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**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)**

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### **1. Introduction**

Many marine species across Europe's seas are experiencing a decrease in population size as well as a loss of distribution range and habitat due to impacts from human pressures<sup>1</sup>.

The United Nations have continuously voiced their concern about the health of oceans and marine biodiversity in the last two decades<sup>2</sup>. Under the Convention on Biological Diversity, the EU has committed to ensuring the conservation of 10% of its coastal and marine areas. This objective is also reflected in Sustainable Development Goal 14 to conserve and sustainably use the oceans, seas and marine resources for sustainable development<sup>3</sup>.

The European Union adopted its Biodiversity Strategy in 2011 to halt biodiversity loss and the degradation of ecosystem services on its territory by 2020. The Habitats Directive<sup>4</sup> requires the establishment of special areas of conservation, including coastal and marine habitats. In addition, the EU's Marine Strategy Framework Directive<sup>5</sup> (MSFD) focuses on protecting marine biodiversity in particular.

The MSFD requires Member States to adopt Programmes of Measures<sup>6</sup> to achieve good environmental status in their marine waters<sup>7</sup> by 2020. The Programmes of Measures shall include spatial protection measures contributing to coherent and representative networks of marine protected areas (MPAs)<sup>8</sup>. Marine protected areas are a measure used across Europe's seas for protecting vulnerable species and habitats. More precisely, they are:

- geographically defined marine areas;
- whose primary and clearly stated objective is nature conservation;

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<sup>1</sup> European Environment Agency (2015) State of the Environment Report. <http://www.eea.europa.eu/soer-2015/europe/marine-and-coastal>

<sup>2</sup> See for instance Agenda 21, <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf> and UNGA Resolution A/RES/66/288 - The Future We Want of 27 July 2012 <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/476/10/PDF/N1147610.pdf?OpenElement>

<sup>3</sup> UNGA Resolution A/69/L.85 of 12 August 2015, [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/69/L.85&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E)

<sup>4</sup> Directive 92/43/EEC

<sup>5</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), OJ L 164, 25.6.2008.

<sup>6</sup> MSFD Art. 13.

<sup>7</sup> Marine waters are defined by MSFD (Art 3(1)).

<sup>8</sup> MSFD Art. 13(4).

- and which are regulated and managed through legal or other effective means to achieve this objective<sup>9</sup>.

It has been demonstrated that well-managed European marine protected areas have positive ecological effects. In marine reserves with high protection, species density<sup>10</sup> increased an average of 116%, biomass of plants and animals increased on average 238%, body size of animals increased 13% and species richness by 19%<sup>11</sup>.

By contributing to maintaining healthy and sustainable seas and oceans, effectively managed MPAs also support services that seas and oceans provide. The role of marine protected areas therefore goes beyond nature conservation, as they create economic benefits to society – they are the green foundations on which the blue economy is built. For example, the overall benefits generated by the marine Natura 2000 network were estimated to reach approximately 1.5 billion EUR per year in 2011. These benefits could increase to 3.2 billion EUR if the marine Natura 2000 coverage doubled<sup>12</sup>.

MPAs generate socioeconomic benefits in various ways. By increasing the biomass of species, MPAs can contribute to rebuilding fish stocks<sup>13</sup>. Evidence shows that the positive effects of MPAs spill over to neighbouring fisheries. For instance, setting up the Columbretes Islands Marine Reserve in Spain increased catches in surrounding fisheries by about 10% a year<sup>14</sup>.

Clean water, healthy habitats and abundant marine biodiversity are also one of the foundations of coastal and marine tourism. MPAs can become major tourist attractions boosting coastal and marine economies<sup>15</sup>. Tourism in the catchment of the Great Barrier Reef Marine Park and World Heritage Area in Australia generated approximately \$6.4 billion in direct expenditure, \$5.2 billion value-added and an equivalent of more than 64,000 full time jobs in 2012<sup>16</sup>.

Finally, by improving the health of the marine environment, MPAs can strengthen other marine ecosystem services, such as waste assimilation, coastal protection and flood management<sup>17</sup>. The designation of a British network of MPAs was estimated to generate a monetary value of £8.2 billion for gas and climate regulation and £1.3 billion for nutrient cycling<sup>18</sup>.

<sup>9</sup> For a more detailed definition, please see the Annex p. 8.

<sup>10</sup> Number of plants and animals in a given area.

