewable energies, desalinisation, and blue biotechnology are adding pressures to the seas alongside traditional activities like shipping, coastal tourism, fishing and aquaculture. As stated by the EEA 'This puts marine ecosystems at risk and could undermine the sea's capacity to supply ecosystem services'<sup>99</sup>; this was also a concern which often voiced by stakeholders during the consultations.

For example, the interests of the tourism industry can run counter to marine conservation objectives. There are concerns among stakeholders that some Member States disregard relevant regulations to favour this economic activity.

In November 2020, the Commission published its offshore renewable energy strategy. The strategy sets out actions to ensure that offshore renewable energy sources can develop and contribute in a significant way to achieving the EU's ambitious climate and energy targets. As part of this strategy, the Commission will foster regional cooperation for the long-term planning and deployment of offshore renewable energy, while ensuring its coexistence with other activities at sea (fisheries, shipping, tourism, defence etc.), as well as environmental, social and economic sustainability.

## **Programmes of measures under the Marine Strategy Framework Directive<sup>100</sup>**

By March 2016, Member States were required to set up and implement programmes of measures to achieve Good Environmental Status in their marine waters, addressing each of the Directive's descriptors, which together should ensure that Good Environmental Status is achieved or maintained by 2020<sup>101</sup>.

The assessment of those programmes of measures has shown that, while considerable efforts have been made by Member States, not all pressures were properly addressed by the measures.

In addition, as noted in the report assessing Member States' programmes of measures under the MSFD<sup>102</sup>, 'Member States often present existing initiatives or ongoing policy implementation as measures. This, for example, includes actions taken under EU environmental legislation or other laws [...]. Existing international commitments, such as those under the International Maritime Organisation, have also been included in Member States' programmes. Additionally, Member States frequently refer to initiatives taken under the Regional Sea Conventions'.

In fact, only 25% of measures have been defined as 'new' measures, meaning that they were put into place specifically for the purposes of the Directive. This is not inherently negative, and the report also points out that a positive effect of the Directive was that 'Member States have progressively moved from a piecemeal approach to protecting the marine environment to a more strategic approach, by bringing together various work-strands'. However, this also shows that Member States did not demonstrate very high ambitions in going beyond existing policy obligations when developing their ambition under the Directive. This was also a point raised by stakeholders during the consultations for this project. They have sometimes criticised the limited ambitions of the Member States in their programmes of MSFD measures.

## **5.3 Possible ways forward**

### **Support implementation of the ecosystem-based approach**

As stated, the ecosystem-based approach is at the heart of EU marine and maritime policy. However, there seems to be a lack of clarity in Member States on how the concept translates into policy implementation across different policies (e.g. marine spatial planning) in a coherent manner. Guidance for the ecosystem-based approach was developed in the context of the MSFD, but there is a need to provide additional guidance to better implement the other policies that are based on the ecosystem approach. The work being done in the marine spatial planning context is to be welcomed for the implementation of an ecosystem-based approach.

This could include, for example, more guidance by the European Commission for policies for which no concrete guidance yet exists for the implementation of an ecosystem-based approach.



## 6. SDG14.3 – Ocean acidification



**Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels**

SDG 14.3 focuses on minimising and addressing the impacts of ocean acidification. Ocean acidification is caused by the uptake of atmospheric CO<sub>2</sub><sup>104</sup> by the ocean, which changes the chemical composition of the seawater. Climate policies are therefore a crucial tool for reducing ocean acidification.

In addition to being a separate target in the 2030 Agenda (i.e. 14.3), ocean acidification is also recognised in the 'Aichi Biodiversity Targets'<sup>105</sup> in Target 10: 'By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimised, so as to maintain their integrity and functioning.'

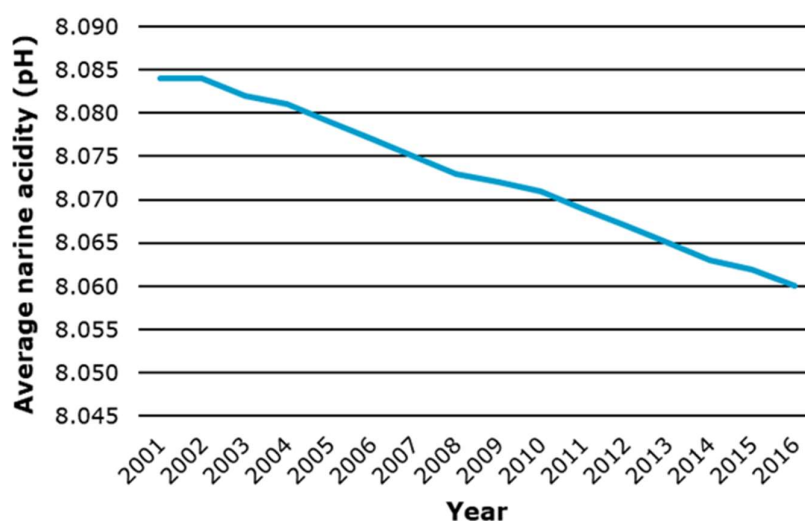
### 6.1 State of play in achieving the target

#### 6.1.1 What the indicators say

The indicator for measuring this target is the average marine acidity (pH) measured at an agreed set of representative sampling stations<sup>106</sup>.

This data on yearly average can be viewed below. As can be seen, a continued trend of acidification is observable. In total, long-term observations of ocean acidification over the past 30 years have shown an average increase in acidity of 26% since pre-industrial times.

**Figure 6.1 Average marine acidity (pH) over the 2011-2016 period**



In addition to minimising the impacts of ocean acidification, SDG14.3 also points to the need for addressing them. The current indicator does not provide insights into local effects and potential adaptation measures.

### 6.1.2 *Beyond the indicators*

#### **What is the EU doing?**

Ocean acidification results from higher CO<sub>2</sub> concentration in the atmosphere, and minimising ocean acidification requires successful global climate policies. Ocean acidification is also often called 'the other CO<sub>2</sub> problem'. Global climate policies to reduce atmospheric CO<sub>2</sub> concentrations are key to halting ocean acidification.

The **United Nations Framework Convention on Climate Change**<sup>107</sup> (the UNFCCC) – agreed in 1992 following the first global Earth Summit of the same year – put in place the first global agreement to tackle global warming, now widely referred to as climate change. The agreement of the 1997 **Kyoto Protocol**<sup>108</sup> to the UNFCCC provided a basis for a more ambitious response to climate change by placing quantified greenhouse gas (GHG) emissions limitation and reduction targets on developed country parties.

The EU ratified the UNFCCC<sup>109</sup> in 1992 and the Kyoto Protocol<sup>110</sup> in 1998. Under the Kyoto Protocol<sup>111</sup> the EU adopted the target to **reduce emissions by 20% by 2020**.

In 2008, the **climate and energy package**<sup>112</sup> established binding legislation to ensure the EU meets a number of targets by 2020, including to cut in GHG emissions by 20% compared to 1990 levels.

International climate discussions culminated in the **Paris Agreement**<sup>113</sup> at the 2015 Paris Climate Change Conference. The Paris Agreement<sup>114</sup> introduces a new global regime for climate change where all countries are expected to contribute towards the Agreement's new, more ambitious goals to prevent dangerous anthropogenic interference with the Earth's climate system. Consequently, all signatory parties are expected to align their long-term climate change mitigation efforts with keeping global temperature increases within 2°C of pre-industrialisation levels, make efforts to limit temperature increase to 1.5°C, and to achieve a balance between emissions of GHGs from sources and the removal of GHGs from the atmosphere by sinks by the second half of this century. This latter goal is widely referred to as 'net-zero emissions' or 'carbon neutrality'.

In 2015, the EU ratified the Paris Agreement<sup>115</sup> and communicated a nationally determined contribution under the Paris Agreement<sup>116</sup> of a domestic GHG emission reductions of at least 40% by 2030, compared to 1990 levels.

In 2018, the EU adopted legislation on the **Climate and Energy Framework**<sup>117</sup> for the 2021-2030 period, implementing the mitigation target of 40% and increasing the targets for the share of renewable energy and energy efficiency.

The EU policy framework consists of a broad set of specific policies aimed at reducing GHGs in the atmosphere from different sources. The EU is the region of the world where the most ambitious climate policies have been implemented, and practical policy

experimentation in the field of the environment and climate change has been taking place at a rapid pace in recent decades<sup>118 119</sup>.

Through this extensive policy framework, by 2018 the EU's GHG emissions had decreased by 23% compared to 1990 levels. The EU therefore is on track to achieve its target under the UNFCCC<sup>120</sup> of reducing GHG emissions by 20% by 2020<sup>121</sup>.

Furthermore, the policy framework put in place by the EU for achieving the 2030 target under the Paris Agreement<sup>122</sup> is also expected to deliver on the EU commitment. Current projections indicate that, if current policies are fully implemented, GHG emission reductions by 2030 would be around 45% compared to 1990 levels when excluding land use emissions and absorptions, and around 47% when including land use. In December 2020, the European Council endorsed a binding EU target of a net domestic reduction of at least 55% in GHG emissions by 2030 compared to 1990<sup>123</sup>.

### **What other observations can be made?**

It is estimated that the oceans have absorbed about 30% of emitted anthropogenic CO<sub>2</sub><sup>124</sup>. While ambitious, the EU policy framework for climate change mitigation until 2020 only aimed at reducing emissions and not at achieving carbon neutrality. This means that emissions, while decreasing, are still high, and that the oceans are still absorbing parts of this surplus. Although the EU is at the forefront in addressing the causes and challenges of climate change and strengthening a concerted global response, it is still the third biggest emitter of GHGs worldwide, behind China and the United States<sup>125</sup>.

As shown earlier, ocean acidification continues to worsen globally as average marine acidity has been constantly increasing. It is estimated that the current rate of change in acidity is about 100 times faster than any change in acidity experienced during the past 55 million years<sup>126</sup>.

Looking into the future, models also consistently project further ocean acidification worldwide, while marine surface pH is projected to decrease to values between 8.05 and 7.75 by the end of the 21st century, depending on future CO<sub>2</sub> emission levels<sup>127</sup>.

Ocean acidification has wide-ranging impacts on marine ecosystems. A reduction in carbonate availability has major impacts on the organisms relying on it, such as reef-building corals, shellfish and plankton.

Changes in pH affect biological processes, e.g. enzyme activities and photosynthesis, which in turn affects primary production. These changes may be exacerbated by rising seawater temperatures. Changes in marine primary production will have an impact on the global carbon cycle and the absorption of atmospheric CO<sub>2</sub> in the ocean, as well as on the overall capacity of the ocean to mitigate climate change<sup>128</sup>.

According to the EU Member State representatives consulted in the course of the study (see Appendix 5 in the Supporting Materials document), SDG14.3 is one of the targets perceived as having larger gaps in achievement.

## 6.2 Remaining challenges

### Missing knowledge

Target 14.3 aims to tackle ocean acidification, among other means, 'through enhanced scientific cooperation at all levels'. This is important to highlight because coherent scientific knowledge in this field is still lacking.

A recent report under the Nairobi work programme<sup>129</sup> summarises the gaps as follows<sup>130</sup>: 'The impact of pH changes on the organismal and ecosystem level is not monitored sufficiently or consistently across geographies, while it is important to develop a case and effect understanding through identifying the physiological and biochemical mechanisms and understand the higher level ecosystem responses to ongoing acidification as well as improving projections of future changes and risks including irreversible shifts in ecosystem structure and functioning. Ocean pH monitoring as well as the monitoring of impacts is needed as ocean acidification affects the overall ecological state of ocean regions, with the potential to affect all trophic levels. This also concerns the identification of adaptation limits and the capacities of ecosystems to adapt.'

It can be hoped that the forthcoming effort by the UN as part of its Decade of Ocean Science for Sustainable Development (2021–2030) will be instrumental in further prioritising this pressing problem at EU level<sup>131</sup>.

### Missing international framework addressing ocean acidification

Despite the urgency of the issue and the role of the ocean in climate regulation and human livelihood, ocean acidification has generally been 'side-lined'<sup>132</sup> in the development of climate change and related environmental policies at national, regional and international level. However, some work is done, for example, by the Regional Sea Conventions. This includes the OSPAR expert group on acidification.

The UNFCCC<sup>133</sup> is considered by many as being capable of addressing ocean acidification as it regulates carbon dioxide emissions – the root cause of the problem<sup>134</sup>.

The UN Convention on the Law of the Sea (UNCLOS)<sup>135</sup> also only touches upon the issue indirectly by addressing marine pollution through the atmosphere (Article 212), while not specifically mentioning CO<sub>2</sub> or acidification. The Convention on Biological Diversity<sup>136</sup> mentions acidification in one of its targets and is therefore relevant because it addresses the impact of ocean acidification on marine species<sup>137</sup>.

This issue is also addressed in the IPCC 'Special Report on the Ocean and Cryosphere in a Changing Climate'<sup>138</sup> which argues, under a heading entitled 'Policy Responses to Ocean Acidification: Is there an International Governance Gap?', as follows:

'Ocean acidification is not specifically mentioned in the Paris Agreement on climate change [...] and has only been given limited attention to date in other UNFCCC discussions. Nevertheless, ocean acidification is widely considered to be part of the climate system [...]. Although many bodies have interests in ocean acidification, no



unifying treaty or single instrument has been developed [...] and there has been only limited governance action that is specific to the problem [...]. One possible response to the fragmented responsibilities for ocean acidification governance would be the development of a new UN mechanism specifically to address ocean acidification [...]. This option would take time and political will and has not been widely supported [...]. One pragmatic approach could be enhancing the involvement of UNFCCC with acidification governance [...] together with increased use of multilateral environment agreements’.

### **Patchy EU framework for understanding and addressing the impacts of ocean acidification**

As pointed out above, the policy framework for mitigating GHG emissions in the EU is very strong. However, there seems to be limited focus of policy tools on understanding and addressing the impacts of ocean acidification within the EU. This is accompanied by a lack of coordination between European and national policies addressing ocean acidification<sup>139</sup>.

Acidification is not recognised in relevant key EU environmental policy tools. For example, it is not mentioned in the ‘EU BIODIVERSITY STRATEGY to 2020’<sup>140</sup> or ‘EU biodiversity strategy for 2030’<sup>141142</sup>. In the 7th EAP<sup>143</sup>, acidification is mentioned once, but only as a pressure for achieving Good Environmental Status under the MSFD. The latest implementation report of the MSFD<sup>144</sup> points out that the link between the MSFD and climate change, both at monitoring and policy development levels, is not obvious, and that key topics such as the monitoring of ocean acidification in European seas and the impacts of marine heatwaves on marine biodiversity are not yet well established. A recent article assessing the current status of ocean acidification governance within the EU also found that there is no strong policy framework directly addressing ocean acidification at either EU or Member State level<sup>145</sup>.

Moreover, emissions from ships are not sufficiently addressed, and this remains a challenging issue. European shipping is a large source of GHG emissions and air pollution. Maritime transport emits around 940 million tonnes of CO<sub>2</sub> annually and is responsible for about 2.5% of global GHG emissions. By signing the Paris Agreement, the EU committed to ‘economy-wide’ emissions reduction efforts. However, shipping is currently the only sector not yet contributing to the EU’s emissions reduction targets and efforts. As such, international shipping stands in the way of the EU fulfilling its Paris commitment and increases pressures on ocean ecosystems by contributing to ocean acidification.

## **6.3 Possible ways forward**

### **Improve knowledge base**

Monitoring and scientific insights on the impacts and dynamics of ocean acidification are crucial in order to address them.

Initiatives to measure ocean pH in a greater number of locations are underway. For instance, 'the Global Ocean Acidification Observing Network' is a collaborative international network to detect and understand the drivers of ocean acidification in estuarine, coastal and open ocean environments. This includes data collection through a variety of sources across the globe – such as data collection on biological responses to ocean acidification. The EU should continue ensuring support and partnership with such global initiatives.

Within the EU, Copernicus provides data on all EU sea basins and to Eurostat. Coastal resolution still needs to be improved, but work is being done. A reference biogeochemical buoy exists in Europe and two new devices will be developed by Copernicus within the next four years. In addition, EMODNET, a web portal for marine data initiated by the European Commission, provides datasets relevant for acidification<sup>146</sup>. The EU is therefore making progress in terms of monitoring.

### **Support international governance**

Ocean acidification is a global and increasing problem and there is an urgent need to act at international level to provide a governance framework. However, there seems to be uncertainty on the best way to do this. The EU could play a driving role in this process by calling for more coordinated international action.

One step in this direction could also be for the EU to become a member of the International Coral Reef Initiative (ICRI) which is a strong advocate for more awareness and action on ocean acidification.

The Regional Seas Conventions already carry out activities related to climate change and some participate in the preparation of regional reports (Med ECC – Barcelona Convention).

EU support to these types of initiatives should be continued, with a view to coordinating action to counteract ocean acidification.

### **Improve the EU policy framework**

Ocean acidification entails high risks for marine ecosystems. These risks should be sufficiently highlighted and acknowledged at EU policy level to raise awareness of this pressing issue.

The EU could also improve the policy framework by putting in place specific actions or tools (including additional research, streamlining and proactive planning) to enhance and better coordinate the abatement of ocean acidification.

## 7. SDG14.4 – Fisheries



**By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics**

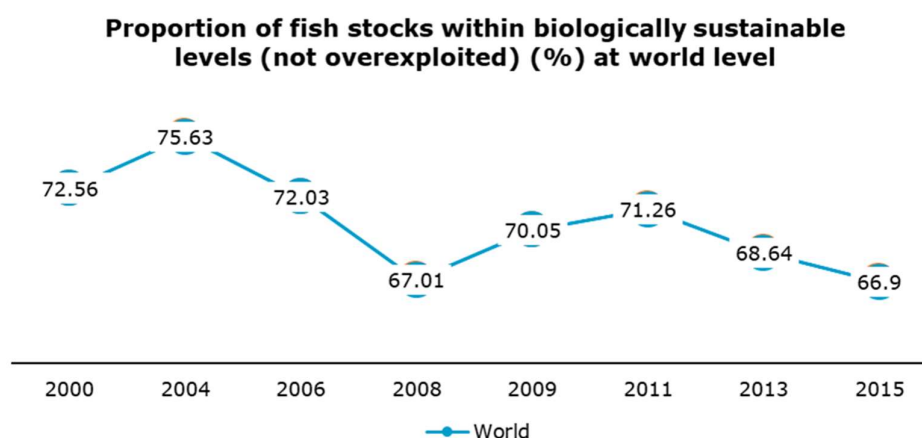
SDG 14.4 focuses on restoring fish stocks through a range of different measures and management tools.

### 7.1 State of play in achieving the target

#### 7.1.1 What the indicators say

The official global indicator for measuring SDG 14.4 relates to the proportion of fish stocks within biologically sustainable levels<sup>147</sup>.

