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HOW TO REACH THE QUALITATIVE ASPECTS OF AICHI TARGET 11 IN THE MEDITERRANEAN

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1. INTRODUCTION

Aichi Target 11: "By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape (CBD)".

The riparian countries of the Mediterranean Sea have trusted the protection of the Mediterranean biodiversity, their species and habitats on an area-based strategy in the form of Marine Protected Areas or MPAs, aligned with the main international conservation conventions and agreements. In 2010, the Convention on Biological Diversity (CBD) adopted in the tenth meeting of the Conference of the Parties held in Nagoya, a revised and updated Strategic Plan for Biodiversity, including the Aichi Biodiversity Targets, compromises addressed to the States Parties for the 2011-2020 period. One of the most demanding was Target 11: by 2020 the Parties should have protected at least 10% of their coastal and marine areas. This area threshold was defined as Aichi´s quantitative target, and to become effective it was coupled with five additional qualitative requirements, by virtue of which MPAs should be:

(QL1) ecologically representative,
(QL2) effectively and equitably managed,
(QL3) well connected,
(QL4) integrated into the surrounding landscapes and seascapes, and
(QL5) they embrace areas of particular importance for biodiversity and ecosystem services.

As 2020 approaches, reaching the quantitative target in the Mediterranean seems theoretically feasible, but the qualitative mandatory ads-on have revealed as a hard task to accomplish and are far from being achieved. A proposal of boosting the qualitative requirements is presented in this note, as guidelines to advance towards a more effective, robust and equitable network of Mediterranean MPAs, in need of reinforcement of the current structures rather than a dimensional increase.

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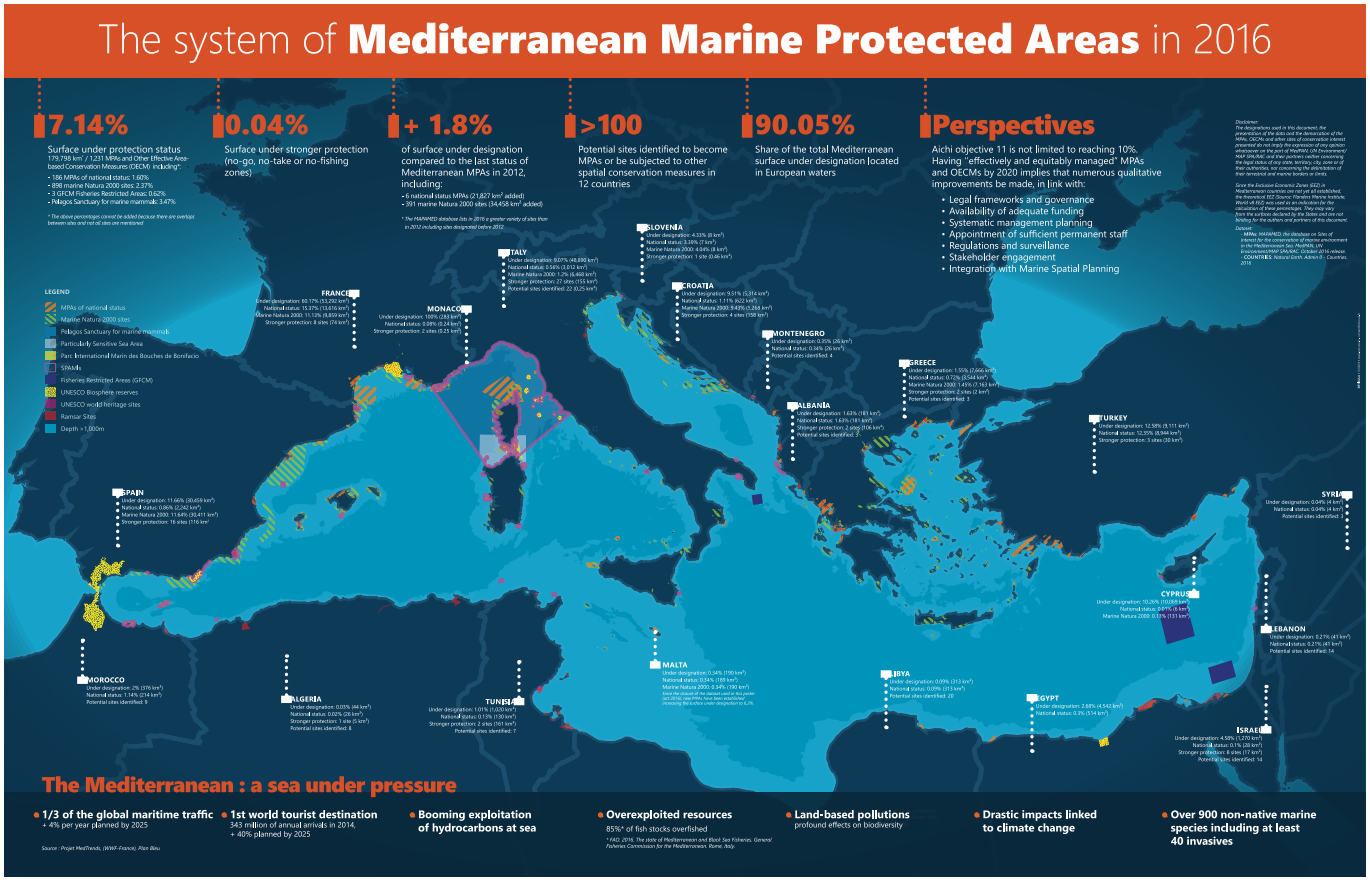
2. PROBLEMATIC AND GAPS IN THE MEDITERRANEAN MPA NETWORK