<sup>11</sup> Fenberg, P. B., et al. (2012) 'The science of European marine reserves: Status, efficacy, and future needs', *Marine Policy* 36(5), pp. 1012–1021.

<sup>12</sup> European Commission (2013), 'The Economic Benefits of the Natura 2000 Network'. [http://ec.europa.eu/environment/nature/natura2000/financing/docs/ENV-12-018\\_LR\\_Final1.pdf](http://ec.europa.eu/environment/nature/natura2000/financing/docs/ENV-12-018_LR_Final1.pdf)

<sup>13</sup> Well-managed MPAs have been found to contain more than 5 times the total large fish biomass and 14 times the shark biomass compared with fished areas. Edgar, G. J. et al. (2014) 'Global conservation outcomes depend on marine protected areas with five key features', *Nature* 506, pp. 216–220.

<sup>14</sup> Sala, E. (2012) 'Here is one great way to save fish – and the fishing industry' in *Tackling Science Challenges*, Harvard Business Review 85.

<sup>15</sup> Australian Government, Department of Environment and Heritage (2003) 'The benefits of marine protected areas'. <http://www.environment.gov.au/system/files/resources/5eaa4f9-e8e0-45d1-b889-83648c7b2ceb/files/benefits-mpas.pdf>

<sup>16</sup> Great Barrier Reef Marine Park Authority (2014), 'Great Barrier Reef Region Strategic Assessment – Strategic Assessment Report'. <http://elibrary.gbrmpa.gov.au/jspui/handle/11017/2861>

<sup>17</sup> Potts et al. (2014) 'Do marine protected areas deliver flows of ecosystem services to support human welfare?', *Marine Policy* 44.

<sup>18</sup> Hussain et al. (2010) 'An ex-ante ecological economic assessment of the benefits arising from marine

The present report takes stock of the progress made by Member States in establishing MPAs by the end of 2012, as required by Article 21 of the MSFD. Based on the work done by the European Environment Agency (EEA) on assessing the network of European MPAs, the report looks at the progress made on the establishment of marine protected areas by Member States (section 2) before examining the coherence and representativity of MPA networks, as required by Article 13(4) (section 3). The last section provides an outlook for the work which remains to be done. Two technical annexes are attached to the report which defines the terminology used in the report, provides the European and international legal context of the establishment of MPAs, and contains tables illustrating the figures used in the report.

## **2. Assessment of the progress made**

The EEA will publish a report on European marine protected areas in 2015<sup>19</sup>. According to their assessment, Europe has made significant efforts in designating MPAs and establishing MPA networks since the entry into force of the Convention on Biological Diversity in 1993<sup>20</sup>. At the end of 2012, 5.9% of European seas<sup>21</sup> were designated as MPAs, but large regional differences exist across Europe in MPA coverage. In three out of ten marine subregions MPA coverage was higher than 10%, while the proportion of MPAs stayed below 2% in two regional seas in 2012<sup>22</sup> (Table 1). Besides the regional differences, large differences were observed between MPA coverage in coastal and offshore waters (Table 2). It should be noted that MPA coverage has further increased since 2012, as some Member States have designated a significant number of MPAs.

The EEA report differentiates between three types of MPAs in Europe: marine Natura 2000 sites, MPAs designated under Regional Sea Conventions, and individual national MPAs. It should be noted that the three types of MPAs may overlap (i.e., a given site or part of it may be designated under more than one regime), follow different designation processes and are subject to different legal requirements.

### **2.1 Marine Natura 2000 sites**

The marine Natura 2000 network is a major success as it is the largest single contributor to European MPAs in terms of coverage. At the end of 2012 it covered more than 228 000 km<sup>2</sup> equalling more than 4% of Europe's seas. Natura 2000 coverage, however, varied across marine regions. In the Greater North Sea and the Baltic Sea, marine Natura 2000 sites covered nearly 18% and 12% of the waters respectively. In other regions, such as the Ionian Sea, Adriatic Sea and Macaronesia, Natura 2000 coverage stayed below 2%<sup>23</sup> (Table 3).

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protected areas designation in the UK', *Ecological Economics* 69(4), pp. 828-838.

<sup>19</sup> European Environmental Agency (2015) 'Marine Protected Areas in Europe's Seas – An overview and reflections on the way forward'.

<sup>20</sup> The CBD requires its Parties to establish systems of protected areas. See Annex p. 10.