**Figure 7.1. Proportion of fish stocks within biologically sustainable levels (not overexploited; %) over the 2000-2015 period in the world (source: UNSTATS, 2020)**



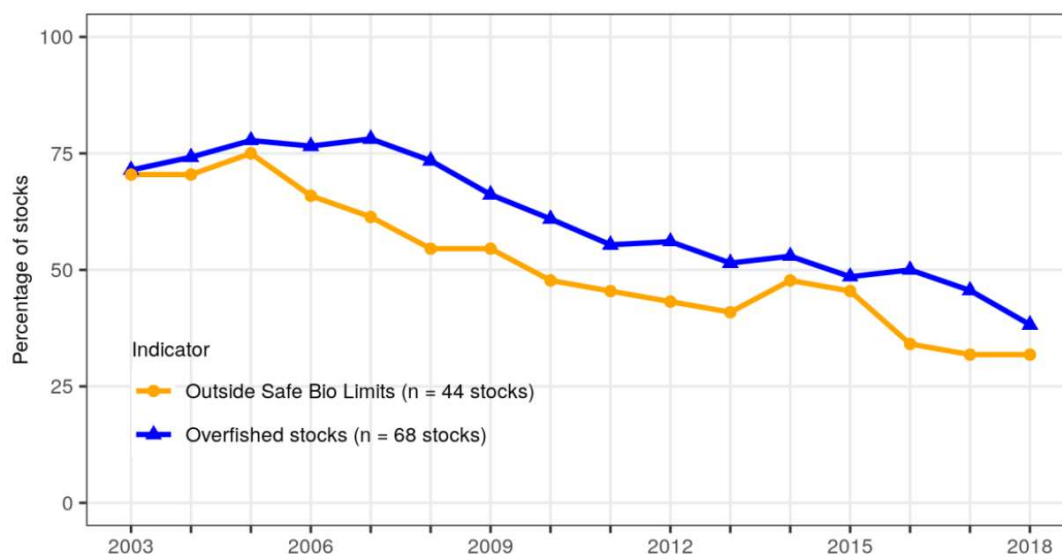
The proportions are shown over the 2000-2015 period. As can be seen in the figure, the proportion of fish stock within biologically sustainable levels was at its lowest globally in 2015.

To determine which stocks are in good state within the EU seas, several indicators are used, including the proportion of overexploited stocks and the proportion of stocks outside safe biological limits.

Across different sea basins in the EU the trends in fish stocks are two-fold.

In the 'north-east Atlantic' (which refers to all stocks within EU waters in FAO Area 27, including the North Sea and the Baltic)<sup>148</sup>, the analysis of long-time data series shows clear signs of improvement as shown in the figure below.

**Figure 7.2 Changes in stock status in the north-east Atlantic region**



Source: STECF (2020) Monitoring the performance of the Common Fisheries Policy.  
The blue line shows the proportion of overexploited stocks and the orange line the proportion of stocks outside safe biological limits

In those seas, there are signs of recovery in several fish and shellfish stocks. If these efforts continue, fishing mortality (e.g. removal of fish due to fishing activity)<sup>149</sup> in the region should remain on average near the maximum sustainable rate of fishing mortality, and reproductive capacity should continue to improve, achieving the 2020 objective for healthy fish and shellfish stocks in the north-east Atlantic and Baltic.

In contrast, in the Mediterranean and the Black Sea, the situation remains critical, with a high percentage of the assessed stocks overfished and a significant lack of knowledge about fishing pressure and reproductive capacity. Fishing policy in those sea basins faces specific challenges. For example, contrary to other EU basins, most of the Mediterranean waters are international, with EU countries in the north of the basin and third countries in the south. This means that stocks are shared (exploited jointly by the EU and third countries), so co-management is paramount to sustainable fisheries in this basin. However, EU efforts and a management framework alone may not guarantee sustainable fisheries in the Mediterranean.

In general, while stocks remain overexploited in the Mediterranean and the Black Sea, there have recently been several measures put in place to improve the situation, for example with the adoption of the first ever multiannual plan in this region (more specifically Mediterranean I), which have the potential to drive significant improvements<sup>150</sup>.

In addition, the 2017 MedFish4Ever Ministerial declaration, prepared and promoted by the EU, set a 10-year political roadmap with clear objectives for sustainable fisheries.

However, while more ambitious measures are now in force, it takes time for the system to adapt and for stocks to respond to better management.

### **7.1.2 Beyond the indicators**

#### **What is the EU doing?**

##### **What is the EU doing?**

The **EU Common Fisheries Policy** aims to ensure that fishing and aquaculture are environmentally, economically and socially sustainable. Between 2015 and 2020, catch limits should be set that are sustainable and maintain fish stocks in the long term (i.e. that can achieve maximum sustainable yield).

The last reform of the Common Fisheries Policy<sup>151</sup> (i.e. applied from 2014 onwards) has brought important governance improvements, including the introduction of maximum sustainable yield<sup>152</sup> as management objective, regionalisation and the landing obligation<sup>153</sup>.

Consultations conducted in the course of this study have repeatedly viewed the maximum sustainable yield concept, the setting of total allowable catches and fishing quotas<sup>154</sup> and reformed multiannual plans<sup>155</sup> as efficient tools for the promotion of sustainable fishing practices.

The regionalisation process under the Common Fisheries Policy is also considered a good approach to involving stakeholders and promoting ownership, according to some of the stakeholders interviewed. The regional management plans are considered particularly powerful tools, especially in relation to the possibility of adopting related delegated acts.

One major development was also to use an ecosystem-based approach for fish stock management, e.g. through the introduction of multiannual plans.

The backbone of the EU fisheries policy is the so-called **Basic Regulation**<sup>156</sup>, which aims to ensure that fisheries are managed in a way that ensures environmental, social and economic sustainability and food supply. In addition to the Basic Regulation, a set of other EU regulations make up the Union's regulatory body for fisheries. This body regulates a very wide range of aspects of fisheries' activity<sup>157</sup>.

The fishery and aquaculture products market is regulated by the **Regulation on the Common Organisation of the Markets** in fishery and aquaculture products<sup>158</sup>, which aims to achieve the environmental sustainability and economic viability of the markets in fishery and aquaculture products.

Another important regulation is the **Technical Measures Regulation**<sup>159</sup>. This deals with the conservation of fisheries resources and the protection of marine ecosystems through technical measures, and aims to optimise exploitation patterns to protect juveniles and spawning aggregations of marine biological resources, minimising

incidental catches of sensitive species, limiting negative environmental impacts and contributing to the achievement of Good Environmental Status.

Data collection activities in the fisheries sector are governed by a framework regulation for data collection on fisheries<sup>160</sup>.

The EU has a control system in place to ensure compliance with the rules of the Common Fisheries Policy. The system comprises (among others) the **Regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing**<sup>161</sup> and the **Regulation on the sustainable management of external fleet**<sup>162</sup>. Both are of particular relevance for the external dimension of the Common Fisheries Policy. Finally, the **Control Regulation**<sup>163</sup> establishes a system for control, inspection and enforcement to ensure compliance with the rules of the Common Fisheries Policy.

During consultations, the international dimension of the **Regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing**<sup>164</sup> was consistently considered very effective. In particular, the carding mechanism<sup>165</sup> is seen as a very positive example for structuring cooperation with non-EU countries that could be replicated in other policy fields if their legal basis allows it (this would, however, need to be based on a thorough assessment of those other policies). This mechanism appears to work appropriately with third countries because it is a market-based measure that exploits the 'regional threat' with the aim of creating a level-playing field and to nudge countries into complying with their international obligations. The EU has an important role to play in the international arena in this sense, due to its major influence.

The **European Maritime and Fisheries Fund**<sup>166</sup> is one of the five structural and financial funds of the EU. It aims to foster sustainable activity, covering the whole value chain of fisheries and aquaculture, to support diversification, and to create new jobs and territorial cohesion, and to fund implementation of the Common Fisheries Policy<sup>167</sup>, including data collection and control purposes. It also supports various measures for the conservation and management of ecosystems. It therefore provides financial support to the whole policy framework described above.

## What other observations can be made?

### Overfishing

As mentioned above, within the EU, and particularly in the Mediterranean and the Black Sea, the situation remains critical, with a high share of the assessed stocks being overfished. In other EU seas, even though the situation is improving, several fish stocks are still overfished. In other sea basins, most notably the north-east Atlantic, the trends look more optimistic.

For the landing obligation, which aims to reduce unwanted catches and the practice of discarding by increasing selectivity, compliance is relatively weak within the EU<sup>168</sup>.

According to the EU Member States' representatives consulted in the course of the study (see Appendix 5 in the Supporting Materials document), SDG14.4 is among the targets for which there are still major gaps in achievement.



## **Destructive fishing practices**

As already mentioned earlier in this report, destructive fishing practices continue to significantly disturb EU marine ecosystems – it is estimated that around 43% of Europe's shelf/slope area and 79% of the coastal seabed is being physically disturbed. This is mainly caused by bottom trawling. This is recognised in the biodiversity strategy for 2030, which suggests actions to reconcile the use of bottom-contacting fishing gear with biodiversity goals, given that it is now the activity most damaging to the seabed.

## **7.2 Remaining challenges**

Reminder: The possible explanations below are linked to the policy framework. It is clear that the status of fish stocks is further influenced by an array of different anthropogenic and natural impacts e.g. in relation to climate change, many of which are not yet fully understood.

### **Availability and use of scientific knowledge**

Data availability is not sufficient to provide a coherent picture of all relevant fish stocks across the European seas. Data is often not available for certain species, which hinders the quality of the scientific advice<sup>169</sup>. Monitoring and reporting remain challenging for some Member States, as does the comparability of the data provided. Generally, fish quotas are often only set for the most economically important stocks, while small and less economically important ones are disregarded<sup>170</sup>.

Scientific advice is not always followed when fishing quotas are adopted at the end of the legislative process<sup>171</sup>. A fundamental condition for the improvement of fish stocks is to follow scientific recommendations when setting total allowable catches and fishing quotas; this is also reflected in the wording of SDG14.4, which calls for 'science-based management plans'.

### **Implementation and enforcement of the policy framework**

The implementation of the landing obligation is meeting resistance from Member States and the fishing industry<sup>172</sup>. Levels of enforcement have remained poor and there is a lack of support and compliance by the fishing industry.

The enforcement of the Control Regulation is challenging, in particular when it comes to monitoring small-scale fishing vessels.

### **Integration of fishing and environmental concerns**

Despite increasing efforts to combine fishery policies with environmental policies, there still is a perceived divide among stakeholders. However, within the EU there are many promising approaches for integrating fisheries and environment, since policy coherence and the integration of environmental objectives into all EU policies is stipulated and



required under the EU Treaty. This is manifested, for example, through policy interactions between the MSFD 173 and the Common Fisheries Policy<sup>174</sup>.

Integration is also important on the stakeholder side. A positive example here is the memorandum of understanding between the North East Atlantic Fisheries Commission (NEAFC), a regional fisheries management organisation, and the OSPAR Commission, related to one of the main EU Regional Sea Conventions.

However, as mentioned above, during stakeholder consultations for this study, one aspect that was frequently brought up was the perception that there is still a divide between the two fields. Examples given included limited communication between national ministries (or regional/local governments) responsible for the topics, and disconnected national policy frameworks. This might indicate that implementation of those policy fields at national level is not sufficiently integrated.

### **7.3 Possible ways forward**

#### **Availability and use of scientific knowledge**

Good data is the foundation of a good policy, especially in the case of the Common Fisheries Policy. However, during the consultations there was often the perception that not enough funding is available for the relevant research institutes in the Member States for the complex data collection necessary for assessing and following maximum sustainable yield and other policy goals. However, in this sector – most notably through the EMFF – funding is available and is often not fully utilised.

It should be assessed whether funding do exist and where. If they do exist, approaches should be adopted for better financing; if the issue is a rather limited absorption of funds by stakeholders, approaches could be developed to improve this.

#### **Integration of fishing and environmental concerns**

More efforts could be undertaken to more closely integrate the stakeholders of either policy fields at local, Member State level and regional level. This could, for example, be helpful for more effectively ensuring buy-in by the fishing industry, which often perceives policies as being biased towards NGOs' interests and often 'unfair'. One possible reason brought up for this during the consultations was that the fishing industry is not sufficiently involved in the discussions on policy development in fishing and environmental policies.

In this context, the EU's biodiversity strategy represents a positive signal. The strategy mandates that an action plan to conserve fisheries resources and protect marine ecosystems will be developed. The Action Plan will highlight areas where further action is needed, for instance with regards to the protection of sensitive species and habitats, and fishing gear that potentially has a negative impact on the marine environment and seabed. The action plan will take into account the existing environmental obligations under the Habitats, Birds and Marine Strategy Framework Directives.

## 8. SDG14.5 – Marine protected areas



**By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information**

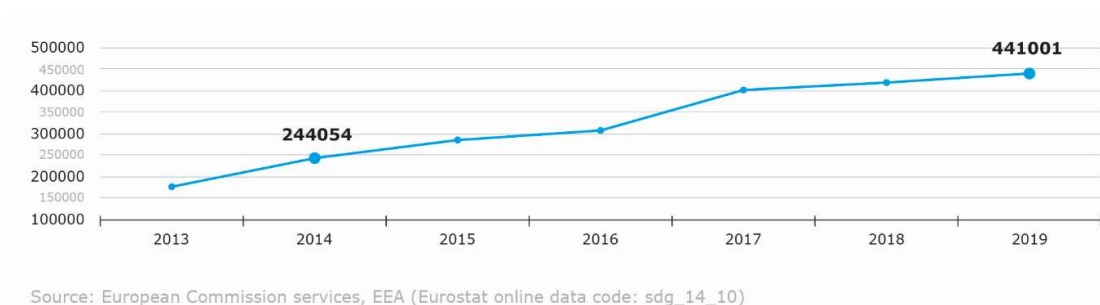
SDG14.5 calls on states to conserve at least 10% of the world's oceans by 2020, by establishing marine protected areas (MPAs) based on the best available scientific information and in conformity with national and international law. The internationally recognised definition for a 'protected area' is provided by the Convention on Biological Diversity (CBD), which defines them as 'geographically defined areas which are designated or regulated and managed to achieve specific conservation objectives'<sup>175</sup>. SDG14.5 establishes a clear target value: 10% of coastal and marine areas must be conserved. This reflects another international commitment that the EU has already agreed to implement, Aichi Target 11<sup>176</sup> adopted in the context of the CBD in 2010.

### 8.1 State of play in achieving the target

#### 8.1.1 What the indicators say

The official indicator for measuring the achievement of SDG14.5 is the coverage of protected areas in relation to marine areas (Index 14.5.1). According to Eurostat, in 2016 the spatial coverage of MPAs in EU was 10.8% of the total marine and coastal surface area. In 2019, the spatial extent of marine sites designated for protection under Natura 2000 was 441,001 km<sup>2</sup><sup>177</sup>.

**Figure 8.1 Surface area of marine sites designated under Natura 2000, EU Member States, 2013–2019 (km<sup>2</sup>)<sup>178</sup>**



While the EU as a whole achieved the target for spatial extent of marine protected areas ahead of schedule, not all regional seas have reached the target of 10% coverage of MPAs, notably in the Mediterranean Sea<sup>179</sup>. In addition, the target has not been met in relation to the effective management and conservation of these areas.

### 8.1.2 *Beyond the indicators*

#### What is the EU doing?

*The EU fosters the development of the EU MPA network through various policy tools*

Different policy tools support the development of MPAs in Europe. MPAs are primarily designated under the **Birds**<sup>180</sup> and **Habitats**<sup>181</sup> **Directives**, which require, among other conservation measures, the creation and management of special areas of conservation and special protection areas for the conservation of certain species and natural habitats. The MPAs designated under these directives form part of the **Natura 2000** network, which is the largest coordinated network of protected areas in the world<sup>182</sup>. MPAs are also designated under national and regional programmes undertaken to meet the objectives set by the **Marine Strategy Framework Directive**<sup>183</sup>. The MSFD establishes a legal obligation that spatial protection measures should 'contribute to coherent and representative networks of marine protected areas'<sup>184</sup>. All three legal instruments establish that necessary conservation objectives and measures must be established to ensure that MPAs guarantee the conservation of habitats and species in these areas.

The **Common Fisheries Policy**<sup>185</sup> also contributes to regulating human activity in MPAs. It provides that Member States can adopt conservation measures affecting fishing activity (e.g. restrictions on commercial fisheries and no-take zones) in protected areas within their jurisdiction, or that they can ask the Commission to adopt them where other Member States also have a management interest in the fishery in question.

The recently adopted **EU biodiversity strategy for 2030**<sup>186</sup> reiterates the commitment to establish a coherent network of protected areas, as well as to enlarge MPA coverage and to increase the share of strictly protected areas. The strategy outlines several key actions to be taken by the Commission, including the creation of criteria and guidance for the designation and appropriate management of protected areas, as well as the brokerage of a new agreement on the designation of three vast MPAs in the Southern Ocean<sup>187</sup>. The signature of such an agreement would constitute a significant achievement for global marine biodiversity, as marine life in Antarctica has historically been overexploited<sup>188</sup>. The EU biodiversity strategy will also require significant additional efforts by Member States to ensure effective management of MPAs, notably by establishing conservation objectives and implementing appropriate conservation measures, including fisheries management measures.

The transnational, national and regional maritime spatial plans required under the **MSP Directive**<sup>189</sup> also play a crucial role in ensuring that the conservation needs related to the establishment of MPAs are considered when organising human activities at sea, in full compliance with the ecosystem-based approach. The development of these plans is underway for EU Member States, to meet the deadline for the establishment of maritime spatial plans by 2021.

The four Regional Sea Conventions<sup>190</sup> around the EU contribute to the MPA designation exercise. Since 1998<sup>191</sup>, **OSPAR** contracting parties have committed to establishing an ecologically coherent network of MPAs in the north-east Atlantic that is well managed. Since then, they have nominated sites in the OSPAR network of MPAs, both in their national waters and areas beyond national jurisdiction<sup>192</sup>. A series of Baltic Marine Environment Protection Commission (**HELCOM**) recommendations prompted country parties to designate and improve the management and coherence of the network of MPAs in the Baltic Sea<sup>193</sup>. According to these recommendations, HELCOM MPAs must have a unique management plan or management measures in place for the area, and the Helsinki Convention has adopted specific guidelines to facilitate this<sup>194</sup>. The **Barcelona Convention**'s members have adopted a dedicated protocol on 'Specially Protected Areas and Biological Diversity in the Mediterranean' that contains provisions relating to the

creation, protection and management of MPAs in the Mediterranean. They have also established a specific body to assist them in implementing the protocol, the Regional Activity Centre for Specially Protected Areas<sup>195</sup>. Lastly, the **Bucharest Convention** provides for the designation of MPAs in its region, while the Black Sea Commission supports the work of its country parties in this task<sup>196</sup>. Notably, all Regional Sea Conventions provide periodic assessments of their network of MPAs<sup>197</sup>, as well as for guidelines and tools to assist their country parties in this mission. According to EEA<sup>198</sup>, not all regional seas achieved the target of 10% coverage of MPAs, notably in the Mediterranean.

### *The EU supports the establishment of MPAs beyond its borders*

The EU supports the achievement of SDG14.5 internationally by advocating the delivery and enhancement of global targets in relevant fora and by facilitating the establishment of new and well-managed MPAs worldwide. The EU has taken an active role in the discussions under the CBD<sup>199</sup> and the UNCLOS<sup>200</sup> on the expansion of MPA coverage targets, including in areas beyond national jurisdiction, and it regularly cooperates with international and regional organisations to coordinate action on MPAs. In addition to this, the EU invested more than EUR 23 million to develop guidelines, carry out scientific research and studies, and set up twinning projects to encourage mutual learning and cooperation among countries on MPAs. Substantial resources have also been allocated by the EU to reinforce the management of MPAs networks worldwide, for instance in the Atlantic, South-East Asia and the Pacific<sup>201 202</sup>.

