



Tackling overfishing and marine litter

An analysis of Member States measures under the Marine Directive

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Summary

Fisheries and marine litter experts from Seas At Risk member organisations, as well as the Coalition Clean Baltic, undertook an in-depth assessment of EU Member States Programmes of Measures for fisheries and litter under the EU Marine Strategy Framework Directive (MSFD). Experts found that while Member States were clearly making efforts and some progress, the measures were not sufficiently ambitious and effective to tackle the threats facing the marine environment. Much more political resolve will be necessary to implement the urgent measures needed to achieve the Directive's objectives for fisheries and litter by 2020 and avoid infraction.

Member States must achieve Good Environmental Status (biologically diverse, clean and healthy seas) by 2020 under the Directive and have specific objectives for 11 Descriptors, including fisheries and litter.

These are:

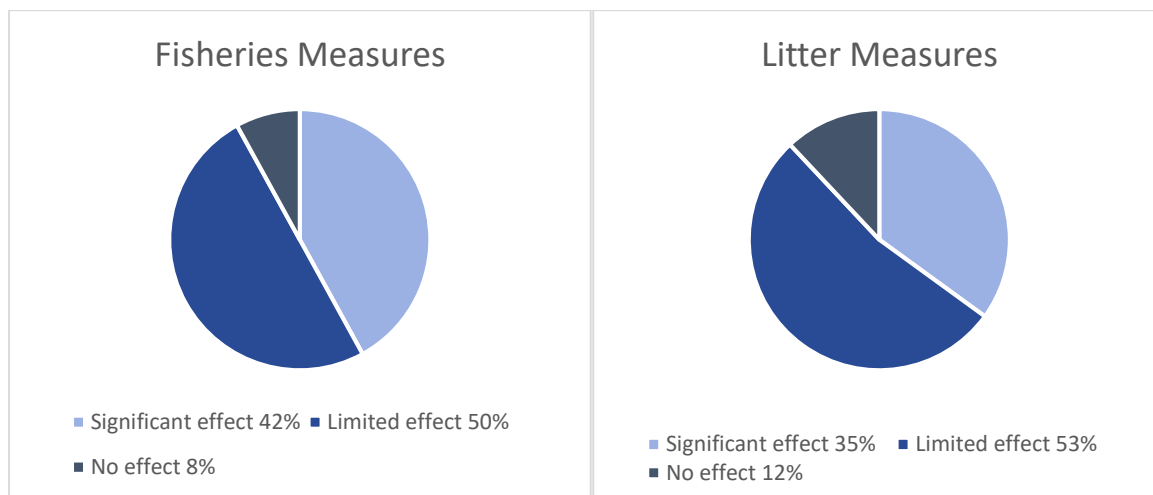
- Descriptor 3: Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
- Descriptor 10: Properties and quantities of marine litter do not cause harm to the coastal and marine environment.

Implementation of the Common Fisheries Policy (CFP) was cited by most Member States as their main measure under fisheries. Failure to implement the CFP fully will therefore also result in failure to implement the fisheries element of MSFD. New measures in addition to the CFP were also lacking or insufficient to meet the requirements. Of note was the complete lack of measures to address the requirement for a high proportion of old/ large sexually mature individuals in commercial fish populations (D3C3). We call for urgent measures to address this including the establishment of fish stock recovery areas and other no take zones, technical measures along with further advice from the respective scientific bodies.

For marine litter, we found that measures were too tightly focussed on coastal measures, clean-ups and education and too few addressed the production of single-use plastic and plastic packaging. It is essential we change our production and consumption systems in order to prevent the creation of waste. This is only just beginning to be tackled by a couple of countries, notably France and Germany. Large scale, cost effective removal of marine litter is currently not possible, the best way to reduce the problem is by ending the input to the seas.

We asked the NGO experts to assess the potential impacts of the different measures in achieving D3 and D10 ranging from 'no impact' to 'significant impact'. 42% of fisheries measures and 35% of litter measures were considered as having a significant impact in contributing to achieving the Descriptors. However, about half, 50% of fisheries and 53% of litter measures were considered to have only limited impact due to the fact they were either voluntary; had limited geographical scope; lacked details or had a low level of ambition (e.g. the quantitative target has been set too low or inexistent).

Meanwhile 8% of fisheries measures and 12% of litter ones were assessed as having, potentially, no impact at all, generally because they were more suited to Monitoring Programmes than Measures. The reasons highlighted above for measures being scored as having low impact or no impact highlight some systemic issues with the Programmes of Measures that should be taken note of for future measures.



Other analysis showed that 67% of fisheries measures and 35% of litter measures were unsurprisingly to implement existing legislative requirements for example related to the CFP or waste legislation. 27% of fisheries and 30% of litter measures were new legislative proposals, which while varied were welcome. Finally, 6% of fisheries and 35% of litter were voluntary measures. While occasionally voluntary measures can be effective, studies have found that the majority are ineffective in delivering public policy measures¹ and hence for MSFD should only be considered as complementary to and not instead of regulatory measures.

Member States measures were also assessed against the priorities NGOs compiled in 2014 for fisheries and litter measures². While some Member States measures matched the NGO priorities, on the whole we found that the gaps in adequate measures and a lack in ambition meant they were unlikely to meet the Descriptors and ultimately GES.

Fisheries measures not sufficient to ensure healthy populations of commercial fish and shellfish populations by 2020

Currently 41% of the 66 assessed fish stocks in the Northeast Atlantic are being overfished above maximum sustainable yield exploitation rate (FMSY), about 90 stocks remain without assessment³ and a shocking 91% of assessed stocks in the Mediterranean are still overfished.

The result of our study shows that our NGO community believes that proper implementation of the provisions of the CFP is one of the main pre-requisites for achieving GES for commercial fish stocks. NGOs are however sceptical about the effectiveness of the implementation of the CFP to date and demand more political resolve from Member States and further pressure from the Commission to achieve Descriptor 3 by 2020. Member States had a decade to bring their exploitation rates to sustainable levels in line with scientific advice since MSFD was adopted in 2008, which would have achieved biomass levels by 2020 for most stocks.

The Marine Directive also goes beyond CFP in its requirements. Other non CFP-related measures considered to have a potentially significant impact show us where there may be gaps in the CFP that NGOs would like to

¹ RSPB. 2015. Using Regulatory Measures as a last resort. Assessing the performance of voluntary measures. http://www.rspb.org.uk/Images/usingregulation_tcm9-408677.pdf

² _Priorities for MSFD programmes of measures Joint NGO paper, October 2014 <http://www.seas-at-risk.org/15-eu-marine-strategy/536-ngos-lay-out-their-priorities-for-msfd-measures.html>

³ Scientific, Technical and Economic Committee for Fisheries (STECF) – 54th Plenary Meeting Report (PLEN-17-01); Publications Office of the European Union, Luxembourg; EUR 28569 EN; doi:10.2760/33472 https://stecf.jrc.ec.europa.eu/documents/43805/1672821/2017-04_STECF+PLEN+17-01_JRC106580.pdf

see addressed. This is the case for measures on shellfish, recreational fisheries and non-commercial fish species. However, we are extremely worried that there are so few measures that will address D3.3 on the age and size of fish and we call for urgent action on this by Member States, the EC and respective scientific bodies working together.

Given the cross over between CFP and MSFD for fisheries measures there is a clear need for stronger integration between these policies and measures. As our analysis also showed that many of the fisheries measures were regional or zonal, stronger policy coherence between the Marine Directive, CFP and the Maritime Spatial Planning Directive and the Habitats and Birds Directive are needed too.

Marine litter measures are not sufficient to avoid harm to the coastal and marine environment

An estimated 100,000 tonnes of plastic from EU countries ends up in the sea every year, from coastal land areas alone.⁴ Much more comes from inland areas via rivers and from at sea-sources like shipping and fishing. Plastic makes up the major part of marine litter, with items eventually breaking up into ever smaller particles.

While some good measures were proposed by Member States to address the issue of marine litter, over all we found that measures were too tightly focussed on coastal measures, clean-ups and education, with insufficient measures to address the production of single-use plastic and plastic packaging. The need to change our production and consumption systems in order to prevent the creation of waste at its source is essential and only beginning to be tackled by a couple of countries. **France** and **Germany** stand out as having coherent sets of measures to address the issue.

Large scale, cost effective removal of marine litter is currently not possible, the best way to reduce the problem is by ending the input to the seas.

⁴ Jambeck, J.R., Geyer, R., Wilcox, C., et al. (2015) Plastic waste inputs from land into the ocean, *Science*, Vol.347, No.6223, pp.768–771.

1 Introduction

EU Member States are required to take action under the Marine Strategy Framework Directive ('Marine Directive') in order to reduce the pressures on the marine environment, safeguard the diversity of marine ecosystems and achieve Good Environmental Status (GES) of our marine environment by 2020. These actions, or 'measures', are included in 'programmes of measures' which form part of each country's marine strategy.

The Marine Directive defines eleven areas, called 'Descriptors', in which Member States need to act in order to protect our precious marine environment:

- Descriptor 1. Biodiversity is maintained
- Descriptor 2. Non-indigenous species do not adversely alter the ecosystem
- Descriptor 3. The population of commercial fish and shellfish species is healthy
- Descriptor 4. Elements of food webs ensure long-term abundance and reproduction
- Descriptor 5. Eutrophication is minimised
- Descriptor 6. The sea floor integrity ensures functioning of the ecosystem
- Descriptor 7. Alteration of hydrographical conditions do not adversely affect the ecosystem
- Descriptor 8. Concentrations of contaminants give no effects
- Descriptor 9. Contaminants in seafood are below safe levels
- Descriptor 10. Marine litter does not cause harm
- Descriptor 11. Introduction of underwater noise does not adversely affect the ecosystem

In 2016, Seas At Risk and Oceana published the results of a first high-level analysis of the programmes of measures in ten Member States (**Belgium, Denmark, France, Finland, Germany, Lithuania, Portugal, Spain, Sweden and UK**)⁵. Based on a survey of NGOs that participated in national consultations, it assessed the programmes overall level of ambition to achieve GES, their key strengths and weaknesses, the processes for public consultation as well as how funding was foreseen to secure the implementation of the planned measures. The box below recalls the four key messages from this high-level evaluation.

Overall level of ambition of the Programmes of Measures

∞ Low ambition ∞

The PoMs analysed show a disproportionately high representation of measures derived from existing obligations (such as the Water Framework Directive, the Common Fisheries Policy or the Nature Directives) that have not yet been fully implemented. This indicates an evident lack of MSFD added-value in the proposed measures across the Descriptors. According to many NGOs, the assumptions that the 'business-as-usual' scenario is sufficient and that no additional measures are considered necessary are based on flawed gap analysis.

∞ Predominantly 'soft' measures ∞

Beyond existing legal and policy measures, the additional measures proposed in the PoMs are predominantly 'soft' measures, such as risk analysis, studies, pilot projects and voluntary agreements, rather than 'hard' measures related to regulations or economic incentives. Many are also too narrowly defined, either geographically or functionally, to effectively reduce the impacts of a given activity.

⁵ Seas At Risk and Oceana, *MSFD Programmes of Measures – An NGO evaluation*, November 2016. Available at: <http://www.seas-at-risk.org/24-publications/780-msfd-programmes-of-measures-an-ngo-evaluation-by-sar-and-oceana.html>

∞ Public consultation processes still to be improved ∞

NGOs noted the same types of limitations in the public participation processes as those reported during the [2012 NGO survey about Article 8-9-10 implementation](#), highlighting the lack of progress on certain aspects, such as poor provision of feedback following consultations and the need to reach out to a wider audience.

∞ Lack of financial commitments ∞

Many of the NGOs surveyed doubted whether sufficient financing is foreseen to guarantee the effective implementation of the proposed measures. The survey highlighted clear differences in approaches to cost analysis across Member States. Without clear resources committed to the PoMs, the entire implementation of MSFD will be at risk.

Following this high-level evaluation, Seas At Risk and its members decided to investigate in more details the measures proposed by the Member States to tackle two issues that are of key strategic importance for us: the issue of marine litter (descriptor 10) and of overfishing (descriptor 3).

The objective of this report is to highlight to the European Commission and national policy-makers and stakeholders good or innovative measures, but also the gaps and mismatches of the measures taken by a number of Member States under the Marine Directive to address the issues of overfishing and pollution from marine litter.



The report also highlights the urgency for Member States to take ambitious and effective measures to tackle the threats facing the marine environment if we are to achieve a good environmental status of our seas and ocean by 2020.

With our conclusions and recommendations, we also aim to provide ‘food-for-thought’ for the Commission’s own on-going analysis of the Member States’ Programmes of Measures.

Methodology

Fourteen experts working in ten national member-NGOs of Seas At Risk have categorised and analysed the measures put in place in ten Member States (**Belgium, Croatia, Cyprus, France, Germany, Italy, Poland, Portugal, Spain** and the **UK**) to address the issues of overfishing and pollution from marine litter.

Our experts were first asked to categorise the measures by type:

- New legislation
- Implementing existing legislation
- Voluntary instrument
- Economic instrument
- Spatial measure
- Public awareness raising
- Stakeholder engagement
- Monitoring / data collection
- Research / pilot projects
- Regional coordination

They were then asked to compare the measures against NGO recommended priority measures. A list of priority measures was defined for each of the two areas (marine litter and commercial fish) based on:

- The NGO list of “Priorities for MSFD programmes of measures” from 2014.
- A review of this list in light of recent developments during a workshop with SAR members and other NGOs on 22 February 2017.

Finally, each respondent was asked to assess the potential impact of each measure using the following scale, and to justify her/his answer:

- No impact
- Limited impact (in scope⁶/in ambition)
- Significant impact⁷

Seas At Risk compiled the answers and made a comparative analysis presented in this report. The analysis aims to show the extent to which Member States have addressed our priority areas in their programmes of measures for marine litter and fisheries and how our experts assess the potential impacts of these proposed measures.

Limitations

It is important to note a number of limitations related to our analysis of the measures for fisheries and litter. The level of specificity of the measures reported by Member States in their PoMs varies a lot and ranges from very specific (e.g. the delineation of specific areas for the restriction of certain fisheries activities) to very broad (e.g. implementation of the Common Fisheries Policy or the Waste Framework Directive). In most cases, the level of details provided on the measure itself and how it will be put in place is limited. Most Member States do not explain in detail the activities and the different steps that will be undertaken in order to achieve what they are promising, and rarely do they explain how these activities will be funded and who will be in charge, even in the case of entirely new measures and even in countries where the level of reporting is generally considered comprehensive (e.g. **Spain, France**). This lack of detailed information has necessarily impeded our experts’ ability to make an assessment of the predicted impact of the different measures and the assessments made must be considered with these limitations in mind.

Not all measures were assessed. In a few countries (**Spain, Poland**), only ‘new’ fisheries measures were assessed. In addition, ‘biodiversity’ measures (for instance banning trawling in certain areas to reduce damage to seafloor integrity or banning certain gears to reduce birds and mammals by-catch) were not included in the analysis, because they were biodiversity measures and often only had a limited geographical scope.⁸

⁶ A measure can have a limited impact in terms of its geographical scope (e.g. only local) or in terms of its temporal scope (e.g. only short-term).

⁷ Significant impact means that the measure could contribute in a significant manner, on a large scale and in the long-term to the reduction of marine litter/having healthy stocks in EU seas.

⁸ See Oceana, *Towards a coherent, well-managed network of EU Marine Protected Areas by 2020: Assessing Member States’ Programmes of Measures under the Marine Strategy Framework Directive*, June 2017. Available at: http://eu.oceana.org/sites/default/files/msfd_report_2017.pdf

2 Achieving healthy stocks of commercial fish and shellfish

Overfishing is still a real problem in European seas; currently 41% of the 66 assessed fish stocks in the North East Atlantic are being overfished above FMSY, while 90 stocks remain without MSY assessment⁹ and 91% of assessed stocks in the Mediterranean are still overfished¹⁰.

As part of the goal to achieve good environmental status (GES) by 2020, the Directive has defined a specific objective for commercial fisheries (Descriptor 3):

Descriptor 3: Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.

The European Commission has further detailed what exactly it means to be in good environmental status for Descriptor 3 in Decision 2017/848 on Good Environmental Status.

D3C1: The *Fishing mortality* rate of populations of commercially-exploited species is at or below levels which can produce the maximum sustainable yield (MSY) [...]

D3C2: The *Spawning Stock Biomass* of populations of commercially-exploited species are above biomass levels capable of producing maximum sustainable yield [...]

D3C3: The age and size distribution of individuals in the populations of commercially-exploited species is indicative of a healthy population. This shall include a high proportion of old/large individuals and limited adverse effects of exploitation on genetic diversity [...]

In order to reach these various objectives by 2020, Member States have to put in place measures that should reduce the level of pressure from fishing and restore stocks of commercial fish and shellfish to health. It should be noted that the first two objectives are also the objectives of the Common Fisheries Policy, while the third is not, meaning that the MSFD in principle has a more ambitious goal than the CFP.

Overfishing not only dramatically reduces fish stocks but many of the fishing gears used also have devastating impacts on marine habitats and on non-target species such as dolphins and turtles; bottom trawling and by-catch are of particular concern. The Marine Directive hence lists fisheries as one of the main marine activities impacting the marine environment, not only because of the extraction of target and non-target species (through by-catch) but also because of the physical damage it can cause to habitats. Thus, Member States must also take measures that will aim to reduce as much as possible impacts from the fishing activity on seabed habitats. However, these measures are primarily to meet Descriptor 6 – Seafloor Integrity and Descriptor 1 – Biodiversity and hence are not detailed and analysed here.

⁹ Scientific, Technical and Economic Committee for Fisheries (STECF) – 54th Plenary Meeting Report (PLEN-17-01); Publications Office of the European Union, Luxembourg; EUR 28569 EN; doi:10.2760/33472

https://stecf.jrc.ec.europa.eu/documents/43805/1672821/2017-04_STECF+PLEN+17-01_JRC106580.pdf

¹⁰ [European Commission Communication COM \(2014\) 388](#)

2.1 What types of measures have Member States proposed for tackling overfishing?

In total, we have identified 90 measures related to Descriptor 3 'Achieving healthy stocks' in the Programmes of Measures (PoMs) of the 9 countries analysed (**Belgium, Croatia, Cyprus, France, Germany, Poland, Portugal, Spain** and the UK).

Out of the measures identified:

- *67% aim to implement existing legislation or measures:* In most cases, this means implementing the provisions of the Common Fisheries Policy (CFP) and all related legislation (Total allowable catches and quotas, Data Collection Framework, Technical Measures, Landing Obligation, etc.). In some cases, it relates to other existing legislation in the Member States, e.g. regulation for shellfish fishing (**Belgium**) and for food labelling (**France**).
- *27% propose new legislation or measures:* New legislation or measures adopted by the Member States on commercial fisheries is quite varied. It ranges from restricting specific gear types (**Cyprus**), adopting management plans for longline fleets (**Spain**), regulating recreational fisheries (**Belgium**), limiting the fishing of shellfish species (**UK**) or creating an awareness-raising programme on sustainable fisheries (**Germany**). **Portugal** is the only country which has (allegedly) presented more 'new' than 'existing' measures for fisheries, many of which are about putting in place management plans for specific areas or species. However, with the exception of some species in Açores and Madeira for which entirely new management plans will be developed, most of these alleged 'new' measures are in fact based on the existing management and recovery plans foreseen in the scope of the CFP.