2.1 Mapping values

The protection of the Mediterranean waters, their species and habitats has been extensively afforded through the establishment of a "system" –as the Aichi declaration states-, a network of MPAs. In the Mediterranean, the latest estimation of protected surface waters was 7.14% (MedPAN & UNEP-MAP-SPA/RAC, 2016).



This remarkable figure of coverage has been reached by including a range of national and international protection figures, and apparently offers good perspectives of reaching the desired accomplishment of the Aichi target 11. There are several positive added values which serve as facilitators:

a) The Mediterranean network of MPAs is remarkably developed in some countries. There are several MPAs which have been properly set up, planned and developed. They have a managerial background which can be useful to reinforce the rest of the network, offering opportunities for a model of convergence and work in cooperation.

b) The Mediterranean network of MPAs enjoys a healthy integration and coordination at the technical level thanks to MedPAN, the network of Mediterranean MPA managers, which provides coordination and help in the form of technical and scientific know-how, specific capacitating activities and funding or coordination of specific long-term projects.

c) The region is the target of international treaties and agreements focused specifically on the protection and conservation of the Mediterranean Sea, -like the UNEP-Mediterranean Action Plan (MAP) and the Barcelona Convention-, or the conservation and sustainable use of marine resources, like de FAO-General Fisheries Commission for the Mediterranean (GFCM) and its provisions. For example, the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (the SPA/BD Protocol) of the Barcelona Convention which entered into force in 1999, set up a procedure for the protection of the whole Mediterranean, including the high seas, through the signature of agreements between neighbouring countries and the declaration of Specially Protected Areas of Mediterranean Importance, or SPAMIs (Scovazzi, 2004, 2011).

Important international organizations and NGOs develop marine programs addressed specifically to the Mediterranean, such as IUCN and WWF. Most of them usually adopt synergistic proposals and share common objectives, information and expertise.

d) There are financial structures addressed specifically for the conservation of MPAs or the conservation of the marine resources, either coming from the European Union –in the form of compensatory measures like the LIFE Funds for the Natura 2000 Network, or the fishery funds provided by the new Fisheries Common Policy-, or from the financial tool of the UNEP-Mediterranean Action Plan, the Mediterranean Trust Fund (MTF). But also, there are other funds at disposal, coming from active and engaged private or private/public donors: the Association for the Sustainable Financing of Mediterranean MPAs (M2PA) has set up a trust fund (The MedFund) that has already received financial contributions from governments and private donors, and is currently granting its first funding to marine protected areas in the Mediterranean.

e) Although partial and incomplete, there is a huge amount of information on the scientific and ecological values of the marine biome and its biodiversity in the Mediterranean Sea, which has been useful for the subdivision of the Mediterranean into ecological/biological units of conservation, and the definition of hotspots for biodiversity.

f) Ecological representativeness (QL1) is effectively accomplished at the coastal habitats of the EU riparian countries through the marine Natura 2000 network. It is a highly structured network which can serve as a model for the non-EU countries.

g) The FAO General Fisheries Commission for the Mediterranean (GFCM) is developing its own strategy of area-based conservation policy through the declaration of International Fisheries Reserve Areas or FRAs, with specific regulations for the exploitation of the marine resources, in some cases with remarkable results.