### **What other observations can be made?**

While significant progress has been made in the designation of MPAs, and there are examples of well managed MPAs, concerns persist regarding the actual level of protection granted by the EU's network of MPAs. According to some NGOs and stakeholders consulted, there is a risk that these areas become 'paper parks', whereby protection is granted only on paper and clear and measurable conservation objectives are either not established at all, or not implemented in practice. This concern is also echoed by the European Court of Auditors, which has stated that sometimes the EU MPA network 'provided little protection'<sup>203</sup>. This prevents the EU MPA network from achieving its full conservation potential.

#### **Box 8.1 Examples of well-managed EU MPAs<sup>204</sup>**

##### **Spain – Columbretes Islands Marine Reserve**

The no-take zone established in the Columbretes MPA has been shown to produce positive spillover effects to surrounding fisheries, with a net benefit to the fishery resulting in a 10% increase in mean annual yield (in weight) of spiny lobster.

##### **Italy – Torre Guaceto MPA**

Following a temporary four-year no-take closure in Torre Guaceto, the catch per unit effort (CPUE) in the MPA was more than four times that outside. This successful management measure supported stock improvement for a number of species and resulted in increased benefits for fishermen when sustainable fishing was resumed.

### *Ecological coherence of the EU MPA network is a challenge*

SDG14.5 requires states to 'conserve' a part of their coastal and marine areas and this requires a network of MPAs that is ecologically coherent, among other things. For an MPA network to be ecologically coherent<sup>205</sup>, it needs to be representative of all biodiversity features<sup>206</sup>, it must cover a sufficient portion of the planning area, it should allow for the replication of similar habitats within the network, and it should ensure connectivity between different areas that are ecologically linked.

At present, MPA coverage in the EU is significantly skewed towards the protection of coastal waters, leaving offshore waters and their deeper sea habitats largely uncovered. While overall coverage of MPAs is over 10% of EU coastal and marine areas, certain EU sub-regions have coverages far below 10%, e.g. the Ionian Sea and the Central Mediterranean Sea only have 2.9% MPA coverage<sup>207</sup>. Lastly, parts of these MPAs are too small to sustain ecosystem resilience, with almost half of all EU MPAs measuring less than 30 km<sup>2</sup>, and are not established closely enough to allow for movement and dispersal of key species between them. These shortcomings in terms of connectivity and representativity prevent the network from fully guaranteeing ecosystem functioning and spillover effects to recover fish stocks<sup>208</sup>.

### *Not all EU MPAs are effectively managed*

Conservation in the context of MPAs can be achieved only if effective management measures are in place, and if adequate staff and financial resources are allocated to the planning and enforcement of these measures. To deliver their conservation benefits (such as increased fish biomass), MPAs must be subject to management plans tailored to the biodiversity threats that the special protection aims to address. Management measures in MPAs should be developed based on best available science and be appropriate to address the conservation objectives set for the area at hand. These measures must also be complemented by spatial protection measures in neighbouring areas<sup>209</sup>. Management measures can range from the restriction of damaging industrial activities or infrastructural developments to the regulation of fishing and other extractive activities in the area<sup>210</sup>.

Unfortunately, information about management effectiveness is lacking, and additional information on the degree to which marine habitats in MPAs are currently considered protected is needed<sup>211</sup>. In some cases, MPAs are more affected than unprotected areas by commercial fisheries, including due to unsustainable fishing practices. This raises questions about the true benefit of the MPA network. At present, only 1% of EU MPAs are strictly protected<sup>212</sup> (i.e. areas where no extractive activities are allowed).

The limitation of fishing activities is only one of the many possible conservation measures to be adopted in the context of MPAs, and sustainable fishing can be compatible with the existence of MPAs. In fact, the majority of EU MPAs allow fishing to differing degrees, which in turn brings substantial socioeconomic benefits to coastal communities. In this context, the regulation of fishing and other human activities is crucial to ensure that all the activities permitted in the MPAs are low impact and do not hinder the achievement of MPA conservation objectives set on the basis of scientific evidence. Against this background, fisheries conservation measures have successfully been introduced in some MPAs in the North Sea and the Baltic, as required by the Birds and Habitats Directives and under the relevant provisions of the Common Fisheries Policy<sup>213</sup>. In addition, since fishing and the harvesting of marine aquatic resources are one of the most common and 'high pressure' activities on habitats and species in marine Natura 2000 sites, the adoption of these measures should in any case be further facilitated for sites where they are required by EU law<sup>214 215 216</sup>.

Information on these and other MPA management measures is currently lacking<sup>217</sup>, and different actors report different figures on the number of MPAs actually covered by management plans.

Despite the difficulty in assessing the MPAs' management effectiveness, it is clear that improved management efforts should be undertaken to ensure that tangible benefits for biodiversity are delivered by the EU network of MPAs<sup>218 219 220</sup>.

## 8.2 Remaining challenges

### **Ecological coherence is affected by insufficient implementation of existing instruments**

Specific EU legislation and recommendations under Regional Seas Conventions mandate that the network of EU MPAs must be ecologically coherent. The current gap may therefore be linked to insufficient implementation of existing provisions. For instance, under MSFD<sup>221</sup> reporting, 22 Member States declared that the spatial measures included in their programmes of measures contributed to the coherent and representative networks of MPAs, but in half of these cases it was not possible to evaluate whether this was actually the case due to the quality of the information provided<sup>222</sup>.

Although relevant funding for fisheries control purposes in MPAs is available under the EMFF, the EU currently<sup>223</sup> lacks agile instruments for nudging Member States to enforce appropriate management practices, according to the stakeholders consulted as part of this study. In addition to this, the absence of an EU-wide methodology<sup>224</sup> or set of clear targets to determine whether a network of MPAs is ecologically coherent can also be a factor affecting implementation of the above-mentioned obligations.

Lastly, in some cases, the designation of MPAs is affected by the existence of substantial diverging interests among actors involved. MPAs are mostly designated in areas that are not 'economically relevant'<sup>225</sup> and this may explain why some biodiversity features (e.g. offshore waters) are inadequately represented in the existing MPA network.

### **Several factors hinder the effective management of MPAs**

There is a widespread agreement within EU institutions and civil society that additional efforts are needed to establish MPA management measures and to ensure the effective management of all EU MPAs<sup>226 227 228</sup>, as well as to gather information on the actual conservation achieved within these areas. This might be a signal that the implementation of relevant provisions within the EU and Member States' policy framework governing MPAs still faces challenges in practice. For instance, while there are several examples of successful implementation of fisheries management measures in MPAs<sup>229</sup>, the first phase of the procedure for their adoption requires that all MS involved reach an agreement, which can take a considerable amount of time and can delay the process in practice<sup>230 231 232 233</sup>.

The fragmentation of the governance framework involved in MPA designation and management also hinders the adoption and enforcement of effective management measures. The proliferation of actors involved in the management of activity challenges the clear attribution of responsibilities and coordination of efforts<sup>234</sup>.



Lack of financial resources and support to MPA managers also plays a role when it comes to effective MPA management<sup>235 236</sup>. Costs associated with designating MPAs can relate to site delineation and planning activities, and to the monitoring and enforcement of the management plans (direct costs). Other costs may arise as a result of the designation of the MPA, for instance congestion costs to displaced fishers (indirect costs), or might relate to foregone commercial fishing or tourism income (opportunity costs)<sup>237</sup>. While some stakeholders signal that funding in support of MPA managers is insufficient and this hinders their ability to design, implement and enforce MPA management plans, others state that funds are available, including under the EMFF<sup>238</sup>, but that Member States are at times unable to absorb these resources.

### 8.3 Possible ways forward

SDG14.5 has been formally achieved, but this should not stop the EU from being more ambitious. This ambition is clearly demonstrated in the recently published EU biodiversity strategy for 2030<sup>239</sup>. It notably includes key commitments for 2030 that reflect a growing ambition when it comes to protected areas, including the extension of the coverage target to 30% and the increase in the proportion of strictly protected areas.

To promote compliance with existing provisions on MPA designation and management, including provisions on ecological coherence, several options can be envisaged:

- Increasing public knowledge on the benefits of establishing MPAs, as well as holding ad hoc dialogues with the different actors that have a stake in the designation of MPAs and that may be affected by it, to stimulate their buy-in<sup>240</sup>;
- Reinforcing follow-up and monitoring on MPAs, as well as increasing the science base, by further harmonising reporting systems<sup>241</sup> and by identifying innovative tools to monitor MPAs, including by making use of technology e.g. drones<sup>242</sup>;
- Linking funding for MPA management, or the allocation of fishing quotas, to performance (i.e. achieved conservation benefits);

Effective management of MPAs is an expensive, complex and challenging task, and therefore new ways of supporting MPAs managing bodies can be developed, for instance by:

- Further disseminating and improving existing dedicated guidance on MPA planning and management<sup>243</sup>, including by establishing common principles and targets on the ecological coherence of MPAs, to facilitate the designation exercise<sup>244</sup>;
- Increasing networking and cooperation activities, including twinning initiatives<sup>245</sup>, among MPA managing bodies to stimulate the sharing of best practice in MPA management and to exploit the lessons learnt from effectively managed MPAs;
- Better exploiting the funding opportunities available for SDG14.5 under the EMFF: an increased portion of the funding could be earmarked for MPA-related purposes, and Member States should be encouraged to refocus their priorities and make use of these funds to cover the costs of delineating sites, planning conservation measures as well as monitoring and enforcing management plans<sup>246</sup>;
- Enhancing the involvement of local communities with co-management strategies<sup>247</sup>.



## 9. SDG14.6 – Fishery subsidies



**By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation**

This target urges states to prohibit harmful fisheries subsidies by 2020, including by recognising the particular circumstances of developing and least developed countries in this regard, in the context of the WTO fisheries subsidies negotiations. According to SDG14.6, harmful fisheries subsidies are financial contributions that stimulate overcapacity and overfishing and illegal, unreported and unregulated (IUU) fishing.

The WTO fisheries subsidies negotiations are a stepping stone in the achievement of SDG14.6. A uniform and global approach would avert competition and trade distortion issues arising from differing disciplines in this area at national level. Building on this understanding and following the adoption of the 2001 Doha Ministerial Declaration<sup>248</sup>, WTO parties agreed to regulate the issue of fisheries subsidies by 2019. Due to the complexity of the discussions at hand, it was decided to prolong the negotiations and to come to a conclusion at the 12th Ministerial Conference that should have taken place in Nur-Sultan on 8–11 June 2020<sup>249</sup>. As result of the outbreak of COVID-19, the 2020 conference has been cancelled. Despite this, negotiations are continuing online, and WTO members confirm their commitment to working towards the 2020 deadline<sup>250</sup>.

### 9.1 State of play in achieving the target

#### 9.1.1 What the indicators say

The indicator for SDG14.6 (Index 14.6.1) measures progress in the implementation of international instruments aimed at combating IUU fishing. This indicator is calculated based on different countries' reported efforts to combat IUU fishing through the effective implementation of key international instruments relevant to IUU fishing. The data for computing the indicator is gathered via a questionnaire sent to all FAO Member States on a biennial basis<sup>251</sup>. The data collected so far for this indicator show that all EU Member States have a 'very high' level of implementation of international instruments that aim to combat IUU fishing<sup>252</sup>.

It is important to note that the indicator for SDG14.6 has spurred some criticism, as it presents no direct link with the overall level of harmful subsidies and is considered incomplete for measuring achievement of the target<sup>253</sup>.

### **9.1.2 Beyond the indicators**

#### **What is the EU doing?**

*The EU is at the forefront of the WTO negotiations on fisheries subsidies*

Trade policy is an exclusive EU competence. The EU is tasked with negotiating on fisheries subsidies on behalf of Member States in international fora such as the WTO. The EU plays an active role in the current fisheries subsidies negotiations. In 2017, following the new impetus in the negotiations provided by the adoption of the 2030 Agenda, the EU revised its proposal on the prohibition of certain fisheries subsidies to the WTO by adding provisions on strengthening transparency and guidelines on special and differential treatment for developing and least developed countries<sup>254</sup>.

*The EU decided to phase out one of the most harmful types of fisheries subsidies in 2004*

Within its borders, the EU had already banned one of the most harmful types of fisheries subsidies in 2004. Following the reform of the Common Fisheries Policy, the EU decided to phase out public subsidies for the construction of new vessels and for increasing the fishing capacity of existing ones<sup>255</sup>.

As far as the provision of subsidies in the EU for the 2014–2020 period is concerned, the European Maritime Fisheries Fund (EMFF)<sup>256</sup> is the main financial instrument supporting implementation of the Integrated Maritime Policy<sup>257</sup> and the Common Fisheries Policy<sup>258</sup>, and is a source of subsidies for the fisheries sector. To support inclusive and sustainable fisheries and aquaculture, the fund co-finances grants to different actors in the sector, allocated by Member States on the basis of nationally determined operational programmes. The fund for the 2014–2020 period had a budget of EUR 6.4 billion, co-financed with Member States for a total public investment of EUR 8.6 billion. In June 2018, the Commission adopted a proposal for the 2021–2027 fund. Under the Multiannual Financial Framework, its budget will be EUR 108 billion.

To mitigate the impact of the outbreak of COVID-19 on the fisheries and aquaculture sector, the EMFF<sup>259</sup> was amended to introduce specific time-limited mitigation measures.

Support to the fisheries and aquaculture sector can also come from other sources, such as the European Regional Development Fund<sup>260</sup>.

*Fisheries subsidies provided by Member States must comply with the objectives of the Common Fisheries Policy*<sup>261</sup>

In addition to the financial support made available under the EU funds, Member States can take the initiative to provide additional funding to their sector under the State aid mechanism i.e. aid granted by the EU countries to the fishing and aquaculture industry other than financing under the EMFF within the scope of Article 42 TFEU<sup>262</sup>. This is only approved by the European Commission on the condition that the subsidies comply with

the objectives of European fisheries policy and do not distort or threaten to distort competition. Overall, the scope and conditions of State aid to the fisheries sector reflects the conditions established in the EMFF Regulation.

### **What other observations can be made?**

#### *Overfishing and overcapacity are still an issue*

Despite the good progress achieved, overfishing is still an issue for certain fish stocks in parts of Europe<sup>263</sup>, and this can also be a consequence of fleet overcapacity.

#### *Quantifying fisheries subsidies is a challenge*

Quantifying the subsidies allocated to the fishing industry, as well as determining their nature (harmful or non-harmful), remains a challenge, and these are important factors to be considered when assessing the achievement of SDG14.6. Transparency is still an issue in fisheries subsidies, and this is demonstrated by the fact that the nature of over 9% of total fisheries subsidies currently remains unknown at global level<sup>264</sup>.

#### *No international agreement has been reached on fisheries subsidies*

No agreement has yet been reached at the international level regarding the regulation of harmful fisheries subsidies. While WTO parties confirm their commitment to continue the negotiations and to work towards the 2020 deadline despite the impediments related to the outbreak of COVID-19, it remains uncertain whether it will be possible to reach an agreement by the end of the year<sup>265</sup>.

## **9.2 Remaining challenges**

### **Progress in fisheries subsidies negotiations is slowed by several factors**

Several factors affect progress in the fisheries subsidies' negotiations within WTO. The global debate on the subject began in the early 1990s, and 30 years later substantial divergences of positions among WTO parties continue to challenge the achievement of an agreement<sup>266 267</sup>. These mainly relate to the kind of harmful subsidies to be prohibited, the magnitude of such subsidies, the development dimension of subsidies and the management system for the potential prohibitions that may be imposed<sup>268</sup>. Reaching an agreement in multilateral and consensus-based organisations such as the WTO has become increasingly difficult<sup>269 270</sup>. The outbreak of COVID-19 has certainly added a layer of complexity to the negotiations.

### **9.3 Possible ways forward**

In the event of a failure or excessive delay in the WTO negotiations, the EU could explore alternative routes to promote the achievement of SDG14.6. For instance, it could envisage the inclusion of provisions relating to the prohibition of fisheries subsidies in its trade or other relevant agreements with third countries.

## 10. SDG14.7 – Economic benefits from sustainable use of marine resources to SIDS and LDC



**By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism**

Fisheries, aquaculture and tourism are crucial to the subsistence of a large number of SIDS and LDCs. In several developing countries, the ocean-based economy accounts for around 10% of the gross domestic product<sup>271</sup>, while tourism can account for over half of the GDP of certain SIDS<sup>272</sup>. These sectors are crucial for driving economic and social development in these countries. SDG14.7 calls for nations to boost the economic benefits of sustainable fisheries and sustainable marine activities to SIDS and LDCs, to support the long-term sustainability of their local livelihoods. Appropriate conservation and protection of the marine ecosystem is a pre-requisite for this. Since it does not specify a target value to be achieved, SDG14.7 rather entails continuous work and enhanced cooperation activities between developed countries and SIDS and LDCs on these matters.

### 10.1.1 What the indicators say

Even though target 14.7 promotes the sustainable use of marine resources through fisheries, aquaculture and tourism, the indicator for measuring progress towards the achievement of SDG14.7 only measures the 'fisheries aspect' of the target. Index 14.7.1 in fact accounts for the percentage of GDP dedicated to sustainable fisheries in SIDS, LDCs and all countries. This indicator aims to measure the value added of sustainable marine capture fisheries as a proportion of GDP, to provide an indication of the economic importance of sustainable fisheries in SIDS and LDCs economies. The sustainable management of fisheries should enable fish stocks to support the communities and industries that rely on them without compromising reproduction and their long-term sustainability<sup>273</sup>. In 2019, the FAO developed a methodology for SDG Indicator 14.7.1, but important data limitations challenge the measurement of progress towards the achievement of SDG 14.7. National fish stock assessments are only available for a few countries, and the FAO aims to begin compiling country-level estimates for the proportion of fish stocks that are within biologically sustainable levels (for SDG indicator 14.4.1) only in 2020. Once data for this indicator becomes available, it will be used to compute SDG indicator 14.7.1<sup>274</sup>.

## 10.2 State of play in achieving the target

### 10.2.1 *Beyond the indicators*

#### What is the EU doing?

*Different strands of the EU policy framework contribute to the achievement of SDG14.7*

Trade in fish and seafood is a key aspect when it comes to increasing the economic benefits to SIDS and LDCs from marine resources. While the internal market in these countries tends to be small, access to global trade routes can generate significant value and create employment opportunities along the fisheries and seafood value chains for local communities<sup>275</sup>. The EU plays a crucial role in this context, as it is the largest importer of seafood in the world<sup>276</sup>. The total value of EU seafood imports amounted to EUR 26.5 million in 2018<sup>277</sup>, and over 50% of this originated in developing countries, including SIDS and LDCs<sup>278 279</sup>. Import conditions have an influence on the economic benefits garnered by these countries through their export activity, and these conditions are harmonised in all EU countries and regulated by **European Food Law**<sup>280</sup>, whose aim is to ensure that imported products comply with the same standards as products from the EU when it comes to hygiene, consumer safety and animal health status. Imports of fishery products into the EU is subject to official certification based on meeting predefined conditions in the exporting country, including with regards to illegal unreported and unregulated fishing<sup>281</sup>. Notably, the EU is committed to fighting illegal, unreported or unregulated fishing worldwide, and adopted the **Regulation to prevent, deter and eliminate IUU fishing**<sup>282</sup> to ensure that only marine fisheries products validated as legal by the competent flag state can be imported into the EU. Within the scope of this regulation, the EU has entered into dialogue with several countries, including SIDS and LDCs, and supported the improvement of their systems to combat IUU fishing.