Figure 1. Number of fisheries measures analysed, by type



- *5% are voluntary instruments:* Fortunately this is a low percentage as NGOs have long found that voluntary measures are often ineffective and certainly not as effective as regulatory measures in

delivering public policy goals¹¹. If used, they should be carefully monitored for effectiveness. Five measures were classified as ‘voluntary’ in **Belgium, France** and **Poland**. In **Belgium**, one measure relates to putting in place a coordination structure between fisheries and environment ministries and another one to increasing the protection of sharks and rays. **Poland** promotes the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organisation, already signed by five fisheries organisations since 2011. In **France**, the voluntary measures relate to the use of a certification system for seafood sustainability and the promotion of sustainable practices among recreational fishermen.

We see that most measures adopted by Member States for commercial fisheries, whether new or already existing, are of a regulatory nature. This is welcome and in line with the fact that most measures falling under Descriptor 3 derive directly from the CFP.

Our experts were also asked to categorise the measures according to other criteria besides ‘regulatory versus voluntary’:¹²

- *18 measures were categorised as ‘economic instruments’*: Different types of measures have been reported in this category. In some cases, the measure includes economic incentives for the end-user. In **Belgium, Cyprus** and **Spain**, financial support to fishermen is foreseen as part of the measures aiming to reduce the fishing fleet. In most other cases, our experts have interpreted this category as ‘measures supported by funding’, such as from the European Maritime and Fisheries Fund (EMFF) (**Cyprus**) or by opening of a tender process to put the measures in place (**Portugal**). **Belgium** foresees a simplification of the procedure to become a professional fisherman (as opposed to a recreational one) which sounds counter to the MSFD. In one case (**Poland**), a measure is fully dedicated to the implementation of the EMFF in the country during the period 2014-2020.
- *35 measures were categorised as ‘spatial measures’*: Some of our experts have categorised measures as ‘spatial measures’ because they have a specific geographical focus (e.g. prohibitive measures for bottom trawling off Eratosthenes in **Cyprus**). In other cases, the measures in this category have a wider remit and relate to the delineation of zones in the country’s whole maritime space (e.g. the establishment of fisheries and aquaculture exclusion zones in offshore wind farms in **Germany** or the designation of MPAs in the Portuguese maritime space). All of these ‘spatial measures’ are, directly or indirectly, relevant to maritime spatial planning and are about delineating zones in the country’s maritime area where fisheries activities are allowed or restricted.
- *12 measures relate to public awareness-raising while 31 are about increasing stakeholder engagement*: e.g. EduMar (Education and awareness on marine environment) in **Portugal** and a measure in **Germany** to keep raising public awareness of sustainable, ecosystem-compatible fisheries. In the other cases, awareness-raising is just one component of the measure (e.g. in the plan for a species-specific approach for sharks and rays in **Belgium**). Regarding stakeholder engagement, a similar analysis can be made. The majority of measures in this category relate to the simple consultation of stakeholders in the development of policies or plans (for instance in the development of local management measures to control fishing of shellfish species in the UK). In a few cases, the measures focus on engaging different types of stakeholders in the development of fisheries policy (such as the Spanish measure setting-up co-management plans with the fisheries sector).
- *42 measures are (either partially or fully) about monitoring and data collection*: More than two thirds of these are constituted by the measures from **Cyprus** and **France** which, according to our experts, almost all contain a component of monitoring. It is possible that this is also true of the other national measures even though they were not reported in the ‘monitoring’ category per se. In several cases, the measures put in this category are strictly about monitoring (e.g. implementation of a "sharing

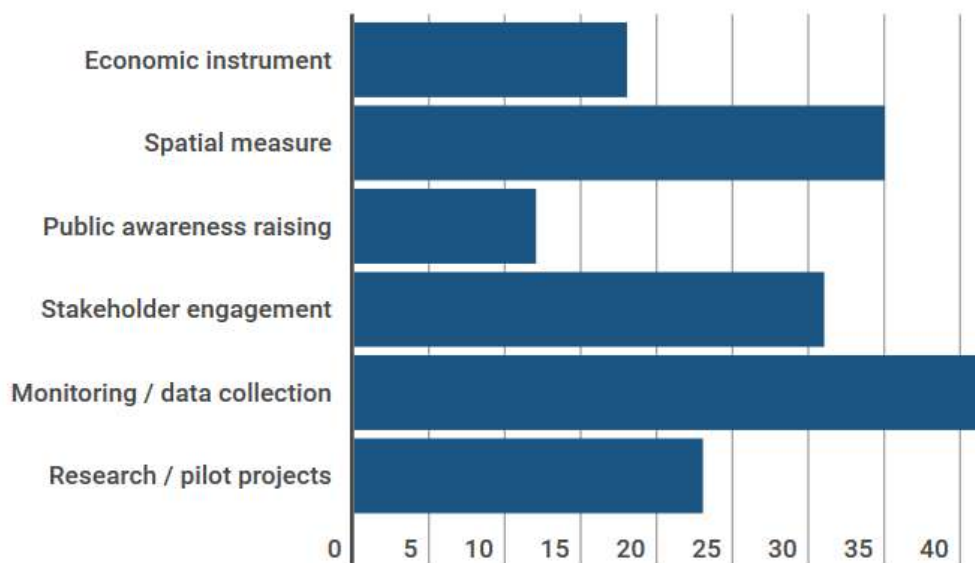
¹¹ RSPB. 2015. Using Regulatory Measures as a last resort. Assessing the performance of voluntary measures. http://www.rspb.org.uk/Images/usingregulation_tcm9-408677.pdf

¹² Measures can be placed in different categories which is why the total number of measures in this list is not 90.

data network" in **Portugal**, monitoring of fishing vessels in **Italy** or monitoring the most economically-important species in critical areas of **Croatian** waters) or data collection (e.g. implementing the DCF in **Belgium**). While these programmes could effectively improve the assessment of environmental status and increase knowledge of ecosystems and their threats, it is often uncertain from the information reported by Member States how this information will be used to develop practical and effective measures. Our experts believe these 'measures' should have been reported as part of the MSFD monitoring programmes in 2014 rather than in the programme of measures in 2015/2016.

- *23 measures are considered to be 'research or pilot projects':* Almost all Member States investigated (except **Croatia**) have included measures that our experts have classified as 'research' or 'pilot projects'. As before, this includes a mix of measures that are entirely about research (e.g. increase knowledge about gear impacts on ecosystems in **France**) and measures that include a research component (e.g. setting up MPAs in offshore windmill farms in **Germany**), amid other types of activities.

Figure 2. Number of fisheries measures analysed, by category¹³



The pre-eminence of 'monitoring/data collection' and 'research' measures, as shown on Figure 2, is worrying. While increasing knowledge and gathering data is an important part of policy-making, it should primarily be included in Monitoring Programmes and not come to the detriment of more effective measures. An interesting result is the large number of 'spatial' measures. As the analysis will show later (see section 2.3.2), most Member States seem to consider zonal planning as an effective tool to regulate fishery resources. This shows that there is a need for stronger policy coherence between the Marine Directive, the CFP, the Maritime Spatial Planning Directive and the Habitats and Birds Directive. Stakeholder engagement is quite high as well which may assist in delivering a measure, but is seldom a measure to achieve D3 in itself.

2.2 How do Member States' measures compare with NGO priorities?

Most of the fisheries measures proposed by Member States to meet the Marine Directive are unsurprisingly requirements from the Common Fisheries Policy. The last reform of the CFP resulted in essential changes,

¹³ Measures can be placed in different categories which is why the total number of measures in this list is not 90.

which, if fully implemented, will make a significant contribution to achieving good environmental status (GES) and these measures need implementing. In some respect, however, the Marine Directive goes beyond the CFP, notably when it comes to healthy size and distribution of fish populations. It also requires a holistic approach to ecosystem based management and therefore consider commercial fisheries as only one component of a broader context.

In order to achieve GES by 2020 for Descriptor 3, Seas At Risk and its members have defined a number of areas where Member States should take measures (some in line with the CFP and some which go beyond the CFP). In the following sections, we analyse which Member States have taken such measures and whether these can be considered ambitious enough to achieve GES by 2020.

2.2.1 Reducing and eliminating overfishing

Reducing and eliminating overfishing is the overarching objective of the CFP, which commits Member States to restore and maintain fish stocks above biomass levels capable of producing maximum sustainable yield (B_{MSY}). In order to reach that, they must set fishing limits according to the exploitation rate consistent with this aim (F_{MSY}) by 2015 where possible, and at the latest by 2020 for all stocks.

However, while fishing below maximum sustainable yield (MSY) is an essential step for the recovery of European fish stocks, it will not, on its own, guarantee that stocks are maintained in a healthy condition. Healthy fish stocks are typically characterised by a varied age class range often with a relatively high proportion of sexually mature, older and larger individuals. Such population characteristics are important for the resilience of the stock to natural variability and human induced pressures, as well for the resilience of the whole ecosystem, since different sizes and ages of fish have different ecological functions.

We, as a collective group of NGOs working towards the goal of ending overfishing and achieving good environmental status, believe that a number of measures should be taken by Member States to achieve these objectives. The following sections compare our NGO proposed measure¹⁴ with what Member States have actually proposed in their Programmes of Measures.

Adjustment of fishing capacity to fishing opportunity levels

The EU fishing fleet capacity has decreased continuously over the past decades in terms of both tonnage and engine power, interrupted only by the accession of new Member States. This numerical decline in capacity is due to EU and national policies that aim to bring capacity into better alignment with declining stocks. Under the rules of the CFP, the total capacity of the fishing fleet in Europe cannot be increased.¹⁵

But this decline has been largely negated by the effects of technological improvements in efficiency and effectiveness. The capacity of most fleet segments is still considered to exceed, by some margin, the available fishing opportunities. Of additional concern, capacity reductions have come at considerable cost to the public purse, and have tended to involve withdrawal of the least efficient and smaller vessels in a fleet segment (often those vessels that have a lower impact on the environment). In terms of environmental impact these

¹⁴http://seas-at-risk.org/images/pdf/archive/2014/NGO_priorities_for_PoM_-_with_additional_chapters_-_FINAL_17_October_2014.pdf These recommendations were then reviewed and updated at a SAR workshop of NGOs on 22 February 2017 for this assessment.

¹⁵ European Commission, *Facts and figures on the Common Fisheries Policy*, Basic statistical data, 2016 Edition, Luxembourg: Publications Office of the European Union, 2016. Available at: <https://publications.europa.eu/en/publication-detail/-/publication/055dcb9b-f0c3-11e5-8529-01aa75ed71a1>

policies tend to result in the deployment of a smaller number of on average larger vessels deploying larger and, in some cases (e.g. bottom-trawling) more impacting gear.



In order to curb over-capacity of fleets more effectively, the 2013 reformed CFP requires Member States to measure the fishing capacity of their fleets and where necessary adjust it in order to ensure a balance between fishing capacity and available fishing resources (Article 22). In addition, the EMFF foresees that the Commission examines Member States' operational programmes (which describe how each Member State will spend the money it has been allocated) to effectively remove overcapacity (Art 19).

NGO proposed measure:

Adjust fishing capacity of the fleet to reflect available fishing opportunities.

Recognise different environmental impacts of different fleet segments when developing policy for capacity reduction, ensuring that low impact and environmentally-friendly components of the fishing fleet are not disadvantaged.

Our experts have determined that 27 measures from 7 countries cover this objective (**Belgium, Croatia, Cyprus, Poland, Portugal, Spain** and the **UK**). In most cases, this relates to generic measures for the implementation of the CFP, which are needed and very welcome and need to be reported on by Member States.

Some Member States provide more detail, for example, **Spain** has designed measures to reduce the number of fishing vessels in its fleet through economic incentives – permanently or temporarily, depending on the stock. Such measures can have a significant impact reducing fishing capacity in high fuel consumption fleets and/or destructive fishing fleets but, in the case of temporary suspension, the impact is limited if no other management measure is taken to reduce overfishing and increase control on fisheries activities once the suspension is lifted. **Croatia** has also included measures in its PoM to suspend a number of fishing activities

– permanently or temporarily depending on the stock – which will ultimately reduce the total fleet capacity. The impact of these measures are considered to be potentially significant for the renewal of fish stocks.

In other countries, measures with a more focused scope also include an objective to adjust fishing capacity, e.g. in relation to recreational fisheries in **Belgium** or to relieve pressure on red coral in **Spain** and demersal fisheries in **Portugal**. In **Belgium**, controlling the capacity of recreational fisheries is deemed to be urgently needed and as such this measure could have a big impact. In **Spain**, the impact of the measure on red coral is very welcome, but it's effect is limited because only the Catalan government established a 10-year moratorium on catching red coral, when it should be an effort from all Mediterranean countries. Finally, in **Portugal**, the impact of the measure, although focused only on three species, is considered potentially large for these stocks and their ecosystem.

Total Allowable Catches are set below F_{MSY}

In order to allow an overfished stock to rebuild to biomass levels capable of producing maximum sustainable yield (B_{MSY}), the fishing rate F has to be set below F_{MSY} . Scientific studies have shown that for a fish stock that is already at or above B_{MSY} , fishing pressure should be slightly below F_{MSY} to account for scientific uncertainty and fluctuations in stock sizes. To bring the stock back to B_{MSY} or above, in a finite timeframe, fishing pressure needs to be reduced even further below F_{MSY} to enable the stocks to recover. The larger the reduction, the faster the recovery.

In reality, this is far from happening. In December 2016, the catch limits of only 44 stocks were set at sustainable levels, while for more than 100 this remains to be achieved. Member States and industry are also increasingly proposing that MSY should be a range, rather than fixed point. This may be acceptable if it is a range below MSY, but it must not be set above it. In addition, in the case of many stocks, scientific advice still needs to be provided and catch limits cannot be set in the meantime.

NGO proposed measure:

Set fishing limits for all commercial exploited species below F_{MSY} (F_{MSY} should be a limit rather a target reference point).

Our analysis shows that none of the PoMs examined include a measure stating explicitly that the country will aim to fish below F_{MSY} for several or even just one stock before 2020. All countries simply reiterate their ambition to follow TACs as set in discussions with other EU Member States in the December Council meetings, without any ambition to push during these negotiations for fishing limits that will ensure that the CFP objectives are achieved. Given that the efforts by Member States to date and the resulting trends have not reduced overfishing in the last 3 years in such a way that it will to successfully achieving the MSY objective until 2020, the objective as a whole is under threat. If politicians are allowed to override scientific advice and goals of sustainable fisheries, then infraction under both the CFP and Marine Directive is bound to occur.

Ecosystem-based fisheries management in multi-annual plans

Multi-annual plans are the major legal tool for implementing the objectives of the CFP in the different sea basins and should ensure that fishing is carried out in an environmentally sustainable way. The plans have to include objectives for sustainable fishing limits, as well as provisions related to the landings obligation to avoid and reduce as far as possible unwanted catches. A first management plan for the Baltic was adopted in 2016 and one for the North Sea was voted on in Parliament in September 2017 and discussed by the Council in Autumn 2017. But the Multi-annual plans fail to adequately implement the ecosystem approach and brake down the silos between environment and fisheries management, for example questioning whether ubiquitous bottom trawling can be consistent with an ecosystem based approach, especially if we are ever

to achieve GES. Certainly regional plans are needed if we are to achieve an ecosystem-based approach, but they should cover all marine issues, not just fisheries.

Several Member States (**UK, Belgium, France**) mention the multiannual plans in their PoMs and state that they should be based on the principles of an ecosystem-based approach to fisheries management, such as taking account of the relationships between different stocks or setting quotas based on the most vulnerable stocks. But they do not detail further how they intend to achieve this, whether on their own or in the context of European negotiations.

NGO proposed measure:

Implement the ecosystem-based approach comprehensively - as required in the CFP

Ensure coherence between different EU legislation and directives, e.g. between the CFP, Marine Strategy Framework Directive (MSFD) and other environmental legislation.

Some other measures related to improving governance and stakeholder participation, or improving data collection to increase knowledge of ecosystem functioning, could also be considered as indirectly contributing to this objective. For instance, **Spain** has defined a measure called 'promotion of co-management plans', which aims to ensure co-responsibility in management among the major stakeholders through bottom-up decision-making, promotion of best fishing practices, establishment of a 'bio-economic' management of fishing activity, etc. Such a measure aims to improve the governance of fisheries, which can be considered as part of an ecosystem-based approach to fisheries management, but it remains to be seen if this will increase sustainability.

In the spotlight

∞ Protecting vulnerable species ∞

A number of Member States have proposed measures focussing on specific vulnerable species:

➤ **France** has adopted two measures to address the problem of stock depletion among eel populations and other types of diadromous species. The first one is a national plan for eel management, developed in 2010, which has the objective of a rate of 40% of escapes towards the sea. This objective has not been reviewed since 2010 and seems quite unambitious considering its threatened status. The second one is a national plan for the management of diadromous fish, which aims to create greater coherence between freshwater, coastal and marine legislation. Each



sub-region has its own plan, most of which run until 2019-2020.

➤ **Italy** and **Belgium** have taken measures focusing specifically on elasmobranchs (sharks, skates, rays). The Belgian measure focuses on improving recognition of different species of rays and sharks which look similar but have different levels of vulnerability. The objective is to establish a list of species that are prohibited and make it known throughout the relevant stakeholder groups. **Italy** is also raising awareness among stakeholder groups to avoid the by-catch of elasmobranch species, and in particular juveniles.

➤ **Portugal** has included two measures that aim to develop management plans for the black scabbard fish in the Madeira sub-region, on one hand, and

for three demersal species (blackspot seabream, alfonsino and splendid alfonsino), on the other hand but there is limited information provided. The measure on demersal species states that monitoring data from professional and

recreational fisheries will be used to develop the plan. The one on the scabbard fish states that the management plan will cover all the commercial fishing boats that harvest this species in the Madeira area.

In general, our experts considered these measures to have a potentially significant impact for the stock recovery of the species, although several noted the lack of a truly ambitious approach and objectives (e.g. for the French measure on eels). One additional remark from our experts is that, while these measures are welcome, the single-species approach is not in line with the ecosystem-based approach to fisheries management and that a broader approach would also be needed to ensure the full-benefits of such protective measures.

2.2.2 Minimising the impact on the marine environment

The EU's marine environment was once incredibly rich, productive and diverse. While Member States assessments are varied, with some unscientifically optimistic, over all, whether we look at marine species (fish, mammals, birds, invertebrates or reptiles) or habitats, we see that less than 20 % (often much lower) of all biodiversity components are considered as being in Good Environmental Status¹⁶.