<sup>21</sup> The EEA delineated the assessment area using a 200 nm limit from the coast or equidistance to non-EU countries except for Greece where a 6 nm limit was used. Marine protected areas exist beyond these boundaries, but they have not been included in the analysis. Similarly, marine protected areas protecting the abundant biodiversity in the outermost regions were excluded from the analysis due to the limited geographical scope of the MSFD. For more information, please see EEA (2015) 'Spatial analysis of Marine Protected Area Networks in Europe's Seas', pp. 1-2.

<sup>22</sup> Data drawn from the Natura 2000 database and the Common Database on Designated Areas.

<sup>23</sup> Since 2012, some Member States have established significantly more Natura 2000 sites further increasing MPA coverage in certain areas.

Similarly, Natura 2000 coverage was much higher in coastal areas<sup>24</sup>. Natura 2000 sites covered 33.3% of near shore waters, 11.3% of coastal waters and only 1.7% of offshore waters<sup>25</sup>. Significant offshore features of the marine environment were therefore not yet covered by the Natura 2000 sites. At the same time, the Natura 2000 sites, underpinned by the Habitats Directive, provide a strong legal framework for the protection of the sites and the sustainable management of human activities therein, and coastal Member States have stepped up efforts to fill existing gaps.

## 2.2 MPA networks established under Regional Sea Conventions

MPA networks designated under Regional Sea Conventions significantly overlap with Natura 2000 and national MPA sites. Regional Sea Conventions, however, represent an important platform for Member States' cooperation to develop and implement an ecosystem-based approach to MPA designation and management. This makes RSCs one of the driving forces behind the expansion of the European MPA network<sup>26</sup>.

The Baltic Sea region was the first regional sea in Europe where coverage exceeded 10%. When HELCOM assessed its MPA network in 2010, coverage reached 10.3 %. In 2012 the MPA network in the Baltic Sea covered 12.4% of the assessment area<sup>27</sup>.

Significant progress can also be observed in certain areas of the North-east Atlantic Ocean. One of the examples for this is the Greater North Sea area whose MPA coverage is the highest in Europe (nearly 18%). On average MPAs covered 3.2% of the assessment area in the North-east Atlantic in 2012<sup>28</sup>.

In 2012 MPA coverage averaged at 9.7% in the EEA's assessment area in the Mediterranean Sea. The EEA was not able to assess MPA coverage in the Black Sea due to the lack of available data (Table 4).

## 2.3 National MPAs

Member States have also designated marine protected areas to protect features of national interest. These sites can feed into the Natura 2000 network, MPA networks under RSCs, or they can stand alone. The extent of convergence between MPA networks designated under different regimes varies from Member State to Member State, and averaged at 68.2% across Europe in case of national and RSC sites (i.e. more than two thirds of the total area covered by national and regional MPAs is designated under both regimes), and at 54.5% in case of national sites and Natura 2000 MPAs<sup>29</sup>. It was not possible to demonstrate that multiple designations increase protection levels for MPA sites.

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<sup>24</sup> This is partly due to the initial terrestrial focus of the Habitats Directive and to the lack of knowledge of deep-sea habitats.

<sup>25</sup> Near shore waters cover the 0-1 nm zone, coastal waters cover the 1-12 nm zone and offshore waters cover the 12 nm-end of assessment area zone. EEA (2015) 'Spatial Analysis of Marine Protected Areas in Europe's Seas'.

<sup>26</sup> See MSFD Art. 5 and 6 on regional cooperation.

<sup>27</sup> EEA (2015) 'Spatial Analysis of Marine Protected Areas in Europe's Seas'.

<sup>28</sup> EEA (2015) 'Spatial Analysis of Marine Protected Areas in Europe's Seas'.

<sup>29</sup> EEA (2015) 'Marine Protected Areas in Europe's Seas – An overview and reflections on the way forward'.

### 3. Coherent and representative networks of marine protected areas

Currently no EU-wide method exists to assess the coherence and representativity of European MPA networks. Regional Sea Conventions, however, have played an important role in defining assessment criteria for MPA network coherence. OSPAR, HELCOM and the Regional Activity Centre for Specially Protected Areas (RAC/SPA) established under the Barcelona Convention together with MedPAN in the Mediterranean have all assessed MPA network coherence.