In addition to this, the EU provides training and technical assistance<sup>283</sup> to help developing countries comply with overall EU rules regarding market access.

The EU is committed to promoting free trade worldwide and it plays an active part in all international efforts aimed at overcoming trade barriers<sup>284</sup>, including regarding seafood trade, in the context of the WTO.

*The EU has put in place a set of rules to ensure the sustainability of its fishing activity abroad*

The EU can have an influence on the sustainability of the fish resources of SIDS and LDCs via its fishing activities outside EU waters. The **Common Fisheries Policy**<sup>285</sup> establishes principles regulating the EU's external fisheries relationships. These include ensuring that fishing activities outside EU waters are based on the same principles and standards as within the EU, with the sustainability of the fishing activity being one of the main objectives. EU vessels can fish in the Exclusive Economic Zone of third countries thanks to bilateral fishing agreements and specific authorisations. To ensure



that EU fishing operations abroad do not undermine the sustainability of the fish stocks of the third countries, the EU adopted the **Regulation on the sustainable management of the external fishing fleets**<sup>286</sup>, which contains a set of provisions aimed at ensuring that fishing operations in third countries are sustainable, including by requiring scientific evaluations.

With certain third countries, the EU establishes **sustainable fisheries partnership agreements (SFPAs)**<sup>287</sup>. These agreements allow EU vessels to fish in the Exclusive Economic Zone (EEZ) of partner countries in exchange for a financial contribution. As of August 2020, 13 SFPA protocols are in force with third countries, six of which classify as SIDS<sup>288</sup> and six as LDCs<sup>289</sup>, involving a yearly financial contribution of around EUR 135 million<sup>290</sup>. In addition to the financial contribution aimed at securing access rights to the EEZ, the EU provides sectoral support aimed at promoting sustainable fisheries development, including by supporting sustainable fisheries management and by combating IUU fishing, and by strengthening the administrative and scientific capacity of the partner countries. The sectoral support is used to finance projects such as loan schemes for local fisheries investors, the development of aquaculture plans, support to seafood processing initiatives and post-harvest value addition<sup>291</sup>. These agreements form part of the EU effort to achieve SDG14.7.

The EU plays an active role in 17 **Regional Fisheries Management Organisations (RMFOs)** that establish fisheries conservation and management measures in the high seas. These organisations guarantee the management, conservation and sustainable exploitation of living marine species in their areas by setting catch limits, adopting technical measures and establishing control obligations. Several of these RFMOs include SIDS and LDCs among their contracting parties<sup>292</sup>, and in some cases they directly recognise the importance of SDG14.7<sup>293</sup>, or have adopted special provisions mandating particular consideration of SIDS and LDCs needs, for instance when establishing fishing quotas<sup>294</sup>. The EU is also actively involved in different regional seas programmes that have taken actions to benefit SIDS<sup>295</sup>, including supporting the adoption of protocols or agreements on marine protection, assisting with sustainable tourism, and promoting the ecosystem-based management of marine and coastal environments in these areas.

#### *EU development policy supports the conservation and sustainable use of marine resources in SIDS and LDCs*

EU development policy fosters the sustainable development of developing countries, comprising SIDS and LDCs, such as by working with these countries to support sustainable fisheries, MPAs, climate mitigation in the maritime shipping sector, harbour infrastructures and maritime security. The EU has dedicated around EUR 590 million<sup>296</sup> to this line of work in the 2014–2020 programming period. Relevant ongoing projects financed by the European Development Fund that contribute to achieving SDG14.7 are the Pacific-European Union Marine Partnership Programme (PEUMP)<sup>297</sup>, the Support Programme for ACP Small Island Developing States (SIDS) and Coastal Countries<sup>298</sup>, the Improved Regional Fisheries Governance in Western Africa (PESCAO)<sup>299</sup> and the ECOFISH programme for the western Indian Ocean<sup>300</sup>.

Notably, the post-Cotonou Agreement, on which a political agreement was reached in December 2020, will represent an important component of the policy framework, with



its strategic priority on 'Environmental sustainability and climate change', that will also aim to address issues relating to ocean governance among EU and African, Caribbean and Pacific (ACP) countries.

Tourism can support the achievement of development and sustainability objectives in SIDS and LDCs, and the strengthening of this sector underpins many objectives of EU development policy. The EU provides support to sustainable tourism in SIDS and LDCs via budget support, thematic programmes, specific calls for proposal and the provision of technical assistance. For instance, before the adoption of the 2030 Agenda, the EU published a study providing guidance on sustainable tourism for development<sup>301 302</sup>.

### **What other observations can be made?**

#### *Overfishing and IUU are still challenges in many SIDS and LDCs*

At present, it is not possible to draw conclusions on the achievement of SDG14.7 due to the lack of holistic data. According to the FAO, SIDS and LDCs have been reporting 'steady contributions of sustainable fisheries to their GDP since 2011'<sup>303</sup>. However, the organisation estimates that the global percentage of stocks fished at biologically unsustainable levels increased from 10% in 1974 to 34.2% in 2017, and that stocks in developing countries increasingly face a 'worsening situation in terms of overcapacity, production per unit of effort and stock status'. Overfishing and IUU fishing are still a challenge in many SIDS and LDCs, including where the EU external fishing fleet is active. This compromises the economic benefits SIDS and LDCs will be able to garner from their marine resources in the long run.

#### *Seafood exports can be increased*

In addition to this, while developing countries have seen a substantial increase in their exports of seafood products over time, from 34.6% to 50.2% of world fishery exports in the 1981–2013 period, LDCs and SIDS have registered only a marginal rise, from 1.6 to 3.5%, in the same period<sup>304</sup>. Given the importance that the fisheries and aquaculture sector have for these states, more could be done to increase this share and the economic benefits achieved.

#### *Funding does not always translate into proportional improvements*

Lastly, substantial funding has been disbursed to developing countries for conservation purposes and the sustainable management of marine resources, but this has not always resulted in a proportional improvement of the state of the marine resources of developing countries, including SIDS and LDCs<sup>305</sup>.

With regards to sustainable tourism in SIDS and LDCs, it appears that support from the EU is still limited and not underpinned by a dedicated strategy, although this might reflect a lack of prioritisation by the countries themselves when discussing cooperation opportunities<sup>306</sup>.

### 10.3 Remaining challenges

#### *Non-tariff measures still complicate market access*

Market access for SIDS and LDCs' seafood products is influenced both by tariff and non-tariff measures. While the tariff measures imposed on seafood products entering the EU and other markets have been gradually decreasing since 2010<sup>307</sup>, the non-tariff measures still represent a major obstacle for developing countries when it comes to increasing their share of the international seafood market. SIDS and LDCs still face challenges in complying with market access requirements related to hygiene, public health, animal health, resource sustainability, IUU fishing prevention and traceability, mainly due to their limited resources, capacity and infrastructure<sup>308</sup>.

#### *Lack of control and transparency hinder sustainable management of marine resources*

Lack of control and transparency regarding major players' fishing activity abroad, including in SIDS and LDCs, is still a major issue hampering the sustainable management of marine resources in the countries<sup>309</sup>. The EU has only recently significantly strengthened its oversight of its external fishing fleet by revising the Regulation on the sustainable management of external fishing fleets. However, the same ambition is not reflected by other third countries with fishing rights in the area, whose fishing practices have attracted criticism<sup>310</sup>. This represents a major issue when it comes to supporting the sustainable management of marine resources in SIDS and LDCs.

#### *Sustainable fisheries partnership agreements have considerably improved, but some challenges remain*

With regards to the SFPAs, their transition from strictly commercial agreements to 'sustainable' fisheries instruments has been welcomed as a significant step forward. Doubts persist regarding the extent of their effectiveness in promoting the sustainable use of resources, as well as in providing economic benefits to local communities. Issues of concern mainly relate to:

- The lack of transparency and capacity in measuring the status of local fish stocks and catch data: this makes it difficult to determine catch limits for the EU vessels based on scientific facts and ultimately challenges the sustainable management of the resources<sup>311</sup>;
- The exact impact of the support provided under these agreements: the absence of indicators for measuring this impact challenges the assessment of the effectiveness of the instruments<sup>312</sup>, in particular in relation to the actual benefits derived by local communities<sup>313</sup>;
- The capacity of partner countries to absorb funding provided under the instruments<sup>314</sup>, as well as consistency between funding under SFPAs and development funding<sup>315</sup> influences the efficient use of the allocated financial resources.

## **Fragmentation in development cooperation affects efficiency**

Ultimately, development cooperation is a complex strand of work, fragmented into several activities often led by different services and actors within the EU, and therefore ensuring consistency in these actions throughout still represents a challenge. This might affect the efficient allocation and use of funding.

### **10.4 Possible ways forward**

The EU could use its leverage to push for increased transparency regarding fishing activities affecting SIDS and LDCs' marine resources, to support their sustainable management. This could be done by building on existing cooperation activities to establish dedicated dialogue with major fishing players to address this issue. The EU could request that partner countries under SFPAs provide information on all other nations fishing within their EEZ in order to assess the status of fish stocks and determine the sustainable level of fishing efforts<sup>316</sup>.

The EU could further strengthen and streamline the support it already provides to SIDS and LDCs to improve their capacity for sustainably managing their marine resources. This strengthened contribution could build on a coherent overarching approach or shared vision aimed at ensuring that the resources provided via different channels (for instance via the European Development Fund and EMFF) are consistent throughout and support the achievement of SDG14.7. This approach could potentially also address the impact of tourism, to ensure this sector expands while at the same time contributes to the sustainable use of local marine resources.

## 11. SDG14.a – Scientific knowledge, research and technology for ocean health



**Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries**

'[Ocean] action can only be effective if it is based on sound knowledge informed by science'<sup>317</sup>. SDG14.a prompts countries around the world to increase their support for ocean science, research capacity development and marine technology transfer, in particular for the benefit of developing countries, SIDS and LDC. It does not indicate a specific target value or timeframe for its achievement, but rather requires states to progressively increase their support for these issues on a continued basis. SDG14.a can be considered as a 'means of implementation target', as progress in implementing SDG14.a will facilitate progress on all other SDG14 targets, as well as wider ocean-related targets that can benefit from the advancement of ocean science as a whole.

### 11.1 State of play in achieving the target

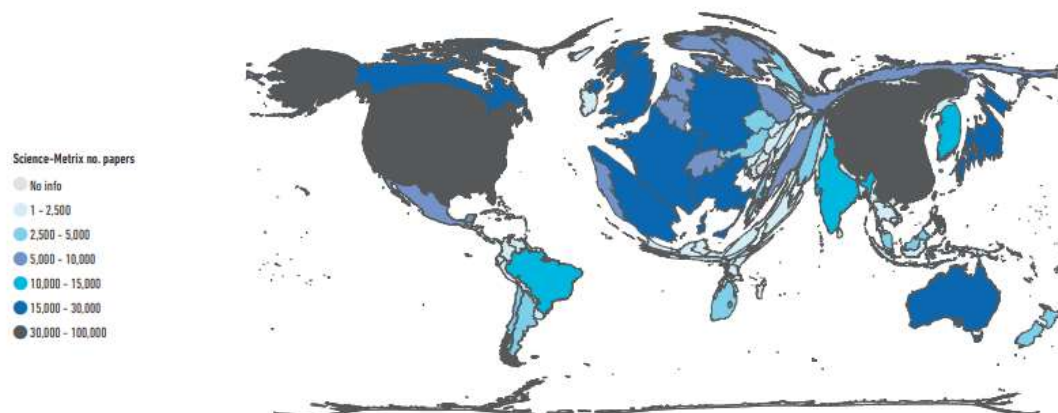
#### 11.1.1 What the indicators say

The indicator for measuring SDG14.a (Index 14.a.1) is the annual national research budget allocated by governments to the field of marine technology, relative to the overall national governmental research and development budget in general<sup>318</sup>. To date, data for this indicator is only available for the years 2009 to 2013 and for just 25 countries<sup>319</sup>. Over this period, the marine technology research budget in the five EU countries for which data is available increased from 0.35% (2009) to 0.56% (2013) of the total research budget<sup>320</sup>.

The data indicating an increase in research budget predates the adoption of the 2030 Agenda. In general, ocean science funding remains modest and significant variations in expenditure persist among countries worldwide. Some countries invested less than 0.04% of their national research and development funding on ocean science in 2013, while others spent around 4%<sup>321</sup>.

When looking at other indicators<sup>322</sup>, the EU leads efforts to support ocean science globally. EU Member States are among the top producers of ocean science publications, and their research outputs are also making a substantial impact, as indicated by the number of citations they receive.

**Figure 11.1 Publications map of the world (2010–2014)**<sup>323</sup>



No official indicator is available for measuring the rate of transfer of marine technology worldwide, therefore it is not possible to draw conclusions on the state of play in achieving the target for this aspect of SDG14.a.

### 11.1.2 *Beyond the indicators*

#### **What is the EU doing?**

*Several EU policies support the development of marine knowledge and research capacity*

Research, science and innovation have always been at the centre of the EU approach to achieving the **2030 Agenda** and SDG14.a. The importance of research and innovation was further stressed with the adoption of the **European Green Deal**<sup>324</sup>, where these two pillars are put forward as drivers of the transition towards a climate neutral and sustainable future for the EU.

The **EU research and innovation policy** builds on three main goals: open innovation, open science and open to the world<sup>325</sup>. The **EU Framework Programme for Research and Innovation**<sup>326</sup> is a central pillar of this policy and it plays a key role for the development of marine knowledge, marine and fisheries data collection and coordination, ocean observation in the EU, together with other instruments such as the **European Earth Observation Programme**, the **LIFE programme**<sup>327</sup> and the **European Structural and Investment Funds**<sup>328</sup>.

**Horizon 2020** is the largest EU research and innovation programme to date. Similar to **Framework Programme 7**, under Horizon 2020, over EUR 1 billion has been allocated to marine and maritime research<sup>329</sup>. The funded projects address research gaps and further the science in several areas, including marine biodiversity and ecosystems, nature-based solutions and ecosystem-based approach to managing marine resources, climate-fit MPAs, a sustainable blue economy, sustainable seafood, coastal resilience and blue carbon, marine pollution including marine litter and underwater noise, bio-based plastics and biodegradability in the circular economy, novel protein sources from

the ocean, marine stewardship, ocean observations, maritime spatial planning, as well as issues related to the standardisation of data collection.

Zooming in, Horizon 2020 provides funding for **SeaDataNet**<sup>330</sup>, an online pan-European infrastructure that stores and manages large and diverse marine datasets collected by national data centres; **MarTera**<sup>331</sup>, the **ERA-NET Cofund scheme**<sup>332</sup> designed to strengthen coordination and cooperation in national and European research on maritime, marine technologies and growth; **JPI Oceans**<sup>333</sup>, an intergovernmental platform that encourages the long-term collaboration between EU Member States and associated countries on marine and maritime research in Europe.

The role of European research and innovation in driving, navigating and accelerating the transformative **Green Deal agenda** through transparent, comprehensive and balanced scientific evidence and innovative solutions is being reinforced through the final **Horizon 2020 call on the Green Deal**<sup>334</sup>, launched in 2020.

In addition to this, in 2019, the Commission presented a proposal for the next programme, Horizon Europe, that will, for the first time, fund ocean research as part of a dedicated mission in the area of '**Healthy oceans, seas, coastal and inland waters: Mission Starfish 2030**'<sup>335</sup>. This official recognition of the oceans as an important pillar in the research and innovation agenda has been welcomed as very promising for the future of marine research by several of the stakeholders interviewed in the study.

Building on this background, the EU is also envisaging the establishment of a **European Partnership under Horizon Europe for 'A climate neutral, sustainable and productive Blue Economy**'<sup>336</sup>, aimed at catalysing the transformation of Europe's ocean economy towards climate neutral status by 2050.

The **EU Space Policy** and **EU space programmes** such as **Copernicus**<sup>337</sup> are major contributors to SDG14.a, both within the EU and worldwide. In particular, the Copernicus Marine Environment Monitoring Service provides regular and systematic reference information (observations and models) on the physical state and on marine ecosystems. It provides data for the measurement of the ocean acidity, a pH indicator, as well as an eutrophication indicator. It also publishes an annual assessment of the state of the global ocean, the Copernicus Ocean State Report. The Copernicus Maritime Surveillance service supports the monitoring of activities at sea, and the Copernicus Climate Change Service provides climate data and information on impacts on sectoral areas relevant to SDG14, such as biodiversity, coastal areas and shipping.

**The EMFF** also contributes to SDG14.a. Funding for scientific advice under the EMFF has increased in the past years, from EUR 8,680 million in 2015 to EUR 10,817 million in 2020<sup>338</sup>.

The EMFF also funds the **European Marine Observation and Data Network (EMODnet)**, the EU marine knowledge database, a network of organisations that links global and national databases to create an international marine data network providing open access to ocean data and products from Europe and beyond<sup>339</sup>.



*The EU engages in several initiatives fostering the transfer of marine technology*

Although the EU does not have a comprehensive and overarching policy on marine technology transfer to developing countries, it engages in several projects involving the transfer of marine technology and marine research capacity-building activities towards these and other third countries in different sea basins. Relevant initiatives in this field are the 'blue economy technology transfer programme'<sup>340</sup> and the Global MTCC Network (GMN)<sup>341</sup>.

*The EU fosters international collaboration on marine research*

Following the adoption of the EU Maritime Strategy for the Atlantic Ocean Area in 2011, the EU has worked to foster cooperation on marine research and innovation with countries bordering the Atlantic by adopting four major instruments: the Galway Statement on Atlantic Ocean Cooperation with the United States and Canada; the Belém Statement on Atlantic Research and Innovation Cooperation<sup>342</sup> with Brazil and South Africa; the EU-Argentina Administrative Arrangement on Marine Research and Innovation Cooperation and the Mindelo Arrangement on Marine Research and Innovation Cooperation with Cabo Verde.

The EU has made significant progress towards an **All-Atlantic Ocean Research Alliance**<sup>343</sup>, which joins efforts undertaken with the signing of the European Union–United States–Canada Galway Statement on Atlantic Ocean Cooperation, and the European Union–Brazil–South Africa Belém Statement on Atlantic Ocean Research and Innovation Cooperation. The All-Atlantic Ocean Research Alliance supports the implementation of the UN's 2030 Agenda for Sustainable Development, the UN Decade of Ocean Science for Sustainable Development and delivers on the priorities such as the European Green Deal, the Horizon Europe Mission Healthy Oceans, Seas, Coastal and Inland Waters and others. In this context, the adoption of the **Atlantic Action Plan 2.0**<sup>344</sup> will reinforce cooperation on research, development and innovation among the partner countries of the Alliance.

The **BlueMed Research and Innovation Initiative**, set up in the framework of the EU's Blue Growth Strategy, promotes the development and alignment of the marine and maritime research and innovation agendas of Mediterranean countries. As outlined in the implementation plan<sup>345</sup> adopted in June 2020, several joint actions will be undertaken to give implementation to this objective, including the establishment of cooperation programmes, joint calls and task forces, training courses, workshops and conferences to facilitate the exchange of best practices and knowledge transfer.