In this section we look at fisheries measures under D3 that may also contribute to other Descriptors.

Fishing has impacts on the marine environment by selectively removing fish and other organisms – i.e. impacting on ecosystem structure, composition and functioning – and through physical interaction – e.g. a trawl or dredge impacting on the seabed, and thus altering the seabed habitat. Overfishing not only dramatically reduces fish stocks, many of the fishing gears used also have devastating impacts on marine habitats and on non-target species such as dolphins and turtles; bottom trawling and by-catch are of particular concern. Overfishing can even cause shifts in the balance of entire marine ecosystems through the large scale removal of predatory fish and the trend to “fish down the food web”. Thus the measures taken by Member States in relation to fisheries also have an impact on other aspects of the MSFD, such as seafloor integrity (Descriptor 6), food web interactions (Descriptor 4) and biodiversity in general (Descriptor 1).

The extent of such impacts can be changed by using different gears and practices, and it is possible to reduce the impact of almost all interactions, though this is easier to achieve in some fisheries than in others. There is broad support for reducing the impact of fishing on the marine environment, but only limited progress has been made in putting this ambition into practice.

In the context of the MSFD, a number of measures can be taken by Member States that would contribute to reducing the impact of fishing on the marine environment, but here we focus on D3 and fisheries measures:

Support and incentivise fishers & organisations with reduced environmental impact

The CFP proposes that Member States should reward operators that fish sustainably and in an environmentally friendly way with extra fishing opportunities, while keeping the total amount of quota within the limits advised by scientists.

NGO proposed measures:

Fully implement Art 17 of the CFP that foresees that Member States shall apply criteria such as impact on the environment and history of compliance when allocating fishing opportunities to fishing vessels.

Set transparent criteria for the allocation of access to fishing resources (quota), and include environmental criteria to incentivise best environmental practice and low impact fisheries. Criteria should include selectivity, impact on habitats,

¹⁶ European Environment Agency. 2014. [Marine Messages](#): Our seas, our future — moving towards a new understanding.

energy consumption per tonne of fish caught, quality of employment, associated benefits to coastal communities, and compliance with the rules of the CFP.

Provide positive incentives to low impact fisheries within the fishing opportunities allocated to respective Member States.

However, few Member States have included specific measures in their PoMs for incentivising or supporting in some ways fishermen and organisations that have a reduced environmental impact. As for the other topics, a few Member States have mentioned the possibility to provide incentives to vessels with reduced impact in the context of the reformed CFP without explicitly stating that they will do so themselves.

A number of measures could be considered as going, more or less, in this right direction:

- In **Scotland**, the government has put in place since 2008 a scheme called the Conservation Credits Scheme, which aims to make sure that stocks of whitefish in Scottish waters, particularly cod, are able to recover to sustainable levels. The scheme rewards vessels with additional fishing time in return for the adoption of conservation-minded fishing practises. According to the **UK** PoM, similar schemes exist in England, Northern Ireland and Wales.
- In **Germany**, within the main set of measures for fisheries, one measure relates to the promotion and development of alternative sustainable and economically-viable fishing techniques to reduce by-catches of harbour porpoises and seabirds. **Germany** explains that it will support fishermen in the transition to these techniques and the measure is said to include ‘economic incentives’ but without further details.
- In **France**, a scheme allows fisheries that abide by the principles of the UN Food and Agriculture Organisation (FAO) for sustainable fisheries to benefit from the public ‘sustainable fisheries’ eco-label which complements other private labelling schemes such as that of the Marine Stewardship Council. This is an indirect economic incentive to switch to more sustainable practices, though its impact can be rather limited as it relies entirely on improved consumers’ awareness.
- In **Poland**, one measure relates to the use of EMFF funds in the country to support a number of projects that will help achieve GES for Descriptor 3. Some of these projects aim to reduce the impact of fisheries on the environment and it is mentioned that funds will be provided to organisations that put in place ‘innovative projects’ for the protection of the marine environment. The limited amount of information provided on the projects means that it is difficult to assess the potential impact of such measure but based on prior knowledge of projects funded through the programme, our experts have determined that the measure could have potentially a significant impact, if fully implemented.
- In **Spain**, a measure that was already mentioned is about setting up and promoting co-management plans in Catalonia. This measure relies on a bottom-up decision-making process and coordination between different stakeholders, it aims to promote best fishing practices and establish a bioeconomic management of fishing activity. Although it is not clear in the Spanish PoM, it can be assumed that technical or financial support will be provided to the relevant stakeholders for the development of these plans.

All of these measures are existing measures, except for the Spanish co-management plans. It is difficult to assess their potential impact with so few details on their design and implementation. Some of these measures are purely voluntary and without any real deterrents (e.g. in **France**) while others are part of a broader scheme which also financially punishes vessels that have negative impacts on the marine environment (e.g. in Scotland). The latter are much more likely to have an impact and be taken up by fishermen.

Gear restrictions to minimise impact on environment and reduce unwanted catches

Different types of fishing gears have different effects on the various components of the marine environment.¹⁷ For instance, bottom trawls have very clear and documented physical and biological effects on benthic habitats and communities due to the gears interaction with the seabed. They include damage to seabed habitats, changes in seabed topography and reduction in the complexity of benthic communities. In addition, the main potential effects of nets are incidental catch including marine mammals, seabirds and elasmobranchs.

Another major issue linked to fishing gears relates to discards. The 2013 CFP aims to gradually ban the wasteful practice of discarding perfectly edible fish overboard, with the aim to encourage fishers to fish more selectively and avoid unwanted catches. With this objective in mind, Article 15 on the landing obligation requires fishermen to record and land all catches of species which are subject to catch limits and count them against the quotas. To support the implementation of this obligation, a certain level of flexibility was introduced in the CFP, but despite this, the landing obligation is under increasing attack (by industry and some Member States) and may be weakened.

By introducing measures related to fishing gears, Member States can increase selectively and drastically reduce the impact of fisheries on the marine environment.

NGO proposed measures:

(Again as for the above issue) Full implementation of Art 17 of the CFP is needed and is not presently being effectively utilised and implemented as a measure to help deliver D3 and also D6 under the MSFD.

Reduce by-catch of non-target species and sexually immature fish through:

- *Enabling EMFF funding for more selective gear,*
- *Technical, spatial and temporal measures,*
- *Quota swaps between Member States and producer organisations,*

Include these measures in regional discard- and management plans.

Almost all of the Member States subject to this analysis have defined measures that correspond to this priority area. As before, in some cases the measures are very specific (e.g. restricting the use of one specific gear type) while others are broad and generic (e.g. developing new fishing practices to limit impacts on marine ecosystems).

We observe two types of measures related to gears:

- *Measures that aim to restrict or ban the use of certain types of gears that are particularly harmful to the marine environment:*

Among those, some measures are related to impacts on habitats and associated communities of fish and other species (e.g. **Cyprus** proposes a measure to limit the use of towed nets (trawls) in selected areas of its marine waters). Other measures are focused on increasing the selectivity of fishing gears to limit by-catch of non-target species (e.g. management plans to reduce by-catch from longline fishing in **Spain**, measures related to the mesh size of nets in Nephrops fisheries in the **UK**, measures targeting by-catch from recreational fisheries in **France** and **Belgium**). In terms of impacts of these measures, the judgments made by our experts vary. In several cases (**Cyprus, Spain, Belgium, UK**), the impact is deemed to be potentially

¹⁷ The N2K Group, *Overview of the potential interactions and impacts of commercial fishing methods on marine habitats and species protected under the EU Habitats Directive*, p11-15.

significant if the measure is properly enforced. In other cases (e.g. **France**), the impact is considered limited as it is based on voluntary action.



- *Measures that aim to develop new, less impacting techniques:*

These measures are often based on research or pilot projects. They stem from the deep-rooted belief that protecting the environment can be solved through technical innovation, but often this is not the case. **Belgium, France, Germany, Poland** and **Spain** have all included measures that are meant to provide support (financial, technical, regulatory) to the development of new fisheries techniques that will have less impact on the environment. In several cases, the reasons mentioned by Member States to develop these new techniques also include the reduction in fuel consumption and increasing safety at sea, in addition to reducing impacts on marine ecosystems. Limited detailed information is provided regarding these new techniques. Only **Belgium** mentions two specific techniques that they wish to promote further: ‘sum wing’ (electric pulse fishing) and ‘rolsloffen’ (roller shoes or wheels), but other Member States are also developing such techniques. **France** mentions several research projects, such as the JUMPER and OPTIPECHE projects.

In general, while NGOs usually welcome innovations in fishing gear that lead to fisheries being more sustainable, there is also a worry about the lack of understanding and gaps in scientific knowledge about the environmental risks of these new techniques. Such knowledge gaps have been acknowledged by ICES and MSC about electric pulse fishing for instance¹⁸. What we do know though is that electric pulse fishing inevitably maims or kills non-target species too, including undersized fish and rare and threatened species

¹⁸ ICES, “Request from **France** for updated advice on the ecosystem effects of pulse trawl”, 4 February 2016. Available at: [https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2016/Special Requests/France Effects of pulse trawl.pdf](https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2016/Special%20Requests/France%20Effects%20of%20pulse%20trawl.pdf) and MSC, “Assessment clarifies sustainability challenges for pulse trawl fisheries”, 10 November 2016. Available at: <https://www.msc.org/newsroom/news/assessment-clarifies-sustainability-challenges-for-pulse-trawl-fisheries>

e.g. species of skates and rays. In the case of **Belgium**, a testing zone for alternative fishing techniques has been proposed in a Natura 2000 site. Without having been through an *appropriate assessment*, as should all activities that are likely to have a significant effect on the site (Article 6(3) of the Habitats Directive), these techniques should not be allowed at all in Natura 2000 areas. Allowing such techniques in Marine Protected Areas seems to divert from the larger issue that, in fact, all bottom contacting gear should probably be prohibited in these areas.

Area closures

As overfishing continues in European waters, a tool to regulate access to fishery resources is zonal management, which should be given greater prominence and used to reserve clearly defined areas for operators adopting low impact gear and fishing practices. In this way, zonal management can provide a strong incentive for low impact fisheries.

The 2013 CFP offers the possibility to Member States to establish Fish Stock Recovery Areas, i.e. areas where “there is clear evidence of heavy concentrations of fish below minimum conservation reference size and of spawning grounds” (CFP, Article 8(1)). It also specifies that “in such areas fishing activities may be restricted or prohibited in order to contribute to the conservation of living aquatic resources and marine ecosystems”. This is particularly relevant in view of achieving GES for criterion D3C3 “The age and size distribution of individuals in the populations of commercially-exploited species is indicative of a healthy population.” While NGOs strongly encourage the use of this possibility, the Commission has recently admitted that the instrument is simply not being used by Member States.¹⁹

There are a number of different types of area closures that can be put in place by Member States and that would contribute to implementing both the CFP and the Marine Directive. The most appropriate type will depend on the objective for setting up the area, i.e. recovery of fish stocks (e.g. Fish Stock Recovery Area, Fisheries Restricted Areas or Essential Fish Habitats areas) or protection and recovery of damaged habitats, birds, mammals or reptiles (e.g. Natura 2000 sites, Vulnerable Marine Ecosystems (VME) areas, Specially Protected Areas of Mediterranean Importance, etc.) The first type should be considered as fisheries management measures, while the latter are *Marine Protected Areas*.

NGO proposed measures:

Increase the use of Article 8 of the CFP to create Fish Stock Recovery Areas.

Use zonal management to make more apparent the benefits of less damaging gears.

Urgently complete the ecologically coherent network of well managed Marine Protected Areas. This network must be properly managed and protected from all damaging activities, most notably bottom towed fishing gear (due to its impact and spatial footprint).

Protect Vulnerable Marine Ecosystems (VMEs) from physical disturbance such as bottom fishing in all EU marine waters (within and beyond MPAs).

Out of the nine Programmes of Measures analysed, all Member States, except the **UK**, have reported measures under Descriptor 3 related to the creation or designation of protected areas. The **UK** has reported these types of measures only under Descriptors 1 and 6, although in some cases specifically to protect certain fish species, such as the black seabream.

¹⁹ Notes from the event “Restoring fish abundance by protecting Essential Fish Habitats”, European Parliament, 01/06/2017.

All the other countries have put in place spatial measures which restrict certain types of fisheries in specifically designated areas. The measures differ in their levels of specificity. Some countries have defined measures to protect well-delineated areas against damage from fishing. For instance, **Cyprus** proposes to close six reef areas to any fishing in order to recover the fish stocks in the region. **Portugal** commits to elaborate management plans for coastal MPAs in the Azores. The measure is not detailed so it is uncertain what type of restrictions on fishing this will entail – if any – but since this measure was reported as part of the package of measures relevant for Descriptor 3, it can be hoped that it will contain appropriate fisheries management measures.



In most cases, the measures are broad and can possibly apply to large zones. For instance, **Poland**'s measure to fund projects through the EMFF includes support for the creation of marine protected areas or fish stock recovery areas. This is still theoretical however and it is not certain whether it will actually take place.

Germany also states that it will adopt fisheries management measures in the Natura 2000 sites in its EEZ in the North and Baltic Seas. In order to do this, it will be going through the process laid out in Article 11 of the CFP, which requires Member States to draw 'Joint Recommendations' with neighbouring countries with a fishing interest in the area to be protected. **Germany** has already adopted a legal ordinance that will be the basis for the future management plans, which German NGOs are critical of because it appears that too many activities will be allowed in the MPAs. German NGOs noted that nearly every ministry managed to get "exceptions" into the ordinance, which means for instance that military activities will still be allowed in certain parts, as will be fishing, research, oil and gas exploration and shipping. There is no mention of completely closing parts of an MPA to all activities.

In some cases, 'spatial' measures could not only help to recover stocks but also ensure that these stocks achieve an age and size indicative of a healthy population, as required by criterion D3C3 of the Commission

Decision on Good Environmental Status. However, to date Member States have only proposed such measures for research and data collection and are not yet taking concrete action to address criterion D3C3.

- **Cyprus** has proposed a measure to conduct studies for the establishment of new marine protected areas to protect spawning areas and nursery grounds of commercially important species which is welcome.
- **France** has proposed a measure to increase knowledge about the ‘zones fonctionnelles halieutiques’, i.e. the zones where essential biological functions of fish take place. Although this is more of a research measure than an operational measure, our experts have determined that it is potentially very significant as it should help with the designation soon of Fish Stock Recovery Area (**France** has in fact passed a decree in April 2017 to allow the creation of these zones once they are known through this research²⁰).
- **Spain** has put forward a measure to maintain and improve the National Basic Data Programme, with the aim to collect biological, environmental, technical and socio-economic data necessary for an ecosystem management of fisheries. In particular, data from this programme will help assess the state of marine biological resources exploited, the level of fishing and the impact of fishing activities on marine biological resources and ecosystems. While this measure is broad it is believed that it will enable to increase knowledge about undersized fish and thus allow the implementation of appropriate measures.

Finally, Member States have also put forward measures to close certain areas to fishing on a temporal basis, often following biological cycles of the fish populations or of other animals:

- In the **UK**, a system of real-time closures of sea areas is in place to prevent fishing effort in areas where juvenile fish are concentrated;
- In **France**, a measure specifically for the Mediterranean region aims to ensure that local by-laws on professional and recreational fisheries take into account the necessary biological rest periods of local fish;
- In **Cyprus**, fishing in the marine protected area of Lara-Toxeftra is restricted during the periods of breeding and nesting of sea turtles.

Area closures, whether permanent or temporary, have generally been considered by our experts as having a potentially significant positive impact. But some concerns have been raised about their limited – and sometimes inappropriate – geographical scopes. According to our Portuguese experts, for instance, the new Marine Protected Areas to be designated do not cover all marine regions and weakly represent nearshore areas, which are of particular concern as they are under higher human impact levels and are the most relevant areas for local fisheries.

In the spotlight

∞ Trawling in sensitive areas ∞

A number of Member States have adopted measures that target specifically the very destructive technique of bottom trawling.

➤ In **Portugal**, a broad measure to regulate access to resources on the extended continental shelf has the potential to ban the access of bottom fishing gears to all foreign boats, as it is already the case for Portuguese boats. In order to put this ban in place, **Portugal** is making use of Article 13(5) of the MSFD and has requested advice from the European Commission. It is unclear what the situation is at present

²⁰ Decree n° 2017-568 of 19 April 2017 related to fisheries conservation zones:
<https://www.legifrance.gouv.fr/eli/decret/2017/4/19/DEVM1630678D/jo/texte>

- **Cyprus** has adopted a measure to prohibit bottom trawling in the marine area of Eratosthenes. It has also put in place an annual closure of bottom trawling from 1 June to 7 November in all territorial waters of the country. These two measures are not new but could have potentially a significant impact if properly enforced, though the temporal measure will not protect the seabed from trawling during the rest of the year.
- As part of its policy to protect Vulnerable Marine Ecosystems, **France** has adopted in 2015 a by-law prohibiting trawling in four zones of the channel in order to protect critical nursing grounds for sole juveniles. This is proposed as part of a broader measure in their Programme of Measures to complement the legal framework in **France** related to fisheries to limit pressure on marine ecosystems. Such measure could have a significant impact if it is followed-up by similar measures for other stocks or in other areas.

2.2.3 Other priorities

Recreational fisheries

The UN Food and Agriculture Organisation (FAO) defines recreational fisheries as: “[...] fishing of aquatic animals (mainly fish) that do not constitute the individual's primary resource to meet basic nutritional needs and are not generally sold or otherwise traded on export, domestic or black markets.”²¹ Recreational fisheries cover a diverse number of practices, from angling, using rods, lines and hooks, to other forms using gear such as spears, bows and arrows, rifles, traps and gillnets. The impacts of these different activities vary widely. Angling is highly selective and it is often possible to release the fish alive with a high degree of survival. Other forms of recreational fisheries, for instance involving gears nets and traps, can border on commercial fisheries and may even involve selling the fish on the black market.

Compared with commercial fisheries, recreational fisheries are expected to produce less overfishing problems. However, overfishing can be caused by recreational fishermen in some places where there is targeted effort. In some areas of the Baltic, catches from recreational fisheries even exceed catches from commercial fisheries for certain species such as perch, pike, pikeperch, sea trout.²² One of the main problems is the lack of data on the scale of recreational fisheries in Europe and thus the impossibility to assess the actual impacts on fish stocks and marine biodiversity of the activity as well as the definition of appropriate management measures. ICES has a working group dedicated to recreational fishing impacts, which struggles because of the lack of uniform reporting. Catch reporting would help to get better stock assessments.

NGO proposed measures:

Reporting for catches should be mandatory for species of community interest and certain coastal species, such as sea bass and cod (depending on the area).