OSPAR defines the ecological coherence of MPA networks along six criteria: features, representativity, replication, connectivity, resilience and adequacy/viability<sup>30</sup>. The first assessment of the OSPAR MPA network was carried out in 2010 and showed that it could not be considered ecologically coherent based on the spatial distribution of MPAs. In 2012 OSPAR attempted again to assess the ecological coherence of its MPA network, but could not arrive to comprehensive conclusions due to the scarcity of relevant distribution data on species and habitats. In 2012, only coarse assessments of the spatial arrangement of MPAs could be performed, which suggested that the OSPAR MPA network was unlikely to be ecologically coherent. However, the network showed the first signs of coherence in certain subregions, e.g. in the Greater North Sea, and to some extent also in the Celtic Seas<sup>31</sup>.

HELCOM identified four criteria for ecological coherence: adequacy, representativity, replication of features and connectivity. Despite the growing number of designated MPAs in its territory, HELCOM concluded in 2010 that MPA networks in the Baltic Sea had not yet reached ecological coherence<sup>32</sup>.

MedPAN-RAC/SPA assessed MPA network coherence in the Mediterranean based on two criteria: representativity and connectivity in 2012. This assessment concluded that the Mediterranean MPA network could not be considered either coherent or representative<sup>33</sup>. The Western Mediterranean was considered the best connected region in the Mediterranean.

As a first attempt to develop a common set of criteria and a methodology to assess the coherence and representativity of European MPA networks, external consultants prepared a study for the European Commission in 2014<sup>34</sup>. The study found that the MPA network in a test area in the Baltic Sea was not coherent. The Commission will continue working to further refine the methodology for EU-wide MPA network assessments.

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<sup>30</sup> OSPAR (2006), 'Guidance on developing an ecologically coherent network of OSPAR marine protected areas', reference number 2006-3.

<sup>31</sup> For more details on the criteria of ecological coherence and the findings, see Johnson D., et al. (2013) 'An assessment of the ecological coherence of the OSPAR Network of Marine Protected Areas in 2012'.

<sup>32</sup> Boedeker D., et al. (2010) 'Towards an ecologically coherent network of well-managed Marine Protected Areas – Implementation report on the status and ecological coherence of the HELCOM BSPA network', Baltic Sea Environment Proceedings No. 124A.

<sup>33</sup> Gabrié C., et al., (2012) 'The Status of the Marine Protected Areas in the Mediterranean Sea', MedPAN & RAC/SPA. Ed: MedPAN Collection.

<sup>34</sup> Wolters H. A., et al., (2014), 'Proposal for an assessment method of the ecological coherence of networks of marine protected areas in Europe'. <https://circabc.europa.eu/sd/a/b993ca97-579c-4aee-8e0e-22794682ac16/MPA%20coherence%20report-final.pdf>

#### 4. Conclusions and outlook

Marine protected areas constitute essential spatial management tools for nature conservation. They can function as sanctuaries for the threatened biodiversity of our seas and oceans. By supporting the resilience of ecosystems, effective networks of MPAs create valuable benefits to society. These socioeconomic benefits include job creation, food provision, or climate regulation. MPAs are therefore a strong illustration of the convergence between the blue and green economy.

Since the entry into force of the Convention on Biological Diversity in 1993, the European MPA network has significantly expanded to cover almost 6% of European seas in 2012. The present report is demonstrating the enormous progress which has been made in establishing MPAs in Europe. Since 2012 even more MPA sites have been designated<sup>35</sup>. Work will not stop here – further efforts will be made to ensure that at least 10% of Europe's seas are protected through coherent MPA networks<sup>36</sup>.

The objectives of the EU Biodiversity Strategy to 2020 are being increasingly implemented through the EU policy framework, which provides an excellent opportunity for the designation and integrated management of MPAs. The Marine Strategy Framework Directive, the Habitats and Birds Directives, the Maritime Spatial Planning Directive and the reformed Common Fisheries Policy all contain provisions which can foster the expansion of the European MPA networks in the coming years.

In order to fully deliver their potential, MPAs must include management measures<sup>37</sup>, and their effective monitoring and enforcement should be ensured. Management measures can include management plans for MPAs themselves, and spatial protection measures in neighbouring areas as a complementing tool to boost the effects of MPAs. MPAs should be an integral part of maritime spatial plans supporting the Green and Blue Infrastructure approach<sup>38</sup> to ensure and improve the delivery of multiple ecosystem services from the same area. This integrated approach is also essential to ensure that pressures across the seas are reduced and ecosystem resilience is therefore strengthened.