The **Black Sea Strategic Research and Innovation Agenda**<sup>346</sup>, launched in 2019, will, inter alia, foster the development of multidisciplinary marine research and data-sharing mechanisms; build on research infrastructure for ocean observation and monitoring, as well as promote education and capacity-building activities to address the research challenges of countries bordering the Black Sea.



*The EU supports the development of marine research and monitoring capacity abroad*

The **Sustainable Fisheries Partnership Agreements** the EU signs with partner countries can also contribute to achieving SDG14.<sup>347</sup> Financial contributions under these agreements are often directed towards developing scientific knowledge and capacity in the partner countries, for instance via the financing of studies, facilitating data collection and sharing, and the development of dedicated training courses.

The EU supports partner countries in developing their capacity to **monitor the oceans**, with programmes such as **PESCAO**, **ECOFISH** and **CAPFISH**, all involving activities, inter alia, to build the capacity of national authorities for monitoring fisheries resources<sup>348</sup>.

The EU fosters data exchange with European and third countries. This happens in the context of the **Copernicus** programme through the stipulation of data cooperation agreements and the financing of regional projects. Furthermore, the Commission is working with international partners on access to and exchange of data, for example in the context of GEO/GEOSS/Blue Planet and IOC/IODE<sup>349</sup>. It is actively involved in the G7 Future of the Seas and Oceans Initiative<sup>350</sup>. The EU is developing joint action to enable ocean data cooperation between the EU and China through EMODnet.

*The EU recognises the importance of underpinning European policies with sound scientific knowledge*

EU policy in all domains must be underpinned by sound scientific knowledge and a solid evidence base. This is also recognised by the **7th EAP**<sup>351</sup>. In this context, the development of marine knowledge and technology has come to be a cross-cutting objective fundamental to several EU policies.

The EU has recognised the importance of developing sustainable marine policy underpinned by marine scientific research, technology and innovation since the early 2000s<sup>352</sup>. This engagement was spelled out as early as 2008 in the **Marine and Maritime Research Strategy**<sup>353</sup>, which promoted integration across marine and maritime research disciplines, including by fostering knowledge and technology transfer at EU level, and encouraged the development of the EU's research capacity and the leveraging of synergies among the different actors involved in marine and maritime research. Objectives relating to the improvement of marine knowledge are also notably included in the **Integrated Maritime Policy**<sup>354</sup> and **Blue Growth Strategy**<sup>355</sup>, underlining how increased knowledge of the seas will promote growth in the blue economy and the sustainable development of sea-based activities.

*Marine data collection activities mandated by EU policy play a crucial role in the advancement of scientific knowledge*

The collection of marine and fisheries data in the context of monitoring and assessment activities plays a crucial role in the advancement of scientific knowledge of our oceans. Data collection and monitoring is provided for under different EU policy tools and carried out by multiple actors.

Under the **MSFD**<sup>356</sup>, programmes of measures must be devised based on sound knowledge of the marine environment, and it requires Member States to establish monitoring programmes to regularly assess the environmental status of their marine waters. These programmes should measure the state of the marine environment, the achievement of environmental targets and the effectiveness of measures established to achieve them. Since its adoption, the MSFD has stimulated several research initiatives, for instance on marine litter and underwater noise, and its implementation has brought improved knowledge of the state of the EU's marine waters, while at the same time identifying current knowledge gaps<sup>357</sup>.

The **Common Fisheries Policy**<sup>358</sup> prompts Member States to carry out fisheries and aquaculture research and innovation programmes and to coordinate their fisheries research and scientific advice programmes with other Member States. Moreover, the reformed CFP strengthens the science-policy interface aspect of EU fishery policy by requiring Member States to collect and make available scientific data on fish stocks, and by requiring that measures to manage fish stocks are established in accordance with the best available scientific advice.

The renewed **EU biodiversity strategy for 2030**<sup>359</sup> calls on Member States to invest in research, innovation and knowledge exchange, as well as to map and assess the state of ecosystems and their services in their national territory, including marine ecosystems.

**Regional Fisheries Management Organisations** and **Regional Sea Conventions** are often involved in the collection, analysis and dissemination of marine or fisheries data and information, and they play a crucial role in the harmonisation of monitoring systems, standardisation and the comparability of data and indicators utilised by EU Member States<sup>360</sup>.

#### *EU Member States play a crucial role in the achievement of SDG14.a*

While acknowledging the substantial contribution of the EU policy framework to the achievement of SDG14.a, it is important to note that **Member States** play a crucial role within the context of this target. In fact, different sources report that up to 85%<sup>361 362</sup> of all funding for marine and maritime research and innovation in Europe comes from Member States. While a comprehensive assessment of EU Member States' resources invested in marine and fisheries research is not available at present, and the mapping of Member States' policies uncovered few national policies that directly address SDG14.a (see the high-level assessment in Appendix 3 in the Supporting Materials document), several stakeholders interviewed stated that this financial support was affected by important national differences.

#### **What other observations can be made?**

As data for the SDG14.a indicator will be collected in 2020, and the information currently available dates back to 2013, it is not possible to draw conclusions on the achievement of the target on this basis. The growing list of EU initiatives and programmes aimed at fostering the creation and coordination of new scientific knowledge, the development of research capacity and knowledge and technology transfer seem to indicate, however, that progress on SDG14.a is ongoing. Building on a solid base established by pre-

existing policy tools and strategies, the EU has also progressively increased its efforts to enhance collaboration on marine research with third countries.

Nevertheless, it is important to acknowledge that the ocean is the largest ecosystem on the planet and remains largely unknown. While ocean science has evolved rapidly in recent years, the challenges it faces are also growing exponentially. The ocean is increasingly exposed to multiple drivers of environmental change that include stressors acting concurrently<sup>363</sup>. Against this background, the potential for improvement in the EU and Member States' actions to achieve SDG14.a is virtually endless, especially considering new challenges that keep arising.



*Despite the considerable efforts, knowledge and research capacity gaps persist in this field*

Scientific knowledge is constantly increasing but multiple issues remain under-researched. Global knowledge gaps<sup>364 365</sup> mainly relate to the physical structure of the ocean; the composition and movement of the ocean's waters; the organisms living in the deep seabed or beyond the continental shelf, and the ways in which the humans interact with the ocean. Issues that would benefit from further research in the EU<sup>366 367</sup> are listed in the figure below.

**Figure 11.2 Overview of research gaps**



Ocean science is big science, in that it requires numerous staff and large and costly equipment. As such, 'ocean science capacity, both human and technical, depends on the financial support it receives'<sup>368</sup>. To make progress on SDG14.a, important developments would be an expansion of the ocean observation infrastructure, to enable in-situ observation and improve monitoring beyond 12 km from the coast, further

investments in the training of scientific advisers and policy-makers, and the development of educational opportunities in Member States.

Unfortunately, significant disparities in terms of research capacity and infrastructure, as well as financial resources, persist both among EU Member States and between the EU and the rest of the world. The lack of long-term and sustained funding for ocean research and research infrastructure represents a considerable challenge for progress in this area as a whole.

*Collaboration among stakeholders involved in the development and use of marine knowledge can be improved*

- **Science-science collaboration:** While a considerable number of collaborative initiatives in the field of ocean research and data collection already exist, these could be further strengthened to ensure efforts are not duplicated. Cooperation between natural and social sciences is also lacking, with many research communities working in silos, and this hinders the creation of much needed multidisciplinary solutions to the current problems faced by our oceans.
- **Science-policy collaboration:** the science-policy interface can be further strengthened, together with the uptake of scientific data and advice in policy implementation. These are important elements for the formulation of effective, efficient and sustainable policies supporting the achievement of SDG14.
- **Science-public collaboration:** while public consultation processes are embedded in the EU policy framework surrounding the achievement of SDG14, public awareness on the current state of our oceans and their importance is still scarce. Citizen engagement is key to addressing the existing and upcoming challenges<sup>369</sup>, for instance marine litter, and further efforts must be taken to disseminate scientific information in order to stimulate societal mobilisation.

## 11.2 Remaining challenges

### **The lack of funding and prioritisation of ocean science has affected the advancement of knowledge**

To a large extent, the current knowledge and research capacity gaps, and in part also collaboration gaps, are attributed to the lack of sufficient funding<sup>370</sup>, and to the lack of prioritisation of marine research for several years, particularly for certain areas such as ocean acidification. In a context of increasing pressures on public budgets and of competing priorities to be tackled, funding for R&D in ocean science often fails to be at the forefront of policy-makers' concerns.

### **The lack of a coherent and overarching marine research strategy influences the efficient use of scarce resources**

In addition to this, funding can in some cases be inefficient due to the lack of coordination in ocean research (i.e. funding might be allocated to similar efforts), or

inadequate to address ocean science needs (i.e. funding is not sufficiently long-term to sustain certain types of research infrastructure). The absence of a coherent and overarching marine research strategy in the EU that coordinates all EU-wide and national research programmes and data collection activities might also cause additional inefficiencies in the utilisation of existing resources.

The effectiveness of the science-policy interface could be hindered by the lack, or poor utilisation, of appropriate communication channels, as well as by a poor understanding of scientific advice by policy-makers.

### 11.3 Possible ways forward

To address the resources gap, alternative routes could be explored<sup>371 372</sup>, such as the combination of different sources of funding, the exploitation of synergies with the private sector or even crowdfunding.

The science-policy interface could be further strengthened by reinforcing existing communication processes and channels between the scientific community and policy-makers, as well as by providing additional dedicated training to the latter.

The EU could create an overarching ocean research strategy<sup>373 374</sup>, since different stakeholders agree that a 'strategic, collective, holistic and flexible approach to ocean research' should be sought that stimulates, inter alia, the development of transdisciplinary and 'sustainability science' and the coordination of all efforts undertaken in the field of ocean science. This could also include a coordinated approach to marine technology transfer and marine research partnerships with developing countries, which is a key aspect of SDG14.a. A boost to adopt such an overarching approach could come from the momentum created by the UN Decade of Ocean Science for Sustainable Development, to be launched in 2021, which aims to strengthen international collaboration on ocean science, as well as by the UN Ocean Conference, which will focus on promoting science-based innovative solutions to improve the health of the oceans.

## 12. SDG14.b – Small-scale fisheries



**Provide access for small-scale artisanal fishers to marine resources and markets**

Small-scale fisheries make a strong contribution to nutrition, food security, local livelihoods, national economies and poverty alleviation in many countries, especially developing ones. However, they often have to compete with large-scale fishing operations and other strong economic actors in tourism, aquaculture and energy<sup>375</sup> for access to marine resources. Access to seafood markets can also be complicated for small-scale artisanal fishers, as they might lack the capacity and resources to comply with standards established for import and sale. Against this background, target 14.b urges countries to ensure small-scale artisanal fishers have access to marine resources and markets. This might include granting secure tenure and user rights, and providing support to enhance the capacity of these actors for complying with market access requirements or establishing preferential treatment for them<sup>376</sup>. Adopting provisions for the participation of small-scale artisanal fishers in fisheries management is also key to ensuring that their rights and voices are adequately taken into consideration in decision-making processes<sup>377</sup>.

### 12.1 State of play in achieving the target

#### 12.1.1 *What the indicators say*

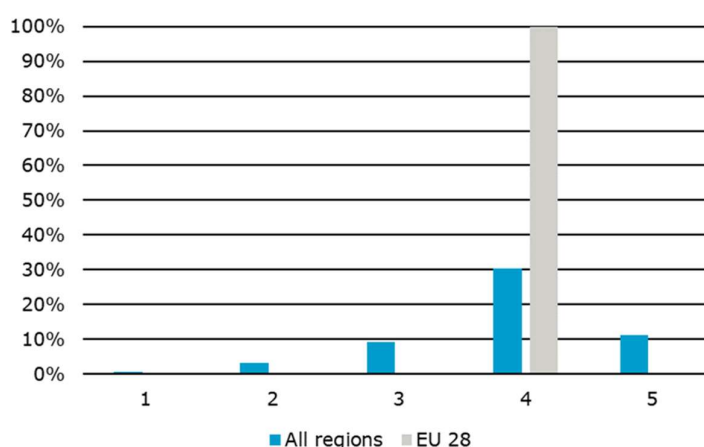
The indicator for measuring SDG 14.b (Index 14.b.1) is progress by countries in the degree of application of a legal/regulatory/policy/institutional framework that recognises and protects access rights for small-scale fisheries<sup>378</sup>.

The indicator is a composite indicator calculated based on the efforts being made by countries to implement selected key provisions of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). This indicator measures the 'access rights' aspect of SDG Target 14.b.

Data for this indicator are obtained from UNSTATS (2020)<sup>379</sup>. The figure below shows the score of EU Member States, compared to non-EU Member States for the year 2018 (data for other years is not available). This overview shows that all EU countries receive a score of four out of five. In the absence of a clearly defined objective, it is not possible to indicate whether SDG14.b will be achieved.



**Figure 12.1 Degree of application of a legal/regulatory/policy/institutional framework which recognises and protects access rights for small-scale fisheries (1 = lowest; 5 = highest) in 2018 (source UNSTATS, 2020)**



### 12.1.2 Beyond the indicators

#### What is the EU doing?

In the EU, small-scale fishers play a crucial role, particularly in the Mediterranean and in the Black Sea, where they represent over 84% of the fishing fleet<sup>380</sup>, as well as in the EU's outermost regions, especially for food security and employment. Reportedly, one quarter of EU production in terms of value comes from small-scale fishers, and 60% of employment in fisheries in the EU is in small-scale fisheries.

The **Common Fisheries Policy** is the main EU policy governing small-scale fisheries in general. The CFP recognises the importance of ensuring a fair standard of living for small-scale fisheries, and it includes general considerations and guiding principles that are relevant for these actors<sup>381</sup>.

The **EMFF** provides financial support for a broad variety of small-scale fishers, including start-up support to young fishers, investments on board, and support for the diversification of activities and income. The EMFF also provides funding for the training of small-scale fishers and to compensate them for participating in conservation activities<sup>382</sup>. It also includes compensation for the permanent cessation of their activities, where this is necessary to restructure fleet segments affected by overcapacity. Moreover, small-scale fishers are eligible for a higher rate of public aid compared to other beneficiaries.

In September 2018, during a high-level conference on the future of sustainable small-scale fisheries, 19 parties (the European Commission, EU Member States and non-EU countries) of the General Fisheries Commission for the Mediterranean adopted a 10-year Regional Plan of Action for sustainable small-scale fisheries (RPOA-SSF) in the Mediterranean and the Black Sea region.

## **12.2 Remaining challenges**

During the course of the study, sufficient information could not be identified for making an assessment.

## **12.3 Possible ways forward**

During the course of the study, sufficient information could not be identified for making an assessment.

## 13. SDG14.c – international law of the sea



**Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want**

SDG14.c reiterates the importance of the implementation of legal obligations under international law, also as reflected in **UNCLOS**<sup>383</sup> to enhance the conservation and sustainable use of oceans and their resources. This can be regarded as a 'means of implementation' kind of target, as its fulfilment would help deliver on the other SDG14 targets. This is because UNCLOS, often referred to as the 'constitution of the oceans'<sup>384</sup>, establishes the overarching legal framework governing all ocean space, its uses and resources. When the Convention entered into force in 1994, it codified longstanding customary law and introduced new rules to address upcoming concerns in the field of international ocean governance. Other than defining rights and obligations over different portions of the ocean space, the Convention binds states parties to protect and preserve the marine environment, and to take all necessary measures to prevent, reduce or control its pollution. Under the Convention, states parties must cooperate on a global and regional basis to develop rules for the protection and preservation of the environment, as well as to advance marine research and monitor pollution. The obligation to provide scientific and technical assistance to developing states is also enshrined in the Convention. As a framework convention, UNCLOS provides for the development of other instruments, rules and standards that are consistent with its provisions, including through competent international organisations at global and regional levels.

### 13.1 1.1 State of play in achieving the target

#### 13.1.1 What the indicators say

The indicator for measuring SDG 14.c (Index 14.c.1) is defined as the number of countries making progress in ratifying, accepting and implementing, through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in UNCLOS, for the conservation and sustainable use of the oceans and their resources. In short, it is defined as the number of countries adopting international legal instruments for ocean conservation. Data collection for this indicator will begin in 2020 and will be repeated every 2–3 years: the metadata for this index is available in UNEP (2019)<sup>385</sup>. In the context of the data collection for this indicator, countries will be asked to self-assess their progress in implementing UNCLOS and its implementing agreements.

All EU Member States and the EU have ratified UNCLOS and its two implementing agreements. This treaty is part of the EU *acquis* i.e. the body of obligations that are binding on all EU Member States. This means that all EU Member States have committed to the obligations under UNCLOS, a 100% score on indicator 14.c.1.

### 13.1.2 Beyond the indicators

#### What is the EU doing?

*The EU contributes to the implementation of UNCLOS both within and beyond its borders*

Ahead of the adoption of the 2030 Agenda, the EU already put in place a comprehensive policy framework for implementing UNCLOS provisions.

The 2008 **MSFD**<sup>386</sup> takes account of the obligations under UNCLOS and it translates its requirements to observe and measure the risks and effects of pollution on the marine environment, as well as obligations requiring states to take measures to prevent, reduce and control pollution of the marine environment. The MSFD<sup>387</sup> implements UNCLOS provisions regarding environmental protection, sustainable fisheries and aquaculture, innovation and investment in marine research. By emphasising regional cooperation, the MSFD<sup>388</sup> facilitates cooperation between states to protect the marine environment, as prescribed by UNCLOS<sup>389</sup> and in close cooperation with relevant **Regional Sea Conventions**.

The **Common Fisheries Policy**<sup>390</sup> is another centrepiece of the EU's implementation of UNCLOS obligations, as it establishes a comprehensive framework to ensure that fishing and aquaculture are environmentally, economically and socially sustainable both within and beyond EU waters<sup>391</sup>.

The EU, moreover, contributes to the long-term sustainable management and conservation of fisheries worldwide by strengthening the performance of existing Regional Fisheries Management Organisations. In the 2017–2018 period, the EU provided EUR 17 million for improving governance, science and capacity building, and for strengthening compliance in the 17 RFMOs in which the EU participates<sup>392</sup>.

Other relevant instruments contributing to the implementation of UNCLOS obligations are the **sustainable fisheries partnership agreements**<sup>393</sup>, the **EU Regulation on the sustainable management of external fishing fleets**<sup>394</sup>, the **EU Regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU)**<sup>395</sup>, and the **EU Maritime Security Strategy and its action plan** (revised in 2018)<sup>396</sup>.

The **EU Research Framework Programme**<sup>397</sup>, the **LIFE programme**<sup>398</sup> and the **European Structural and Investment Funds**<sup>399</sup> also contribute to the implementation of UNCLOS<sup>400</sup> provisions relating to the obligation to develop marine science, technology and infrastructure.

While this is not an obligation, UNCLOS mentions in its preamble that 'the problems of ocean space are closely interrelated and need to be considered as a whole'. In this context, both the **Integrated Maritime Policy**<sup>401</sup>, the **MSP Directive**<sup>402</sup> and integrated coastal management process serve to coordinate relevant policies affecting the ocean space, and as such support the EU and Member States in effectively complying with their obligations under UNCLOS<sup>403</sup>.

In addition to this, the EU participates in the implementation of UNCLOS and its implementing agreements by funding its infrastructure via annual contributions. This includes funding to various RFMOs, the International Seabed Authority and the International Tribunal for the Law of the Sea<sup>404</sup>.