Possible management measures for recreational fisheries resemble those for commercial fisheries and include:

- *Daily bag limits and monthly quotas*
- *Limitations of the fishing effort, mostly by regulating the numbers and sizes of fishing gear and hooks that can be used (e.g. mesh sizes of gillnets)*
- *Geographical or temporal closures or species bans e.g. eel*

Recreational fisheries are particularly prominent in the Baltic Sea and the Mediterranean. The underrepresentation of Baltic and Mediterranean countries in our sample of PoMs analysed means that the

²¹ FAO, ‘Recreational Fisheries’, *FAO Technical Guidelines for Responsible Fisheries No. 13*, Rome, 2012. Available at: <http://www.fao.org/docrep/016/i2708e/i2708e00.pdf>

²² HELCOM, *Information about Coastal recreational fisheries in the Baltic Sea countries*, Group on Ecosystem-based Sustainable Fisheries, FISH 6-2017, 22-24 May 2017, p2.

scale of the problem related to recreational fisheries may be underestimated. Nonetheless, only two Member States (surprisingly from the Mediterranean and the Baltic basins) have not mentioned recreational fisheries in their PoMs at all, i.e. **Croatia** and **Poland**.

Recreational fisheries in **Portugal** represent an important component of the catches reported and occurs everywhere along the coast (mainland and islands, with the exception of Selvages islands). **Portugal** mentions recreational fishing once, in the context of its measure to develop management plans for demersal fisheries, which it says will be based on monitoring data from professional and recreational fisheries. It can be imagined that the management plans will contain measures targeting recreational fishers if data is used but this cannot be ascertained with the information presented. Our national experts consider that the bulk of measures on fisheries proposed by **Germany** may also cover recreational fisheries. These are not mentioned in the PoM or the description of the measure but it is so broad that it could be. **Spain** has an existing measure on recreational fisheries in offshore waters but this was not analysed by our experts who focused on new measures. And finally, the **UK** has not mentioned recreational fisheries in its measures for Descriptor 3 but has mentioned it as part of its measures on fish biodiversity, specifically in relation to the management of diadromous fish.

Four Member States have defined at least one, and in most cases several, measure on recreational fisheries: **Belgium, Croatia, France** and **Italy**.

- Three measures from **France** and **Cyprus** relate to improving the regulatory framework for recreational fisheries, more specifically of recreational rod fishing in **Cyprus**. The measures include obligatory licensing of recreational fishers, the marking of certain species to prevent illegal fishing and quotas. Two measures from **Belgium** and **France** relate to improving the enforcement of regulations on recreational fisheries.
- Each of the four countries has adopted a measure to improve knowledge and awareness of the impacts of recreational fisheries. In **Belgium** and **France**, it starts with improving the monitoring of the scale of recreational fisheries and the gaps in knowledge. **Cyprus** wants to better evaluate the impacts of recreational fishing on marine ecosystems, again to assess the scale of the problem. And finally **Italy** has adopted several new measures aimed at raising awareness of recreational fishers, among others, on by-catch of cetaceans and elasmobranchs as well as on damage to benthic habitats and species.

Two countries stand out for their listed measures related to recreational fisheries, in addition to the ones mentioned above:

- **France** listed the largest number of measures on recreational fisheries (6). Recreational fishing is also taken into consideration in measures related to the regulation of ‘pêche à pied’ (gathering of seafood by hand) which is a very popular fishing technique in the North Sea marine subregion and has impacts on local marine ecosystems. It also proposes a number of management measures for recreational fisheries (on-board, on foot and underwater) in view of the recovery of certain species, in particular the bar.
- In **Belgium**, regulating recreational fisheries has been deemed extremely urgent by our national experts. In this regard, **Belgium** has adopted an interesting new measure which aims to stimulate discussions on simplifying conversion of recreational fishing to commercial fishing. The premises of this measure is that professional fisheries are obviously much better regulated through the CFP and inciting recreational fishermen to convert to professional fisherman would allow to have better data and better control over their activities. This measure should be accompanied by financial incentives, as already mentioned before.

The impact of measures related to recreational fisheries is assessed differently depending on the country. In **Belgium** and **Cyprus**, the measures are considered to have a potentially significant impact whereas in **France**

the impact is deemed more limited, in comparison to the efforts still needed in relation to professional fisheries.

Enforcement

Once new legislation is adopted, such as the reformed CFP, its efficacy depends on the implementation at EU and Member State level. Strong rules and provisions that would lead to improved economic and environmental situation for fishers, fish stocks and the environment can often be undermined if not sufficiently controlled, monitored and enforced.

NGO proposed measures:

Ensure sufficient control and enforcement.

Collect and make publicly available full real time information on vessel movements including shellfish harvest vessels and areas openings and closures to fishing for shellfish.

Our analysis shows that at least 35 measures adopted by the Member States relate to the question of enforcement. However, more than three quarters of these are in fact measures on another topic. We will not consider these in the same way as proper measures to improve enforcement and control mechanisms.

Only four Member States have adopted specific measures on enforcement and control: **Belgium, Croatia, France** and **Spain**. In addition, the **UK** mentions the need to increase enforcement of regulations for the fishing of shellfish in the wild but without specific technical details on how this can be done.

France and **Belgium** have both adopted a measure to increase enforcement mechanisms for recreational fisheries. **Belgium** in particular intends to intensify controls on recreational fishermen and is exploring the possibility to create a licensing system, as was mentioned in the previous section. **Spain** is the only country to have provided details on what a measure to improve enforcement would actually entail, whereas **France, Belgium** and **Croatia** have merely recalled their obligations under existing legislation. **Spain** mentions the various technical tools it intends on using to support its enforcement activities, including improved electronic recording and reporting system (ERS) and automatic identification systems (AIS).

In terms of impacts, our experts have provided mixed appreciations, some of them considering that measures related to enforcement will not help stock recoveries because of their low levels of ambition (e.g. insufficient presence of scientist observers on-board vessels). However, most of them agree that such measures are necessary and are at the root of better implementation of the existing legal frameworks.

Awareness raising

There is presently not enough awareness of the MSFD and the fishery and other measures needed to achieve Good Environmental Status. However, awareness raising measures must be complementary to and not instead of regulatory measures. There is also a need for environment officials and Ministers in Member States to liaise more with fisheries colleagues and further raise awareness of the Marine Directive.

NGO proposed measures:

Raise awareness of the interrelatedness between the objectives of the CFP and the objectives of good environmental status, human health and well-being, food security, climate change, etc.

A little over half of the Member States studied (**Belgium, France, Germany, Italy, Poland** and **Portugal**) have designed measures aimed to inform the public or stakeholders about sustainable fisheries. In some cases, information to the public is just one aspect of the measure which has a broader scope. In **France**, for instance, a measure is about facilitating the labelling of sustainable fisheries product and a part of the measure is about raising awareness among the general public on these labels.

In other cases, the measure is fully about awareness-raising and education. It can either target the general public or specific stakeholders:

- **Belgium** and **Italy** have both designed measures to raise awareness about the vulnerability of elasmobranchs (sharks, rays and skates). The measures target specific groups of stakeholders likely to fish (intentionally or through by-catch) these species, including professional fishermen, producers' organisations, recreational fishermen, fishmongers, harbours, etc. The measures include a harmonisation of species names, a better recognition of different species and of different levels of vulnerability and the establishment of lists of prohibited species. While raising awareness about these species is very important, our experts also consider that an EU-wide approach would be more efficient than country-focused efforts.
- **France** and **Poland** have included a measure to promote the principle of sustainable fisheries. In **Poland**, it targets professional fishermen and producers and is about disseminating the principles of FAO's Code of Conduct for Responsible Fisheries. It was co-signed by 5 fishery organisations since 2011. In **France**, it targets specifically recreational fishermen and is about disseminating the principles contained in a national 'charter' developed in 2010 and co-signed by 10 organisations.
- Two measures focus on educating the general public:
 - **Portugal** has developed a measure targeting specifically children and young people, as well as the rest of the educational community, to raise knowledge about the preservation of the ocean, contributing to the promotion of more informed, responsible and participative citizens. The measure does not focus specifically on fisheries however and covers all issues related to the exploitation of the sea.
 - **Germany** plans the development of an educational programme, covering teaching material, digital campaigns, printed media, etc. to raise-awareness among the general public about sustainable fisheries. In addition to private citizens, efforts will be made to target specifically schools, universities, adult education centres and other (public and private) educational institutions, as well as supermarket chains and restaurants. The topics covered in the programme will include:
 - Effects of different fishing methods on target species, non-target species and the seabed
 - Ecosystem-compatible fishing gear and techniques
 - MSY concept
 - Economic aspects of sustainable ecosystem fishing
 - Consumers' potentials through conscious consumption

In general, while acknowledging that raising awareness and education is important, SAR members were concerned that these measures were proposed instead of the necessary regulatory measures needed to achieve Descriptor 3 for fisheries. **Germany**, for instance, presents the most comprehensive educational measure of all. However, it has only adopted two 'new' measures in addition to CFP measures, one is this educational programme and the other one is a management plan for mussels in a marine protected area which is, in fact, not at all an environmental measure (see box below on shellfish).

In the spotlight

∞ Measures for shellfish ∞

While the majority of measures target both commercial fish and shellfish species indiscriminately, a number of measures are designed to specifically reduce the overfishing of shellfish.

➤ The **UK** has adopted four measures related to *limiting the fishing of shellfish in the wild*, helping to protect spawning stock and prevent stock overexploitation. The measures cover the following species (not covered by CFP quotas): edible crabs, lobsters and scallops. Our analysis concludes however that the impact of these measures is likely to be limited. One reason is that there will be limited data collection without which the full impacts of fishing cannot be assessed. Another reason is the lack of an overall nation-wide approach to management measures and a focus only on local measures.



➤ In **France**, a couple of measures on the western coast of **France** relate to the *management of 'pêche à pied'* (i.e. gathering seafood by hand), which is the predominant type of recreational fisheries and targets mostly shellfish species. The measures will probably have a limited impact, however. One measure is about monitoring the activity (through the setting-up of an observatory); the other is about supporting local projects to temporarily suspend the activity when the state of the stock requires it. This second measure has potential but its geographical scope is bound to be limited as it depends on the voluntary actions of locals.

➤ One of the **German** measures for Descriptor 3 is the development of a *management plan for mussels* in the national park Niedersächsisches Wattenmeer. At the time when this analysis was performed, only drafts of the management plan were available and no public consultation had been done yet. At the time, the draft plans included fishery on wild mussels as well as the import of seeds from different regions, which includes the risk of importing invasive species. In addition, newly formed mussel banks could be harvested. According to our national experts, this measure cannot be considered a nature conservation measure and seems to be in contradiction with the objectives of the Marine Directive and the fact that the Wadden Sea is a World Heritage Site.

2.3 Conclusions

We asked our experts to assess the potential impacts of the different measures on the goal of achieving healthy stocks of commercial fish and shellfish by 2020, ranging from 'no impact' to 'significant impact'. They made this judgment based on their knowledge of their country's existing actions and inactions on the topic and their understanding of what each measure would entail. In many cases, this amounted to 'expert judgement' considering the shocking lack of details provided by Member States on the measure.

Reassuringly, only 8% of all fisheries measures are assessed by our experts as having, potentially, no impact at all. These are mostly measures related to monitoring and data collection, such as the setting up of observatories or databases. Beyond any considerations for their potential effectiveness in collecting data, experts are disappointed that these 'measures' are included in the Programmes of Measures when they should clearly have been part of the monitoring programmes. (It should be noted however that a number of SAR experts have also singled out monitoring and data collection measures as good practices (see box 'Top 3 measures' below), highlighting a diversity of views).

Half of the measures are considered to have, potentially, only a limited impact. The impact of a measure can be considered limited because of its low level of ambition or because of a restricted geographical or temporal

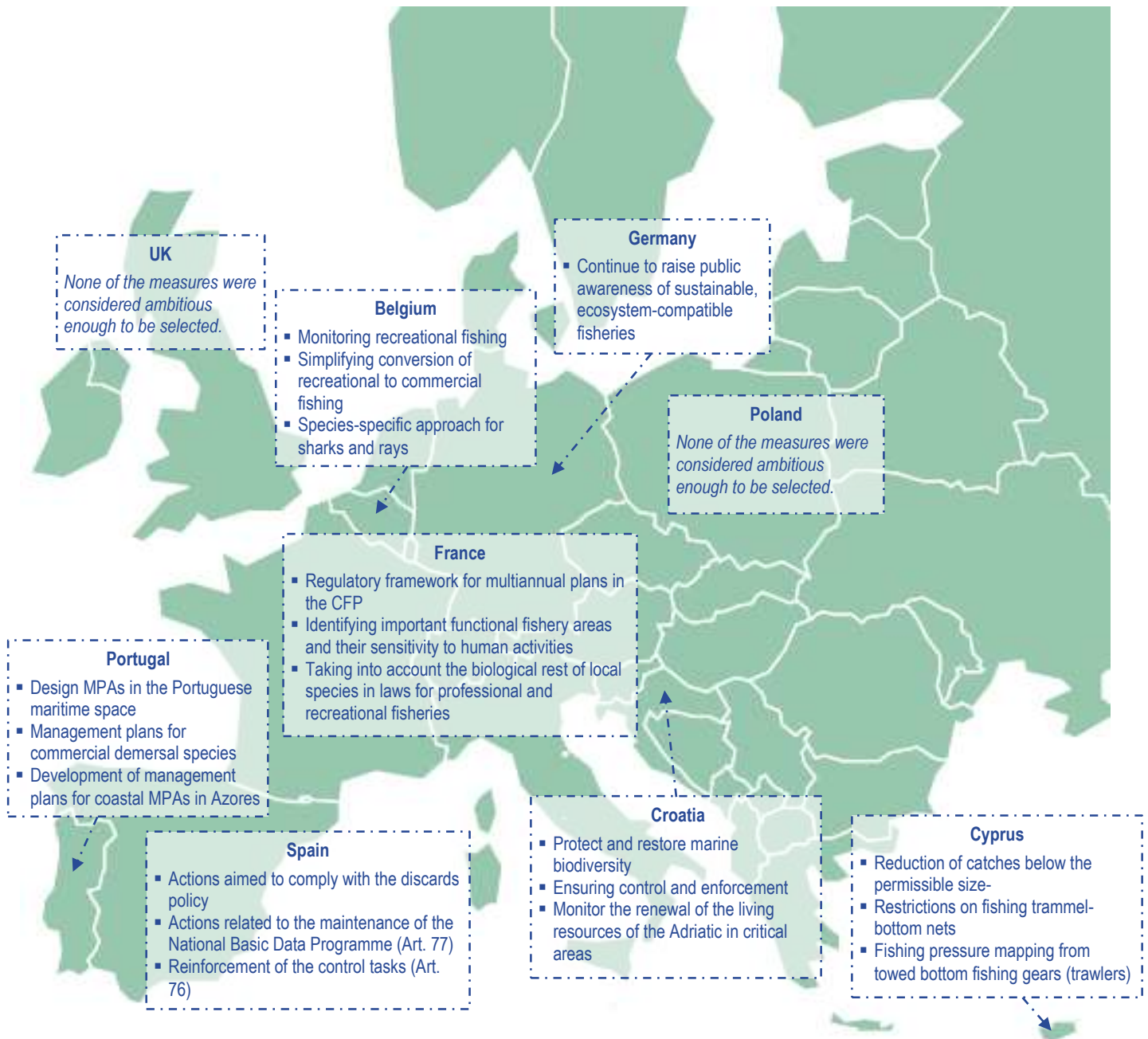
scope. A number of reasons are provided by our experts for judging that a measure would only have a limited impact:

- The first and most important reason is the lack of detail given on the actual activities that will be undertaken to implement the measure. In most cases, our experts prefer to be cautious in their judgment when they did not have sufficient information to make an informed assessment, in particular for broad programmes or action plans, which promise to deliver good environmental status but do not say concretely how this will be achieved.
- The impact of a measure has been considered limited also when the measure is voluntary rather than obligatory. This is the case for instance of measures aimed at promoting good practices for sustainable fisheries among various stakeholders. While raising awareness is considered an important tool, it should not prevent from taking direct regulatory actions.
- Other reasons for a measure to be considered as having a limited impact include a restricted geographical scope (e.g. ban only in a specific marine protected area, isolated measures not geographically connected to each other, measure taken at country-level which should rather be taken at EU-level, etc.), or a restricted scope in terms of species targeted (e.g. single-species management plans, which lack an ecosystem-based approach to fisheries management).
- Finally, a measure could be considered as having a limited impact because it has a low level of ambition (e.g. the quantitative target set is too low or inexistent).

42% of the measures are considered to have, potentially, a significant impact. While this number is quite high, it should be noted that half of the measures ‘with significant potential impact’ are from two countries only (**Belgium** and **Cyprus**). The main reason (in these two countries and in others) for considering that a measure could have a significant impact is that it derives from the Common Fisheries Policy. The result of our study clearly shows that our NGO community is committed to the success of the CFP and believes that a proper implementation of the provisions of the CFP is the main pre-requisite for achieving GES for commercial fish stocks. But it also shows that NGOs are sceptical about the effectiveness of the implementation of the CFP to date and demand that a lot more efforts are made in view of achieving the 2019/2020 deadlines of both MSFD and CFP. In particular, the implementation of the ecosystem-based approach to fisheries management needs to be improved. Other non CFP-related measures considered to have a potentially significant impact also show us where there may be gaps in the CFP that NGOs would like to see addressed. This is the case for measures on shellfish, recreational fisheries and non-commercial fish species.

In terms of overall ambition, the sets of measures for Descriptor 3 have been assessed differently depending on the countries. The level of ambition is considered very minimal and insufficient in **Germany** and in **Poland**. On the other hand, our experts in **Spain**, **Cyprus** and **Belgium** are encouraged by the measures proposed in their countries and gives a positive appreciation, with a note in all three countries saying that the set of measures could be considered ambitious only if properly implemented. Finally, our experts in **France**, **Croatia**, **Portugal** and the **UK** were slightly more critical of the overall level of ambition of the measures taken in their countries. Some were concerned about the lack of proper monitoring indicators (e.g. deadline, quantitative targets) for each measure (though others would expect this to be in the Monitoring plan) and many were concerned about the lack of measures on surveillance and enforcement, which makes us sceptical about effective implementation. More political resolve will be necessary to bring about the change needed to achieve CFP objectives and GES by 2020.

The following map presents the ‘top measures’ for commercial fisheries selected by our experts among the list of measures presented by the Member States. In most cases, the main measure of ‘implementing the CFP’ has not been selected, although, as we mentioned above, it is considered to be the key measure for the achievement of GES. In this exercise, our experts were drawn to other types of environmentally-oriented measures that would either reinforce the CFP action or go beyond it.



We note that a number of countries, including the **UK** and **Poland**, have claimed that good environmental status for commercial fish stocks (Descriptor 3) will not be achieved by 2020 and have thus made use of the ‘exception’ mechanism laid out in Article 14(1)(e) of the MSFD. The UK’s justification is that it will take time for fish stocks to respond to the changes in the exploitation rate (F) and for the biomass to increase to the targeted biomass levels (B_{MSY}). The **UK** states that it will deliver in time the required exploitation rate (F_{MSY} – or criterion D3C1), as per the provisions of the CFP, but that this will probably not lead to all commercial fish stocks achieving B_{MSY} (or criterion D3C2) by 2020. The **UK** is therefore claiming an exception to the deadline by which GES will be achieved. While this argument is understandable we are worried that this type of justification could, first, legitimise a much delayed reaction of Member States to the situation and, second, lead to further inaction down the road.