2.2 Mapping threats

In the Mediterranean, the roadmap to accomplishing Aichi target 11 has been focused on reaching the quantitative threshold of 10% of protected waters. As 2020 comes up the qualitative requirements or QLs are far from being achieved even on the MPAs already declared. These are the main limiting factors for the qualitative achievement of the Target detected:

a) For QL1 (ecologically representative):

- Mediterranean MPAs have suffered from opportunistic instead of a structured and planned designation (Baldi et al, 2017).

- The geographical bias of the network is fully explained by socio-economic reasons: four European countries accumulate 88% of the Mediterranean GDP and manage 102 out of 186 of the national declared MPAs. These 102 MPAs cover nearly 60% of the total marine area protected by this category (MAPAMED, MedPAN-SPA/RAC, 2016), and all of them are in the north of the basin.

- There is a strong bias in the network regarding the type of ecosystems protected, as they are mainly coastal and located in waters less than 50 meters deep (Ramos-Esplá et al., 2004). The proportion of waters protected in the territorial 12 nautical mile fringe rises to 8.22%, whereas beyond 12 nautical miles it does not reach 3% (European Commission, 2015), resulting in an underrepresentation of deeper ecosystems.

b) For QL2 (effectively managed):

- There is a striking contrast between the current financing of Mediterranean MPAs and the budget needed to fulfil the Target 11 objectives. The total available resources for Mediterranean MPAs— 54.5 million €— constitutes a mere 7% of the ideal budget of 700 million €/year. Considering that an additional 7,000 million € will be needed to effectively protect 10% of Mediterranean waters by 2020, current resources fall quite far short of needs (Binet et al., 2015).

- For the majority of sites, there is a lack of information on management measures and their implementation, and if they are, on their effectiveness to reach the site's conservation targets (MedPAN & UNEP-MAP-SPA/RAC, 2016).

- Many Mediterranean MPAs lack legal, managerial and staff capacity to provide effective protection to the area. MPA managers suffer from the legislative framework where they operate, weakening their capacity to enforcement. Sufficient and efficient patrolling and surveillance occurs in only 31% of Mediterranean MPAs, while less than 10% have sufficient staff to meet conservation requirements (Gaines et al., 2010; MedPAN & UNEP-MAP-SPA/RAC, 2016; Amengual & Alvarez, 2018).

c) For QL2 (effectively managed) and QL4 (integrated into the surrounding landscapes and seascapes):

- Although 80% of the fish stocks assessed in the Mediterranean are outside biologically safe limits (GFCM Scientific Advisory Committee, 2017) there is a weak convergence of action between the environmental administration and the fisheries administration, both at a national and regional level, and between the MPA managers and the fishing communities as one of the main local stakeholders at the local level.

d) For QL3 (well connected):

- There are not national or regional MPAs set up to promote species conservation and resilience through ecological connectivity (Gabrié et al., 2012).

e) For QL4 (integrated into the surrounding landscapes and seascapes):

- The Aichi Biodiversity Target 11 calls also for an "equitable" management of MPAs. The Mediterranean ranks remarkably low in the managerial equity indicators already set in place:
  - **o** inclusive decision-making procedures,
  - **o** management shared between the national authorities and local stakeholders/NGOs, or placed fully in the hands of non-governmental organizations (Gill et al., 2018),
  - **o** Gender policy through women empowerment in the MPA regional strategy.

f) For QL5 (embrace areas of particular importance for biodiversity and ecosystem services):

- Threatened and/or protected species in the Mediterranean are often not considered or adequately sheltered by the design and goals of the current MPAs. There is only a maximum 2% overlap between existing marine protected areas and the predicted areas of biodiversity concern (Coll et al., 2012).