*The EU undertakes substantial efforts to strengthen international ocean governance in multiple forums*

The most notable contribution of the EU to SDG14.c consists of its continuous work to strengthen **international ocean governance**. The EU is actively engaged in international cooperation on ocean governance on a number of matters. It promotes the ratification of UNCLOS and other relevant agreements on ocean-related topics worldwide in bilateral and multilateral dialogue, and within the UN General Assembly. The EU drives discussions to enhance the protection of marine biodiversity under the Convention on International Trade in Endangered Species (CITES)<sup>405</sup> and UN CBD<sup>406</sup>. Moreover, the EU actively supports cooperation between international and regional organisations, including the International Labour Organization (ILO), International Maritime Organization (IMO), Food and Agriculture Organization (FAO), Regional Sea Conventions (RSCs) and Regional Fisheries Management Organisations (RFMOs) at various levels<sup>407</sup>. The EU is party to every international legal instrument in existence on ocean-related topics, and it plays a very active role in promoting their implementation worldwide.

*The EU plays an instrumental role in filling existing gaps in the international legal framework*

Notably, the EU also plays an instrumental role in filling gaps in the existing international ocean governance framework, to supplement UNCLOS provisions. It supported the development of instruments such as the agreement to promote compliance with international conservation and management measures by fishing vessels on the high seas, adopted by the FAO in 1993; the Code of Conduct for Responsible Fisheries, adopted by the FAO Conference in November 1995<sup>408</sup>, the FAO Agreement on Port State Measures<sup>409</sup> and the 2018 Agreement to prevent unregulated high seas fisheries in the Central Arctic Ocean<sup>410</sup>. At present, the EU is leading discussions on an international legally binding instrument under UNCLOS for the conservation and sustainable use of the **marine biodiversity of areas beyond national jurisdiction** (BBNJ). The new agreement will aim to encourage a more holistic management of activities and marine resources in the high seas, and it will focus particularly on promoting the sharing of the benefits of marine genetic resources, the establishment of area-based management tools, the use of environmental impact assessments in these areas and on strengthening capacity building and the transfer of marine technology to developing countries. Dialogue around this instrument was initiated in the context of the UN General Assembly in 2004, and negotiations are still ongoing<sup>411</sup>. While the COVID-19 pandemic has led to the postponement of the fourth session of the BBNJ negotiations, the EU continues its work online and the stakeholders interviewed confirm it has been instrumental in the progress made so far in the negotiations. The EU is also playing an active role in the process to agree a **Post-2020 Global Biodiversity Framework** under the CBD<sup>412</sup>.

In terms of technical assistance and capacity building, the EU is engaged in several programmes supporting sustainable fisheries and aquaculture, MPAs, the blue economy, maritime security, and maritime transport in developing countries. These programmes are mostly financed by the EMFF, the EU Development Policy and EU Research Framework Programme. The scope of sustainable fisheries partnership agreements has also been extended, and as such they contribute to building the capacity of developing states in favour of the conservation and sustainable management of marine resources<sup>413</sup>.

Most of the instruments and programmes mentioned above have been in place for years, before the adoption of the 2030 Agenda. The EU has been a leading actor in this field, and it has explicitly pushed for the inclusion of SDG14.c in the Agenda itself.

### **What other observations can be made?**

In practice, implementing SDG14.c requires more than a formal ratification of the above-mentioned legal instruments. States must effectively implement the obligations stemming from UNCLOS by creating a legal framework to transpose these within their jurisdictions. SDG14.c, moreover, entails a continued effort to strengthen international ocean governance by raising awareness about UNCLOS and the related agreements, filling the gaps in the international framework for the oceans, improving coordination and cooperation between international organisations, and by supporting developing countries with technical assistance and capacity building.

#### *Achieving SDG14.c requires a continuous effort*

It is difficult to link the achievement of SDG14.c to a specific result, as this target rather entails a continuous effort in implementing the existing international ocean governance framework for engaging with third countries to develop it further. This is an ongoing exercise whose scope keeps expanding, as the challenges faced by the oceans keep adding up and requiring a continuous update of the international legal framework for ocean governance.

#### *There is room for improvement in the international ocean governance framework*

There are few indications of concrete gaps in the achievement of SDG14.c. Despite this, areas where improvements could be beneficial to further progress with SDG14.c have been identified:

- The international legal framework for the oceans is incomplete. Further developments are needed, for instance to regulate the areas of seabed mining and the use of marine biodiversity in areas beyond national jurisdiction<sup>414</sup>.
- The current state of the oceans indicates that the implementation of the relevant international agreements is still lacking. The EU is still lagging behind on objectives regarding sustainable fishing and effective protection under MPAs, and illegal activities are still taking place in European seas<sup>415</sup>.



- Coordination between different legal instruments regulating the oceans could be enhanced<sup>416</sup>.

## 13.2 Remaining challenges

The fragmentation of the ocean governance framework, with multiple actors and levels of jurisdiction involved in the implementation of existing international commitments, together with the multiple international legal instruments to comply with, may hamper the implementation by the Member States, which have to juggle competing priorities<sup>417</sup>. In addition to this, stakeholders often fail to see the benefits of implementing certain legal obligations, and this affects their application on the ground. Poor law enforcement and accountability, as well as illegal and criminal activities at sea, also affect the implementation of existing international legal instruments, particularly in sectors where progress is still slow.

## 13.3 Possible ways forward

The EU is already playing a leading role in most multilateral negotiations to close the existing regulatory gap in international ocean governance, e.g. on the conservation and sustainable use of the marine biological diversity of areas beyond national jurisdiction (BBNJ) and the post-2020 global framework for biodiversity. The EU should build on these efforts and intensify the work in this area, perhaps by allocating additional resources to the negotiation exercise, to ensure that an agreement is reached in due course.

To address the implementation gap, the EU could further support the strengthening of coordination between different international organisations responsible for the oceans. The EU always aims to ensure coherence between its internal and external policies. These efforts should be continued<sup>418</sup>, for instance by increasing the interactions among the decision makers in charge of their development and implementation, together with dedicated consistency checks. In addition to this, it could increase support (including financial) for the effective implementation of existing international legal obligations, and identify innovative ways to monitor compliance, such as by utilising new available technologies.

Improved ocean literacy and the dissemination of scientific knowledge on the status of the oceans and of the impacts of existing ocean-related challenges could stimulate stakeholder buy-in. In addition to this, enhanced stakeholder engagement in the preparation and implementation of ocean-related international agreements could benefit compliance. This could, moreover, facilitate the emergence of complementary governance arrangements such as voluntary commitments by relevant stakeholders<sup>419</sup>.

## 14. High-level assessment and horizontal recommendations

The high-level assessment is structured around the Better Regulation evaluation criteria, to provide a summarised holistic view of the contribution of EU policies towards achieving SDG14.

### 14.1 Relevance

The high-level assessment of relevance considers whether the policies in place at EU and Member State level are aligned with SDG14 and other ocean-related targets in the 2030 Agenda. Although most major policies predate the 2030 Agenda, the analysis undertaken shows a strong link between EU policies and ocean-related targets. Since the adoption of the 2030 Agenda, policies have further evolved or been adopted to better address the issues facing the oceans, within the EU and beyond. For instance, the **international ocean governance agenda**<sup>420</sup> was adopted in 2016 and forms part of the EU's response to the 2030 Agenda. Several pieces of legislation have been adopted in recent years to complete the framework promoting the conservation of fish stocks, such as the **Technical Measures Regulation**<sup>421</sup>, the **SMEF Regulation**<sup>422</sup> and the **Port Reception Facilities Directive**<sup>423</sup>. Overall, no significant policy gaps have been identified in the study and the remaining challenges relate more to the proper and effective implementation of existing policies.

### 14.2 Effectiveness

Conducting a high-level assessment of the contribution of the EU and its Member States to the achievement of SDG14 and other ocean-related targets is challenging. If we base the assessment on the agreed indicators for SDG14 targets, most appear unlikely to be met by the stipulated timelines, indicating that the contribution of EU policies to SDG14 achievement is moderate. If we look beyond the SDG14 indicators, it can be concluded that the EU and its Member States have been taking, and continue to take, strong action to improve the status of the marine environment, with tangible results in areas such as the restoration of certain fish stocks and the establishment of MPAs. However, we are still far from reversing the negative trends, and continued strong and urgent efforts will be necessary to protect the oceans within the EU and beyond. Tangible results and impacts have yet to materialise on issues such as reducing pollution and ocean acidification if the related SDG14 targets are to be achieved within the set deadlines. Continued and concerted EU action to implement the existing policies will therefore be needed to achieve the SDG14 targets.

### 14.3 Efficiency

Considerable investments are being made from the EU budget and in Member States to implement the policies that are contributing to achieving SDG14. While no quantitative estimates are possible between investments towards different SDG14 targets, no clear funding gaps have been identified in the study. While an increase in funding would of course be welcome in a context where challenges continue to emerge and accumulate,

particularly in the areas of ocean research and law enforcement, consultations with stakeholders indicate that the lack of funding is not considered a major issue. Rather, they point to the need to better coordinate the allocation of funding to ensure that the resources available are put to good use.

## 14.4 Coherence

The EU has relevant policies in place that contribute to all targets under SDG14 and other ocean-related targets. No major gaps were identified in the policy framework that could hamper achievement of those targets. Minor gaps include a missing coherent framework for monitoring and addressing ocean acidification.

The study found that sometimes coherence is lacking in policy implementation between the different policy areas and governance levels. There is a need to better streamline or focus the objectives of sectoral policies and the efforts of all the actors involved at EU, Member State and regional levels.

No overarching EU framework or strategy exists for the achievement of SDG14, and the different targets are implemented through a plethora of different policy tools. Such a framework document could potentially be beneficial to provide guidance on coherent policy implementation and perhaps even future policy-making through a number of high-level objectives. At the same time, it should be kept in mind that SDG14 is part of the indivisible and interconnected 2030 Agenda.

## 14.5 EU added value

Effective actions to achieve SDG14 require mobilisation globally, since oceans are a shared resource. Likewise, unilateral action at Member State level would likely be ineffective towards achieving SDG14. Hence, there is clear added value from EU policies in guiding and leading the process. In addition, the economic activities derived from the oceans (fisheries, aquaculture, tourism) give the EU a strong role as an economic zone, to lead and pave the way towards more sustainable use of the oceans.

## 14.6 Horizontal recommendations

### 14.6.1 Within EU borders

**The science-policy interface is crucial in the implementation of SDG14, and the policy framework needs to be flexible.** Ocean-related policy-making must follow scientific advice. As scientific understanding on oceans continues to evolve, the policy framework needs to be adapted accordingly. Moreover, pressures on the oceans are intensifying, and this requires policies to evolve at the same pace to address them. However, for the science-policy interface to be effective, this requires the political will to ensure implementation of scientific advice.

**Efforts to further define SDG14 indicators for the EU context would benefit the monitoring of progress.** At present, Eurostat only assesses part of SDG14 targets (some aspects of SDG14.1 and SDG14.4, and SDG14.3, SDG14.5). Given the importance that monitoring status and trends have for the development of appropriate policies to address current challenges, additional efforts could be undertaken to further define SMART<sup>424</sup> indicators for measuring progress towards the achievement of all SDG14 targets in the EU context.

**The EU policy framework contributing to the achievement of SDG14 is comprehensive, but implementation and enforcement still seem to be lacking in some cases.** The assessment has found no major gaps in the policy framework that is highly relevant for addressing all targets of SDG14. The EU and Member States should refocus efforts on implementation and enforcement of existing policies. Results-based management should be encouraged.

**Member States heavily rely on the EU policy framework, and rarely go beyond what is required in ocean-related policies.** The quality of Member States' environmental governance systems also affects implementation of the existing policy framework for SDG14.

**Transparency and inclusiveness are key.** The successful implementation of ocean-related policies relies heavily on the buy-in and engagement of stakeholders. These actors must be included in the decision-making processes, and greater efforts to share the objectives and results of policies with them are needed. **Greater investments in ocean literacy** and communication are fundamental in this context, to enhance the common understanding of ocean-related challenges and to reinforce the engagement of all citizens.

**Funding plays a role in supporting the achievement of SDG14.** Nevertheless, the EU has disbursed considerable funds in recent years, and the appropriate allocation of the existing resources appears to be more of a priority than increasing the funds.

#### **14.6.2 External dimension**

**SDG14 cannot be achieved within the EU if it is not achieved worldwide.** The ocean is a shared resource and, in most cases, action needs to be taken at international level for it to have a meaningful impact. It is crucial that a global level playing field is created, to promote fair competition between the EU and other economic operators. The EU example, for instance on issues such as the fight against IUU fishing, often stimulates neighbouring countries to enhance their environmental standards, and this cooperation should be further cultivated. In this context, the interests of developing countries must be afforded due consideration, and the EU's international ocean governance agenda<sup>425</sup> was welcomed as a very powerful and successful tool for international cooperation.

**The EU must lead by example and use its leverage to foster global progress in the achievement of SDG14.** The EU has emerged as the 'sustainable development champion' in the international arena, and to continue playing its current leading role in international discussions and processes, it needs to lead by example. The unity of Member States gives the EU notable strength at the negotiating table, and this influence could be used more strategically in the global arena to bring ocean-related issues to the centre of political and diplomatic dialogue.

**The EU should take the lead on ocean-related issues currently excluded from SDG14.** SDG14 focuses mostly on fisheries and conservation, but it overlooks other major marine issues such as ocean warming, and generally activities in areas beyond national jurisdiction. The EU should lead discussions on these issues that will need to be addressed in the future.

**Regional organisations are crucial players for the achievement of SDG14.** The regional approach is particularly useful because it enables coverage of entire ecosystems, while at the same time regions are sufficiently locally attached and small-scale to involve all relevant stakeholders. Regional organisations in the EU are fairly well developed. Currently, four RSC are active in the European seas, and the EU participates in 17 RFMO<sup>426</sup>. Although there are good examples of regional cooperation in Europe, further issues on which enhanced cooperation and coordination are needed should be identified, for instance on matters relating to environmental monitoring and fisheries

governance, and this exercise should also be undertaken with regards to cooperation at international level.

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<sup>3</sup> The latest version from 2020 can be found here: <https://ec.europa.eu/eurostat/web/products-catalogues/-/KS-01-20-192>

<sup>4</sup> The latest version from 2020 can be found here: [https://s3.amazonaws.com/sustainabledevelopment.report/2020/2020\\_sustainable\\_development\\_report.pdf](https://s3.amazonaws.com/sustainabledevelopment.report/2020/2020_sustainable_development_report.pdf)

<sup>5</sup> The indicators used by Eurostat for the assessment do not cover all the SDG 14 targets.

<sup>6</sup> The lack of sufficient data refers to the lack of time series for more than 25% of the indicators. Eurostat (2020) Sustainable development in the European Union — Overview of progress towards the SDGs in an EU context — 2020 edition. Available at : <https://ec.europa.eu/eurostat/documents/4031688/11010788/KS-01-20-192-EN-N.pdf/ae63aff0-a6f3-1d47-da83-c6886b9daaab>

<sup>7</sup> See: Sustainable Development Solutions Network and IEEP (2019) 2019 Europe Sustainable Development Report. Available at : <https://www.sdgindex.org/reports/2019-europe-sustainable-development-report/>

<sup>8</sup> The ICEP sub-indicator (14.1.1a) refers to the inputs of nutrients (nitrogen, phosphorus and silica) from rivers; the FPDD sub-indicator (14.1.1b) refers to the modelled macro and micro plastics distribution in the ocean.

<sup>9</sup> Bathing water quality is assessed according to standards for microbiological parameters (intestinal enterococci and Escherichia coli)

<sup>10</sup> Eurostat (2020) Eurostat Statistics Explained - SDG 14 - Life below water (statistical annex). Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=SDG\\_14\\_-\\_Life\\_below\\_water\\_%28statistical\\_annex%29#Bathing\\_sites\\_with\\_excellent\\_water\\_quality](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=SDG_14_-_Life_below_water_%28statistical_annex%29#Bathing_sites_with_excellent_water_quality) Accessed 22-02-2020.

<sup>11</sup> Contaminants in this context include synthetic chemical substances and heavy metals. See EEA (2019) Contaminants in Europe's for a detailed description. The report is available at: <https://www.eea.europa.eu/publications/contaminants-in-europes-seas>

<sup>12</sup> Under this category the report looks predominantly at plastic litter.

<sup>13</sup> See [https://ec.europa.eu/environment/strategy/zero-pollution-action-plan\\_en](https://ec.europa.eu/environment/strategy/zero-pollution-action-plan_en)

<sup>14</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008L0056>

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<sup>16</sup> Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32008L0105>

<sup>17</sup> Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31991L0271>

<sup>18</sup> Commission Staff Working Document Evaluation of the Council Directive 91/271/EEC of 21 May 1991, concerning urban waste-water treatment SWD(2019) 700 final. Available at: <https://ec.europa.eu/environment/water/water-urbanwaste/pdf/UWWTD%20Evaluation%20SWD%20448-701%20web.pdf>

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<sup>23</sup> REACH stands for Registration, Evaluation, Authorisation and Restriction of Chemicals.

<sup>24</sup> Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee European Union Strategic Approach to Pharmaceuticals in the Environment COM (2019) 128 final. Available at: [https://ec.europa.eu/environment/water/water-dangersub/pdf/strategic\\_approach\\_pharmaceuticals\\_env.PDF](https://ec.europa.eu/environment/water/water-dangersub/pdf/strategic_approach_pharmaceuticals_env.PDF)

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<sup>32</sup> For this analysis, Europe's seas were divided into grid cells of 20 × 20 km<sup>2</sup> in coastal waters and 100 × 100 km<sup>2</sup> in offshore areas and then the chemical status assessed through a model. Problem areas are defined as areas 'if there is evidence of an undesirable disturbance to the marine ecosystem due to inputs of contaminants'. The full methodology is described in EEA (2019) Contaminants in Europe's seas. Available at: <https://www.eea.europa.eu/publications/contaminants-in-europes-seas>

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<sup>58</sup> E.g. the recent Blue2 study which was supporting a wider effort to build up a Europe-wide capacity for the integrated assessment modelling of policies that affect the quality of the freshwater and marine environment

<sup>59</sup> EEA (2019) Contaminants in Europe's seas. Available at: <https://www.eea.europa.eu/publications/contaminants-in-europes-seas>

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<sup>64</sup> Some approaches exist which are, however, usually proxies. For example, the UK Office for National Statistics (ONS) uses, for now, the proportion of protected areas at sea as a proxy for indicator 14.2.1.

<sup>65</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy

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<sup>75</sup> Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1380>

<sup>76</sup> Communication from the Commission to the European Parliament, the European Council, the European Economic and Social Committee and the Committee of the Regions (2019) The European Green Deal. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A640%3AFIN>

<sup>77</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030

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<sup>79</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Available at : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056>

<sup>80</sup> Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC) COM/2020/259 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593613439738&uri=CELEX:52020DC0259>

<sup>81</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

<sup>82</sup> Reporting period 2013 – 2018.

<sup>83</sup> EEA (2020) Conservation status and trends of habitats and species. Available at: <https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends> Accessed: 20 August 2020

<sup>84</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

<sup>85</sup> The five marine regions are: North-east Atlantic Ocean (MATL), Baltic Sea (MBAL), Black Sea (MBLS), Macaronesian Sea (MMAC), Mediterranean Sea (MMED).