1. Member States have had almost a decade to bring their exploitation rates to sustainable levels, and yet, in December 2016, the catch limits of only 44 stocks were set at sustainable levels, while for more than 100 this remains to be achieved! If catch limits had been set at the recommended scientific levels earlier (e.g. starting when the MSFD was adopted in 2008 and it was clear that GES had to be achieved by 2020), the chances of achieving the targeted biomass levels would have been much higher.
2. Very few Member States have taken measures that specifically address D3C3 on the age and size of individuals. There are in fact a number of measures that can be taken by Member States that would contribute substantially to the achievement of this objective, including the creation of Fish Stock Recovery Area, as per Article 8 of the CFP. Limited knowledge or difficulties in designing measures can no longer be used as an excuse for lack of action so close to the 2020 deadline.

3 Tackling marine litter

Marine litter consists of manufactured or processed solid materials that end up in the marine environment one way or another, either intentionally discarded or not. Marine litter is a growing problem worldwide, with millions of tonnes of litter ending up in the marine environment every year. Plastic makes up the major part of marine litter, with items eventually breaking up into ever smaller particles. Large scale, cost effective removal of marine litter is currently not possible, the only way to reduce the problem is by ending the input to the seas.

Litter found at sea can be found floating on the sea surface, in the water column, on the seabed (the vast majority) and deposited on the coastline too, either in the form of macro litter or of small pieces of plastics called microplastics. These are either directly introduced into the marine environment as plastic microparticles, for example those incorporated in cosmetics or textiles which are washed down the drain, or they result from the degradation of larger plastic items by the sun, salt and waves. Research has found 92 species of fish shown to ingest marine litter²³ - plastic really is on the menu now²⁴.

The Marine Directive is currently the only primary piece of EU legislation to address the issue of marine litter. As part of the objective of achieving good environmental status (GES) by 2020, the Directive has defined a specific objective in relation to marine litter, called Descriptor 10.

Descriptor 10: Properties and quantities of marine litter do not cause harm to the coastal and marine environment.

The EU has further detailed what exactly it means to be in good environmental status for Descriptor 10 in Decision 2017/848 on Good Environmental Status.

D10C1: The composition, amount and spatial distribution of litter on the coastline, in the surface layer of the water column, and on the seabed, are at levels that do not cause harm to the coastal and marine environment [...]

D10C2: The composition, amount and spatial distribution of micro-litter on the coastline, in the surface layer of the water column, and in seabed sediment, are at levels that do not cause harm to the coastal and marine environment [...]

D10C3: The amount of litter and micro-litter ingested by marine animals is at a level that does not adversely affect the health of the species concerned [...]

D10C4: The number of individuals of each species which are adversely affected due to litter, such as by entanglement, other types of injury or mortality, or health effects [...]

In order to reach these various objectives by 2020, Member States have to put in place measures that should reduce and eventually phase out litter in the marine environment and the impacts it causes to marine ecosystems.

²³ Kühn, S., Bravo Rebolledo E.L. and Van Franeker, J.A. (2015). Deleterious effects of litter on marine life. In: Bergmann, M., Gutow, L., and Klages, M. (eds). *Marine Anthropogenic Litter*. Springer, Berlin (open access). Available from website: http://dx.doi.org/10.1007/978-3-319-16510-3_4.

²⁴ HRH Prince of Wales speaking at Our Ocean 2017

Drastic cuts in the input of marine litter are fully possible with the right measures. The sources and pathways of marine litter are complex, and touch upon many different areas including product policy, waste management on land, fisheries, shipping, sewage treatment and tourism. Therefore, efforts to tackle the problem will necessarily stretch beyond the traditional realm of marine policy.



3.1 What types of measures have Member States designed for tackling marine litter?

In total, we have identified 87 measures related to Descriptor 10 on marine litter in the Programmes of Measures (PoMs) of 8 countries (**Belgium, Croatia, Cyprus, France²⁵, Germany, Poland, Portugal** and the UK). The number of measures per country ranges from three in **Croatia** to 20 in the UK.

Out of the measures identified:

- *35% aim to implement existing legislation:* Marine litter is fought, first and foremost, on land and plenty of pieces of EU and national legislation regulating waste on land and in freshwater are relevant to the fight against marine litter.²⁶ It is therefore not surprising that more than a third of the measures taken by the Member States are in fact about improving the implementation of existing legislation. Existing legislation selected by the Member States for their PoMs include EU waste and water

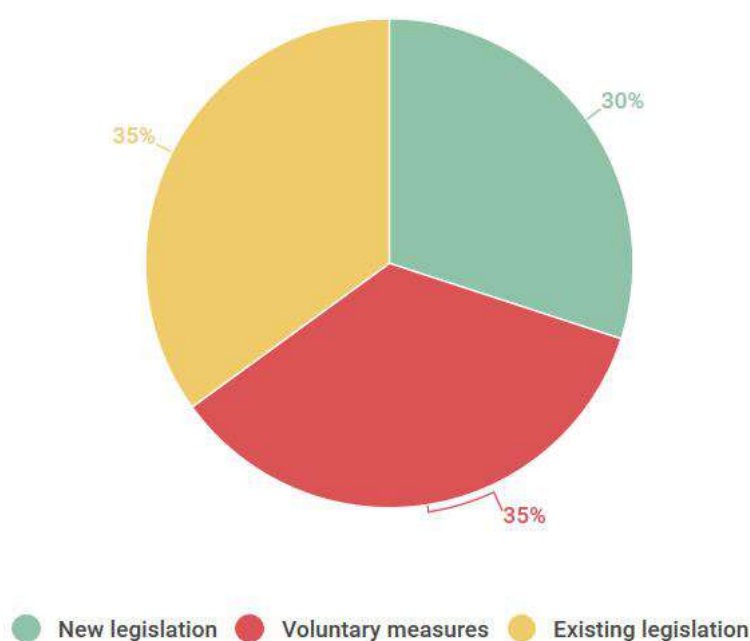
²⁵ An in-depth analysis has been done only of the North Sea measures, but measures taken in the other marine subregions have also been looked at, a lot of which were similar to the North Sea ones. Only the North Sea measures are included in the numbers provided in this section.

²⁶ IEEP, *How to improve EU legislation to tackle marine litter*, 2013. Available at: http://www.seas-at-risk.org/images/pdf/FINAL_IEEP_2013_marine_litter.pdf

legislation (Waste Framework Directive, Water Framework Directive and relevant daughter directives, Port-Reception Facilities Directive, etc.), agreements from Regional Sea Conventions and international conventions (OSPAR Regional Action Plan on Marine Litter, MARPOL, etc.) and national and local legislation (e.g. single use carrier bags charge regulations in Wales, Northern Ireland, Scotland and England, waste collection from aquaculture production facilities in **France**, etc.)

- *30% are about putting in place new legislation:* This category contains two types of measures: some measures are solely about adopting a new legislation on an issue (e.g. banning microbeads or plastic bags). These are often considered as good practice by our experts but are also rarer. On the other hand, a number of measures have been classified as ‘new legislation’ when their description is in fact broader and vaguer. They may lead to the adoption of new legislation but they first focus on collecting and analysing data and designing activities and putting in place pilots to test their effectiveness. Only when the result is satisfactory will it lead to adopting new legislation. An example of this is the German measure ‘Modification/substitution of products in a comprehensive life-cycle approach’, which is made of three phases: generating knowledge and feasibility studies; reviewing findings and defining measures; taking concrete actions. All but two countries (**Belgium** and **France**) have adopted measures that our experts have classified as ‘new legislation’. It ranges from one measure in **Croatia** to seven in **Germany**.
- *35% are voluntary instruments (i.e. non-regulatory instruments):* In this category, different types of measures have been reported. In some cases, the measure is really about getting people to act voluntarily in order to improve a situation (through the use of incentives, financial or otherwise, or through awareness raising). For instance, **Belgium** has defined a set of actions to get fishermen to be more careful about their nets and make sure they do not abandon them. Often, the measures categorised here are simply related to data collection or research. As noted before, many measures are broadly defined and contain several types of actions, some of a regulatory nature, others of a non-regulatory nature. Therefore, a number of measures considered to be of a ‘regulatory’ nature also include the promotion of voluntary activities.

Figure 3. Number of marine litter measures analysed, by type



Our experts were also asked to categorise the measures according to other criteria than ‘regulatory versus voluntary’:²⁷

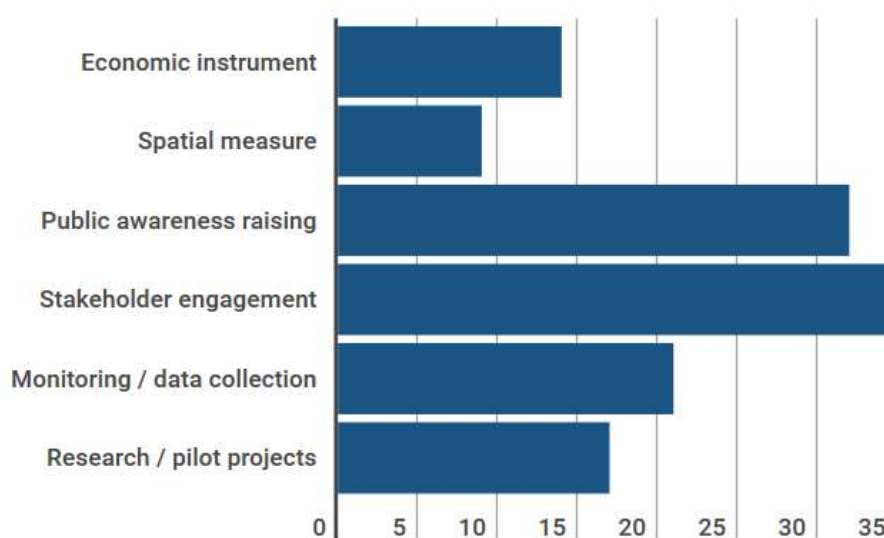
- *14 measures were categorised as ‘economic instruments’:* Such measures can be divided into two categories: ‘negative’ instruments (disincentives) and ‘positive’ instruments (incentives)²⁸. In the first category, we find measures such as the imposition of fines for littering (**Belgium, UK**), pushing for a harmonised ‘no-special-fee’ system in ports for ship waste (**Germany, Poland**), the setting-up of a plastic bag charge (**France, UK**) or a landfill tax to encourage the reuse or recycle of waste destined for landfill (UK). Most of the ‘economic measures’ identified by our experts fall under this first category. The second category covers mostly measures related to the setting-up of deposits refund systems, where consumers can get money back for returning items, such as plastic bottles (in **Germany** and part of the **UK** (Scotland)).
- *9 measures were categorised as ‘spatial measures’:* Only a handful of countries have defined measures that aim to delineate specific zones for prevention/reduction/research, etc. This includes the designation of ‘special zones’ where dumping of any type of waste, including sewage or food waste, is forbidden up (e.g. up to 12 nautical miles in **France**), the identification of waste ‘accumulation zones’ (**France, Germany**) or the integration of a marine litter component in spatial plans for aquaculture (**France**). In addition to these, it should be noted that all Member States but **Portugal** have defined measures for litter removal which take place in specific zones, such as beaches or river beds, but they were not reported as ‘spatial measures’ by our experts.
- *32 measures relate to public awareness-raising while 38 are about increasing stakeholder engagement:* These are by far the largest categories, including more than half of all the measures. **Cyprus** for instance has designed six measures that are about raising awareness among the general public and among specific groups stakeholders (e.g. municipalities or fishermen). Engaging stakeholders in the fight against marine litter often means actions towards professional fishermen, boat owners, port operators but also recreational fishermen, tourists, divers or consumers. In a few cases, it extends to producers of land-based waste, such as the cosmetic industry (**Germany, Belgium**), the tobacco industry (**France**) or NGO work with the sky lantern and balloon industry (UK), sometimes in the context of the application of the Extended Producer Responsibility policy (see section 3.2.4). Regarding the general public, several types of instruments are mentioned in the PoMs. Beach clean-up measures, which, as mentioned before, are very popular in the Member States’ PoMs, are often seen as an effective educational tool for the general public. A number of measures target school curriculums (**Germany, Portugal**). Both **Belgium** and the **UK** have defined measures aimed to raise awareness about the impact of waste from land (for instance from ‘fly-tipping’) on the sea.
- *21 measures are about monitoring and data collection:* We can distinguish two types of measures within this category. On one hand, a few Member States (such as **Belgium, Portugal** or **Croatia**) have included ‘measures’ that are solely about monitoring and data collection. We consider that these should be part of the country’s monitoring programme and should not be presented as a ‘measure’. On the other hand, considering how much knowledge is still needed on this topic, most of the measures presented by the Member States include a monitoring/data collection component. This concerns broad measures, like national frameworks for waste management, as well as more specific measures (e.g. on microplastics in **Germany** and **Poland**, on marinas in **France**, on gear marking in **Poland**). Most of the litter removal measures (fishing for litter, beach clean-ups) also have a monitoring/data collection component.
- *17 measures are considered to be ‘research or pilot projects’:* There are different types of measures classified under this category. Some measures are clearly only about research. For instance, one of **Portugal**’s measure is about defining new bio-indicators for marine litter. **Poland** has defined a

²⁷ Measures can be placed in different categories which is why the total number of measures in this list is not 87.

²⁸ <http://www.ejolt.org/2012/11/policy-instruments-for-sustainability/>

measure to analyse the occurrence of microplastic particles in the marine environment. In other cases, Member States have simply included a research module as part of their measures. Several of **Germany's** measures for instance start first with a scoping study, that will then allow to take more targeted measures. We welcome these measures provided they are truly focused on closing the knowledge gaps with a view towards proposing better measures in the second cycle, and not just a means of delaying more concrete measures.

Figure 4. Number of marine litter measures analysed, by category²⁹



As we can see, public awareness-raising and stakeholder engagement are the predominant types of measures taken by Member States on marine litter. While engaging with stakeholders, in particular with industry, is important to ensure ownership and understanding of measures it can also be a means of avoiding addressing the root cause of the problem. Awareness raising and stakeholder engagement should be conducted in conjunction with regulatory measures to reduce plastic consumption, which are lacking from most of the programmes of measures, bar plastic bags and disposable cutlery in France. What we have seen with instead is that more than a third of the measures proposed by Member States are voluntary actions or agreements.

In the spotlight

∞ Regional Sea Conventions ∞

All Member States have discussed the need for greater regional coordination to fight marine litter, in the context of the Regional Sea Conventions. In some cases, the mention is limited. For instance, **Portugal** simply refers to the OSPAR guidelines for the monitoring of litter. But in most cases, the measures adopted by the Member States are clearly about implementing the work done in the relevant Regional Sea Convention related to marine litter:

- **Belgium, Germany, France** and the **UK** make very clear references to OSPAR's Regional Action Plan on Marine Litter.
- **Cyprus, Croatia** and **France** also refer to the work of UNEP/MAP on marine litter although not systematically to the regional action plan. **Cyprus** has several measures related to UNEP/MAP's awareness-raising campaigns on beach cleaning.
- **Poland** has adopted a measure to implement the marine litter axis of the HELCOM's Baltic Sea Action Plan, which includes initiatives like the 'no-special-fee' system for port reception facilities (see section 3.2.2), legal

²⁹ Measures can be placed in different categories which is why the total number of measures in this list is not 87.

action against illegal discharges, including sewage from ships, the ‘zero-discharge’ principle for offshore platforms and awareness-raising activities such as beach clean-ups and Fishing for Litter initiatives.

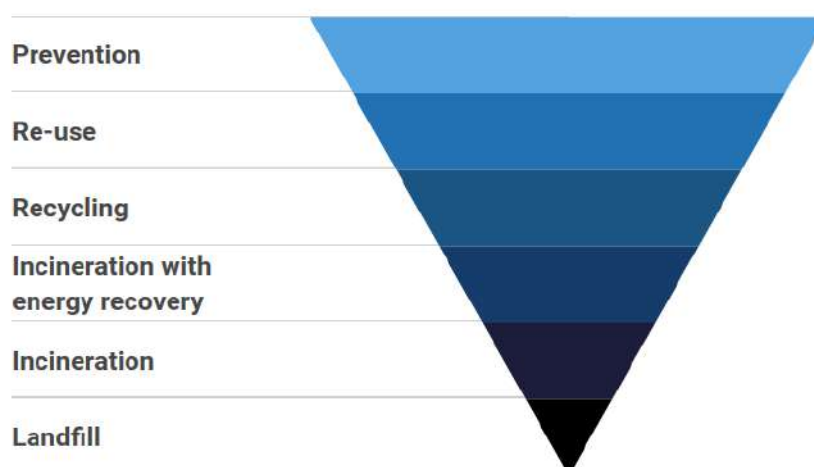
It is important to note that neither HELCOM nor OSPAR are binding instruments, only the UNEP/MAP’s regional action plan is legally binding to the UNEP/MAP’s contracting parties. And while the RAPs contain measures in all relevant areas, they were substantially weakened during negotiations. To date the implementation of the RAP actions has mainly consisted of studies and information gathering on the relevant topics. While it is certainly beneficial to have additional information, it is unclear how these studies will be translated into actions. Therefore, they should not be used by Member States as an excuse for inaction at the national level.

3.2 How do Member States’ measures compare with our priorities?

3.2.1 Waste prevention: towards a circular economy

An estimated 100,000 tonnes of plastic from EU countries ends up in the sea every year, from coastal land areas alone.³⁰ Much more comes from inland areas via rivers and from at sea-sources like shipping and fishing. When analysing the types of items that become marine litter, a significant proportion can be classified as items designed for single or short-term usage, such as plastic bags, bottles and packaging. They systematically feature in the top 10 items most frequently found on beaches.³¹ Plastic waste is perceived to have little to no value, and even materials that are valuable to recyclers are frequently escaping treatment systems. The same applies to single-use plastics such as cups, cutlery, plastic bags etc.

Figure 5. Waste hierarchy as defined in the Waste Framework Directive



The waste hierarchy is enshrined in the EU Waste Framework Directive, the main piece of legislation related to the management and disposal of waste in Europe. Waste prevention is at the top of the waste hierarchy,

³⁰ Jambeck, J.R., Geyer, R., Wilcox, C., et al. (2015) Plastic waste inputs from land into the ocean, *Science*, Vol.347, No.6223, pp.768–771.

³¹ Joint Research Centre, *Identifying Sources of Marine Litter*, JRC Technical Reports, 2016. Available at: http://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/MSFD_identifying_sources_of_marine_litter.pdf

followed by reuse, recycling, waste incineration with energy recovery, incineration without energy recovery and landfill at the bottom. Unfortunately, prevention and reuse are often ignored, despite having benefits for carbon reduction, resource efficiency and marine litter reduction, while policy-makers and the general public often focus a lot more on recycling.