The Commission will continue supporting national and international efforts in relation to the designation and effective management of marine protected areas, as well as the implementation of other spatial protection measures for marine biodiversity. In particular, the Commission will:

- support Member States in the effective and integrated implementation of the legislation in place through increased communication or guidance, e.g. in relation to Article 11 of the CFP;
- foster common understanding of Article 13(4) of the MSFD;
- further develop an EU methodology for the assessment of MPA network coherence and representativity;

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<sup>35</sup> E.g. by the end of 2014 Natura 2000 areas designated under the Habitats and Birds directives had increased to almost 320 000 km<sup>2</sup> compared to approximately 228 000 km<sup>2</sup> in 2012 – see [http://ec.europa.eu/environment/nature/info/pubs/docs/nat2000newsl/nat37\\_en.pdf](http://ec.europa.eu/environment/nature/info/pubs/docs/nat2000newsl/nat37_en.pdf)

<sup>36</sup> See Aichi Target 11 in point 2 of the Annex to this report.

<sup>37</sup> Oceana (2014), 'Management matters: Ridding the Baltic Sea of paper parks'. [http://eu.oceana.org/sites/default/files/oceana\\_ridding\\_the\\_baltic\\_sea\\_of\\_paper\\_parks.pdf](http://eu.oceana.org/sites/default/files/oceana_ridding_the_baltic_sea_of_paper_parks.pdf)

<sup>38</sup> For more information, see [http://ec.europa.eu/environment/nature/ecosystems/index\\_en.htm](http://ec.europa.eu/environment/nature/ecosystems/index_en.htm)

- support Member States, through existing EU financing mechanisms, in particular the European Maritime and Fisheries Fund and the LIFE Programme or through ongoing processes such as the Natura 2000 biogeographical process, to increase MPA designations, especially offshore and to effectively manage<sup>39</sup> MPAs;
- promote inclusive governance structures for MPAs which enable wide stakeholder participation (e.g. local authorities, local communities, economic actors etc.) in MPA management;
- where necessary, continue working on EU-level support mechanisms for the effective enforcement and control of MPA management measures;
- promote research at a European level and support Member States' efforts to close existing data gaps hindering the effective management and assessment of MPAs<sup>40</sup>;
- contribute to determining the economic benefits from MPAs<sup>41</sup> by preparing studies and collaborating with international organisations such as the OECD;
- ensure EU representation at negotiations on an implementing agreement to UNCLOS for the conservation and sustainable use of biodiversity in areas beyond national jurisdiction<sup>42</sup> in order to make UNCLOS Art. 192 and 194(5) more operational in these areas.

The Commission will prepare the next progress report on the establishment of marine protected areas in the context of the MSFD implementation, i.e. the Commission report on the Programmes of Measures submitted by the Member States<sup>43</sup>. The present report will provide a baseline for this assessment. The progress made in establishing MPAs in Europe will also be assessed in 2019 when the Commission evaluates the first cycle of the implementation of the MSFD<sup>44</sup>. With a dedicated effort at all levels, it should be possible to meet the objectives set out in EU and international law and policies, and increase MPA coverage above 10%<sup>45</sup> by 2020 in Europe.

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<sup>39</sup> The Commission has funded various research projects in this field (see for instance MESMA, <http://www.mesma.org/>).

<sup>40</sup> See for instance the European Marine Board's position paper no. 18 'Achieving Ecologically Coherent MPA Networks in Europe: Science Needs and Priorities', April 2013.

[http://www.esf.org/fileadmin/Public\\_documents/Publications/EMB\\_PP18\\_Marine\\_Protected\\_Areas.pdf](http://www.esf.org/fileadmin/Public_documents/Publications/EMB_PP18_Marine_Protected_Areas.pdf)

<sup>41</sup> Through a dedicated study.

<sup>42</sup> The UN General Assembly has recently decided to launch intergovernmental negotiations in 2016 on an implementing agreement to UNCLOS for the conservation and sustainable use of biodiversity in ABNJ (Resolution A/69/L.65 of 19 June 2015).

<sup>43</sup> Member States shall submit their Programmes of Measures to the Commission by 31 March 2016.

<sup>44</sup> MSFD Art. 20.

<sup>45</sup> See Aichi Target 11 under point 2 of the Annex to this report.