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3. TOWARDS AICHI QUALITATIVE TARGET 11: NECESSARY CHANGES

In order to advance, we propose a list of measures which can be considered to effectively advance in each of the qualitative requirements included in Aichi target 11. They are the following:

3.1 QL1: "ecologically representative"

Considering the current social, political and economic reality of the Mediterranean, a network ecologically representative of the Mare Nostrum in 2020 seems rather unrealistic. But we have the chance to positively advance in this direction if:

- the Mediterranean States, Parties to UNCLOS, tackle legislative changes related with the UN-Law of the Sea,
- national efforts to reach the Aichi target 11 are structured in the form of a sub-regional initiative, with subunits (regions and nodes) defined by socio economic and ecological descriptors, (also affecting QL2 and QL3)
- there is a creative use of the concept of other effective area-based conservation measures, and this is inclusive with: (i) the fisheries sector, and (ii) the private sector/environmental NGOs. (affecting also QL2)

While every State is free to establish or not to establish an exclusive economic zone (EEZ), a Mediterranean without waters beyond national jurisdiction (WBNJ) would manage its pelagic fisheries and conservation values more effectively, because comprehensive Economic Exclusive Zone (EEZ) declarations of the countries which have not yet exerted national rights into the open sea would facilitate the managerial capacity over pelagic fisheries and MPAs eventually declared in current WBNJ. Management of those waters through agreements supported by multinational treaties is quite limited, as it is not legally binding to non-Party countries. The EEZ declarations may provide important opportunities for large-scale conservation of marine ecosystems and biodiversity in this zone, including the underrepresented bathyal and abyssal habitats. Encouraging the countries which have not already declared their EEZ to do so would be a crucial change. Alternatively, the SPAMI tool, brought by the SPA/BD Protocol of the Barcelona Convention, allows for the establishment of intergovernmental cooperation and the adoption of joint measures necessary for the protection of the environment of all the maritime waters of the Mediterranean, irrespective of their legal condition, to the seabed and its subsoil and to the terrestrial coastal areas designated by each of the Parties.

The GFCM is taking up regulations on the fisheries policy in the Mediterranean through their FRAs programme, which are positively contributing to its conservation through a convergent area-based strategy based on spatial management tools. In 2005, the GFCM endorsed the decision of prohibiting bottom-trawling activities in waters deeper than 1000 m. The decision has had more extensive and long-lasting effects than any other conservation action taken in the Mediterranean so far and affected underrepresented habitats. Combined fisheries and conservation objectives can be achieved by merging diverse management actions, but the strategies of the conservation and the fisheries management bodies, although convergent in their objectives, need to be progressively much more tightly aligned. The attention afforded to the scientific definition, identification and assessment of the FAO Vulnerable Marine Ecosystems (VME) in the Mediterranean high seas, and Essential Fish Habitats (EFH) by the GFCM, and the selection of FRAs sites based on them, clearly shows a common action around the area-based conservation concept which is fully included in Target 11 qualitative provisions. The results of this common view should inevitably lead to a combination of efforts between the fisheries and conservation actors in the Mediterranean, as the FishForum has recently stated (FF conclusions, 2018) but which surprisingly is far from being achieved. If effectively afforded, can be great in results, reduce conflicts with a key stakeholder and be attained at a much more reasonable cost (embracing also QL2, QL4 and QL5).

Management of some MPAs based on private-led initiatives, such as delegate governance in the hands of NGOs, might be considered as an exploration of the term "other effective area-based conservation measures" of the Aichi 11 goal statement, a line of action which has not been fully explored so far. Limitations of these organizations in terms of law enforcement can be subdued by a co-management formula and the establishment of agreements with the national marine security authorities. This alternative vision could play a role, particularly in the Southeast littoral countries, supplying expertise, funds and human resources in the critical phase I of MPA declaration and management (Gomei & Di Carlo, 2012).

The coverage and implementation of no-entry, no-take and no-fishing zones, within either existing or future MPAs, should be increased from the current coverage of 0.04% of the Mediterranean Sea to reach at least 2% of no-take zones, especially in key functional areas.

3.2. QL2: "effectively managed"

It is mandatory a strong reinforcement of the financial mechanisms addressed specifically for Mediterranean MPAs, both at national and international level.