Waste prevention, repair and re-use

A key aspect of **waste prevention** is primarily about redesigning products to reduce the amount of material likely to become waste. This can be incentivised through hard laws and targets, economic instruments such as taxation, or through extended producer responsibility schemes (EPR – see section 3.2.4). But this requires going beyond ‘easy’ and ‘quick win’ solutions and to adopt a holistic approach to waste prevention. For instance, biodegradable or compostable plastics are not an answer to marine litter, as these technologies do not allow plastics to fully biodegrade in sea water. Another example is with personal care products, cosmetics and some detergent products, which contain plastic particles/microbeads that can be washed down the drain and are not filtered out by water treatment facilities. All of these products should be redesigned as a matter of urgency, but Member States at the moment are only focusing on the issue of the microplastics in exfoliating scrubs, as these are the easiest to replace with alternatives readily available but are only a small part of a much larger problem.

Repair and reuse are acts that take place after a product has been bought and used and allows to either prolong the life of a product or to give it a new use, thus delaying that product from becoming waste. By reducing the production of waste, reducing consumption of single-use plastics, designing products to be repaired, durable, reusable and if not, easily recycled into new products, and putting a consumer value on

plastics through economic instruments they are less likely to be carelessly disposed of and end up in the oceans.

The Circular Economy Package, adopted in 2015, addresses our unsustainable production, consumption, and poor waste management. The non-legislative communication includes a target of “reducing marine litter by 30% by 2020 for the ten most common types of litter found on beaches, as well as for fishing gear found at sea, with the list adapted to each of the four marine regions in the EU”. This target comes in addition to those adopted by Member States under the Marine Directive (Article 10), many of which were of a qualitative nature. The European Commission is working to implement this overall target by investigating baseline setting and statistical analysis, and hopes to achieve the target by developing a Strategy on Plastics in a Circular Economy. This Strategy has three main aims: to decouple plastic production from virgin fossil fuel feedstock and reduce its life-cycle greenhouse gas emissions, to improve the economics, quality and uptake of plastic recycling and reuse, and finally to reduce plastic leakage to the environment.³² It is due to be released in December 2017.

As part of the Circular Economy Package, the EU Waste Framework Directive and the Packaging and Packaging Waste Directive are currently under revision. The original Commission proposal and the amendments proposed by the Environment Committee of the European Parliament introduced a number of elements, in addition to asking for higher recycling targets, that should strengthen waste prevention, including economic incentives, EPR, reduction of non-recyclable or excessive packaging and a call to review the Ecodesign Directive. However, the on-going negotiations in the Council show very low ambition on the part of the Member States, with little mechanisms for enforcement and very long timeframes for targets.

NGO proposed measures³³:

Implement ambitious waste management policies as a priority, in order to reduce waste production and move towards a circular economy.

Ensure that plastic products are easily recycled, long lasting or reusable.

End the use of single-use products, in particular plastic items such as carrier bags, disposable cutlery, packaging and bottles wherever possible.

Ban at EU level intentionally added microplastics from products such as personal care products, cosmetics and detergents.

Ensure that all facilities handling plastic pre-production pellets (nurdles) are regulated and have in place measures to avoid their leakage to the environment, and are regularly audited for compliance.

All Member States but **Portugal** appear to have discussed the question of waste prevention in their PoMs. But when we take a closer look at the measures themselves, we can see that they have not applied the concept of waste prevention or the principle of a circular economy to the same extent.

Two Member States refer to their national or regional waste management and prevention programmes, developed to implement the (unrevised) EU Waste Framework Directive, but give few details as to what these cover and how it will help concretely reduce the input of waste into the sea:

- **Croatia** has designed a new measure to put in place a national management plan for litter, which should help determine the sources of waste, reduce or prevent its entry into the marine ecosystem and identify ways of collecting as well as eventual recovery or reuse. It mentions the adoption of

³² European Commission, Roadmap for the strategy on plastics in a circular economy, January 2017. Available at: http://ec.europa.eu/smart-regulation/roadmaps/docs/plan_2016_39_plastic_strategy_en.pdf

³³ http://seas-at-risk.org/images/pdf/archive/2014/NGO_priorities_for_PoM_-_with_additional_chapters_-_FINAL_17_October_2014.pdf These recommendations were then reviewed and updated at a SAR workshop of NGOs on 22 February 2017 for this assessment.

additional regulations once this analysis is done but also refers to awareness-raising activities. This measure could potentially have a significant impact but too few details are given at the moment to make a full assessment.

- **Cyprus** mentions its National Waste Reduction Programme (2015-2021) and mentions awareness-raising activities to be done but does not provide any other detail regarding its content and how it will help reduce marine litter.

Two Member States present a slightly more detailed set of measures, looking into certain specific issues, such as microplastics or paraffins:

- The **Belgian** PoM mentions very briefly that measures will be taken in the Flanders Region to prevent packaging waste and microplastics, in the form of voluntary agreements with the cosmetics industry, but does not provide any additional details as to how and when this will be done.
- **Poland** has proposed a measure to reduce of the amount of paraffin and its derivatives introduced into marine waters. While this measure could have a significant impact, it is not clear how it will be set in motion concretely, especially because **Poland** mentions it wants to take action at the international level. It also wants to look into sources of microplastics but has only planned a research project on the topic and no concrete measures yet.

The **UK** has proposed a rather large number of measures on the topic of marine litter, but still approaches the problem of marine litter from the angle of avoiding littering: “Avoiding littering and inappropriate disposal of waste is the best way to reduce the amount of debris getting into the environment.” Thus, it



ensues that reducing marine litter can only happen by changing people’s behaviour to littering: “Behaviour change to stop littering at source on land and sea is considered the most effective and efficient way of addressing the problem.”³⁴ We consider both assumptions to be dramatically flawed and to ignore the problem of increasing plastic use, bad product design, excessive packaging, programmed obsolescence and pushy marketing practices. It also seems

inappropriate for the **UK** to take this position considering that anti-littering campaigns have been operating in the **UK** for decades, yet show little to no evidence of being effective in reducing the quantities of litter in the environment.

Promoting more responsible and sustainable consumption patterns is an important part of solving our waste problem, but it can only work if real changes are effected upstream to production patterns and if citizens feel that producers are also making an effort to find real solutions. More sustainable choices by consumers will only be made more frequently if these options are widely available and simple, for example by ensuring reusable cutlery, cups and other tableware are available in all catering businesses, and water fountains

³⁴ Department for Environment, Food & Rural Affairs, *Marine Strategy Part Three: UK Programme of Measures*, December 2015 (updated March 2016), p138.

facilitate the use of reusable water bottles³⁵. In addition, the measures proposed by the **UK** lack details on the concrete implementation steps to be taken. They include the development and implementation of marine litter strategies (for Wales, Scotland and Northern Ireland) and a litter strategy for England, but the bulk of the activities organised under these strategies seem to be about encouraging voluntary action at citizen level, raising awareness and collecting data and information. Some activities in Northern Ireland relate to improving deposit or recycling systems but with no additional detail as to what this means concretely.

Two Member States have proposed a more comprehensive programme aiming to prevent the creation of waste at its source, and not just prevent entry into the marine environment:

- **Germany** proposes three wide-scale measures that have the potential to significantly reduce the amount of certain types of waste in the sea:
 - Putting in place modifications or substitutions of products that have been found on beaches or in the sea in large quantities. This includes working with manufacturers to find alternatives for shapes and composition, including use of toxic chemicals, in such a way that they are no longer a threat to the marine environment. **Germany** mentions cigarette filters and balloons as examples.
 - Reducing microplastics in cosmetics and cleaning products through prohibitions and the search for alternatives.
 - Further developing deposit / return systems for plastic waste, examining possible regulations for sustainable product and packaging design and increasing the recycling of packaging waste.

While these measures are quite ambitious in theory, or at least seem to tackle the problem in the right way, there is no real commitment from **Germany** to actually adopt new regulation on any of these topics. Most of the measures are based on voluntary actions from producers and manufacturers and awareness-raising of consumers, some also include financial incentives. Most measure descriptions refer to the European legal framework as the basis for any regulatory action. As mentioned previously, this can go two ways, depending on the final level of ambition of the European package currently under discussion. Therefore, the impact of these measures will strongly depend on political will and the human and financial resources dedicated to their implementation. The development of the German measures was facilitated by regular round table meetings of a broad range of stakeholders. This approach is commendable, but must be backed up with firm commitments from the Government.

- Out of the 11 national measures proposed by **France** to deal with marine litter, two in particular stand out by referring to the 2014-2020 National Programme for Waste Reduction which promotes a circular economy by prioritising waste prevention, reuse and recycling before waste management. One of the measures is specifically about the 'marine litter' pillar of the National Waste Programme, and rather than focusing on marine litter removal and disposal, as many other national plans for marine litter do, it presents a broader vision of marine litter prevention which starts at production level. It covers EPR, prohibition of a number of single use items and raising awareness of producers not part of the EPR mechanism on the impact of their production on marine litter. How significant the impact of these measures will be will depend on how many of the actions described in the national programme become regulatory and how many remain voluntary, as well as the human and financial resources provided for their implementation. However, the approach of **France** to outright ban some of the most damaging single use plastic items is a significant step in the right direction.

Finally, all Member States rely heavily on existing legal or political national, regional and EU frameworks, in particular the soon-to-be-revised EU Waste Framework Directive and Packaging Waste Directive, which level

³⁵ <http://www.seas-at-risk.org/17-marine-litter/801-how-to-cut-ocean-plastic-pollution-start-with-these-billions-of-bottles-straws-and-coffee-cups.html>

of ambition will strongly depend on the on-going negotiations between the Council Parliament and Commission, and the Regional Action Plans on marine litter (OSPAR, HELCOM or UNEP/MAP), which as we have seen previously have a number of flaws.

In the spotlight ∞ Single- use plastic ∞

Billions of single-use plastic items are consumed every year in the EU. Single-use plastics makes up on average 49% of beach litter, according to data from the International Coastal Clean-up. Few Member States have directly addressed the question of single-use plastic in their programmes of measures, and those who did focused mostly on plastic bags, based on the impetus given by the 2015 Plastic Bag Directive. As well as setting a target for the per-capita reduction of lightweight plastic bags, the Directive provided derogation to single market rules that prevent Member States from restricting certain products.

➤ As part of its strategy to limit the use of products that create a lot of waste, **France** has banned the provision of plastic bags in supermarkets and, from 2020 onwards, of plastic glasses, plates and cutlery. Some limitations should be noted however. First of all, **France** will still allow certain biodegradable single-use products, which require consumers to make proper use of composting facilities (not always available). Secondly, this ban will not extend to single-use tableware sold to catering businesses]. The proposals were controversial with the European Commission as restricting the free movement of goods is against EU single market rules. They were forced to justify the restriction



on environmental grounds, and assuming the justification is not challenged, this could set a precedent for other Member States to do the same³⁶.

➤ The **UK** and **Germany** have also started tackling this issue through the scope of the plastic shopping bag, but have not taken as radical an approach as **France** and have simply introduced a small charge for the purchase of a bag in stores. More EU Member States have made use of the 'levy' or 'charge' system to reduce the consumption of single-use plastic bags, including **Belgium** and **Portugal** (although not specified in their Programmes of Measures).

In October, 2017, Seas At Risk published a report³⁷ on single-use plastic which, among others, shows that the arguments used to justify the reduction targets in the Plastic Bag Directive also apply to other single-use items, and the Directive and its approach of obliging a per capita reduction in items, through outright bans or economic measures, should be extended to cover other items on the grounds of their environmental damage and waste of valuable resources. The study also highlights the role that governments and local municipalities can have in reducing single use plastics by modifying licensing laws or through Green Public Procurement procedures which prioritise waste reduction and reusable or long lasting products over disposable.

3.2.2 Waste from sea-based sources

Sea-based sources of marine litter include shipping, recreational boating, the fishing industry, and offshore oil and gas platforms, with litter entering the sea through both accidental and deliberate discharges of items ranging from galley waste to cargo containers. Waste from ships and fisheries is a significant source of marine litter, possibly reaching up to 90% of beach litter in % in areas with heavy shipping activity such as the North

³⁶ Surfrider Europe, *Enough Excuses: Time for Europe to Act Against Plastic Bag Pollution*, 2017

http://www.surfrider.eu/wp-content/uploads/2017/07/report_eumembersstateslegislations_plasticbags_web_en.pdf

³⁷ Seas At Risk. 2017. Single-use plastics and the marine environment. <http://www.seas-at-risk.org/17-marine-litter/801-how-to-cut-ocean-plastic-pollution-start-with-these-billions-of-bottles-straws-and-coffee-cups.html>

Sea³⁸ but with a general EU wide average of 34%³⁹. Although there are still many uncertainties, there is little doubt that the illegal discharge of waste by ships is an important source of marine litter worldwide.

Dumping of plastic waste from ships is illegal under the International Convention for the Prevention of Pollution from Ships (MARPOL), but enforcement is very difficult. Thus, the main intervention point is in the port, to incentivise waste delivery through fee and reporting systems, and to ensure that the processes are as smooth and simple as possible for ship crews. Regimes for ship waste delivery in ports differ greatly between Member States. The EU Port Reception Facilities Directive (2000/59/EC) aims to prevent discharges of waste at sea by ships and ensure delivery at port. This is to be done by improving the availability of reception facilities at community ports in order to meet the needs of ships without causing undue delay to their operation. However, the current EU PRF Directive does not prescribe how port reception facilities should be established, paid for and operated, which has led to a wide range of different systems. This has been identified as a possible factor in ship-waste dumping. A revision of the Directive is on-going, which will hopefully bring the changes needed to achieve further reductions in this source of marine litter.



Another sea-based source of marine litter is waste from fishermen. Fishing gear is a very damaging form of marine litter, with entanglement in nets causing the death of a wide range of marine species. Nets are often lost accidentally but also dumped intentionally and both are called 'ghost nets'. The Fisheries Control regulation states that boats must try to retrieve the gear, and report the GPS points where it was lost to relevant authority, although this is not properly enforced. Some gear is purposefully dumped due to the high costs of end of life waste treatment, the lack of space on board fishing vessels, or the lack of

accountability. Other types of waste that can be produced by fishing boats include dolly rope (strands of plastic rope used to protect trawled gear from rocky sea floors), Styrofoam fish boxes, rubber gloves, etc. However, fishermen can also be part of the solution by collecting waste caught in their nets and returning them to shore instead of to the ocean (see next section).

NGO proposed measures:

Implement and fully enforce the 'general prohibition' on waste discharge from ships to the sea (IMO's Annex V of MARPOL 73/78).

Implement a harmonised 100% no special fee system for garbage in ports and fishing harbours for all vessels

Collect data on actual waste delivery in ports, and inspect ships based on a 'risk based' approach for waste dumping.

Implement extended producer responsibility schemes and compulsory marking for fishing gear, and ensure ease of disposal for end of life gear, to end gear dumping and minimise the presence of ghost nets in European seas.

Promote better procurement practices on board vessels, to prioritise waste prevention.

³⁸ Van Franeker, J.A., Meijboom, A., De Jong, M., and Verdaat, H., *Fulmar litter EcoQO monitoring in the Netherlands 1979-2008 in relation to EU directive 2000/59/EC on port reception facilities*, Wageningen IMARES Report, No.CO27/10, 2010

³⁹ Arcadis, *Marine Litter Study to Support the Establishment of an Initial Quantitative Headline Reduction Target*, Report for DG Environment, 2014, http://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/final_report.pdf

This constitutes the largest category of measures taken by Member States on marine litter, with 65 measures dedicated to sea-based sources of litter. This reflects the fact that, in most countries, the PoMs are the only or primary place where the issue of waste from maritime activities is addressed while land-based sources are addressed in other programming documents (in particular related to waste legislation). It also probably stems from the fact that the PoMs are often the product of the governmental departments working on environmental marine policy, which do not have competences in the field of product policy, showing the lack of cooperation between different departments and ministries.

But the prevalence of these measures over other categories can also show that Member States have not yet fully made the transition to addressing marine litter at the roots of the problem, i.e. consumption and production patterns, and still focus their efforts on maritime activities. Differences can be observed among countries, however. For instance, out of nine measures on marine litter proposed by **Germany**, only three focus on sea-based sources of waste. On the other hand, out of 13 measures proposed by **France**, more than half are about waste from sea-based sources (fishing boats, commercial and leisure boats, aquaculture, etc.)

Member States are taking different types of measures to fight against waste from sea-based sources:

- **Regulatory actions:** All Member States but **Portugal** and **Croatia** have, one way or another, recalled their obligations under existing legislation, more specifically the MARPOL Convention and the EU Port Reception Facilities Directive:
 - On the *MARPOL Convention*, the Member States (**Belgium, Cyprus, France, Poland** and the **UK**) simply recall their obligations to ban the dumping of certain types of waste (such as plastic waste) and in certain maritime zones (e.g. in the 12-mile zone). While this is not innovative in any sense, our experts all agree that a better implementation of existing obligations would have a significant impact in terms of reducing the input of ship-generated waste. None of the Member States are explicit about the types of enforcement action they intend to take to make this happen concretely though.
 - On *port reception facilities*, half of the Member States (**Belgium, France, Germany** and the **UK**) refer directly to the EU PRF Directive and its on-going revision. **Poland** and **Cyprus** have included measures related to monitoring the functioning of their ports and improving infrastructure for the collection of waste without referring specifically to the Directive. Improving port reception facilities for the collection and disposal of ship-generated waste is very important and has the potential to have a significant impact, but only if it is accompanied by measures either incentivising ships to make use of these facilities or dis-incentivising them to dump their waste at sea. With this in mind, it is notable that only two Member States out of eight (**Germany** and **Poland**) mention the application of a '100% no-special-fee' system as part of their PoMs. This measure, strongly supported by Seas At Risk, is key to stop dumping and ensure the delivery of all waste by all ships to ports for proper collection and treatment (see box below for more details).
- **Voluntary initiatives:** A number of Member States have presented measures to promote voluntary actions by marinas or leisure ports. **France** has developed a guidance document for leisure boat owners recalling their rights and obligations when it comes to managing their waste. It has also put in place a label for 'Clean Ports of **France**' encouraging all marinas to increase their environmental quality, including through better waste management. **Belgium** has also foreseen to carry out activities in marinas to raise awareness on better waste management. No additional detail is provided as to what such activities could be. Although these types of measures are voluntary and target only one aspect of the problem, they do tend to focus on a group of maritime users that are largely exempt from a number of provisions in the PRF Directive (in particular related to monitoring and enforcement) and are therefore worth highlighting as interesting practices.