<sup>86</sup> Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0089>

<sup>87</sup> Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0089>

<sup>88</sup> Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC) COM/2020/259 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593613439738&uri=CELEX:52020DC0259>

<sup>89</sup> After “Development, construction and use of residential, commercial, industrial and recreational infrastructure and areas”.

<sup>90</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

<sup>91</sup> EEA (2020) Main pressures and threats. Available at: <https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/main-pressures-and-threats> Accessed: 20 August 2020

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<sup>92</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Available at : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056>

<sup>93</sup> Baltic Sea: seafloor damage, incidental by-catch. North Sea: fisheries (including sea-floor damage). Mediterranean Sea: overfishing. Black Sea: sea-floor damage, overfishing.

<sup>94</sup> Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC) COM/2020/259 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593613439738&uri=CELEX:52020DC0259>

<sup>95</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

<sup>96</sup> EEA (2020) Main pressures and threats. Available at: <https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/main-pressures-and-threats> Accessed: 20 August 2020

<sup>97</sup> EEA (2020) The European environment — state and outlook 2020. Available at: <https://www.eea.europa.eu/publications/soer-2020>

<sup>98</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

<sup>99</sup> EEA (2020) The European environment — state and outlook 2020. Available at: <https://www.eea.europa.eu/publications/soer-2020>

<sup>100</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Available at : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056>

<sup>101</sup> It should be noted that for most descriptors no quantitative threshold values have been defined yet.

<sup>102</sup> Report from the Commission to the European Parliament and the Council assessing Member States' programmes of measures under the Marine Strategy Framework Directive COM/2018/562 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:562:FIN&qid=1533034580736>

<sup>103</sup> EEA (2020) The European environment — state and outlook 2020. Available at: <https://www.eea.europa.eu/publications/soer-2020>

<sup>104</sup> Carbon emissions refers to carbon dioxide, which is a greenhouse gas (GHG). Carbon dioxide (CO<sub>2</sub>) is the baseline greenhouse gas that is used as a benchmark for other gasses.

<sup>105</sup> European Parliament (2019) EU Environment and Climate Change Policies - State of play, current and future challenges. Available at: [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/638428/IPOL\\_STU\(2019\)638428\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/638428/IPOL_STU(2019)638428_EN.pdf)

<sup>106</sup> The detailed metadata for this index is available in UNEP (2019). SDG Indicators Metadata Repository. United Nations Environment Programme (UNEP), Nairobi, Kenya. URL: <https://unstats.un.org/sdgs/metadata/files/Metadata-14-03-01.pdf>

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<sup>107</sup> UN General Assembly, United Nations Framework Convention on Climate Change : resolution / adopted by the General Assembly, 20 January 1994, A/RES/48/189. Available at:

[https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf)

<sup>108</sup> UNFCCC (1997) Kyoto Protocol to the United Nations Framework Convention on Climate Change adopted at COP3 in Kyoto, Japan, on 11 December 1997. Available at: <https://unfccc.int/sites/default/files/resource/docs/cop3/l07a01.pdf>

<sup>109</sup> UN General Assembly, United Nations Framework Convention on Climate Change : resolution / adopted by the General Assembly, 20 January 1994, A/RES/48/189. Available at:

[https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf)

<sup>110</sup> UNFCCC (1997) Kyoto Protocol to the United Nations Framework Convention on Climate Change adopted at COP3 in Kyoto, Japan, on 11 December 1997. Available at: <https://unfccc.int/sites/default/files/resource/docs/cop3/l07a01.pdf>

<sup>111</sup> UNFCCC (1997) Kyoto Protocol to the United Nations Framework Convention on Climate Change adopted at COP3 in Kyoto, Japan, on 11 December 1997. Available at: <https://unfccc.int/sites/default/files/resource/docs/cop3/l07a01.pdf>

<sup>112</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - 20 20 by 2020 - Europe's climate change opportunity. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52008DC0030>

<sup>113</sup> United Nations (2015) Paris Agreement. Available at: [https://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf)

<sup>114</sup> United Nations (2015) Paris Agreement. Available at: [https://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf)

<sup>115</sup> United Nations (2015) Paris Agreement. Available at: [https://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf)

<sup>116</sup> United Nations (2015) Paris Agreement. Available at: [https://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf)

<sup>117</sup> European Commission, 2030 climate & energy framework. Available at: [https://ec.europa.eu/clima/policies/strategies/2030\\_en](https://ec.europa.eu/clima/policies/strategies/2030_en)

<sup>118</sup> Delbeke J., Vis P. (2016) EU Climate Policy explained. Available at: [https://ec.europa.eu/clima/sites/clima/files/eu\\_climate\\_policy\\_explained\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/eu_climate_policy_explained_en.pdf)

<sup>119</sup> A detailed overview of the different policies can e.g. be found in: European Parliament (2019) EU Environment and Climate Change Policies - State of play, current and future challenges. Available at:

[https://www.europarl.europa.eu/RegData/etudes/STUD/2019/638428/IPOL\\_STU\(2019\)638428\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/638428/IPOL_STU(2019)638428_EN.pdf)

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<sup>120</sup> UN General Assembly, United Nations Framework Convention on Climate Change : resolution / adopted by the General Assembly, 20 January 1994, A/RES/48/189. Available at:

[https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf)

<sup>121</sup> Report from the Commission to the European Parliament and the Council, Preparing the ground for raising long-term ambition, EU Climate Action Progress Report 2019 [COM(2019)396 final]. Available at: [https://ec.europa.eu/clima/sites/clima/files/strategies/progress/docs/com\\_2019\\_559\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/strategies/progress/docs/com_2019_559_en.pdf)

<sup>122</sup> United Nations (2015) Paris Agreement. Available at: [https://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf)

<sup>123</sup> European Council Meeting (10 and 11 December 2020) Council Conclusions. Available at : <https://data.consilium.europa.eu/doc/document/ST-22-2020-INIT/en/pdf>

<sup>124</sup> IPCC (2014) Climate Change 2014, Synthesis Report. Available at: [https://www.ipcc.ch/site/assets/uploads/2018/05/SYR\\_AR5\\_FINAL\\_full\\_wcover.pdf](https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf)

<sup>125</sup> JRC (2019) Fossil CO<sub>2</sub> and GHG emissions of all world countries. Available at: <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/fossil-co2-and-ghg-emissions-all-world-countries-0>

<sup>126</sup> Rhein, M., et al. (2013) 'Observations: Ocean', in: Climate change 2013: The physical science basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Stocker, T. F., et al. (eds), Cambridge University Press, Cambridge, UK, and New York, NY. Available at : [http://www.climatechange2013.org/images/report/WG1AR5\\_Chapter03\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_Chapter03_FINAL.pdf)

<sup>127</sup> EEA (2020) Indicator Assessment: Ocean acidification. Available at: <https://www.eea.europa.eu/data-and-maps/indicators/ocean-acidification-3/assessment>  
Accessed: 20/09/2020

<sup>128</sup> See: <https://www.eea.europa.eu/data-and-maps/indicators/ocean-acidification-3/assessment>

<sup>129</sup> The Nairobi work programme is a mechanism under the NNFFCCC to facilitate and catalyse the development, dissemination, and use of knowledge that would inform and support adaptation policies and practices.

<sup>130</sup> UNFCCC (2019) Adaptation of the Ocean, Coastal Areas and Ecosystems. Scoping Paper on Closing Knowledge Gaps and Advancing Action. Available at: [https://unfccc.int/sites/default/files/resource/Scopingpaper\\_Final%20version.pdf](https://unfccc.int/sites/default/files/resource/Scopingpaper_Final%20version.pdf)

<sup>131</sup> Galdies C. et al. (2020) European policies and legislation targeting ocean acidification in european waters - Current state. Available at: <https://www.sciencedirect.com/science/article/pii/S0308597X19309054>

<sup>132</sup> Galdies C. et al. (2020) European policies and legislation targeting ocean acidification in european waters - Current state. Available at: <https://www.sciencedirect.com/science/article/pii/S0308597X19309054>

<sup>133</sup> UN General Assembly, United Nations Framework Convention on Climate Change : resolution / adopted by the General Assembly, 20 January 1994, A/RES/48/189. Available at: [https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf)

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<sup>134</sup>Rakhyun E. Kim (2012) Is a New Multilateral Environmental Agreement on Ocean Acidification Necessary? Available at: [https://www.researchgate.net/publication/256043173\\_Is\\_a\\_New\\_Multilateral\\_Environmental\\_Agreement\\_on\\_Ocean\\_Acidification\\_Necessary](https://www.researchgate.net/publication/256043173_Is_a_New_Multilateral_Environmental_Agreement_on_Ocean_Acidification_Necessary)

<sup>135</sup> UN General Assembly, Convention on the Law of the Sea, 10 December 1982. Available at: [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf)

<sup>136</sup> Convention on Biological Diversity (1992). Available at: <https://www.cbd.int/doc/legal/cbd-en.pdf>

<sup>137</sup> Popattanachai, Naporn and Kirk, Elizabeth (2020) Ocean Acidification and Multilateral Environmental Agreements. Available at: <http://eprints.lincoln.ac.uk/id/eprint/41170/>

<sup>138</sup> IPCC (2019) Special Report on Ocean and Cryosphere in a changing climate, Chapter 5 "Changing Ocean, Marine Ecosystems, and Dependent Communities". Available at: <https://www.ipcc.ch/srocc/chapter/chapter-5/>

<sup>139</sup> C. Gladies et. al (2020) European policies and legislation targeting ocean acidification in european waters - Current state. Available at: <https://www.sciencedirect.com/science/article/pii/S0308597X19309054>

<sup>140</sup> Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions Our Life Insurance, Our Natural Capital: An EU Biodiversity Strategy To 2020 [COM/2011/0244 final]. Available at : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0244>

<sup>141</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives (COM/2020/380 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

<sup>142</sup> The Strategy does, however, highlight that the global Aichi biodiversity targets defined under the Convention on Biological Diversity (which as mentioned earlier also include a target mentioning acidification) are insufficient to adequately protect and restore nature.

<sup>143</sup> Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet'. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013D1386>

<sup>144</sup> Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC) COM/2020/259 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593613439738&uri=CELEX:52020DC0259>

<sup>145</sup> Galdies C. et al. (2020) European policies and legislation targeting ocean acidification in european waters - Current state. Available at: <https://www.sciencedirect.com/science/article/pii/S0308597X19309054>

<sup>146</sup> See: <https://www.emodnet-chemistry.eu/acidification>

<sup>147</sup> The detailed metadata for this index is available in UNEP (2019). SDG Indicators Metadata Repository. United Nations Environment Programme (UNEP), Nairobi, Kenya. URL: <https://unstats.un.org/sdgs/metadata/files/Metadata-14-04-01.pdf>

<sup>148</sup> See e.g. here for more information: <http://www.fao.org/fishery/area/Area27/en>

<sup>149</sup> This is an indicator of the level of fishing pressure.

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<sup>150</sup> Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC) COM/2020/259 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593613439738&uri=CELEX:52020DC0259>

<sup>151</sup> Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1547133726973&uri=CELEX:32013R1380>

<sup>152</sup> The maximum sustainable yield for a given fish stock means the highest possible annual catch that can be sustained over time, by keeping the stock at the level producing maximum growth. The MSY refers to a hypothetical equilibrium state between the exploited population and the fishing activity.

<sup>153</sup> The landing obligation requires all catches of regulated commercial species on-board to be landed and counted against quota. The discarding of prohibited species should be recorded in the logbook and forms an important part of the science base for the monitoring of these species

<sup>154</sup> The so-called “total allowable catches” are catch limits that are set for most commercial fish stocks. The Commission prepares the proposals, based on scientific advice. TACs are shared between EU countries in the form of national quotas. For each stock a different allocation percentage per EU country is applied for the sharing out of the quotas.

<sup>155</sup> Almost all important stocks and fisheries are managed by means of a multiannual plan. The plans contain the goal for fish stock management, expressed in terms of fishing mortality and/or targeted stock size. Some multiannual plans include fishing effort restrictions as an additional instrument to the annual total allowable catches, and specific control rules. Multiannual plans under the new CFP include the target of fishing at maximum sustainable yield and a deadline for achieving this target.

<sup>156</sup> Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1380>

<sup>157</sup> This overview is based on European Parliament (2019) EU fisheries policy – latest developments and future challenges which provides a more detailed overview. Available at: [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/629202/IPOL\\_STU\(2019\)629202\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/629202/IPOL_STU(2019)629202_EN.pdf)

<sup>158</sup> Regulation (EU) No 1379/2013 of the European Parliament and of the Council of 11 December 2013 on the common organisation of the markets in fishery and aquaculture products, amending Council Regulations (EC) No 1184/2006 and (EC) No 1224/2009 and repealing Council Regulation (EC) No 104/2000. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R1379>

<sup>159</sup> Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1241>

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<sup>160</sup> Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R1004>

<sup>161</sup> Council Regulation (EC) No 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing. Available at: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32008R1005>

<sup>162</sup> Regulation (EU) 2017/2403 of the European Parliament and of the Council of 12 December 2017 on the sustainable management of external fishing fleets, and repealing Council Regulation (EC) No 1006/2008. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R2403>

<sup>163</sup> Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009R1224>

<sup>164</sup> Council Regulation (EC) No 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing, amending Regulations (EEC) No 2847/93, (EC) No 1936/2001 and (EC) No 601/2004 and repealing Regulations (EC) No 1093/94 and (EC) No 1447/1999. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1408984470270&uri=CELEX:02008R1005-20110309>

<sup>165</sup> The regulation stipulates that the EU will issue warnings, known as a “yellow card,” to countries that perform poorly in the effort to end IUU fishing. Failure to curb IUU fishing will result in a ban in the export of fish to the EU via the issuance of a red card.

<sup>166</sup> Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0508>

<sup>167</sup> Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1380>

<sup>168</sup> See: [https://ec.europa.eu/commission/presscorner/detail/en/QANDA\\_20\\_1071](https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_1071)

<sup>169</sup> STECF (2020) Monitoring the performance of the Common Fisheries Policy (STECF-Adhoc-20-01) Edited. Available at: [https://stecf.jrc.ec.europa.eu/reports/cfp-monitoring/asset\\_publisher/oz5O/document/id/2484866?inheritRedirect=false&redirect=https%3A%2F%2F](https://stecf.jrc.ec.europa.eu/reports/cfp-monitoring/asset_publisher/oz5O/document/id/2484866?inheritRedirect=false&redirect=https%3A%2F%2F)

<sup>170</sup> Based on stakeholder consultations.

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<sup>171</sup> See e.g. New Economics Foundation (2019) Landing the blame: overfishing in the Northeast Atlantic 2019, Available at: [https://neweconomics.org/uploads/files/NEF\\_LTB\\_ATLANTIC\\_2019.pdf](https://neweconomics.org/uploads/files/NEF_LTB_ATLANTIC_2019.pdf) or The Pew Charitable Trusts (2019) EU Fisheries Management Improves but Still Lags Behind Scientific Advice. Available at : [https://www.pewtrusts.org/-/media/assets/2019/12/eone/eone-2019-analysis\\_v1.pdf](https://www.pewtrusts.org/-/media/assets/2019/12/eone/eone-2019-analysis_v1.pdf). The former source estimates that two-thirds of “total allowable catches” were set above scientific advice between 2001 and 2018. While the percentage by which “total allowable catches” were set above advice declined throughout this period (from 42% to 8% in all EU waters), the proportion of “total allowable catches” set above advice did not. This point has also frequently been brought up during stakeholder consultations.

<sup>172</sup> See e.g. European Parliament (2019) EU fisheries policy – latest developments and future challenges. Available at: [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/629202/IPOL\\_STU\(2019\)629202\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/629202/IPOL_STU(2019)629202_EN.pdf) and Federal Agency for Nature Conservation (2019) 5-year review (2014-2019) of the EU Common Fisheries Policy. Available at: [https://www.duh.de/fileadmin/user\\_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP\\_Fischereipolitik\\_Broschure\\_komplett\\_lange\\_Version\\_GB\\_16\\_12\\_19.pdf](https://www.duh.de/fileadmin/user_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP_Fischereipolitik_Broschure_komplett_lange_Version_GB_16_12_19.pdf)

<sup>173</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056>

<sup>174</sup> See e.g. Federal Agency for Nature Conservation (2019) 5-year review (2014-2019) of the EU Common Fisheries Policy. Available at : [https://www.duh.de/fileadmin/user\\_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP\\_Fischereipolitik\\_Broschure\\_komplett\\_lange\\_Version\\_GB\\_16\\_12\\_19.pdf](https://www.duh.de/fileadmin/user_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP_Fischereipolitik_Broschure_komplett_lange_Version_GB_16_12_19.pdf) chapter 4 for a detailed overview of how the two legislative pieces interact.

<sup>175</sup> Convention on Biological Diversity (1992), article 2. Available at: <https://www.cbd.int/doc/legal/cbd-en.pdf>

<sup>176</sup> Aichi Target 11 “By 2020 [...] 10 % of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider [...] seascape”. Strategic Plan for Biodiversity 2011-2020. Adopted by the Conference of the Parties of the United Nations Convention on Biological Diversity in 2010. Retrieved from: <https://www.cbd.int/kb/record/decision/12268>

<sup>177</sup> Eurostat (2020) Sustainable development in the European Union — Monitoring report on progress towards the SDGS in an EU context — 2020 edition. Available at: <https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-02-20-202>

<sup>178</sup> Eurostat (2020) Sustainable development in the European Union — Monitoring report on progress towards the SDGS in an EU context — 2020 edition. Available at: <https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-02-20-202>

<sup>179</sup> EEA (2018) Marine Protected Areas. Available at: <https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/assessments/marine-protected-areas>

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<sup>180</sup> Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0147>

<sup>181</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

<sup>182</sup> European Commission website, Natura 2000. Available at: [https://ec.europa.eu/environment/nature/natura2000/index\\_en.htm](https://ec.europa.eu/environment/nature/natura2000/index_en.htm)

<sup>183</sup> According to the EEA, approximately 75% of the EU MPAs are designated under the EU Habitats Directive and the EU Birds Directive. See EEA (2020) The European environment — state and outlook 2020. Available at: <https://www.eea.europa.eu/publications/soer-2020>

<sup>184</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Available at : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056>

<sup>185</sup> Article 11, Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1547133726973&uri=CELEX:32013R1380>

<sup>186</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives (COM/2020/380 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

<sup>187</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives (COM/2020/380 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

<sup>188</sup> The Arctic Institute (2020) 'The European Union in Antarctica: An Emerging Area of Interest?' Available at: <https://www.thearcticinstitute.org/european-union-antarctica-emerging-area-interest/?cn-reloaded=1>

<sup>189</sup> Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0089>

<sup>190</sup> These are: The Convention for the Protection of the Marine Environment in the North-East Atlantic of 1992 (further to earlier versions of 1972 and 1974) – the OSPAR Convention (OSPAR); The Convention on the Protection of the Marine Environment in the Baltic Sea Area of 1992 (further to the earlier version of 1974) – the Helsinki Convention (HELCOM); The Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean of 1995 (further to the earlier version of 1976) – the Barcelona Convention (UNEP-MAP); The Convention for the Protection of the Black Sea of 1992 – the Bucharest Convention. Most of these RSCs include non-EU countries among its parties. Notably, the EU is party to the OSPAR, HELCOM and Barcelona Convention.