At a national level, States Parties to the Barcelona Convention should (i) reinforce strongly their commitment to their national system of MPAs through the adoption of a national programme reasonably provided; (ii) adopt a financial compromise with their national protected areas system in terms of percentage of the annual budget dedicated to.

At the regional level (for the whole of the Mediterranean), through a strong and decisive reinforcement of the UNEP/MAP Mediterranean Trust Fund (MTF) which is insufficient in its current configuration; of the LIFE programme and the environmental and fisheries structural funds of the UE; through the reinforcement of the financial instrument specifically addressed to MPAs in the Mediterranean (The MedFund) and giving a renewed impulse and reorientation of the European financial aid for development to the Mediterranean non-EU states. The participation of EU countries in the context of bilateral or multilateral aid for development agreements is advisable. Additionally, there is a need to increase the participation of private donors, an active which has not been fully explored in the region, through a creative stimulus of the use of tax exemption. Also, supporting the development of small funding programmes within MPAs will enable to develop local project management capacities and as a lever to attract new and matching funding sources.

It is essential that MPAs established by the Contracting Parties to the Barcelona Convention fulfil the baseline requirements set by the SPA/BD Protocol for the establishment of Specially Protected Areas (SPAs), that are the objectives for which such areas are established and the protection measures required to pursue these objectives. A more explicit norm of declaration, establishing clear and indisputable limits, a minimum specific national budget, a management plan with legal capacity over other legal regulations affecting the area, a minimum capacity of surveillance -"no boat, no park"- and a minimum capacity of enforcement could be defined.

There should be decisive advances in capacity building for an effectively managed MPA network in the form of coordinated and stable formative forums.

Supporting MPA effective and equitable management, and especially of "young MPAs" by having a specific policy for such MPAs in their initial stages, and by adopting minimum standards for their effective management and recommendations for good governance, through sharing the best field practices.

It is important to strengthen exchange of experience, best practices and knowledge among MPA managers, including through increased cooperation between EU and non-EU Mediterranean countries, especially for addressing conservation needs for highly mobile marine species. MPA Twining initiatives may help in this context (also serving QL3).

In order to objectively evaluate advances towards QL2 (but also QL4 and QL5), a set of state and response indicators should be set up, specifically designed to this objective at the Mediterranean. There are multiple examples of sets of indicators already tested which could eventually be adapted and used by national authorities or by an independent and external body under the auspices of the Barcelona Convention and SPA/RAC. In this respect, in the framework of the implementation of the Integrated Monitoring and Assessment Programme (IMAP) of the Barcelona Convention, the Contracting Parties, while updating their national monitoring programmes, need to include at least one monitoring area in a low pressure area (e.g. marine protected area / Specially Protected Area of Mediterranean Importance (SPAMI)). It may be useful to differentiate two or three categories of MPAs according to their empowerment and enforcement phase and not to their actual age or date of establishment (e.g. "young", "mid-aged" and "mature" MPAs), as they may not have the same priorities and capacities according to their "maturity". This concern is also important when communicating about various MPAs across the Mediterranean region.

3.3 QL3: "well connected"

The SPA/BD Protocol set up a procedure for the declaration of SPAMIs both in the high seas and between neighbourhood countries, a strategy which unfortunately has not been fully developed. Only one among the SPAMIs so far established, namely the French-Italian-Monegasque sanctuary for marine mammals (so-called Pelagos sanctuary) covers also areas of high seas. The Barcelona Convention and its SPA/RAC should vigorously promote the adoption of this figure of protected areas between neighbouring Parties, a promising development which apart from enhancing ecological connectivity will empower MPAs as a relevant tool for regional cooperation in a region in urgent need of. In this regard, cooperation among SPAMIs should be reinforced and promoted. This would result in significant advances in QL4 and QL1 as well.

The application of adequate and well validated hydrodynamic models linked to the development of bio-transport networks are providing maps of MPA functional connectivity and could help significantly in the appropriate design of well-connected MPAs (Rossi et al., 2014) and the identification of the Mediterranean eco-regions if managers work in synergy with motivated oceanographers.