- **Measures related to fishing gears, ghost nets and gear marking:** A 2016 report for the Commission on Measures to Combat Marine Litter has shown that measures to prevent the loss of fishing gears can be very effective as only a small group of stakeholders (i.e. a portion of fishers and fish farmers) need to change their practices to have a big impact, i.e. much fewer gears in the water. This is probably why all Member States have included measures related to fishing gears and the prevention of 'ghost nets'. In most cases, the measures proposed by the Member States are simply to raise awareness of fishermen about the impacts of lost gears, not only on the environment, but also for the fisheries economic sector as well (through ghost fishing and the cost of entangling vessels and gear). Other types of measures related to fishing gear include:
 - **France** wants to get fishermen to contribute to the mapping of zones where ghost nets may accumulate. The **UK** and **Poland** aim to promote the FAO code of conduct for responsible fisheries, which includes retrieval of lost or abandoned fishing gear.
 - **Germany** has provided for a more comprehensive set of measures on the issue, including the provision of financial incentives for the collection of fishing gear at harbours, developing better systems for the repair of gears, developing alternative gears that would be less impacting for the environment, etc.
 - Several countries (**Belgium, Poland, Germany** and the **UK**) also mention the possibility of 'gear marking', which means tagging fishermen's gear in order to be able to trace it back to its owner if lost at sea. At this stage, the Member States' proposals focus on researching the feasibility of implementing such measures, although **Poland** also plans a testing phase.

Most of our experts agree that measures targeting the retrieval of fishing gear can have a significant impact if properly implemented. In particular, gear marking systems could be very effective but our experts warn that it can only work if the fishermen community supports the measure, which is for instance not the case in **Poland**.

- **Waste from other sources than shipping and fisheries:** It seems that only **France** has included a measure related to the management of waste by the aquaculture sector, focusing on its Atlantic maritime façade. The scope of the measure is very limited, however, as it is only about sending a letter to local authorities to remind them of their legal obligations to put in place a waste collection and treatment system in fish farms. **France** also has two other interesting measures, on ship recycling and on the reporting of containers fallen overboard. Both measures are simply about the legal obligations of ship owners under existing legislation. While these are important issues as improving the implementation of the legislation could have a direct and immediate impact, there is no indication of the concrete enforcement measures that will be taken to improve the situation.

In the spotlight

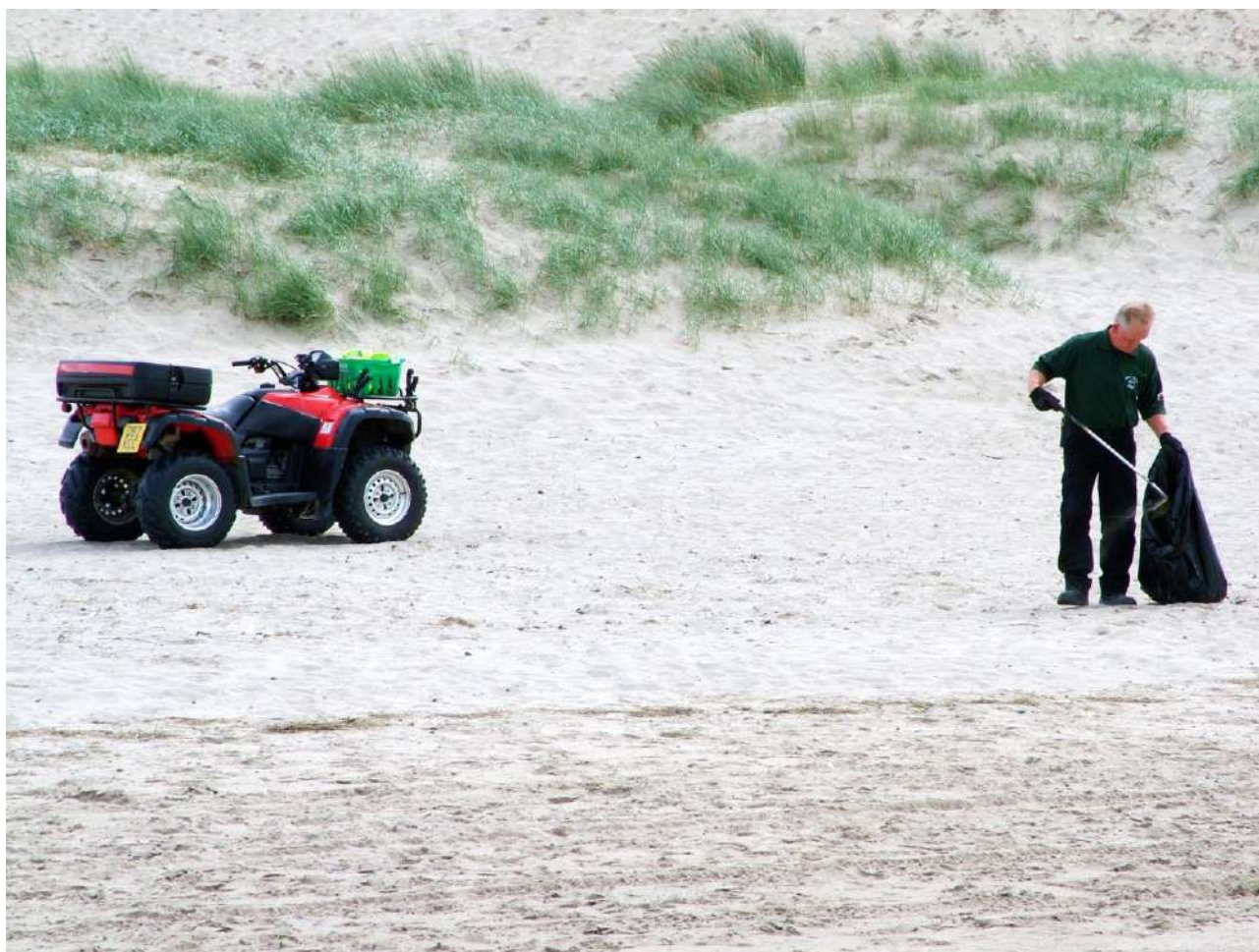
∞ Port Reception Facilities and the 'no special fee' system ∞

One of the most important factors in incentivising ship waste delivery is the waste fee system introduced by the port. The EU Port Reception Facilities Directive states that a 'significant' part of the waste fee shall be paid by all ships calling at ports, irrespective of waste delivery. According to a Commission declaration annexed to the Directive, 'significant' means at least 30 per cent. The directive is being revised with a proposal expected later this year, and it is essential that harmonisation of fee systems is at the core. A **100% no special fee system** is a method removing any incentive for ships to dump at sea and thereby encouraging ships to deliver their waste, by charging all ships the full cost of waste delivery, regardless of whether they deliver waste or not. To be most effective and to avoid penalising one port over another, all ports in an area must have the same fee system.

Only two Member States out of eight have mentioned that they will support the introduction of a 'no-special-fee' system in their PoMs, **Germany** and **Poland**, although **Belgium** hints at it by mentioning 'best practices' from other EU Member States. Both **Germany** and **Poland** belong to HELCOM, which introduced this system in the Baltic sea at the end of the 1990's. It is therefore not surprising that these two countries are supporting the system.

3.2.3 Litter removal measures

Litter removal measures at sea consist in activities that aim to remove waste, often solid waste, coming from land or from ships and that has ended up in the sea through various pathways.



Two important litter removal measures are beach clean-ups and ‘Fishing for Litter’ schemes, where fishermen collect litter that they stumble upon during their fishing trips (e.g. that ends up in their nets). Beach clean-ups are essential on a daily basis during the summer as their increased use results in litter being dropped or purposefully left. They are also excellent tools for raising awareness in communities about waste issues, and the ‘Fishing for Litter’ schemes can also be a good method for raising-awareness among the fisheries community. Both can also be useful in the context of monitoring, as they help governments and NGOs assess the most common types of waste and allow for more targeted actions towards specific industry or consumer groups, e.g. smokers or plastic bottle industry.

A number of limitations should be highlighted, however. Unless beach clean-ups are undertaken by paid staff ideally on a daily basis during the Spring and Summer months, then they are unlikely to be regular enough to reduce littering. If Member States have included clean-ups by NGOs in their measures, then they should fund these and ensure they meet standards to make a significant contribution to Descriptor 10. ‘Fishing for Litter’ schemes are expensive to run needing personnel to engage with fishermen, infrastructure and waste disposal facilities. There is also a difference to be made between ‘passive’ Fishing for Litter schemes, where fishermen collect waste during their normal fishing trips and which has very little negative effects, and ‘active’ Fishing for Litter schemes, where fishermen are paid to go out to the sea and collect waste in dedicated trips. In the second instance, the negative environmental effects of getting a boat out to the sea, in particular regarding

carbon emissions, largely outweigh the benefits of fishing out an extremely tiny proportion of the litter that has accumulated in the ocean.

It should also be noted that litter removal measures from sea can be counter-productive effects, by diverting funding from more needed measures. Initiatives such as the Ocean Cleanup, which is about deploying booms at the surface of the sea to catch floating litter and is receiving an enormous amount of funding from private and public actors globally, give people a false sense that the litter that is present in the sea right now can be taken out in sufficient amount to actually ‘clean up the sea’. It distracts from the much bigger issue that a change is direly needed in how we produce and consume.

NGO proposed measures:

Encourage fishing for litter initiatives following the KIMO model, with fished waste accepted at all EU ports and harbours as part of the 100% no special fee system.

Fund NGO organised beach clean-ups, surveys and educational programmes, to increase public awareness of marine litter and contribute to public support of waste reduction activities and survey data. However, voluntary initiatives cannot replace daily beach cleans by local government employees which are essential throughout the spring and summer months.

The two main types of litter removal measures promoted by Member States in their PoMs are the beach clean-ups and ‘Fishing for Litter’ schemes.

- All Member States have presented at least one measure to support ‘**Fishing for Litter**’ schemes, although **France** and **Portugal** do not mention this specific name.
 - Six Member States (**Belgium, Croatia, Cyprus, Germany, Poland** and the **UK**) talk about the promotion and implementation of, or continued support for, ‘Fishing for Litter’ schemes in their waters. All of them refer to ‘passive’ Fishing for Litter schemes, which means that fishermen are encouraged to collect, in dedicated bags, the waste that ends up in their fishing nets and deposit it at ports where it should be sorted and treated appropriately.

Few Member States give details on what exactly their ‘support’ is going to consist in, in particular in terms of financing these schemes, which are run by NGOs, fisheries organisations or local authorities. **Poland** is the only one to mention that it will fund these schemes through the waste fees collected by ports. **Germany** mentions that an extension of these schemes will require to ensure that all ports and harbours are able to collect and properly dispose of the waste brought back to shore.
 - **Portugal** mentions the development of a waste management system on-board vessels, which could be either restricted to managing the waste produced by the vessel itself or also include waste collected in fishing nets. There are not enough details to make that judgment.
 - **France** refers to a ‘European programme’ called ‘Waste Free Oceans’, which we would categorise as an ‘active’ Fishing for Litter scheme. It consists in an experimental technique to collect floating litter with the help of booms attached to two trawlers. The trawlers go out to the sea specifically to collect the litter and bring it back to shore to specialised ports where the waste can be recycled. **France** is not explicit regarding the type of support it would give to this on-going initiative (if any). For the reasons mentioned above, our opinion is that Member States should not promote these initiatives as there is very little evidence that the positive environmental benefits (retrieving floating litter) outweigh the negative impacts (shipping emissions). It is also important to mention that, despite what **France** states, the programme is not funded by the EU.

- A few countries (**Croatia, France**) also mention that they will keep supporting initiatives by diving associations to retrieve litter on the seafloor and in the water column. The type of support they will provide is not specified.
- All Member States but **Portugal** and **Croatia** presented at least one measure related to **beach clean-ups**. The same sort of generic information is given by the Member States about the beach clean-ups, recalling as we have previously mentioned that they are often carried out by NGOs and volunteer organisations. None of the Member States specify what their support will be to these initiatives, in particular in terms of funding. Several countries mention the added value in terms of monitoring the main types of litter found on beaches and awareness raising of local communities. Interestingly, **France's** measure is about disseminating guidelines on responsible beach cleaning practices, to avoid damages to the coastal ecosystems. This refers to the type of daily mechanical beach cleaning many municipalities perform on their tourist beaches during peak season, which can be extremely damaging to any flora and fauna. **Germany** and the **UK** refer to guidelines developed by OSPAR. **Cyprus'** measure is simply about implementing the UNEP/MAP clean-up day initiative on Cypriot territory, and **Germany** mentions the need to increase EU and international initiatives, such as International Coastal Cleanup Day and Let's Clean Up Europe.
- Three Member States (**Germany, France** and **Cyprus**) have also included specific measures about the removal of waste upstream, i.e. in **rivers and estuaries**, before it reaches the shores. These can have a much more effective outcome than litter removal on beaches or in the sea as rivers constitute one of the primary pathways for entry of waste into the sea and the geographical scope for action is much more limited and litter concentrations higher. Other Member States (e.g. the **UK**) have simply recalled their legal obligations under existing legislation for the treatment of waste water before it enters the sea, e.g. the Urban Waste Water Treatment Directive. Finally, **France** has also proposed a measure to remove macro-litter during dredging transfers. However, at this stage the measure is only a study so it has no impact yet.

Overall, our experts have assessed these litter removal measures as having a limited impact, both in terms of geographical scope (limited to some beaches and some areas of the sea where Fishing for Litter ships go) and in terms of ambition. They have deemed the actions to be mostly cosmetic, considering that they are voluntary and retrieve only a very limited amount of litter out of the total that enters the sea every day. Most of them have highlighted the educational benefits of these actions, which can also be supplemented with more in-depth educational programmes in schools and other educational fora, as **Germany** and **Portugal** have foreseen. Finally, the lack of concrete information about the type of support that will be provided for the implementation of these initiatives, usually done by non-state actors, makes us doubt that the measures proposed in the PoMs will have a stronger impact than what is already in place in most countries.

3.2.4 Economic instruments

Financial incentives or disincentives are the most effective way of changing the behaviour of consumers, producers or retailers quickly. Evidence of this can be seen in the recent initiatives by many countries to charge customers for the provision of plastic carrier bags at check-out counters of supermarkets and stores. In Ireland, the introduction of a 0.22€ charge on plastic carrier bags in 2007 resulted in a 90% reduction in the use of plastic bags in 5 months, going from 328 bags per person per year to 21. Similar levels of reduction have been witnessed in other countries. In **France**, the number of thin plastic carrier bags decreased from 10.5 billion to 1.5 billion from 2002 to 2009. In **Belgium**, a reduction of 86% in the use of plastic bag was observed between 2007 and 2011.⁴⁰ These very impressive numbers show how effective a financial levy can be in changing consumers' behaviours.

⁴⁰ European Commission, *Assessment of impacts of options to reduce the use of single-use plastic carrier bags*, September 2011. Available at: http://ec.europa.eu/environment/waste/packaging/pdf/report_options.pdf

Other economic incentives can be used with producers to promote the redesign of products to prevent waste creation or ease of littering. Placing a deposit on items is a very effective example of a positive financial incentive, the consumer pays an additional sum to be redeemed once the item has been returned to a participating business. The primary example of this are return deposit schemes for beverage packaging, which are in place in a number of European Member States. Return deposit schemes for beverage packaging have been shown to decrease littering of those items, and also ensures a high quality stream of waste for recyclers. In **Germany** the return and recycling rates for PET bottles that are subject to a deposit are 98.5%⁴¹. There are also numerous small-scale schemes of deposits for other kinds of packaging or single-use items, such as glass jars for various products, or coffee cups in several German towns.

Extended Producer Responsibility (EPR) is the environmental policy where a producer's responsibility for a product extends to the whole of a product's life cycle, including its disposal. EPR schemes operate across Europe, but so far there are no minimum requirements and the schemes are not effective or priced in such a way to drive any change in the producers' behaviour. EPR schemes should be implemented in a way that provides the biggest incentive to prevent waste and reduce litter by ensuring the following minimum requirements:

- Coverage of the entire cost of waste management of the product, including litter clean-up and prevention
- Fee modulation to reward positive design changes to reduce waste and penalise inaction
- Independently verified data gathering and reporting

The Waste Framework Directive has basic requirement for EPR schemes, and the revised version is likely to lay out minimum requirements, depending on the results of negotiations between EU institutions.

NGO proposed measures:

Fully achieve the recycling targets from the Waste Framework Directive and Packaging and Packaging Waste Directive
Prioritise waste prevention through the use of economic instruments, including levies, deposit systems and EPR schemes with modulated fees for better designed products.
Charge higher fines for litter offences on land and at sea.

Few Member States have included measures providing economic incentives or disincentives for better waste management or disposal.

Positive economic incentives are mostly about the government providing funding to private or non-profit initiatives. As we have seen during the first high-level analysis of the Member States' PoM in 2016⁴², very few Member States have provided information about sources of funding for the various measures proposed. This includes also the measures that are meant to support third-party initiatives, such as the beach clean-ups or Fishing for Litter schemes. As we have seen in the previous section, only **Poland** provides an indication of how it intends to fund Fishing for Litter schemes.

Overall, Member States have put forward economic disincentives in their PoMs, in the form of taxes or levies. One such measure is the 100% indirect fee for ship-generated waste in ports which was discussed in Section 3.2.2 of this report and is proposed by **Germany** and **Poland**.

⁴¹ PwC for Deutsche Umwelthilfe e.V, *Reuse and Recycling Systems for Selected Beverage Packaging from a Sustainability Perspective*, 2011

⁴² Seas At Risk & Oceana, *MSFD Programmes of Measures – An NGO analysis*, November 2016.

Other financial disincentives include:

- *Fines for littering*: Only the **UK** reports as part of their PoMs but they must exist in many other Member States. Our experts point out that fines for littering have existed for a long time in many countries. They have the potential to change people's behaviour regarding littering in the street but there is in fact very little enforcement, so the impact of such measures on the whole marine litter issue is in fact very limited.
- *Charges for the purchase of single-use items, in particular plastic bags*: As we have seen before, only the **UK** and **Germany** have mentioned this as part of their PoM but other Member States have put this system in place. Our experts all agree that these measures are very effective and data on reduction of people's use of plastic bags support this assessment (see introduction to this section). One important flaw of these schemes is that people who can afford the charge can continue to use polluting products. Therefore, these measures are not as effective as total bans, as will be in place in **France** and other EU regions (e.g. Brussels and Wallonia).
- *Taxes*: Again, only the **UK** reports its landfill tax as part of its PoM. The landfill tax aims to encourage business to reuse or recycle waste rather than bring it to the landfill.

In the spotlight

∞ UK landfill tax⁴³ ∞

It was introduced in 1996 to try and encourage more sustainable ways of waste disposal, reduce waste and increase use of non-landfill options (this can include recycling, composting and recovery). The tax has gone up with time. Since 2000, the amount of waste sent to landfill has dropped by 70% and the average household recycling rates have risen from 18% to 44%. There are 2 rates of tax a lower one for less polluting wastes according to Treasury Order and a higher one for all other waste⁴⁴.