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- <sup>191</sup> OSPAR Commission (2020) Marine Protected Areas. Available at: <https://www.ospar.org/work-areas/bdc/marine-protected-areas> Accessed 20-08-2020.
- <sup>192</sup> OSPAR Commission (2018) Status of the OSPAR Network of Marine Protected Areas in 2017. Available at : [https://www.ospar.org/site/assets/files/1378/assessment\\_sheet\\_mpa\\_status\\_2017.pdf](https://www.ospar.org/site/assets/files/1378/assessment_sheet_mpa_status_2017.pdf)
- <sup>193</sup> HELCOM (2020) Marine Protected Areas. Available at: <https://helcom.fi/action-areas/marine-protected-areas/> Accessed 20-08-2020
- <sup>194</sup> Helsinki Commission (2006) Planning and management of Baltic Sea Protected Areas: guidelines and tools Balt. Sea Environ. Proc. No. 105. Available at: <https://www.helcom.fi/wp-content/uploads/2019/08/BSEP105-1.pdf>
- <sup>195</sup> SPA/RAC (2020) Missions. Available at: <http://www.rac-spa.org/missions> Accessed 20-08-2020
- <sup>196</sup> Black Sea Commission (2020) Annual BSC Work Programme 2019/2020. Available at : <http://www.blacksea-commission.org/BSC%20Activities/Work%20Programmes/> Accessed 20-08-2020
- <sup>197</sup> Either as dedicated MPA reports, or as part of wider 'state of the environment' reports.
- <sup>198</sup> EEA (2018) Marine Protected Areas. Available at: <https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/assessments/marine-protected-areas>
- <sup>199</sup> Convention on Biological Diversity (1992), article 2. Available at: <https://www.cbd.int/doc/legal/cbd-en.pdf>
- <sup>200</sup> UN General Assembly, Convention on the Law of the Sea, 10 December 1982. Available at: [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf)
- <sup>201</sup> For instance, the BIOPAMA II Programme (<https://www.biopama.org/>) assists the African, Caribbean and Pacific countries to address their priorities for improved management and governance of biodiversity and natural resources, including the management of MPAs.
- <sup>202</sup> The Transatlantic MPA Network brings together MPA managers around the Atlantic rim from North and South America, Africa and Europe. The twinning project has allowed them to network and share best management practices. They are now looking to continue their cooperation based on a common strategy
- <sup>203</sup> European Court of Auditors (2020) Marine Environment: EU protection is wide but not deep. Available at: [https://www.eca.europa.eu/Lists/ECADocuments/SR20\\_26/SR\\_Marine\\_environment\\_EN.pdf](https://www.eca.europa.eu/Lists/ECADocuments/SR20_26/SR_Marine_environment_EN.pdf)
- <sup>204</sup> ICF, IEEP, PML (2018) Study on the Economic Benefits of MPAs. Available at: <https://op.europa.eu/en/publication-detail/-/publication/dbe3d250-b0b5-11e8-99ee-01aa75ed71a1>
- <sup>205</sup> For a definition of ecologically coherent networks of MPAs, please see European Marine Board Position Paper (2013) Achieving Ecologically Coherent MPA Networks in Europe: Science Needs and Priorities. Available at : [http://archives.esf.org/fileadmin/Public\\_documents/Publications/EMB\\_PP18\\_Marine\\_Protected\\_Areas.pdf](http://archives.esf.org/fileadmin/Public_documents/Publications/EMB_PP18_Marine_Protected_Areas.pdf)
- <sup>206</sup> To be representative, an MPA network should represent the full range of biological features (species, biotopes, habitat types) present within the planning region, rather than limiting protection to a narrow range of priority features. See European Marine Board
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Position Paper (2013) Achieving Ecologically Coherent MPA Networks in Europe: Science Needs and Priorities. Available at : [http://archives.esf.org/fileadmin/Public\\_documents/Publications/EMB\\_PP18\\_Marine\\_Protected\\_Areas.pdf](http://archives.esf.org/fileadmin/Public_documents/Publications/EMB_PP18_Marine_Protected_Areas.pdf)

<sup>207</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>208</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>209</sup> Report from the Commission to the European Parliament and the Council on the progress in establishing marine protected areas (as required by Article 21 of the Marine Strategy Framework Directive 2008/56/EC). Available at : [https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/pdf/marine\\_protected\\_areas.pdf](https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/pdf/marine_protected_areas.pdf)

<sup>210</sup> IUCN WCPA (2018) Applying IUCN's Global Conservation Standards to Marine Protected Areas (MPA). Delivering effective conservation action through MPAs, to secure ocean health & sustainable development. Available at : [https://www.iucn.org/sites/dev/files/content/documents/applying\\_mpa\\_global\\_standards\\_v120218\\_nk\\_v2.pdf](https://www.iucn.org/sites/dev/files/content/documents/applying_mpa_global_standards_v120218_nk_v2.pdf)

<sup>211</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>212</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives (COM/2020/380 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

<sup>213</sup> European Commission website, Managing Fisheries. Available at: [https://ec.europa.eu/fisheries/cfp/fishing\\_rules\\_en](https://ec.europa.eu/fisheries/cfp/fishing_rules_en) Accessed on 26/11/2020.

<sup>214</sup> The N2K Group (2018) Review of fisheries management measures in Natura 2000 sites. Available at : <https://ec.europa.eu/environment/nature/natura2000/marine/docs/Review%20of%20fisheries%20management%20measures%20in%20Natura%202000%20sites.pdf>

<sup>215</sup> Federal Agency for Nature Conservation (2019) 5-year review (2014-2019) of the EU Common Fisheries Policy. Available at : [https://www.duh.de/fileadmin/user\\_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP\\_Fischereipolitik\\_Broschue\\_komplett\\_lange\\_Version\\_GB\\_16\\_12\\_19.pdf](https://www.duh.de/fileadmin/user_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP_Fischereipolitik_Broschue_komplett_lange_Version_GB_16_12_19.pdf)

<sup>216</sup> This also has consequences for SDG14.4.

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<sup>217</sup> The N2K Group (2018) Review of fisheries management measures in Natura 2000 sites. Available at :  
<https://ec.europa.eu/environment/nature/natura2000/marine/docs/Review%20of%20fisheries%20management%20measures%20in%20Natura%202000%20sites.pdf>

<sup>218</sup> EEA (2020) The European environment — state and outlook 2020. Available at: <https://www.eea.europa.eu/publications/soer-2020>

<sup>219</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives (COM/2020/380 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

<sup>220</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>221</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008L0056>

<sup>222</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>223</sup> The European Commission's proposal for the revision of the Fisheries Control System, put forward in 2018, includes provisions that will enhance control over fishing vessels in fishing restricted areas, as well as the monitoring of entry into and exit from specific areas, including MPAs. The proposal is available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009R1224>

<sup>224</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>225</sup> Stakeholder opinion

<sup>226</sup> EEA (2020) The European environment — state and outlook 2020. Available at: <https://www.eea.europa.eu/publications/soer-2020>

<sup>227</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives (COM/2020/380 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

<sup>228</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>229</sup> Fisheries management measures were adopted also prior to the reform of the Common Fisheries Policy.

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<sup>230</sup> Federal Agency for Nature Conservation (2019) 5-year review (2014-2019) of the EU Common Fisheries Policy. Available at : [https://www.duh.de/fileadmin/user\\_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP\\_Fischereipolitik\\_Broschure\\_komplett\\_lange\\_Version\\_GB\\_16\\_12\\_19.pdf](https://www.duh.de/fileadmin/user_upload/download/Projektinformation/Naturschutz/Fischereipolitik/GFP_Fischereipolitik_Broschure_komplett_lange_Version_GB_16_12_19.pdf)

<sup>231</sup> Salomon, Markus & Markus, Till & Dross, Miriam. (2014). Masterstroke or paper tiger – The reform of the EU's Common Fisheries Policy. *Marine Policy*. 47. 76–84. 10.1016/j.marpol.2014.02.001. Available at : [https://www.researchgate.net/publication/260441135\\_Masterstroke\\_or\\_paper\\_tiger\\_-\\_The\\_reform\\_of\\_the\\_EUs\\_Common\\_Fisheries\\_Policy](https://www.researchgate.net/publication/260441135_Masterstroke_or_paper_tiger_-_The_reform_of_the_EUs_Common_Fisheries_Policy)

<sup>232</sup> This procedure requires a lengthy sequence of informal consultations, preparation of documentation and negotiation of a joint recommendation among all participating Member States before the Commission adopts a delegated act establishing the conservation measure.

<sup>233</sup> Stakeholder opinion.

<sup>234</sup> WWF (2019) Protecting our ocean: Europe's challenges to meet the 2020 deadlines. Available at : [http://d2ouvy59p0dg6k.cloudfront.net/downloads/protecting\\_our\\_ocean\\_summary.pdf](http://d2ouvy59p0dg6k.cloudfront.net/downloads/protecting_our_ocean_summary.pdf)

<sup>235</sup> A 2015 study estimated a EUR 700M financing gap for optimal MPA management only in the Mediterranean. Binet, T., Diazabakana, A., Hernandez, S. 2015. Sustainable financing of Marine Protected Areas in the Mediterranean: a financial analysis. Vertigo Lab, MedPAN, RAC/SPA, WWF Mediterranean. Available at: [http://www.rac-spa.org/sites/default/files/doc\\_medmpanet/final\\_docs\\_regional/55\\_study\\_on\\_the\\_sustainable\\_financing\\_of\\_mediterranean\\_mpas.pdf](http://www.rac-spa.org/sites/default/files/doc_medmpanet/final_docs_regional/55_study_on_the_sustainable_financing_of_mediterranean_mpas.pdf)

<sup>236</sup> Lack of funding for MPA management appears to be a global issue. Gill, D., Mascia, M., Ahmadi, G. et al. (2017) Capacity shortfalls hinder the performance of marine protected areas globally. *Nature* 543, 665–669. Available at: <https://www-nature-com.pros.lib.unimi.it:2050/articles/nature21708.pdf>

<sup>237</sup> OECD (2017) Marine Protected Areas: Economics, management and effective policy mixes. Available at: [https://read.oecd-ilibrary.org/environment/marine-protected-areas\\_9789264276208-en#page1](https://read.oecd-ilibrary.org/environment/marine-protected-areas_9789264276208-en#page1)

<sup>238</sup> Article 14(f) of the EMFF Regulation establishes that the EMFF may support 'The management, restoration and monitoring of marine protected areas'. See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0508>

<sup>239</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives (COM/2020/380 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

<sup>240</sup> Stakeholder opinion.

<sup>241</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>242</sup> Stakeholder opinion.

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<sup>243</sup> This forms part of the key actions to be taken by the Commission under the EU Biodiversity Strategy to 2030.

<sup>244</sup> Commission Staff Working Document Key stages and progress up to 2019 Accompanying the Report from the Commission to the European Parliament and the Council on the implementation of the Marine Strategy Framework Directive (SWD(2020) 60 final). Available at: <https://ec.europa.eu/info/sites/info/files/swd202060final.pdf>

<sup>245</sup> The EU already launched similar activities with third countries: <https://oceanconference.un.org/commitments/?id=17526>.

<sup>246</sup> The OECD outlines the direct costs of MPA management. See: OECD (2017) Marine Protected Areas: Economics, management and effective policy mixes. Available at: [https://read.oecd-ilibrary.org/environment/marine-protected-areas\\_9789264276208-en#page1](https://read.oecd-ilibrary.org/environment/marine-protected-areas_9789264276208-en#page1)

<sup>247</sup> This had already been recommended by the EU in 2015, see: Report from the Commission to the European Parliament and the Council on the progress in establishing marine protected areas (as required by Article 21 of the Marine Strategy Framework Directive 2008/56/EC). Available at : [https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/pdf/marine\\_protected\\_areas.pdf](https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/pdf/marine_protected_areas.pdf). A best practice example in the co-management of MPAs is represented by the MPA in Torre Guaceto (Italy) <https://www.europarc.org/case-studies/sustainable-fishermen-community-marine-protected-area-torre-guaceto/>

<sup>248</sup> Doha Ministerial Declaration, adopted on the 14<sup>th</sup> November 2001 at the Fourth Ministerial Conference of the WTO. Retrieved from: [https://www.wto.org/english/thewto\\_e/minist\\_e/min01\\_e/mindecl\\_e.htm](https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm)

<sup>249</sup> WTO Introduction to fisheries subsidies in the WTO. Available at : [https://www.wto.org/english/tratop\\_e/rulesneg\\_e/fish\\_e/fish\\_intro\\_e.htm#:~:text=Introduction%20to%20fisheries%20subsidies%20in%20the%20WTO,food%20and%20livelihood%20to%20people.&text=Subsidies%20for%20fishing%20are%20thus,supporting%20fisheries%20production%20and%20conservation.](https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_intro_e.htm#:~:text=Introduction%20to%20fisheries%20subsidies%20in%20the%20WTO,food%20and%20livelihood%20to%20people.&text=Subsidies%20for%20fishing%20are%20thus,supporting%20fisheries%20production%20and%20conservation.)

<sup>250</sup> WTO website, 'WTO members start text-based negotiations on fisheries subsidies'. Available at : [https://www.wto.org/english/news\\_e/news20\\_e/fish\\_21sep20\\_e.htm](https://www.wto.org/english/news_e/news20_e/fish_21sep20_e.htm)

<sup>251</sup> UNEP (2019). SDG Indicators Metadata Repository. United Nations Environment Programme (UNEP), Nairobi, Kenya. URL: <https://unstats.un.org/sdgs/metadata/files/Metadata-14-06-01.pdf>.

<sup>252</sup> UNISTATS (2020). United Nations Global SDG Database. United Nations Statistics Division (UNSTATS), New York, US. URL: <https://unstats.un.org/sdgs/indicators/database/>, accessed: 22-02-2020.

<sup>253</sup> Arthur R., Heyworth S., Pearce J., Sharkey W. (2019) The cost of harmful fishing subsidies. Working Paper. Available at: <https://pubs.iied.org/pdfs/16654IIED.pdf>

<sup>254</sup> European Commission, 'Joint Staff Working Document Accompanying the Document Joint Report to the European Parliament and the Council, Improving International Ocean Governance - Two Years of Progress SWD(2019) 104 Final'.

<sup>255</sup> BirdLife International; Bloom; ClientEarth; Low Impact Fishers Europe; Seas at risk; WWF, 'Will the EU Doom Our Ocean and Fisheries?' Available at : [https://wwfeu.awsassets.panda.org/downloads/jointpositionpaper\\_willthe\\_eudoomouroceanand\\_fishers\\_jan2020.pdf](https://wwfeu.awsassets.panda.org/downloads/jointpositionpaper_willthe_eudoomouroceanand_fishers_jan2020.pdf)

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<sup>256</sup> Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0508>

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<sup>258</sup> Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1380>

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<sup>261</sup> Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1380>

<sup>262</sup> European Commission (2014) State aid in the fishery and aquaculture sector. Available at : [https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/presentation-state-aid\\_en.pdf](https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/presentation-state-aid_en.pdf)

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<sup>270</sup> Stakeholder opinion.

<sup>271</sup> OECD Issue Paper (2017) A preliminary assessment of indicators for SDG 14 on "Oceans". Available at: <https://hal.archives-ouvertes.fr/hal-01639008/document>

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<sup>277</sup> European Commission (2020) External trade. Available at : [https://ec.europa.eu/fisheries/5-external-trade\\_en](https://ec.europa.eu/fisheries/5-external-trade_en) Accessed 20-08-2020

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<sup>287</sup> For more information, see: [https://ec.europa.eu/fisheries/cfp/international/agreements\\_en](https://ec.europa.eu/fisheries/cfp/international/agreements_en)

<sup>288</sup> Countries defined as SIDS according to the UNESCO List of SIDS <http://www.unesco.org/new/en/natural-sciences/priority-areas/sids/resources/sids-list/>

<sup>289</sup> Countries defined as LDCs according to the UNCTAD List of LDCs <https://unctad.org/en/pages/aldc/Least%20Developed%20Countries/UN-list-of-Least-Developed-Countries.aspx>

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<sup>292</sup> For instance, the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC).

<sup>293</sup> The Southern Indian Ocean Fisheries Agreement (SIOFA)'s overall objectives make explicit reference to SDG 14.7. For more information, see: <https://www.apsoi.org/>

<sup>294</sup> This is true for the Western and Central Pacific Fisheries Commission (WCPFC), whose Convention establishes that states party must take into account the 'needs of SIDS in the Convention Area whose economies, food supplies and livelihoods are overwhelmingly dependent on the exploitation of marine living resources' when developing criteria to set fishing quotas. The Convention is available at: <https://www.wcpfc.int/convention-text>

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<sup>297</sup> For more information see: [https://ec.europa.eu/europeaid/projects/pacific-european-union-marine-partnership-programme-peump\\_en](https://ec.europa.eu/europeaid/projects/pacific-european-union-marine-partnership-programme-peump_en)

<sup>298</sup> For more information see: <http://intra-acp-map.acp.int/projects/support-programme-for-small-island-developing-countries-sids-and-coastal-countries/>

<sup>299</sup> For more information see: [https://ec.europa.eu/europeaid/projects/improved-regional-fisheries-governance-western-africa-pescao-0\\_en](https://ec.europa.eu/europeaid/projects/improved-regional-fisheries-governance-western-africa-pescao-0_en)

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<sup>321</sup> IOC-UNESCO (2017) Global ocean science report: the current status of ocean science around the world. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000250428>

<sup>322</sup> IOC-UNESCO (2017) Global ocean science report: the current status of ocean science around the world. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000250428>

<sup>323</sup> The area of each country is scaled and resized according to the number of ocean science publications. IOC-UNESCO (2017) Global ocean science report: the current status of ocean science around the world. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000250428>

<sup>324</sup> Communication from the Commission to the European Parliament, the European Council, the European Economic and Social Committee and the Committee of the Regions (2019) The European Green Deal. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A640%3AFIN>

<sup>325</sup> For more information see: [https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy\\_en](https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy_en)

<sup>326</sup> For more information see: <https://ec.europa.eu/programmes/horizon2020/en>

<sup>327</sup> For more information see: <https://ec.europa.eu/easme/en/life>

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328 For more information see: [https://ec.europa.eu/info/funding-tenders/funding-opportunities/funding-programmes/overview-funding-programmes/european-structural-and-investment-funds\\_en](https://ec.europa.eu/info/funding-tenders/funding-opportunities/funding-programmes/overview-funding-programmes/european-structural-and-investment-funds_en)

329 For more information, please visit: <https://cordis.europa.eu/en>

330 For more information see: <https://www.seadatanet.org/About-us>

331 For more information see: <https://www.maritera.eu/about-matera>

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339 For more information see: <https://www.emodnet.eu/what-emodnet>

340 For more information see: <https://www.emporia4kt.com/ttprogramme>

341 The Global MTCC Network (GMN) – formally titled “Capacity Building for Climate Mitigation in the Maritime Shipping Industry ” – initiative unites technology centres – Maritime Technology Cooperation Centres (MTCCs) – in targeted regions into a global network. Together, they are promoting technologies and operations to improve energy efficiency in the maritime sector and help navigate shipping into a low-carbon future. This project is funded by the EU and implemented by the International Maritime Organisation. For more information see: <https://gmnmn.org/about-gmn/>

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- <sup>349</sup> The Commission was actively involved in the OceanObs19 conference and its follow-up.
- <sup>350</sup> The G7 countries fund more than 50% of ocean observations.
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