3.4. QL4 "integrated into the surrounding landscapes and seascapes"

This is the "equitable" component of Target 11. MPAs are more likely to be successful when attention is given to local development. There is an urgent need to advance and adopt effective actions to increase the participation of the local stakeholders, especially those from the touristic and the fishery sector, using inclusive decision-making procedures in the MPA management bodies from the inception phase. This is of particular relevance when there are local communities in the vicinity of or within the MPA with subsistence economies.

The habits of consumption, the overfishing of coastal fisheries and the levels of pollution in the Mediterranean shores are unsustainable. To ameliorate this, we need inevitably an expanded vision to strengthen the conservation premises and to link and align them more tightly with the fisheries objectives of the UNEP/MAP Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD) (Strategic direction 1.2) on the one hand, and with the Sustainable Consumption and Production Regional Action Plan for the Mediterranean on the other.

Working towards creating a win-win relationship of MPAs with decision-makers, donors and private sector interested in marine and maritime spatial planning, integrated coastal zone management, blue growth strategies, sustainable tourism and sustainable fisheries policies, in order to respond to pressures beyond MPA borders, while considering MPAs as natural capital and a management instrument to reach sustainability targets.

Incorporating gender policy into MPA design can lead to increased benefits for the local community affected. Women participation in the MPA management should be facilitated at all levels, and needs reinforcement as a regional strategy, aligned with the European Union and the Mediterranean Strategy for Sustainable Development (MSSD) commitment to gender equality and women's empowerment, the IUCN Gender Programme and especially the Union for the Mediterranean's Strategy for Women's Empowerment 2018-2020.

MPAs can -and should- contribute to poverty reduction in riparian economies of subsistence (Bennett & Dearden, 2014). A managerial action which negatively affects local community only might be adopted if no other less impacting solution is found for the area or activity affected, and always adopting compensatory measures and/or incentives for the stakeholders economically affected by an MPA –through the reduction or complete loss of fishing rights, for example. This should be compulsory in the Mediterranean MPA system: in MPAs indeed, no fair deal means no managerial capacity.

Positive results in QL4 are keystones, and they should be converted into an essential argument to lobby in favor of the MPA system in the national and international forums and media. The evaluation of the ecosystem services provided by each MPA should be afforded and evaluated in economic terms immediately, particularly when the tourism and fisheries economies are positively affected by the area. The results of this kind of analysis should be fully publicized in the media but also as scientifically sound publications.

3.5. QL5: "embrace areas of particular importance for biodiversity and ecosystem services"

There is a reasonable knowledge of Mediterranean hotspots or areas of biological concern (IBAs for birds, IMMAs for marine mammals, etc.) or for endangered, threatened and/or endemic species, and their habitats, so decisive advances can be attained in the matching with the MPA system, especially at regional level. The decision to declare a new MPA should be fully supported by biological and ecological evidence of the relevance of the area in conservation terms. This strategy would be particularly relevant also for QL1.

Declaration of new areas based on singular geomorphologic or oceanographic elements linked to VMEs or EFHs as criteria for selection of new areas should be intensively used (seamounts, guyots, canyons and trenches, hydrothermal vents, continental drop-offs, fronts and eddies, etc.).

We need to select, design and set up new MPAs with socioeconomic criteria. The IUCN category V -Protected Landscapes/ Seascapes- and VI -protected areas with sustainable use of natural resources- have not been fully promoted and used in the Mediterranean, rather surprisingly. Biosphere reserves fit perfectly with these categories of protected areas and their extensive used could mean simultaneous advances both in the quantitative and the qualitative criteria of Target 11.

As a final note, the new strategy for the years beyond 2020 should not focus on new area threshold, thus, a new quantitative target, but on the contrary, on the reinforcement or strengthening of the network we will have at that time, paying most and special attention to the qualitative components of the target. The targets should also be pragmatic and backed by an actual will and enforcement means by the governments, including human and financial. The network has a paramount necessity to grow up not in surface, but in (i) managerial capacity, (ii) social and political component of the MPA socioeconomic, (iii) sustainable financing, (iv) strengthening the synergy with the fisheries area-based policy, and (v) strengthening the synergy with marine spatial planning in order to better take into account all the sectors of activities which could impact MPAs. And this should be the new target for the future of the Mediterranean MPA network to come after Aichi. However, given, the financial implications, commitments should be sought only for realistic orientations for which funding can be reasonably expected.

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