Landfill tax rates

£ per tonne landfill tax	1 April 2016	1 April 2017	1 April 2018
Standard rate	84.40	86.10	88.95
Lower rate	2.65	2.70	2.80

Only one Member State, **France**, refers directly to Extended Producer Responsibility schemes in its programme of measures. As part of its 2014-2020 National Waste Management Strategy, **France** reiterated its commitment to EPR schemes, launched as early as 2004, adding new quantitative targets to be achieved, including for the reuse of products. In the MSFD PoM, **France** also mentions that it will aim to extend the principle of EPR schemes to producers of products commonly-found on beaches or in the sea, e.g. cigarette producers, plastic packaging producers, etc. if they are not already covered by an EPR scheme. **Germany** mentions that producers and industry will be among the actors responsible for implementing some of the measures put forward in the German PoM on waste, however the information is vague and not binding so it is difficult to assess to which extent it will be similar to an EPR scheme.

3.3 Conclusions

As in the case of the fisheries measures, we asked our experts to assess the potential impacts of the different measures proposed by Member States to tackle the issue of marine litter by 2020, ranging from 'no impact' to 'significant impact'. They made this judgment based on their knowledge of their country's existing actions

⁴³ <https://www.gov.uk/government/publications/landfill-tax-increase-in-rates/landfill-tax-increase-in-rates>

⁴⁴ <https://www.gov.uk/government/publications/excise-notice-lft1-a-general-guide-to-landfill-tax/excise-notice-lft1-a-general-guide-to-landfill-tax#qualifying-material>

and inactions on the topic and their understanding of what each measure would entail. In many cases, this amounted to expert judgement considering the shocking lack of details provided by Member States on the measure.

Twelve percent of all the measures are considered by our experts as having, potentially, no direct impact at all. Most of these measures are data collection measures (building a database in **Portugal**, making a study on waste from dredging in **France**). As with the fisheries measures, in certain cases, experts have highlighted measures destined to collect new data on emerging topics as good practices (e.g. on microplastics in **Poland**) but overall experts consider that data collection measures should have been included in the Monitoring Programmes rather than in the Programmes of Measures.

More than half of the measures are considered to have, potentially, only a limited impact. The impact of a measure can be considered limited because of its low level of ambition or because of a restricted geographical or temporal scope. A number of reasons are provided by our experts for judging that a measure would only have a limited impact.:

- As with the fisheries measures, the first reason for judging that a measure will only have a limited impact is the lack of detail given on the actual activities that will be undertaken to implement the measure. Our experts prefer to be cautious in their judgment when they do not have sufficient information to make an informed assessment, in particular for broad programmes or action plans, which promise to deliver good environmental status but do not say concretely how this will be achieved.
- Limited geographical scope is also often highlighted as an issue, in particular in the case of litter removal measures, such as beach clean-ups and Fishing for Litter measures. Similarly, the impact may be considered limited if the measure only focuses on one group of stakeholders (e.g. leisure boat owners). However, in those cases, our experts have always highlighted that the impact for that particular group can be really significant.
- The impact of a measure has been considered limited also when the measure is voluntary rather than obligatory, especially for measures targeting industry. Voluntary agreements with industry may be an interesting way forward to start raising the profile of a particular issue (e.g. single-use plastic) but at a certain point in time these need to become the rule rather than the exception and the only way for that to happen is to take direct regulatory actions.
- Finally, a measure could be considered as having a limited impact because it has a low level of ambition (e.g. the quantitative target set is too low or inexistent).

It is interesting to note that these reasons are quite similar to the justifications provided for fisheries measures (e.g. limited geographical scope, voluntary measures, lack of details), highlighting a number of structural problems with how Member States are setting up measures.

Finally, 35% of the measures have been considered as having, potentially, a significant impact on the objective of tackling marine litter by 2020. The measures considered as having the largest impacts are those that consider the problem of marine litter from the angle of waste prevention on land, fully acknowledging that this problem cannot be tackled solely from the angle of sea-based sources, as these represent only a fraction of the total amount of waste in the sea. Broad waste prevention and management programmes, which address issues like product substitutions, Extended Producer Responsibility or single-used plastic, are definitely the most impactful types of measure that can be presented in the Member States' PoMs, especially if they contain a sufficient number of regulatory actions and are not based solely on voluntary measures. Programmes for the regulation of waste from sea-based sources are also important measures, even though they represent a smaller proportion than land-based sources. Innovative initiatives, such as the '100% no-special-fee' system for port reception facilities are definitely worth highlighting as good practices.

However, for all measures presented as having a potentially significant impact, our experts have systematically made a note that this will depend strongly on enforcement mechanisms. At the moment, this is seriously lacking in most countries, which means that these measures are good only on paper.

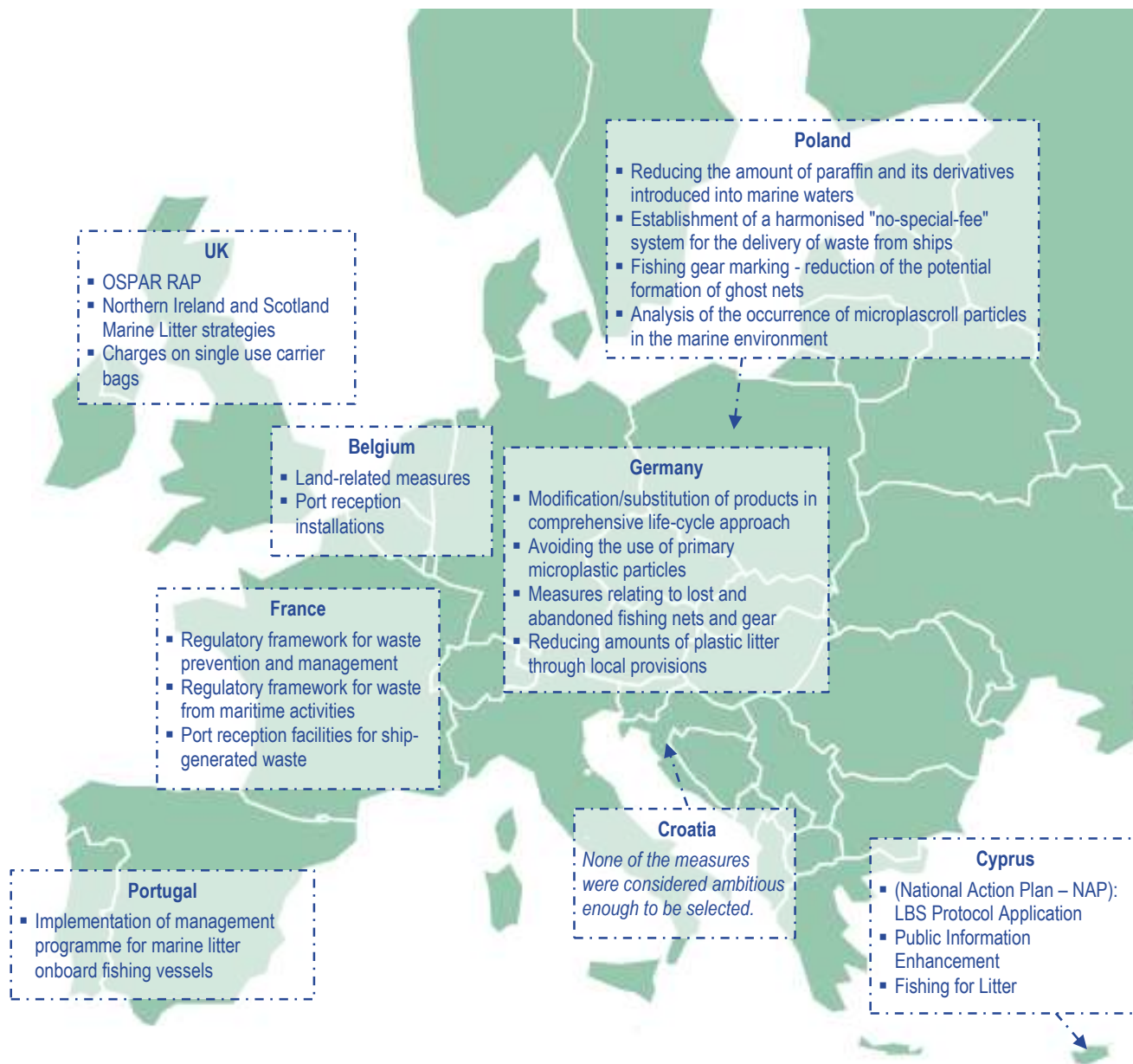
In terms of the overall level of ambition of the packages of measures put forward by Member States to tackle marine litter, there are clear differences among the Member States. Two countries, **France** and **Germany**, clearly stand out with coherent sets of measures that seem to be addressing the issue of marine litter from the right angle, i.e. the need to change our production and consumption systems in order to prevent the creation of waste at its source. Of course, there are a number of limitations, in particular the lack of details on how concretely some of the measures will be implemented (i.e. through regulatory or voluntary actions), how they will be financed, what monitoring mechanisms will be in place to ensure their implementation and by what date they should be put in place. Our German experts have particularly highlighted the way **Germany** has designed the marine litter measures, through the setting up of a stakeholder working group. Even though the implementation of measures will need to be monitored closely, it is an encouraging method that, unfortunately, was not reproduced for the other descriptors.

The other six countries have been judged more critically by our experts.

- **Poland's** and **Belgium's** sets of measures are encouraging with some references to land-based waste prevention and interesting measures for sea-based sources of waste (e.g. the '100% no-special-fee' system for port reception facilities in **Poland**, gear marking in **Belgium**). However, the lack of detailed information about the implementation of the measures, the lack of a clear reference to the principles of a circular economy and of re-use and recycling, and the major delays in implementing the PoM for **Poland** (not before 2020) weaken them substantially.
- **Portugal's** measures are almost entirely focused on data collection and developing indicators. They did not include any of their measures related to the prevention of land-based waste. While it is clear that more knowledge and information are needed on the extent of the problem in Portuguese waters, this should not stop **Portugal** from taking additional measures to prevent the input of waste into the seas. It is regrettable the land based measures are not included to allow us to make a more comprehensive assessment of the measures taken in **Portugal** to address the waste problem. It also means that the issues (land-based waste and sea-based waste) are dealt with in separate programmes, presumably by different departments in the government. This does not send the right message regarding the need to address the marine litter issue at its source, i.e. the production of waste on land, and in a comprehensive manner, i.e. from its creation to its disposal.
- **Croatia** has a very limited set of measures on marine litter but one of them relates to the implementation of the national waste programme and so could have a significant impact if this programme tackles waste prevention in an effective way. The other two measures – data collection and fishing for litter – are more cosmetic.
- **Cyprus** has defined a relatively long list of measures on marine litter but most of them are about implementing regional programmes or initiatives from UNEP/MAP. If the UNEP/MAP regional action plan on marine litter is effectively implemented in **Cyprus**, it would be a good step forward but there are no details in the Cypriot PoM to explain how this will be done. In general, the level of ambition of the Cypriot PoM on litter is low as a lot of the measures are voluntary in nature, putting less emphasis on prevention-reuse-recycle-repair strategies and focusing more on a clean-up mentality.
- The UK's set of measures on marine litter is also considered to be low in terms of ambition. The **UK** simply provides a list of existing legislation or strategy and hang a lot on the OSPAR regional action plan, although they are actively working within that process to weaken the level of ambition. The **UK** also puts a lot of emphasis on changing individual behaviour as a solution to the waste problem, rather than considering changes in our production patterns. However, since the measures were

developed, the Government is increasingly recognising that regulation is needed for issues such as microbeads and bottle deposit return schemes.

The following map presents the ‘top measures’ for tackling marine litter selected by our experts among the list of measures presented by the Member States.



Overall, we observe that few Member States have made the transition – in their marine policy – to considering marine litter as the terrible consequence of a much larger problem in our societies, which is the way we produce and consume goods and the waste that come from this. And even if they have made, or are making, a transition towards more sustainable consumption and production, most have not yet put in place the necessary measures to address this much larger problem. It is very likely that this is due to a compartmentalisation of policies within governments, i.e. measures on the marine environment are not designed by the same officials as those working on product policy or waste policy. It also comes from the fact that governments are still reluctant to tackle the key culprits in the production of waste, namely the producers of single-use plastic and plastic packaging.

Therefore, the measures presented in the Member States' PoMs that we have examined are mostly focused on coastal and sea-based activities, from tourism (beaches) to shipping, and much less on land-based activities. A large share of these are litter removal measures, such as beach clean-ups or Fishing for Litter schemes, despite the fact that these result in the removal of only a small amount of litter in relation to the overall stock of waste in the ocean.

We are supportive of NGOs' initiatives, such as beach clean-ups and education activities, and think that the government should provide more financial support for these, especially if they are to promote them as 'measures' in their PoMs (when in fact it is NGOs doing all of the work). However, we also see a danger in the active promotion by governments of these types of activities in the sense that they create a false perception among the general public that the sea can be 'cleaned', instead of focusing on the need to change production and consumption patterns.

We are also wary of the promotion of citizen education programmes as a key measure when their effectiveness has been proven to be limited if not sustained over the long term and designed to reach all sectors of the population. We are concerned that the promotion of these kinds of measures represents an avoidance by Member States in tackling the core of the problem, which necessarily involves some changes in business practices by many economic actors.

4 Conclusions and recommendations

Fisheries and marine litter experts from Seas At Risk member organisations found that 42% of fisheries measures and 35% of litter measures were considered as having a positive significant impact in contributing to achieving the Descriptors. However, the majority, 50% of fisheries and 53% of litter were considered to have only limited impact due to the fact they were either voluntary; had limited geographical scope; lack of details or low level of ambition (e.g. the quantitative target set is too low or inexistent). Meanwhile 8% of fisheries measures and 12% of litter measures were assessed as having, potentially, no impact at all, generally because they were more suited to Monitoring Programmes than Measures.

The reasons highlighted for measures being scored as having a low impact or no impact highlights some systemic issues with the Programmes of Measures that should be taken note of for future measures.

4.1 Fisheries measures

Member States have had almost a decade to bring their exploitation rates to sustainable and scientific levels since MSFD was adopted in 2008 in order to achieve the targeted biomass levels by 2020.

The result of our study shows that our NGO community believes that proper implementation of the provisions of the CFP is one of the main pre-requisites for achieving GES for commercial fish stocks. NGOs are however sceptical about the effectiveness of the implementation of the CFP to date and demand more political resolve from Member States and further pressure from the Commission to achieve Descriptor 3 by 2020. Member States had a decade to bring their exploitation rates to sustainable levels in line with scientific advice since MSFD was adopted in 2008, which would have achieved biomass levels by 2020 for most stocks.

The Marine Directive also goes beyond CFP in its requirements. Other non CFP-related measures considered to have a potentially significant impact show us where there may be gaps in the CFP that NGOs would like to see addressed. This is the case for measures on shellfish, recreational fisheries and non-commercial fish species. However, we are extremely worried that there are so few measures that will address D3.3 on the age and size of fish and we call for urgent action to address this by Member States, the EC and respective scientific bodies working together.

Recommendations:

- For all commercially exploited fish and shellfish populations to be within safe biological limits, full implementation of the Common Fisheries Policy is essential, in particular:
 - Set fishing limits below the maximum sustainable yield exploitation rate (FMSY) in order to restore and maintain fish stocks above biomass levels that can produce maximum sustainable yield (BMSY).
 - Adjust fishing capacity of the fleet to bring in balance with available fishing opportunities in order to prevent over-capacity.
 - Implement ecosystem-based management, which meets requirements under the MSFD as well as the CFP.
 - Reduce by-catch of non-target species and sexually immature fish through technical, spatial and temporal measures, quota swaps, and by enabling EMFF funding for more selective gear.
- Comprehensive measures are also urgently needed to ensure that there is a high proportion of sexually mature old/ large individuals in populations (as required by Descriptor 3.3). These are essential for a

healthy fish population. The respective scientific bodies need to advise on methods but measures should include:

- Fish stock recovery areas (as per Article 8 of the CFP), well managed Marine Protected Areas and no take zones where the large adult specimen can thrive.
 - Additional spatial measures as well as technical and temporal measures.
- Given that recreational fisheries can impact on fish stocks, additional management measures for them are needed too, ranging from daily bag limits to limitations of the fishing effort.
 - Support and incentivise fishers with reduced environmental impact: fully implement Article 17 of CFP, that foresees that Member States shall apply criteria such as impact on the environment and history of compliance when allocating fishing opportunities to fishing vessels.
 - Control and enforcement are essential to meet the objectives of the CFP and Marine Directive and must be further invested in to restore our ecosystems and provide long term food security.
 - Lastly ensure coherence between EU fisheries and environmental legislation especially the CFP, Marine Strategy Framework Directive (MSFD) and the Habitats Directive.

4.2 Marine litter measures

An estimated 100,000 tonnes of plastic from EU countries ends up in the sea every year, from coastal land areas alone⁴⁵. Much more comes from inland areas via rivers and some from at sea-sources like shipping and fishing. Plastic makes up the major part of marine litter, with items eventually breaking up into ever smaller particles.

While some good measures were proposed by Member States to address the issue of litter, over all we found that Measures were too tightly focussed on coastal measures, clean ups and education and not enough on the producers of single-use plastic and plastic packaging. The need to change our production and consumption systems in order to prevent the creation of waste at its source is essential and only beginning to be tackled by a couple of countries.

Large scale, cost effective removal of marine litter is currently not possible, the best way to reduce the problem is by ending the input to the seas.

Recommendations:

- Waste prevention and reform of our production and consumption habits is essential.
 - End the use of single-use products as far as possible, in particular plastic items such as carrier bags, disposable cutlery, packaging and bottles wherever possible.
 - Economic instruments can be effective and more use should be made of them, either by charging the consumer (plastic bag example) or make the producer pay (EPR schemes) or incentivising producers to design products that are less likely to become waste or litter.
 - Implement ambitious waste management policies with higher recycling in order to move towards a circular economy.

⁴⁵ Jambeck, J.R., Geyer, R., Wilcox, C., et al. (2015) Plastic waste inputs from land into the ocean, *Science*, Vol.347, No.6223, pp.768–771.

- Develop more reusable packaging systems and ensure all plastic packaging is recyclable and contains recycled plastic content.
- Litter removal measures are important but do not address the root causes of the problem. We need to avoid creating a false hope that the ocean can be 'cleaned up'.
- The 100% no special fee system at Port Reception Facilities needs to be introduced to prevent dumping of waste by fishing boats and ships.
- Implement measures to reduce waste from fishing vessels. Economic measures such as deposit schemes or stimulus for net recycling businesses could improve disposal options for end of life gear and operational waste.
- Discharge of marine litter through sewage pipes is still a major problem, in particular Combined Sewer Overflows need to be addressed.
- Microplastics should be banned from all products (cosmetics, detergents, other sources) that can end up in the marine environment. This should be done at the EU-level.
- Ensure that all facilities handling plastic pellets (nurdles) are regulated and have in place measures to avoid their leakage to the environment, and are regularly audited for compliance.
- More ministerial cooperation is also needed, especially between ministries responsible for production/economy and environment ministries.



for the protection and restoration of the marine environment

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